TREND MICRO™

TREND MICRO™ Apex Central™

Patch 3

Administrator's Guide

Centralized Security Management for Endpoints

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This documentation introduces the main features of the product and/or provides installation instructions for a production environment. Read through the documentation before installing or using the product.

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Preface

Preface

This document introduces Trend Micro Apex Central™ and discusses getting started information, managed product integration, and security monitoring details.

Topics in this section:

- *Documentation on page xii*
- *Audience on page xiii*
- *Document Conventions on page xiii*
- *Terminology on page xiv*

Documentation

Apex Central documentation includes the following:

Document	Description
Readme file	Contains a list of known issues and may also contain late-breaking product information not found in the Online Help or printed documentation
Installation and Upgrade Guide	A PDF document that discusses requirements and procedures for installing the Apex Central **Note** The Installation and Upgrade Guide may not be available for minor release versions, service packs, or patches.
System Requirements	A PDF document that discusses requirements and procedures for installing Apex Central
Administrator's Guide	A PDF document that provides detailed instructions of how to configure and manage Apex Central and managed products, and explanations on Apex Central concepts and features
Online Help	HTML files compiled in WebHelp format that provide "how to's", usage advice, and field-specific information. The Help is also accessible from the Apex Central console
Widget and Policy Management Guide	Contains information that explains how to configure dashboard widgets and policy management settings in Apex Central To access this guide, go to https://docs.trendmicro.com/en-us/enterprise/trend-micro-apex-central-2019-widget-and-policy-management-guide/preface-(wpg)_001.aspx.
Automation Center	Online user guides and references that explain how to use the Apex Central Automation APIs: https://automation.trendmicro.com/apex-central/home
Data Protection Lists (Chapter 1 only)	A PDF document that lists predefined data identifiers and templates for Data Loss Prevention

Document	Description
Knowledge Base	An online database of problem-solving and troubleshooting information. It provides the latest information about known product issues. To access the Knowledge Base, go to the following website: http://success.trendmicro.com

Download the latest version of the PDF documents and readme at:

http://docs.trendmicro.com/en-us/enterprise/apex-central.aspx

Audience

Apex Central documentation is intended for the following users:

- Apex Central Administrators: Responsible for Apex Central installation, configuration, and management. These users are expected to have advanced networking and server management knowledge.
- Managed Product Administrators: Users who manage Trend Micro products that integrate with Apex Central. These users are expected to have advanced networking and server management knowledge.

Document Conventions

The documentation uses the following conventions.

Table 1. Document Conventions

Convention	Description
UPPER CASE	Acronyms, abbreviations, and names of certain commands and keys on the keyboard
Bold	Menus and menu commands, command buttons, tabs, and options
Italics	References to other documents

Convention	Description
Monospace	Sample command lines, program code, web URLs, file names, and program output
Navigation > **Path**	The navigation path to reach a particular screen For example, **File** > **Save** means, click **File** and then click **Save** on the interface
 **Note**	Configuration notes
 **Tip**	Recommendations or suggestions
 **Important**	Information regarding required or default configuration settings and product limitations
 **WARNING!**	Critical actions and configuration options

Terminology

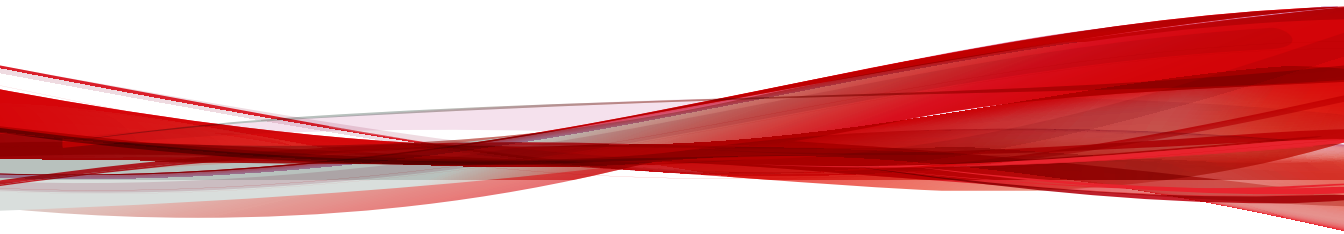
The following table provides the official terminology used throughout the Apex Central documentation:

Terminology	Description
Administrator (or Apex Central administrator)	The person managing the Apex Central server
Security Agent	The managed product program installed on an endpoint
Components	Responsible for scanning, detecting, and taking actions against security risks

Terminology	Description
Apex Central console, web console, or management console	The web-based user interface for accessing, configuring, and managing a Apex Central **Note** Consoles for integrated managed products are indicated by the managed product name. For example, the Apex One web console.
Managed endpoint	The endpoint where the managed product Security Agent is installed
Managed product	A Trend Micro product that integrates with Apex Central
Managed server	The endpoint where the managed product is installed
Server	The endpoint where the Apex Central server is installed
Security risk	The collective term for virus/malware, spyware/grayware, and web threats
Dual-stack	Entities that have both IPv4 and IPv6 addresses
Pure IPv4	An entity that only has an IPv4 address
Pure IPv6	An entity that only has an IPv6 address

Part I

Introduction



Chapter 1

Introducing Apex Central

This section introduces Trend Micro Apex Central™ and provides an overview of its features and capabilities.

Topics include:

- *About Apex Central on page 1-2*
- *What's New on page 1-2*
- *Key Features and Benefits on page 1-5*
- *Apex Central Architecture on page 1-7*

About Apex Central

Trend Micro Apex Central™ is a web-based console that provides centralized management for Trend Micro products and services at the gateway, mail server, file server, and corporate desktop levels. Administrators can use the policy management feature to configure and deploy product settings to managed products and endpoints. The Apex Central web-based management console provides a single monitoring point for antivirus and content security products and services throughout the network.

Apex Central enables system administrators to monitor and report on activities such as infections, security violations, or virus/malware entry points. System administrators can download and deploy components, such as antivirus pattern files, scan engines, and antispam rules, throughout the network to ensure up-to-date protection. Apex Central allows both manual and pre-scheduled updates, and allows the configuration and administration of products as groups or as individuals for added flexibility.

What's New

This version of Apex Central includes the following new features and enhancements.

Feature	Description
New platform	Apex Central supports installation on Windows Server 2022.

TABLE 1-1. Previous Updates

FEATURE	DESCRIPTION
Event Notifications	The following Event Notification settings have been disabled to prevent too many unnecessary notifications from being sent to recipients (**Detections** > **Notifications** > **Event Notifications** > **Advanced Threat Activity**): • C&C callback alert • C&C callback outbreak alert • Correlated incident detections
Additional Advanced Threat Activity notifications	Apex Central supports Advanced Threat Activity event notifications for Behavior Monitoring violations and Predictive Machine Learning detections.
Advanced Logging Policy optimization	The Advanced Logging Policy for Apex One Vulnerability Protection (**Policies** > **Policy Management** > **Apex One Security Agent** > **Vulnerability Protection Settings** > **Network Engine Settings**) uses "Stateful, Frag, and Verifier Suppression" by default to exclude fragmentation and verifier related events.
Concurrent session limitation	Apex Central allows administrators to prevent multiple web console sessions per user account.
Critical event auditing	The Apex One server and Security Agents collect Windows event logs related to critical system events (move Security Agent, uninstall Security Agent, reset password) and sends the logs to Apex Central Product Auditing Event logs.
Dashboard enhancements	• The name of the **Operation Center** tab has changed to **Security Posture**, the name of the **Threat Detection** tab has changed to **Threat Statistics**, and the widgets on the former **DLP Incident Investigation** tab have moved to the **Data Loss Prevention** tab. • Toggle the **Table** view on the **Security Posture** dashboard tab to display the chart nodes, critical threats, and antivirus pattern compliance information in a table.

Feature	Description
Enhanced API integration	Apex Central provides APIs for forwarding detection logs in CEF format, Product Auditing Events, Security Agent pattern update statuses, or Security Agent engine update statuses to SIEM servers. For more information, see https://automation.trendmicro.com/apex-central/home.
Impact Analysis enhancement	The **Affected Users** screen automatically refreshes every 60 seconds when running an Impact Analysis.
New dashboard widgets	• The **Quick Investigation** widget allows you to start Historical Investigations directly from the dashboard. • Use the **Attack Discovery Detections** widget to view detection logs generated by the Endpoint Sensor Attack Discovery feature. Attack Discovery logs include MITRE™ Tactics and Techniques information and Windows Antimalware Scan Interface (AMSI) data. • The **Top Endpoints Affected by IPS Events**, **Top IPS Attack Sources**, and **Top IPS Events** widgets provide greater visibility for Intrusion Prevention events on your network.
Password complexity enhancement	• Apex Central user accounts have stronger password complexity requirements. • The Unload and Uninstall Security Agent features include enhanced password complexity requirements for better security.
Policy inheritance	Enhancements to Behavior Monitoring, Predictive Machine Learning, and the Trusted Program List policies allow for policy inheritance support.
SQL Server support	Apex Central supports Microsoft SQL Server 2019 Cumulative Update 4 (CU4) and SQL Server Express CU4.
Syslog enhancements	• Apex Central allows you to forward Intrusion Prevention and Product Auditing Event logs to a syslog server. • Common Event Format (CEF) syslogs indicate the type of critical threat detected.
Vulnerability patches	Apex Central has patched Cross Site Scripting (XSS) and SQL injection vulnerabilities.

Feature	Description
Web browser support	Apex Central supports Microsoft Edge (Chromium).

Key Features and Benefits

Apex Central provides the following features and benefits.

Feature	Benefits
Active Directory integration	Apex Central supports integration with multiple Active Directory forests and allows you to import Active Directory groups in addition to users. You can also enable Active Directory authentication to allow users or groups from federated business partners across an extranet to securely log on to the Apex Central console.
Dashboard	Use the **Dashboard** tabs and widgets for extensive visibility of managed product and Apex Central information about threat detections, component statuses, policy violations, and more.
Security Posture	Use the **Security Posture** tab to gain instant insights into the antivirus pattern and Data Loss Prevention compliance status, critical threat detections, as well as resolved and unresolved events on your network.
User/Endpoint Directory	View detailed information about all the users and endpoints within the Apex Central network and any security threat detections.
Product Directory	System administrators can immediately deploy configuration modifications to managed products or even run a manual scan from the Apex Central web console during a virus/malware outbreak.
Global Policy Management	System administrators can use policies to configure and deploy product settings to managed products and endpoints from a single management console to ensure consistent enforcement of your organization's virus/malware and content security policies.
Logs	Use a single management console to view consolidated logs from all registered managed products without having to log on to each individual product console.

Feature	Benefits
Event Notifications	Keep administrators informed of network events at all times by configuring Apex Central to send notifications by email, Windows syslog, SNMP trap, or an in-house or industry-standard application used by your organization.
Reports	Create comprehensive reports from custom or static templates to obtain the actionable information you need to ensure network protection and security compliance.
Component Updates	Securely download and deploy antivirus patterns, antispam rules, scan engines, and other antivirus or content security components to help ensure that all managed products are up to date.
Connected Threat Defense	Apex Central brings together a host of Trend Micro products and solutions to help you detect, analyze, and respond to targeted attacks and advanced threats before they unleash lasting damage.
Secure communication infrastructure	Apex Central uses a communications infrastructure built on the Secure Socket Layer (SSL) protocol and can even encrypt messages with authentication.
Role-based Administration	Grant and control access to the Apex Central web console by assigning specific web console privileges to administrators and providing only the tools and permissions necessary to perform specific tasks.
Command Tracking	Command Tracking allows you to continuously monitor whether commands executed using the Apex Central web console, such as antivirus pattern updates and component deployment, have successfully completed.
License management	Deploy new Activation Codes or reactivate existing Activation Codes on managed products.
Security Agent installation	Download Security Agent installation packages for Apex One or Apex One (Mac) directly from the Apex Central console.
Two-Factor Authentication	Two-Factor Authentication provides extra security on user accounts by requiring users to type the verification code generated by the Google Authenticator app in order to sign in to Apex Central.

Feature	Benefits
Browser support	This version of Apex Central includes support for the following: • Microsoft™ Internet Explorer™ • Microsoft™ Edge™ • Microsoft™ Edge™ (Chromium) • Google™ Chrome™

Apex Central Architecture

Trend Micro Apex Central™ provides a means to control Trend Micro products and services from a central location. This application simplifies the administration of a corporate virus/malware and content security policy.

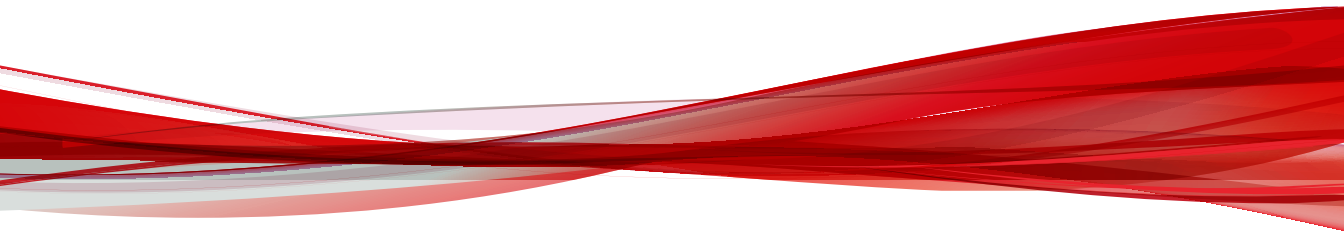
The following table describes the components that Apex Central uses.

Component	Description
Apex Central server	Acts as a repository for all data collected from the agents. The Apex Central server includes the following features: • An SQL database that stores managed product configurations and logs Apex Central uses the Microsoft SQL Server database (`db_ApexCentral.mdf`) to store data included in logs, managed product information, user account, network environment, and notification settings. • A web server that hosts the Apex Central web console • A mail client that delivers event notifications through email messages Apex Central can send notifications to individuals or groups of recipients about events that occur on the Apex Central network. Send event notifications by email, SNMP trap, syslog, or any in-house/industry standard application used by your organization to send notifications. • A report server that generates antivirus and content security product reports The Apex Central report is an online collection of figures about security threat and content security events that occur on the Apex Central network.
Trend Micro Management Communication Protocol	MCP handles the Apex Central server interaction with managed products that support the next generation agent. MCP agents install with managed products and use one/two way communication to communicate with Apex Central. MCP agents poll Apex Central for instructions and updates.
Web Service Integration communication	An agent-less integration model that allows Apex Central to communicate with managed products

Component	Description
Web-based management console	Allows an administrator to manage Apex Central from virtually any computer with an Internet connection and web browser The Apex Central management console is a web-based console published on the Internet through the Microsoft Internet Information Server (IIS) and hosted by the Apex Central server. It lets you administer the Apex Central network from any computer using a compatible web browser.
Widget Framework	Allows an administrator to create a customized dashboard to monitor the Apex Central network.

Part II

Getting Started



Chapter 2

The Web Console

This section discusses how to access and configure the Apex Central web-based management console.

Topics include:

- *About the Web Console on page 2-2*
- *Assigning HTTPS Access to the Web Console on page 2-3*
- *Accessing the Web Console on page 2-6*
- *Configuring Web Console Settings on page 2-8*

About the Web Console

The Apex Central web console provides centralized management, monitoring, and security visibility for all endpoints and users protected by Trend Micro products registered to the Apex Central server. The console comes with a set of default settings and values that you can configure based on your security requirements and specifications. The web console lets you administer the Apex Central network from any machine using a compatible web browser.

Note

View the web console at a screen resolution of 1366 x 768 pixels.

Apex Central supports the following web browsers:

- Microsoft Internet Explorer™ 11
- Microsoft Edge™
- Microsoft Edge™ (Chromium)
- Google Chrome™

Web Console Requirements

Resource	Requirement
Processor	300 MHz Intel™ Pentium™ processor or equivalent
RAM	128 MB minimum
Available disk space	30 MB minimum

Resource	Requirement
Browser	Microsoft Internet Explorer™ 11, Microsoft Edge™, Microsoft Edge™ (Chromium), or Google Chrome™ **Important** When using Internet Explorer to access the Apex Central web console, turn off **Compatibility View**.
Others	Monitor that supports 1366 x 768 resolution at 256 colors or higher

Assigning HTTPS Access to the Web Console

During Apex Central installation, you can choose the level of security when accessing the management console. The least secure level only requires an HTTP connection. The most secure requires an HTTPS connection. If the least secure connection was selected during installation, you can change the access level after installation to the most secure connection.

Important

- You must obtain a certificate and set up the Apex Central virtual directory before you can start sending encrypted or digitally signed information to and from the Apex Central server.
- The following procedure describes how to assign HTTPS access from a Windows Server 2012 R2 installation.

  If you are running a different version of Windows Server, refer to the Microsoft documentation for your specific Windows Server installation.

Procedure

1. Obtain a Web Site Certificate from any certification provider (for example, `Thawte.com` or `VeriSign.co`).

2. Log on to the Apex Central server.
3. Go to **Start** > **Administrative Tools** > **Internet Information Services (IIS) Manager**.

   The **Internet Information Services (IIS) Manager** screen appears.
4. From the **Connections** pane on the left, select the server name.
5. From the **Features View** pane in the center, double-click **Server Certificates**.
6. From the **Actions** pane on the right, click **Import...**.

   The **Import Certificate** screen appears.
7. Import the Web Site Certificate obtained in step 1:
   a. Upload the certificate file.
   b. Specify the password for the certificate.
   c. Select the Certificate Store.
   d. Click **OK**.

      Windows Server imports the certificate file and closes the **Import Certificate** screen.
8. From the **Connections** pane on the right, expand the **Sites** folder and select the **<Web Site>** created during Apex Central installation.

   Note

   If you did not a specify a custom **<Web Site>** name during Apex Central installation, the default **<Web Site>** name is **Default Web Site**.
9. Right-click the **<Web Site>** and select **Edit Bindings...**.

   The **Site Bindings** screen appears.
10. Configure site bindings:
    a. Select the **https** type and click **Edit...**.

Tip

If the **https** type does not appear in the **Site Bindings** list, click **Add...** to manually add the **https** type.

b. Select the imported certificate file from the **SSL certificate** drop-down list.

c. Click **OK**.

d. Click **Close**.

11. Configure SSL settings:

a. Expand the **<Web Site>** and select the **WebApp** virtual directory.

b. From the **Features View** pane in the center, double-click **SSL Settings**.

c. Select **Require SSL**.

d. From the **Actions** pane on the right, click **Apply**.

The **Alerts** pane appears and indicates that the changes have been successfully saved.

12. Specify the HTTPS port number in the following locations:

- Registry key:

  `HKLM\Software\Wow6432Node\TrendMicro\TVCS\WebPort`

- System configuration file:

  In the `<Apex Central installation folder>\systemconfiguration.xml` file, locate `m_uiWebServer_Https_Port` and set the value to the HTTPS port number.

13. Restart the following services:

- Trend Micro Apex Central
- Trend Micro Management Infrastructure

- W3WP

Accessing the Web Console

Log on to the Apex Central console from the Apex Central server or from any endpoint with Internet access and a supported web browser.

Note

- You cannot use the same user account to log onto the Apex Central management console from multiple browsers on the same endpoint.
- You can use the same user account to log onto the Apex Central management console from different endpoints.

Procedure

1. Access the Apex Central management console locally or remotely.
   - To access the console locally, on the Apex Central server, go to **Start** > **Programs** > **Trend Micro Apex Central** > **Trend Micro Apex Central**.
   - To access the console remotely, open a web browser and go the following address:

     `http(s)://<host name>/WebApp/login.html`

     Where `<host name>` is the fully qualified domain name (FQDN), IP address, or server name of the Apex Central server.

   The **Log On** screen appears.
2. Provide logon credentials.
   - To log on using Apex Central account credentials, type the user name and password.

- To log on with domain credentials, type the domain and user name in the following format, and then type the password.

  ```
  domain\user_name
  ```

  Note

  Logging on with domain credentials requires an integrated Active Directory structure.

  For more information, contact your Active Directory administrator.

3. Click **Log On**.

   Note

   If your administrator enabled Two-Factor Authentication, follow the on-screen prompts.

   For more information on setting up Two-Factor Authentication, contact your administrator.

4. (Optional) When logging on with domain credentials, you can store the credentials for future use by clicking the **Log On with Domain Credentials** button.

   Note

   The **Log On with Domain Credentials** button only displays if the administrator added the Apex Central server to the Active Directory domain on the Active Directory server.

   Apex Central prompts you to provide your domain credentials and confirm the automatic logon. The next time you access the console, click **Log On with Domain Credentials** to log on automatically.

5. To log off from the web console, go to the top right corner of the web console and click **<account_name>** > **Log Off**.

Configuring Web Console Settings

Configure the Apex Central web console settings to determine how users access the web console and how often a screen refresh occurs.

Procedure

1. Go to **Administration** > **Settings** > **Web Console Settings**.

   The **Web Console Settings** screen appears.

2. Configure the required settings.

Section	Settings
Web Console Auto Refresh	Select **Enable Auto Refresh** to enable the Apex Central server to refresh screen data at the specified interval • **Refresh the web console every _ seconds**: Select the frequency (in seconds) in which the web console refreshes the screen data
Web Console Timeout	Select **Enable automatic log out from the web console** to enable the Apex Central server to log off users at the specified interval • **Automatically log out of the web console after _ minutes**: Select the period of inactivity (in minutes) in which the web console automatically logs off users
Security Settings	Select **Automatically lock user accounts after unsuccessful logon attempts** to enable the Apex Central server to lock user accounts after the specified number of unsuccessful logon attempts • **Consecutive unsuccessful attempts**: Specify the number of unsuccessful logon attempts • **Account lock duration**: Specify the amount of time (in minutes) to lock the user account
Concurrent Session Limitation	Select **Enforce one session per account** to prevent multiple web console logon sessions for the same user account

3. Click **Save**.

Chapter 3

The Dashboard

This section discusses how to use the Apex Central dashboard tabs and widgets.

Topics include:

- *About the Dashboard on page 3-2*
- *Tabs and Widgets on page 3-2*
- *Security Posture Tab on page 3-6*
- *Summary Tab on page 3-17*
- *Data Loss Prevention Tab on page 3-27*
- *Compliance Tab on page 3-33*
- *Threat Statistics Tab on page 3-39*

About the Dashboard

The **Dashboard** appears when you open the Apex Central web console or click **Dashboard** on the main menu. Each Apex Central user account has a completely independent dashboard. Any changes to the dashboard belonging to a specific user account will not affect the dashboards of the other user accounts.

The **Dashboard** contains the following:

- Tabs
- Widgets

Tabs and Widgets

Widgets are the core components of the **Dashboard**. Widgets provide specific information about various security-related events.

The information that widgets display comes from:

- Apex Central database
- Registered managed products

  For more information, see *Server Registration on page 8-2*.

- Trend Micro Smart Protection Network

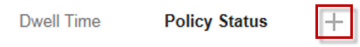
Tabs provide a container for widgets. The **Dashboard** supports up to 30 tabs.

Working with Tabs

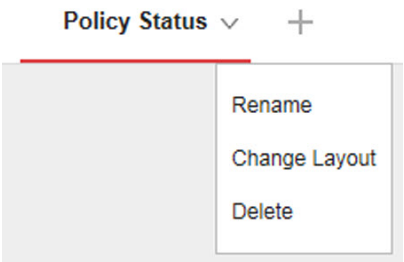
Manage tabs by adding, renaming, changing the layout, deleting, and automatically switching between tab views.

Procedure

1. Go to the **Dashboard**.
2. To add a tab:
   a. Click the add icon (+).



   b. Type a name for the new tab.
3. To rename a tab:
   a. Hover over the tab name and click the down arrow.

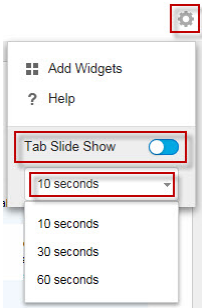


   b. Click **Rename** and type the new tab name.
4. To change the layout of the widgets for a tab:
   a. Hover over the tab name and click the down arrow.
   b. Click **Change Layout**.
   c. Select the new layout from the screen that appears.
   d. Click **Save**.
5. To delete a tab:
   a. Hover over the tab name and click the down arrow.

b. Click **Delete** and confirm.

6. To play a tab slide show:

   a. Click the **Settings** button to the right of the tab display.



   b. Enable the **Tab Slide Show** control.

   c. Select the length of time each tab displays before switching to the next tab.

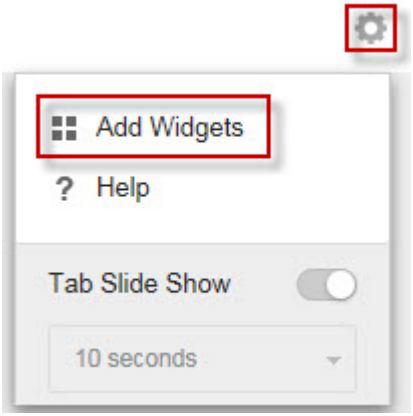
Working with Widgets

Manage widgets by adding, moving, resizing, renaming, and deleting items. You can also modify the products that contribute data for the widget.

Procedure

1. Go to the **Dashboard**.
2. Click a tab.
3. To add a widget:

   a. Click the **Settings** button to the right of the tab display.



b. Click **Add Widgets**.

c. Select widgets to add.

- In the drop-down on top of the widgets, select a category to narrow down the selections.
- Use the search text box on top of the screen to search for a specific widget.

d. Click **Add**.

4. To move a widget to a new location on the same tab, drag-and-drop a widget to a new location.

5. Resize widgets on a multi-column tab by pointing the cursor to the right edge of the widget and then moving the cursor to the left or right.

6. To rename a widget:

   a. Click the settings icon (>).

   b. Type the new title.

   c. Click **Save**.

7. To modify the product scope of the widget:

a. Click the settings icon (>).

b. Click the double arrow button ( ) in the **Scope** field.

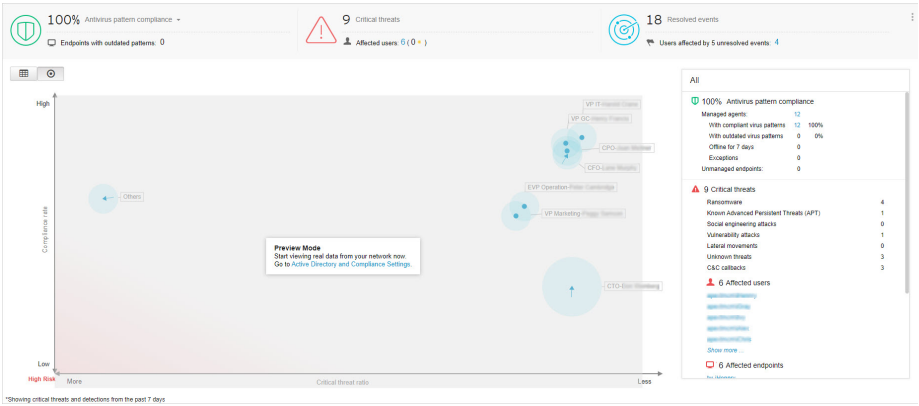
c. (Optional) Click the funnel icon ( ) to filter and search for products.

d. Select the products that contribute data for the widget and click **OK**.

e. Click **Save**.

8. To delete a widget, click the delete icon (>).

Security Posture Tab



The **Security Posture** tab provides a holistic summary of your network protection status by consolidating data about the compliance levels, critical threat detections, and detections stopped on your network. You can use the **Security Posture** chart to quickly identify high risk users and groups from an integrated Active Directory structure.

Note

To change the sample chart data and display sites or reporting lines based on your company network, enable Active Directory integration or create custom sites based on IP addresses.

For more information, see *Active Directory and Compliance Settings on page 6-1*.

By default, the **Security Posture** tab is toggled to **Chart** view ( ). To display the chart nodes, critical threats, and antivirus pattern compliance information in a table, toggle the **Table** view ( ).

Click the settings icon (>) to change the following information that displays on the tab.

- **Organization**: Specify the display name of the organization.
- **Active Directory grouping**: Specify whether the nodes on the chart represent **Sites** or **Reporting Lines** from your Active Directory.
- **Groups to display**: Select the top number of groups at the highest risk
- **Period**: Specify the time range for the data that displays on the chart.

Compliance Indicators

This section of the **Security Posture** tab provides information about the antivirus pattern compliance level or the Data Loss Prevention compliance level of your network.

As your network compliance level changes, the color of the compliance indicator icon changes to reflect the thresholds configured on the **Active Directory and Compliance Settings** screen.

The default view displays information for the **Antivirus pattern compliance** indicator.

Note

Changing the compliance indicator also changes the compliance level information that displays in the **Security Posture** chart.

For more information, see *Security Posture Chart on page 3-10*.

To change the compliance information that displays, click the name of the selected compliance indicator next to the down arrow icon ( ) and select one of the following indicators from the drop-down.

INDICATOR	DESCRIPTION
Antivirus pattern compliance	Displays the following information: • The percentage of Security Agents using acceptable Virus Pattern and Smart Scan Agent Pattern versions **Note** Apex Central supports Security Agents for the following managed products: • Apex One • Worry-Free Business Security Services For more information about configuring compliance indicator settings, see *Configuring the Antivirus Pattern Compliance Indicators on page 6-8*. • The total number of endpoints with outdated antivirus patterns on your network Click the count for **Endpoints with outdated patterns** to view detailed information about the affected endpoints in the User/Endpoint Directory. For more information, see *User/Endpoint Directory on page 7-2*.

Indicator	Description
Data Loss Prevention compliance	Displays the following information: • The percentage of Data Loss Prevention enabled Security Agents with an acceptable number of threat detections For more information about configuring compliance indicator settings, see *Configuring the Data Loss Prevention Compliance Indicator on page 6-10*. • The total number of endpoints with Data Discovery threat detections Click the count for **Endpoints with unacceptable threat detections** to view detailed information about the affected endpoints in the User/Endpoint Directory. For more information, see *User/Endpoint Directory on page 7-2*.

Critical Threats

The **Critical Threats** section of the **Security Posture** tab displays the total number of unique critical threats (by threat type) detected on your network, the total number of affected users, and the number of affected important users (marked by the star).

For more information about defining important users or endpoints, see *User or Endpoint Importance on page 7-38*.

Click the number of affected users to view additional details on the **User/ Endpoint Directory** screen.

For more information, see *User/Endpoint Directory on page 7-2*.

Critical threat detections include the following threat types.

Threat Type	Description
C&C callback	Attempts to communicate with a command-and-control (C&C) server to deliver information, receive instructions, and download other malware

Threat Type	Description
Known Advanced Persistent Threat (APT)	Intrusions by attackers that aggressively pursue and compromise chosen targets, often conducted in campaigns—a series of failed and successful attempts over time to get deeper and deeper into a target network—and not isolated incidents
Lateral movement	Searches for directories, email, and administration servers, and other assets to map the internal structure of a network, obtain credentials to access these systems, and allow the attacker to move from system to system
Ransomware	Malware that prevents or limits users from accessing their system unless a ransom is paid
Social engineering attack	Malware or hacker attacks that exploits a security vulnerability found in documents, such as a PDF file
Unknown threats	Suspicious objects (IP addresses, domains, file SHA-1 hash values, email messages) with the "high" risk level, as detected by Deep Discovery Inspector, endpoint security products, or other products with Virtual Analyzer
Vulnerability attack	Malware or hacker attacks that exploits a security weakness typically found in programs and operating systems

Resolved Events

This section of the **Security Posture** tab displays the total number of resolved and unresolved events on your network.

Click the count for the **Users affected by __ unresolved events** field to view detailed information about the users affected by unresolved events on your network.

For more information, see *User/Endpoint Directory on page 7-1*.

Security Posture Chart

The chart on the **Security Posture** tab displays the relationship between the critical threat ratio and compliance level of your network. The x-axis

indicates the ratio of critical threats to total endpoints within a site or reporting line. The y-axis indicates the compliance levels of the sites or reporting lines for the selected compliance indicator. You can use this data to quickly identify high risk users and groups from an integrated Active Directory structure.

Note

To change the sample chart data and display sites or reporting lines based on your company network, enable Active Directory integration or create custom sites based on IP addresses.

For more information, see *Active Directory and Compliance Settings on page 6-1*.

Hover over a node to view compliance and critical threat information for particular sites or reporting lines. The tail on a node indicates the direction from which the security status has changed over the specified time period.

- Click the settings icon (>) to change the **Active Directory grouping** (**Sites**, **Reporting Lines**) represented by the node.
- You can also customize sites and reporting lines by using the **Active Directory and Compliance Settings** screen.

  For more information, see *Endpoint and User Grouping on page 6-12*.

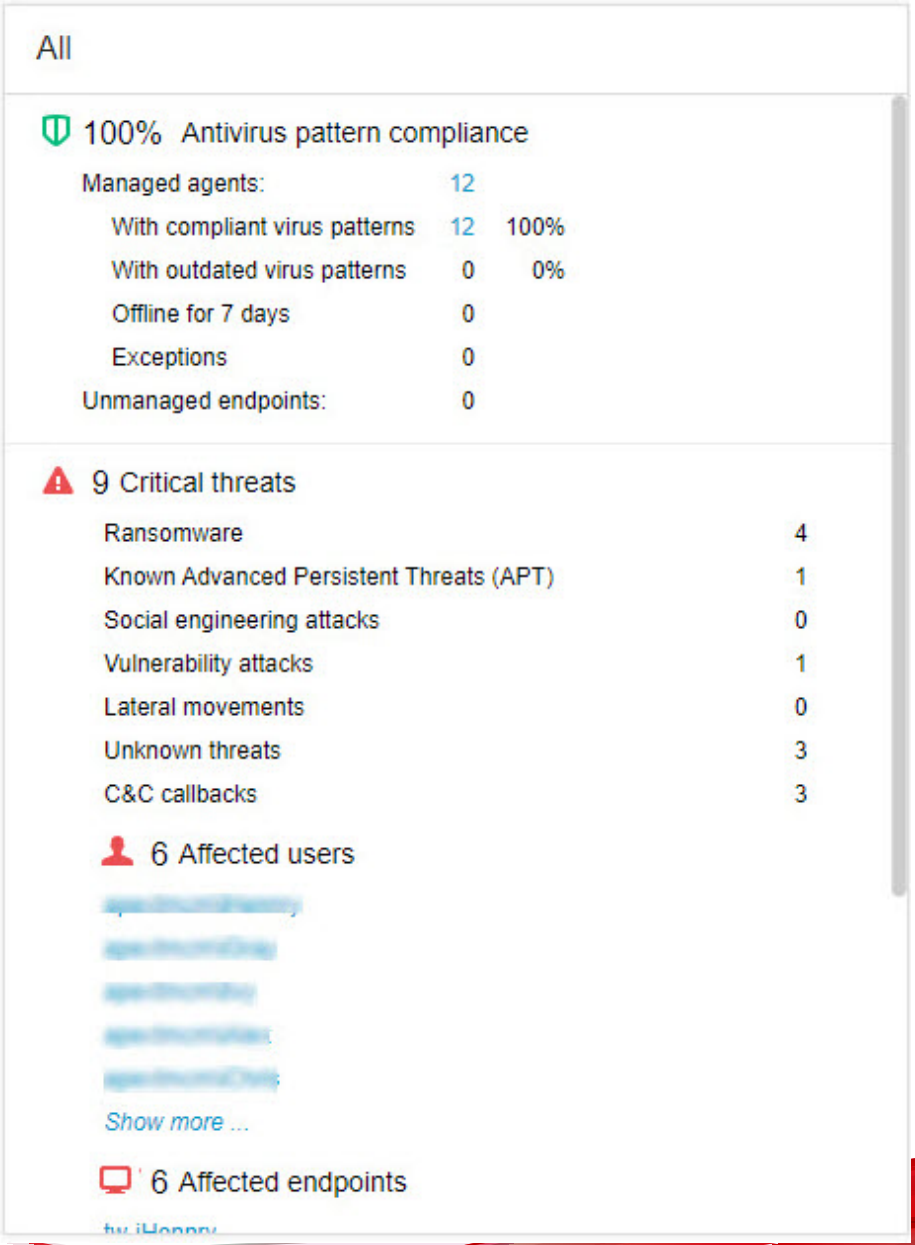
The default view displays the selected compliance indicator information for all nodes on your network for the last 7 days.

- Select a different compliance indicator to change the compliance information that displays.

  For more information, see *Compliance Indicators on page 3-7*.
- Click the settings icon (>) to change the **Period** for the data that displays.
- Click a node to view detailed information about the selected node in the summary panel on the right.

  For more information, see *Security Posture Details Pane on page 3-12*.

Security Posture Details Pane



The details pane on the **Security Posture** tab displays more detailed information about the compliance levels, critical threat detections, and total resolved/unresolved events on your network.

The default view displays the selected compliance indicator information for all nodes on your network for the last 7 days.

- Select a different compliance indicator to change the compliance information that displays.

  For more information, see *Compliance Indicators on page 3-7*.

- Click a node on the chart to display only the information for the selected node.

  For more information, see *Security Posture Chart on page 3-10*.

- Click the settings icon (>) to change the **Period** for the data that displays.

TABLE 3-1. Compliance Information

INDICATOR	DESCRIPTION

Antivirus pattern compliance	Displays the percentage of Security Agents using acceptable Virus Pattern and Smart Scan Agent Pattern versions
	
	You can also view the following details:
	
	• **Managed agents**: The number of endpoints that have Apex One or Worry-Free Business Security Services Security Agents installed
	
	  • **With compliant virus patterns**: The number of managed agents using acceptable Virus Pattern and Smart Scan Agent Pattern versions
	
	  • **With outdated virus patterns**: The number of managed agents not using acceptable Virus Pattern and Smart Scan Agent Pattern versions
	
	  • **Offline for 7 days**: The number of managed agents that have not communicated with the managed product server in 7 or more days
	
	  • **Exceptions**: The number of users or endpoints excluded from the compliance calculations
	
	• **Unmanaged endpoints**: The number of endpoints that do not have Apex One or Worry-Free Business Security Services Security Agents installed
	
	Expand the categories and click a count to view additional details about the affected endpoints.
	
	For more information, see the following topics:
	
	• *Configuring the Antivirus Pattern Compliance Indicators on page 6-8*
	
	• *User/Endpoint Directory on page 7-1*

Indicator	Description

Data Loss Prevention compliance	Displays the percentage of Data Loss Prevention enabled Apex One agents with an acceptable number of threat detections
	
	You can also view the following details:
	
	• **Managed agents**: The number of endpoints that have Apex One or Worry-Free Business Security Services Security Agents installed
	  ◦ **With acceptable threat detections**: The number of managed agents with an acceptable number of threat detections
	  ◦ **With unacceptable threat detections**: The number of managed agents that exceeded the acceptable number of threat detections
	  ◦ **Offline for 7 days**: The number of managed agents that have not communicated with the managed product server in 7 or more days
	  ◦ **Exceptions**: The number of users or endpoints excluded from the compliance calculations
	• **Unmanaged endpoints**: The number of endpoints that do not have Apex One or Worry-Free Business Security Services Security Agents installed
	
	Expand the categories and click a count to view additional details about the affected endpoints.
	
	For more information, see the following topics:
	
	• *Configuring the Data Loss Prevention Compliance Indicator on page 6-10*
	• *User/Endpoint Directory on page 7-1*

TABLE 3-2. Critical Threats

SECTION	DESCRIPTION
Critical threats	Displays the total number of unique critical threats (by threat type) detected on your network Lists all the critical threat types affecting your network For threat types with detections: • Expand the threat type to view a list of detections. • Click a detection to view additional details on the **Threat Information** screen. For more information, see *Affected Users on page 7-20*.
Affected users	Displays the total number of users affected by critical threats • Expand the section to view affected users. • Click an affected user to view additional details on the **User** information screen. Fore more information, see *Security Threats for Users on page 7-6*.
Affected endpoints	Displays the total number of endpoints affected by critical threats • Expand the section to view affected endpoints. • Click an affected endpoint to view additional details on the **Endpoint** information screen. Fore more information, see *Security Threats on Endpoints on page 7-14*.

TABLE 3-3. Total Events

DATA	DESCRIPTION
Total events	Displays the total number of events detected
Resolved events	Displays the number of resolved events on your network
Unresolved events	Displays the number of unresolved events on your network that require action

Data	Description
Affected users	Displays the number of users affected by unresolved events on your network Click the count to view details about the affected users. For more information, see *User/Endpoint Directory on page 7-1*.

Summary Tab

The **Summary** tab contains a predefined set of widgets that provides an overview of the security status of your network.

Note

You can add, delete, or modify the widgets that display on the **Summary** tab.

Available widgets:

- Critical Threats
- Users with Threats
- Endpoints with Threats
- Product Connection Status
- Product Component Status
- Ransomware Prevention

Critical Threats Widget

This widget displays the total number of unique critical threat types detected on your network and the number of affected users and threat detections for each threat type.

Click the settings icon (>) to change the default **View**.

- On the **Summary** tab or a custom tab, the **Affected users** view is selected by default.
- On the **Threat Investigation** tab, the **Threat detections** view is selected by default.

Note

- The widget lists critical threat types in order of severity.
- Individual users may be affected by more than one critical threat type.

Use the **Range** drop-down to select the time period for the data that displays.

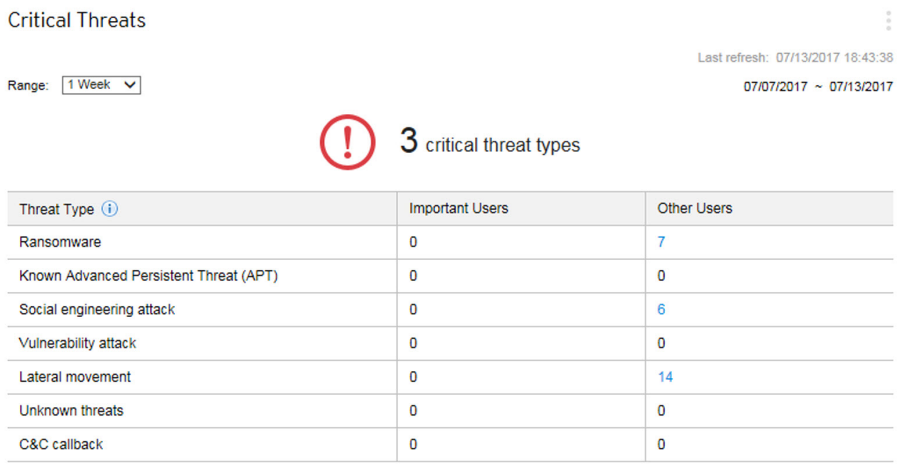


FIGURE 3-1. Affected Users View

The **Affected users** view displays the number of **Important Users** and **Other Users** affected by each threat type.

- Click the count in the **Important Users** or **Other Users** column, and then click the affected user you want to view.

  For more information, see *Security Threats for Users on page 7-6*.

- You can define important users or endpoints on the **User/Endpoint Directory** screen.

  For more information, see *User or Endpoint Importance on page 7-38*.

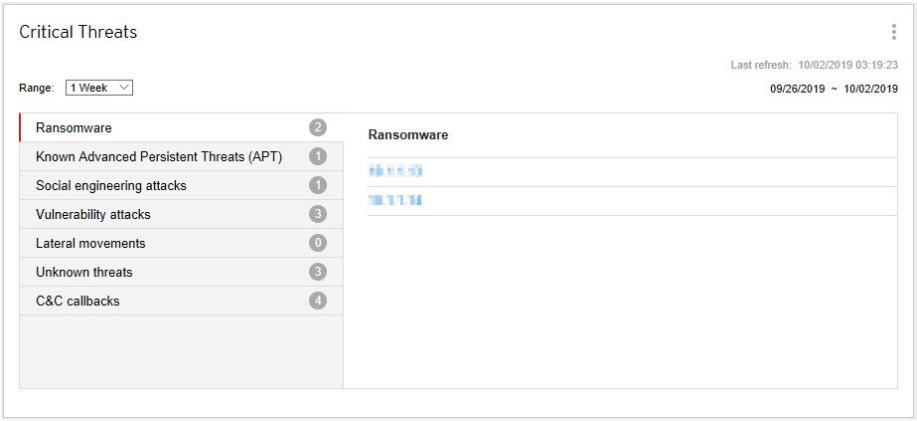


FIGURE 3-2. Threat Detections View

The **Threat detections** view displays the number of detections for each critical threat type.

- Click a critical threat type to view the specific threat detections.
- Click the hyperlink for a specific threat detection to view details about the affected users and automatically start a Root Cause Analysis to determine whether the threat has affected other endpoints on your network.

  For more information, see *Affected Users on page 7-20*.

Critical threat detections include the following threat types.

THREAT TYPE	DESCRIPTION
Ransomware	Malware that prevents or limits users from accessing their system unless a ransom is paid

Threat Type	Description
Known Advanced Persistent Threats (APT)	Intrusions by attackers that aggressively pursue and compromise chosen targets, often conducted in campaigns—a series of failed and successful attempts over time to get deeper and deeper into a target network—and not isolated incidents
Social engineering attacks	Malware or hacker attacks that exploits a security vulnerability found in documents, such as a PDF file
Vulnerability attacks	Malware or hacker attacks that exploits a security weakness typically found in programs and operating systems
Lateral movements	Searches for directories, email, and administration servers, and other assets to map the internal structure of a network, obtain credentials to access these systems, and allow the attacker to move from system to system
Unknown threats	Suspicious objects (IP addresses, domains, file SHA-1 hash values, email messages) with the "high" risk level, as detected by Deep Discovery Inspector, endpoint security products, or other products with Virtual Analyzer
C&C callbacks	Attempts to communicate with a command-and-control (C&C) server to deliver information, receive instructions, and download other malware

Users with Threats Widget

This widget displays information about users with security threat detections.

Use the **Range** drop-down to select the time period for the data that displays.

Click the **Important Users** or **Other Users** tabs to switch between the different views.

- For more information about defining important users or endpoints, see *User or Endpoint Importance on page 7-38*.

The table lists affected users in order by critical threat type severity first, and then by the number of threat detections for the user.

- Click the number in the **Threats** column for the user you want to view.

  Fore more information, see *Security Threats for Users on page 7-6*.

The **Most Critical Threat** column displays the following threat types.

Threat Type	Description
C&C callback	Attempts to communicate with a command-and-control (C&C) server to deliver information, receive instructions, and download other malware
Known Advanced Persistent Threat (APT)	Intrusions by attackers that aggressively pursue and compromise chosen targets, often conducted in campaigns—a series of failed and successful attempts over time to get deeper and deeper into a target network—and not isolated incidents
Lateral movement	Searches for directories, email, and administration servers, and other assets to map the internal structure of a network, obtain credentials to access these systems, and allow the attacker to move from system to system
Ransomware	Malware that prevents or limits users from accessing their system unless a ransom is paid
Social engineering attack	Malware or hacker attacks that exploits a security vulnerability found in documents, such as a PDF file
Unknown threats	Suspicious objects (IP addresses, domains, file SHA-1 hash values, email messages) with the "high" risk level, as detected by Deep Discovery Inspector, endpoint security products, or other products with Virtual Analyzer
Vulnerability attack	Malware or hacker attacks that exploits a security weakness typically found in programs and operating systems

Endpoints with Threats Widget

This widget displays information about endpoints with security threat detections.

Use the **Range** drop-down to select the time period for the data that displays.

Click the **Important Endpoints** or **Other Endpoints** tabs to switch between the different views.

- For more information about defining important users or endpoints, see *User or Endpoint Importance on page 7-38*.

The table lists affected users in order by critical threat type severity first, and then by the number of threat detections for the user.

- Click the number in the **Threats** column for the user you want to view.

  Fore more information, see *Security Threats on Endpoints on page 7-14*.

The **Most Critical Threat** column displays the following threat types.

Threat Type	Description
C&C callback	Attempts to communicate with a command-and-control (C&C) server to deliver information, receive instructions, and download other malware
Known Advanced Persistent Threat (APT)	Intrusions by attackers that aggressively pursue and compromise chosen targets, often conducted in campaigns—a series of failed and successful attempts over time to get deeper and deeper into a target network—and not isolated incidents
Lateral movement	Searches for directories, email, and administration servers, and other assets to map the internal structure of a network, obtain credentials to access these systems, and allow the attacker to move from system to system
Ransomware	Malware that prevents or limits users from accessing their system unless a ransom is paid
Social engineering attack	Malware or hacker attacks that exploits a security vulnerability found in documents, such as a PDF file
Unknown threats	Suspicious objects (IP addresses, domains, file SHA-1 hash values, email messages) with the "high" risk level, as detected by Deep Discovery Inspector, endpoint security products, or other products with Virtual Analyzer
Vulnerability attack	Malware or hacker attacks that exploits a security weakness typically found in programs and operating systems

Apex Central Top Threats Widget

This widget displays information about the malicious files and malicious URLs detected for a specified time range.

You can choose to display the data in a bar chart or table by clicking the display icons ().

Use the drop-down list above the chart/table to select the type of threat data to display.

- **Malicious Files**: Ranks the malicious files detected on your network by the number of detections
- **Malicious URLs**: Ranks the malicious URLs detected on your network by the number of detections

Click a bar, threat name, or detection number to open the **Log Query** screen that displays information about the affected endpoints, threat details, and detection count.

The default view displays the top 10 threats from all the managed products for which the logged on user account has access rights.

- Click the settings icon () to edit the widget title, product scope, or number of threats that displays.

Product Component Status Widget

This widget displays the component versions and compliance status of managed products or endpoints on your network. Use this widget to track managed products or endpoints with outdated components.

The default view displays the latest versions of components managed by Apex Central and the compliance status of managed products. The **Pattern** and **Engine** sections list components in order of the highest rate of non-compliance first. You can click the **Rate** column to change the sort order.

Click any of the components in the **Pattern** or **Engine** columns to view a pie chart that displays the number of managed products or endpoints using each component version.

Click the counts in the **Outdated/All** columns to view information about the component versions on outdated managed products, all managed products, outdated endpoints, or all endpoints.

Click the settings icon (>) to configure the following options:

Note

The settings icon ( ) does not display for widgets on the **Summary** tab.

- To modify the product scope of the widget, click the double arrow button (>>) in the **Scope** field and select the products that contribute data.
- To edit the components that display in the widget, select or clear components from the **Pattern** or **Engine** fields.
- To display compliance information for managed products, endpoints, or both, specify the **Source**.
- To specify whether to view data from all components reported by managed products or to view data from only components managed by Apex Central, select the **View**.

Data	Description
Pattern	Displays the name of the pattern file, template, or antispam rule
Engine	Displays the name of the scan engine
Latest Version	Displays the following information: • The latest version of the component downloaded by Apex Central • The latest version of the component that is available for download (reported by managed products)

Data	Description
Outdated/All	Displays the following information: • **Outdated**: The number of managed products or endpoints with outdated components Click the first count in the **Outdated/All** column to view information about the component versions on the outdated managed products or endpoints. • **All**: The total number of managed products or endpoints that use the component Click the second count in the **Outdated/All** column to view information about the component versions on all managed products or endpoints. **Note** This column displays when **Both** is selected for the **Source**.
Rate	Displays the percentage of managed products or endpoints with outdated components **Note** This column displays when **Both** is selected for the **Source**.

Product Connection Status Widget

This widget displays the connection status of all managed products that register to the Apex Central server.

The default view lists the connection status and managed server name of each managed product for which the logged on user account has access rights.

- To change the product scope, click the settings icon (>) and select a new **Scope**.

- To view a summary of the total number of managed products for each connection status, click the settings icon (>) and switch the **View** to **Summary**.

Click **View details** to view detailed information on the **Log Query** screen.

- For more information, see *Querying Logs on page 15-2*.

Status	Description
Active	Indicates that the product service is running and communication with the Apex Central server is established successfully
Inactive	Indicates that the product service is not running or is unable to establish communication with the Apex Central server
Abnormal	Indicates that the product service has not communicated with the Apex Central server within the user-defined agent communication time-out interval

Ransomware Prevention Widget

This widget provides an overview of all the attempted ransomware attacks for a specified time range.

The default view displays a summary of all the ransomware detections and categorizes all the attempts based on the infection channel.

- Click the ransomware detection count to view additional details.

Channel	Description
Messages	Ransomware detected in email messages or email attachments
Websites	Ransomware detected by Web Reputation Services
Network traffic	Ransomware detected by Apex One Suspicious Connections and Deep Discovery Inspector

Channel	Description
Cloud sync	Ransomware detected by Cloud App Security on cloud storage and Office 365 servers (Exchange Online, SharePoint Online, and OneDrive), or detected by Apex One in local folders on Apex One agents that sync with cloud storage
Files	Ransomware detected by File Reputation Services
Behaviors	Ransomware detected by Apex One Behavior Monitoring

Data Loss Prevention Tab

The **Data Loss Prevention** tab contains widgets that display information about DLP incidents, template matches, and incident sources.

The predefined widgets include:

- DLP Incidents by Severity and Status
- DLP Incident Trends by User
- DLP Incidents by User
- DLP Incidents by Channel
- DLP Template Matches
- Top DLP Incident Sources
- DLP Violated Policy

DLP Incident Trends by User Widget

This widget checks the number of DLP incident trends based on managed users. Data can be filtered by severity level, or filtered to show only the total number of incidents triggered by a specific user for a specified period of time. By default the widget displays data from all the managed products that a user's account privileges allow.

Important

This widget only displays data for Apex Central user accounts that have been assigned Data Loss Prevention (DLP) user roles.

For more information about reviewing DLP incidents and configuring DLP user roles, see https://docs.trendmicro.com/en-us/enterprise/apex-central-online-help/dlp_incidents.

Use the **Range** drop-down to select the time period for the data that displays.

Click the sections from the graph to open the **Incident Information** screen and review the summary of incidents.

Click the widget settings icon on the widget to access additional settings.

Setting	Description
Title	Specify a new and meaningful title for the widget in the field.
Range	Specify the time range when the DLP incidents were triggered.
Scope	Specify the data scope displayed by the widget. • Directly managed users • All managed users: Data is collected from both directly managed users and people under the directly managed users.
Severity	Specify the severity levels to filter the data.
Users to display	Specify the number of managed users to display.

Click **Save** to apply changes and update the widget data.

DLP Incidents by Severity and Status Widget

This widget checks the number of DLP incidents based on severity levels and incident status. Data can be filtered by severity level, as well as display the total number of new and high severity incidents. By default the widget displays data from all the managed products that a user's account privileges allow.

Important

This widget only displays data for Apex Central user accounts that have been assigned Data Loss Prevention (DLP) user roles.

For more information about reviewing DLP incidents and configuring DLP user roles, see https://docs.trendmicro.com/en-us/enterprise/apex-central-online-help/dlp_incidents.

Use the **Range** drop-down to select the time period for the data that displays.

Click the numbers in any column to open the **Incident Information** screen and review the summary of incidents.

To look up a specific incident, type an ID in the **Incident ID** field and click **Search**.

Tip

Each incident is assigned an ID number. ID numbers can be found by clicking a table link, in **Incident details updated** event notifications, or in **Data Loss Prevention** log query results.

Click the widget settings icon on the widget to access additional settings.

Setting	Description
Title	Specify a new and meaningful title for the widget in the field.
Range	Specify the time range when the DLP incidents were triggered.
Scope	Specify the data scope displayed by the widget. • Directly managed users • All managed users: Data is collected from both directly managed users and people under the directly managed users
Severity	Specify the severity levels to filter the data.

Click **Save** to apply changes and update the widget data.

DLP Incidents by User Widget

This widget checks the number of DLP incidents based on severity levels and managed users. Data can be filtered by severity level, as well as display the total number of new and high severity incidents triggered by specific users. By default the widget displays data from all the managed products that a user's account privileges allow. The widget shows a maximum of 50 users.

Important

This widget only displays data for Apex Central user accounts that have been assigned Data Loss Prevention (DLP) user roles.

For more information about reviewing DLP incidents and configuring DLP user roles, see https://docs.trendmicro.com/en-us/enterprise/apex-central-online-help/dlp_incidents.

Use the **Range** drop-down to select the time period for the data that displays.

Click the numbers in any column to open the **Incident Information** screen and review the summary of incidents.

To look up a specific user, type a few characters in the **User** field and click **Search**. For example typing `ke` shows all user names with `ke`, such as “Ken” and “Brooke”. You can also type a domain and user name, such as `domain1\chris`.

Note

User names must not contain the following characters: " [ ] : ; | = + * ? / \ < &> ,

Domain names must not contain the following characters: \ * + = | : ; " ? < &> ,

Click the widget settings icon on the widget to access additional settings.

Setting	Description
Title	Specify a new and meaningful title for the widget in the field.
Range	Specify the time range when the DLP incidents were triggered.

Setting	Description
Scope	Specify the data scope displayed by the widget. • Directly managed users • All managed users: Data is collected from both directly managed users and people under the directly managed users.
Severity	Specify the severity levels to filter the data.
Users to display	Specify the number of managed users to display.

Click **Save** to apply changes and update the widget data.

DLP Incidents by Channel Widget

This widget displays the total number of DLP incidents. Data can be filtered by the type of channels where the incident is triggered.

Use the **Range** drop-down to select the time period for the data that displays.

Use the **Channel** drop-down to filter out the type of channels where the incident is triggered.

This widget displays the number of DLP incidents and the ratio of channels compared to the total number of incidents. This widget displays this data by:

Data	Description
P2P	Displays all peer-to-peer DLP incidents by any managed product that the Data Scope specifies
IM	Displays all instant messaging DLP incidents by any managed product that the Data Scope specifies
Webmail	Displays all webmail DLP incidents by any managed product that the Data Scope specifies
Email	Displays all email DLP incidents by any managed product that the Data Scope specifies

Data	Description
Web App	Displays all web application DLP incidents by any managed product that the Data Scope specifies
Others	Displays the remaining DLP incidents by any managed product that the Data Scope specifies

Clicking links in the **Channel** column or sections from the graphs opens a screen that displays detailed information.

Data	Description
Channel	Type of channels where the DLP incidents is triggered
Incidents	Number of DLP incidents triggered
Percentage (%)	DLP incidents percentage of total number of incidents

To change the information that the widget displays, click > . On the dialog box that appears, specify the **Scope** by clicking >> and selecting the parent servers that the widget uses as its source.

DLP Template Matches Widget

This widget displays the type of DLP incidents on your network. Data can be filtered by template.

Use the **Range** drop-down to select the time period for the data that displays.

Clicking links in the **Template** column or sections from the graphs opens a screen that displays detailed information.

Data	Description
Template	Template triggered by DLP incidents
Incidents	Number of DLP incidents
Percentage (%)	DLP incidents percentage of total number of incidents

To change the information that the widget displays, click > . On the dialog box that appears, specify the **Scope** by clicking >> and selecting the parent servers that the widget uses as its source.

Top DLP Incident Sources Widget

This widget displays the total number of top DLP incident sources on your network. This data includes users, email addresses, host names, and IP addresses, which can be filtered by incident source.

Use the **Range** drop-down to select the time period for the data that displays.

Use the **Show** drop-down to select the data to be displayed.

DLP Violated Policy Widget

This widget displays the DLP violated policy. Use this widget to check the total number of DLP incidents. By default data is sorted by the number of incidents. To sort data by policy name, click the **Policy** column title.

Use the **Range** drop-down to select the time period for the data that displays.

Clicking links in the **Incidents** column opens a screen that displays detailed information.

Data	Description
Policy	Name of the policy where the DLP incidents is triggered
Incidents	Number of DLP incidents triggered

Compliance Tab

The **Compliance** tab contains widgets that display information relating to component or connection compliance for managed products or endpoints.

The predefined widgets are as follows:

- Product Application Compliance
- Product Component Status
- Product Connection Status
- Agent Connection Status

Product Application Compliance Widget

This widget displays the product version, language, build, and update status for managed products. This provides administrators a quick way to discern which managed product's applications are up-to-date and which require updating.

You can choose to display the data in a bar chart or table by clicking the display icons ().

Click the counts in the **Up-to-date** and **Out-of-date** columns to open a screen that displays detailed information. Apex Central performs a log query to provide the detailed information.

Data	Description
Product	The managed product registered to Apex Central
Version	Version of the managed product
Language	Language version of the managed product
Build	Build number of the managed product
Up-to-date	Number of products that are considered updated Edit the widget to specify the minimum product version that should still be considered "up-to-date". Click the count to view more details about the product.
Out-of-date	Number of products that are "out-of-date" Click the count to view more details about the product.

Data	Description
Up-to-date Rate (%)	Percentage of products that are "up-to-date"

By default the widget displays data from all the managed products that a user's account privileges allow.

Specify a bar graph or a table to display the data. By default, data is displayed as a bar graph.

Click **Edit** to access the following options:

- Click **Scope** > **Browse** to specify the products that contribute data for the widget.

  The data scope specifies the products which the widget uses to display data. This can have a drastic affect on the usefulness of the information that the widget displays.

- On the **Up-to-date range** drop-down, specify the number of product versions away from the latest build that should still be considered "up-to-date".

Click **Save** to apply changes and exit.

Product Component Status Widget

This widget displays the component versions and compliance status of managed products or endpoints on your network. Use this widget to track managed products or endpoints with outdated components.

The default view displays the latest versions of components managed by Apex Central and the compliance status of managed products. The **Pattern** and **Engine** sections list components in order of the highest rate of non-compliance first. You can click the **Rate** column to change the sort order.

Click any of the components in the **Pattern** or **Engine** columns to view a pie chart that displays the number of managed products or endpoints using each component version.

Click the counts in the **Outdated/All** columns to view information about the component versions on outdated managed products, all managed products, outdated endpoints, or all endpoints.

Click the settings icon (>) to configure the following options:

Note

The settings icon ( ) does not display for widgets on the **Summary** tab.

- To modify the product scope of the widget, click the double arrow button (>>) in the **Scope** field and select the products that contribute data.
- To edit the components that display in the widget, select or clear components from the **Pattern** or **Engine** fields.
- To display compliance information for managed products, endpoints, or both, specify the **Source**.
- To specify whether to view data from all components reported by managed products or to view data from only components managed by Apex Central, select the **View**.

DATA	DESCRIPTION
Pattern	Displays the name of the pattern file, template, or antispam rule
Engine	Displays the name of the scan engine
Latest Version	Displays the following information: • The latest version of the component downloaded by Apex Central • The latest version of the component that is available for download (reported by managed products)

DATA	DESCRIPTION
Outdated/All	Displays the following information: • **Outdated**: The number of managed products or endpoints with outdated components Click the first count in the **Outdated/All** column to view information about the component versions on the outdated managed products or endpoints. • **All**: The total number of managed products or endpoints that use the component Click the second count in the **Outdated/All** column to view information about the component versions on all managed products or endpoints. **Note** This column displays when **Both** is selected for the **Source**.
Rate	Displays the percentage of managed products or endpoints with outdated components **Note** This column displays when **Both** is selected for the **Source**.

Product Connection Status Widget

This widget displays the connection status of all managed products that register to the Apex Central server.

The default view lists the connection status and managed server name of each managed product for which the logged on user account has access rights.

- To change the product scope, click the settings icon (>) and select a new **Scope**.

- To view a summary of the total number of managed products for each connection status, click the settings icon (>) and switch the **View** to **Summary**.

Click **View details** to view detailed information on the **Log Query** screen.

- For more information, see *Querying Logs on page 15-2*.

Status	Description
Active	Indicates that the product service is running and communication with the Apex Central server is established successfully
Inactive	Indicates that the product service is not running or is unable to establish communication with the Apex Central server
Abnormal	Indicates that the product service has not communicated with the Apex Central server within the user-defined agent communication time-out interval

Agent Connection Status Widget

This widget displays the connection status of agents with their parent servers. Agents for the following managed products are displayed:

- Endpoint Sensor
- Endpoint Encryption
- Mobile Security
- Mobile Security (for Mac)
- Apex One
- Vulnerability Protection
- Worry-Free Business Security Services

By default the widget displays data from all the managed products that a user's account privileges allow.

Click the values in the **Online**, **Offline**, or **Total** columns to view more information. Apex Central performs a log query to provide the information.

Data	Description
Server	Parent servers
Online	Agents connected to their parent servers
Offline	Agents disconnected from their parent servers
Total	Total number of endpoints

To change the information that the widget displays, click ⋮ > . On the dialog box that appears, specify the **Scope** by clicking >> and selecting the parent servers that the widget uses as its source.

Threat Statistics Tab

The **Threat Statistics** tab contains widgets that display aggregated detections of security threats.

The predefined widgets include:

- Apex Central Top Threats
- Apex Central Threat Statistics
- Threat Detection Results
- Policy Violation Detections
- C&C Callback Events

Apex Central Top Threats Widget

This widget displays information about the malicious files and malicious URLs detected for a specified time range.

You can choose to display the data in a bar chart or table by clicking the display icons ( ).

Use the drop-down list above the chart/table to select the type of threat data to display.

- **Malicious Files**: Ranks the malicious files detected on your network by the number of detections
- **Malicious URLs**: Ranks the malicious URLs detected on your network by the number of detections

Click a bar, threat name, or detection number to open the **Log Query** screen that displays information about the affected endpoints, threat details, and detection count.

The default view displays the top 10 threats from all the managed products for which the logged on user account has access rights.

- Click the settings icon (>) to edit the widget title, product scope, or number of threats that displays.

Apex Central Threat Statistics Widget

This widget displays the total number of security threat detections on your network. Data can be filtered by security threat type or by the location on your network where the threat is detected.

- Product Category

Data	Description
File server	Security threats on file servers detected by any managed product that the Data Scope specifies
Network	Security threats on your network detected by any managed product that the Data Scope specifies
Unknown	Unidentified security threats

Data	Description
Mail	Security threats on email servers detected by any managed product that the Data Scope specifies
Desktop	Security threats on desktops detected by any managed product that the Data Scope specifies
Gateway	Security threats at the gateway detected by any managed product that the Data Scope specifies
Apex Central server	Security threats on Apex Central servers detected by any managed product that the Data Scope specifies

- Violation Type

Data	Description
Behavior Monitoring	Behavior Monitoring violation detected by any managed product that the Data Scope specifies
Content Violation	Content security violations (spam, blocked keywords and expressions) detected by any managed product that the Data Scope specifies
Device Control	Device Control violation detected by any managed product that the Data Scope specifies
Firewall Violation	Firewall violation by any managed product that the Data Scope specifies
Network Content Inspection	Network Content Inspection violation detected by any managed product that the Data Scope specifies
Predictive Machine Learning	Predictive Machine Learning detection by any managed product that the Data Scope specifies
Spyware/Grayware	Spyware/grayware detected by any managed product that the Data Scope specifies
Suspicious Files	Suspicious file detection by any managed product that the Data Scope specifies
Virus/Malware	Viruses/malware detected by any managed product that the Data Scope specifies

Data	Description
Web Security	Web security violations (malicious URLs, blocked URLs) detected by any managed product that the Data Scope specifies

Note

The widget can display data for only one information type at a time.

Click the links in the **Detections** column to open a screen that displays detailed information. Apex Central performs a log query to provide the detailed information.

Data	Description
Type	Type of security threat or managed product where the threat is detected
Detections	Number of security threats detected
Percentage (%)	Security threat percentage of total number of detected threats

Specify the date range for the data that the widget displays:

- Today
- Last 7 days
- Last 14 days
- Last 30 days

Specify how the widget displays the data:

- Pie chart
- Bar chart
- Tabular
- Line chart

By default the widget displays data from all the managed products that a user's account privileges allow.

To change the information that the widget displays, click > . On the dialog box that appears, specify the **Scope** by clicking >> and selecting the parent servers that the widget uses as its source.

Threat Detection Results Widget

This widget displays the number of threat detections and the ratio of threats compared to the total number of detections. The widget can display data for only one information type at a time. Clicking links in the **Detections** column opens a screen that displays detailed information. Apex Central performs a log query to provide the detailed information.

Data	Description
Results	The action or result of the action performed by the managed product **Note** This column does not display for the **Web Security** threat type
Policy/Rule	The type of policy/rule applied under the **Web Security** threat type. **Note** This column does not display for other listed threat types.
Detections	The number of security threats detected
Percentage (%)	The percentage of total detections that are security threats

This widget displays threat detections for the following threat types:

Table 3-4. Threat Types

Threat Type	Description
Virus/Malware	Displays the action taken on all files by any managed product that the Data Scope specifies. For example: Cleaned, Access denied, and so on.

Threat Type	Description
Spyware/Grayware	Displays the action taken on all files by any managed product that the Data Scope specifies. For example: Successful, Further action required, and so on.
Content Security	Displays the action taken on all email messages by any managed product that the Data Scope specifies. For example: Deleted, Attachments stripped, and so on.
Web Security	Displays all web security violations blocked using the policies by any managed product that the Data Scope specifies. For example: File blocking, File name, and so on.
Network Virus	Displays the action taken on all network viruses by any managed product that the Data Scope specifies

Click the settings icon (>) to edit the widget title, product scope, or type of threats that displays.

Policy Violation Detections Widget

This widget displays the policy violation detections for Network VirusWall Enforcer devices. Clicking links in the **Detections** column opens a screen that displays detailed information. Apex Central performs a log query to provide the detailed information.

Data	Description
Type	Lists **Service Violations** as a type of security threat
Updated	Last updated date
Detections	Number of service violations Network VirusWall Enforcer devices detect

Click the settings icon (>) to edit the widget title or product scope.

Note

This widget only displays policy violation detections for Network VirusWall Enforcer.

Click **Save** to apply changes and exit.

C&C Callback Events Widget

This widget displays the number of C&C callback attempts based on compromised hosts or callback addresses. The widget can display data for only one information type at a time. Clicking the numbers in any table cells opens the **C&C Callback Events** screen, which contains the following callback summary data:

Data	Description
Compromised Host	Affected host or email address
Callback Address	URL, IP address, or email address to which a compromised host attempts a callback
C&C Server Location	Region and country where the C&C server locates
Callback Attempts	Number of contacts made between callback addresses and compromised hosts
Latest Callback Address/ Compromised Host	URL, IP address, or email address to which the last callback attempt was logged
Callback Addresses/ Compromised Hosts (with numbers displayed in the columns)	Number of compromised hosts or callback addresses associated with the callback attempts
Logged By	Name of the managed product that logged the event

Click the settings icon (>) to edit the following:

- **Title**: Modify the title of the **C&C Callback Events** widget.
- **Scope**: Click >> and select the parent servers that the widget uses as the source.
- **C&C list source**: Select **Global Intelligence**, **Virtual Analyzer**, or **User-defined** as the C&C list sources.

- **Items to display**: Select the number of items to display on the widget.

Click **Save** to apply changes and exit.

Chapter 4

Account Management

This section discusses how to create and administer Apex Central user accounts and roles.

Topics include:

- *User Accounts on page 4-2*
- *User Roles on page 4-15*

User Accounts

The **User Accounts** screen provides a list of all previously configured user accounts for the Apex Central console. You can use this screen to set up user account and a particular role to each user.

For more information about user roles, see *User Roles on page 4-15*.

The following table outlines the tasks available on the **User Accounts** screen.

Task	Description
Add user accounts	Click **Add** to set up a new user account or import users or groups from an integrated Active Directory structure. For more information, see *Adding a User Account on page 4-5*. **Note** Apex Central allows you to create user accounts for users and groups from an integrated Active Directory structure. For more information, see *Active Directory Integration on page 6-2*.
Delete user accounts	Select the check box next the **User/Group Name** of an existing account and click **Delete** to permanently remove an account. **WARNING!** Deleting an account permanently removes all previously configured account information from the Apex Central server.
Enable two-factor authentication	Click the **Enable Two-Factor Authentication** link to require users to type the verification code generated by the Google Authenticator app in order to sign in to Apex Central. For more information, see *Enabling or Disabling Two-Factor Authentication on page 4-12*.

TASK	DESCRIPTION
Disable two-factor authentication	Click the **Disable Two-Factor Authentication** link to only require the use of a valid user account and password to sign in to Apex Central. For more information, see *Enabling or Disabling Two-Factor Authentication on page 4-12*.
Edit user accounts	Click the **User/Group Name** of a user account to edit the user information. For more information, see *Editing a User Account on page 4-11*.
Unlock user accounts	Click the **Unlock** button in the **Locked** column to unlock an account that exceeded the specified number of consecutive unsuccessful logon attempts. For more information, see *Configuring Web Console Settings on page 2-8*.
Enable user accounts	Click the  icon in the **Enable** column to enable a disabled account to sign in to the Apex Central console. **Note** You can also enable a disabled account by editing the account. For more information, see *Editing a User Account on page 4-11*.

Task	Description
Disable user accounts	Click the  icon in the **Enable** column to temporarily prevent a user from signing in to the Apex Central console. **Note** • You can also disable a user account by editing the account. For more information, see *Editing a User Account on page 4-11*. • Apex Central cannot disable accounts for Active Directory users or groups. To disable an Active Directory account, you must disable the account from the Active Directory server. For more information, contact your Active Directory administrator.

Root Account

Apex Central allows you to specify the name of the **<Root>** account upon installation. The **<Root>** account can view all the functions in the menu, use all available services, and install agents. You cannot delete the **<Root>** account.

The **<Root>** account also has the following additional privileges:

- The **<Root>** account can unlock a locked function by forcibly logging out the user who currently uses the function.
- The **<Root>** account can bypass Two-Factor Authentication.

Note

Apex Central accounts log on to Apex Central only and not the entire network. Apex Central user accounts are not the same as network domain accounts.

Adding a User Account

Use the **User Accounts** screen to create new user accounts for Apex Central administrators or to import users or groups from an integrated Active Directory structure.

Important

- Only the **<Root>** account created during installation, or user accounts that have been assigned the **Administrator** or **Administrator and DLP Compliance Officer** user role, can create new user accounts on Apex Central.
- Importing users or groups from an Active Directory structure requires an integrated Active Directory structure.

  For more information, see *Active Directory Integration on page 6-2*.
- Integrating an Active Directory structure allows Active Directory users or groups to log on to Apex Central by using the **Log On with Domain Credentials** button without having to provide their user names and passwords.

  For more information, see *Accessing the Web Console on page 2-6*.

Procedure

1. Go to **Administration** > **Account Management** > **User Accounts**.

   The **User Accounts** screen appears.
2. Click **Add**.

   The **User Accounts > Step 1: User Information** screen appears.
3. Select **Enable this account** to enable the account upon creation.

Note

Apex Central cannot disable accounts for Active Directory users or groups. To disable an Active Directory account, you must disable the account from the Active Directory server.

For more information, contact your Active Directory administrator.

4. Select the account type.

   - To create a new Apex Central user account:

     a. Select **Custom account**.

     b. Configure the following required account information:

Information	Description
User name	Type the account name that the user provides to log on to the Apex Central web console.
Full name	Type the full name of the user.
Password	Type the password that the user provides to log on to the Apex Central web console. **Note** Users can change their passwords on the **My Account** screen. For more information, see *Viewing or Editing User Account Information on page 4-13*.
Confirm password	Type the same password provided in the **Password** field.

Information	Description
Email address	Type the email address to which the user has notifications delivered. **Note** • This field is required for Apex Central to send reports and event notifications by email or when Two-Factor Authentication is enabled. • You must also configure SMTP server settings in order for Two-Factor Authentication to work properly and for Apex Central to send reports and notifications by email. For more information, see *Configuring SMTP Server Settings on page 16-4*.

- To import users or groups from an integrated Active Directory structure:

  a. Select **Active Directory user or group**.

  b. Search for Active Directory users or groups using the following:

  - **User/Group name**

    Note

    - This field is required.
    - You can use an asterisk wildcard (*) to search using partial string matching.

      For example, typing “tom*” searches for all users or groups with names that start with “tom”.

  - **Base distinguished name**

  c. Click **Search**.

Active Directory accounts that match the specified criteria appear in the **Search result** list.

d. Select Active Directory users or groups from the **Search result** list and click **>**.

The selected Active Directory users or groups appear in the **Selected users/groups** list.

Important

- Apex Central requires you to manually synchronize Active Directory data before imported users or groups can log on to Apex Central using their Active Directory domain credentials.

  For more information, see *Active Directory Integration on page 6-2*:

- You do not need to manually synchronize Active Directory data from an Active Directory structure migrated from a previous version of Control Manager. Users and groups from the migrated Active Directory structure can log on to Apex Central as soon as the migration completes.

5. Click **Next**.

   The **User Accounts > Step 2: Access Control** screen appears.

6. Select a user role from the **Select role** drop-down.

Note

- The access rights defined for a user role take precedence over the managed product/folder access rights that you configure for individual user accounts.
- The DLP Compliance Officer and DLP Incident Reviewer roles are only available to Active Directory users or groups.

  For more information, see *User Roles on page 4-15*.

7. In the **Select accessible products/folders** tree, select the products or folders that the user can access in the Product Directory structure.

Note

You can restrict a user to a single managed product or allow access to the entire Product Directory. Assigning access to a folder allows users to access all of the sub-folders and managed products.

For more information, see *Managed Product Access Control on page 4-9*.

8. Specify the managed product/folder access rights for the user account.

Note

Access rights determine the actions that the user account can perform on managed products. Privileges granted to an account cannot exceed those of the grantor.

For more information, see *Managed Product Access Control on page 4-9*.

9. Click **Finish**.

   The new user account appears on the **User Accounts** screen.

Managed Product Access Control

The access rights you specify for selected managed products/folders determine the controls available to the user on the **Product Directory** screen. For example, if you only specify the **Execute** access right for the selected managed products/folders, then the user can only use the **Tasks** button on the **Product Directory** screen.

Note

The actions available on the **Product Directory** screen buttons dynamically change based on user role, managed product/folder access rights, and the managed product/folder you select in the Product Directory structure.

For more information, see *Product Directory on page 10-2*.

You can specify one or more of the following access rights for the accessible managed products/folders.

Access Right	Description
Execute	Allows the user account to use the **Tasks** button on the **Product Directory** screen to execute tasks on managed products located in accessible folders For more information, see *Executing Managed Product Tasks on page 10-8*.
Configure	Allows the user account to use the **Configure** button on the **Product Directory** screen to configure managed product settings or log on to the managed product web console from Apex Central For more information, see *Configuring Managed Product Settings on page 10-9*.
Edit Directory	Allows the user account to use the **Directory Management** button to organize accessible managed products or folders in the Product Directory structure For more information, see *Directory Management on page 10-11*.

Note

When administrators specify which products a user can access, the administrator is also specifying what information a user can access from Apex Central. The following information is affected: component information, logs, product summary information, security information, and information available for reports and log queries.

Example:

Bob and Jane are Apex One administrators. Both have identical user role permissions (they have access to the same menu items in the web console). However, Jane oversees operations for all Apex One servers. Bob only oversees operations for Apex One servers protecting desktops for the Marketing department. The information that they can view in the web console will be very different. Bob logs on and only sees information that is applicable to the Apex One servers that his Apex Central user account allows (the Apex One servers for the Marketing department). When Jane logs on, she sees information for all Apex One servers, because her Apex Central user account grants her access to all Apex One servers registered to Apex Central.

Editing a User Account

Use the **User Accounts** screen to edit the user information, user role, or managed product/folder access rights of any user account that you have permission to edit.

Important

- The **<Root>** account created during installation can edit any user account on the Apex Central network. Any user account assigned the **Administrator** or **Administrator and DLP Compliance Officer** user role can edit any other user account on the Apex Central network, except for the **<Root>** account.
- Modifying the access rights of a user account terminates all Apex Central sessions for the modified account and all accounts created by the modified account.
- You cannot change the user name of an existing account.

Procedure

1. Go to **Administration** > **Account Management** > **User Accounts**.

   The **User Accounts** screen appears.

2. Click the **User/Group Name** of the account to modify.

   The **User Accounts > Step 1: User Information** screen appears.

3. To enable or disable the account, select or deselect the **Enable this account** check box.

4. Modify the user information.

5. Click **Next**.

   The **User Accounts > Step 2: Access control** screen appears.

6. Modify the user role, accessible products/folders, or access rights.

7. Click **Finish** to apply changes.

Enabling or Disabling Two-Factor Authentication

Two-Factor Authentication provides extra security on user accounts by requiring users to type the verification code generated by the Google Authenticator app in order to sign in to Apex Central.

Important

Two-Factor Authentication for Apex Central requires the following:

- Configuring an email address for each user account

  For more information, see *Viewing or Editing User Account Information on page 4-13*.

- Configuring SMTP server settings to send email notifications

  For more information, see *Configuring SMTP Server Settings on page 16-4*.

- Downloading and installing the Google Authenticator app on each user's mobile device

Note

- The **<Root>** account can always bypass Two-Factor Authentication.
- Although the verification code generated by the Google Authenticator app changes every 30 seconds, users can still use previously generated codes up to 5 minutes old to sign in to Apex Central.

Procedure

1. Go to **Administration** > **Account Management** > **User Accounts**.

   The **User Accounts** screen appears.

2. To enable two-factor authentication:

a. Click **Enable Two-Factor Authentication**.

   A confirmation dialog box appears.

b. Click **Enable**.

   - A warning message appears at the top of the **User Accounts** screen, prompting you to configure email addresses for all user accounts.

     Click the link to view users without configured email addresses.

   - The email address field on the **Add User Account** screen becomes a required field.

   - Apex Central requires users to type the verification code generated by the Google Authenticator app, in addition to a valid user name and password, in order to sign in.

3. To disable two-factor authentication:

a. Click **Disable Two-Factor Authentication**.

   A confirmation dialog box appears.

b. Click **Disable**.

   Signing into the Apex Central web console will only require the use of a valid user account and password.

Viewing or Editing User Account Information

Use the **My Account** screen to view or change account information for your own user account or for a user account that you created.

For information about editing the user role assigned to a particular user account, see *Editing a User Account on page 4-11*.

Procedure

1. Go to **Administration** > **Account Management** > **My Account**.

   The **My Account** screen appears.

2. Configure the following account information:

Information	Description
Full name	Type the full name of the user. **Note** This field is required.
Password	Type the password that the user provides to log on to the Apex Central web console. **Note** This field is required.
Confirm password	Type the same password provided in the **Password** field. **Note** This field is required.

Information	Description
Email address	Type the email address to which the user has notifications delivered. **Note** • This field is required for Apex Central to send reports and event notifications by email and for Two-Factor Authentication. For more information about Two-Factor Authentication, see *Enabling or Disabling Two-Factor Authentication on page 4-12*. • In order for Apex Central to send reports and event notifications by email, you must also configure SMTP server settings. For more information, see *Configuring SMTP Server Settings on page 16-4*.
Telephone number	Type the landline phone number to associate with the user account.
Mobile phone number	Type the cellular phone number to associate with the user account.

3. Click **Save** to apply changes.

User Roles

The **User Roles** screen provides a list of all default user roles and all custom user roles that you can assign to user accounts. User roles define which areas of the Apex Central web console a user can access and control. You can use this screen to create and edit custom Apex Central user roles.

Important

If a custom user role in a previous Apex Central version has permissions to Policy Management menu items, the role will have full control permissions after upgrading to the current release. You can change the permissions to "Maintain" or "Read-only". When upgrading from a Apex Central version that does not include Policy Management, custom user roles have no permissions to manage or view Policy Management features until you choose to modify the role settings.

Note

- Only the **<Root>** account created during installation, or user accounts that have been assigned the **Administrator** or **Administrator and DLP Compliance Officer** user role, can create new user accounts and assign user roles.
- The access rights defined for a user role take precedence over the managed product/folder access rights that you configure for individual user accounts.

  For more information, see *Managed Product Access Control on page 4-9*.

The following table outlines the tasks available on the **User Roles** screen.

Task	Description
Add user roles	Click **Add** to create a new custom user role. For more information, see *Adding a User Role on page 4-20*.
Delete user roles	Select the check box next the **Name** of an custom user role and click **Delete** to permanently remove the role. **Note** You cannot delete any of the default user roles provided by Trend Micro Apex Central™.

Task	Description
Edit user roles	Click the **Name** of a user role to edit or view assigned access rights. For more information, see *Editing a User Role on page 4-21*. **Note** You cannot edit any of the default user roles provided by Trend Micro Apex Central™. For more information about the default user roles, see *Default User Roles on page 4-17*.

Default User Roles

Apex Central provides default user roles that you can assign to user accounts. User roles define which areas of the Apex Central web console a user can access and control. Although you can add access rights to a default user role, you cannot remove any of the predefined access rights from a default user role.

Note

Only the **<Root>** account created during installation, or user accounts that have been assigned the **Administrator** or **Administrator and DLP Compliance Officer** user role, can create new user accounts and assign user roles.

For more information about adding or editing custom user roles, see the following topics:

- *Adding a User Role on page 4-20*
- *Editing a User Role on page 4-21*

The following table describes the default roles available on the **User Roles** screen.

Role	Description
Administrator_and_DLP Compliance_Officer	• Can perform all actions on all menu items • Can monitor, review, and investigate DLP incidents triggered by any Active Directory user
Administrator	• Can perform all actions on all menu items • Cannot monitor, review, or investigate DLP incidents triggered by any Active Directory user
DLP_Compliance_Officer	• Can perform all actions on the **Dashboard** • Can monitor, review, and investigate DLP incidents triggered by any Active Directory user **Note** This user role is only available to Active Directory users or groups.
DLP_Incident_Reviewer	• Can perform all actions on the **Dashboard** • Can only monitor, review, and investigate DLP incidents triggered by Active Directory users that report to the DLP Incident Reviewer **Note** This user role is only available to Active Directory users or groups. For more information, see the following topics: • *Reporting Lines on page 6-14* • *Adding a User Account on page 4-5*

ROLE	DESCRIPTION
Operator	• Can perform all actions on all the **Dashboard** and **Directories** menu items • Can perform log queries, view reports generated and sent by other users, and update user account information • Can only view information on the **Policy Management** screen • Cannot monitor, review, or investigate DLP incidents triggered by any Active Directory user
Power_User	• Can perform all actions on all the **Dashboard** and **Directories** menu items • Can perform log queries, maintain logs, and generate and maintain reports • Can only view information on the **Policy Management** screen • Cannot monitor, review, or investigate DLP incidents triggered by any Active Directory user
Read-only_User	• Can view information on all menu items and update user account information • Can perform all actions on the **Dashboard** • Can perform log queries, generate reports, create custom report templates, search directories, and create and use custom tags/filters to manage the User/Endpoint Directory tree • Cannot view reports generated by other users
SSO_User	• Can perform all actions on all menu items • Cannot monitor, review, or investigate DLP incidents triggered by any Active Directory user **Note** This user role is hidden by default.
Threat_Investigator	• Can investigate security threat incidents on managed endpoints/servers

Note

The **Operator** and **Power User** roles in previous versions do not have permissions to perform actions on **Policy Management** menu items. After upgrading to this version, these two roles will have read-only permissions, which cannot be changed.

Adding a User Role

You can use the **User Roles** screen to create custom user roles.

Procedure

1. Go to **Administration** > **Account Management** > **User Roles**.

   The **User Roles** screen appears.

2. Click **Add**.

   The **Add Role** screen appears.

3. In the **Role Information** section:

   a. Type a unique user role name in the **Name** field.

   b. Provide a meaningful description for the user role in the **Description** field.

   Note

   The description appears in the User Roles list. Providing a meaningful description can help administrators quickly identify a user role if the user role name cannot fully convey the use for the user role.

4. In the **Menu Access Control** section, select the accessible menu items for the user role.

5. Specify access rights for the selected menu items.

- **Full control, except**: Select to allow users to perform all actions available on the accessible menu items
  - **Create, copy and import policies**: Select to prevent users from creating, copying, or importing policies on the **Policy Management** screen

    For more information, see *Policy Management on page 13-2*.
  - **Monitor, review, and investigate DLP incidents triggered by all users**: Select to prevent users from investigating DLP incidents triggered by all Active Directory users
- **Read only**: Select to only allow users to view information on menu items selected in the **Menu Access Control** section

6. Click **Save**.

   The new user role appears on the **User Roles** screen.

Editing a User Role

Apex Central allows you to modify the access rights for a custom user role.

For information about editing the user role assigned to a particular user account, see *Editing a User Account on page 4-11*.

Note

Managed product information displayed on accessible menu items depends on the managed product/directory permissions that Apex Central administrators specify in an individual's user account.

Example:

Bob and Jane are Apex One administrators. Both have identical user role permissions (they have access to the same menu items in the web console). However, Jane oversees operations for all Apex One servers. Bob only oversees operations for Apex One servers protecting desktops for the Marketing department. The information that they can view in the web console will be very different. Bob logs on and only sees information that is applicable to the Apex One servers that his Apex Central user account allows (the Apex One servers for the Marketing department). When Jane logs on, she sees information for all Apex One servers, because her Apex Central user account grants her access to all Apex One servers registered to Apex Central.

Procedure

1. Go to **Administration** > **Account Management** > **User Roles**.

   The **User Roles** screen appears.

2. Click the **Name** of a user role to edit.

   The **Edit Role** screen appears.

3. Edit the user role information.

4. Click **Save** to apply changes.

Chapter 5

License Management

This section discusses how to activate or renew product licenses for Apex Central and managed products.

Topics include:

- *Apex Central Activation and License Information on page 5-2*
- *Managed Product Activation and Registration on page 5-4*

Apex Central Activation and License Information

Activating Apex Central allows you to use all of the product features, including downloading updated program components.

Activating Apex Central

The **License Management** screen allows you to activate Apex Central after obtaining an Activation Code from your Trend Micro sales representative or reseller.

If you purchased a license for Apex One Sandbox as a Service, you can also activate the license from the **License Management** screen.

Important

After activating Apex Central, log off and then log on to the Apex Central web console for changes to take effect.

Procedure

1. Go to **Administration** > **License Management** > **Apex Central**.

   The **License Information** screen appears and displays the current license information.

2. Click the **Specify a new Activation Code** link.

3. Type your Activation Code.

4. Click **Activate**.

5. Log off and then log on to the Apex Central web console for the changes to take effect.

Viewing and Renewing Apex Central License Information

The **License Management** screen displays your current Apex Central license information and activation status. You can access the Trend Micro Customer Licensing Portal from this screen to update or renew your license.

If you purchased a license for Apex One Sandbox as a Service, the **License Management** screen also displays the license information and activation status.

Procedure

1. Go to **Administration** > **License Management** > **Apex Central**.

   The **License Information** screen appears and displays the current license information.

2. To update the screen with the latest license information:

   a. Click **Update License Information**.

   b. Log off and then log on to the Apex Central web console for the changes to take effect.

3. To renew your license:

   a. Click the **Specify a new Activation Code** link.

   b. Type your Activation Code.

   c. Click **Activate**.

   d. Log off and then log on to the Apex Central web console for the changes to take effect.

4. To view information about the current license in the Trend Micro Customer Licensing Portal:

   a. Click **View online**.

   b. Sign in to the Customer Licensing Portal using your Trend Micro account and password.

c. Click the **My Products/Services** menu tab.

d. Expand the **Products/Services** categories to view license information for registered Trend Micro products.

Managed Product Activation and Registration

To use Apex Central, managed products (for example, Apex One, ScanMail for Microsoft Exchange) and other services, you need to obtain Activation Codes and activate the software or services. Included with the software is a Registration Key. Use that key to register your software online on the Trend Micro Customer Licensing Portal website and obtain an Activation Code.

When managed products register to Apex Central, the managed products add their Activation Codes to the managed product Activation Code list on the **License Management** screen. Administrators can add new Activation Codes to the list and redeploy renewed Activation Codes.

License Management Details

The following table describes the managed product license information that displays on the **License Management** screen (**Administration** > **License Management** > **Managed Products**).

Tip

You can clear the **Hide expired Activation Codes** check box to view license details for all managed products.

Column Name	Description
Activation Code	Displays the Activation Code for the managed product
Note	Displays additional information about the Activation Code

Column Name	Description
Activated Products	Displays the number of managed products to which the Activation Code deploys
License Status	Displays the status of the Activation Code: • Valid • Expired
Type	Displays the type of the Activation Code: • **Full**: Allows full use of the product for the maintenance period (typically 1 year) • **Trial**: Allows full use of the product for the evaluation period (typically 3 months)
Expiration Date	Displays the date the Activation Code expires
Seat Count	Displays the number of seats the Activation Code allows
View license information online	Click the link to open your default web browser to the Trend Micro Customer Licensing Portal. This portal allows you to manage your Trend Micro business account, which includes Activation Codes for on-premise products and subscriptions to Trend Micro Software as a Service solutions.

Managed Product License Information

Clicking an **Activation Code** on the **License Management** screen (**Administration** > **License Management** > **Managed Products**) displays the following license information about the managed product/service.

Field	Description
Activation Code	The code used to activate the license for the product/service
Status	The license status (for example, “Valid”)
Type	The type of license for the product/service (for example, “Full” or “Trial”)

Field	Description
Expiration date	The expiration date of the product/service license
Description	The user-defined description for the Activation Code • Type a description in the text box and click **Finish** to save changes.

Activating Managed Products

Use the **License Management** screen to activate managed product licenses. Activating managed products allows you to use all the features for the product, including downloading updated program components. You can activate managed products after obtaining an Activation Code from your product package or by purchasing one through a Trend Micro reseller.

Procedure

1. Go to **Administration** > **License Management** > **Managed Products**.

   The **License Management** screen appears.

2. Click **Add and Deploy**.

   The **Add and Deploy a New License > Step 1: Input Activation Code** screen appears.

3. Type the Activation Code for the product you want to activate in the **New activation code** field.

4. Click **Next**.

   The **Add and Deploy a New License > Step 2: Select Targets** screen appears.

Note

If no products appear in the list, the selected Activation Code does not support any products currently registered to Apex Central. This could mean that the managed product does not support receiving Activation Codes from Apex Central servers.

5. Select the managed product(s) to which to deploy the Activation Code.
6. Click **Deploy**.

   The **License Management** screen appears and lists the new Activation Code in the table.

Note

The Activation Code deployment status appears in a toast message at the top of the **License Management** screen.

Click the link in the message to view the deployment status details on the **Command Tracking** screen.

Renewing Managed Product Licenses

Apex Central can deploy or redeploy Activation Codes to registered products from the **License Management** screen.

Procedure

1. Go to **Administration** > **License Management** > **Managed Product**.

   The **License Management** screen appears.
2. Select an Activation Code from the list.
3. Click **Re-Deploy**.

   The **Re-Deploy License** screen appears.
4. Select the product(s) for Activation Code deployment.

Note

- If no products appear in the list, the selected Activation Code does not support any products currently registered to Apex Central.
- You must select at least one product in order to deploy the Activation Code.

5. Click **Deploy**.

   Apex Central deploys the Activation Code to the selected product(s).

Chapter 6

Active Directory and Compliance Settings

This section discusses how to configure Active Directory integration and compliance indicator settings in Apex Central.

Topics include:

- *Active Directory Integration on page 6-2*
- '*Compliance Indicators on page 6-6*
- *Endpoint and User Grouping on page 6-12*

Active Directory Integration

Integrate Apex Central with a Microsoft Active Directory server to:

- Allow administrators to create user accounts for web console access based on Active Directory users or groups.

  For more information, see *Adding a User Account on page 4-5*.

- Map the User/Endpoint Directory according to your existing organizational structure and integrate endpoint information (such as threat detections and policy statuses) with Active Directory user information (such as login history and contact details).

  For more information, see *User/Endpoint Directory on page 7-2*.

- Use the site location and reporting line information in Active Directory to gain greater insight into your network protection status on the **Security Posture** dashboard tab.

  For more information, see *Compliance Indicators on page 6-6*.

Configuring Active Directory Connection Settings

Specify the connection settings to allow Apex Central to synchronize endpoint and user information from Active Directory servers.

Note

Apex Central supports synchronization with multiple Active Directory forests. Adding an Active Directory domain automatically synchronizes all domains from the same forest.

For more information about forest trusts, contact your Active Directory administrator.

Procedure

1. Go to **Administration** > **Settings** > **Active Directory and Compliance Settings**.

2. Click the **Active Directory Settings** tab.
3. Select **Enable Active Directory synchronization and authentication**.
4. Configure the connection settings to access an Active Directory server.

Field	Description
Server address	Type the FQDN or IP address (IPv4 or IPv6) of the Active Directory server.
User name	Type the domain name and user name required to access the Active Directory server. Example format, `domain\user_name`
Password	Type the password required to access the Active Directory server.

   - To add another Active Directory server, click the add icon (+).
   - To delete an Active Directory server, click the delete icon (–).

5. From the **Synchronization frequency (in hours)** drop-down list, select how often Apex Central synchronizes data with Active Directory servers.

Note

Active Directory synchronization times vary based on the size and complexity of the Active Directory database. You may need to wait for more than an hour before synchronization completes.

6. (Optional) Expand **Advanced settings** to configure the **Synchronization source** or **Connection mode**.
   a. Select one of the following synchronization sources:
      - **Domain controllers**: Synchronizes all domains from multiple forests with trust relationships
      - **Global catalog**: Synchronizes all domains from a single forest

Important

Some information used by Apex Central, such as geographic location and user membership in global groups or domain local groups, cannot be synchronized from a global catalog with default settings. Choose to synchronize from a global catalog only if your network policy restricts Apex Central from connecting to all domain controllers.

b. Select one of the following connection modes:

- **SSL**

  Important

  To use an SSL connection, import the Active Directory Certificate to the Apex Central server.

- **Non-SSL**

7. (Optional) Click **Test Connection** to test the server connection.

   Note

   Testing the connection does not save the Active Directory server settings.

   The Active Directory server connection status icon (or) appears in front of the server address.

8. Click **Save**.

   Apex Central synchronizes endpoint and user information from the Active Directory server(s) according to the synchronization frequency.

9. (Optional) Configure which Active Directory domains and OUs Apex Central synchronizes by modifying the `ADSyncOUList.config` configuration file located at:

   ```
   <Apex Central installation directory>\ADSyncOUList.config
   ```

10. (Optional) Click **Synchronize Now** to manually synchronize Active Directory data.

The Active Directory server connection status icon (or) appears in front of the server address.

11. To remove a synchronized Active Directory server:

    a. Clear the **Enable Active Directory synchronization** check box.

    b. Click **Clear Data** to purge the Apex Central server of data from the removed Active Directory server.

    Apex Central removes the synchronized Active Directory server.

> **Note**
>
> Clicking **Clear Data** triggers a scheduled task, which runs every 2 minutes, to purge all data of the removed Active Directory servers from the Apex Central database.

Troubleshooting Active Directory Synchronization

Active Directory synchronization allows Apex Central to obtain user information (such as site and reporting line information) from Active Directory servers.

If an Active Directory related error appears on the **Dashboard** screen, refer to the following table for troubleshooting solutions.

Issue	Solution
Incorrect user name or password	• Ensure that you specified the correct account information. • Verify that the user account has privileges to access the Active Directory server. For assistance, contact the Active Directory administrator.

Issue	Solution
Unable to connect to the Active Directory server	• Ensure that you have configured the correct Active Server connection settings. For more information, see *Configuring Active Directory Connection Settings on page 6-2*. • Check that the Active Directory server is available. • Check your network connection and firewall settings. • Ensure that both the Apex Central and Active Directory servers can establish communication with one another. To test your Apex Central connection to Active Directory servers, click **Test Connection** on the **Active Directory and Compliance Settings** screen.
Unable to access the Apex Central database	Ensure that the connection to the Apex Central database is present. For more information, see *Understanding the Apex Central Database on page 24-2*.

If the connection issue persists, contact Support.

For more information, see *Technical Support on page 26-1*.

Compliance Indicators

Apex Central includes the following compliance indicators and performs compliance calculations based on the indicator settings and the user and endpoint information synchronized from Active Directory servers. You can view the information for the compliance indicators on the **Security Posture** dashboard tab.

- **Antivirus Pattern Compliance**: The percentage of managed Apex One Security Agents using acceptable antivirus pattern (Virus Pattern and Smart Scan Agent Pattern) versions
- **Data Loss Prevention Compliance**: The percentage of managed Data Discovery-enabled Apex One and Cloud App Security agents with an acceptable number of sensitive data detection incidents

The following provides an overview of the procedures to get Apex Central to perform compliance calculations and display compliance information on the **Security Posture** dashboard tab.

Procedure

1. Connect to an Active Directory server to synchronize the user and endpoint information.

   For more information, see *Configuring Active Directory Connection Settings on page 6-2*.

2. Configure the compliance indicator settings.

   For more information, see the following topics:

   - *Configuring the Antivirus Pattern Compliance Indicators on page 6-8*
   - *Configuring the Data Loss Prevention Compliance Indicator on page 6-10*

3. (Optional) Customize endpoint and user grouping based on Active Directory sites and reporting lines.

   For more information, see *Endpoint and User Grouping on page 6-12*.

4. Go to the **Dashboard** to view the compliance information.

Note

To change the Active Directory grouping or view the Data Discovery compliance of your managed agents, configure the **Security Posture** tab settings.

For more information, see the following topics:

- *Security Posture Tab on page 3-6*
- *Working with Widgets on page 3-4*

Configuring the Antivirus Pattern Compliance Indicators

You can configure settings and exceptions for the Antivirus Pattern Compliance indicators to display the percentage of managed Security Agents using acceptable antivirus pattern (Virus Pattern and Smart Scan Agent Pattern) versions on the **Security Posture** tab.

Note

Apex Central supports Security Agents for the following managed products:

- Apex One
- Worry-Free Business Security Services

Procedure

1. Go to **Administration** > **Settings** > **Active Directory and Compliance Settings**.
2. Click the **Compliance Indicator** tab.
3. Click **Antivirus pattern compliance**.
4. The following table describes the available configuration options.

Column	Description
Acceptable pattern versions	Specify the pattern versions for endpoints to be considered compliant.
Alert indicator	Adjust the slider control to set the thresholds (% of compliant agents) for different alert levels.

5. In the **Exception List**, select custom tags or filters to exclude users or endpoints from compliance calculations.

Note

- The Exceptions list applies to all Apex Central users. You may only add or delete exceptions based on your permissions to modify the corresponding tags and filters.
- For more information about creating tags or filters, see *Custom Tags and Filters on page 7-30*.

a. Click **Add**.

   The **Add Exception** screen appears.

b. From the **Type** drop-down list, select **User** or **Endpoint** to display the available custom filters and tags by type; otherwise, select **All** to view all entries.

   Note

   To search for a custom filter or tag, type a name in the text field and press ENTER.

   For more information on custom tags and filters, see *Custom Tags and Filters on page 7-30*.

c. Select one or more custom tags or filters and click **Add**.

   The selected items appear in the Exception List.

d. Click **Close**.

e. Click **Save**.

f. Specify the scope of the added custom tags or filters from the **Apply exceptions added by** drop-down list.

   - **All user accounts**: Excludes all users and endpoints specified in custom filters and tags added by any user account
   - **Only the logged on account**: Excludes only the users and endpoints specified in custom filters and tags added by the currently logged on user account

6. Click **Save**.

Configuring the Data Loss Prevention Compliance Indicator

You can configure settings and exceptions for the Data Loss Prevention Compliance indicator to display the percentage of managed Data Discovery-enabled Security Agents with an acceptable number of sensitive data detection incidents on the **Security Posture** tab.

Procedure

1. Go to **Administration** > **Settings** > **Active Directory and Compliance Settings**.
2. Click the **Compliance Indicator** tab.
3. Click **Data Loss Prevention compliance**.
4. The following table describes the available configuration options.

Column	Description
Period	Specify the time range for the displayed data.
Acceptable number of threat detections	Type the acceptable number of sensitive data detection incidents.
Alert indicator	Adjust the slider control to set the thresholds (% of compliant agents) for different alert levels.

5. In the **Exception List**, select custom tags or filters to exclude users or endpoints from compliance calculations.

Note

- The Exceptions list applies to all Apex Central users. You may only add or delete exceptions based on your permissions to modify the corresponding tags and filters.
- For more information about creating tags or filters, see *Custom Tags and Filters on page 7-30*.

a. Click **Add**.

The **Add Exception** screen appears.

b. From the **Type** drop-down list, select **User** or **Endpoint** to display the available custom filters and tags by type; otherwise, select **All** to view all entries.

Tip

To search for a custom filter or tag, type a name in the text field and press ENTER.

For more information on custom tags and filters, see *Custom Tags and Filters on page 7-30*.

c. Select one or more custom tags or filters and click **Add**.

The selected items appear in the Exception List.

d. Click **Close**.

e. Click **Save**.

f. Specify the scope of the added custom tags or filters from the **Apply exceptions added by** drop-down list.

- **All user accounts**: Excludes all users and endpoints specified in custom filters and tags added by any user account
- **Only the logged on account**: Excludes only the users and endpoints specified in custom filters and tags added by the currently logged on user account

6. Click **Save**.

Endpoint and User Grouping

Apex Central can group endpoints or users on the **Security Posture** tab based on the following information:

- Site locations
- Reporting line managers

By default, Apex Central synchronizes the user or endpoint site and reporting line information from Active Directory. You can configure custom site and reporting line groups to display compliance information.

Sites

The following table describes the site information displayed on the **Sites** tab.

TABLE 6-1. Sites

COLUMN	DESCRIPTION
Display Name	Type the name that displays on the **Security Posture** widget/tab. **Note** By default, the **Others** group includes endpoints that do not belong to any site.
Site	The site name synchronized from Active Directory

Creating a Custom Site

You can create a custom site group to include endpoints or users in a specified IP address range.

Procedure

1. Go to **Administration** > **Settings** > **Active Directory and Compliance Settings**.
2. Click the **Sites** tab.
3. Click **Add Custom**.

   The **Add Custom Site** screen appears.
4. Specify the **Display name** that identifies the group on the **Security Posture** widget/tab.
5. Select the **Node color** that identifies the group on the **Security Posture** widget/tab.
6. 6. Specify the IPv4 or IPv6 address range of the endpoints included in the custom site
7. Click **Save**.

   After creating a custom site:

   - Click **Delete Custom** to delete a selected custom site.
   - Click the custom site name to change the settings.

Merging Sites

You can create a custom site by merging two or more sites. After merging preexisting sites, Apex Central removes the original sites from the list.

Tip

Apex Central indicates a merged group using a solid dot icon ( ).

Procedure

1. Go to **Administration** > **Settings** > **Active Directory and Compliance Settings**.

2. Click the **Sites** tab.
3. Select two or more sites.
4. Click **Merge**.

   The **Merge Sites** screen appears.
5. Specify the **Display name** that identifies the group on the **Security Posture** widget/tab.
6. Select the **Node color** that identifies the group on the **Security Posture** widget/tab.
7. Click **Save**.

   After merging sites, you can click **Split** to split a merged site.

Reporting Lines

The following table describes the information displayed on the **Reporting Lines** tab.

TABLE 6-2. Reporting Lines

DATA	DESCRIPTION
Reporting line level	The reporting line level indicates the level of management hierarchy for a user in Active Directory. Select a level number from the **Reporting line level** drop-down list and click **Apply** to update the list.
Display Name	The name that displays on the **Security Posture** tab **Tip** By default, the **Others** group includes all managers that are at reporting line levels higher than the selected level.

Data	Description
Manager	The reporting line manager This information is synchronized from an Active Directory server.

Creating a Custom Reporting Line

You can create a custom reporting line to group users that report directly or indirectly to the selected managers.

Procedure

1. Go to **Administration** > **Settings** > **Active Directory and Compliance Settings**.
2. Click the **Reporting Lines** tab.
3. (Optional) Change the **Reporting line level** setting and click **Apply** to update the list.

   The reporting line level indicates the level of management hierarchy for a user in Active Directory.
4. Click **Add Custom**.

   The **Add Custom Reporting Line** screen appears.
5. Specify the **Display name** that identifies the group on the **Security Posture** widget/tab.
6. Select a user from the **Users** list and click the icon to add to the **Selected Users** list.

   Note

   To select more than one user, press CTRL and click the user names.
7. Click **Save**.

   After creating a custom reporting line:

- Click **Delete Custom** to delete a selected custom reporting line.
- Click the custom group name to change the settings.

Merging Reporting Lines

You can create a custom reporting line by merging two or more reporting lines. After merging preexisting reporting lines, Apex Central removes the original reporting lines from the list.

Tip

Apex Central indicates a merged group using a solid dot icon ( ).

Procedure

1. Go to **Administration** > **Settings** > **Active Directory and Compliance Settings**.
2. Click the **Reporting Lines** tab.
3. Select two or more reporting lines.
4. Click **Merge**.

   The **Merge Reporting Line** screen appears.
5. Specify the **Display name** that identifies the group on the **Security Posture** widget/tab.
6. Click **Save**.

   After merging reporting lines, you can click **Split** to split a merged reporting line.

Chapter 7

User/Endpoint Directory

This section discusses how to view information about all the users and endpoints within the Apex Central network.

Topics include:

- *User/Endpoint Directory on page 7-2*
- *User Details on page 7-3*
- *Endpoint Details on page 7-10*
- *Active Directory Details on page 7-20*
- *Affected Users on page 7-20*
- *Using the Advanced Search on page 7-25*
- *Custom Tags and Filters on page 7-30*

User/Endpoint Directory

The **User/Endpoint Directory** screen displays information about all the users and endpoints within the Apex Central network for a specified time range.

- Use the drop-down controls below the **Endpoints** or **Users** tab to specify the time period for the data that displays or to switch between **Tabular view** and **Timeline view**.
- Click **Export** to export the data as a `*.csv` file or `*.png` image.

Note

Tabular view only supports exporting data as a `*.csv` file. **Timeline view** can export data as a `*.csv` file or a `*.png` image. The exported `*.png` timeline image only displays information for a maximum of 30 users or endpoints.

The User/Endpoint tree organizes data into the following categories:

- **Users**: Contains information about any user that logs on an endpoint or that is part of the integrated Active Directory structure

  For more information, see *User Details on page 7-3*.

- **Endpoints**: Contains information about any endpoint that sends logs to Apex Central or that is part of the integrated Active Directory structure

  For more information, see *Endpoint Details on page 7-10*.

- **Active Directory**: Displays the organizational units of the integrated Active Directory server

Note

Apex Central supports synchronization with multiple Active Directory forests. Adding an Active Directory domain automatically synchronizes all domains from the same forest.

For more information about forest trusts, contact your Active Directory administrator.

You can change the default data that displays in the **Users** and **Endpoints** nodes through use of advanced searches, tags, and filters.

For more information, see *Using the Advanced Search on page 7-25* and *Custom Tags and Filters on page 7-30*.

User Details

The **User/Endpoint Directory** screen displays User information for a specified time range.

- Use the drop-down controls below the **Endpoints** or **Users** tab to specify the time period for the data that displays or to switch between **Tabular view** and **Timeline view**.
- Click **Export** to export the data as a `*.csv` file or `*.png` image.

> **Note**
>
> **Tabular view** only supports exporting data as a `*.csv` file. **Timeline view** can export data as a `*.csv` file or a `*.png` image. The exported `*.png` timeline image only displays information for a maximum of 30 users or endpoints.

The following table describes the User information that displays on the **User/Endpoint Directory** screen in **Tabular view**.

TABLE 7-1. User Details in Tabular View

COLUMN	DESCRIPTION
	If the endpoint or user is assigned an importance tag, Apex Central displays a yellow star icon ( ) to indicate importance. For more information, see *User or Endpoint Importance on page 7-38*.

Column	Description

User	Apex Central identifies and associates users with endpoints based on the type of endpoint or through integration with Active Directory.
	• Server and desktop platforms: Apex Central associates the last logged on user with the endpoint
	• Mobile devices:
	  • If Active Directory synchronization is available, Apex Central resolves the registered email address for the mobile device with the associated Active Directory account
	  • If Active Directory synchronization is not available, Apex Central displays the registered email address for the mobile device
	Click a user name to view contact details.
	For more information, see *Contact Information on page 7-9*.
	Note
	The **Users** > **All** node lists all local users from various endpoints regardless of their duplicate status. Duplicate users having the same names can occur. Apex Central consolidates all endpoints from managed products that have multiple local users.

Domain	• If Active Directory synchronization is available, this Apex Central displays the domain name that the user is a member of. • If Active Directory synchronization is not available, this Apex Central displays the endpoint/host name that the user was the last person to log on to.
Manager	If Active Directory synchronization is available, Apex Central displays the manager of the user Click a name in the manager column to view the manager's contact details. For more information, see *Contact Information on page 7-9*.

Column	Description
Endpoints	The number of endpoints currently associated with the user, based on the last log on information from the endpoints Click the count to view the related endpoint information in the table. For more information, see *Endpoint Details on page 7-10*.
Policies	The number of policies currently associated with the user, based on the last log on information from the endpoints Click the **Policies** count to view the related policy information for the user. For more information, see *Policy Status on page 7-9*.
Threats	The total number of security threats that occurred on endpoints associated with the user Click the **Threats** count to view the related threat information for the user. For more information, see *Security Threats for Users on page 7-6*. For example, if Henry was the last user logged on to endpoint "us-mkt-dev1", and that endpoint reported 10 virus/malware detections and 2 web violations, Henry's **Threats** count displays as **12**. **Note** • If the network environment is not using Active Directory, the following detections/violations for gateway products do not display: email content violation, phishing email, and spam. • Security threats detected by endpoint products (for example, Apex One) are associated with the last logged-on user of the endpoint. Security threats detected by gateway products (for example, IWSVA) are associated with the user who triggered the detection.

The following table describes the User information that displays on the **User/Endpoint Directory** screen in **Timeline view**.

TABLE 7-2. User Details in Timeline View

COLUMN	DESCRIPTION
User	Apex Central identifies and associates users with endpoints based on the type of endpoint or through integration with Active Directory.
Threats	The total number of security threats that occurred on endpoints associated with the user Click the **Threats** count to view the related threat information for the user. For more information, see *Security Threats for Users on page 7-6*.
<Timeline>	The timeline indicates when the security threats occurred for each user. • Hover over a red warning dot ( ) to view the number of critical threats and the total number of all security threat detections for a user on a specific date. • Hover over a solid red dot ( ) to view the number of non-critical threat detections for a user on a specific date. • Click a red dot to view the related threat information for a specific date. For more information, see *Security Threats for Users on page 7-6*.

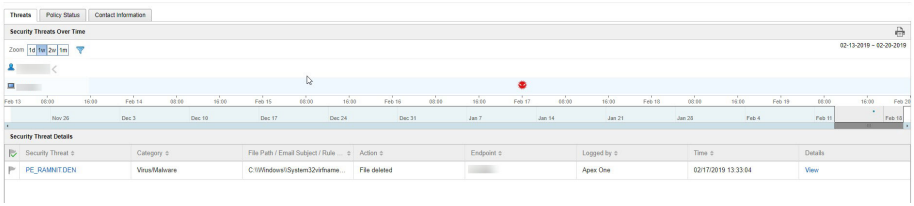
Security Threats for Users

The **Threats** tab on the **User** information screen allows you to view all security threats detected on endpoints assigned to the selected user.

You can access this screen from the following widgets on the **Dashboard** > **Summary** tab on the Apex Central console.

- **Critical Threats**: Click a number in the **Important Users** or **Other Users** columns and then click the user you want to view.
- **Users with Threats**: Click the number in the **Threats** column for the user you want to view.

- **Endpoints with Threats**: Click the number in the **Threats** column for the endpoint you want to view. On the **Endpoint** information screen, click the **General Information** tab and click the user name.



- **Security Threats Over Time**: Provides a graphical representation of threat information based on the time of the detection and whether the detection occurred on an assigned endpoint or the user's account
  - Hover over a threat icon (for example,) to view details about the detection.
  - Change the displayed time interval by changing the **Zoom** value.
  - Change the end date by scrolling through the dates displayed under the graph.
  - Apply filters by clicking the funnel icon () and selecting the following criteria and using the **OR** or **AND** operators to build advanced filters.
    - **Threat type**: Select a threat category from the second drop-down list
    - **Security threat**: Type a malware name or suspicious URL, IP address, or sender email address
    - **Threat status**: Select **Resolved by product**, **Action required**, or **Resolved manually**
- **Security Threat Details**: Provides more detailed information about the threats displayed on the **Security Threats Over Time** graph

- Click a value in the **Security Threat** column to view the **Affected Users** screen.

  For more information, see *Affected Users*.

- Click **View** link in the **Details** column to view detailed information.

- Click a flag icon in the **Threat Status** column ( ) to change the threat status for threats that require remediation.

Note

Changing the threat status for a threat does not actually resolve the threat. The threat status is a case handling tool to help administrators track identified threats and indicate to other administrators that a threat has been resolved.

Threat Status	Description
Resolved by product ( )	Indicates that the threat has been resolved by a managed product **Note** You cannot change this threat status.
Action required ( )	Indicates that remediation is required Click the **Action required** icon ( ) to change the threat status to **Resolved manually** ( ).
Resolved manually ( )	Indicates that remediation has been performed by an administrator Click the **Resolved by product** icon ( ) to change the threat status to **Action required** ( ).

Policy Status

The **Policy Status** tab displays all the products installed on the target endpoint, any Apex Central policies assigned, and the current policy status for each installed product.

Note

Apex Central identifies and associates users with endpoints based on the type of endpoint or through integration with Active Directory.

Click the **Assigned Policy** name to view or edit a policy.

Contact Information

The **Contact Information** screen displays user details, similar to the entries in Active Directory.

Synchronizing Contact Information with Active Directory

Apex Central synchronizes data from the Active Directory Global Category (GC).

Procedure

1. Open the Microsoft Management Console (mmc).
2. Add a snap-in (Active Directory Schema).
3. In left panel, go to **Attribute**.
4. Enable **Replicate this attribute to Global Catalog** for each of the following:
   - **proxyAddresses**
   - **department**

- **homephone**
- **PhysicalDeliveryOfficeName**
- **telephoneNumber**
- **title**

5. Wait until Active Directory replication occurs.

Endpoint Details

The **User/Endpoint Directory** screen displays Endpoint information for a specified time range.

- Use the drop-down controls below the **Endpoints** or **Users** tab to specify the time period for the data that displays or to switch between **Tabular view** and **Timeline view**.
- Click **Export** to export the data as a `*.csv` file or `*.png` image.

Note

Tabular view only supports exporting data as a `*.csv` file. **Timeline view** can export data as a `*.csv` file or a `*.png` image. The exported `*.png` timeline image only displays information for a maximum of 30 users or endpoints.

The following table describes the User information that displays on the **User/Endpoint Directory** screen in **Tabular view**.

Column	Description
	If the endpoint or user is assigned an importance tag, Apex Central displays a yellow star icon ( ) to indicate importance. For more information, see *User or Endpoint Importance on page 7-38*.

Column	Description
Endpoint	The host name or device name Click an endpoint name to view the **Endpoint** screen that opens to the **Policy Status** tab. For more information, see *Policy Status on page 7-16*.
IP Address	The static or dynamic IP address of the endpoint
Type	Machine or device type: server, desktop, laptop, mobile device, and others
Operating System	The operating system running on the machine or device
Endpoint Server	The server name and product installed on the server that manages the endpoint
User	The name or email address of the most recent user who logged on and/or used the endpoint For more information, see *Contact Information on page 7-9*.
Threats	The total number of security threats that occurred on the endpoint Click the **Threats** count to view the related threat information for the endpoint. For more information, see *Security Threats on Endpoints on page 7-14*.

The following table describes the Endpoint information that displays on the **User/Endpoint Directory** screen in **Timeline view**.

TABLE 7-3. Endpoint Details in Timeline View

COLUMN	DESCRIPTION
Endpoint	The host name or device name Click an endpoint name to view the **Endpoint** screen that opens to the **Policy Status** tab. For more information, see *Policy Status on page 7-16*. **Note** If the endpoint is assigned an important tag, Apex Central displays a yellow star icon ( ) in front of the endpoint name. For more information, see *User or Endpoint Importance on page 7-38*.
Threats	The total number of security threats that occurred on the endpoint Click the **Threats** count to view the related threat information for the endpoint. For more information, see *Security Threats on Endpoints on page 7-14*.
<Timeline>	The timeline indicates when the security threats occurred for each endpoint. • Hover over a red warning dot ( ) to view the number of critical threats and the total number of all security threat detections for an endpoint on a specific date. • Hover over a solid red dot ( ) to view the number of non-critical threat detections for an endpoint on a specific date. For more information, see *Security Threats on Endpoints on page 7-14*.

Endpoint Information

The **Endpoint** information screen provides more detailed information about the selected endpoint. The **Endpoint** information screen title displays the endpoint icon () followed by the endpoint name.

Click one the following tabs to view related information.

- **Threats**: Displays all security threats detected on the selected endpoint

  For more information, see *Security Threats on Endpoints on page 7-14*.

- **Policy Status**: Displays the list of policies associated with the selected endpoint

  For more information, see *Policy Status on page 7-16*.

- **Notes**: Displays any manually added notes about the selected endpoint

  For more information, see *Notes for Endpoints on page 7-16*.

- **General Information**: Displays basic information regarding the selected endpoint

  For more information, see *General Information for Endpoints on page 7-17*.

The **Endpoint** information screen also allows you to take specific actions on the selected endpoint by using the **Task** menu.

- **Assign tags**: Associates tags with the selected endpoint for search purposes

  For more information, see *Custom Tags on page 7-32*.

- **Isolate**: Limits the access the endpoint has to the network and Internet

  For more information, see *Isolating Endpoints on page 19-34*.

- **Restore**: Restores network access to the isolated endpoint

  For more information, see *Isolating Endpoints on page 19-34*.

Security Threats on Endpoints

The **Threats** tab on the **Endpoint** information screen allows you to view all security threats detected on a specific endpoint.

You can access the **Threats** tab on the **Endpoint** information screen from the following locations:

- **Endpoints with Threats** widget: Click a count in the **Threats** column

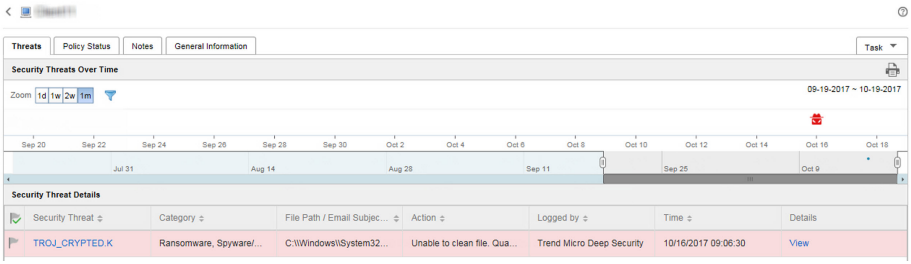
  For more information, see *Endpoints with Threats Widget on page 3-21*.

- **Endpoint Details** screen: Click a count in the **Threats** column

  For more information, see *Endpoint Details on page 7-10*.

- **Affected Users** tab on the **Security Threat** screen: Click an endpoint name in the **Host Name** column

  For more information, see *Affected Users on page 7-20*.



- **Task**: Allows you to **Assign tags**, or **Isolate** or **Restore** connections to the endpoint.

  For more information, see *Isolating Endpoints on page 19-34*.

- **Security Threats Over Time**: Provides a graphical representation of threat information based on the time of the detection and whether the detection occurred on an assigned endpoint or the user's account

  - Hover over a threat icon (for example,) to view details about the detection.

- Change the displayed time interval by changing the **Zoom** value.
- Change the end date by scrolling through the dates displayed under the graph.
- Apply filters by clicking the funnel icon () and selecting the following criteria and using the **OR** or **AND** operators to build advanced filters.
  - **Threat type**: Select a threat category from the second drop-down list
  - **Security threat**: Type a malware name or suspicious URL, IP address, or sender email address
  - **Threat status**: Select **Resolved by product**, **Action required**, or **Resolved manually**

- **Security Threat Details**: Provides more detailed information about the threats displayed on the **Security Threats Over Time** graph
  - Click a value in the **Security Threat** column to view the **Affected Users** screen.

    For more information, see *Affected Users*.
  - Click **View** link in the **Details** column to view detailed information.
  - Click a flag icon in the **Threat Status** column () to change the threat status for threats that require remediation.

Note

Changing the threat status for a threat does not actually resolve the threat. The threat status is a case handling tool to help administrators track identified threats and indicate to other administrators that a threat has been resolved.

Threat Status	Description
Resolved by product ( )	Indicates that the threat has been resolved by a managed product **Note** You cannot change this threat status.
Action required ( )	Indicates that remediation is required Click the **Action required** icon ( ) to change the threat status to **Resolved manually** ( ).
Resolved manually ( )	Indicates that remediation has been performed by an administrator Click the **Resolved by product** icon ( ) to change the threat status to **Action required** ( ).

Policy Status

The **Policy Status** tab displays all the products installed on the target endpoint, any Apex Central policies assigned, and the current policy status for each installed product.

Click the **Assigned Policy** name to view or edit a policy.

Notes for Endpoints

You can manually add notes to endpoints to help track issues and solutions on particular endpoints. For example, add additional notes on isolated endpoints while you are investigating and resolving threats or when you are about to restore the network connection after all threats have been resolved.

Apex Central automatically adds the following notes corresponding to specific actions:

- "Isolate"

- "Restore"
- "Assign Tag {tag name}"
- "Remove Tag {tag name}"

For more information, see *Assigning Custom Tags to Users/Endpoints on page 7-34* and *Isolating Endpoints on page 19-34*.

General Information for Endpoints

You can view the following information about the endpoint:

Information	Description
IP Address	The IP address of the endpoint
Type	The type of endpoint (for example, "Laptop")
Operating System	The operating system on the endpoint
User	The user account associated with the endpoint **Note** Apex Central identifies and associates users with endpoints based on the type of endpoint or through integration with Active Directory.
Domain	The Active Directory domain associated with the endpoint

Isolating Endpoints

Isolate at-risk endpoints to run an investigation and resolve security issues. Restore the connection promptly when all issues have been resolved.

Procedure

1. Go to **Directories** > **Users/Endpoints**.

2. Select to view endpoints.
3. Click the name of an endpoint in the list.
4. On the **Endpoint** information screen that appears, click **Task** > **Isolate**.

   Apex Central disables the **Isolate** option on endpoints for the following reasons:

   - The agent on the endpoint runs an unsupported version.
   - The user account used to log on to Apex Central does not have the necessary permissions.

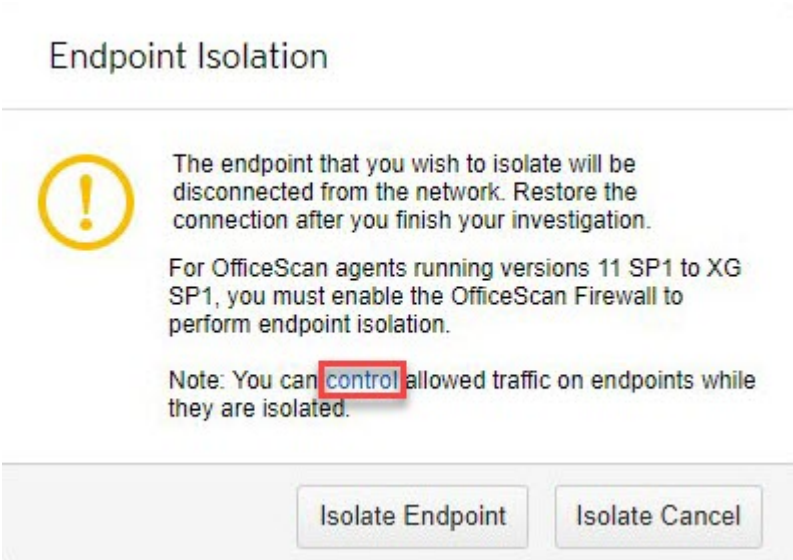
5. A message appears at the top of the **Endpoint** information screen that allows you to monitor the isolation status. After isolation completes, the message closes and a notification appears on the target endpoint to inform the user.

   If a problem occurs during the isolation process, the message at the top of the **Endpoint - {name}** screen informs you of the problem.

6. To view all isolated endpoints on your Apex Central network, click the **Endpoints** > **Filters** > **Network Connection** > **Isolated** node in the User/Endpoint Directory tree.
7. (Optional) To configure allowed inbound and outbound traffic to all isolated endpoints:

   For a list of default Trend Micro communication ports, see *Downloading Security Agent Installation Packages on page 9-2*.

   a. Click the **Control** hyperlink in the note on the screen that appears.



b. Select **Control traffic on isolated endpoints**.

c. Expand the **Inbound Traffic** or **Outbound Traffic** sections.

d. Specify the allowed traffic by specifying the **Protocol**, **IP Address**, and **Destination Port**.

   Separate multiple destination ports using commas.

e. Add multiple inbound and outbound entries by clicking the - control to the right of the **Destination Port** information.

Note

After modifying the allowed traffic settings, all previously isolated endpoints and any endpoints isolated later apply the inbound and outbound traffic settings.

---

8. After you have resolved the security threats on an isolated endpoint, restore network connectivity from the following locations:

- **Endpoint** information screen: Click **Task** > **Restore**.

- **Endpoints** > **Filters** > **Network Connection** > **Isolated**: Select the endpoint row in the table and click **Task** > **Restore Network Connection**.

9. A message appears at the top of the screen that allows you to monitor the restoration status. After restoration completes, the message closes and a notification appears on the target endpoint to inform the user.

   If a problem occurs during the restoration process, the message at the top of the screen informs you of the problem.

Active Directory Details

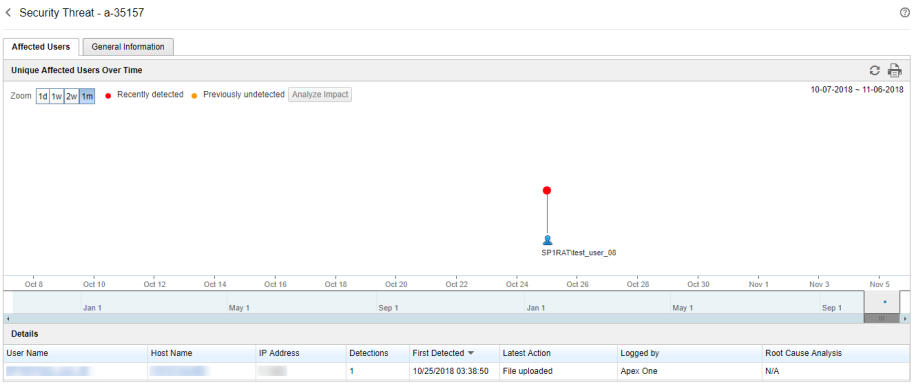
The Active Directory node displays the integrated Active Directory structure. When viewing an organizational unit in the Active Directory node, the list provides two tabs:

- **Users**: For more information, see *User Details on page 7-3*.
- **Endpoints**: For more information, see *Endpoint Details on page 7-10*.

Affected Users

The **Affected Users** tab on the **Security Threat** screen allows you to view the users that a specific threat targeted across your network.

You can access the **Affected Users** tab from the **User** or **Endpoint** information screens by clicking a **Security Threat** name in the table.



- **Unique Affected Users Over Time**: Provides a graphical representation of which users the threat affected and the time of the detection
  - Click **Analyze Impact** to start a Root Cause Analysis to determine whether the threat has affected other endpoints on your network.

    Important

    Performing an Impact Analysis from the **Threat Information** screen requires a valid Apex One Endpoint Sensor license and enabling the Enable Sensor feature for the appropriate **Apex One Security Agent** or **Apex One (Mac)** policies.

    For more information, see *Analyzing Impact on Affected Users on page 7-23*.

  - Click **Start Retro Scan** to scan historical web access logs for callback attempts to C&C servers and other related activities on your network.

Important

Performing a Retro Scan from the **Threat Information** screen requires adding at least one Deep Discovery Inspector server on the **Server Registration** screen on Apex Central and enabling Retro Scan on the registered Deep Discovery Inspector server.

For more information, see *Performing a Retro Scan on Affected Users on page 7-24*.

- Hover over a user icon to view all users affected by this specific threat and its detection history in your environment
  - **Recently detected**: The threat detection occurred during scanning
  - **Previously undetected**: The threat detection occurred during an impact analysis of log data
- Change the displayed time interval by changing the **Zoom** value.
- Change the end date by scrolling through the dates displayed under the graph.

- **Details**: Provides more detailed information about the threats displayed on the **Unique Affected Users Over Time** graph
  - Click a value in the **User Name** or **Host Name** column to view more details.

    For more information, see *Security Threats for Users* or *Security Threats on Endpoints*.

General Information for Security Threats

The information shown varies by threat type and threat-related information received from managed products.

Analyzing Impact on Affected Users

You can perform a historical impact analysis of security threats in your environment from the **Affected Users** tab on the **Security Threats** screen in Apex Central.

Apex One Endpoint Sensor analyzes the impact of suspicious files, IP addresses, and domains in your environment by contacting agents and performing a historical scan of the agent logs to determine if the suspicious objects have affected your environment for a period of time without detection.

Important

Impact analysis requires a valid Apex One Endpoint Sensor license. Ensure that you have a valid Apex One Endpoint Sensor license and enable the Enable Sensor feature for the appropriate **Apex One Security Agent** or **Apex One (Mac)** policies.

For more information, see the *Apex Central Widget and Policy Management Guide*.

Procedure

1. On the Apex Central console, go to **Dashboard**.
2. On the **Users with Threats** or **Endpoints with Threats** widgets, click a number.
3. On the screen that appears, click a **Security Threat** name in the **Security Threat Details** table.

   The **Affected Users** screen appears.
4. Click **Analyze Impact**.

   Endpoint Sensor scans historical network traffic and logs for any detections of the suspicious object.

   For more information, see *Historical Investigations in Endpoint Sensor on page 19-17*.

Performing a Retro Scan on Affected Users

You can perform a Retro Scan to scan historical web access logs for callback attempts to C&C servers and other related activities on your network from the **Affected Users** tab on the **Security Threats** screen in Apex Central.

Deep Discovery Inspector analyzes the impact of suspicious URLs based on historical network traffic information collected by Trend Micro Retro Scan.

Important

Performing a Retro Scan from the **Threat Information** screen requires adding at least one Deep Discovery Inspector server on the **Server Registration** screen on Apex Central and enabling Retro Scan on the registered Deep Discovery Inspector server.

For more information, see the *Deep Discovery Inspector Administrator's Guide*.

Procedure

1. On the Apex Central console, go to **Dashboard**.
2. On the **Users with Threats** or **Endpoints with Threats** widgets, click a number.
3. On the screen that appears, click a **Security Threat** name in the **Security Threat Details** table.

   The **Affected Users** screen appears.
4. Click **Start Retro Scan**

   Deep Discovery Inspector scans historical web access logs for callback attempts to C&C servers and other related activities on your network.

   For more information, see *Retro Scan in Deep Discovery Inspector on page 7-25*.

Retro Scan in Deep Discovery Inspector

Retro Scan is a cloud-based service that scans historical web access logs for callback attempts to C&C servers and other related activities in your network. Web access logs may include undetected and unblocked connections to C&C servers that have only recently been discovered. Examination of such logs is an important part of forensic investigations to determine if your network is affected by attacks.

Retro Scan stores the following log information in the Smart Protection Network:

- IP addresses of endpoints monitored by Deep Discovery Inspector
- URLs accessed by endpoints
- GUID of Deep Discovery Inspector

Retro Scan then periodically scans the stored log entries to check for callback attempts to C&C servers in the following lists:

- Trend Micro Global Intelligence list: Trend Micro compiles the list from multiple sources and evaluates the risk level of each C&C callback address. The C&C list is updated and delivered to enabled products daily.
- User-defined list: Retro Scan can also scan logs against your own C&C server list. Addresses must be stored in a text file.

Important

The Retro Scan screen in Deep Discovery Inspector only displays information for scans that use the Trend Micro Global Intelligence list.

Using the Advanced Search

Apex Central allows you to search for Users or Endpoints using partial string matching. You can also filter the Users or Endpoints that display in the list using Boolean operators.

Procedure

1. Go to **Directories** > **Users/Endpoints**.

   The **User/Endpoint Directory** screen appears.

2. Click the **Advanced** link above the table.

3. In the **Search** drop-down, select **Users** or **Endpoints**.

   The search criteria in the second drop-down control dynamically changes based on your selection.

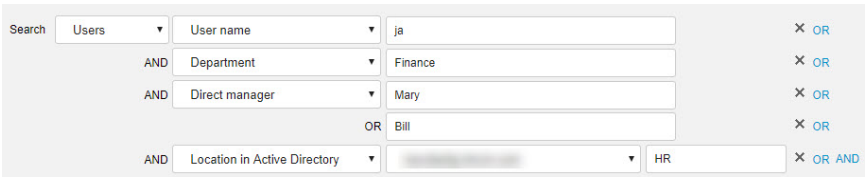
   For more information, see *Advanced Search Categories on page 7-27*.

4. Add multiple search criteria using the Boolean operators to the right of the filters.

5. Add multiple search criteria using the Boolean operators to the right of the filters.

   - **OR**: Allows you to search for multiple values for the specified criteria. All records that match either value display.
   - **AND**: Allows you to select a new search criteria. Only records that match the values specified for this criteria and all other selected criteria values display.

   To filter all users with "ja" in their name in the Finance department that report to "Mary" or "Bill" in the Active Directory domain "HR", specify the following criteria:



6. Display results by clicking one of the following:

   - **Search**: Displays the search results in the list but does not save the search criteria.

- **Save as New Custom Filter**: Displays the search results in the list and prompts you to save the search criteria to a custom filter. The custom filter displays under the **Users** or **Endpoints** node in the User/Endpoint Directory tree.

  For more information, see *Filters on page 7-35*.

7. (Optional) Use the drop-down controls below the **Endpoints** or **Users** tab to specify the time period for the data that displays or to switch between **Tabular view** and **Timeline view**.

8. (Optional) Click **Export** to export the data as a `*.csv` file or `*.png` image.

Note

- **Tabular view** only supports exporting data as a `*.csv` file.
- **Timeline view** can export data as a `*.csv` file or a `*.png` image.

Advanced Search Categories

During an Advanced Search, use the following search criteria options for **Users** and **Endpoints**.

TABLE 7-4. User Categories

CATEGORY	DESCRIPTION
User name	The account name of local users or people belonging to an Active Directory structure
Direct manager	The account name of the person who users are assigned to report to
Location in Active Directory	The organization unit from which to begin your search
Department	The name of the department in your company that groups users based on their function (for example, Accounting) or other criteria
Active Directory group	A collection of Active Directory user and computer accounts, contacts and other groups that can be managed as a single unit

Category	Description
Threat type	Select a security threat type from the third drop-down list
Security threat	Search for a specific security threat by typing a malware name, URL, IP address, or sender email address
Threat status	The remediation status indicated by the flag icon in the first column on the **Security Threats** screen: Resolved by product, Action required, Resolved manually For more information, see *Security Threats for Users on page 7-6*.
Importance	The assigned importance level For more information, see *User or Endpoint Importance on page 7-38*.
Active Directory site	The site name synchronized from the Active Directory For more information, see *Endpoint and User Grouping on page 6-12*.
Reporting line	The display name for the reporting line synchronized from the Active Directory For more information, see *Endpoint and User Grouping on page 6-12*.

Table 7-5. Endpoint Categories

Category	Description
Endpoint name	The host or device name of the endpoint
IP address	The IPv4 address range **Note** Searching by IPv4 segment requires a specific range starting with the first octet. The search returns all endpoints with IP addresses containing the entry.
Endpoint type	The type of computer or device: server, desktop, laptop, mobile device, or other
Operating system	The type of operating system on the endpoint

CATEGORY	DESCRIPTION
Location in Active Directory	The organization unit from which to begin your search
Threat type	Select a security threat type from the third drop-down list
Security threat	Search for a specific security threat by typing a malware name, URL, IP address, or sender email address
Threat status	The remediation status indicated by the flag icon in the first column on the **Security Threats** screen: Resolved by product, Action required, Resolved manually For more information, see *Security Threats on Endpoints on page 7-14*.
Compliance	The antivirus pattern compliance or Data Loss Prevention compliance status For more information, see *Compliance Indicators on page 6-6*.
Importance	The assigned importance level For more information, see *User or Endpoint Importance on page 7-38*.
Active Directory site	The site name synchronized from the Active Directory For more information, see *Endpoint and User Grouping on page 6-12*.
Reporting line	The display name for the reporting line synchronized from the Active Directory For more information, see *Endpoint and User Grouping on page 6-12*.
Installation mode	The Security Agent installation mode For more information, see *Downloading Security Agent Installation Packages on page 9-2*.
Services	The Security Agent service For more information, see the *Apex Central Widget and Policy Management Guide*.
Apex One domain hierarchy	The location of the endpoint within the Apex One domain hierarchy

Custom Tags and Filters

Use tags and filters based on your network and management requirements. Trend Micro suggests that you consider the following when using tags and filters:

- Group users based on your Active Directory organization
- Group endpoints based on their location
- Group users or endpoints with similar properties or characteristics

  For example:

  - Group users based on direct supervisor associations
  - Group endpoints using the same operating system

Note

- Any Apex Central user account that has permission to create or modify custom tags, filters, or important labels in the **User/Endpoint Directory** can view or modify custom tags, filters, or important labels created by all other user accounts.
- Editing a tag, filter, or importance label on the **User/Endpoint Directory** screen also modifies the corresponding tag, filter, or importance label used by log queries and reports. For example, if the an endpoint is removed from a custom filter on the **User/Endpoint Directory** screen, then log queries and generated reports that use the filter will exclude data from the removed endpoint.
- Apex Central automatically assigns importance to “Domain Admins” (users) and “Domain Controllers” (endpoints) after Active Directory synchronization.
  - The current version of Apex Central only supports one important “Domain Admin” and one important “Domain Controller” for each integrated Active Directory domain. Individual user accounts can no longer assign separate “important” tags for the same “Domain Admins” and “Domain Controllers”.
  - If you have preexisting “important” tags for “Domain Admins” and “Domain Controllers” created by separate user accounts on a previous version of Apex Central, the preexisting “Domain Admins” and “Domain Controllers” will be deleted and replaced with one important “Domain Admin” and one important “Domain Controller” for each integrated Active Directory domain.

Tip

- The **User Access** log query data view provides details about any user modifications related to any available custom tags or filters.

  For more information, see the following topics:

  - *Querying Logs on page 15-2*
  - *User Access Information on page B-98*

- Generate custom reports for tagged users and endpoints by specifying the associated tags, filters, or importance labels as the report targets.

  For more information, see the following topics:

  - *Creating One-time Reports on page 17-22*
  - *Adding Scheduled Reports on page 17-27*
  - *Editing Scheduled Reports on page 17-32*

Custom Tags

Custom tags are labels that you can manually associate with one or more users/endpoints for grouping purposes.

- By default, Apex Central does not assign tags to any users or endpoints.
- You can apply multiple custom tags to multiple users/endpoints.
- Any Apex Central user account that has permission to create or modify custom tags, filters, or important labels in the **User/Endpoint Directory** can view or modify custom tags, filters, or important labels created by all other user accounts.

Creating a Custom Tag

Note

- Any Apex Central user account that has permission to create or modify custom tags, filters, or important labels in the **User/Endpoint Directory** can view or modify custom tags, filters, or important labels created by all other user accounts.
- Editing a tag, filter, or importance label on the **User/Endpoint Directory** screen also modifies the corresponding tag, filter, or importance label used by log queries and reports. For example, if the an endpoint is removed from a custom filter on the **User/Endpoint Directory** screen, then log queries and generated reports that use the filter will exclude data from the removed endpoint.

Procedure

1. Go to **Directories** > **Users/Endpoints**.
2. Expand the **Custom Tags** node under **Users** or **Endpoints** in the tree.
3. Click **Add new custom tag**.
4. Type a descriptive name for the tag, and press ENTER or click to save the new tag.

   The tag appears in the list of **Users** or **Endpoints** tags.

   After creating a custom tag:

   - Click the icon next to any custom tag to edit the tag name.
   - Click the icon next to any custom tag to delete the tag.

Assigning Custom Tags to Users/Endpoints

Note

- Any Apex Central user account that has permission to create or modify custom tags, filters, or important labels in the **User/Endpoint Directory** can view or modify custom tags, filters, or important labels created by all other user accounts.
- Editing a tag, filter, or importance label on the **User/Endpoint Directory** screen also modifies the corresponding tag, filter, or importance label used by log queries and reports. For example, if the an endpoint is removed from a custom filter on the **User/Endpoint Directory** screen, then log queries and generated reports that use the filter will exclude data from the removed endpoint.

Procedure

1. Go to **Directories** > **Users/Endpoints**.
2. Select the **Users** or **Endpoints** to view, or search for specific users/endpoints.
3. To associate a custom tag with a user/endpoint:
   - Click the user/endpoint row and click **Tasks** > **Assign/Remove Custom Tags**.
   - Right-click the user/endpoint row and click **Assign/Remove Custom Tags**.
4. In the **Assign/Remove Custom Tags** dialog, select or clear the necessary tag(s) from the list, and click **Save**.

   You can verify the proper association of tags with the selected users or endpoints by selecting a tag from the **Customs Tags** list, and checking that the selected user or endpoint displays properly.

Filters

Filters automatically group users or endpoints having the same criteria.

- You can group **Users** and **Endpoints** based on custom tags and filters or assign importance.

  For more information, see *Creating a Custom Filter on page 7-37* and *User or Endpoint Importance on page 7-38*.

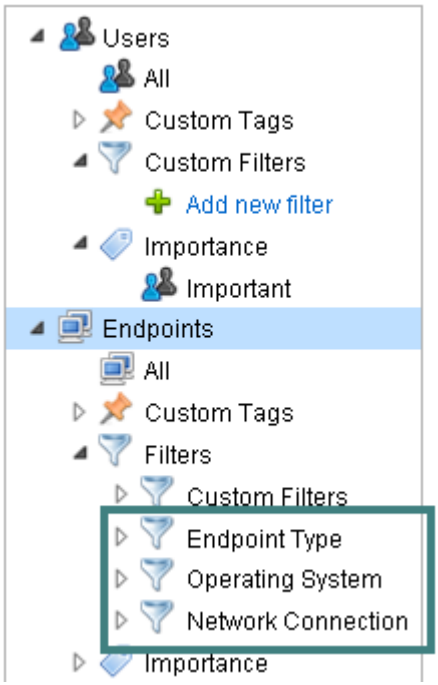
- In addition, the **Endpoints** tree can group endpoints based on default filters.

  For more information, see *Default Endpoint Filters on page 7-36*.

- Any Apex Central user account that has permission to create or modify custom tags, filters, or important labels in the **User/Endpoint Directory** can view or modify custom tags, filters, or important labels created by all other user accounts.

Default Endpoint Filters

By default, the **Endpoints** tree provides default filters based on the typical grouping of endpoints in an organization.



Expand one of the default filters and select the type of endpoint to display.

For details about the table columns and the data they contain, see *User Details on page 7-3*.

The following are the default filters:

- **Endpoint Type**: Servers, desktops, laptops, mobile devices, and other types
- **Operating System**: Common operating systems installed on endpoints, including Windows, Mac OS, iOS, Android, and other operating systems

- **Network Connection**: Isolated endpoints

> **Note**
>
> After viewing the **Isolated** endpoints, you can click **Tasks** > **Restore Network Connection** to stop the isolation.

Creating a Custom Filter

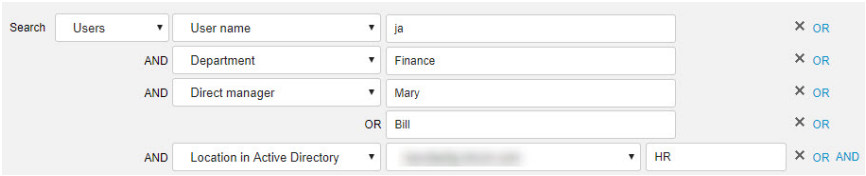
> **Note**
>
> - Any Apex Central user account that has permission to create or modify custom tags, filters, or important labels in the **User/Endpoint Directory** can view or modify custom tags, filters, or important labels created by all other user accounts.
> - Editing a tag, filter, or importance label on the **User/Endpoint Directory** screen also modifies the corresponding tag, filter, or importance label used by log queries and reports. For example, if the an endpoint is removed from a custom filter on the **User/Endpoint Directory** screen, then log queries and generated reports that use the filter will exclude data from the removed endpoint.

Procedure

1. Go to **Directories** > **Users/Endpoints**.
2. Expand the **Custom Filters** node in the tree.
   - For **Users**, expand **Custom Filters**.
   - For **Endpoints**, expand **Filters**, and then expand **Custom Filters**.
3. Click **Add new filter**.

   The **Search** area above the table changes to allow you to select the filter criteria.
4. Filter users or endpoints based on the available criteria.

The following example filters all users with "ja" in their name in the Finance department that report to "Mary" or "Bill" in the Active Directory domain "HR":



For more information, see *Advanced Search Categories on page 7-27*.

After creating a custom filter:

- Click the icon next to any custom filter to edit the filter name.
- Click the icon next to any custom filter to update the Boolean expressions.
- Click the icon next to any custom filter to delete the filter.

User or Endpoint Importance

Assigning importance to groups of users and endpoints allows you to quickly monitor and respond to threats against these targets from the **Dashboard** screen. Apex Central provides several widgets that highlight threat events for "important" users and endpoints. You may want to apply stricter policies to important users or endpoints and constantly monitor their protection status.

You must first assign custom tags, or create custom filters, to identify the important users or endpoints. After identifying the important users or endpoints on your network, you can assign the "important" tag to provide greater visibility on the **Dashboard**.

For more information see *Custom Tags and Filters on page 7-30*.

Note

- Manually assign importance to users/endpoints grouped using custom tags and filters.
- Any Apex Central user account that has permission to create or modify custom tags, filters, or important labels in the **User/Endpoint Directory** can view or modify custom tags, filters, or important labels created by all other user accounts.
- Editing a tag, filter, or importance label on the **User/Endpoint Directory** screen also modifies the corresponding tag, filter, or importance label used by log queries and reports. For example, if the an endpoint is removed from a custom filter on the **User/Endpoint Directory** screen, then log queries and generated reports that use the filter will exclude data from the removed endpoint.
- Apex Central automatically assigns importance to "Domain Admins" (users) and "Domain Controllers" (endpoints) after Active Directory synchronization.
  - The current version of Apex Central only supports one important "Domain Admin" and one important "Domain Controller" for each integrated Active Directory domain. Individual user accounts can no longer assign separate "important" tags for the same "Domain Admins" and "Domain Controllers".
  - If you have preexisting "important" tags for "Domain Admins" and "Domain Controllers" created by separate user accounts on a previous version of Apex Central, the preexisting "Domain Admins" and "Domain Controllers" will be deleted and replaced with one important "Domain Admin" and one important "Domain Controller" for each integrated Active Directory domain.

Procedure

1. Go to **Directories** > **Users/Endpoints**.
2. Expand the **Importance** node under **Users** or **Endpoints** in the tree.
3. Click **Important** and click the edit icon ( ).
4. On the screen that displays:

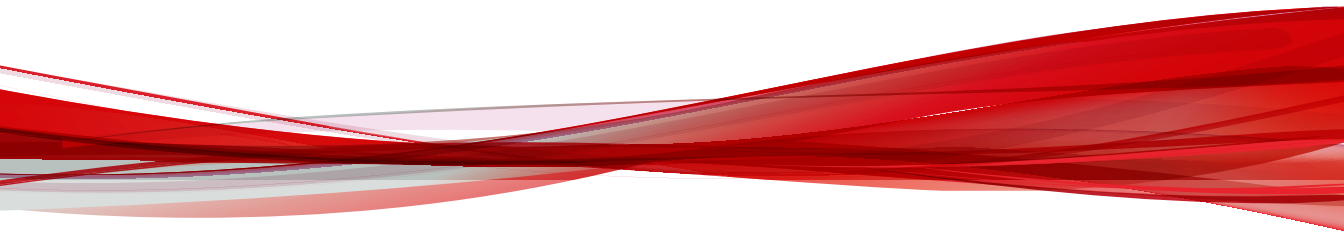
- Assign importance by selecting one or several custom tags or custom filters, and then click **Save**.
- Remove importance by clearing one or several custom tags or custom filters, and then click **Save**.

The table in the main screen is updated with the list of endpoints or users that match the custom tags or custom filters.

For details about the table columns and the data they contain, see *User Details on page 7-3*.

Part III

Managed Product Integration



Chapter 8

Managed Product Registration

This section discusses how to register managed products and servers to the Apex Central server.

Topics include:

- *Managed Product Registration Methods on page 8-2*
- *Server Registration on page 8-2*
- *Managed Product Communication on page 8-11*

Managed Product Registration Methods

Apex Central requires managed products to register to the Apex Central server by using one of the following methods:

- The **Server Registration** screen on the Apex Central management console
- The managed product's management console (through the Apex Central MCP agent)

Server Registration

The **Server Registration** screen (**Administration** > **Managed Servers** > **Server Registration**) allows you to register, configure, or unregister managed products that register to Apex Central using the Apex Central management console.

For more information about products that register to Apex Central using the managed product web console, see *Connected Threat Defense Product Integration on page 19-37*.

Use the **Server Registration** screen to perform the following tasks.

Task	Description
Add managed servers	Click **Add** to register managed products to the Apex Central server. For more information, see *Adding a Managed Server on page 8-5*. **Note** If the **Add** icon is disabled, the managed product registers to Apex Central using the managed product console.

Task	Description
Edit managed server settings	Click the **Edit** icon in the **Actions** column to modify configuration settings for a managed server. For more information, see *Editing a Managed Server on page 8-7*.
Delete managed servers	Click **Delete** icon in the **Actions** column to unregister a managed server from the Apex Central server. For more information, see *Deleting a Managed Server on page 8-8*.
Configure proxy settings	Click **Proxy Settings** to configure proxy settings for managed products For more information, see *Configuring Proxy Settings for Managed Products on page 8-9*.
Configure cloud service settings	Click **Cloud Service Settings** to register, edit, or unregister cloud services For more information, see *Configuring Cloud Service Settings on page 8-11*.
Organize managed servers in the Product Directory structure	Click **Directory Management** to group or move managed products to new locations in the Product Directory structure For more information, see *Managing the Product Directory on page 10-13*.
Single sign-on to managed product consoles	Click the link in the **Server** column to single sign-on to the managed product console. **Tip** You can also single sign-on to managed product consoles from the **Product Directory** screen. For more information, see *Product Directory on page 10-2*.

Note

For more information about the details that display on the **Server Registration** screen, see *Managed Server Details on page 8-4*.

Managed Server Details

The following table describes the information that displays on the **Server Registration** screen.

Column Name	Description
Server	Displays the server name of the managed product **Note** Clicking the server name of a managed product that registers to Apex Central using an MCP agent redirects you to the managed product console.
Display Name	Displays the server display name of the managed product
Product	Displays the name of the managed product
Connection Type	Displays how the managed product registers to Apex Central • **Automatic**: The managed product registers to Apex Central through an MCP agent. For details, see *Connected Threat Defense Product Integration on page 19-37*. • **Manual**: Administrators used the **Server Registration** screen to register the managed product. For details, see *Adding a Managed Server on page 8-5*. • **Cloud Service**: The managed product registers through **Cloud Service Settings**. For details, see *Configuring Cloud Service Settings on page 8-11*.
Last Report	Displays the most recent date and time when Apex Central received a response from the managed product

Column Name	Description
Virtual Analyzer	Displays the registered Virtual Analyzer (if any) to which the managed product submits samples
Actions	• **Edit**: Click this icon to update the server information For details, see *Editing a Managed Server on page 8-7*. • **Delete**: Click this icon to unregister a managed server For details, see *Deleting a Managed Server on page 8-8*.

Adding a Managed Server

Use the **Server Registration** screen to register managed servers to the Apex Central server.

Note

- If the **Add** button is disabled, then the product registers to Apex Central using the managed product management console.

  For more information, see *Connected Threat Defense Product Integration on page 19-37*.

- Before performing policy management on a newly added managed server, click **Directory Management** and move the managed product from the **New Entity** folder to another location.

  For more information, see *Managing the Product Directory on page 10-13*.

Procedure

1. Go to **Administration** > **Managed Servers** > **Server Registration**.

   The **Server Registration** screen appears.

2. Select a product from the **Server Type** drop-down list.

   A list of registered managed servers appears.

3. Click the **Add** button or the **Add a product** link in the table.

   The **Add Server** screen appears.

4. Specify the following server information:

   - **Server**: Type the <managed product> server name, FQDN, or IPv4/IPv6 address and port number (if any).

     Important

     The server address should start with either `HTTP` or `HTTPS`.

   - **Display name**: Specify the name of the <managed product> server that displays in Apex Central.

5. If logging on to the managed server requires authentication, specify the following credentials:

   - **User name**: Provide the name of a <managed product> account with administrator privileges.
   - **Password**: Type the password for the provided account.

     Important

     Apex Central requires an account with administrator privileges to deploy policy settings.

6. (Optional) To use a proxy server, select the **Use a proxy server for the connection** check box.

   For more information, see *Configuring Proxy Settings for Managed Products on page 8-9*.

7. To enable sample submission, select the Virtual Analyzer product/service from the **Virtual Analyzer** drop-down list.

Important

- For Deep Security and Trend Micro Endpoint Sensor, you must add the managed server first and then edit the server to select the Virtual Analyzer.
- For all other managed products, you can select the Virtual Analyzer when you add the managed server for the first time.
- For more information, see *Connected Threat Defense Product Integration on page 19-37*.

8. Click **Save**.

   The newly added server appears in the list of registered managed servers.

Editing a Managed Server

Use the **Server Registration** screen to edit information for managed servers registered to the Apex Central server.

Procedure

1. Go to **Administration** > **Managed Servers** > **Server Registration**.

   The **Server Registration** screen appears.

2. Select a product from the **Server Type** drop-down list.

   A list of registered managed servers appears.

3. Click the **Edit** icon in the **Actions** column for the managed server you want to edit.

   The **Edit Server** screen appears.

4. Edit the server information.

   - **Authentication**: Provide the user name and password if the server requires authentication to log on.

- **Connection**: Select the **Use a proxy server for the connection** check box to use the configured proxy server.

  For more information, see *Configuring Proxy Settings for Managed Products on page 8-9*.

- **Sample Submission**: Select the Virtual Analyzer product/service from the **Virtual Analyzer** drop-down list.

  Important

  - If the **Virtual Analyzer** drop-down list displays **Not supported**, then the Virtual Analyzer product/service must be configured from the managed product server console (for example, the Deep Discovery Inspector console) instead of Apex Central.
  - Apex One servers managed by a Node Apex Central can select the Deep Discovery Analyzer registered to a Hub Apex Central as the Virtual Analyzer product/service.

  For more information, see *Connected Threat Defense Product Integration on page 19-37*.

5. Click **Save**.

Deleting a Managed Server

Use the **Server Registration** screen to unregister a managed server from Apex Central.

Procedure

1. Go to **Administration** > **Managed Servers** > **Server Registration**.

   The **Server Registration** screen appears.

2. Click **Directory Management**.

3. Expand the product tree and select the server you want to delete.

4. Click **Delete**.

   A confirmation screen appears.

5. Click **OK**.

   The selected server is deleted from the product tree.

   Note

   Deleting a managed server on the **Server Registration** screen does not uninstall the server program or related agents.

6. On the management console of the server, go to the product registration screen and unregister the server from Apex Central.

7. Click **OK**.

Configuring Proxy Settings for Managed Products

Apex Central allows you to use a proxy server to connect to managed products on an internal network. After configuring proxy server settings for a managed product, enable the proxy server connection for specific managed servers.

For more information, see *Editing a Managed Server on page 8-7*.

Important

You can only use one proxy server for all managed servers of the same managed product type.

Procedure

1. Go to **Administration** > **Managed Servers** > **Server Registration**.

   The **Server Registration** screen appears.

2. Select a product from the **Server Type** drop-down list.

A list of registered managed servers appears.

3. Click **Proxy Settings**.

   The **Proxy Settings** screen appears.

4. Select one of the following protocols:

   - **HTTP**
   - **SOCKS 4**
   - **SOCKS 5**

5. Specify the following fields:

   - **Server**: Type the server name, FQDN, or IPv4 address of the proxy server
   - **Port**: Type the port number that the proxy server uses for client connections

6. If the proxy server requires authentication, specify the following credentials:

   - **User name**
   - **Password**

7. Click **Save**.

8. To enable the proxy server connection:

   a. Click the **Edit** icon in the **Actions** column for the managed server you want to edit.

      The **Edit Server** screen appears.

   b. Select the **Use a proxy server for the connection** check box in the **Connection** section.

   c. Click **Save**.

Configuring Cloud Service Settings

Use the **Server Registration** screen to register or unregister a managed cloud service from Apex Central.

Procedure

1. Go to **Administration** > **Managed Servers** > **Server Registration**.

   The **Server Registration** screen appears.

2. Click **Cloud Service Settings**.

   The **Cloud Service Settings** screen appears.

3. To register a cloud service, provide the following credentials:

   - **Account**: Type the user name you used to activate the cloud service subscription on the Trend Micro Customer Licensing Portal (https://clp.trendmicro.com/).
   - **Password**: Type the password for the cloud service account.

4. To unregister a cloud service, click **Stop managing services with Apex Central** and agree to all succeeding prompts.

5. Click **OK**.

Managed Product Communication

Apex Central uses Management Communication Protocol (MCP) agents installed on managed servers to communicate with managed products that do not register to the Apex Central server through the Apex Central management console.

An MCP agent communicates with the Apex Central server by sending a heartbeat at a regular interval to indicate that the managed product is operating normally.

Administrators can configure the Agent Communication Schedule to determine when agents send heartbeats to the Apex Central server.

Important

Apex Central only allows you to configure the Agent Communication Schedule for managed products that register to the Apex Central server through the Apex Central management console.

Modifying the Default Agent Communication Schedule

Apex Central uses the default agent communication schedule to communicate with all managed products that do not have a customized agent communication schedule.

Use the **Set Communicator Schedule** screen to modify the default schedule by clicking a time slot to change the communication status.

Procedure

1. Go to **Administration** > **Managed Servers** > **Agent Communication Schedule**.

   The **Agent Communication Schedule** screen appears.

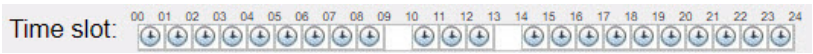
2. In the **Communicator** column, click **Default Schedule**.

   The **Set Communicator Schedule** appears.

3. Click a time slot to change the agent communication status.

   - Setting a time slot to **Idle** creates consecutive time periods during which the agent sends heartbeats to the Apex Central server.

     For example, setting time slots 09 and 13 to **Idle** creates two periods of consecutive time slots.



- You can specify up to three consecutive time periods of **Scheduled** time slots during which the agent sends a heartbeat to the Apex Central server.

4. Click **Save**.

Configuring Agent Communication Schedules

Customize the Agent Communication Schedule for a managed product by clicking a time slot on the **Set Communicator Schedule** screen to change the communication status.

Important

You can only configure one Agent Communication Schedule per managed product.

Procedure

1. Go to **Administration** > **Managed Servers** > **Agent Communication Schedule**.

   The **Agent Communication Schedule** screen appears.

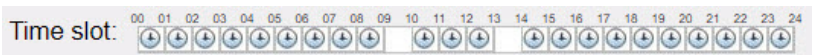
2. In the **Communicator** column, click the managed product to modify.

   The **Set Communicator Schedule** screen appears.

3. Click a time slot to change the communication status.

   - Setting a time slot to **Idle** creates consecutive time periods during which the agent sends heartbeats to the Apex Central server.

     For example, setting time slots 09 and 13 to **Idle** creates two periods of consecutive time slots.



- You can specify up to three consecutive time periods of **Scheduled** time slots during which the agent sends a heartbeat to the Apex Central server.

4. Click **Save**.

Configuring Managed Product Heartbeat Intervals

The **Managed Product Heartbeat Interval** settings determine how frequently the agent sends a heartbeat to the Apex Central server.

Use the **Communication Time-out Settings** screen to define the managed product heartbeat interval in minutes.

When configuring the managed product heartbeat interval, consider the following:

- The **Managed Product Heartbeat Interval** settings only apply to managed products that register to the Apex Central server using the Apex Central management console.
- Long heartbeat intervals consume less bandwidth but allow more network events to occur before Apex Central updates the communication status.
- Short intervals between heartbeats consume more bandwidth but present a more up-to-date picture of your network status.

Procedure

1. Go to **Administration** > **Managed Servers** > **Communication Time-out Settings**.

   The **Communication Time-out Settings** screen appears.

2. In the **Managed Product Heartbeat Interval** section, configure the following settings:

   - **Report managed product status every**: Defines the agent communication heartbeat interval

Valid values are between 5 and 480 minutes.

- **If no communication, set status as abnormal after**: Defines the agent communication time-out interval

  Valid values are between 15 and 1440 minutes.

Important

The **If no communication, set status as abnormal after** value must be at least triple the **Report managed product status every** value.

3. Click **Save**.

Chapter 9

Security Agent Installation

This chapter describes Security Agent installation requirements and methods.

Topics include:

- *Downloading Security Agent Installation Packages on page 9-2*
- *Apex One Security Agent System Requirements on page 9-4*
- *Apex One (Mac) Security Agent Installation on page 9-26*

Downloading Security Agent Installation Packages

Use the **Security Agent Download** screen to create and download Security Agent installation packages for Apex One or Apex One (Mac). You can download and install the Security Agent installation package or get a URL that you can send to users to download the Security Agent installation package directly onto a target endpoint.

TABLE 9-1. Pre-installation Configuration

SECURITY AGENT	CONFIGURATION
Apex One	Before installing Apex One Security Agents: • Change the default Apex One Security Agent unloading and uninstallation passwords • Ensure that endpoints can communicate through ports 80 and 443 • Ensure that endpoints can access *.trendmicro.com • If required, configure Apex One Security Agent proxy server settings
Apex One (Mac)	Before installing Apex One (Mac) Security Agents: • Ensure that endpoints can communicate through port 61617 or 8443 (SaaS) • Ensure that endpoints can access *.trendmicro.com • If required, configure Apex One Security Agent proxy server settings

For more information about system requirements for installing Security Agents on endpoints, see the following topics:

- *Apex One Security Agent System Requirements on page 9-4*
- *Apex One (Mac) Security Agent System Requirements on page 9-26*

Procedure

1. Go to **Administration** > **Security Agent Download**.
2. Select the operating system.
   - **Windows 64-bit**: Select to create a 64-bit MSI installation package for Apex One Security Agents
   - **Windows 32-bit**: Select to create a 32-bit MSI installation package for Apex One Security Agents
   - **Mac**: Select to create a ZIP installation package for Apex One (Mac) Security Agents
3. For **Windows 64-bit** or **Windows 32-bit** Apex One Security Agents, select the **Installation mode**:
   - **Full feature set**: Installs the standard Apex One Security Agent with full feature capabilities
   - **Coexist**: The coexist mode Apex One Security Agent provides a limited subset of Apex One capabilities but is compatible with any supported Windows endpoint, running any endpoint security software.

   Tip

   Select **Coexist** mode to allow target endpoints to use third-party security software.
4. If you have more than one corresponding managed product server for the type of installation package selected, use the **Server** drop-down to select the server to which the Security Agent reports.

   Note

   If you only have one managed product server, only the managed product server name displays.
5. Click one of the following deployment options:

- **Download**: Downloads a copy of the Security Agent installation package that you can install locally or later deploy to target endpoints
- **Get Download Link**: Displays a URL that you can send to users to install the Security Agent directly onto a target endpoint

Note

For Apex One servers, the Apex One Security Agent package applies the settings generated the last time the Security Agent Packaging Tool ran.

For more information, see the *Apex One Administrator's Guide*

Apex One Security Agent System Requirements

This section outlines the Apex One Security Agent system requirements for fresh installations on supported Windows platforms.

Windows Endpoint Platforms

Windows 7 (32-bit / 64-bit) Service Pack 1 Requirements

Item	Requirement	
Editions **Important** Service Pack 1 is required.	• Home Basic • Home Premium • Ultimate • Professional	• Enterprise • Professional for Embedded Systems • Ultimate for Embedded Systems • Thin PC

Item	Requirement
Processor	• Minimum 1GHz (32-bit) / 2GHz (64-bit) Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Simple File Sharing disabled • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin

Windows 8.1 (32-bit / 64-bit) Requirements

Item	Requirement
Editions (no Service Pack required)	• Standard • Pro • Enterprise

ITEM	REQUIREMENT
Processor	• Minimum 1GHz (32-bit) / 2GHz (64-bit) Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin **Note** Windows UI is not supported.

Windows 10 (32-bit / 64-bit) Requirements

ITEM	REQUIREMENT
Editions (no Service Pack required)	• Home • Pro • Pro for Workstations • Education • Enterprise
Update support	• Windows 10 November 2021 Update (Windows 10 21H2) and earlier
Processor	• Minimum 1GHz (32-bit) / 2GHz (64-bit) Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.

Item	Requirement
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin **Note** Windows UI is not supported.

Windows Server Platforms

Windows Server 2008 R2 (64-bit) Platforms

- *Windows Server 2008 R2 on page 9-8*
- *Windows Storage Server 2008 R2 on page 9-9*
- *Windows HPC Server 2008 R2 on page 9-10*

Note

For processor and RAM requirements for a specific platform, refer to the Microsoft system requirements for that platform.

Table 9-2. Windows Server 2008 R2

Item	Requirement
Editions (Service Pack 1)	• Standard • Enterprise • Datacenter • Web • Server Core

ITEM	REQUIREMENT
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin

TABLE 9-3. Windows Storage Server 2008 R2

ITEM	REQUIREMENT
Editions (Service Pack 1)	• Basic • Standard • Enterprise • Workgroup

ITEM	REQUIREMENT
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin

TABLE 9-4. Windows HPC Server 2008 R2

ITEM	REQUIREMENT
Editions (no Service Pack required)	• N/A
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor

Item	Requirement
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin

Windows MultiPoint Server 2010 (64-bit) Platform

Note

For processor and RAM requirements for a specific platform, refer to the Microsoft system requirements for that platform.

Item	Requirement
Editions (no Service Pack required)	• N/A

ITEM	REQUIREMENT
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin

Windows MultiPoint Server 2011 (64-bit) Platform

Note

For processor and RAM requirements for a specific platform, refer to the Microsoft system requirements for that platform.

ITEM	REQUIREMENT
Editions (no Service Pack required)	• Standard • Premium
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin

Windows Server 2012 (64-bit) Platforms

- *Windows Server 2012 on page 9-14*
- *Windows Server 2012 R2 on page 9-15*
- *Windows Storage Server 2012 on page 9-16*

- *Windows Storage Server 2012 R2 on page 9-17*
- *Windows MultiPoint Server 2012 on page 9-18*
- *Windows Server 2012 Failover Clusters on page 9-19*
- *Windows Server 2012 R2 Failover Clusters on page 9-20*

Note

For processor and RAM requirements for a specific platform, refer to the Microsoft system requirements for that platform.

TABLE 9-5. Windows Server 2012

ITEM	REQUIREMENT
Editions (no Service Pack required)	• Standard • Datacenter • Server Core
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)

ITEM	REQUIREMENT
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin **Note** Windows UI is not supported.

TABLE 9-6. Windows Server 2012 R2

ITEM	REQUIREMENT
Editions (no Service Pack required)	• Standard • Datacenter • Server Core
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)

ITEM	REQUIREMENT
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin **Note** Windows UI is not supported.

TABLE 9-7. Windows Storage Server 2012

ITEM	REQUIREMENT
Editions (no Service Pack required)	• Standard • Workgroup
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)

Item	Requirement
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin **Note** Windows UI is not supported.

Table 9-8. Windows Storage Server 2012 R2

Item	Requirement
Editions (no Service Pack required)	• Standard • Workgroup
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)

ITEM	REQUIREMENT
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin **Note** Windows UI is not supported.

TABLE 9-9. Windows MultiPoint Server 2012

ITEM	REQUIREMENT
Editions (no Service Pack required)	• Standard • Premium
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)

ITEM	REQUIREMENT
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin **Note** Windows UI is not supported.

TABLE 9-10. Windows Server 2012 Failover Clusters

ITEM	REQUIREMENT
Editions (no Service Pack required)	• N/A
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)

ITEM	REQUIREMENT
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin **Note** Windows UI is not supported.

TABLE 9-11. Windows Server 2012 R2 Failover Clusters

ITEM	REQUIREMENT
Editions (no Service Pack required)	• N/A
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)

ITEM	REQUIREMENT
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin **Note** Windows UI is not supported.

Windows Server 2016 (64-bit) Platforms

- *Windows Server 2016 on page 9-22*
- *Windows Server 2016 Failover Clusters on page 9-23*
- *Windows Storage Server 2016 on page 9-24*

Note

For processor and RAM requirements for a specific platform, refer to the Microsoft system requirements for that platform.

TABLE 9-12. Windows Server 2016

ITEM	REQUIREMENT
Editions (no Service Pack required)	• Standard • Datacenter • Server Core
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin **Note** Windows UI is not supported.

TABLE 9-13. Windows Server 2016 Failover Clusters

ITEM	REQUIREMENT
Editions (no Service Pack required)	• N/A
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin **Note** Windows UI is not supported.

TABLE 9-14. Windows Storage Server 2016

ITEM	REQUIREMENT
Editions (no Service Pack required)	• Standard • Workgroup
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin **Note** Windows UI is not supported.

Windows Server 2019 (64-bit) Platforms

Note

For processor and RAM requirements for a specific platform, refer to the Microsoft system requirements for that platform.

TABLE 9-15. Windows Server 2019

ITEM	REQUIREMENT
Editions (no Service Pack required)	• Standard • Datacenter • Server Core
Processor	• Minimum 1.4GHz Intel Pentium or equivalent (2GHz recommended) • AMD™ 64 processor • Intel 64 processor
RAM	• 2GB minimum (exclusively for Apex One) Apex One with Endpoint Sensor: • 2GB minimum (exclusively for Apex One)
Available Disk Space	• 1.5GB minimum • 2.0GB recommended **Note** If you activate Application Control, Endpoint Sensor, Vulnerability Protection, and Data Protection on the Security Agent, Trend Micro recommends increasing the minimum disk space to 3.0GB.

Item	Requirement
Others	• Monitor that supports 1024 x 768 resolution at 256 colors or higher • Allow printer/file sharing in the Windows firewall (if enabled) • Enable default local admin **Note** Windows UI is not supported.

Apex One (Mac) Security Agent Installation

This section describes Apex One (Mac) Security Agent installation requirements and methods.

For more information, refer to the Apex One (Mac) documentation.

Apex One (Mac) Security Agent System Requirements

The following are the requirements for installing the Security Agent on a Mac endpoint.

Table 9-16. Security Agent installation requirements

Resource	Requirement
Operating system	• macOS™ Catalina 10.15 • macOS™ Mojave 10.14 • macOS™ High Sierra 10.13 • macOS™ Sierra 10.12 • OS X™ El Capitan 10.11

Resource	Requirement
Hardware	• **Processor**: Apple® M1, Apple® M2, or Intel® Core™ processor • **RAM**: 2GB minimum • **Available disk space**: 512MB minimum
Server-agent communication	• 8443 (SaaS) • 61617
Others	• Access to *.trendmicro.com • If required, proxy server settings for Internet connection

Chapter 10

Product Directory

This section discusses how to view information about all the managed products registered to the Apex Central server and the tasks available on the **Product Directory** screen.

Topics include:

- *Product Directory on page 10-2*
- *Viewing Managed Product Status Summaries on page 10-5*
- *Performing an Advanced Search of the Product Directory on page 10-6*
- *Executing Managed Product Tasks on page 10-8*
- *Configuring Managed Product Settings on page 10-9*
- *Querying Logs from the Product Directory on page 10-10*
- *Directory Management on page 10-11*

Product Directory

The **Product Directory** screen displays information about all the managed product servers registered to the Apex Central server. You can use this screen to search for specific managed product entities, view managed server status summaries, execute managed product tasks, configure managed product settings, or query managed product logs.

Tip

You can also use the **Log Query** screen to query managed product logs.

For more information, see *Querying Logs on page 15-2*.

The Product Directory tree organizes managed products into the following default folders:

- **<Root>**: Displays the name of the Apex Central server and contains all the following subfolders
- **Local Folder**: Contains the **New Entity** folder and any custom folders you create
- **New Entity**: Contains all managed products newly registered to the Apex Central server
- **Search Result**: Contains all managed products that match the criteria for a basic or advanced search

Note

Except for the **New Entity** folder, Apex Central lists all folders in ascending order, starting from special characters (!, #, $, %, (,), *, +, -, comma, period, +, ?, @, [,], ^, _, {, |, }, and ~), numbers (0 to 9), or alphabetic characters (a/A to z/Z).

The **Product Directory** screen uses icons to represent managed products and the connection status of managed products.

For more information about the Product Directory connection status icons, see the *Connection Status Icons on page 10-4*.

The following table outlines the tasks available on the **Product Directory** screen.

Task	Description
View status summaries	Select a managed product entity in the Product Directory to view the status summary. For more information, see *Viewing Managed Product Status Summaries on page 10-5*.
Find managed product entities	In the **Find entity** search box, search for managed product entities using partial string matching and click **Search**. Managed product entities that match the search criteria appear in the **Search Result** folder. For more information about performing an advanced search, see *Executing Managed Product Tasks on page 10-8*.
Configure managed product settings	Select a managed product entity in the Product Directory tree and select an option from the **Configure** drop-down. For more information, see *Configuring Managed Product Settings on page 10-9*.
Execute managed product tasks	Select a managed product entity in the Product Directory tree and select an option from the **Tasks** drop-down. For more information, see *Executing Managed Product Tasks on page 10-8*.
Query managed product logs	Select a managed product entity in the Product Directory and click **Logs**. For more information, see *Querying Logs from the Product Directory on page 10-10*.
Organize the Product Directory structure	Click **Directory Management** to create new folders or move or group managed product entities in the Product Directory tree. For more information, see *Directory Management on page 10-11*.

Task	Description
Single sign-on to manged product consoles	Select the managed product server icon in the corresponding folder in the Product Directory tree and click **Configure** > **<Managed_Product> Single Sign On**. **Tip** You can also single sign-on to managed product consoles from the **Server Registration** screen. For more information, see *Server Registration on page 8-2*.

Connection Status Icons

The Product Directory uses the following icons to indicate the status of communication between the Apex Central server and registered managed products.

Icon	MCP Agent Status	Product Service Status
	Running	Running
	Running	Not running
	Communication timed out **Note** The Apex Central server was unable to establish communication with the MCP agent on the managed product server within the heartbeat interval configured on the **Communication Time-out Settings** screen.	Unknown

Icon	MCP Agent Status	Product Service Status
	Not running **Note** The Apex Central server was unable to establish communication with the MCP agent on the managed product server after multiple unsuccessful attempts according to the criteria configured on the **Communication Time-out Settings** screen.	Not running

Viewing Managed Product Status Summaries

Apex Central allows you to use the **Product Directory** screen to view status summaries for managed products and folders.

Tip

You can also view managed product status summaries by using the **Threat Detection Results** widgets on the **Dashboard**.

Procedure

1. Go to **Directories** > **Products**.

   The **Product Directory** screen appears.

2. Select the following items in the Product Directory tree to display status summaries in the working area.

Item	Description
Managed product	Select to view System Information and Product License Information
Managed product folder	Select to view Antivirus, Spyware/Grayware, Content Security, Web Security, Network Virus, Violation Status, and Component Status summaries
Managed product server	Select a managed product server in the Product Directory tree and click **Folder** > **Product View** to display all domains on the managed product server
Domain in the Product Directory tree	Select to display all clients that belong to this domain on the managed product server

Note

By default, Apex Central displays a seven days of information ending with the day of your query.

You can change the summary period by selecting **Today**, **Last 7 days**, **Last 14 days**, or **Last 30 days** from the **Period** drop-down list.

Performing an Advanced Search of the Product Directory

Apex Central allows you to search the Product Directory for managed product entity names, domains, and endpoints using partial string matching. You can also perform advanced searches on folder objects to locate specific objects using Boolean operators.

Note

After performing a search, any matches appear in a new folder under the **Search Result** node of the Product Directory tree.

Procedure

1. Go to **Directories** > **Products**.

   The **Product Directory** screen appears.

2. Select a folder in the Product Directory tree to search.

   Important

   The advanced search feature only searches within the selected folder and all subfolders. You cannot perform a search within the **Search Result** folder.

3. Click **Advanced Search**.

   The **Advanced Search** screen appears.

4. In the **Match** drop-down, select from the following:

   - **All of the criteria**
   - **Any of the criteria**

5. Specify your filtering criteria.

   Note

   - The available criteria, operators, and values change depending on the products registered to Apex Central and the previous filtering selections.
   - Apex Central supports up to 20 filtering criteria for searches.

6. To add or remove search conditions, click the buttons to the right of the search criteria.

7. Click **Search**.

   Managed products that match the search criteria appear in the **Search Result** folder in the Product Directory tree.

Executing Managed Product Tasks

Use the **Tasks** drop-down menu to issue tasks to a specific managed product or a group of managed products.

The types of commands that display change depending on the managed products selected. Some common tasks include:

- Deploying components
- Sending scan commands
- Synchronizing agents

Tip

Download the latest components from the Trend Micro ActiveUpdate server to the Apex Central server before deploying updates to a specific managed product or a group of managed products.

For more information, see *Configuring Manual Update Settings on page 11-8*.

Procedure

1. Go to **Directories** > **Products**.

   The **Product Directory** screen appears.

2. Select a managed product or folder from the Product Directory tree.

   Note

   If you select a folder, Apex Central attempts to send the selected command to all applicable managed products contained within the selected folder.

3. From the **Tasks** drop-down menu, select a task to perform.
4. To send the command to managed products, do the following:
   - For deployment commands: Click **Deploy now**.

- For scan commands:

  a. Select a scan command.

  b. Select the managed products.

  c. Click **Send Request**.

5. Click **Command Details** to monitor the task progress or click **OK** to proceed with other tasks.

Configuring Managed Product Settings

Apex Central allows you to configure a managed product by signing in to the managed product's web console or by replicating configuration settings to target machines through the Apex Central web console.

Note

For additional information about configuring managed products, refer to the managed product's documentation.

Procedure

1. Go to **Directories** > **Products**.

   The **Product Directory** screen appears.

2. Select a managed product from the Product Directory tree.

3. From the **Configure** drop-down, select one of the following:

   Note

   Options on the **Configure** drop-down menu change depending on the managed product selected.

   - **Configuration Replication**: Replicates configuration settings from the selected managed product to target machines

- **Replicate configuration to entire folder**: Replicates configuration settings to all other managed products in the same folder as the selected managed product
- **<Managed Product> Single Sign On**: Logs you on to the managed product web console using your Apex Central credentials
- **Configure <Managed Product>**: Logs you on to the managed product's web console
  - If prompted, type your user name and password to sign in to the managed product's web console.
  - If prompted, click **Yes** to proceed to the managed product's web console.

Querying Logs from the Product Directory

Apex Central allows you to perform a log query from the **Product Directory** screen by selecting a managed product or folder from the Product Directory tree as the source of information.

Note

When querying logs from the Product Directory, Apex Central preselects the product scope based on the managed product server or folder you select on the **Product Directory** screen.

For more information about performing log queries from the **Log Query** screen, see *Querying Logs on page 15-2*.

Procedure

1. Go to **Directories** > **Products**.

   The **Product Directory** screen appears.

2. Select a managed product or folder from the Product Directory tree.

Note

The selected managed product or folder determines the product scope of the log query.

3. Click the **Logs** button.

   The **Log Query** screen appears.

4. Select a log type and click **OK**.

5. Select a time period or specify a custom range of dates.

6. To specify custom filtering criteria:

   a. Click **Show advanced filters**.

   b. Select **All of the criteria** or **Any of the criteria** as the criteria matching rule.

   c. Select a filtering option from the **Select criteria...** drop-down.

   d. Select an operator and specify the criteria.

Note

Apex Central supports up to 20 custom filtering criteria for each log query.

7. Click **Search**.

Directory Management

The **Directory Management** screen allows you to customize the Product Directory structure to suit your administrative needs. To access the **Directory Management** screen, click the **Directory Management** button on the **Product Directories** screen (**Directories** > **Products**).

Group managed products according to geographical, administrative, or product-specific purposes. In combination with different access rights used to access managed products or folders in the directory, the following table presents the recommended grouping types as well as their advantages and disadvantages.

TABLE 10-1. Product Grouping Comparison

GROUPING TYPE	ADVANTAGES	DISADVANTAGES
Geographical or Administrative	Clear structure	No group configuration for identical products
Product type	Group configuration and status is available	Access rights may not match
Combination of both	Group configuration and access right management	Complex structure, may not be easy to manage

Plan this structure carefully, because the structure also affects the following:

TABLE 10-2. Considerations for the Structure

CONSIDERATION	EFFECT
User access	When creating user accounts, Apex Central prompts for the segment of the Product Directory that the user can access. For example, granting access to the root segment grants access to the entire directory. Granting access to a specific managed product only grants access to that specific product.
Deployment planning	Apex Central deploys update components (for example, virus pattern files, scan engines, anti-spam rules, program updates) to products based on Deployment Plans. These plans deploy to Product Directory folders, rather than individual products. A well-structured directory therefore simplifies the designation of recipients.

For more information, see *Managing the Product Directory on page 10-13*.

Important

User accounts have specific access permissions assigned based on Product Directory folders.

- Changing the Product Directory structure may affect how Apex Central users can access the managed products.
- You can select the **Keep the current user access permissions when moving managed products/folders** check box to prevent changing the user access scope when changing the Product Directory structure.

For more information, see *User Accounts on page 4-2*.

Managing the Product Directory

Use the **Directory Management** screen to organize your Product Directory structure.

For more information, see *Directory Management on page 10-11*.

Important

- Apex Central prevents multiple users from unknowingly making changes at the same time through use of a function-locking mechanism. Apex Central informs you if another user is already using the **Directory Management** screen. If you still want to make changes to the Product Directory and possibly affect the other user's changes, click **Break** to immediately access the screen.
- Changing the Product Directory structure may affect how Apex Central users can access the managed products. User accounts have specific access permissions assigned based on Product Directory folders.

  For more information, see *User Accounts on page 4-2*.

Procedure

1. Go to **Directories** > **Products**.

   The **Product Directory** screen appears.

2. Click the **Directory Management** button.

   The **Directory Management** screen appears.

3. Enable the **Keep the current user access permissions when moving managed products/folders** check box if you want to maintain the current user access permissions for all managed products.

   Note

   If you disable this option and move a managed product to a new location, the managed product inherits the permissions of the new folder location.

4. To organize the Product Directory, you can perform the following tasks:

   - **Add Folder**: Creates a new custom folder in the **Local Folder** node
   - **Rename**: Renames an existing custom folder
   - **Delete**: Deletes an existing custom folder

     Note

     Apex Central cannot delete a custom folder that contains a registered managed product.

   - Move managed products or folders: Drag and drop a managed product or folder to a new location

     Important

     You cannot rename, delete, or add new products or folders to the “root”, **Cascading Folder**, or **New Entity** folders.

5. Click **Back** to apply changes and return to the **Product Directory** screen.

Recovering Managed Products

WARNING!

The following actions may delete managed products from the Product Directory:

- Reinstalling the Apex Central server and selecting **Delete existing records and create a new database**
- Replacing a corrupted Apex Central database with another database with the same name

Use one of the following three methods to recover managed products that were accidentally deleted from the Product Directory.

Procedure

- Manually restart the Apex Central MCP agent service on the managed product server.
- Wait for the MCP agent to automatically re-register to the Apex Central server after 8 hours.
- Manually re-register the MCP agent to the Apex Central server from the managed product console.

Chapter 11

Component Updates

This section discusses how to configure component updates in Apex Central.

Topics include:

- *Component Updates on page 11-2*
- *Configuring Scheduled Update Settings on page 11-5*
- *Configuring Manual Update Settings on page 11-8*
- *Configuring Proxy Settings for Component/License Updates, Cloud Services, and Syslog Forwarding on page 11-12*

Component Updates

The Apex Central server hosts component files that the managed products use to keep your network protected from the latest security threats.

Keep the components up-to-date by running manual or scheduled updates. Apex Central allows you to perform the following tasks:

- Download the latest component versions from an update source
- Deploy updated components to managed products

Component List

You can view the list of available components on the Apex Central server on the **Scheduled Update** and **Manual Update** screens.

The following table describes the component information that displays on the **Scheduled Update** and **Manual Update** screens.

Field	Description
Category	Displays the name of a component category Click ▸ to display the list of components in a category.
Type	Displays the component type
Current Version	Displays the last version of the component successfully downloaded by Apex Central
Last Download	Displays the time Apex Central downloaded the **Current Version** of the component
Associated Products	Displays the name of the managed product or the number of managed products using the component If more than one managed products use the component, move the mouse cursor over the text to display the list of associated managed products.

Update Source

Configure the Apex Central server to download components from the Trend Micro ActiveUpdate server or other update sources. You can specify other update sources if the Apex Central server is unable to connect to the Trend Micro ActiveUpdate server directly or if you host an update server in your network.

By default, Apex Central uses a more secure HTTPS connection method to download components from the Trend Micro ActiveUpdate server.

To access other update sources, Apex Central supports Remote UNC authentication, which uses a user account from the update source server to share a folder for Apex Central to download updates.

Deployment Plan

A deployment plan allows you to specify the scope and schedule in which the Apex Central server deploys updated components to managed products.

After the Apex Central server downloads a new component version from an update source, you can configure Apex Central to deploy updated components to managed products immediately, at a specified time, or after a delay period.

You can configure Apex Central to deploy updated components to selected managed products based on different deployment schedules.

When creating a deployment schedule, consider the following:

- You can only select one folder or managed product for each deployment schedule. However, you can specify more than one schedule for the deployment plan.
- Apex Central bases the deployment plan delays on the completion time of the download, and these delays are independent of each other.

  For example, if you have three folders to update at 5-minute intervals, you can assign the first folder a delay of 5 minutes, and then set delays of 10 and 15 minutes for the two remaining folders, respectively.

Note

If you do not specify a deployment schedule in the deployment plan, Apex Central downloads the updates but does not deploy updated components to managed products.

Adding a Deployment Schedule

You can configure a deployment schedule to deploy updated components to selected managed products based on the schedule you specify.

Procedure

1. Access the **Scheduled Update** or **Manual Update** screen.
2. In the **Deployment Plan** section, select **Define different deployment plans for managed products**.
3. Click **+ Add**.

   The **Add Schedule** screen appears.
4. Configure the deployment schedule.
5. From the **Managed Products/Folder** tree, select a managed product or product folder.
6. Click **OK** to save the settings.

   After creating a deployment plan, you can perform the following tasks:

   - Click a schedule to edit the deployment schedule settings.
   - Click **Delete** to remove a selected deployment schedule.

Configuring Scheduled Update Settings

Configure scheduled component update settings to allow the Apex Central server to download selected components from an update source based on the specified schedule.

You can also configure Apex Central to deploy updated components to managed products based on the deployment plan.

Note

Migrating to Apex Central directly from Control Manager 6.0 Service Pack 3 retains previously configured **Update Source**, **Download Schedule**, and **Deployment Plan** configurations for the **All Pattern files/Cleanup templates, except Deep Discovery Malware Pattern** component on the **Scheduled Update** screen.

WARNING!

Migrating to Apex Central directly from Control Manager 6.0 Service Pack 3 resets the **Components** configurations on the **Manual Update** and **Scheduled Update** screens to default settings.

Procedure

1. Go to **Administration** > **Updates** > **Scheduled Update**.
2. Use the drop-down lists to filter the component list. You can filter the component list based on the following:
   - **Products**: Select one or more managed products or all Trend Micro products from the drop-down and click **Apply**
   - **Categories**: Select one or more component categories from the drop-down and click **Apply**
   - **Types**: Select one or more component types from the drop-down and click **Apply**

3. In the **Components** section, select the component categories or expand the categories to select components to update.

   For more information, see *Component List on page 11-2*.

   Important

   If you select the **Enable intelligent component downloading** check box, Apex Central automatically selects all components based on the selected component categories. You cannot select individual components to update. To select individual components, clear the check box.

   Note

   To minimize Apex Central network traffic, disable the downloading of components that have no corresponding managed products or services.

4. (Optional) Select **Enable intelligent component downloading** to allow Apex Central to automatically detect and download new components based on the selected component categories from an update source.

   Note

   If the intelligent component downloading feature is not enabled, Apex Central only downloads updates for existing components selected in the component list during a scheduled or manual update.

5. In the **Update Source** section, select one of the following options and configure the required settings:

   - **Trend Micro ActiveUpdate server**: Select this option to download component updates from the official Trend Micro ActiveUpdate server.
   - **Other update source**: Type the URL of the update source in the text field. You can specify up to five update sources by clicking the + icon.

     If server authentication is required, click **Specify authentication credentials** and type the user name and password information.

For more information, see *Update Source on page 11-3*.

Note

If the Apex Central server uses a proxy server to connect to an update source, configure the proxy settings on the **Proxy Settings** screen.

For more information, see *Configuring Proxy Settings for Component/License Updates, Cloud Services, and Syslog Forwarding on page 11-12*.

6. In the **Download Schedule** section, select **Enable scheduled downloads** and specify the component download schedule.

7. In the **Deployment Plan** section, select a deployment option and configure the required settings.

Option	Description
Deploy to all selected managed products	Select this option to deploy updated components to the selected managed products based on one of the following schedules: • **Immediately**: Apex Central deploys the updated components to the managed products as soon as Apex Central finishes downloading new component versions. • **Start at**: Apex Central deploys updated components to managed products at the specified time. • **Delay**: Apex Central deploys updated components to managed products after waiting for the specified time.

Option	Description
Define different deployment plans for managed products	Select this option to configure deployment schedules for specified managed products. Do one of the following: • Click **+ Add** to add a new deployment schedule. For more information, see *Adding a Deployment Schedule on page 11-4*. • Click a schedule to edit the deployment schedule settings. • Click **Delete** to remove a selected deployment schedule. **Note** If you do not specify a deployment schedule, Apex Central downloads the component updates but does not deploy updated components to managed products.
Do not deploy	Select this option if you do not want Apex Central to automatically deploy updated components to managed products. You can manually deploy updated component to managed products on the **Products** screen. For more information, see *Executing Managed Product Tasks on page 10-8*.

8. Click **Save**.

Configuring Manual Update Settings

You can start a Manual Update on the Apex Central server to download selected components from an update source.

You can also configure Apex Central to deploy updated components to managed products based on the deployment plan.

WARNING!

Migrating to Apex Central directly from Control Manager 6.0 Service Pack 3 resets the **Components** configurations on the **Manual Update** and **Scheduled Update** screens to default settings.

Procedure

1. Go to **Administration** > **Updates** > **Manual Update**.
2. Use the drop-down lists to filter the component list. You can filter the component list based on the following:
   - **Products**: Select one or more managed products or all Trend Micro products from the drop-down and click **Apply**
   - **Categories**: Select one or more component categories from the drop-down and click **Apply**
   - **Types**: Select one or more component types from the drop-down and click **Apply**
3. In the **Components** section, select the component categories or expand the categories to select components to update.

   For more information, see *Component List on page 11-2*.

   Important

   If you select the **Enable intelligent component downloading** check box, Apex Central automatically selects all components based on the selected component categories. You cannot select individual components to update. To select individual components, clear the check box.

   Note

   To minimize Apex Central network traffic, disable the downloading of components that have no corresponding managed products or services.
4. (Optional) Select **Enable intelligent component downloading** to allow Apex Central to automatically detect and download new components based on the selected component categories from an update source.

Note

If the intelligent component downloading feature is not enabled, Apex Central only downloads updates for existing components selected in the component list during a scheduled or manual update.

5. In the **Update Source** section, select one of the following options and configure the required settings:

   - **Trend Micro ActiveUpdate server**: Select this option to download component updates from the official Trend Micro ActiveUpdate server.
   - **Other update source**: Type the URL of the update source in the text field. You can specify up to five update sources by clicking the + icon.

     If server authentication is required, click **Specify authentication credentials** and type the user name and password information.

     For more information, see *Update Source on page 11-3*.

Note

If the Apex Central server uses a proxy server to connect to an update source, configure the proxy settings on the **Proxy Settings** screen.

For more information, see *Configuring Proxy Settings for Component/License Updates, Cloud Services, and Syslog Forwarding on page 11-12*.

6. In the **Deployment Plan** section, select a deployment option and configure the required settings.

Option	Description
Deploy to all selected managed products	Select this option to deploy updated components to the selected managed products based on one of the following schedules: • **Immediately**: Apex Central deploys the updated components to the managed products as soon as Apex Central finishes downloading new component versions. • **Start at**: Apex Central deploys updated components to managed products at the specified time. • **Delay**: Apex Central deploys updated components to managed products after waiting for the specified time.
Define different deployment plans for managed products	Select this option to configure deployment schedules for specified managed products. Do one of the following: • Click **+ Add** to add a new deployment schedule. For more information, see *Adding a Deployment Schedule on page 11-4*. • Click a schedule to edit the deployment schedule settings. • Click **Delete** to remove a selected deployment schedule. **Note** If you do not specify a deployment schedule, Apex Central downloads the component updates but does not deploy updated components to managed products.
Do not deploy	Select this option if you do not want Apex Central to automatically deploy updated components to managed products. You can manually deploy updated component to managed products on the **Products** screen. For more information, see *Executing Managed Product Tasks on page 10-8*.

7. Click **Download Now**.

The download progress displays at the top of the **Manual Update** screen.

8. To cancel a download in progress:
   - Click the **Stop Current Update** button in the progress bar.
   - Click the **Download Now** button to cancel the download in progress and start a new download.

Configuring Proxy Settings for Component/License Updates, Cloud Services, and Syslog Forwarding

Apex Central allows you to use a proxy server for component/license updates, cloud services, and syslog forwarding.

Note

You can also use the same proxy server for syslog forwarding if you select a SOCKS protocol for the server. Syslog forwarding does not support HTTP protocol proxy servers.

For more information, see *Configuring Syslog Forwarding on page 15-14*.

Procedure

1. Go to **Administration** > **Settings** > **Proxy Settings**.

   The **Proxy Settings** screen appears.

2. Select **Use a proxy server for component/license updates, cloud services, syslog forwarding, and Suspicious Object Hub Apex Central server connections**.

3. Select the protocol:

   Note

   Syslog forwarding does not support HTTP proxy servers. To use a proxy server for syslog forwarding, select a SOCKS protocol.

- **HTTP**
- **SOCKS 4**
- **SOCKS 5**

4. Type the host name or IP address of the server in the **Server name or IP address** field.
5. Type a port number in the **Port** field.
6. Type a user name and password if your server requires authentication.
7. Click **Save**.

Chapter 12

Command Tracking and Product Communication

This section discusses how to track commands issued from the Apex Central server.

Topics include:

- *Command Tracking on page 12-2*
- *Querying and Viewing Commands on page 12-3*
- *Configuring Communication Time-out Settings on page 12-4*

Command Tracking

The **Command Tracking** screen provides a list of all previously issued commands sent from the Apex Central server. You can use this screen to monitor the status of the commands you issued to managed products from the Apex Central console. For example, after issuing a Start Scan Now task, which can take several minutes to complete, you can proceed with other tasks and then refer to the **Command Tracking** screen to query and view the status of the issued command.

For more information about querying and viewing commands, see *Querying and Viewing Commands on page 12-3*.

The following table describes the command information that displays on the **Command Tracking** screen.

Column Name	Description
Issued	The date and time when the Apex Central server issued the command to the managed product
Command	The type of command issued by the Apex Central server
User	The name of the user who triggered the command
Successful	The number of managed products that completed the command Click the count in the **Successful** column to view more detailed information about the command. For more information, see *Command Details on page 12-4*.
Unsuccessful	The number of managed products unable to perform the command Click the count in the **Unsuccessful** column to view more detailed information about the command. For more information, see *Command Details on page 12-4*.

Column Name	Description
In Progress	The number of managed products that are currently performing the command Click the count in the **In Progress** column to view more detailed information about the command. For more information, see *Command Details on page 12-4*.
All	The total number of managed products to which Apex Central issued the command Click the count in the **All** column to view more detailed information about the command. For more information, see *Command Details on page 12-4*.

Querying and Viewing Commands

Use the **Command Tracking** screen to track and view previously issued commands.

Procedure

1. Go to **Administration** > **Command Tracking**.

   The **Command Tracking** screen appears.

2. To filter the command list, specify the following:

   - **Issued**: Specify when the managed product sent the command
   - **Command**: Select the command to monitor
   - **User**: Provide the account name used to send the command.

     Tip

     Leave this field blank to query commands issued by all users.

- **Status**: Select one or more command statuses and click **Apply**.

3. Click the count in the **Successful**, **Unsuccessful**, **In Progress**, or **All** column to view detailed command information.

   The **Command Details** screen appears.

   For more information, see *Command Details on page 12-4*.

Command Details

The **Command Details** screen displays the following information about an issued command.

Column Name	Description
Last Reported	The date and time when the managed product last sent a response to the Apex Central server
Server/Entity	The host name of the managed product server
Status	The status of the issued command
Description	Additional details about the command status

Note

The **Command Details** screen refreshes every 30 seconds.

Configuring Communication Time-out Settings

The **Managed Product Heartbeat Interval** settings determine how frequently the agent sends a heartbeat to the Apex Central server.

- The **Managed Product Heartbeat Interval** settings only apply to managed products that register to the Apex Central server using the Apex Central management console.

- Long heartbeat intervals consume less bandwidth but allow more network events to occur before Apex Central updates the communication status.
- Short intervals between heartbeats consume more bandwidth but present a more up-to-date picture of your network status.

The **Command Time-out Settings** determines how long Apex Central attempts to send a command to a managed server.

Procedure

1. Go to **Administration** > **Managed Servers** > **Communication Time-out Settings**.

   The **Communication Time-out Settings** screen appears.

2. In the **Managed Product Heartbeat Interval** section, configure the following settings:

   - **Report managed product status every**: Defines the agent communication heartbeat interval

     Valid values are between 5 and 480 minutes.

   - **If no communication, set status as abnormal after**: Defines the agent communication time-out interval

     Valid values are between 15 and 1440 minutes.

   Important

   The **If no communication, set status as abnormal after** value must be at least triple the **Report managed product status every** value.

   ---

3. In the **Command Time-out Settings** section, select one of the following:

   - **24** hours
   - **48** hours
   - **72** hours

4. Click **Save**.

Part IV

Policies

Chapter 13

Policy Management

This section contains information about how to perform policy management on managed products and endpoints.

Important

Each managed product provides different policy settings that you can configure and deploy to policy targets. You can find a complete list of supported managed products and the policy settings for each in the *Apex Central Widget and Policy Management Guide*.

You can download a PDF version of the guide using the following link:

https://docs.trendmicro.com/en-us/enterprise/apex-central.aspx

You can also view the guide online using the following link:

https://docs.trendmicro.com/en-us/enterprise/apex-central-widget-and-policy-management-guide/introduction.aspx

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Topics include:

- *Policy Management on page 13-2*
- *Policy Status on page 13-24*

Policy Management

Policy management allows administrators to enforce product settings on managed products and endpoints from a single management console. Administrators create a policy by selecting the targets and configuring a list of product settings.

To perform policy management on a new managed product or endpoint, move the managed product from the **New Entity** folder to another folder in the Product Directory structure.

Creating a New Policy

Important

Each managed product provides different policy settings that you can configure and deploy to policy targets. You can find a complete list of supported managed products and the policy settings for each in the *Apex Central Widget and Policy Management Guide*.

You can download a PDF version of the guide, or view the guide online, using the following link:

https://docs.trendmicro.com/en-us/enterprise/apex-central.aspx

Procedure

1. Go to **Policies** > **Policy Management**.

   The **Policy Management** screen appears.

2. Select the type of product settings from the **Product** list.

   The screen refreshes to display policies created for the selected managed product.

   For more information about configuring policy settings for specific managed products, see the *Apex Central Widget and Policy Management Guide*.

3. Click **Create**.

   The **Create Policy** screen appears.

4. Type a policy name.

5. Specify targets.

   Apex Central provides several target selection methods that affect how a policy works.

   The policy list arranges the policy targets in the following order:

   - **Specify Targets**: Use this option to select specific endpoints or managed products.

     For details, see *Specifying Policy Targets on page 13-8*.

   - **Filter by Criteria**: Use this option to allocate endpoints automatically based on the filtering criteria.

     For details, see *Filtering by Criteria on page 13-5*.

   - **None (Draft only)**: Use this option to save the policy as a draft without choosing any targets.

   For more information about the policy list, see *Understanding the Policy List on page 13-20*.

6. Click a managed product feature to expand it and configure its settings. Repeat this step to configure all features.

   - Each feature has a link to a Help topic that discusses the feature and how to use it.

   - For certain product settings, Apex Central needs to obtain specific setting options from the managed products. If administrators select multiple targets for a policy, Apex Central can only obtain the setting options from the first selected target. To ensure a successful policy deployment, make sure the product settings are synchronized across the targets.

- If you are creating a policy for **Apex One Security Agent** that you want to act as a parent to a future child policy, configure settings that can be inherited, customized, or extended on the child policy.
  - For a list of Security Agent settings that can be inherited, customized, or extended, see *Working with Parent Policy Settings on page 13-10*.
  - For details on creating a child policy, see *Inheriting Policy Settings on page 13-14*.

7. Click **Deploy** or **Save**.

   If you clicked **Deploy**, Apex Central starts the deployment. The deployed policy appears in the list on the **Policy Management** screen. It usually takes a few minutes for Apex Central to deploy the policy to the targets.

   Click **Refresh** on the **Policy Management** screen to update the status information in the policy list. If the status of the deployment remains pending after an extended period of time, there might be issues with the targets. Check if there is a connection between Apex Central and the targets. Also check if the targets are working properly.

   Once Apex Central deploys a policy to the targets, the settings defined in the policy overwrite the existing settings in the targets. Apex Central enforces the policy settings in the targets every 24 hours. Although local administrators can make changes to the settings from the managed product console, the changes are overwritten every time Apex Central enforces the policy settings.

   - Apex Central enforces the policy settings on the targets every 24 hours. Since policy enforcement only occurs every 24 hours, the product settings in the targets may not align with the policy settings if local administrators make changes through the managed product console between the enforcement period.
   - Policy settings deployed to IMSVA servers take priority over the existing settings on the target servers instead of overwriting them. IMSVA servers save these policy settings on the top of the list.
   - If an Apex One Security Agent assigned with a Apex Central policy has been moved to another Apex One domain, the agent settings

will temporarily change to the ones defined by that Apex One domain. Once Apex Central enforces the policy again, the agent settings will comply with the policy settings.

Filtering by Criteria

Use this option to allocate endpoints automatically based on the filtering criteria.

This option:

- Is only available on the following managed products:
  - Apex One (Mac)
  - Apex One Data Loss Prevention
  - Apex One Security Agent
  - Mobile Security for Enterprise
  - Trend Micro Endpoint Application Control
- Uses a filter to automatically assign current and future targets to the policy
- Is useful for deploying standard settings to a group of targets

Administrators can change the priority of filtered policies in the policy list. When an administrator reorders the policy list, Apex Central re-assigns the targets to different filtered policies based on the target criteria and the user roles of each policy creator.

Apex Central can only assign endpoints without policies to a new filtered policy. To re-allocate an endpoint already assigned to a filtered policy, move another filtered policy with the matching criteria up the priority list.

See *Assigning Endpoints to Filtered Policies on page 13-7* for more information on how Apex Central assign targets to filtered policies.

Procedure

1. On the **Create Policy** screen, go to the **Targets** section, select **Filter by Criteria**, and then click **Set Filter**.

   The **Filter by Criteria** screen appears.

2. Select the following options and define the criteria.

Criteria	Description
Match keywords in	Define keywords based on the host name or Apex Central display name. **Note** Apex Central performs partial matching for single keyword searches. You can search multiple, comma-separated keywords, however,Apex Central only provides full string matches for each keyword provided.
IP addresses	Define a range of IP addresses and click **Add**. **Note** • Policy management only supports IPv4 addresses. • When a new managed product or endpoint registers to Apex Central, it takes about an hour for the managed product or endpoint to become available for searching by IP address.
Operating systems	Select one or more operation systems from the drop-down list.
Directories	Select one of the following directories and define the criteria. • **Product Directory**: Select folders from the Product Directory structure • **Active Directory**: Select organizational units from an integrated Active Directory structure • **Apex One domain hierarchy**: Type at least one Apex One domain hierarchy keyword

3. Click **Save**.

   The **Create Policy** screen reloads.

Assigning Endpoints to Filtered Policies

When a new endpoint registers to Apex Central, it goes through the filtered policies in the list in descending order. Apex Central assigns the new endpoint to a filtered policy when the following conditions are both satisfied:

- The new endpoint matches the target criteria in the policy
- The policy creator has the permission to manage the new endpoint

The same action applies to an endpoint already assigned to a policy, but the policy creator later deletes the policy.

Note

For endpoints just registered to Apex Central and for those just released from deleted policies, there is a three-minute grace period during which no endpoint allocation occurs. These endpoints are temporarily without policies during this period.

If an endpoint does not meet the target criteria in any filtered policies, the endpoint does not associate with any policies. Apex Central allocates these endpoints again when the following actions occur:

- Create a new filtered policy
- Edit a filtered policy
- Reorder the filtered policies
- Daily endpoint allocation schedule

  Apex Central uses a daily endpoint allocation schedule to ensure that endpoints are assigned to the correct policies. This action occurs once at 3:15 pm every day. When endpoint properties change, such as the operating system or IP address, these endpoints require the daily schedule to re-assign them to the correct policies.

Note

- If the endpoints are offline during the daily endpoint allocation schedule, the policy status for these endpoints will remain pending until they go online.
- If the Apex One domain of the endpoint is changed, Apex Central deploys the updated the policy after 10 minutes.

When the above actions occur, Apex Central allocate endpoints based on the following conditions:

TABLE 13-1. Endpoint Allocation for Filtered Policies

	New endpoints or endpoints from deleted policies	Endpoints without policies	Endpoints with policies
Create a new policy		●	
Edit a policy	●	●	●
Reorder the filtered policies	●	●	●
Daily endpoint allocation schedule	●	●	●

Specifying Policy Targets

Use this option to select specific endpoints or managed products.

This option:

- Uses the search or browse function to locate specific targets and manually assigns them to the policy
- Is useful when administrators plan to deploy specific settings only to a certain targets
- Remains static on the top of the policy list and takes priority over any filtered policies

Procedure

1. On the **Create Policy** screen, go to the **Targets** section, select **Specify Target(s)**, and then click **Select**.

   The **Specify Targets** screen appears.

2. Use **Search** or **Browse** to locate the targets.

   - **Search**: Use the following search criteria to find endpoints or managed products. The search results display the endpoints or managed products matching all of the selected criteria.

     - **Match keywords in**: Define keywords based on the host name or Apex Central display name.
     - **IP addresses**: Define a range of IP addresses and click **Add**.

     Note

     - Policy management only supports IPv4 addresses.
     - When a new managed product or endpoint registers to Apex Central, it takes about an hour for the managed product or endpoint to become available for search by IP address.

     - **Operating systems**: Select one or more operating systems from the drop-down.

   - **Browse**: Browse the Product Directory or Active Directory to locate endpoints or managed products to assign to the policy.

     Note

     To set up the Active Directory, see *Active Directory Integration on page 6-2*.

3. Select the endpoints or managed products and then click **Add Selected Targets**.

4. Wait for the numbers in **View Action List** and **View Results** to change.

5. Click **OK**.

   The **Create Policy** screen reloads.

Working with Parent Policy Settings

Apex Central administrators who create a parent policy for an **Apex One Agent** can configure certain policy settings to be inherited, customized, or extended.

Note

These options are not available on other managed products.

- **Inherit from parent**
  - A child policy administrator cannot change the setting at all. An Apex One administrator can manually change the setting from the Apex One server console. However, the setting will be overwritten when Apex Central deploys policies to the Apex One server.

    For example, a Apex Central administrator can create a parent policy that enforces the exclusion of PDF files from a Manual Scan.
  - Changes to the setting on the parent policy are always enforced on the child policy.
  - If the permission on the parent policy changes from "Inherit from parent" to "Are customizable" or "Extend from parent", the child policy administrator can customize or extend the current setting. Changes to the setting on the parent policy are no longer enforced.
- **Are customizable**
  - A child policy can deviate from the setting configured in the parent policy.

    For example, if Scheduled Scan on the parent policy runs weekly but is customizable, the child policy administrator can change the schedule to daily.

- Changes to the setting on the parent policy are never enforced on the child policy.
- If the permission on the parent policy changes from "Are customizable" to "Inherit from parent", the current setting on the parent policy overwrites the setting on the child policy. Changes to the setting on the parent policy are always enforced.

- **Extend from parent**
  - A child policy administrator can add to the items configured in the parent policy.

    For example, if the parent policy excludes 20 file names from being scanned during a Manual Scan, the administrator can add 10 more safe and trustworthy files to the child policy.
  - Items added or removed from the parent policy are also added or removed from the child policy. A removed item can be added back to the child.
  - If the permission on the parent policy changes from "Extend from parent" to "Inherit from parent", items in the child policy that have no match in the parent are removed. Changes to the items on the parent policy are always enforced.

The following table lists the parent policy settings that can be inherited, customized, or extended.

Setting and Path	Available Options		
	Inherit From Parent	Are Customizable	Extend From Parent
Scan schedule **Scheduled Scan Settings** > **Target** tab > **Schedule** section	●	●	

Setting and Path	Available Options		
	Inherit From Parent	Are Customizable	Extend From Parent
File extensions to scan **Manual Scan / Real-time Scan / Scan Now / Scheduled Scan Settings** > **Target** tab > **Files to Scan** section > **Files with the following extensions** option	●		●
Scan exclusion lists (directories, files, and file extensions to exclude from scans) **Manual Scan / Real-time Scan / Scan Now / Scheduled Scan Settings** > **Scan Exclusion** tab	●		● **Note** When selecting **Extend from parent** from a scan exclusion list, the list expands to show a **Child Policy Restrictions** section where the parent policy creators can specify items that child policies cannot exclude from scans.

Copying Policy Settings

Administrators can copy the settings from an existing policy, create a new policy with the same settings, and deploy the settings to different endpoints or managed products.

Note

It is not possible to copy the settings of a child **Apex One Agent** policy. To determine whether the **Apex One Agent** policy is a child or a parent, check the **Parent Policy** column. A clickable value displays if the policy is a child, and N/A if otherwise.

Procedure

1. Go to **Policies** > **Policy Management**.

   The **Policy Management** screen appears.

2. Select the type of product settings from the Product list.

   The screen refreshes to display policies created for the selected managed product.

3. Select a policy from the list.

4. Click **Copy Settings**.

   The **Copy and Create Policy** screen appears.

5. In the **Policy Name** field, type a name for the policy.

6. Assign **Targets** to the policy.

7. (Optional) Change settings as necessary.

8. Click **Deploy**.

Note

- After clicking **Deploy**, please wait two minutes for Apex Central to deploy the policy to the targets. Click **Refresh** on the **Policy Management** screen to update the status information in the policy list.
- Apex Central enforces the policy settings on the targets every 24 hours.

Inheriting Policy Settings

Create a new child policy by inheriting the settings of an existing parent policy. A child policy cannot be copied and its settings cannot be inherited.

This task requires a parent policy for the Apex One agent. A parent policy for the Apex One agent has the value **N/A** displayed under the **Parent Policy** column.

Procedure

1. Go to **Policies** > **Policy Management**.

   The **Policy Management** screen appears.

2. Select **Apex One Agent** from the Product list.

   The screen refreshes to display policies created for the selected managed product.

3. Select a parent policy that does not have locally managed settings.

4. Click **Inherit Settings**.

   The **Inherit and Create Policy** screen appears.

5. In the **Policy Name** field, type a name for the policy.

6. Assign **Targets** to the policy.

7. (Optional) Review the settings that can be customized or extended and then make changes as necessary. For a list of settings to review, see *Working with Parent Policy Settings on page 13-10*.

   Note

   A setting cannot be customized or extended if the option selected on the parent policy is **Inherit from parent**.

   For example:

- If the Scheduled Scan setting is customizable, you can change the schedule from weekly to daily.
- If the scan exclusion list for Real-time Scan can be extended, you can type additional file names that you deem safe and trustworthy. After the child policy is created, it will add those file names to the scan exclusion list.

8. Click **Deploy**.

Note

- After clicking **Deploy**, please wait two minutes for Apex Central to deploy the policy to the targets. Click **Refresh** on the **Policy Management** screen to update the status information in the policy list.
- Apex Central enforces the policy settings on the targets every 24 hours.

Modifying a Policy

Administrators can modify policy targets and settings as necessary. The root account owner can modify every policy in the list, while other account owners can only modify the policies they created. After a policy is modified, Apex Central deploys the policy to the targets.

Important

Each managed product provides different policy settings that you can configure and deploy to policy targets. You can find a complete list of supported managed products and the policy settings for each in the *Apex Central Widget and Policy Management Guide*.

You can download a PDF version of the guide, or view the guide online, using the following link:

https://docs.trendmicro.com/en-us/enterprise/apex-central.aspx

For a parent policy for the Apex One agent, if you modified the targets and settings for specific features, the modifications will apply to all child policies and deployed to the respective targets. Some settings on a parent policy support **permissions**, which control the changes allowed on child policies. Modifications to these parent policy permissions are also applied to child policies and deployed to targets. For a list of settings that support permissions, see *Working with Parent Policy Settings on page 13-10*.

For example:

- If you changed the scan schedule permission from "Inherit from parent" to "Are customizable", administrators can start to customize the existing schedule on their child policies.
- If you changed the Manual Scan file extensions permission from "Extend from parent" to "Inherit from parent", any file extensions that administrators added to child policies will be removed. In addition, administrators will no longer be able to add file extensions.

Procedure

1. Navigate to **Policies** > **Policy Management**.

   The **Policy Management** screen appears.

2. Select the type of product settings from the **Product** list.

   The screen refreshes to display policies created for the selected managed product.

3. Click a policy name in the **Policy** column.

   The **Edit Policy** screen appears.

4. Modify the policy.

   Note

   Modifying the filtering criteria in a filtered policy can affect target allocation. Apex Central may re-assign some targets to other filtered policies, or add additional targets to the current policy.

5. Click **Deploy**.

   It usually takes a few minutes for Apex Central to deploy the policy to the targets. Click **Refresh** on the **Policy Management** screen to update the status information in the policy list. If the status of the deployment remains pending after an extended period of time, there might be issues with the targets. Check if there is a connection between Apex Central and the targets. Also check if the targets are working properly.

   Apex Central enforces the policy settings on the targets every 24 hours.

Importing and Exporting Policies

Export policies for backup or to import to another Apex Central server of the same version.

Note

- Apex Central exports policy settings but not policy targets.
- A parent policy stays as a parent after the export or import.
- A child policy becomes a parent after the export. Consequently, it is a parent after the import.
- Apex Central cannot import a policy if its name is the same as an existing child policy. If the existing policy is not a child, Apex Central overwrites it after the import.
- For more information, see the following topics:
  - *Creating a New Policy on page 13-2*
  - *Inheriting Policy Settings on page 13-14*

Procedure

1. Go to **Policies** > **Policy Management**.

   The **Policy Management** screen appears.

2. Select the type of product settings from the **Product** list.

   The screen refreshes to display policies created for the selected managed product.

3. To export, select one or several policies, click **Export Settings**, and then save the resulting policy file.

   - If you exported a single policy, the resulting file has the extension `*.cmpolicy`.
   - If you exported several policies, the resulting file is a compressed (`*.zip`) file containing the individual `.cmpolicy` files.

4. To import, click **Import Settings** and then locate and load the policy file.

   - You can import an entire `*.zip` file or import individual `*.cmpolicy` files one by one.
   - If the policy already exists in the policy list, a confirmation prompt appears, asking if you want to overwrite the existing policy.

     Click **OK** to proceed.

   The screen refreshes and displays the imported policy at the top of the list.

   For more information about reordering the policy list, see *Reordering the Policy List on page 13-23*.

Deleting a Policy

Administrators can remove a policy from the list. Apex Central then re-allocates the targets associated with the deleted policy if the targets match the filtering criteria of another policy. Those without a match become endpoints without policies, and they keep the settings defined by the deleted policy unless a managed product administrator modifies the settings.

Apex Central only allows policy creators to delete their own policies. However, the root account can delete every policy in the list.

It is not possible to delete an Apex One Agent parent policy with settings *inherited* by an existing child policy.

Procedure

1. Go to **Policies** > **Policy Management**.

   The **Policy Management** screen appears.

2. Select the type of product settings from the **Product** list.

   The screen refreshes to display policies created for the selected managed product.

3. Select the policy to delete.

4. Click **Delete**.

   A confirmation screen appears.

5. Click **OK**.

Changing the Policy Owner

The default owner of a policy is the user account that created the policy. You can use the **Policy Management** screen to change the owner of a policy to any Apex Central user account. You can also change the policy owner to an Active Directory group, which designates all Active Directory users within the group as owners of the policy.

Important

If you change the owner of a policy to a user account that does not have access rights to the specified targets, the new owner can modify the policy settings but cannot view the policy data.

Procedure

1. Go to **Policies** > **Policy Management**.

   The **Policy Management** screen appears.

2. Select one or more policies to change the owner.

3. Click **Change Owner**.

   The **Change Policy Owner** screen appears.

4. Select a user account from the drop-down list.

5. Click **Save** to change the owner.

   Apex Central sends an email notification to all user accounts assigned the “Administrator” role.

Understanding the Policy List

The policy list displays the information and status of policies created by all users. When a new endpoint registers to Apex Central, it goes through the filtered policies in the list in descending order. Apex Central assigns the new endpoint to a filtered policy when the following conditions are both satisfied:

- The new endpoint matches the target criteria of the policy
- The policy creator has the permission to manage the new endpoint

The following table describes the policy list columns that display on the **Policy Management** screen. Click a column to sort the data.

TABLE 13-2. Policy List

COLUMN	DESCRIPTION
Priority	Displays the priority of the policies • Apex Central lists policies from the highest to the lowest priority. • When administrators create a filtered policy, Apex Central saves the new policy as the lowest priority policy. • A specified policy takes priority over any filtered policies and remains on the top of the list. Administrators cannot reorder specified policies. • Apex Central places draft policies at the bottom of the list.
Policy	Displays the name of the policy
Policy Version	This column only appears if the selected product is **Apex One Security Agent**. Displays the latest policy version deployed **Note** Some targets might not have the latest policy version deployed. To view the current policy deployed on specific targets, click the number in the **Deployed** column.
Parent Policy	This column only appears if the selected product is **Apex One Security Agent**. If a policy is a child policy (that is, it inherited its settings from a parent policy), this column shows the name of the parent policy. Otherwise, N/A displays.
Deviations	This column only appears if the selected product is **Apex One Security Agent**. If a policy is a child policy, this column shows the number of settings that have been changed on the policy and are therefore inconsistent with settings on the parent policy. If settings are consistent between the policy and its parent, 0 (zero) displays. If a policy is not a child policy, N/A displays.

Column	Description
Owner	Displays the user who is currently assigned the policy **Note** The default owner is the user who created the policy. • If you change the owner of a policy to a user account that does not have access rights to the specified targets, the new owner can modify the policy settings but cannot view the policy data. • You can also assign multiple owners by assigning the policy to an Active Directory group. For more information, see *Changing the Policy Owner on page 13-19*.
Last Editor	Displays the user who last edited the policy
Last Edited	This column only appears if the selected product is **Apex One Security Agent**. Displays when the policy was last edited
Targets	Displays how administrators select targets for the policy. • **Specified**: Uses the browse or search function to select specific targets for the policy. Specified policies remain static on the top of the policy list and take priority over filtered policies. • **Filtered**: Uses a filter to automatically assign current and future endpoints to the policy. Administrators can rearrange the priority of filtered policies. Hover over an item to conveniently view the filter criteria and make adjustments as necessary. • **None**: The policy creator saved the policy as a draft without selecting any targets.
Deployed	Displays the number of targets that have applied the policy settings or have unactivated product services Click the number to view the policy status.

Column	Description
Pending	Displays the number of targets that have not applied the policy settings Click the number to view the policy status.
Offline	Displays the number of targets that have offline agents Click the number to view the policy status.
With Issues	Displays the number of targets that have not applied the policy settings due to unsupported policy deployment, no policy configuration, system errors, endpoint communication errors with the product server, unsupported endpoints, locally changed settings, disabled product services, or partial deployment Click the number to view the policy status.

Note

The numbers in **Deployed** and **Pending** columns only reflect the endpoints or managed products that an administrator has permission to manage.

Reordering the Policy List

Administrators can use the **Reorder** button to change the order of the filtered policies. Rearranging the policy list can affect target allocation. Apex Central may re-assign some targets to different filtered policies.

Note

- Specified policies remain static and always take priority over filtered policies.
- This function is only available for managing Apex One settings.

Procedure

1. Go to **Policies** > **Policy Management**.

   The **Policy Management** screen appears.

2. Select the type of product settings from the **Product** list.

   The screen refreshes to display policies created for the selected managed product.

3. Click **Reorder**.

   The **Reorder Policies** screen appears.

4. Rearrange the order of the **Priority** column.

5. Click **Save**.

> **Note**
>
> After clicking **Save**, please wait two minutes for Apex Central to re-assign the targets. Click **Refresh** on the **Policy Management** screen to update the status information in the policy list.

Policy Status

Policy status allows administrators to check if Apex Central has successfully deployed a policy to its targets.

To check the policy deployment status, use one of the following methods:

- On the **Policy Management** screen, click a number in the policy list. The **Log Query** screen appears.
- On the dashboard, click a number in the **Policy Status** widget. The **Log Query** screen appears.
- Perform a log query

The following table provides the descriptions and suggestions about each policy status:

TABLE 13-3. Policy Status

POLICY STATUS	DESCRIPTION	SUGGESTIONS
Pending	Apex Central is processing the policy.	Wait a few minutes and then check the status again.
Without policy	Apex Central has not assigned a policy to this endpoint or managed product.	Assign a policy to the endpoint or managed product.
Deployed	Apex Central has successfully deployed the policy.	N/A
Endpoint unable to connect to server	• The endpoint did not receive the policy settings. • The server is currently busy.	• Check the connection status of the endpoint • Connect the endpoint to the company network • Wait for the updated policy status
Inapplicable product settings	The managed product cannot process some of the policy settings.	• Verify the policy settings • Update to the latest policy template version • Check the settings on the managed product • Verify the IP address of the managed product on the **Managed Servers** screen If the IP address is incorrect, unregister and then register the managed product again to Apex Central. • Refer to the *Administrator's Guide* for the managed product
Unsupported endpoint	The endpoint does not support some features specified in the policy settings.	Upgrade the agent to a supported version.

Policy Status	Description	Suggestions
Settings changed locally	Some settings on the endpoint or managed product do not comply with the settings specified in the policy because the managed product administrator has made some changes through the managed product console.	Verify the settings on the managed product console.
Unactivated licenses	The managed product has not activated the licenses for some of the services specified in the policy settings.	Activate the licenses for the related services from the **License Management** screen on the Apex Central console
Disabled product services	The managed product has disabled some of the services specified in the policy settings.	Enable the related services on the managed product.
Partially deployed	Apex Central has enforced a portion of the policy settings.	Wait a few minutes and then check the status again.
Managed by [Apex Central server name]	Another Apex Central is currently managing the managed product.	Remove the managed product from the Managed Server list and add the managed product to the list again.
Invalid user name or password	The user name or password for authentication is incorrect.	Verify the user name or password.
Invalid product server or authentication information	The server name or the authentication information is incorrect.	Verify the server name and the authentication information.

Policy Status	Description	Suggestions
Unable to automatically log on to product	Apex Central cannot use the single sign-on function to access the managed product.	• Check the single sign-on function in the Product Directory • Check the connection status of the MCP agent • Change the server connection type from **Automatic** to **Manual** in the **Managed Servers** list.
Web server configuration error	A web service error has occurred.	Check the IIS configuration.
Product communication error	Unable to access the product console.	• Check if you can connect to the managed product's web console. • Check the settings of the managed product.
Unable to connect to product	Apex Central cannot establish a connection with the managed product.	• Check the connection status of the managed product. • Check the network connection
Unsupported product version	The managed product version is not supported.	Upgrade the managed product to a supported version.
Network configuration error	A network connection error has occurred.	Check the network connection.
System error. Error ID: [error ID number].	A system error has occurred.	Contact your Trend Micro support representative.

Chapter 14

Policy Resources

This section contains information about policy resources for integrated products/services.

Important

Each managed product provides different policy settings that you can configure and deploy to policy targets. You can find a complete list of supported managed products and the policy settings for each in the *Apex Central Widget and Policy Management Guide*.

You can download a PDF version of the guide, or view the guide online, using the following link:

https://docs.trendmicro.com/en-us/enterprise/apex-central.aspx

Topics include:

- *Application Control Criteria on page 14-2*
- *Data Loss Prevention on page 14-15*
- *Intrusion Prevention Rules on page 14-34*
- *Device Control Allowed Devices on page 14-38*

Application Control Criteria

Configure Application Control criteria that you can then assign to Security Agent policy rules. You can create “Allow” and “Block” criteria to limit the applications that users can execute or install on protected endpoints. You can also create assessment criteria to monitor the applications executing on endpoints and then refine the criteria based on the usage results.

Important

You must configure Application Control criteria before deploying an Application Control policy to Security Agents.

Each managed product provides different policy settings that you can configure and deploy to policy targets. You can find a complete list of supported managed products and the policy settings for each in the *Apex Central Widget and Policy Management Guide*.

You can download a PDF version of the guide, or view the guide online, using the following link:

https://docs.trendmicro.com/en-us/enterprise/apex-central.aspx

The following table outlines the tasks available on the **Application Control Criteria** screen.

Task	Description
Add criteria	Click the **Add Criteria** drop-down button and select from the following options: • **Allow**: Click to define “Allow” or “Lockdown” criteria For more information, see *Defining Allowed Application Criteria on page 14-4*. • **Block**: Click to define “Block” or “Assessment” criteria For more information, see *Defining Blocked Application Criteria on page 14-6*. • **Copy**: Select an existing criteria and click **Copy** to define new criteria based on the existing settings • **Import**: Click to select a ZIP package exported from a compatible Application Control source **Note** If the imported package contains criteria names that match preexisting criteria, you have the option to **Overwrite** existing criteria or **Skip** the import of the criteria with duplicated names.
Export criteria	Select the check box to the left of existing criteria and click **Export** to save the selected criteria to a ZIP package (`<timestamp>_iACRuleExport.zip`)
Delete criteria	Select the check box to the left of existing criteria and click **Delete** to remove the selected criteria from the list **WARNING!** If you selected criteria used by existing Apex One Security Agent policies, you must confirm that you want to delete and remove the criteria from all affected Security Agent policies. You cannot undo this action.

Task	Description
Modify criteria	Click a **Criteria Name** to modify the criteria settings **Note** Affected endpoints receive modified criteria settings the next time the Security Agents connect to the server.
View policy associations	Click the value in the **Target Policies** column to display a list of all Apex One Security Agent policies that implement the criteria. **Tip** Click a policy name to open a new browser tab on which you can view or modify the policy settings.

Defining Allowed Application Criteria

Application Control provides the ability to define criteria that specifically allow certain applications to execute. You can define allow criteria to ensure that Application Control never blocks a certain application, or you can create a complete list of applications allowed to execute on endpoints and then deploy a **Lockdown** policy to the endpoints. While in **Lockdown** mode, users cannot execute, access, or install any application that you did not include in the allow criteria.

For more information about Lockdown policies, see *Application Control Policy Settings*.

Procedure

1. Go to **Policies** > **Policy Resources** > **Application Control Criteria**.

   The **Application Control Criteria** screen appears.

2. Click **Add Criteria** and select **Allow**.

   The **Allow Criteria Settings** screen appears.

3. Type a unique **Name** for the criteria.

4. Select the level of **Trust permission** for the applications.

Permission	Description	Example Use
Application cannot execute external processes	Applications cannot access any external processes or start any other applications	Use when you want to allow standalone applications to run on endpoints but prevent access to other processes For example, this setting allows Microsoft Word to run but prevents embedded OLE objects from executing.
Application can execute other processes	Applications can start external processes and applications that users are unable to access directly	Use when you want to allow applications to run on endpoints and still allow access to required child processes or add-ons. For example, this setting allows Internet Explorer to run and also allows Internet Explorer to execute any installed plug-ins.
Inheritable execution rights (not recommended)	Applications can install and start external processes and applications, and the child applications can also install and start external processes and applications	Use when you want to allow installation packages to execute on the endpoint **Inheritable execution rights (not recommended)** allows the installation package to perform all installation tasks and then also allows the installed application to run all required processes.

5. Select the **Match method** used to identify applications and configure required settings.

Method	Description
Application Reputation List	Allows you to apply the criteria to applications that Trend Micro has tested and assigned a security score for For more information, see *Application Reputation List on page 14-8*.
File paths	Allows you to apply the criteria to any application installed in the specified location For more information, see *File Paths on page 14-9*.
Certificates	Allows you to apply the criteria to applications based on certificate validity and certificate attributes For more information, see *Certificates on page 14-13*.
Hash values	Allows you to apply the criteria to applications based on SHA-1 or SHA-256 hash values For more information, see *Hash Values on page 14-14*.
Gray Software List	Allows you to include applications to the criteria that Trend Micro has tested and found to be potentially harmful The Gray Software List is a subset of the Application Reputation List and contains applications that may be malicious if not used properly. Trend Micro recommends blocking or monitoring applications in the Gray Software List to ensure that your network remains secure.

6. Click **Save**.

Defining Blocked Application Criteria

Application Control provides the ability to define criteria that specifically block certain applications from executing. You can define block criteria to ensure that Application Control always blocks certain applications or you can create “Assessment” criteria to monitor the applications that users access.

Procedure

1. Go to **Policies** > **Policy Resources** > **Application Control Criteria**.

The **Application Control Criteria** screen appears.

2. Click **Add Criteria** and select **Block**.

   The **Block Criteria Settings** screen appears.

3. Type a unique **Name** for the criteria.

4. To create a monitoring rule, select **Enable assessment mode**.

Note

Application Control logs all applications that match the assessment criteria but takes no further action. Application Control allows the applications to execute normally.

5. Select the **Match method** used to identify applications and configure required settings.

Method	Description
Application Reputation List	Allows you to apply the criteria to applications that Trend Micro has tested and assigned a security score for For more information, see *Application Reputation List on page 14-8*.
File paths	Allows you to apply the criteria to any application installed in the specified location For more information, see *File Paths on page 14-9*.
Certificates	Allows you to apply the criteria to applications based on certificate validity and certificate attributes For more information, see *Certificates on page 14-13*.
Hash values	Allows you to apply the criteria to applications based on SHA-1 or SHA-256 hash values For more information, see *Hash Values on page 14-14*.

Method	Description
Gray Software List	Allows you to include applications to the criteria that Trend Micro has tested and found to be potentially harmful The Gray Software List is a subset of the Application Reputation List and contains applications that may be malicious if not used properly. Trend Micro recommends blocking or monitoring applications in the Gray Software List to ensure that your network remains secure.

6. Click **Save**.

Application Match Methods

Application Control provides multiple methods for identifying applications to include in the allow and block criteria.

Note

Application Control also provides the Gray Software List which you cannot modify.

The Gray Software List is a subset of the Application Reputation List and contains applications that may be malicious if not used properly. Trend Micro recommends blocking or monitoring applications in the Gray Software List to ensure that your network remains secure.

Application Reputation List

The Application Reputation List is a comprehensive list of applications tested by Trend Micro. The list includes most popular operating system files and binaries as well as applications for desktops, servers, and mobile devices. Trend Micro periodically provides updates to the list.

Important

Ensure that you have turned on regular updates to the Certified Safe Software Pattern to stay up-to-date with the latest application information.

You can search for applications by typing the name of **Vendors** or **Applications**. Select applications using the data provided.

Data	Description
Application	The name of the application
AIR Score	A comprehensive security score based on an application's popularity and reputation
Global Usage	The global prevalence of the application **Tip** Click the prevalence to view a regional breakdown of the application usage.

File Paths

You can configure Application Control to specifically target certain directory locations based on absolute path, storage type, and Perl Compatible Regular Expressions (PCRE).

Select whether to match by a specific path or a storage type, and specify the match string type (**String** or **Regular Expression (PCRE)**). Type the file paths that apply to the criteria.

Note

- Application Control supports the use of the asterisk (*) wildcard when specifying a **String** type match. The asterisk character can represent one or more characters in a subdirectory of the specified string location.
- You cannot use wildcard characters to indicate the entire contents of the selected storage location.
- You can specify up to 100 file paths.

TABLE 14-1. Supported Storage Locations

STORAGE LOCATION	ENVIRONMENT VARIABLE	DESCRIPTION
Specific path	Not applicable	Only applies to applications in the exact path specified **Note** Application Control does not check device type when using this location type.
Any built-in storage	$FixedDrives	Only applies to applications in the path specified and stored on an internal storage device (internal hard disk drive)
Any local storage	$LocalDrives	Only applies to applications in the path specified and stored on a non-removable local storage device (internal or external hard disk drive)
Any removable storage	$RemovableDrives	Only applies to applications in the path specified and stored on a removable storage device (USB drive, CD/DVD)
Network path	$RemoteDrives	Only applies to applications in the path specified and stored on a shared network resource
Program Files folder	$ProgramFiles	Only applies to applications in the path specified and stored in the Program Files folders (default folders `C:\Program Files` and `C:\Program Files (x86)`)
System volume	$SystemDrive	Only applies to applications in the path specified and stored in the default Windows system drive

File Path Example Usage

Goal	Allow Rule	Block Rule	Results
Monitor all users' `Downloads` folder	-	1. **Enable assessment mode** 2. **Any local storage** 3. **String** 4. `C:\Users\*\Downloads\*`	Logs all attempts to access applications in all users' `Downloads` folder. Monitors: • `C:\Users\john_doe\Downloads\start.exe` • `C:\Users\Administrator\Downloads\start.exe`
Block all applications located in any folder under the`MyApps` subfolder of either `Program Files` directory	-	1. **Program Files folders** 2. **String** 3. `\MyApps*`	Blocks: • `C:\Program Files(x86)\MyApps\start.exe` • `C:\Program Files\MyApps\start.exe` • `C:\Program Files(x86)\MyApps\bin\start.exe` Allows: • `C:\Program Files(x86)\start.exe`

Goal	Allow Rule	Block Rule	Results
Allow all applications located in any folder under the `MyApps` subfolder of either `Program Files` directory but Block all other applications/ folders	1. **Program Files folders** 2. **String** 3. `\MyApps*`	1. **Any local storage** 2. **String** 3. `C:\Program Files\*` AND 1. **Any local storage** 2. **String** 3. `C:\Program Files (x86)\*`	Blocks: • `C:\Program Files(x86)\start.exe` Allows: • `C:\Program Files(x86)\MyApps\start.exe` • `C:\Program Files\MyApps\start.exe` • `C:\Program Files(x86)\MyApps\bin\start.exe`
Block only applications located in the `MyApps` subfolder of either `Program Files` directory but Allow all other applications/ folders	1. Allow the subfolders of the `MyApps` directory a. **Program Files folders** b. **String** c. `\MyApps\*\*`	1. **Program Files folders** 2. **String** 3. `\MyApps\*`	Blocks: • `C:\Program Files(x86)\MyApps\start.exe` • `C:\Program Files\MyApps\start.exe` Allows: • `C:\Program Files(x86)\start.exe` • `C:\Program Files(x86)\MyApps\bin\start.exe`

Goal	Allow Rule	Block Rule	Results
Block a specific application file name in any folder	-	1. **Specific path** 2. **Regular expression (PCRE)** 3. `.*\\(?i)test(?-i)\..*`	Blocks: • `C:\MyApps\test.exe` • `C:\Users\guet\AppData\Local\Temp\test.exe` • `C:\Program Files(x86)\MyApps\test.exe`

Certificates

You can configure Application Control to specifically target applications based on the "trust" level of a certificate and that contain specific certificate attributes.

Select the type of certificate "trust" level and then specify the required certificate "Issuer" or "Subject" information.

Note

Application Control supports the use of the asterisk (*) wildcard when specifying Certificate attributes, although you must use the wildcard in conjunction with other characters to limit the scope. For example, you cannot use only the wildcard character in any field.

The following table describes the different "trust" types.

Type	Description
Trusted (valid)	You must have included the certificate in the trusted certificates list and the certificate must not have expired
Trusted (expired)	You must have added the certificate in the trusted certificates list but the certificate has already expired

Type	Description
Untrusted	The certificate is unknown or you did not add the certificate to the trusted certificates list

Note

The "trust" level combinations for Allow and Block criteria differ.

Hash Values

You can configure Application Control to match applications using SHA-1 or SHA-256 hash value formats. You can choose to manually specify hash values or import a list of generated values.

Select your **Input method** and follow the on-screen instructions.

Input Method	Description
Manual	Allows you to manually specify up to 100 hash values (and descriptions)

Input Method	Description
Import	Allows you to import a ZIP package containing a properly formatted hash value list in CSV format You can choose to use the **Hash Generator tool** or manually create the CSV file using the **CSV sample format**. **WARNING!** You can only import one file into each set of criteria. If you attempt to import a new hash value list into the criteria, Application Control completely overwrites the existing values. • **Hash Generator tool**: Download and execute the tool on a target endpoint that you have installed with all necessary applications. The tool automatically creates a valid ZIP package containing the hash values of all applications found on the endpoint. • **CSV sample format**: Download the sample file and follow the instructions to properly populate the hash value list. Once you have completed the list, compress the file in ZIP format before importing into the set of criteria. **Important** The hash value list cannot contain a mixture of SHA-1 and SHA-256 formats. You must create separate hash value files and separate Application Control criteria for each type of hash value format.

Data Loss Prevention

Data Loss Prevention (DLP) safeguards an organization's confidential and sensitive data-referred to as digital assets-against accidental disclosure and intentional theft. DLP allows you to:

- Identify the digital assets to protect
- Create policies that limit or prevent the transmission of digital assets through common channels, such as email and external devices

- Enforce compliance to established privacy standards

DLP evaluates data against a set of rules defined in policies. Policies determine the data that must be protected from unauthorized transmission and the action that DLP performs when it detects transmission.

Important

Each managed product provides different policy settings that you can configure and deploy to policy targets. You can find a complete list of supported managed products and the policy settings for each in the *Apex Central Widget and Policy Management Guide*.

You can download a PDF version of the guide, or view the guide online, using the following link:

https://docs.trendmicro.com/en-us/enterprise/apex-central.aspx

Data Identifier Types

Digital assets are files and data that an organization must protect against unauthorized transmission. Administrators can define digital assets using the following data identifiers:

- **Expressions**: Data that has a certain structure.

  For details, see *Expressions on page 14-17*.

- **File attributes**: File properties such as file type and file size.

  For details, see *File Attributes on page 14-22*.

- **Keyword lists**: A list of special words or phrases.

  For details, see *Keywords on page 14-24*.

Note

Administrators cannot delete a data identifier that a DLP template is using. Delete the template before deleting the data identifier.

Expressions

An expression is data that has a certain structure. For example, credit card numbers typically have 16 digits and appear in the format "nnnn-nnnn-nnnn-nnnn", making them suitable for expression-based detections.

Administrators can use predefined and customized expressions.

For details, see *Predefined Expressions on page 14-17* and *Customized Expressions on page 14-18*.

Predefined Expressions

Data Loss Prevention comes with a set of predefined expressions. These expressions cannot be modified or deleted.

Data Loss Prevention verifies these expressions using pattern matching and mathematical equations. After Data Loss Prevention matches potentially sensitive data with an expression, the data may also undergo additional verification checks.

For a complete list of predefined expressions, see the *Data Protection Lists* document at:

http://docs.trendmicro.com/en-us/enterprise/data-protection-reference-documents.aspx.

Viewing Settings for Predefined Expressions

Note

Predefined expressions cannot be modified or deleted.

Procedure

1. Go to **Policies** > **Policy Resources** > **DLP Data Identifiers**.
2. Click the **Expression** tab.
3. Click the expression name.

4. View settings in the screen that opens.

Customized Expressions

Create customized expressions if none of the predefined expressions meet the company's requirements.

Expressions are a powerful string-matching tool. Become comfortable with expression syntax before creating expressions. Poorly written expressions can dramatically impact performance.

When creating expressions:

- Refer to the predefined expressions for guidance on how to define valid expressions. For example, when creating an expression that includes a date, refer to the expressions prefixed with "Date".
- Note that Data Loss Prevention follows the expression formats defined in Perl Compatible Regular Expressions (PCRE). For more information on PCRE, visit the following website:

  http://www.pcre.org/
- Start with simple expressions. Modify the expressions if they are causing false alarms or fine tune them to improve detections.

Administrators can choose from several criteria when creating expressions. An expression must satisfy the chosen criteria before Data Loss Prevention subjects it to a DLP policy. For details about the different criteria options, see *Criteria for Customized Expressions on page 14-19*.

Criteria for Customized Expressions

TABLE 14-2. Criteria Options for Customized Expressions

CRITERIA	RULE	EXAMPLE
None	None	All - Names from US Census Bureau • Expression: [^\w]([A-Z][a-z]{1,12}(\s?,\s?|[\s]|\s([A-Z])\.\s)[A-Z][a-z]{1,12})[^\w]
Specific characters	An expression must include the characters you have specified. In addition, the number of characters in the expression must be within the minimum and maximum limits.	US - ABA Routing Number • Expression: [^\d]([0123678]\d{8})[^\d] • Characters: 0123456789 • Minimum characters: 9 • Maximum characters: 9
Suffix	Suffix refers to the last segment of an expression. A suffix must include the characters you have specified and contain a certain number of characters. In addition, the number of characters in the expression must be within the minimum and maximum limits.	All - Home Address • Expression: \D(\d+\s[a-z.]+\s([a-z]+\s){0,2} (lane|ln|street|st|avenue|ave|road|rd|place|pl|drive|dr|circle| cr|court|ct|boulevard|blvd)\.? [0-9a-z,#\s\.]{0,30}[\s|,][a-z]{2}\ s\d{5}(-\d{4})?)[^\d-] • Suffix characters: 0123456789- • Number of characters: 5 • Minimum characters in the expression: 25 • Maximum characters in the expression: 80

Criteria	Rule	Example
Single- character separator	An expression must have two segments separated by a character. The character must be 1 byte in length. In addition, the number of characters left of the separator must be within the minimum and maximum limits. The number of characters right of the separator must not exceed the maximum limit.	All - Email Address • Expression: [^\w.]([\w\.]{1,20}@[a-z0-9]{2,20}[\.][a-z]{2,5}[a-z\.]{0,10})[^\w.] • Separator: @ • Minimum characters to the left: 3 • Maximum characters to the left: 15 • Maximum characters to the right: 30

Creating a Customized Expression

Procedure

1. Go to **Policies** > **Policy Resources** > **DLP Data Identifiers**.
2. Click the **Expression** tab.
3. Click **Add**.

   A new screen displays.
4. Type a name for the expression. The name must not exceed 100 bytes in length and cannot contain the following characters:

   • > < * ^ | & ? \ /
5. Type a description that does not exceed 256 bytes in length.
6. Type the displayed data.

   For example, if you are creating an expression for ID numbers, type a sample ID number. This data is used for reference purposes only and will not appear elsewhere in the product.

7. Choose one of the following criteria and configure additional settings for the chosen criteria (see *Criteria for Customized Expressions on page 14-19*):

   - None
   - Specific characters
   - Suffix
   - Single-character separator

8. Test the expression against an actual data.

   For example, if the expression is for a national ID, type a valid ID number in the **Test data** text box, click **Test**, and then check the result.

9. Click **Save** if you are satisfied with the result.

Note

Save the settings only if the testing was successful. An expression that cannot detect any data wastes system resources and may impact performance.

Importing Customized Expressions

Use this option if you have a properly-formatted `.dat` file containing the expressions. You can generate the file by exporting the expressions from either the server you are currently accessing or from another server.

Procedure

1. Go to **Policies** > **Policy Resources** > **DLP Data Identifiers**.
2. Click the **Expression** tab.
3. Click **Import** and then locate the `.dat` file containing the expressions.
4. Click **Open**.

A message appears, informing you if the import was successful. If an expression to be imported already exists, it will be skipped.

File Attributes

File attributes are specific properties of a file. You can use two file attributes when defining data identifiers, namely, file type and file size. For example, a software development company may want to limit the sharing of the company's software installer to the R&D department, whose members are responsible for the development and testing of the software. In this case, the Apex Central administrator can create a policy that blocks the transmission of executable files that are 10 to 40 MB in size to all departments except R&D.

By themselves, file attributes are poor identifiers of sensitive files. Continuing the example in this topic, third-party software installers shared by other departments will most likely be blocked. Trend Micro therefore recommends combining file attributes with other DLP data identifiers for a more targeted detection of sensitive files.

For a complete list of supported file types, see the *Data Protection Lists* document at:

http://docs.trendmicro.com/en-us/enterprise/data-protection-reference-documents.aspx.

Creating a File Attribute List

Procedure

1. Go to **Policies** > **Policy Resources** > **DLP Data Identifiers**.
2. Click the **File Attribute** tab.
3. Click **Add**.

   A new screen displays.
4. Type a name for the file attribute list. The name must not exceed 100 bytes in length and cannot contain the following characters:

- > < * ^ | & ? \ /

5. Type a description that does not exceed 256 bytes in length.
6. Select your preferred true file types.
7. If a file type you want to include is not listed, select **File extensions** and then type the file type's extension. Data Loss Prevention checks files with the specified extension but does not check their true file types. Guidelines when specifying file extensions:

   - Each extension must start with an asterisk (*), followed by a period (.), and then the extension. The asterisk is a wildcard, which represents a file's actual name. For example, `*.pol` matches `12345.pol` and `test.pol`.
   - You can include wildcards in extensions. Use a question mark (?) to represent a single character and an asterisk (*) to represent two or more characters. See the following examples:

     - `*.*m` matches the following files: `ABC.dem`, `ABC.prm`, `ABC.sdcm`

     - `*.m*r` matches the following files: `ABC.mgdr`, `ABC.mtp2r`, `ABC.mdmr`

     - `*.fm?` matches the following files: `ABC.fme`, `ABC.fml`, `ABC.fmp`

   - Be careful when adding an asterisk at the end of an extension as this might match parts of a file name and an unrelated extension. For example: `*.do*` matches `abc.doctor_john.jpg` and `abc.donor12.pdf`.
   - Use semicolons (;) to separate file extensions. There is no need to add a space after a semicolon.

8. Type the minimum and maximum file sizes in bytes. Both file sizes must be whole numbers larger than zero.
9. Click **Save**.

Importing a File Attribute List

Use this option if you have a properly-formatted `.dat` file containing the file attribute lists. You can generate the file by exporting the file attribute lists from either the server you are currently accessing or from another server.

Procedure

1. Go to **Policies** > **Policy Resources** > **DLP Data Identifiers**.
2. Click the **File Attribute** tab.
3. Click **Import** and then locate the `.dat` file containing the file attribute lists.
4. Click **Open**.

   A message appears, informing you if the import was successful. If a file attribute list to be imported already exists, it will be skipped.

Keywords

Keywords are special words or phrases. You can add related keywords to a keyword list to identify specific types of data. For example, "prognosis", "blood type", "vaccination", and "physician" are keywords that may appear in a medical certificate. If you want to prevent the transmission of medical certificate files, you can use these keywords in a DLP policy and then configure Data Loss Prevention to block files containing these keywords.

Commonly used words can be combined to form meaningful keywords. For example, "end", "read", "if", and "at" can be combined to form keywords found in source codes, such as "END-IF", "END-READ", and "AT END".

You can use predefined and customized keyword lists. For details, see *Predefined Keyword Lists on page 14-25* and *Customized Keyword Lists on page 14-26*.

Predefined Keyword Lists

Data Loss Prevention comes with a set of predefined keyword lists. These keyword lists cannot be modified or deleted. Each list has its own built-in conditions that determine if the template should trigger a policy violation.

For details about the predefined keyword lists in Data Loss Prevention, see the *Data Protection Lists* document at:

http://docs.trendmicro.com/en-us/enterprise/data-protection-reference-documents.aspx

How Keyword Lists Work

Number of Keywords Condition

Each keyword list contains a condition that requires a certain number of keywords be present in a document before the list triggers a violation.

The number of keywords condition contains the following values:

- **All**: All of the keywords in the list must be present in the document.
- **Any**: Any one of the keywords in the list must be present in the document.
- **Specific number**: There must be at least the specified number of keywords in the document. If there are more keywords in the document than the number specified, Data Loss Prevention triggers a violation.

Distance Condition

Some of the lists contain a "distance" condition to determine if a violation is present. "Distance" refers to the amount of characters between the first character of one keyword and the first character of another keyword. Consider the following entry:

F**irst Name:_John_ L**ast Name:_Smith_

The **Forms - First Name, Last Name** list has a "distance" condition of fifty (50) and the commonly used form fields of "First Name" and "Last Name". In

the example above, Data Loss Prevention triggers a violation as the number of characters between the “F” in First Name and the “L” in Last Name is equal to eighteen (18).

For an example of an entry that does not trigger a violation, consider the following:

The f**irst name of our new employee from Switzerland is John. His l**ast name is Smith.

In this example, the number of characters between the “f” in “first name” and the “l” in “last name” is sixty-one (61). This exceeds the distance threshold and does not trigger a violation.

Customized Keyword Lists

Create customized keyword lists if none of the predefined keyword lists meets your requirements.

There are several criteria that you can choose from when configuring a keyword list. A keyword list must satisfy your chosen criteria before Data Loss Prevention subjects it to a policy. Choose one of the following criteria for each keyword list:

- **Any keyword**
- **All keywords**
- **All keywords within <x> characters**
- **Combined score for keywords exceeds threshold**

For details regarding the criteria rules, see *Customized Keyword List Criteria on page 14-27*.

Customized Keyword List Criteria

TABLE 14-3. Criteria for a Keyword List

CRITERIA	RULE
Any keyword	A file must contain at least one keyword in the keyword list.
All keywords	A file must contain all the keywords in the keyword list.
All keywords within <x> characters	A file must contain all the keywords in the keyword list. In addition, each keyword pair must be within <x> characters of each other. For example, your 3 keywords are WEB, DISK, and USB and the number of characters you specified is 20. If Data Loss Prevention detects all keywords in the order DISK, WEB, and USB, the number of characters from the "D" (in DISK) to the "W" (in WEB) and from the "W" to the "U" (in USB) must be 20 characters or less. The following data matches the criteria: DISK####WEB############USB The following data does not match the criteria: DISK******************WEB****USB(23 characters between "D" and "W") When deciding on the number of characters, remember that a small number, such as 10, usually results in a faster scanning time but only covers a relatively small area. This may reduce the likelihood of detecting sensitive data, especially in large files. As the number increases, the area covered also increases but scanning time might be slower.
Combined score for keywords exceeds threshold	A file must contain one or more keywords in the keyword list. If only one keyword was detected, its score must be higher than the threshold. If there are several keywords, their combined score must be higher than the threshold. Assign each keyword a score of 1 to 10. A highly confidential word or phrase, such as "salary increase" for the Human Resources department, should have a relatively high score. Words or phrases that, by themselves, do not carry much weight can have lower scores. Consider the scores that you assigned to the keywords when configuring the threshold. For example, if you have five keywords and three of those keywords are high priority, the threshold can be equal to or lower than the combined score of the three high priority keywords. This means that the detection of these three keywords is enough to treat the file as sensitive.

Creating a Keyword List

Procedure

1. Go to **Policies** > **Policy Resources** > **DLP Data Identifiers**.
2. Click the **Keyword** tab.
3. Click **Add**.

   A new screen displays.
4. Type a name for the keyword list. The name must not exceed 100 bytes in length and cannot contain the following characters:
   - > < * ^ | & ? \ /
5. Type a description that does not exceed 256 bytes in length.
6. Choose one of the following criteria and configure additional settings for the chosen criteria:
   - **Any keyword**
   - **All keywords**
   - **All keywords within <x> characters**
   - **Combined score for keywords exceeds threshold**
7. To manually add keywords to the list:
   a. Type a keyword that is 3 to 40 bytes in length and specify whether it is case-sensitive.
   b. Click **Add**.
8. To add keywords by using the "import" option:

Note

Use this option if you have a properly-formatted `.csv` file containing the keywords. You can generate the file by exporting the keywords from either the server you are currently accessing or from another server.

a. Click **Import** and then locate the `.csv` file containing the keywords.

b. Click **Open**.

A message appears, informing you if the import was successful. If a keyword to be imported already exists in the list, it will be skipped.

9. To delete keywords, select the keywords and click **Delete**.

10. To export keywords:

Note

Use the "export" feature to back up the keywords or to import them to another server. All keywords in the keyword list will be exported. It is not possible to export individual keywords.

a. Click **Export**.

b. Save the resulting `.csv` file to your preferred location.

11. Click **Save**.

Importing a Keyword List

Use this option if you have a properly-formatted `.dat` file containing the keyword lists. You can generate the file by exporting the keyword lists from either the server you are currently accessing or from another server.

Procedure

1. Go to **Policies** > **Policy Resources** > **DLP Data Identifiers**.

2. Click the **Keyword** tab.

3. Click **Import** and then locate the `.dat` file containing the keyword lists.

4. Click **Open**.

A message appears, informing you if the import was successful. If a keyword list to be imported already exists, it will be skipped.

Data Loss Prevention Templates

A DLP template combines DLP data identifiers and logical operators (And, Or, Except) to form condition statements. Only files or data that satisfy a certain condition statement will be subject to a DLP policy.

For example, a file must be a Microsoft Word file (file attribute) AND must contain certain legal terms (keywords) AND must contain ID numbers (expressions) for it to be subject to the "Employment Contracts" policy. This policy allows Human Resources personnel to transmit the file through printing so that the printed copy can be signed by an employee. Transmission through all other possible channels, such as email, is blocked.

You can create your own templates if you have configured DLP data identifiers. You can also use predefined templates. For details, see *Customized DLP Templates on page 14-31* and *Predefined DLP Templates on page 14-30*.

Note

It is not possible to delete a template that is being used in a DLP policy. Remove the template from the policy before deleting it.

Predefined DLP Templates

Data Loss Prevention comes with the following set of predefined templates that you can use to comply with various regulatory standards. These templates cannot be modified or deleted.

- **GLBA**: Gramm-Leach-Billey Act
- **HIPAA**: Health Insurance Portability and Accountability Act
- **PCI-DSS**: Payment Card Industry Data Security Standard
- **SB-1386**: US Senate Bill 1386

- **US PII**: United States Personally Identifiable Information

For a detailed list on the purposes of all predefined templates, and examples of data being protected, see the *Data Protection Lists* document at:

http://docs.trendmicro.com/en-us/enterprise/data-protection-reference-documents.aspx

Customized DLP Templates

Create your own templates if you have configured data identifiers. A template combines data identifiers and logical operators (And, Or, Except) to form condition statements.

For more information and examples on how condition statements and logical operators work, see *Condition Statements and Logical Operators on page 14-31*.

Condition Statements and Logical Operators

Data Loss Prevention evaluates condition statements from left to right. Use logical operators carefully when configuring condition statements. Incorrect usage leads to an erroneous condition statement that will likely produce unexpected results.

See the examples in the following table.

TABLE 14-4. Sample Condition Statements

CONDITION STATEMENT	INTERPRETATION AND EXAMPLE
[Data Identifier1] **And** [Data Identifier 2] **Except** [Data Identifier 3]	A file must satisfy [Data Identifier 1] and [Data Identifier 2] but not [Data Identifier 3]. For example: A file must be [an Adobe PDF document] and must contain [an email address] but should not contain [all of the keywords in the keyword list].

Condition Statement	Interpretation and Example
[Data Identifier 1] **Or** [Data Identifier 2]	A file must satisfy [Data Identifier 1] or [Data Identifier 2]. For example: A file must be [an Adobe PDF document] or [a Microsoft Word document].
Except [Data Identifier 1]	A file must not satisfy [Data Identifier 1]. For example: A file must not be [a multimedia file].

As the last example in the table illustrates, the first data identifier in the condition statement can have the "Except" operator if a file must not satisfy all of the data identifiers in the statement. In most cases, however, the first data identifier does not have an operator.

Creating a Template

Procedure

1. Go to **Policies** > **Policy Resources** > **DLP Templates**.
2. Click **Add**.

   A new screen displays.
3. Type a name for the template. The name must not exceed 100 bytes in length and cannot contain the following characters:
   - > < * ^ | & ? \ /
4. Type a description that does not exceed 256 bytes in length.
5. Select data identifiers and then click the "add" icon.

   When selecting definitions:
   - Select multiple entries by pressing and holding the CTRL key and then selecting the data identifiers.

- Use the search feature if you have a specific definition in mind. You can type the full or partial name of the data identifier.
- Each template can contain a maximum of 30 data identifiers.

6. To create a new expression, click **Expressions** and then click **Add new expression**. In the screen that appears, configure settings for the expression.
7. To create a new file attribute list, click **File attributes** and then click **Add new file attribute**. In the screen that appears, configure settings for the file attribute list.
8. To create a new keyword list, click **Keywords** and then click **Add new keyword**. In the screen that appears, configure settings for the keyword list.
9. If you selected an expression, type the number of occurrences, which is the number of times an expression must occur before Data Loss Prevention subjects it to a policy.
10. Choose a logical operator for each definition.

Note

Use logical operators carefully when configuring condition statements. Incorrect usage leads to an erroneous condition statement that will likely produce unexpected results. For examples of correct usage, see *Condition Statements and Logical Operators on page 14-31*.

11. To remove a data identifier from the list of selected identifiers, click the trash bin icon.
12. Below **Preview**, check the condition statement and make changes if this is not your intended statement.
13. Click **Save**.

Importing Templates

Use this option if you have a properly-formatted `.dat` file containing the templates. You can generate the file by exporting the templates from either the server you are currently accessing or from another server.

Procedure

1. Go to **Policies** > **Policy Resources** > **DLP Templates**.
2. Click **Import** and then locate the `.dat` file containing the templates.
3. Click **Open**.

   A message appears, informing you if the import was successful. If a template to be imported already exists, it will be skipped.

Intrusion Prevention Rules

The **Intrusion Prevention Rules** screen displays the Intrusion Prevention Rules supported by Apex Central Vulnerability Protection. Intrusion Prevention Rules examine the actual content of network packets (and sequences of packets). Based on the conditions set within the Intrusion Prevention Rule, various actions are then carried out on these packets. These actions include replacing specifically defined or suspicious byte sequences, or completely dropping packets and resetting the connection.

- To filter the list of rules, use the **Search** box to specify full or partial strings that appear in any of the columns.
- To sort the list of Intrusion Prevention Rules by column data, click a column heading.
- To view detailed Intrusion Prevention Rule Properties, click the link in the **Rule Name** column of a rule.
- To exclude traffic from one or more source endpoints from Vulnerability Protection scanning, click **Configure Exceptions** and specify the source IP addresses.

Note

You can add up to 100 entries to the exception list.

Note

Apex Central automatically imports/updates Intrusion Prevention Rules from the Apex One server during manual or scheduled component updates.

Important

Each managed product provides different policy settings that you can configure and deploy to policy targets. You can find a complete list of supported managed products and the policy settings for each in the *Apex Central Widget and Policy Management Guide*.

You can download a PDF version of the guide, or view the guide online, using the following link:

https://docs.trendmicro.com/en-us/enterprise/apex-central.aspx

The following table outlines the rule information that displays on the **Intrusion Prevention Rules** screen.

Column	Description
Identifier	The unique identifier tag for the Intrusion Prevention Rule
Rule Name	The name of the Intrusion Prevention Rule
Application Type	The Application Type this Intrusion Prevention Rule is grouped under
Severity	The severity level that Trend Micro assigns to the rule **Note** The severity of a rule has no effect on how the rule is implemented or applied. Severity levels can be useful as sorting criteria when viewing a list of Intrusion Prevention Rules.

Column	Description
Mode	The network engine detection mode used by the Intrusion Prevention module
Type	The type of vulnerability detected: • **Smart**: Known or unknown (for example, zero-day) vulnerability • **Exploit**: Known exploit (usually signature based) for a known vulnerability • **Vulnerability**: Known vulnerability for which one or more exploits may exist
CVE	The Common Vulnerabilities and Exposures (CVE®) identifier that MITRE assigns to the vulnerability For more information, see http://cve.mitre.org/.
Microsoft	The Common Vulnerabilities and Exposures (CVE®) identifier that Microsoft assigns to the vulnerability
CVSS Score	The Common Vulnerability Scoring System (CVSS) severity score of the vulnerability according the National Vulnerability Database For more information, see http://nvd.nist.gov/cvss.cfm.
Last Updated	The date and time the rule was last modified

Intrusion Prevention Rule Properties

The **Intrusion Prevention Rule Properties** screen displays detailed information about a specific Intrusion Prevention Rule and vulnerability. Click the **General** tab or the **Vulnerability** to view details about the rule.

The following tables describe the information provided on the **General** tab and **Vulnerability** tab.

Table 14-5. General Information

Data	Description
Identifier	The unique identifier tag for the Intrusion Prevention Rule

Data	Description
Name	The name of the Intrusion Prevention Rule
Description	The description of the Intrusion Prevention Rule **Note** Apex One Vulnerability Protection does not support the configuration options available on the standalone version of Trend Micro Vulnerability Protection.
Application Type	The Application Type this Intrusion Prevention Rule is grouped under
Priority	The priority level of the Intrusion Prevention Rule. Higher priority rules are applied before lower priority rules.
Severity	The severity level that Trend Micro assigns to the rule **Note** The severity of a rule has no effect on how the rule is implemented or applied. Severity levels can be useful as sorting criteria when viewing a list of Intrusion Prevention Rules.
Mode	The network engine detection mode used by the Intrusion Prevention module
Type	The type of vulnerability detected: • **Smart**: Known or unknown (for example, zero-day) vulnerability • **Exploit**: Known exploit (usually signature based) for a known vulnerability • **Vulnerability**: Known vulnerability for which one or more exploits may exist
Issued	The date the rule was released (not downloaded)
Last Updated	The date and time the rule was last modified

TABLE 14-6. Vulnerability Information

DATA	DESCRIPTION
Severity	The severity level of the vulnerability
CVSS Score	The Common Vulnerability Scoring System (CVSS) severity score of the vulnerability according the National Vulnerability Database For more information, see http://nvd.nist.gov/cvss.cfm.
Description	The description of the vulnerability
External References	Provides links to external references for more information about the vulnerability

Device Control Allowed Devices

Import or export lists of **Device Control Allow Devices** that apply to all Apex One Security Agent policy targets.

Note

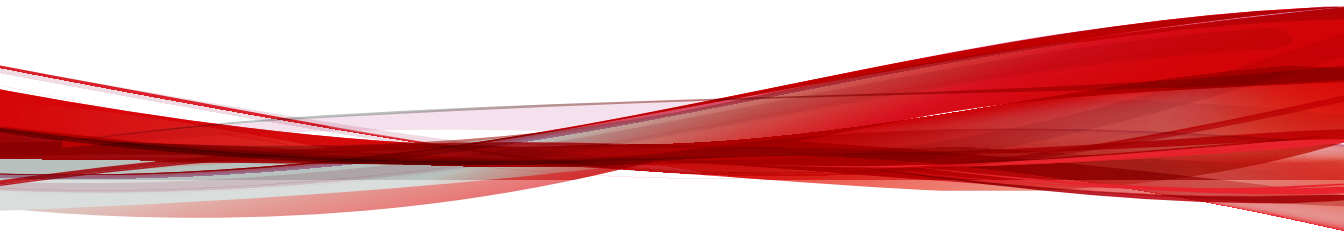
- Only Security Agents with Data Protection enabled override the "Block" or "Read" action on devices added to the Device Control Allowed Devices list.
- The Device Control Allowed Devices list does not apply to Security Agents without Data Protection and Security Agents with Device Control permission not set to "Block" or "Read".

ITEM	DESCRIPTION
Import	Select a properly formatted CSV file containing a list of all the devices you want to allow on all Apex One Security Agent endpoints. **Important** Importing a new list overwrites the previous list completely. To retain the existing list, export the list before importing a new CSV file.

Item	Description
Last imported	The date/time the server imported the current list
Total allowed devices	The total number of allowed devices in the currently applied list
Export	Exports the current allowed list in CSV format

Part V

Detections



Chapter 15

Logs

This chapter describes how to access Apex Central generated logs and logs from managed products registered to Apex Central.

Topics include:

- *Log Queries on page 15-2*
- *Querying Logs on page 15-2*
- *Configuring Log Aggregation on page 15-14*
- *Configuring Syslog Forwarding on page 15-14*
- *Deleting Logs on page 15-20*

Log Queries

Apex Central allows you to query the Apex Central database for Apex Central generated logs and log data from registered managed products.

Apex Central also allows you to:

- Use advanced filters to narrow log query search results.
- Configure log aggregation settings to reduce network traffic when sending log data from managed products to the Apex Central server.
- Manually delete log entries by type or configure automatic log deletion.

Querying Logs

Use the **Log Query** screen to query Apex Central generated logs and log data from registered managed products. You can also narrow the search results by using advanced custom filters, export the search results in XML or CSV format, or save and share the log query search criteria with other Apex Central administrators.

Note

Apex Central also allows you to perform a log query from the **Product Directory** screen.

For details, see *Querying Logs from the Product Directory on page 10-10*.

Procedure

1. Go to **Detections** > **Logs** > **Log Query**.

   The **Log Query** screen appears.

2. Specify the log type.

Note

Log types correspond to specific data views used in Apex Central reports.

For more information about log types and data views, see *Log Names and Data Views on page 15-6*.

a. Select a log type from the first drop-down control.

b. Click **OK** to apply the selected log type.

3. To filter your search results to data from specific managed products:

   a. Click the second drop-down control.

   b. Select targets for the query by using one of the following options:

      - **Directory**: Allows you to locate and select managed products from the Product Directory structure
      - **Type**: Allows you to choose a product type and select from a list of all registered managed products of the same type
      - **Tags and filters**: Allows you to select custom tags, filters, or important labels from the User/Endpoint Directory to query specific endpoints

      Note

      - You can select up to 10 custom tags, filters, or important labels to perform a log query.
      - Custom filters that contain Compliance, Important, Threat Type, Security Threat, or Threat Status Criteria information cannot be used to perform a log query.

   c. Click **OK** to apply the selected targets.

4. Select a time period from the **Time** drop-down control.

5. To filter search results using custom criteria:

   a. Click **Show advanced filters**.

b. Specify the **Match** rule for the custom filter:

- **All of the criteria**: Data must match all the specified criteria
- **Any of the criteria**: Data can match any of the specified criteria

c. In the **Select criteria...** drop-down list, select a data column to filter.

Note

The data columns in the **Select criteria...** drop-down list dynamically change based on the log type you select in the first drop-down control.

For more information about the data columns, see *Log Names and Data Views on page 15-6* and refer to the corresponding data view details.

The filtering criteria that appear in the second and third drop-down lists dynamically change based on the data column you select.

d. In the second drop-down list, select an operator.

e. In the third drop-down list, define the criteria.

Note

Apex Central supports up to 20 custom filtering criteria for each log query.

6. Click **Search**.

The search results appear in the table on the **Log Query** screen.

Note

- The **Generated** column displays the local date and time on the endpoint for when the managed product first detected the threat.
- The **Received** column displays the local date and time on the Apex Central server for when the Apex Central server received the data from the managed product server.

7. (Optional) Click a link in a data column to drill down for more information.
8. (Optional) Customize the data columns in the search results.
   - Click **Customize Columns** to add or remove columns that display in the table.
   - Rearrange the order in which the columns display by dragging the column headings.
9. (Optional) Export the log query results.
   a. Click **Export to CSV** or **Export to XML**.

      The **Log Query Exporting page** screen appears.

   b. After the export completes, open or save the file.
10. (Optional) Save log query search criteria.

Note

- Saving a log query only saves the search criteria for the query. To save log query search results, export the results or create a report using a grid table.

  For more information about creating reports, see *Reports on page 17-1*.
- Saved queries are automatically visible to all users from the same Active Directory group.
- A gray user icon ( ) next to a saved query indicates a log query shared by a user from outside your Active Directory group. Hover over the icon to view the name of the user who shared the query.

   a. Click the save button ( ).

   b. Specify a name for the saved query.

   c. Click **Save**.

After saving a log query, you can click the saved queries button () to view a list of saved queries and perform the following actions.

- Click the name of a saved query to run the log query.
- Click the share icon () next to a saved query name to share the log query with all Apex Central users.
- Click the stop sharing icon () next to a saved query name to stop sharing the log query with all Apex Central users.
- Click the delete icon () to remove the saved query.

Log Names and Data Views

Apex Central log types correspond to specific data views for custom report templates. You can use the following data views to create custom report templates for your log query results.

For more information, see the following topics:

- *Custom Templates on page 17-2*
- *Data Views on page B-1*

TABLE 15-1. Security Logs

LOG NAME	DATA VIEW	DESCRIPTION
System Events:		
Virus/Malware	Detailed Virus/ Malware Information	Provides specific information about the virus/ malware detections on your network, such as the managed product that detected the viruses/malware, the name of the virus/ malware, and the infected endpoint For more information, see *Detailed Virus/ Malware Information on page B-73*.

Log Name	Data View	Description
Spyware/Grayware	Detailed Spyware/ Grayware Information	Provides specific information about the spyware/grayware detections on your network, such as the managed product that detected the spyware/grayware, the name of the spyware/grayware, and the name of the infected endpoint For more information, see *Detailed Spyware/ Grayware Information on page B-60*.
Suspicious Files	Detailed Suspicious File Information	Provides specific information about suspicious files detected on your network For more information, see *Detailed Suspicious File Information on page B-5*.
Behavior Monitoring	Detailed Behavior Monitoring Information	Provides specific information about Behavior Monitoring events on your network For more information, see *Detailed Behavior Monitoring Information on page B-49*.
Integrity Monitoring	Integrity Monitoring Information	Use to monitor specific changes to an endpoint, such as installed software, running services, processes, files, directories, listening ports, registry keys, and registry values For more information, see *Integrity Monitoring Information on page B-55*.
Application Control	Detailed Application Control Violation Information	Provides specific information about application control violations on your network, such as the violated Security Agent policy and criteria For more information, see *Detailed Application Control Violation Information on page B-47*.
Device Control	Device Access Control Information	Provides specific information about Device Access Control events on your network For more information, see *Device Access Control Information on page B-44*.

Log Name	Data View	Description
Endpoint Security Compliance	Detailed Endpoint Security Compliance Information	Provides specific information about endpoint security compliance on your network For more information, see *Detailed Endpoint Security Compliance Information on page B-50*.
Endpoint Security Violations	Detailed Endpoint Security Violation Information	Provides specific information about endpoint security violations on your network For more information, see *Detailed Endpoint Security Violation Information on page B-51*.
Predictive Machine Learning	Detailed Predictive Machine Learning Information	Provides specific information about advanced unknown threats detected by Predictive Machine Learning For more information, see *Detailed Predictive Machine Learning Information on page B-3*.
Virtual Analyzer	Detailed Virtual Analyzer Detection Information	Provides specific information about advanced unknown threats detected by Virtual Analyzer For more information, see *Virtual Analyzer Detection Information on page B-6*.
Virtual Analyzer Suspicious Objects	Detailed Virtual Analyzer Suspicious Object Impact Information	Provides detailed information about the impact of Virtual Analyzer suspicious objects For more information, see *Detailed Virtual Analyzer Suspicious Object Impact Information on page B-7*.
Attack Discovery	Attack Discovery Detection Information	Provides general information about threats detected by Attack Discovery For more information, see *Attack Discovery Detection Information on page B-10*.
Gray Detections	Gray Detection Information	Provides detailed information about possible indicators of attack detected on your network For more information, see *Gray Detection Information on page B-38*.

Log Name	Data View	Description
Network Events:		
Spam Connections	Spam Connection Information	Provides specific information about the source of spam on your network, such as the managed product that detected the spam, the specific action taken by the managed product, and the total number of spam detected For more information, see *Spam Connection Information on page B-58*.
Content Violations	Detailed Content Violation Information	Provides specific information about the email messages with content violations, such as the managed product that detected the content violation, the sender(s) and recipients(s) of the email message, the name of the content violation policy, and the total number of violations detected For more information, see *Detailed Content Violation Information on page B-17*.
Email Messages with Advanced Threats	Email Messages with Advanced Threats	Provides specific information about email messages with advanced threats, such as anomalous behavior, false or misleading data, suspicious and malicious behavior patterns, and strings that indicate system compromise but require further investigation to confirm For more information, see *Email Messages with Advanced Threats on page B-19*.
Web Reputation	Detailed Web Reputation Information	Provides compliance information about application activity detected by Web Reputation Services For more information, see *Detailed Web Reputation Information on page B-85*.

Log Name	Data View	Description
Web Violations	Detailed Web Violation Information	Provides specific information about web violations on your network For more information, see *Detailed Web Violation Information on page B-88*.
Firewall Violations	Detailed Firewall Violation Information	Provides specific information about firewall violations on your network, such as the managed product that detected the violation, the source and destination of the transmission, and the total number of firewall violations For more information, see *Detailed Firewall Violation Information on page B-52*.
Network Content Inspection	Network Content Inspection Information	Provides specific information about network content violations on your network For more information, see *Network Content Inspection Information on page B-55*.
Intrusion Prevention	Detailed Intrusion Prevention Information	Provides specific information to help you achieve timely protection against known and zero-day attacks, defend against web application vulnerabilities, and identify malicious software accessing the network For more information, see *Detailed Intrusion Prevention Information on page B-53*.
C&C Callbacks	Detailed C&C Callback Information	Provides specific information about C&C callback events detected on your network For more information, see *Detailed C&C Callback Information on page B-2*.

Log Name	Data View	Description
Suspicious Threats	Detailed Suspicious Threat Information	Provides specific information about suspicious threats on your network, such as the managed product that detected the suspicious threat, specific information about the source and destination, and the total number of suspicious threats on the network For more information, see *Detailed Suspicious Threat Information on page B-26*.
Application Activity	Detailed Application Activity	Displays specific information about application activities that violate network security policies For more information, see *Detailed Application Activity on page B-45*.
Mitigation	Detailed Mitigation Information	Provides specific information about tasks carried out by mitigation servers to resolve threats on your network For more information, see *Detailed Mitigation Information on page B-25*.
Correlation	Detailed Correlation Information	Provides specific information about detailed threat analyses and remediation recommendations For more information, see *Detailed Correlation Information on page B-25*.
Data Protection Events:		
Data Loss Prevention	DLP Incident Information	Provides specific information about incidents detected by Data Loss Prevention For more information, see *DLP Incident Information on page B-21*.

Log Name	Data View	Description
Data Discovery	Data Discovery Data Loss Prevention Detection Information	Displays specific information about incidents detected by Data Discovery For more information, see *Data Discovery Data Loss Prevention Detection Information on page B-20*.

Table 15-2. Product Information

Log Name	Data View	Description
Managed Product:		
Product Status	Product Status Information	Provides detailed information about managed products registered to the Apex Central server, such as the managed product version and build number, and the managed product server operating system For more information, see *Product Status Information on page B-111*.
Product Events	Product Event Information	Provides information about managed product events, such as managed products registering to Apex Central, component updates, and Activation Code deployments For more information, see *Product Event Information on page B-110*.
Product Auditing Events	Product Auditing Event Log	Provides information about managed product auditing events, such as managed product console access For more information, see *Product Auditing Event Log on page B-109*.
Apex Central:		

Log Name	Data View	Description
Command Tracking	Command Tracking Information	Provides information about commands Apex Central issued to managed products, such as the date and time Apex Central issued commands for component updates or Activation Code deployments, and the status of the commands For more information, see *Command Tracking Information on page B-96*.
Apex Central Events	Apex Central Event Information	Provides information about Apex Central server events, such as managed products registering to Apex Central, component updates, and Activation Code deployments For more information, see *Apex Central Event Information on page B-95*.
Unmanaged Endpoints	Unmanaged Endpoints	Provides information about detected endpoints that do not have a Trend Micro Security Agent installed For more information, see *Unmanaged Endpoint Information on page B-97*.
User Access	User Access Information	Provides information about Apex Central user access and the activities users perform while logged on to Apex Central For more information, see *User Access Information on page B-98*.
Product Licenses	Detailed Product License Information	Provides information about the Activation Codes and licensing status of managed products or services, such as the managed product version and license expiration date For more information, see *Detailed Product License Information on page B-106*.

Configuring Log Aggregation

Log aggregation allows you to conserve network bandwidth by sending only selected data from managed products to the Apex Central server.

WARNING!

Apex Central cannot recover data that managed products do not send to the Apex Central server.

Procedure

1. Go to **Detections** > **Logs** > **Log Aggregation Settings**.

   The **Edit Log Aggregation Rule** screen appears.

2. Select **Enable log aggregation**.

3. Expand log categories.

4. Clear check boxes to stop sending data from managed products to Apex Central.

5. Click **Save**.

Configuring Syslog Forwarding

Use the **Syslog Settings** screen to configure Apex Central to forward supported logs to a syslog server.

For more information, see the following topics:

- *Disabling Syslog Forwarding on page 15-18*
- *Supported Log Types and Formats on page 15-18*

Note

- If you migrated to Apex Central from a previous Control Manager installation, Apex Central automatically imports your previous syslog forwarding settings configured using the LogForwarder tool (<Control Manager installation directory>\LogForwarder.exe).
- After migrating to Apex Central, you will no longer be able to execute the LogForwarder tool.

Procedure

1. Go to **Administration** > **Settings** > **Syslog Settings**.

   The **Syslog Settings** screen appears.

2. Select the **Enable syslog forwarding** check box.

3. Configure the following settings for the server that receives the forwarded syslogs:

   - **Server address**: Syslog server IP address or FQDN
   - **Port**: Syslog server port number
   - **Protocol**: Select the transmission protocol

   Note

   If **SSL/TLS** is selected, Apex Central accepts valid self-signed certificates by default.

   - If the server certificate contains a Subject Alternative Name, the Subject Alternative Name must contain the server FQDN or IP address.
   - For additional security, use a valid server certificate or upload the server certificate to Apex Central.

4. (Optional) To upload a server certificate:

Important

- Apex Central only supports server certificates in X.509 format with .DER or .PEM encoding.

  For more information, see https://support.ssl.com/Knowledgebase/Article/View/19/0/der-vs-crt-vs-cer-vs-pem-certificates-and-how-to-convert-them.

- Apex Central only supports uploading server certificates for SSL/TLS transmissions.

a. Select the **Use server certificate** check box.

b. Click **Select** to select the server certificate from your computer.

c. Click **Open**.

   Apex Central uploads the selected server certificate.

5. (Optional) To use a proxy server for syslog forwarding, select the **Use a SOCKS proxy server** check box.

Important

- Apex Central only supports syslog forwarding over a SOCKS protocol proxy server for SSL/TLS or TCP transmissions.
- Syslog forwarding does not support HTTP proxy servers. To use a proxy server for syslog forwarding, click **Configure proxy settings** and select a SOCKS protocol server on the **Proxy Settings** screen.

  For more information, see *Configuring Proxy Settings for Component/License Updates, Cloud Services, and Syslog Forwarding on page 11-12*.

Apex Central uses the proxy server configured on the **Proxy Settings** screen (**Administration** > **Settings** > **Proxy Settings**) for syslog forwarding.

6. Select the log format:

- **CEF**: Uses the standard Common Event Format (CEF) for log messages

- **Apex Central format**: Sets the syslog **Facility** code to "Local0" and the **Severity** code to "Notice"

For more information, see *Supported Log Types and Formats on page 15-18*.

7. Configure the frequency for when Apex Central forwards the logs.
8. Select the log type(s) to forward:
   a. Select a log category from the **Log type** drop-down list:

      Note
      You can select log types from multiple log categories.

      - **Security logs**
      - **Product information**

   b. Select the check box(es) for the log(s) you want to forward.

      Apex Central displays the total number of selected log types next to the **Log type** drop-down list.

   c. (Optional) Select another log category from **Log type** drop-down list to select additional logs types to forward.
9. (Optional) Click **Test Connection** to test the server connection.

   Note
   Testing the connection does not save the syslog server settings.

   The syslog server connection status appears at the top of the screen.
10. Click **Save**.
    - Apex Central starts forwarding logs to the configured syslog server.
    - To monitor the log forwarding status, go to **Administration** > **Command Tracking** and select **Forward Syslog** from the **Command** drop-down list.

For more information, see *Querying and Viewing Commands on page 12-3*.

Disabling Syslog Forwarding

Use the **Syslog Settings** screen to stop forwarding logs from Apex Central to a syslog server.

Procedure

1. Go to **Administration** > **Settings** > **Syslog Settings**.

   The **Syslog Settings** screen appears.

2. Clear the **Enable syslog forwarding** check box.

3. Click **Save**.

   Apex Central stops forwarding logs to the configured syslog server.

Supported Log Types and Formats

Apex Central can forward logs to a syslog server in the following log formats:

- **CEF**: Uses the standard Common Event Format (CEF) for log messages
- **Apex Central format**: Sets the syslog **Facility** code to "Local0" and the **Severity** code to "Notice"

The following tables outline the formats supported by each log type.

TABLE 15-3. Security Logs

LOG TYPE	CEF	APEX CENTRAL FORMAT
Application Control	Yes	No

Log Type	CEF	Apex Central Format
Attack Discovery	Yes	No
Behavior Monitoring	Yes	Yes
C&C Callbacks	Yes	No
Content Violations	Yes	No
Data Loss Prevention	Yes	Yes
Device Control	Yes	Yes
Intrusion Prevention	Yes	No
Network Content Inspection	Yes	No
Predictive Machine Learning	Yes	No
Spyware/Grayware	Yes	No
Suspicious Files	Yes	No
Virtual Analyzer	Yes	No
Virus/Malware	Yes	No
Web Violations	Yes	No

Table 15-4. Product Information

Log Type	CEF	Apex Central Format
Engine Update Status	Yes	Yes
Managed Product Logon/Logoff Events	Yes	Yes
Product Auditing Events	Yes	No
Pattern Update Status	Yes	Yes

For information about mapping syslog content between CEF and Apex Central formats, see *Syslog Content Mapping - CEF on page F-1*.

Deleting Logs

Use the **Log Maintenance** screen to manually delete log entries by type or configure automatic log deletion.

WARNING!

Manually deleting log data may affect report generation.

Tip

Trend Micro recommends backing up Data Loss Prevention logs to your Security Information and Event Management (SIEM) server and keeping the logs for at least 2 years.

Procedure

1. Go to **Detections** > **Logs** > **Log Maintenance**.

   The **Log Maintenance** screen appears.

2. To delete logs manually:

   a. Select the check box for the log type.

   b. Click **Delete All** in the corresponding row for the type of log entries you want to delete.

      A confirmation message appears.

   c. Click **OK** to delete all logs for the selected type.

3. To configure automatic log deletion:

   a. Select the check box for the log type.

   b. In the **Maximum Log Entries** column, specify the maximum number of logs that Apex Central retains.

Note

By default, Apex Central retains a maximum of 1,000,000 log entries.

c. In the **Purge Offset** column, specify the number of logs that Apex Central deletes when the number of logs reaches the number specified in the **Maximum Log Entries** column.

Note

By default, the purge offset value is 1,000 log entries.

d. In the **Maximum Log Age** column, specify the age of logs that Apex Central deletes automatically.

Note

By default, the maximum log age is 90 days.

e. Click **Save**.

Chapter 16

Notifications

This section discusses how to send notifications about events that occur on the Apex Central network.

Topics include:

- *Event Notifications on page 16-2*
- *Notification Method Settings on page 16-3*
- *Contact Groups on page 16-7*
- *Advanced Threat Activity Events on page 16-10*
- *Content Policy Violation Events on page 16-31*
- *Data Loss Prevention Events on page 16-35*
- *Known Threat Activity Events on page 16-44*
- *Network Access Control Events on page 16-60*
- *Unusual Product Behavior Events on page 16-63*
- *Updates on page 16-70*

Event Notifications

Apex Central can notify individuals or groups of recipients about events detected by managed products. Supported notification methods include email messages, Windows system log notifications, SMNP traps, syslog messages, and trigger applications.

For more information, see *Notification Method Settings on page 16-3*

Use the **Event Notifications** screen to enable or disable notifications about events from the following categories.

Event Category	Description
Advanced Threat Activity	Provides warnings about advanced and unknown threats For more information, see *Advanced Threat Activity Events on page 16-10*.
Content Policy Violation	Provides warnings about email content and URL security policy violations For more information, see *Content Policy Violation Events on page 16-31*.
Data Loss Prevention	Provides information about Data Loss Prevention incidents and template matches For more information, see *Data Loss Prevention Events on page 16-35*.
Known Threat Activity	Provides warnings about viruses/spyware/grayware detected by antivirus managed products For more information, see *Known Threat Activity Events on page 16-44*.
Network Access Control	Provides warnings from managed Network VirusWall products For more information, see *Network Access Control Events on page 16-60*.

Event Category	Description
Unusual Product Behavior	Provides information about product options or service activation and deactivation For more information, see *Unusual Product Behavior Events on page 16-63*.
Updates	Provides antivirus and content security component update results (successful or unsuccessful) For more information, see *Updates on page 16-70*.

Notification Method Settings

Use the **Notification Method Settings** screen to configure settings for the following notification methods.

Method	Description
Email	Configure **SMTP Server Settings** to send email notifications about events detected by managed products. For more information, see *Configuring SMTP Server Settings on page 16-4*.
SNMP Trap	Configure **SNMP Trap Settings** to send SNMP trap notifications about events detected by managed products. For more information, see *Configuring SNMP Trap Settings on page 16-5*.
Syslog	Configure **Syslog Settings** to send syslog messages to selected recipients or supported third-party products. For more information, see *Configuring Syslog Settings on page 16-5*.
Trigger Application	Provide user credentials to trigger an in-house or industry-standard application used by your organization to send notifications. For more information, see *Configuring Trigger Application Settings on page 16-6*.

Configuring SMTP Server Settings

Apex Central allows you to send email messages to notify selected recipients about events detected by managed products.

Important

You must configure **SMTP Server Settings** in order for Apex Central to send email messages.

Procedure

1. Go to **Detections** > **Notifications** > **Notification Methods**.

   The **Notification Methods** screen appears.

2. In the **SMTP Server Settings** section, specify the following:

   a. **Server FQDN or IP address**: Type a valid FQDN, IPv4, or IPv6 address.

   b. **Port**: Type the port number of the SMTP server.

   c. **Sender email address**: Type the email address that sends the event notification.

   d. **Attachment size limit (KB)**: Specify the maximum file attachment size in kilobytes.

3. To use Extended SMTP (ESMTP):

   a. Select **Enable ESMTP**.

   b. Specify the user name and password.

   c. Select the authentication method from the **Authentication** drop-down list.

4. Click **Save**.

Configuring SNMP Trap Settings

Apex Central allows you to send Simple Network Management Protocol (SNMP) traps to notify selected recipients about events detected by managed products.

Procedure

1. Go to **Detections** > **Notifications** > **Notification Methods**.

   The **Notification Methods** screen appears.

2. In the **SNMP Trap Settings** section, specify the following:

   a. **Community name**: Type the SNMP community name.

   b. **Server IP address**: Type the IPv4 or IPv6 address of the SNMP server.

3. Click **Save**.

Configuring Syslog Settings

Apex Central allows you to send syslog messages to notify selected recipients about events detected by managed products.

You can also direct syslog messages to supported third-party products.

Procedure

1. Go to **Detections** > **Notifications** > **Notification Methods**.

   The **Notification Methods** screen appears.

2. In the **Syslog Settings** section, specify the following:

   a. **Server IP address**: Type the IPv4 or IPv6 address of the syslog server.

b. **Port**: The the port number of the syslog server.

c. **Facility**: Select the facility code.

Note

Add multiple syslog servers using the add icon ().

3. Click **Save**.

Configuring Trigger Application Settings

Apex Central allows you to use in-house or industry-standard applications to notify selected recipients about events detected by managed products.

For example, if your organization uses a batch file that executes the **`net send`** command, you can use the **Notification Method Settings** screen to provide the credentials for a user account with the necessary privileges.

Important

Save the trigger application file in the following location on the Apex Central server:

```
<Apex Central installation directory>\Application\
```

Procedure

1. Go to **Detections** > **Notifications** > **Notification Methods**.

   The **Notification Methods** screen appears.

2. In the **Trigger Application Settings** section, select **Use a specified user to trigger the application**.

3. Type the user name and password for an account with the privileges required by the trigger application.

4. Click **Save**.

Contact Groups

The **Contact Groups** screen provides a list of all previously defined contact groups that are available when specifying report and event notification recipients. Apex Central contact groups allow you to send notifications or reports to all the recipients in the same group without having to select user accounts individually.

The following table outlines the tasks available on the **Contact Groups** screen.

Task	Description
Add new contact groups	Click **Add** to create a new contact group. For more information, see *Adding Contact Groups on page 16-7*.
Remove existing contact groups	Select an existing contact group and click **Remove**. **WARNING!** Deleting a contact group affects all reports or notifications using the group.
Edit existing contact groups	Click the **Name** of an existing contact group to edit the recipients. For more information, see *Editing Contact Groups on page 16-9*.

Adding Contact Groups

Use the **Add Group** screen to create new contact groups for reports and event notifications.

Procedure

1. Go to **Detections** > **Notifications** > **Contact Groups**

   The **Contact Groups** screen appears.

2. Click **Add**.

   The **Add Group** screen appears.

3. Type a name for the contact group.

4. Specify recipients for the contact group.

   - From the **Available User Accounts** list, select user accounts and click **>**.

     The selected user accounts appear in the **Selected User Accounts** list.

     Note

     You can also add users and groups from an integrated Active Directory structure.

     For more information, see *Active Directory Integration on page 6-2*.

   - In the **Additional recipients** field, type an email address and press ENTER.

     The newly added email address appears below the **Additional recipients** field.

     Note

     You can only add one email address at a time.

5. Click **Save**.

Editing Contact Groups

Use the **Edit Group** screen to create new contact groups for reports and event notifications.

Note

You cannot edit the **Name** of an existing contact group.

Procedure

1. Go to **Detections** > **Notifications** > **Contact Groups**

   The **Contact Groups** screen appears.

2. Click the **Name** of the contact group you want to edit.

   The **Edit Group** screen appears.

3. Specify recipients for the contact group.

   - From the **Available User Accounts** list, select user accounts and click **>**.

     The selected user accounts appear in the **Selected User Accounts** list.

     Note

     You can also add users and groups from an integrated Active Directory structure.

     For more information, see *Active Directory Integration on page 6-2*.

   - In the **Additional recipients** field, type an email address and press ENTER.

     The newly added email address appears below the **Additional recipients** field.

Note

You can only add one email address at a time.

4. Click **Save**.

Advanced Threat Activity Events

Use the **Event Notifications** screen to enable and configure notifications for advanced threat activity detected on your network.

Attack Discovery Detections

Configure the following event notification to notify administrators when advanced threats have been detected by the Attack Discovery Engine.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Advanced Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **Attack Discovery Detections**.

   The **Attack Discovery Detections** screen appears.

4. Specify the following notification settings.

Settings	Description
Detection type	Select the risk level of the detections that trigger the event notification.
Period	Specify the period of time.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Attack Discovery Token Variables on page C-6*.

7. To test if recipients can receive the event notification, click **Test**.

8. Click **Save**.

Behavior Monitoring Violations

Configure the following event notification to notify administrators when Behavior Monitoring violations have been detected.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Advanced Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **Behavior Monitoring violations**.

   The **Behavior Monitoring violations** screen appears.

4. Specify the following notification settings.

Settings	Description
Trigger an alert for each detection	Select to send an event notification for each detection.
Specify the alert threshold that applies to a single endpoint	Select to send event notifications only for detections that match the specified criteria. • Detections: Specify the number of detections • Period: Specify the time period in hours

5. Select recipients for the notification.
   a. From the **Available Users and Groups** list, select contact groups or user accounts.
   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Advanced Threat Activity Token Variables on page C-2*.

7. To test if recipients can receive the event notification, click **Test**.
8. Click **Save**.

C&C Callback Alert

Configure the following event notification to notify administrators when communication between an endpoint and a known C&C callback address has been detected.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Advanced Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **C&C callback alert**.

   The **C&C Callback Alert** screen appears.

4. Specify the following notification settings.

Settings	Description
C&C list source	Select one or more C&C list sources.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *C&C Callback Token Variables on page C-7*.

Method	Description
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2* and *C&C Callback Token Variables on page C-7*.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

7. To test if recipients can receive the event notification, click **Test**.
8. Click **Save**.

C&C Callback Outbreak Alert

Configure the following event notification to notify administrators when communications between multiple endpoints and known C&C callback addresses have been detected.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Advanced Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **C&C callback outbreak alert**.

   The **C&C Callback Outbreak Alert** screen appears.

4. Specify the following notification settings.

Settings	Description
C&C list source	Select one or more C&C list sources.

Settings	Description
Callback attempts	Specify the number of callback attempts.
Compromised hosts	Specify the number of compromised hosts.
Period	Specify the period of time.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *C&C Callback Token Variables on page C-7*.

7. To test if recipients can receive the event notification, click **Test**.

8. Click **Save**.

Correlated Incident Detections

Configure the following event notification to notify administrators when correlated incidents have been detected.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

The **Event Notifications** screen appears.

2. Click **Advanced Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **Correlated incident detections**.

   The **Correlated Incident Detections** screen appears.

4. Specify the following notification settings.

Settings	Description
Attach logs in CSV format	Select to send event notification recipients a *.csv file containing log data about the detections.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Advanced Threat Activity Token Variables on page C-2*. **Note** The `%hostIP%` and `%group%` token variables are not applicable in email notifications because data is aggregated from multiple hosts.

7. To test if recipients can receive the event notification, click **Test**.
8. Click **Save**.

Email Messages with Advanced Threats

Configure the following event notification to notify administrators when email messages with advanced threats have been detected.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Advanced Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **Email messages with advanced threats**.

   The **Email Messages with Advanced Threats** screen appears.

4. Specify the following notification settings.

Settings	Description
Detections	Type the number of threats detected by the managed product.
Period	Specify the period of time.
Detection type	Select the risk level of the detections that trigger the event notification.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2*.

7. To test if recipients can receive the event notification, click **Test**.

8. Click **Save**.

High Risk Virtual Analyzer Detections

Configure the following event notification to notify administrators when Virtual Analyzer detects highly suspicious objects.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Advanced Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **High risk Virtual Analyzer detections**.

   The **High Risk Virtual Analyzer Detections** screen appears.

4. Specify the following notification settings.

Settings	Description
Trigger an alert for each detection	Select to send an event notification for each detection.
Specify the alert threshold that applies to a single endpoint	Select to send event notifications only for detections that match the specified criteria. • Detections: Specify the number of detections • Period: Specify the time period in hours
Attach logs in CSV format	Select to send event notification recipients a *.csv file containing log data about the detections.

5. Select recipients for the notification.
   a. From the **Available Users and Groups** list, select contact groups or user accounts.
   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.
6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Advanced Threat Activity Token Variables on page C-2*.

7. To test if recipients can receive the event notification, click **Test**.
8. Click **Save**.

High Risk Host Detections

Configure the following event notification to notify administrators when a high risk host has been detected on your network.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Advanced Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **High risk host detections**.

   The **High Risk Host Detections** screen appears.

4. Specify the following notification settings.

Settings	Description
Trigger an alert for each detection	Select to send an event notification for each detection.
Specify the alert threshold that applies to a single endpoint	Select to send event notifications only for detections that match the specified criteria. • Detections: Specify the number of detections • Period: Specify the time period in hours
Attach logs in CSV format	Select to send event notification recipients a *.csv file containing log data about the detections.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Advanced Threat Activity Token Variables on page C-2*.

7. To test if recipients can receive the event notification, click **Test**.
8. Click **Save**.

Known Targeted Attack Behavior

Configure the following event notification to notify administrators when known targeted attack behavior has been detected on your network.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.
2. Click **Advanced Threat Activity**.

   A list of events appears.
3. In the **Event** column, click **Known targeted attack behavior**.

   The **Known Targeted Attack Behavior** screen appears.
4. Specify the following notification settings.

Settings	Description
Trigger an alert for each detection	Select to send an event notification for each detection.

Settings	Description
Specify the alert threshold that applies to a single endpoint	Select to send event notifications only for detections that match the specified criteria. • Detections: Specify the number of detections • Period: Specify the time period in hours
Attach logs in CSV format	Select to send event notification recipients a *.csv file containing log data about the detections.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Advanced Threat Activity Token Variables on page C-2*.

7. To test if recipients can receive the event notification, click **Test**.

8. Click **Save**.

Potential Document Exploit Detections

Configure the following event notification to notify administrators when documents that contain potential exploit code have been detected on your network.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Advanced Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **Potential document exploit detections**.

   The **Potential Document Exploit Detections** screen appears.

4. Specify the following notification settings.

Settings	Description
Trigger an alert for each detection	Select to send an event notification for each detection.
Specify the alert threshold that applies to a single endpoint	Select to send event notifications only for detections that match the specified criteria. • Detections: Specify the number of detections • Period: Specify the time period in hours
Attach logs in CSV format	Select to send event notification recipients a *.csv file containing log data about the detections.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Advanced Threat Activity Token Variables on page C-2*.

7. To test if recipients can receive the event notification, click **Test**.
8. Click **Save**.

Predictive Machine Learning Detections

Configure the following event notification to notify administrators when emerging unknown security threats have been detected by Trend Micro Predictive Machine Learning.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.
2. Click **Advanced Threat Activity**.

   A list of events appears.
3. In the **Event** column, click **Predictive Machine Learning detections**.

   The **Predictive Machine Learning detections** screen appears.
4. Specify the following notification settings.

Settings	Description
Trigger an alert for each detection	Select to send an event notification for each detection.

Settings	Description
Specify the alert threshold that applies to a single endpoint	Select to send event notifications only for detections that match the specified criteria. • Detections: Specify the number of detections • Period: Specify the time period in hours

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Advanced Threat Activity Token Variables on page C-2*.

7. To test if recipients can receive the event notification, click **Test**.

8. Click **Save**.

Rootkit or Hacking Tool Detections

Configure the following event notification to notify administrators when a rootkit or hacking tool has been detected on your network.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

The **Event Notifications** screen appears.

2. Click **Advanced Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **Rootkit or hacking tool detections**.

   The **Rootkit or Hacking Tool Detections** screen appears.

4. Specify the following notification settings.

SETTINGS	DESCRIPTION
Trigger an alert for each detection	Select to send an event notification for each detection.
Specify the alert threshold that applies to a single endpoint	Select to send event notifications only for detections that match the specified criteria. • Detections: Specify the number of detections • Period: Specify the time period in hours
Attach logs in CSV format	Select to send event notification recipients a *.csv file containing log data about the detections.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Advanced Threat Activity Token Variables on page C-2*.

7. To test if recipients can receive the event notification, click **Test**.
8. Click **Save**.

SHA-1 Deny List Detections

Configure the following event notification to notify administrators when files with SHA-1 values that match objects in the Deny List have been detected on your network.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.
2. Click **Advanced Threat Activity**.

   A list of events appears.
3. In the **Event** column, click **SHA-1 Deny List detections**.

   The **SHA-1 Deny List Detections** screen appears.
4. Specify the following notification settings.

Settings	Description
Trigger an alert for each detection	Select to send an event notification for each detection.

Settings	Description
Specify the alert threshold that applies to a single endpoint	Select to send event notifications only for detections that match the specified criteria. • Detections: Specify the number of detections • Period: Specify the time period in hours
Attach logs in CSV format	Select to send event notification recipients a *.csv file containing log data about the detections.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Advanced Threat Activity Token Variables on page C-2*.

7. To test if recipients can receive the event notification, click **Test**.

8. Click **Save**.

Watchlisted Recipients at Risk

Configure the following event notification to notify administrators when Deep Discovery Email Inspector detects malicious or suspicious email messages or attachments sent to watchlisted recipients.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Advanced Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **Watchlisted recipients at risk**.

   The **Watchlisted Recipients at Risk** screen appears.

4. Specify the following notification settings.

Criteria	Description
Email address watchlist	Type the email addresses to be monitored. Use a semicolon (;) to separate multiple entries.
Type	Select the risk level of the detections that trigger the event notification.
Detections	Type the number of threats detected by the managed product.
Period	Specify the time period for the detections.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Advanced Threat Activity Token Variables on page C-2*.

7. To test if recipients can receive the event notification, click **Test**.
8. Click **Save**.

Worm or File Infector Propagation Detections

Configure the following event notification to notify administrators when worm or file infector characteristics have been detected on your network.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Advanced Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **Worm or file infector propagation detections**.

   The **Worm or File Infector Propagation Detections** screen appears.

4. Specify the following notification settings.

Settings	Description
Trigger an alert for each detection	Select to send an event notification for each detection.

Settings	Description
Specify the alert threshold	Select to send event notifications only for detections that match the specified criteria. • Detections: Specify the number of detections • Period: Specify the time period in hours
Attach logs in CSV format	Select to send event notification recipients a *.csv file containing log data about the detections.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Advanced Threat Activity Token Variables on page C-2*.

7. To test if recipients can receive the event notification, click **Test**.

8. Click **Save**.

Content Policy Violation Events

Use the **Event Notifications** screen to enable and configure notifications for content policy violations detected on your network.

Email Policy Violation

Configure the following event notification to notify administrators when an email has been detected violating content security policy.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Content Violation Policy**.

   A list of events appears.

3. In the **Event** column, click **Email policy violation**.

   The **Email Policy Violation** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Content Policy Violation Token Variables on page C-9*.

METHOD	DESCRIPTION
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2* and *Content Policy Violation Token Variables on page C-9*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	A standard for forwarding log messages in an IP network Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.
7. Click **Save**.

Web Access Security Violation

Configure the following event notification to notify administrators when access to a URL has been blocked for violating a security policy.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.
2. Click **Content Violation Policy**.

   A list of events appears.
3. In the **Event** column, click **Web access security violation**.

   The **Web Access Security Violation** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Web Access Policy Violation Token Variables on page C-14*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2* and *Web Access Policy Violation Token Variables on page C-14*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	A standard for forwarding log messages in an IP network Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.

7. Click **Save**.

Data Loss Prevention Events

Use the **Event Notifications** screen to enable and configure notifications for Data Loss Prevention events detected on your network.

Incident Details Updated

Configure the following event notification to notify administrators when incident details have been updated.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Data Loss Prevention**.

   A list of events appears.

3. In the **Event** column, click **Incident details updated**.

   The **Incident Details Updated** screen appears.

4. Specify the criteria for the incident detail updates to be notified about:

Criteria	Description
Incident detail updates	Select the type of incident detail updates. • **Closed** • **Any change**

Criteria	Description
Filter by severity level	Select one of more of the following risk levels. • **High** • **Medium** • **Low** • **Informational** • **Undefined**

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Data Loss Prevention Token Variables on page C-9*.

6. To test if recipients can receive the event notification, click **Test**.
7. Click **Save**.

Scheduled Incident Summary

Configure the following event notification to send administrators a summary of the DLP incidents that occurred on your network.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Data Loss Prevention**.

   A list of events appears.

3. In the **Event** column, click **Scheduled incident summary**.

   The **Scheduled Incident Summary** screen appears.

4. Specify the following notification settings.

Criteria	Description
Frequency	Select to receive notifications on a daily or weekly basis.

Attach incident details	Select to attach incident logs to the notification.
	• Select the content that DLP Compliance Officers receive:
	  • **Incidents from all managed users**
	  • **Incidents from direct reports only**
	Note
	DLP Incident Reviewers can only receive incidents from direct reports
	• Select the format of the log details

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Data Loss Prevention Token Variables on page C-9*.

6. To test if recipients can receive the event notification, click **Test**.

7. Click **Save**.

Significant Incident Increase

Configure the following event to notify administrators when a significant increase in DLP incidents occurred over a predefined period.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Data Loss Prevention**.

   A list of events appears.

3. In the **Event** column, click **Significant incident increase**.

   The **Significant Incident Increase** screen appears.

4. Specify the following notification settings.

Settings	Description
Hourly	Specify the number of hourly incidents.
Daily	Specify the number of daily incidents.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Data Loss Prevention Token Variables on page C-9*.

7. To test if recipients can receive the event notification, click **Test**.
8. Click **Save**.

Significant Incident Increase by Channel

Configure the following event notification to notify administrators when a significant increase in DLP incidents by channel occurred over a predefined period.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.
2. Click **Data Loss Prevention**.

   A list of events appears.
3. In the **Event** column, click **Significant incident increase by channel**.

   The **Significant Incident Increase By Channel** screen appears.
4. Specify the following notification settings.

Settings	Description
Hourly	Specify the number of hourly incidents.
Daily	Specify the number of daily incidents.

5. Select recipients for the notification.

a. From the **Available Users and Groups** list, select contact groups or user accounts.

b. Click **>**.

The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

METHOD	DESCRIPTION
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Data Loss Prevention Token Variables on page C-9*.

7. To test if recipients can receive the event notification, click **Test**.

8. Click **Save**.

Significant Incident Increase by Sender

Configure the following event notification to notify administrators when a significant increase in DLP incidents by sender occurred over a predefined period.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Data Loss Prevention**.

   A list of events appears.

3. In the **Event** column, click **Significant incident increase by sender**.

   The **Significant Incident Increase by Sender** screen appears.

4. Specify the following notification settings.

Settings	Description
Hourly	Specify the number of hourly incidents.
Daily	Specify the number of daily incidents.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Data Loss Prevention Token Variables on page C-9*.

7. To test if recipients can receive the event notification, click **Test**.

8. Click **Save**.

Significant Incident Increase by User

Configure the following event notification to notify administrators when a significant increase in DLP incidents by user occurred over a predefined period.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Data Loss Prevention**.

   A list of events appears.

3. In the **Event** column, click **Significant incident increase by user**.

   The **Significant Incident Increase by User** screen appears.

4. Specify the following notification settings.

Settings	Description
Hourly	Specify the number of hourly incidents.
Daily	Specify the number of daily incidents.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Data Loss Prevention Token Variables on page C-9*.

7. To test if recipients can receive the event notification, click **Test**.

8. Click **Save**.

Significant Template Match Increase

Configure the following event notification to notify administrators when a significant increase in DLP template matches occurred over a predefined period.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Data Loss Prevention**.

   A list of events appears.

3. In the **Event** column, click **Significant template match increase**.

   The **Significant Template Match Increase** screen appears.

4. Specify the following notification settings.

Settings	Description
Hourly	Specify the number of hourly incidents.
Daily	Specify the number of daily incidents.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Data Loss Prevention Token Variables on page C-9*.

7. To test if recipients can receive the event notification, click **Test**.
8. Click **Save**.

Known Threat Activity Events

Use the **Event Notifications** screen to enable and configure notifications for known threat activity detected on your network.

Network Virus Alert

Configure the following event notification to notify administrators when a network virus has been detected.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.
2. Click **Known Threat Activity**.

   A list of events appears.
3. In the **Event** column, click **Network virus alert**.

   The **Network Virus Alert** screen appears.
4. Specify the following notification settings.

Settings	Description
Detections	Type the number of threats detected by the managed product.
Affected users/endpoints	Specify the number of affected users/endpoints.
Period	Specify the period of time.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2*, *Known Threat Activity Token Variables on page C-11* and *Network Access Control Token Variables on page C-14*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2*, *Known Threat Activity Token Variables on page C-11* and *Network Access Control Token Variables on page C-14*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.

Method	Description
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

7. To test if recipients can receive the event notification, click **Test**.
8. Click **Save**.

Special Spyware/Grayware Alert

Configure the following event notification to notify administrators when a spyware/grayware included in the list of monitored spyware/grayware threats has been detected.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.
2. Click **Known Threat Activity**.

   A list of events appears.
3. In the **Event** column, click **Special spyware/grayware alert**.

   The **Special Spyware/Grayware Alert** screen appears.
4. Type the names of the spyware/grayware to monitor.
5. Specify the following notification settings.

Settings	Description
Period	Specify the period of time.

6. Select recipients for the notification.
   a. From the **Available Users and Groups** list, select contact groups or user accounts.

b. Click **>**.

The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

7. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

8. To test if recipients can receive the event notification, click **Test**.

9. Click **Save**.

Special Virus Alert

Configure the following event notification to notify administrators when a virus included in the list of monitored viruses has been detected.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

The **Event Notifications** screen appears.

2. Click **Known Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **Special virus alert**.

   The **Special Virus Alert** screen appears.

4. Type the name of the viruses to monitor.

5. Specify the following notification settings.

Settings	Description
Period	Specify the period of time.

6. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

7. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2*, *Known Threat Activity Token Variables on page C-11* and *Network Access Control Token Variables on page C-14*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2*, *Known Threat Activity Token Variables on page C-11* and *Network Access Control Token Variables on page C-14*.

Method	Description
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

8. To test if recipients can receive the event notification, click **Test**.
9. Click **Save**.

Spyware/Grayware Found - Action Successful

Configure the following event notification to notify administrators when the configured spyware/grayware scan actions are successful for the spyware/grayware detection.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Known Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **Spyware/Grayware found - action successful**.

   The **Spyware/Grayware Found - Action Successful** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.

7. Click **Save**.

Spyware/Grayware Found - Further Action Required

Configure the following event notification to notify administrators when spyware/grayware detections require further action.

Configure the following event notification to notify administrators when the configured spyware/grayware scan actions were unsuccessful/unavailable for the spyware/grayware detection.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Known Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **Spyware/Grayware found - further action required**.

   The **Spyware/Grayware Found - Further Action Required** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.

Method	Description
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.
7. Click **Save**.

Virus Found - First Action Successful

Configure the following event notification to notify administrators when the first scan action for a virus detection is successful.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.
2. Click **Known Threat Activity**.

   A list of events appears.
3. In the **Event** column, click **Virus Found - first action successful**.

   The **Virus Found - First Action Successful** screen appears.
4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

b. Click **>**.

The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.

7. Click **Save**.

Virus Found - First Action Unsuccessful and Second Action Unavailable

Configure the following event notification to notify administrators when the first scan action for a virus detection is unsuccessful and the second action is unavailable.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Known Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **Virus found - first action unsuccessful and second action unavailable**.

   The **Virus Found - First Action Unsuccessful and Second Action Unavailable** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.

Method	Description
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.
7. Click **Save**.

Virus Found - First and Second Actions Unsuccessful

Configure the following event notification to notify administrators when the first and second scan actions for a virus detection are unsuccessful.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Known Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **Virus found - first and second actions unsuccessful**.

   The **Virus Found - First and Second Actions Unsuccessful** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

b. Click **>**.

The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.

7. Click **Save**.

Virus Found - Second Action Successful

Configure the following event notification to notify administrators when the second scan action for a virus detection is successful.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Known Threat Activity**.

   A list of events appears.

3. In the **Event** column, click **Virus found - second action successful**.

   The **Virus Found - Second Action Successful** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.

Method	Description
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.
7. Click **Save**.

Virus Outbreak Alert

Configure the following event notification to notify administrators when a virus outbreak is detected.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.
2. Click **Known Threat Activity**.

   A list of events appears.
3. In the **Event** column, click **Virus outbreak alert**.

   The **Virus Outbreak Alert** screen appears.
4. Specify the following notification settings.

Settings	Description
Detections	Type the number of threats detected by the managed product.
Affected users/endpoints	Specify the number of affected users/endpoints.
Period	Specify the period of time.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2* and *Known Threat Activity Token Variables on page C-11*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

7. To test if recipients can receive the event notification, click **Test**.

8. Click **Save**.

Network Access Control Events

Use the **Event Notifications** screen to enable and configure notifications for Network VirusWall policy violations or potential vulnerability attacks detected on your network.

Network VirusWall Policy Violations

Configure the following event notification to notify administrators when a Network VirusWall policy violation has been detected.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Network Access Control**.

   A list of events appears.

3. In the **Event** column, click **Network VirusWall policy violations**.

   The **Network VirusWall Policy Violations** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.

6. To test if recipients can receive the event notification, click **Test**.
7. Click **Save**.

Potential Vulnerability Attacks

Configure the following event notification to notify administrators when Network VirusWall has detected potential vulnerability attacks.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Network Access Control**.

   A list of events appears.

3. In the **Event** column, click **Potential vulnerability attacks**.

   The **Potential Vulnerability Attacks** screen appears.

4. Specify the following notification settings.

Settings	Description
Detections	Specify the amount of potential vulnerability attacks detected by Network VirusWall.
Period	Specify the period of time.
Reported by	Specify the number of Network VirusWall devices that reported the potential vulnerability attack.

5. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

6. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2* and *Network Access Control Token Variables on page C-14*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2* and *Network Access Control Token Variables on page C-14*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.

Method	Description
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

7. To test if recipients can receive the event notification, click **Test**.
8. Click **Save**.

Unusual Product Behavior Events

Use the **Event Notifications** screen to enable and configure notifications for unusual product behaviors detected on your network.

Managed Product Unreachable

Configure the following event notification to notify administrators when a connection error occurs between Apex Central and a managed product server.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.
2. Click **Unusual Product Behavior**.

   A list of events appears.
3. In the **Event** column, click **Managed product unreachable**.

   The **Managed Product Unreachable** screen appears.
4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

b. Click **>**.

The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

METHOD	DESCRIPTION
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2*.

6. To test if recipients can receive the event notification, click **Test**.

7. Click **Save**.

Product Service Started

Configure the following event notification to notify administrators when a product service has started.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Unusual Product Behavior**.

   A list of events appears.

3. In the **Event** column, click **Product service started**.

   The **Product Service Started** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

b. Click **>**.

The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.

7. Click **Save**.

Product Service Stopped

Configure the following event notification to notify administrators when a product service has stopped.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

The **Event Notifications** screen appears.

2. Click **Unusual Product Behavior**.

   A list of events appears.

3. In the **Event** column, click **Product service stopped**.

   The **Product Service Stopped** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

METHOD	DESCRIPTION
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.
7. Click **Save**.

Real-time Scan Disabled

Configure the following event notification to notify administrators when Real-time Scan is disabled.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.
2. Click **Unusual Product Behavior**.

   A list of events appears.
3. In the **Event** column, click **Real-time Scan disabled**.

   The **Real-time Scan Disabled** screen appears.
4. Select recipients for the notification.
   a. From the **Available Users and Groups** list, select contact groups or user accounts.
   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.
5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2*.

Method	Description
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.
7. Click **Save**.

Real-time Scan Enabled

Configure the following event notification to notify administrators when Real-time Scan is enabled.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Unusual Product Behavior**.

   A list of events appears.

3. In the **Event** column, click **Real-time Scan enabled**.

   The **Real-time Scan Enabled** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.

7. Click **Save**.

Updates

Use the **Event Notifications** screen to enable and configure notifications for component update statuses.

Antispam Rule Update Successful

Configure the following event notification to notify administrators when an antispam rule update is successful.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Update**.

   A list of events appears.

3. In the **Event** column, click **Antispam rule update successful**.

   The **Antispam Rule Update Successful** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.
7. Click **Save**.

Antispam Rule Update Unsuccessful

Configure the following event notification to notify administrators when an antispam rule update is unsuccessful.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Update**.

   A list of events appears.

3. In the **Event** column, click **Antispam rule update unsuccessful**.

   The **Antispam Rule Update Unsuccessful** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.

7. Click **Save**.

Pattern File/Cleanup Template Update Successful

Configure the following event notification to notify administrators when a pattern file or cleanup template update is successful.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Update**.

   A list of events appears.

3. In the **Event** column, click **Pattern file/Cleanup template update successful**.

   The **Pattern File/Cleanup Template Update Successful** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2*.

Method	Description
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.
7. Click **Save**.

Pattern File/Cleanup Template Update Unsuccessful

Configure the following event notification to notify administrators when a pattern file or cleanup template update is unsuccessful.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.

2. Click **Update**.

   A list of events appears.

3. In the **Event** column, click **Pattern file/Cleanup template update unsuccessful**.

   The **Pattern File/Cleanup Template Update Unsuccessful** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

b. Click **>**.

The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

METHOD	DESCRIPTION
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.

7. Click **Save**.

Scan Engine Update Successful

Configure the following event notification to notify administrators when a scan engine update is successful.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

The **Event Notifications** screen appears.

2. Click **Update**.

   A list of events appears.

3. In the **Event** column, click **Scan engine update successful**.

   The **Scan Engine Update Successful** screen appears.

4. Select recipients for the notification.

   a. From the **Available Users and Groups** list, select contact groups or user accounts.

   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.

5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2*.
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.
7. Click **Save**.

Scan Engine Update Unsuccessful

Configure the following event notification to notify administrators when a scan engine update is unsuccessful.

Procedure

1. Go to **Detections** > **Notifications** > **Event Notifications**.

   The **Event Notifications** screen appears.
2. Click **Update**.

   A list of events appears.
3. In the **Event** column, click **Scan engine update unsuccessful**.

   The **Scan Engine Update Unsuccessful** screen appears.
4. Select recipients for the notification.
   a. From the **Available Users and Groups** list, select contact groups or user accounts.
   b. Click **>**.

      The selected contact groups or user accounts appear in the **Selected Users and Groups** list.
5. Enable one or more of the following notification methods.

Method	Description
Email message	To customize the email notification template, use supported token variables or modify the text in the **Subject** and **Message** fields. For more information, see *Standard Token Variables on page C-2*.

Method	Description
Windows event log	To customize the notification template, use supported token variables or modify the text in the **Message** field. For more information, see *Standard Token Variables on page C-2*.
SNMP trap	Apex Central stores SNMP trap notifications in a Management Information Base (MIB). To view the SNMP trap notifications, go to **Notifications** > **Notification Method Settings** and click **Download MIB file** under **SNMP Trap Settings**.
Trigger application	Specify the full path of the application file and any parameters for the command.
Syslog	Apex Central can direct syslogs to supported third-party products, including Cisco Security Monitoring, Analysis and Response (MARS).

6. To test if recipients can receive the event notification, click **Test**.
7. Click **Save**.

Chapter 17

Reports

This section discusses how to create reports using the data collected from all managed products registered to Apex Central.

Topics include:

- *Reports Overview on page 17-2*
- *Custom Templates on page 17-2*
- *One-time Reports on page 17-21*
- *Scheduled Reports on page 17-26*
- *Configuring Report Maintenance on page 17-37*
- *Viewing My Reports on page 17-37*

Reports Overview

Apex Central allows you to generate, download, and send reports that consolidate data from all registered managed products without having to log on to multiple product consoles.

You can use Apex Central to:

- Generate one-time reports on demand.
- Add scheduled reports to automatically generate and send reports to specified recipients on a user-defined schedule.
- Create custom report templates from data views or use pre-defined custom templates and static templates.
- Generate custom reports for endpoints that have been assigned custom tags, filters, or important labels.

Custom Templates

The **Custom Templates** screen provides a list of all available custom report templates. Apex Central provides pre-defined custom templates for you to use. You can copy a pre-defined template to edit or create a new template by selecting and configuring specific report elements.

Note

Custom templates use data views that correspond to specific Apex Central logs to define the scope of the report data.

For more information, see the following topics:

- *Log Names and Data Views on page 15-6*
- *Data Views on page B-1*

The following table outlines the available tasks on the **Custom Templates** screen.

Task	Description
Add new custom templates	Click **Add** to create a new custom template. For more information, see *Adding or Editing Custom Templates on page 17-3*.
Delete custom templates	Select an existing template and click **Delete**.
Edit custom templates	Click the **Name** of an existing template to edit. For more information, see *Adding or Editing Custom Templates on page 17-3*.
Copy custom templates	Select an existing template and click **Copy**. Apex Central adds a new template to the list using the following naming: Copy of <original_template_name> For more information, see *Adding or Editing Custom Templates on page 17-3*.
Import custom templates	Click **Import** to import a properly formatted XML report template into Apex Central.
Export custom templates	Select an existing template and click **Export**. Apex Central exports the template in XML format.

Adding or Editing Custom Templates

You can create custom templates to generate company-specific reports in multiple formats.

Procedure

1. Go to **Detections** > **Reports** > **Custom Templates**.

   The **Custom Templates** screen appears.

2. Add, edit, or copy a template.

   - To add a new template, click **Add**.

The **Add Report Template** screen appears.

- To edit an existing template, click the **Name** of the template.

  The **Edit Report Template** screen appears.

- To make a copy of an existing template to use as the basis for a new template:

  a. Select the check box to the left of the **Name** of the template you want to use.

  b. Click **Copy**.

     Apex Central adds a new template to the list using the following naming:

     Copy of <original_template_name>

  c. Click the newly added template **Name**.

     The **Edit Report Template** screen appears.

3. Specify a unique **Name** for the template.
4. (Optional) Provide a **Description** for the new template.
5. Using the **Working Panel**, drag and drop report elements into the available "row" to design the section layout of your report.

Important

Each row only supports 3 report elements.

Tip

If the **Working Panel** does not appear, click the **Show working panel** button beside **Template Content**.

TABLE 17-1. Report Elements

TEMPLATE ELEMENT	DESCRIPTION
Static text	Provides a container for user-defined content **Note** Static text content can contain up to 4096 characters. For more information, see *Configuring the Static Text Report Element on page 17-7*.
Bar chart	Inserts a customizable bar chart object For more information, see *Configuring the Bar Chart Report Element on page 17-8*.
Line chart	Inserts a customizable line graph object For more information, see *Configuring the Line Chart Report Element on page 17-11*.
Pie chart	Inserts a customizable pie chart object For more information, see *Configuring the Pie Chart Report Element on page 17-13*.
Dynamic table	Inserts a customizable dynamic table / pivot table object The information in a dynamic table compares exactly two data fields either horizontally or vertically. For more information, see *Configuring the Dynamic Table Report Element on page 17-16*.
Grid table	Inserts a customizable table object The information in a grid table will be the same as the information that displays in a log query. For more information, see *Configuring the Grid Table Report Element on page 17-19*.

6. Organize the layout of rows and pages in your report using the **Insert page break above**, **Insert row above**, **Insert row below**, and **Delete this row** buttons.

Note

Report elements added to the same row appear side-by-side in the order you added the elements to the template. This allows you to display multiple charts on the same line. If you want to display multiple charts on different lines within the same page, insert new rows but do not insert a page break.

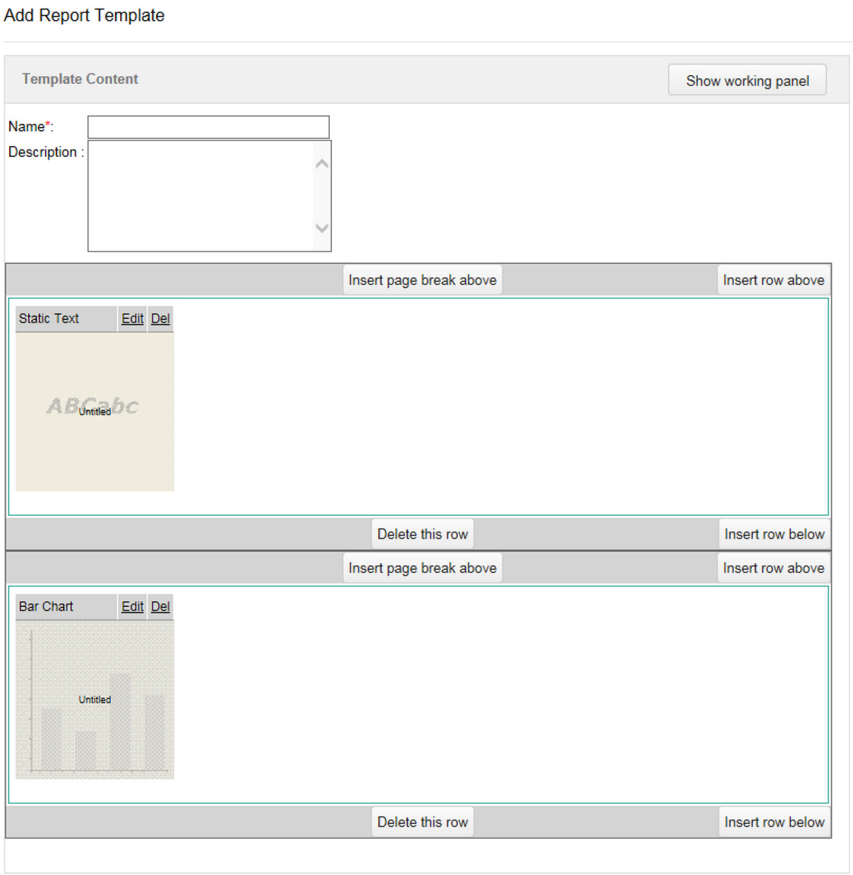


FIGURE 17-1. Custom report template setup to display static text above a bar chart

7. Click **Save**.

Configuring the Static Text Report Element

This task assumes that you have already added the **Static Text** report element to a custom report template row.

For more information, see *Adding or Editing Custom Templates on page 17-3*.

Procedure

1. In the **Static Text** report element, click **Edit**.

   The **Edit Static Text** screen appears.

2. In the **Name** field, specify the title of the text box element.

3. In the **Message** field, specify any descriptive text to display in the message body.

   Note

   Static text content can contain up to 4096 characters.

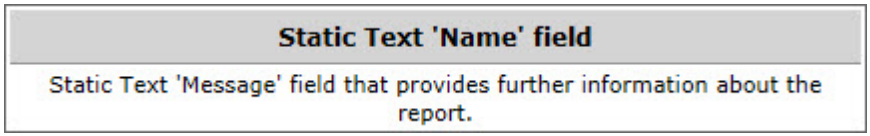


FIGURE 17-2. Static text report output example

4. Click **Save** to return to the **Add/Edit Report Template** screen.

Configuring the Bar Chart Report Element

This task assumes that you have already added the **Bar Chart** report element to a custom report template row.

For more information, see *Adding or Editing Custom Templates on page 17-3*.

Procedure

1. In the **Bar Chart** report element, click **Edit**.

   The **Edit Bar Chart > Step 1: Data View** screen appears.

2. Select the type of report data you want to display from the **Data Views** directory.

For more information, see *Data Views on page B-1*.

3. Click **Next >**.

   The **Step 2: Set Query Criteria** screen appears.

4. To filter the data that displays, select **Custom criteria**.

5. Specify the **Match** rule for the custom filter.

   - **All of the criteria**: Data must match all the specified criteria.
   - **Any of the criteria**: Data can match any of the specified criteria.

6. Specify the filtering criteria, each of which consists of three parts:

   - Data type: Corresponds to a column returned by the data view
   - Operator: Used to match or exclude data type values
   - Value: Select criteria from the drop-down controls or specify values in the text boxes

   Note

   The options that display depend on the selected data view, and the selected data type and operator.

   Apex Central supports a maximum of 20 filters.

7. Add or remove criteria using the plus (+) and minus (−) controls.

8. Click **Next >**.

   The **Step 3: Specify Design** screen appears.

9. Specify the **Name** used as the title for the chart.

10. From the **Drag Available Fields** list, drag-and-drop the data that displays in the following locations:

    - **Data Field**: Specifies the total count for data appearing in the chart
    - **Category Field**: Specifies how the data is separated in the chart

- **Series Field**: Defines the type of data to plot against the vertical and horizontal axes used as a comparison

11. In the **Data Properties** section, configure the following:

    - **Aggregated by**: The method in which to display data

        - **Total number of instances**: Includes duplicate results in the data

        - **Number of unique instances**: Displays only one instance of duplicated result types

        For example, if an endpoint detects 5 instances of "VirusA" and 3 instances of "VirusB" in the data, the detection count on the graph would display the following values:

        - Total number of instances = 8 (virus detections, regardless of virus name)

        - Number of unique instances = 2 (unique virus types, regardless of number of occurrences)

12. In the **Category Properties** section, configure the following:

    - Specify the **Label** name that appears on the horizontal axis of the chart.

    - Select the **Sorting** order and direction.

        - **Aggregation value**: Sorts based on the count value of the data

        - **Category name**: Sorts alphabetically based on the category name

    - Select the **Filter summarized result** check box to filter the data that displays in the report.

        - Specify the maximum number of items to display.

        - Enable **Aggregate remaining items** to group all remaining data in the "Others" category.

13. In the **Series Properties** section, specify the **Label name** that appears to describe the data series.
14. Click **Save**.

    The **Add/Edit Report Template** screen appears with the updated chart settings applied.

Configuring the Line Chart Report Element

This task assumes that you have already added the **Line Chart** report element to a custom report template row.

For more information, see *Adding or Editing Custom Templates on page 17-3*.

Procedure

1. In the **Line Chart** report element, click **Edit**.

   The **Edit Line Chart > Step 1: Data View** screen appears.
2. Select the type of report data you want to display from the **Data Views** directory.

   For more information, see *Data Views on page B-1*.
3. Click **Next >**.

   The **Step 2: Set Query Criteria** screen appears.
4. To filter the data that displays, select **Custom criteria**.
5. Specify the **Match** rule for the custom filter.
   - **All of the criteria**: Data must match all the specified criteria.
   - **Any of the criteria**: Data can match any of the specified criteria.
6. Specify the filtering criteria, each of which consists of three parts:
   - Data type: Corresponds to a column returned by the data view

- Operator: Used to match or exclude data type values
- Value: Select criteria from the drop-down controls or specify values in the text boxes

Note

The options that display depend on the selected data view, and the selected data type and operator.

Apex Central supports a maximum of 20 filters.

7. Add or remove criteria using the plus (+) and minus (−) controls.
8. Click **Next >**.

   The **Step 3: Specify Design** screen appears.
9. Specify the **Name** used as the title for the chart.
10. From the **Drag Available Fields** list, drag-and-drop the data that displays in the following locations:
    - **Data Field**: Defines the data value on the vertical axis of the chart
    - **Category Field**: Defines the data value on the horizontal axis of the chart
    - **Series Field**: Defines the type of data to plot against the vertical and horizontal axes used as a comparison
11. In the **Data Properties** section, configure the following:
    - **Value label**: The label that appears on the vertical axis of the chart
    - **Aggregated by**: The method in which to display data
      - **Total number of instances**: Includes duplicate results in the data
      - **Number of unique instances**: Displays only one instance of duplicated result types

For example, if an endpoint detects 5 instances of “VirusA” and 3 instances of “VirusB” in the data, the detection count on the graph would display the following values:

- Total number of instances = 8 (virus detections, regardless of virus name)
- Number of unique instances = 2 (unique virus types, regardless of number of occurrences)

12. In the **Category Properties** section, configure the following:
    - Specify the **Label** name that appears on the horizontal axis of the chart.
    - Select the **Sorting** order and direction.
        - **Aggregation value**: Sorts based on the count value of the data
        - **Category name**: Sorts alphabetically based on the category name
    - Select the **Filter summarized result** check box to filter the data that displays in the report.
        - Specify the maximum number of items to display.
        - Enable **Aggregate remaining items** to group all remaining data in the “Others” category.
13. In the **Series Properties** section, specify the **Label name** that appears to describe the data series.
14. Click **Save**.

    The **Add/Edit Report Template** screen appears with the updated chart settings applied.

Configuring the Pie Chart Report Element

This task assumes that you have already added the **Pie Chart** report element to a custom report template row.

For more information, see *Adding or Editing Custom Templates on page 17-3*.

Procedure

1. In the **Pie Chart** report element, click **Edit**.

   The **Edit Pie Chart > Step 1: Data View** screen appears.

2. Select the type of report data you want to display from the **Data Views** directory.

   For more information, see *Data Views on page B-1*.

3. Click **Next >**.

   The **Step 2: Set Query Criteria** screen appears.

4. To filter the data that displays, select **Custom criteria**.

5. Specify the **Match** rule for the custom filter.

   - **All of the criteria**: Data must match all the specified criteria.
   - **Any of the criteria**: Data can match any of the specified criteria.

6. Specify the filtering criteria, each of which consists of three parts:

   - Data type: Corresponds to a column returned by the data view
   - Operator: Used to match or exclude data type values
   - Value: Select criteria from the drop-down controls or specify values in the text boxes

   Note

   The options that display depend on the selected data view, and the selected data type and operator.

   Apex Central supports a maximum of 20 filters.

7. Add or remove criteria using the plus (+) and minus (−) controls.

8. Click **Next >**.

   The **Step 3: Specify Design** screen appears.

9. Specify the **Name** used as the title for the chart.

10. From the **Drag Available Fields** list, drag-and-drop the data that displays in the following locations:

    - **Data Field**: Specifies the total count for data appearing in the chart
    - **Category Field**: Specifies how the data is separated in the chart

11. In the **Data Properties** section, configure the following:

    - **Aggregated by**: The method in which to display data
      - **Total number of instances**: Includes duplicate results in the data
      - **Number of unique instances**: Displays only one instance of duplicated result types

      For example, if an endpoint detects 5 instances of "VirusA" and 3 instances of "VirusB" in the data, the detection count on the graph would display the following values:

      - Total number of instances = 8 (virus detections, regardless of virus name)
      - Number of unique instances = 2 (unique virus types, regardless of number of occurrences)

12. In the **Category Properties** section, configure the following:

    - Specify the **Label** name that appears on the horizontal axis of the chart.
    - Select the **Sorting** order and direction.
      - **Aggregation value**: Sorts based on the count value of the data
      - **Category name**: Sorts alphabetically based on the category name

- Select the **Filter summarized result** check box to filter the data that displays in the report.
  - Specify the maximum number of items to display.
  - Enable **Aggregate remaining items** to group all remaining data in the "Others" category.

13. Click **Save**.

    The **Add/Edit Report Template** screen appears with the updated chart settings applied.

Configuring the Dynamic Table Report Element

This task assumes that you have already added the **Dynamic Table** report element to a custom report template row.

For more information, see *Adding or Editing Custom Templates on page 17-3*.

Procedure

1. In the **Dynamic Table** report element, click **Edit**.

   The **Edit Dynamic Table > Step 1: Data View** screen appears.

2. Select the type of report data you want to display from the **Data Views** directory.

   For more information, see *Data Views on page B-1*.

3. Click **Next >**.

   The **Step 2: Set Query Criteria** screen appears.

4. To filter the data that displays, select **Custom criteria**.

5. Specify the **Match** rule for the custom filter.
   - **All of the criteria**: Data must match all the specified criteria.

- **Any of the criteria**: Data can match any of the specified criteria.

6. Specify the filtering criteria, each of which consists of three parts:
   - Data type: Corresponds to a column returned by the data view
   - Operator: Used to match or exclude data type values
   - Value: Select criteria from the drop-down controls or specify values in the text boxes

Note

The options that display depend on the selected data view, and the selected data type and operator.

Apex Central supports a maximum of 20 filters.

7. Add or remove criteria using the plus (+) and minus (−) controls.
8. Click **Next >**.

   The **Step 3: Specify Design** screen appears.
9. Specify the **Name** used as the title for the chart.
10. From the **Drag Available Fields** list, drag-and-drop the data that displays in the following locations:
    - **Row Field**: Defines how the data is separated horizontally in the table
    - **Column Field**: Defines how the data is separated vertically in the table
    - **Data Field**: Defines the data value that displays for the specified **Row Field** or **Column Field** in the table

Important

The **Dynamic Table** report element requires exactly one **Data Field** and either one **Row Field** or one **Column Field**.

11. In the **Data Properties** section, configure the following:

    - **Data field title**: The label for the data field
    - **Aggregated by**: The method in which to display data
        - **Total number of instances**: Includes duplicate results in the data
        - **Number of unique instances**: Displays only one instance of duplicated result types

      For example, if an endpoint detects 5 instances of "VirusA" and 3 instances of "VirusB" in the data, the detection count on the graph would display the following values:

        - Total number of instances = 8 (virus detections, regardless of virus name)
        - Number of unique instances = 2 (unique virus types, regardless of number of occurrences)

12. In the **Row Properties** section, configure the following:

    - Specify the **Row header title**.
    - Select the **Sorting** order and direction.
        - **Aggregation value**: Sorts based on the count value of the data
        - **Header title**: Sorts alphabetically based on the category name
    - Select the **Filter summarized result** check box to filter the data that displays in the report.
        - Specify the maximum number of items to display.
        - Enable **Aggregate remaining items** to group all remaining data in the "Others" category.

13. In the **Column Properties** section, configure the following:

    - Specify the **Column header title**.

- Select the **Sorting** order and direction.
  - **Aggregation value**: Sorts based on the count value of the data
  - **Header title**: Sorts alphabetically based on the category name
- Select the **Filter summarized result** check box to filter the data that displays in the report.
  - Specify the maximum number of items to display.
  - Enable **Aggregate remaining items** to group all remaining data in the "Others" category.

14. Click **Save**.

    The **Add/Edit Report Template** screen appears with the updated chart settings applied.

Configuring the Grid Table Report Element

This task assumes that you have already added the **Grid Table** report element to a custom report template row.

For more information, see *Adding or Editing Custom Templates on page 17-3*.

Procedure

1. In the **Grid Table** report element, click **Edit**.

   The **Edit Grid Table > Step 1: Data View** screen appears.

2. Select the type of report data you want to display from the **Data Views** directory.

   For more information, see *Data Views on page B-1*.

3. Click **Next >**.

   The **Step 2: Set Query Criteria** screen appears.

4. To filter the data that displays, select **Custom criteria**.
5. Specify the **Match** rule for the custom filter.
   - **All of the criteria**: Data must match all the specified criteria.
   - **Any of the criteria**: Data can match any of the specified criteria.
6. Specify the filtering criteria, each of which consists of three parts:
   - Data type: Corresponds to a column returned by the data view
   - Operator: Used to match or exclude data type values
   - Value: Select criteria from the drop-down controls or specify values in the text boxes

   Note

   The options that display depend on the selected data view, and the selected data type and operator.

   Apex Central supports a maximum of 20 filters.
7. Add or remove criteria using the plus (+) and minus (−) controls.
8. Click **Next >**.

   The **Step 3: Specify Design** screen appears.
9. Specify the **Name** used as the title for the chart.
10. Select the data fields to display in the report.

    Note

    By default, Apex Central selects all fields for the specified data view.
11. Select the **Sorting** order of the **Selected Fields**.
12. Select the **Display quantity** to define the maximum number of items included in the report.

13. Click **Save**.

    The **Add/Edit Report Template** screen appears with the updated chart settings applied.

One-time Reports

The **One-time Reports** screen provides a list of all previously generated one-time reports for your network. You can use this screen to create new one-time reports and view previously generated one-time reports.

The following table outlines the available tasks on the **One-time Reports** screen.

Task	Description
Add new one-time reports	Click **Add** to create a new one-time report. For more information, see *Creating One-time Reports on page 17-22*.
Delete one-time reports	Select an existing one-time report and click **Delete**.
Forward one-time reports to email recipients	Select an existing one-time report and click **Forward** to email the report as an attachment to specified recipients.
View generated one-time reports	Click the **View** link in the **View** column of the report you want to view.
View one-time report profiles	Click the **Name** of a previously generated one-time report to view the report profile. **Note** You cannot edit the profiles of previously generated one-time reports.

Creating One-time Reports

Use the **One-time Reports** screen to generate reports on demand. When creating reports, specify whether to use custom or static templates.

Procedure

1. Go to **Detections** > **Reports** > **One-time Reports**.

   The **One-time Reports** screen appears.

2. Click **Add**.

   The **Add One-Time Report > Step 1: Contents** screen appears.

3. Type a name for the report in the **Name** field.

4. (Optional) Type a description for the report in the **Description** field.

5. In the **Report Content** section, select one of the following template types:

   - **Custom Templates**: Select one or more custom report templates.

     Note

     Selecting multiple custom templates generates a single report that displays formatted data from all selected templates.

     For more information about creating custom report templates, see *Adding or Editing Custom Templates on page 17-3*.

   - **Static Templates**: Select one or more of the static templates provided by Trend Micro.

     a. Select a static template from the **Report category** drop-down.

     b. Select the data to display in the report and specify any corresponding parameters.

6. Select the report generation format.

- Custom template report formats:
  - Adobe PDF format (*.pdf)
  - HTML format (*.html)
  - XML format (*.xml)
  - CSV format (*.csv)
- Static template report formats:
  - Adobe PDF format (*.pdf)
  - Microsoft Word format (*.docx)
  - Microsoft Excel format (*.xlsx)

7. Click **Next**.

   The **Add One-Time Report > Step 2: Targets** screen appears.

8. Specify targets using one of the following views.
   - **Product Directory**: Select the managed products or folders containing the managed products that provide the report information.
   - **Tags and filters**: Select up to 10 custom tags, filters, or important labels containing the users or endpoints that provide the report information.

Note

- The **Tags and filters** view is only available for custom report templates.
- Reports generated by a user account only include data from endpoints that the user account is authorized to view. If a user account selects a tag, filter, or importance label containing endpoints that the user account does not have permission to view, then the generated report excludes data from the unauthorized endpoints.
- Editing a tag, filter, or importance label on the **User/Endpoint Directory** screen also modifies the corresponding tag, filter, or importance label used by log queries and reports. For example, if the an endpoint is removed from a custom filter on the **User/Endpoint Directory** screen, then log queries and generated reports that use the filter will exclude data from the removed endpoint.

9. If the report contains data from a Network VirusWall Enforcer device, specify the clients from which the reports generate:
   - **All clients**: Generates reports from all Network VirusWall Enforcer devices
   - **IP range**: Generates reports from a specific IP address range
   - **Segment**: Generates reports from a specific network segment
10. Click **Next**.

    The **Add One-Time Report > Step 3: Time Period** screen appears.
11. Specify the time period for the report.
12. Click **Next**.

    The **Add One-Time Report > Step 4: Message Content and Recipients** screen appears.
13. (Optional) Email the report as an attachment to selected recipients.
    a. In the **Subject** field, type a title for the email message that contains the report.

b. In the **Message** field, type a description about the report.

c. Select **Email the report as an attachment** to send the report to selected recipients.

d. Select contact groups or user accounts.

e. Click **>>**.

The selected contact groups or user accounts appear in the Recipient list.

14. Click **Finish**.

The **One-time Reports** screen appears and displays the newly added report generation task.

15. To view a generated report:

a. Click the **View** link in the **View** column for the generated report you want to view.

b. Open or save the generated report file.

Viewing One-Time Reports

Use the **One-time Reports** screen to view previously generated one-time reports.

Procedure

1. Go to **Detections** > **Reports** > **One-time Reports**.

The **One-time Reports** screen appears.

2. Click the **View** link in the **View** column for the generated report you want to view.

3. Open or save the generated report file.

Scheduled Reports

The **Scheduled Reports** screen provides a list of all reports that automatically generate on a user-defined schedule. You can use this screen to view basic information about previously configured scheduled reports, add new scheduled reports, and enable/disable scheduled reports.

The following table outlines the available tasks on the **Scheduled Reports** screen.

Task	Description
Add new scheduled report profiles	Click **Add** to create a new scheduled report profile. For more information, see *Adding Scheduled Reports on page 17-27*.
Edit scheduled report profiles	Click the **Name** of an existing scheduled report profile to edit. For more information, see *Editing Scheduled Reports on page 17-32*.
Copy scheduled report profiles	Select one or more existing scheduled report profiles and click **Copy** to replicate the selected profiles. Click the **Name** of a copied scheduled report profile to edit. For more information, see *Editing Scheduled Reports on page 17-32*.
Delete scheduled report profiles	Select existing scheduled report profiles and click **Delete**.
View previously generated scheduled reports	Click the **View** link in the **History** column for the report you want to view. For more information, see *Viewing Scheduled Reports on page 17-36*.

Task	Description
Enable or disable scheduled reports	• To disable a scheduled report, click the enabled () icon in the **Enable** column. • To enable a scheduled report, click the disabled () icon in the **Enable** column. **Note** Newly added scheduled report profiles are enabled by default.

Adding Scheduled Reports

Use the **Scheduled Reports** screen to automatically generate reports on a user-defined schedule. When adding scheduled reports, specify whether to use custom or static templates.

Procedure

1. Go to **Detections** > **Reports** > **Scheduled Reports**.

   The **Scheduled Reports** screen appears.

2. Click **Add**.

   The **Add Scheduled Report > Step 1: Contents** screen appears.

3. Type a name for the report in the **Name** field.

4. (Optional) Type a description for the report in the **Description** field.

5. In the **Report Content** section, select one of the following template types:

   - **Custom Templates**: Select one or more custom report templates.

Note

Selecting multiple custom templates generates a single report that displays formatted data from all selected templates.

For more information about creating custom report templates, see *Adding or Editing Custom Templates on page 17-3*.

- **Static Templates**: Select one or more of the static templates provided by Trend Micro.

  a. Select a static template from the **Report category** drop-down.

  b. Select the data to display in the report and specify any corresponding parameters.

6. Select the report generation format.

   - Custom template report formats:
     - Adobe PDF format (*.pdf)
     - HTML format (*.html)
     - XML format (*.xml)
     - CSV format (*.csv)
   - Static template report formats:
     - Adobe PDF format (*.pdf)
     - Microsoft Word format (*.docx)
     - Microsoft Excel format (*.xlsx)

7. Click **Next**.

   The **Add Scheduled Report > Step 2: Targets** screen appears.

8. Specify targets using one of the following views.

   - **Product Directory**: Select the managed products or folders containing the managed products that provide the report information.

- **Tags and filters**: Select up to 10 custom tags, filters, or important labels containing the users or endpoints that provide the report information.

Note

- The **Tags and filters** view is only available for custom report templates.
- Reports generated by a user account only include data from endpoints that the user account is authorized to view. If a user account selects a tag, filter, or importance label containing endpoints that the user account does not have permission to view, then the generated report excludes data from the unauthorized endpoints.
- Editing a tag, filter, or importance label on the **User/Endpoint Directory** screen also modifies the corresponding tag, filter, or importance label used by log queries and reports. For example, if the an endpoint is removed from a custom filter on the **User/Endpoint Directory** screen, then log queries and generated reports that use the filter will exclude data from the removed endpoint.

9. If the report contains data from a Network VirusWall Enforcer device, specify the clients from which the reports generate:
   - **All clients**: Generates reports from all Network VirusWall Enforcer devices
   - **IP range**: Generates reports from a specific IP address range
   - **Segment**: Generates reports from a specific network segment
10. Click **Next**.

    The **Add Scheduled Report > Step 3: Frequency** screen appears.
11. Specify how often the reports generate:
    - **Every 'n' days**: Reports generate every 1 to 6 days, depending on your selection.

- **Weekly**: Reports generate weekly on the specified day.
- **Bi-weekly**: Reports generate every two weeks on the specified day.
- **Monthly**: Reports generate monthly on the first, 5th, 10th, 15th, 20th, 25th, or the last day of the month.

12. Specify the data range:
    - **Reports include data up to the Start the schedule time specified below**: This means that a report could have up to 23 hours more data contained in the report. While this has a small affect on weekly or monthly reports, this can make a "daily" report with almost two days worth of data depending on the Start schedule time.
    - **Reports include data up to 23:59:59 of the previous day**: This means that data collection for the report stops just before midnight. Reports will be an exact time period (example: Daily reports will be 24 hours) but will not contain the absolute latest data.
13. Specify when the report schedule starts:
    - **Immediately**: The report schedule starts immediately after enabling the report.
    - **Start on**: The report schedule starts on the date and time specified in the accompanying fields.

Tip

Click the calendar icon next to the **mm/dd/yyyy** field to use a dynamic calendar to specify the date range.

14. Click **Next**.

    The **Add Scheduled Report > Step 4: Message Content and Recipients** screen appears.

15. (Optional) Email the report as an attachment to selected recipients.
    a. In the **Subject** field, type a title for the email message that contains the report.

b. In the **Message** field, type a description about the report.

c. Select **Email the report as an attachment** to send the report to selected recipients.

d. Select contact groups or user accounts.

e. Click **>>**.

The selected contact groups or user accounts appear in the Recipient list.

16. Click **Finish**.

The **Scheduled Reports** screen appears and displays the newly added report generation task.

Note

By default, Apex Central enables newly added scheduled reports.

17. To view a generated report:

a. Click the **View** link in the **History** column for the scheduled report you want to view.

The **Scheduled Report History** screen appears.

b. Click the **View** link in the **View** column for the generated report you want to view.

Tip

If the scheduled report has not been generated, click the **Generate** button to create a quick report based on the scheduled report settings.

c. Open or save the generated report file.

Editing Scheduled Reports

Use the **Scheduled Reports** screen to automatically generate reports on a user-defined schedule. When adding scheduled reports, specify whether to use custom or static templates.

Procedure

1. Go to **Detections** > **Reports** > **Scheduled Reports**.

   The **Scheduled Reports** screen appears.

2. Click the **Name** of a scheduled report profile.

   The **Edit Scheduled Report > Step 1: Contents** screen appears.

3. Type a name for the report in the **Name** field.

4. (Optional) Type a description for the report in the **Description** field.

5. In the **Report Content** section, select one of the following template types:

   - **Custom Templates**: Select one or more custom report templates.

     Note

     Selecting multiple custom templates generates a single report that displays formatted data from all selected templates.

     For more information about creating custom report templates, see *Adding or Editing Custom Templates on page 17-3*.

   - **Static Templates**: Select one or more of the static templates provided by Trend Micro.

     a. Select a static template from the **Report category** drop-down.

     b. Select the data to display in the report and specify any corresponding parameters.

6. Select the report generation format.

- Custom template report formats:
  - Adobe PDF format (*.pdf)
  - HTML format (*.html)
  - XML format (*.xml)
  - CSV format (*.csv)
- Static template report formats:
  - Adobe PDF format (*.pdf)
  - Microsoft Word format (*.docx)
  - Microsoft Excel format (*.xlsx)

7. Click **Next**.

   The **Edit Scheduled Report > Step 2: Targets** screen appears.

8. Specify targets using one of the following views.
   - **Product Directory**: Select the managed products or folders containing the managed products that provide the report information.
   - **Tags and filters**: Select up to 10 custom tags, filters, or important labels containing the users or endpoints that provide the report information.

Note

- The **Tags and filters** view is only available for custom report templates.
- Reports generated by a user account only include data from endpoints that the user account is authorized to view. If a user account selects a tag, filter, or importance label containing endpoints that the user account does not have permission to view, then the generated report excludes data from the unauthorized endpoints.
- Editing a tag, filter, or importance label on the **User/Endpoint Directory** screen also modifies the corresponding tag, filter, or importance label used by log queries and reports. For example, if the an endpoint is removed from a custom filter on the **User/Endpoint Directory** screen, then log queries and generated reports that use the filter will exclude data from the removed endpoint.

9. If the report contains data from a Network VirusWall Enforcer device, specify the clients from which the reports generate:
   - **All clients**: Generates reports from all Network VirusWall Enforcer devices
   - **IP range**: Generates reports from a specific IP address range
   - **Segment**: Generates reports from a specific network segment
10. Click **Next**.

    The **Edit Scheduled Report > Step 3: Frequency** screen appears.
11. Specify how often the reports generate:
    - **Every 'n' days**: Reports generate every 1 to 6 days, depending on your selection.
    - **Weekly**: Reports generate weekly on the specified day.
    - **Bi-weekly**: Reports generate every two weeks on the specified day.
    - **Monthly**: Reports generate monthly on the first, 5th, 10th, 15th, 20th, 25th, or the last day of the month.

12. Specify the data range:

    - **Reports include data up to the Start the schedule time specified below**: This means that a report could have up to 23 hours more data contained in the report. While this has a small affect on weekly or monthly reports, this can make a "daily" report with almost two days worth of data depending on the Start schedule time.
    - **Reports include data up to 23:59:59 of the previous day**: This means that data collection for the report stops just before midnight. Reports will be an exact time period (example: Daily reports will be 24 hours) but will not contain the absolute latest data.

13. Specify when the report schedule starts:

    - **Immediately**: The report schedule starts immediately after enabling the report.
    - **Start on**: The report schedule starts on the date and time specified in the accompanying fields.

    Tip

    Click the calendar icon next to the **mm/dd/yyyy** field to use a dynamic calendar to specify the date range.

14. Click **Next**.

    The **Edit Scheduled Report > Step 4: Message Content and Recipients** screen appears.

15. (Optional) Email the report as an attachment to selected recipients.

    a. In the **Subject** field, type a title for the email message that contains the report.

    b. In the **Message** field, type a description about the report.

    c. Select **Email the report as an attachment** to send the report to selected recipients.

    d. Select contact groups or user accounts.

e. Click **>>**.

The selected contact groups or user accounts appear in the Recipient list.

16. Click **Finish**.

The **Scheduled Reports** screen appears and displays the newly added report generation task.

Viewing Scheduled Reports

Use the **Scheduled Reports** screen to view previously generated scheduled reports.

Procedure

1. Go to **Detections** > **Reports** > **Scheduled Reports**.

   The **Scheduled Reports** screen appears.

2. Click the **View** link in the **History** column for the scheduled report you want to view.

   The **Scheduled Report History** screen appears.

3. Click the **View** link in the **View** column for the generated report you want to view.

   Tip

   If the scheduled report has not been generated, click the **Generate** button to create a quick report based on the scheduled report settings.

4. Open or save the generated report file.

Configuring Report Maintenance

Configure **Report Maintenance** settings to delete reports when a maximum number of reports is reached.

Procedure

1. Go to **Detections** > **Reports** > **Report Maintenance**.

   The **Report Maintenance** screen appears.

2. Specify the maximum number of one-time and scheduled reports to keep.

3. Click **Save**.

Viewing My Reports

The **My Reports** screen provides a list of all the reports generated by the current user. You can also view reports generated by other users belonging to the same groups as the current user.

Procedure

1. Go to **Detections** > **Reports** > **My Reports**.

   The **My Reports** screen appears.

2. Click the **View** link in the **View** column for the generated report you want to view.

3. Open or save the generated report file.

Chapter 18

Data Loss Prevention Incidents

Apex Central provides the capability for DLP compliance officers and incident reviewers to review and update incident information.

Topics include:

- *Administrator Tasks on page 18-2*
- *DLP Incident Review Process on page 18-7*

Administrator Tasks

To enable the incident review process, Apex Central administrators need to complete some prerequisite tasks. The following table lists the required tasks and references:

TABLE 18-1. Administrator Tasks

TASK	REFERENCES
Set up manager information in Active Directory.	*Setting Up Manager Information in Active Directory Users on page 18-3*
Set up Active Directory integration to obtain user information.	*Active Directory and Compliance Settings on page 6-1*
Create user accounts specific for DLP incident investigation. You can assign the following user roles to grant permission to review DLP incidents: • Administrator and DLP Compliance Officer • DLP Compliance Officer • DLP Incident Reviewer **Note** The DLP Compliance Officer and DLP Incident Reviewer roles are only available to Active Directory users.	• *Understanding DLP User Roles on page 18-3* • *Default User Roles on page 4-17* • *Adding a User Account on page 4-5*
Set up the **Scheduled incident summary** and **Incident details updated** notifications.	• *Scheduled Incident Summary on page 16-36* • *Incident Details Updated on page 16-35*
Export DLP logs for auditing purposes.	*Querying Logs on page 15-2*

Setting Up Manager Information in Active Directory Users

For managers to investigate DLP incidents, set up the manager information in each Active Directory user.

Procedure

1. Open the Active Directory Users and Computers console. Click **Start** > **Administrative Tools** > **Active Directory Users and Computers**.

   The **Active Directory Users and Computers** console appears.

2. Double-click a user.

   The **<user> Properties** screen appears.

3. Click the **Organization** tab and then click **Change...**.

   The **Select User or Contact** screen appears.

4. Specify the manager information and click **OK**.

5. To verify the manager-user relationship, open the manager's **<user> Properties** screen, click the **Organization** tab, and check the user information under **Direct reports**.

Understanding DLP User Roles

Apex Central provides the following Data Loss Prevention (DLP) user roles:

- Administrator and DLP Compliance Officer
- DLP Compliance Officer
- DLP Incident Reviewer

Note

You can only assign the “DLP Compliance Officer” and “DLP Incident Reviewer” roles to Active Directory user accounts.

The following table describes the features and characteristics related to the DLP user roles:

Feature	Role	Description
DLP logs	Administrator and DLP Compliance Officer	• View DLP log data for all Active Directory users • Access specific widgets that display DLP incident information
	DLP Compliance Officer	• Access limited to DLP logs related to directly managed users
	DLP Incident Reviewer	• Access specific widgets that display DLP incident information

FEATURE	ROLE	DESCRIPTION

Incident scope	Administrator and DLP Compliance Officer
	DLP Compliance Officer
		• View DLP incident data for all Active Directory users by clicking the settings icon (>) on any of the following **Data Loss Prevention** widgets and selecting **All managed users** for the **Scope**.
		  • DLP Incidents by Severity and Status
		  • DLP Incident Trends by User
		  • DLP Incidents by User
		
		Note
		  • By default, the scope for each **Data Loss Prevention** widget only allows this role to view incident data for **Directly managed users**.
		  • Changing the **Scope** for one **Data Loss Prevention** widget does not affect the scope of any other widget.
		
		• On all other screens:
		  • User accounts assigned with the "Administrator and DLP Compliance Officer" role can view data from all Active Directory users reported by managed products according to the user account's product scope
		  • The "DLP Compliance Officer" role cannot view any data

	DLP Incident Reviewer	View DLP incident data for directly managed users

FEATURE	ROLE	DESCRIPTION
Menu access	Administrator and DLP Compliance Officer DLP Compliance Officer DLP Incident Reviewer	Access the **Data Loss Prevention** tab and the following widgets: • DLP Incidents by Severity and Status • DLP Incident Trends by User • DLP Incidents by User For more information, see *Data Loss Prevention Tab on page 3-27*.
Scheduled incident summary notification	Administrator and DLP Compliance Officer DLP Compliance Officer DLP Incident Reviewer	Receive the following: • Daily or weekly email notification • Summary list of incident count by severity level • Link to the Apex Central web console
Incident details updated notification	Administrator and DLP Compliance Officer DLP Compliance Officer	Receive notification of changes to incident status or comments **Note** The "DLP Incident Reviewer" role does not receive this notification.

Creating DLP Auditing Logs

Administrators can use log queries to generate and export DLP auditing logs. Perform a log query as described in *Querying Logs on page 15-2* and configure the following:

- Log type: Select **User Access**
- Advanced filters: Add the following activities (**Activity**) to custom criteria:

- Download DLP incident file
- Update DLP incident

DLP Incident Review Process

Once Apex Central administrators have completed the prerequisite tasks, the reviewers can start the incident review process. The following table lists the tasks and references:

TABLE 18-2. DLP Incident Review Process

TASK	DESCRIPTION
Receive the scheduled incident summary notification message	Apex Central summarizes and sends email notifications to the incident reviewers daily or weekly.
Review details about the incident using one of the following methods: • Click the link provided in the message to log on to the Apex Central web console • Open the attachment (if available)	*Understanding the Incident Information List on page 18-7*
Update the incident status and provide comments	*Reviewing Incident Details on page 18-9*

Understanding the Incident Information List

The **Incident Information** screen displays a list of incidents manageable for the reviewer. Incident reviewers can use this screen to do the following:

- View incident summary
- Take actions on incidents
- Export incident details

TABLE 18-3. Incident Information List

ITEM	DESCRIPTION
ID	Unique incident ID
Received	Date and time when Apex Central received incident data **Note** After receiving DLP logs from managed products, Apex Central needs 30 minutes to process the logs before incident reviewers can view the data.
Severity	Severity level of the incident **Note** Once Apex Central receives and processes a DLP incident, Apex Central does not update the severity level if changes occur in the managed product.
Policy	Name of the Apex Central policy that triggered the incident **Note** For incidents triggering DLP policies created in managed products, this appears as **N/A**.
User	Name of the user who triggered the incident
Manager	Name of the user's manager
Status	Current status of the incident • New • Under Investigation • Escalated • Closed
Action	Action available for managing the incident

Reviewing Incident Details

By clicking the **Edit** icon in the **Action** column of the **Incident Information** screen, the **Incident Details** screen appears displaying detailed information about the incident. DLP incident reviewers can use this screen to update the incident status and provide comments on the incident.

TABLE 18-4. Incident Details

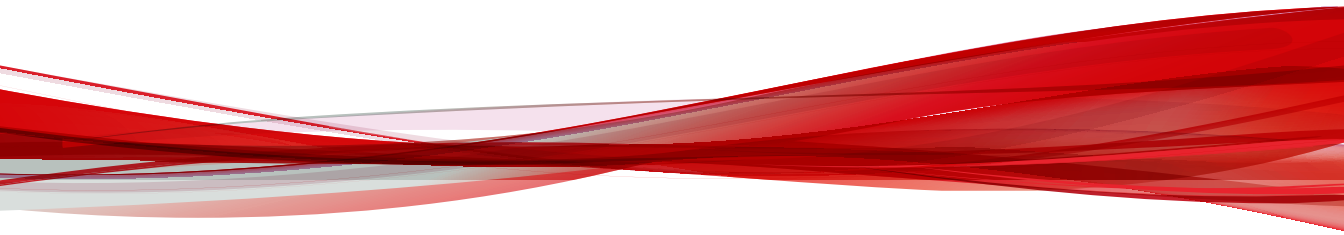
ITEM	DESCRIPTION
ID	Unique incident ID
Status	Use this to update the review status of the incident. Available options: • **New** • **Under Investigation** • **Escalated** • **Closed**
Severity	Severity level of the incident **Note** Once Apex Central receives and processes a DLP incident, Apex Central does not update the severity level if changes occur in the managed product.
Policy	Name of the Apex Central policy that triggered the incident **Note** For incidents triggering DLP policies created in managed products, this appears as **N/A**.
Rule	Names of the rules from that triggered the incident

Item	Description
Received	Date and time when Apex Central received incident data **Note** After receiving DLP logs from managed products, Apex Central needs 30 minutes to process the logs before incident reviewers can view the data.
Generated	Date and time the incident occurred in the managed product
User	Name of the user who triggered the incident
Manager	Name of the user's manager
Endpoint	Source host name
IP address	Source IP address
Sender	Source email address
Subject	Subject of the email message
Recipient	Destination email address
Destination	Intended destination of the file containing the digital asset or channel (if no source is available)
Last modified date	Date and time of the last modification to the asset
Last modified by	Name of the user who last modified the asset
Template	Names of the templates that triggered the incident
File	Name or link to the file that triggered the incident **Note** The file is quarantined in the managed product.
SHA-1	Hash information of the file
Channel	Channel through which the transmission occurred

Item	Description
Action	Actions taken on the incident
User justification reason	User-defined reasons for allowing users to transfer sensitive data
Matching content	Digital assets that triggered the incident
Comments	User-defined notes about the incident

Part VI

Threat Intelligence and Response



Chapter 19

Connected Threat Defense

This section discusses how to detect, analyze, and respond to targeted attacks and advanced threats before they unleash lasting damage.

Topics include:

- *About Connected Threat Defense on page 19-2*
- *Feature Requirements on page 19-2*
- *Suspicious Object List Management on page 19-5*
- *Preemptive Protection Against Suspicious Objects on page 19-20*
- *Connected Threat Defense Product Integration on page 19-37*

About Connected Threat Defense

Apex Central brings together a host of Trend Micro products and solutions to help you detect, analyze, and respond to targeted attacks and advanced threats before they unleash lasting damage.

For more information, see *Connected Threat Defense Product Integration*.

Feature Requirements

The following table lists the features available with the Connected Threat Defense architecture and the required and optional products that integrate with each.

Feature	Required Products	Optional Products

Security threat monitoring	• Apex Central
	• Deep Discovery Inspector 5.0 (or later) or one of the following Virtual Analyzer products:
	  • *Apex One Sandbox as a Service*
	  • *Deep Discovery Analyzer*
	Important
	At least one optional product is required to evaluate log data.
		• Apex One 2019 or OfficeScan 11.0 SP1 (or later)
		• Apex One Endpoint Sensor
		• Cloud App Security 5.0 (or later)
		• Deep Security Manager 10.0 (or later)
		• InterScan Messaging Security Virtual Appliance 9.1 (or later)
		• InterScan Web Security Virtual Appliance 6.5 SP2 Patch 4 (or later)
		• ScanMail for Microsoft Exchange 12.5 (or later)
		• Trend Micro Endpoint Application Control 2.0 SP1 (or later)

Feature	Required Products	Optional Products

Suspicious Object list synchronization
 	
For more information, see *Suspicious Object Lists on page 19-6* and *Connected Threat Defense Product Integration on page 19-37*.
	• Apex Central
	• Deep Discovery Inspector 5.0 (or later) or one of the following Virtual Analyzer products:
	  • *Apex One Sandbox as a Service*
	  • *Deep Discovery Analyzer*
	
	Important
	At least one optional product is required for Suspicious Object list synchronization.
		• Apex One 2019 or OfficeScan 11.0 SP1 (or later)
		• Cloud App Security 5.0 (or later)
		• Deep Discovery Director
		• Deep Security Manager 10.0 (or later)
		• InterScan Messaging Security Virtual Appliance 9.1 (or later)
		• InterScan Web Security Virtual Appliance 6.5 SP2 Patch 4 (or later)
		• Smart Protection Server 3.3 Patch 2 (or later)
		• Trend Micro Endpoint Application Control 2.0 SP1 (or later)

Suspicious Object sample submission	• Deep Discovery Inspector 5.0 (or later) or one of the following Virtual Analyzer products:
	  • *Apex One Sandbox as a Service*
	  • *Deep Discovery Analyzer*
		• Apex One 2019 or OfficeScan 11.0 SP1 (or later)
		• Apex One Endpoint Sensor
		• Deep Discovery Email Inspector 3.0 (or later)
		• Deep Security Manager 10.0 (or later)
		• InterScan Messaging Security Virtual Appliance 9.1 (or later)
		• InterScan Web Security Virtual Appliance 6.5 SP2 Patch 4 (or later)
		• ScanMail for Microsoft Exchange 12.5 (or later)

Feature	Required Products	Optional Products

Suspicious Object management	• Apex Central
	• Deep Discovery Inspector 5.0 (or later) or one of the following Virtual Analyzer products:
	  • *Apex One Sandbox as a Service*
	  • *Deep Discovery Analyzer*
		• Apex One 2019 or OfficeScan 11.0 SP1 (or later)
		• Apex One Endpoint Sensor
		• Cloud App Security 5.0 (or later)
		• Deep Security Manager 10.0 (or later)
		• InterScan Messaging Security Virtual Appliance 9.1 (or later)
		• InterScan Web Security Virtual Appliance 6.5 SP2 Patch 4 (or later)
		• Trend Micro Endpoint Application Control 2.0 SP1 (or later)

Suspicious Object scan actions For more information, see *Suspicious Object Scan Actions on page 19-9*.	• Apex Central	• Apex One 2019 or OfficeScan 11.0 SP1 (or later) • Cloud App Security 5.0 (or later) • Deep Security Manager 10.0 (or later) • InterScan Messaging Security Virtual Appliance 9.1 (or later) • InterScan Web Security Virtual Appliance 6.5 SP2 Patch 4 (or later) • Smart Protection Server 3.3 Patch 2 (or later) • Trend Micro Endpoint Application Control 2.0 SP1 (or later)

Feature	Required Products	Optional Products
Impact analysis	• Apex Central • Apex One Endpoint Sensor **Important** Performing an impact analysis on **Affected Users** screen also requires Deep Discovery Inspector 5.0 (or later). For more information, see *Analyzing Impact on Affected Users on page 7-23*.	• Deep Discovery Inspector 5.0 (or later)
Endpoint isolation For more information, see *Isolating Endpoints on page 19-34*.	• Apex Central • Apex One 2019 or OfficeScan 11.0 SP1 (or later)	• Apex One Endpoint Sensor
IOC management	• Apex Central • Apex One Endpoint Sensor	• None

Suspicious Object List Management

Apex Central allows you to synchronize Suspicious Object lists among managed products and create User-Defined and Exception lists to further control the spread of suspicious objects. You can also configure specific actions that supported managed products take upon detecting suspicious objects in your environment.

Apex Central consolidates Virtual Analyzer and user-defined suspicious object lists (excluding exceptions) and synchronizes the lists with integrated managed products.

For more information about products that can synchronize Suspicious Objects lists with Apex Central, see *Suspicious Object list synchronization* in *Feature Requirements on page 19-2*.

Suspicious Object Lists

Apex Central consolidates Virtual Analyzer Suspicious Object lists and synchronizes all Suspicious Object lists among many managed products. The way each managed product implements the lists depends on how the product implements the feature. Refer to your managed product Administrator's Guide for more information about how the product uses and synchronizes the Suspicious Object lists.

Note

Administrators can configure specific scan actions on suspicious objects using the Apex Central console. You can then configure certain managed products to perform actions based on the Suspicious Object list settings.

For more information, see *Suspicious Object Scan Actions on page 19-9*.

List Type	Description
Virtual Analyzer Suspicious Objects	Managed products that integrate with a Virtual Analyzer submit suspicious files or URLs to Virtual Analyzer for analysis. If Virtual Analyzer determines that an object is a possible threat, Virtual Analyzer adds the object to the Suspicious Object list. Virtual Analyzer then sends the list to its registered Apex Central server for consolidation and synchronization purposes. On the Apex Central console, go to the **Threat Intel** > **Virtual Analyzer Suspicious Objects** > **Objects** tab to view the Virtual Analyzer Suspicious Objects list. For more information, see *Suspicious Object Detection on page 19-15*.

List Type	Description
Exceptions to Virtual Analyzer Suspicious Objects	From the list of Virtual Analyzer suspicious objects, Apex Central administrators can select objects that are considered safe and then add them to an exception list. On the Apex Central console, go to the **Threat Intel** > **Virtual Analyzer Suspicious Objects** > **Exceptions** tab to view the Virtual Analyzer Suspicious Object Exceptions list. Apex Central sends the exception list to the Virtual Analyzers (except for Apex One Sandbox as a Service) that subscribe to the list. When a Virtual Analyzer detects a suspicious object that is in the exception list, the Virtual Analyzer considers the object as "safe" and does not analyze the object again. For more information, see *Adding Exceptions to the Virtual Analyzer Suspicious Object List on page 19-7*.
User-Defined Suspicious Objects	Apex Central administrators can add objects they consider suspicious but are not currently in the list of Virtual Analyzer suspicious objects by going to the **Threat Intel** > **Custom Intelligence** > **User-Defined Suspicious Objects**. For more information, see *Preemptive Protection Against Suspicious Objects on page 19-20*.

Adding Exceptions to the Virtual Analyzer Suspicious Object List

Apex Central allows you to exclude objects from the Virtual Analyzer Suspicious Object list based on the file SHA-1, domain, IP address, or URL.

Important

The User-Defined Suspicious Object list has a higher priority than the Virtual Analyzer Suspicious Object list.

Procedure

1. Go to **Threat Intel** > **Virtual Analyzer Suspicious Objects**.

   The **Virtual Analyzer Suspicious Objects** screen appears.

2. Click the **Exceptions** tab.
3. Click **Add**.
4. Specify the **Type** of object.
   - **File**: Specify the **File SHA-1** hash value for the file.
   - **IP address**: Specify the IP address.
   - **URL**: Specify the URL.
   - **Domain**: Specify the domain.

     Apex Central allows you to use a wildcard character (*) to exclude specific subdomains or subdirectories from the Virtual Analyzer Suspicious Object list.

Example	Description
https://*.domain.com/	Excludes all URLs within subdomains of the domain “domain.com” from the Virtual Analyzer Suspicious Object list **Important** If a URL contains a subdirectory, then the URL will not be excluded even if the URL contains a matching subdomain. For example, “https://abc.domain.com/abc” will not be excluded.
*.abc.domain.com	Excludes all subdomains of the subdomain “abc” from the Virtual Analyzer Suspicious Object list

Example	Description
https:// *.domain.com/abc/*	Excludes all URLs within subdomains of the domain “domain.com” and all subdirectories of the subdirectory “abc” from the Virtual Analyzer Suspicious Object list **Important** If a URL does not contain a subdirectory within subdirectory “abc”, then the URL will still be excluded. For example, “https://abc.domain.com/abc” will be excluded.

5. (Optional) Specify a **Note** to assist in identifying the suspicious object.
6. Click **Add**.

   The object appears in the Virtual Analyzer Exception list. Managed products that subscribe to the suspicious objects lists receive the new object information during the next synchronization.

Suspicious Object Scan Actions

Using the Apex Central console, administrators can configure scan actions that certain managed products take after detecting specific suspicious objects in the **Virtual Analyzer Suspicious Objects** list or the **User-Defined Suspicious Objects** list.

TABLE 19-1. Scan Action Product Support

PRODUCT	VIRTUAL ANALYZER LIST	USER-DEFINED LIST
Apex One (any version)	Performs actions against the following suspicious object types: • **File**: Log, Block, Quarantine • **IP address**: Log, Block • **URL**: Log, Block • **Domain**: Log, Block	Performs actions against the following suspicious object types: • **File**: Log, Block, Quarantine • **File SHA-1**: Log, Block • **IP address**: Log, Block • **URL**: Log, Block • **Domain**: Log, Block
OfficeScan XG SP1 (or later)	Performs actions against the following suspicious object types: • **File**: Log, Block, Quarantine • **IP address**: Log, Block • **URL**: Log, Block • **Domain**: Log, Block	Performs actions against the following suspicious object types: • **File**: Log, Block, Quarantine • **IP address**: Log, Block • **URL**: Log, Block • **Domain**: Log, Block
Deep Security Manager 10.0 (or later)	Performs actions against the following suspicious object types: • **File**: Log, Block, Quarantine • **URL**: Log, Block	Performs actions against the following suspicious object types: • **File**: Log, Block, Quarantine • **URL**: Log, Block

Product	Virtual Analyzer List	User-Defined List
• Deep Discovery Inspector 5.0 (or later) • Deep Discovery Email Inspector 3.0 (or later)	Synchronizes the following suspicious object types: • **File**: No scan actions performed • **IP address**: No scan actions performed • **URL**: No scan actions performed • **Domain**: No scan actions performed	Synchronizes the following suspicious object types: • **File**: No scan actions performed • **IP address**: No scan actions performed • **URL**: No scan actions performed • **Domain**: No scan actions performed
InterScan Messaging Security Virtual Appliance 9.1 (or later)	Performs actions against the following suspicious object types: • **File**: Log, Block, Quarantine	Performs actions against the following suspicious object types: • **File**: Log, Block, Quarantine • **File SHA-1**: Log, Block, Quarantine
InterScan Web Security Virtual Appliance 6.5 SP2 Patch 4 (or later)	Performs actions against the following suspicious object types: • **File**: Log, Block, Quarantine • **File SHA-1**: Log, Block, Quarantine • **IP address**: Log, Block • **URL**: Log, Block • **Domain**: Log, Block	Performs actions against the following suspicious object types: • **File**: Log, Block, Quarantine • **File SHA-1**: Log, Block, Quarantine • **IP address**: Log, Block • **URL**: Log, Block • **Domain**: Log, Block
Trend Micro Endpoint Application Control 2.0 SP1 Patch 1 (or later)	Performs actions against the following suspicious object types: • **File**: Log, Block, Quarantine	Performs actions against the following suspicious object types: • **File**: Log, Block, Quarantine • **File SHA-1**: Log, Block, Quarantine

<table>
<tr><th>Product</th><th>Virtual Analyzer List</th><th>User-Defined List</th></tr>
<tr><td>Cloud App Security 5.0 (or later)</td><td>Performs actions against the following suspicious object types:
• File: Log, Block, Quarantine
• URL: Log, Block</td><td>Performs actions against the following suspicious object types:
• File: Log, Block, Quarantine
• URL: Log, Block</td></tr>
<tr><td rowspan="2">• Smart Protection Server 3.3 Patch 2 (or later)
• OfficeScan 11.0 SP1 (or later) integrated Smart Protection Server
• Trend Micro products that send Web Reputation queries to a supported Smart Protection Server</td><td>Managed products perform actions against the following suspicious object types during Web Reputation queries:
• URL: Log, Block</td><td>Managed products perform actions against the following suspicious object types during Web Reputation queries:
• URL: Log, Block
Important
Smart Protection Server classifies all URLs in the User-Defined Suspicious Objects list as “High” risk.</td></tr>
<tr><td colspan="2">Note
Only certain managed products can directly perform the actions configured in Apex Central on suspicious URL objects. Other managed products take action on suspicious URL objects based on the product's configured Web Reputation settings.
Logs that display on the managed products may not contain information related to suspicious object detections. Apex Central interprets logs sent from the managed product and displays the suspicious object detection on the Apex Central console.</td></tr>
</table>

Configuring Distribution Settings

Configure distribution settings to enable Apex Central to consolidate and send Virtual Analyzer and user-defined suspicious objects (excluding

exceptions) to certain managed products. These products synchronize and use all or some of these objects.

Apex Central can also send suspicious IP addresses and domains to TippingPoint.

Note

The **Distribution Settings** also allows you to configure Suspicious Object Hub and Node Apex Central server settings to synchronize suspicious object lists across multiple Apex Central servers.

For more information, see *Suspicious Object Hub and Node Architecture on page 22-1*.

Procedure

1. Go to **Threat Intel** > **Distribution Settings**.

   The **Distribution Settings** screen appears.

2. To send suspicious objects to managed products:

   a. Click the **Managed Products** tab.

   b. Select the **Send suspicious objects to managed products** check box.

   c. Record the following information for use when configuring Apex Central as the Virtual Analyzer source in managed products:

      - **Service URL**: The service URL of Apex Central
      - **API key**: The code that identifies Apex Central to the managed product

   d. Click **Save**.

   e. Click **Sync Now**.

3. To send suspicious objects to TippingPoint:

   a. Click the **TippingPoint** tab.

b. Select the **Send suspicious objects (IP addresses and domain names only) to TippingPoint** check box.

Note

Apex Central sends suspicious IP addresses and domain names analyzed by Virtual Analyzer. TippingPoint uses reputation filters to apply block, permit, or notify actions across an entire reputation group. For more information about reputation filters, refer to your TippingPoint documentation.

c. Specify the following:

- **Server name**: Type the server URL and port number for your TippingPoint deployment.
- **User name**: Type the user name of an account with sufficient privileges to access the TippingPoint console.
- **Password**: Type the password for the account.

d. (Optional) Click **Test Connection** to confirm the connection.

e. Select the severity level that triggers Apex Central to send domain names or IP address information to TippingPoint.

- **High only**: IP addresses and domain names with high severity
- **High and medium**: IP addresses and domain names with high and medium severity
- **All**: Includes IP addresses and domain names with high, medium, and low severity

f. Click **Save**.

g. Click **Sync Now**.

Suspicious Object Detection

You can view suspicious object detections in your environment in many ways using the Apex Central console. For information regarding the different ways of viewing suspicious object detections, refer to the following:

- *Viewing At Risk Endpoints and Recipients on page 19-15*
- *Analyzing Impact from Virtual Analyzer Suspicious Objects on page 19-16*

Note

Apex Central only identifies users or endpoints exposed to suspicious objects in your environment. You cannot take any direct action on any suspicious objects using the Apex Central console.

Viewing At Risk Endpoints and Recipients

Apex Central checks Web Reputation, URL filtering, network content inspection, and rule-based detection logs received from all managed products and then compares these logs with its list of suspicious objects.

Procedure

1. Go to **Threat Intel** > **Virtual Analyzer Suspicious Objects**.

   The **Virtual Analyzer Suspicious Objects** screen appears.

2. Click the **Objects** tab.

3. Expand the arrow to the left of the **Object** you want to view.

   - The **At Risk Endpoints** list displays all endpoints and users still affected by the suspicious object.
     - For **File** detections, the **Latest Action Result** column displays the last action result reported from managed products.
     - For all other detection types, the **Latest Action Result** column displays “N/A”.

- The **At Risk Recipients** list displays all recipients still affected by the suspicious object.

Analyzing Impact from Virtual Analyzer Suspicious Objects

The **Virtual Analyzer Suspicious Objects** screen allows you to perform an impact analysis on your network. The impact analysis uses Endpoint Sensor to contact agents and performs a historical scan of the agent logs to determine if the suspicious objects have affected your environment for a period of time without detection.

You can also perform an impact analysis for user-defined suspicious objects on the **Custom Intelligence** screen.

For more information, see *Analyzing Impact and Responding to IOCs from User-Defined Suspicious Objects on page 19-32*.

Important

Impact analysis requires a valid Apex One Endpoint Sensor license. Ensure that you have a valid Apex One Endpoint Sensor license and enable the Enable Sensor feature for the appropriate **Apex One Security Agent** or **Apex One (Mac)** policies.

For more information, see the *Apex Central Widget and Policy Management Guide*.

Procedure

1. Go to **Threat Intel** > **Virtual Analyzer Suspicious Objects**.

   The **Virtual Analyzer Suspicious Objects** screen appears.

2. Click the **Objects** tab.

3. Select one or more objects from the list.

   Note

   Apex Central does not support analyzing impact for URL objects.

4. Click **Analyze Impact**.

   Endpoint Sensor contacts agents and evaluates the agent logs for any detections of the suspicious objects.

   Note

   Impact analysis times vary depending on your network environment.

5. Expand the arrow to the left of the **Object** you want to view.

   - The **At Risk Endpoints** list displays all endpoints and users still affected by the suspicious object.
     - For **File** detections, the **Latest Action Result** column displays the last action result reported from managed products.
     - For all other detection types, the **Latest Action Result** column displays "N/A".
   - The **At Risk Recipients** list displays all recipients still affected by the suspicious object.

Historical Investigations in Endpoint Sensor

Historical Investigations assess historical events and analysis chains based on specified criteria. The results can be viewed as a root cause analysis map showing the execution flow of any suspicious activity. This facilitates the analysis of the enterprise-wide chain of events involved in a targeted attack.

Historical Investigations use the following object types for its investigation:

- DNS record
- IP address
- File name
- File path
- SHA-1 hash values

- MD5 hash values
- User account

Historical Investigations query a normalized database containing an endpoint's historical events. Compared to a traditional log file, this method uses less disk space and consumes fewer resources.

Viewing the Handling Process

The **Handling Process** screen provides an overview of the life-cycle for a suspicious object in your environment and current effect of the suspicious object to your users or endpoints.

Important

Viewing the handling process requires additional licensing for a product or service that includes Virtual Analyzer. Ensure that you have a valid license for at least one of the following:

- Apex One Sandbox as a Service
- Deep Discovery Analyzer 6.5 (or later)
- Deep Discovery Email Inspector 3.5 (or later)
- Deep Discovery Inspector 5.0 (or later)

Procedure

1. Go to **Threat Intel** > **Virtual Analyzer Suspicious Objects**.
2. Click the **View** link in the **Handling Process** column of the table for a specific suspicious object.

   The **Handling Process** screen appears.
3. Click any of the following tabs to view more information about the suspicious object.

Tab	Description
Sample Submission	Displays information related to the first and latest analysis of the suspicious object Apex Central integrates with the following products, which use a Virtual Analyzer to analyze suspicious objects submitted by other managed products: • Deep Discovery Analyzer 6.5 (or later) • Deep Discovery Email Inspector 3.5 (or later) • Deep Discovery Inspector 5.0 (or later) **Note** Apex One Sandbox as a Service does not provide **Sample Submission** information.
Analysis	Displays the Virtual Analyzer analysis of the submitted object Virtual Analyzer determines the risk level of suspicious objects based on their potential to expose systems to danger or loss. Supported objects include files (SHA-1 hash values), IP addresses, domains, and URLs. **Note** Apex One Sandbox as a Service does not provide **Product**, **Product host name**, or **Product IP address** information.
Distribution	Displays all products that synchronized the Suspicious Object list and the last synchronization time Apex Central consolidates Virtual Analyzer and user-defined suspicious object lists (excluding exceptions) and synchronizes the lists with integrated managed products.

Tab	Description
Impact Analysis & Mitigation	Displays all endpoints and users affected by the suspicious object • For **File** detections, the **Latest Action Result** column displays the last action result reported from managed products. • For all other detection types, the **Latest Action Result** column displays "N/A". Click the **Root Cause Analysis** link to further investigate how the object affected the user or endpoint.

Preemptive Protection Against Suspicious Objects

Apex Central provides different ways to protect against suspicious objects not yet identified within your network. Use the User-Defined Suspicious Object list or import indicators from OpenIOC or STIX files to take proactive actions on suspicious threats identified by external sources.

Feature	Description
User-Defined Suspicious Objects list	The User-Defined Suspicious Objects list allows you to define suspicious file, file SHA-1, IP address, URL, and domain objects that your registered Virtual Analyzer has not yet detected on your network. Supported managed products that subscribe to the Suspicious Object lists can take action on the objects found in the list to prevent the spread of unknown threats. For more information, see the following topics: • *Adding Objects to the User-Defined Suspicious Object List on page 19-21* • *Suspicious Object Scan Actions on page 19-9* • *Analyzing Impact and Responding to IOCs from User-Defined Suspicious Objects on page 19-32*

Feature	Description
STIX file list	The STIX file list allows you to import Structured Threat Import Expression (STIX) files and extract suspicious file SHA-1, IP address, URL, and domain objects to the User-Defined Suspicious Object list. For more information, see the following topics: • *Adding STIX Objects to the User-Defined Suspicious Object List on page 19-23* • *Analyzing Impact and Responding to IOCs from User-Defined Suspicious Objects on page 19-32*
OpenIOC file list	The OpenIOC file list allows you to import OpenIOC files and extract suspicious file SHA-1, IP address, URL, and domain objects to the User-Defined Suspicious Object list. For more information, see the following topics: • *Adding OpenIOC Objects to the User-Defined Suspicious Object List on page 19-26* • *Analyzing Impact and Responding to IOCs from User-Defined Suspicious Objects on page 19-32*

Adding Objects to the User-Defined Suspicious Object List

You can protect your network from objects not yet identified on your network by adding the suspicious objects to the User-Defined Suspicious Object list. Apex Central provides you the options to add objects based on the file, file SHA-1, domain, IP address, or URL. You can also specify the scan action that supported Trend Micro products perform after detecting the suspicious objects.

For more information, see the following topics:

- *Importing User-Defined Suspicious Object Lists on page 19-23*
- *Adding OpenIOC Objects to the User-Defined Suspicious Object List on page 19-26*
- *Adding STIX Objects to the User-Defined Suspicious Object List on page 19-23*

Procedure

1. Go to **Threat Intel** > **Custom Intelligence**.

   The **Custom Intelligence** screen appears.

2. Click the **User-Defined Suspicious Objects** tab.

   The User-Defined Suspicious Object list appears.

3. Click **Add**.

4. Specify the **Type** of object.

   - **File**: Click **Browse** to upload a suspicious object file.
   - **File**: Specify the **File SHA-1** hash value for the file.
   - **IP address**: Specify the IP address.
   - **URL**: Specify the URL.
   - **Domain**: Specify the domain.

5. Specify the **Scan action** that supported products take after detecting the object.

   - **Log**
   - **Block**
   - **Quarantine**

   Note

   This scan action is only available for **File** or **File SHA-1** objects.

6. (Optional) Specify a **Note** to assist in identifying the suspicious object.

7. (Optional) Specify the expiration date.

8. Click **Add**.

The object appears in the User-Defined Suspicious Object list. Managed products that subscribe to the suspicious objects lists receive the new object information during the next synchronization.

Importing User-Defined Suspicious Object Lists

Add multiple suspicious objects to the User-Defined Suspicious Objects list using a properly formatted CSV file.

Procedure

1. Go to **Threat Intel** > **Custom Intelligence**.

   The **Custom Intelligence** screen appears.

2. Click the **User-Defined Suspicious Objects** tab.

   The User-Defined Suspicious Object list appears.

3. Click **Import**.

4. Select the CSV file containing the list of suspicious objects.

   Tip

   Click the **Download sample CSV** link to obtain a properly formatted example CSV file with detailed instructions on creating a user-defined suspicious objects list.

5. Click **Import**.

   Objects in the CSV file appear in the User-Defined Suspicious Objects list. Managed products that subscribe to the suspicious objects lists receive the new object information during the next synchronization.

Adding STIX Objects to the User-Defined Suspicious Object List

After obtaining a properly formatted Structured Threat Information Expression (STIX) file (`*.xml`) from a trusted external source (a security

forum or other Deep Discovery Virtual Analyzer product), import the file to Apex Central to extract the suspicious file SHA-1, IP address, URL, and domain objects to the User-Defined Suspicious Object list. When uploading a file, you can also specify the scan action that supported Trend Micro products perform after detecting the suspicious objects.

For more information about manually adding suspicious objects to the User-Defined Suspicious Object list, see *Adding Objects to the User-Defined Suspicious Object List on page 19-21*.

Important

Apex Central only supports uploading properly formatted STIX files that have `*.xml` file extensions and conform to the following STIX and Cybox releases:

- STIX 1.1
- STIX 1.1.1
- STIX 1.2
- Cybox 2.1

Note

Apex Central automatically extracts suspicious objects to the User-Defined Suspicious Object list when the STIX file is imported.

Procedure

1. Go to **Threat Intel** > **Custom Intelligence**.

   The **Custom Intelligence** screen appears.

2. Click the **STIX** tab.

   The STIX file list appears.

3. (Optional) To filter the files that display in the file list, use the search box to specify a full or partial string contained in the **File Name**, **Short Description**, or **Source Added By** columns.

4. Click **Add**.

   The **Add STIX Files** screen appears.

5. Select STIX files (`*.xml`) to upload.

   a. Click **Select Files...**.

   b. Select one or more files to upload.

   Note

   - The maximum file size for each file is 10 MB.
   - The total number of files uploaded at the same time cannot exceed 200 files.

   c. Click **Open**.

6. (Optional) Click **Advanced settings** to specify scan actions that supported products perform after detecting the object.

   Note

   You can also configure scan actions for suspicious objects on the User-Defined Suspicious Object list.

   For more information, see *Suspicious Object Scan Actions on page 19-9*.

7. Click **Add**.

   Apex Central uploads the selected STIX files and extracts suspicious objects to the User-Defined Suspicious Object list.

   - To download a copy of a specific file, click the link in the **File Name** column.
   - To track the file extraction status, use the **Command Tracking** screen.

     For more information, see *Command Tracking on page 12-2*.

- To view the extracted suspicious objects on a filtered view of the User-Defined Suspicious Object list, click the count in the **Extracted Objects** column.
- To delete files, select the check box next to the **File Name** of at least one file and click **Delete**.

Note

- Deleting a file does not remove the extracted suspicious objects from the User-Defined Suspicious Object list.
- You cannot delete a file until Apex Central has finished extracting suspicious objects from the file.

Adding OpenIOC Objects to the User-Defined Suspicious Object List

You can protect your network from objects not yet identified on your network by importing properly formatted OpenIOC files (`*.ioc`) and extracting suspicious file SHA-1, IP address, URL, and domain objects to the User-Defined Suspicious Object list. When uploading a file, you can specify the scan action that supported Trend Micro products perform after detecting the suspicious objects. After uploading an OpenIOC file, you can also select an uploaded file as the assessment criteria for a Historical Investigation or a Live Investigation.

For details about manually adding suspicious objects directly to the User-Defined Suspicious Object list, see *Adding Objects to the User-Defined Suspicious Object List on page 19-21*.

Important

Apex Central only supports OpenIOC 1.0.

Note

By default, Apex Central automatically extracts suspicious objects to the User-Defined Suspicious Object list when the OpenIOC file upload is complete.

Alternatively, you can choose to upload the OpenIOC file first, and then manually extract suspicious objects after the file upload is complete.

Procedure

1. Go to **Threat Intel** > **Custom Intelligence**.

   The **Custom Intelligence** screen appears.

2. Click the **OpenIOC** tab.

   The OpenIOC file list appears.

3. (Optional) To filter the files that display in the file list, use the search box to specify a full or partial string contained in the **File Name**, **Short Description**, or **Source Added By** columns.

4. Click **Add**.

   The **Add OpenIOC Files** screen appears.

5. Select OpenIOC files (`*.ioc`) to upload.

   a. Click **Select Files...**.

   b. Select one or more files to upload.

Note

- The maximum file size for each file is 10 MB.
- The total number of files uploaded at the same time cannot exceed 200 files.
- The maximum number of objects for each suspicious object type in the User-Defined Suspicious Object list cannot exceed 10,000 objects for each type.

  The extraction task for a suspicious object type will be unsuccessful if the maximum number of objects has been reached for the object type.

c. Click **Open**.

6. (Optional) Click **Advanced settings** to configure the following settings:

   - To upload the file without automatically extracting the suspicious objects, clear the **Extract file SHA-1 hashes, IP addresses, URLs, or domains, and add the suspicious objects to the User-Defined Suspicious Objects list** check box.

     Note

     If you disable automatic extraction when uploading files, you can still manually extract objects after the file upload is complete.

   - Specify scan actions for supported products to perform after detecting the object.

     Note

     You can also configure scan actions for suspicious objects on the User-Defined Suspicious Object list.

     For more information, see *Suspicious Object Scan Actions on page 19-9*.

7. Click **Add**.

Tip

- To track the file upload status, perform a log query by using the **User Access** log type.

  For more information, see *Querying Logs on page 15-2*.

- To track the suspicious object extraction status, use the **Command Tracking** screen.

  For more information, see *Command Tracking on page 12-2*.

Apex Central uploads the selected OpenIOC files to the OpenIOC file list.

Note

- If default settings are selected, Apex Central automatically extracts suspicious objects to the User-Defined Suspicious Object list.
- The **Extracted Objects** column in the OpenIOC file list displays "N/A" for the following scenarios:
  - You uploaded the OpenIOC file without automatically extracting the suspicious objects.
  - Apex Central was unable to extract suspicious objects from the OpenIOC file.

8. To manually extract suspicious objects from an uploaded OpenIOC file:

   a. Select the check box next the **File Name** of the uploaded file.

   b. Click **Extract**.

      The **Extracted Objects** column displays the number of suspicious objects from the OpenIOC file to the User-Defined Suspicious Object list.

      - To download a copy of a specific file, click the link in the **File Name** column.
      - To track the file extraction status, use the **Command Tracking** screen.

For more information, see *Command Tracking on page 12-2*.

- To view the extracted suspicious objects on a filtered view of the User-Defined Suspicious Object list, click the count in the **Extracted Objects** column.
- To delete files, select the check box next to the **File Name** of at least one file and click **Delete**.

Note

- Deleting a file does not remove the extracted suspicious objects from the User-Defined Suspicious Object list.
- You cannot delete a file until Apex Central has finished extracting suspicious objects from the file.

9. To start a threat investigation using an uploaded OpenIOC file as the assessment criteria:

Important

- Threat investigations require a valid Endpoint Sensor license. Ensure that you have a valid Endpoint Sensor license or contact your service provider to obtain an Activation Code.
- After activating your Endpoint Sensor license, enable the Endpoint Sensor feature by creating an Apex One Agent policy or Apex One (Mac) policy on the **Policy Management** screen (**Policies** > **Policy Management**).

  For more information, see the *Apex Central Widget and Policy Management Guide*.

a. Select the check box next the **File Name** of the uploaded file.

b. Perform one of the following types of threat investigation:

Investigation	Description
Historical Investigation	A Historical Investigation uses server metadata to identify endpoints that are possible candidates for further analysis. Hover over the **Analyze Impact** button and click **Historical Investigation**. **Note** You can also perform a Historical Investigation from the **Historical Investigation** screen (**Response** > **Historical Investigation**). For more information, see *Using User-defined Criteria for Historical Investigations on page 20-5*. For specific information about the server metadata used for Historical Investigations, see *Endpoint Sensor Metadata on page 20-2*.
One-time Investigation	A One-time Investigation is a Live Investigation that is generated on demand and goes through all files currently on the disk and all processes currently running in memory. Hover over the **Analyze Impact** button and go to **Live Investigation** > **One-time**. **Note** You can also perform a one-time investigation from the **One-time Investigation** tab on the **Live Investigation** screen (**Response** > **Live Investigation**). For more information, see *One-Time Investigation on page 20-26*.

Investigation	Description
Scheduled Investigation	A Scheduled Investigation is a Live Investigation that runs automatically at specific intervals. Hover over the **Analyze Impact** button and go to **Live Investigation** > **Scheduled**. **Note** You can also perform a scheduled investigation from the **Scheduled Investigation** tab on the **Live Investigation** screen (**Response** > **Live Investigation**). For more information, see *Scheduled Investigation on page 20-29*.

Analyzing Impact and Responding to IOCs from User-Defined Suspicious Objects

After adding suspicious objects or properly formatted IOC (STIX or OpenIOC) files to Apex Central, you can perform an impact analysis by selecting specific file, file SHA-1, IP address, or domain objects to determine if the threat exists within your network and take mitigation steps to prevent the spread of the threat to other endpoints.

For more information, see the following topics:

- *Importing User-Defined Suspicious Object Lists on page 19-23*
- *Adding OpenIOC Objects to the User-Defined Suspicious Object List on page 19-26*
- *Adding STIX Objects to the User-Defined Suspicious Object List on page 19-23*

Important

- Impact analysis requires a valid Apex One Endpoint Sensor license. Ensure that you have a valid Apex One Endpoint Sensor license and enable the Enable Sensor feature for the appropriate **Apex One Security Agent** or **Apex One (Mac)** policies.

  For more information, see the *Apex Central Widget and Policy Management Guide*.

- Endpoint isolation requires that you install Apex One Security Agents on the target endpoints.

Procedure

1. Go to **Threat Intel** > **Custom Intelligence**.

   The **Custom Intelligence** screen appears.

2. Click the **User-Defined Suspicious Objects** tab.

   The User-Defined Suspicious Object list appears.

3. Select one or more objects from the list.

   Note

   Apex Central does not support analyzing impact for URL objects.

4. Click **Analyze Impact**.

   Endpoint Sensor contacts agents and evaluates the agent logs for any detections of the suspicious objects.

   Note

   Impact analysis times vary depending on your network environment.

5. Expand the arrow to the left of the **Object** you want to view.

   - The **At Risk Endpoints** list displays all endpoints and users still affected by the suspicious object.

- For **File** detections, the **Latest Action Result** column displays the last action result reported from managed products.
- For all other detection types, the **Latest Action Result** column displays "N/A".

- The **At Risk Recipients** list displays all recipients still affected by the suspicious object.

Isolating Endpoints

Isolate at-risk endpoints to run an investigation and resolve security issues. Restore the connection promptly when all issues have been resolved.

Important

- Endpoint isolation requires a valid Apex Central license.
- For OfficeScan agents running versions 11 SP1 to XG SP1, you must enable the OfficeScan Firewall to perform endpoint isolation.

Procedure

1. Go to **Directories** > **Users/Endpoints**.
2. Select to view endpoints.
3. Click the name of an endpoint in the list.
4. On the **Endpoint** information screen that appears, click **Task** > **Isolate**.

   Apex Central disables the **Isolate** option on endpoints for the following reasons:

   - The agent on the endpoint runs an unsupported version.
   - The user account used to log on to Apex Central does not have the necessary permissions.
5. A message appears at the top of the **Endpoint** information screen that allows you to monitor the isolation status. After isolation completes, the

message closes and a notification appears on the target endpoint to inform the user.

If a problem occurs during the isolation process, the message at the top of the **Endpoint - {name}** screen informs you of the problem.

6. To view all isolated endpoints on your Apex Central network, click the **Endpoints** > **Filters** > **Network Connection** > **Isolated** node in the User/Endpoint Directory tree.

7. (Optional) To configure allowed inbound and outbound traffic to all isolated endpoints:

   a. Select **Control traffic on isolated endpoints**.

   b. Expand the **Inbound Traffic** or **Outbound Traffic** sections.

   c. Specify the allowed traffic by specifying the **Protocol**, **IP Address**, and **Destination Port**.

      Separate multiple destination ports using commas.

   d. Add multiple inbound and outbound entries by clicking the - control to the right of the **Destination Port** information.

Note

After modifying the allowed traffic settings, all previously isolated endpoints and any endpoints isolated later apply the inbound and outbound traffic settings.

8. After you have resolved the security threats on an isolated endpoint, restore network connectivity from the following locations:

   - **Endpoint** information screen: Click **Task** > **Restore**.
   - **Endpoints** > **Filters** > **Network Connection** > **Isolated**: Select the endpoint row in the table and click **Task** > **Restore Network Connection**.

9. A message appears at the top of the screen that allows you to monitor the restoration status. After restoration completes, the message closes and a notification appears on the target endpoint to inform the user.

If a problem occurs during the restoration process, the message at the top of the screen informs you of the problem.

Connected Threat Defense Product Integration

The Connected Threat Defense strategy integrates many Trend Micro products. The following diagrams illustrate how the major products interact.

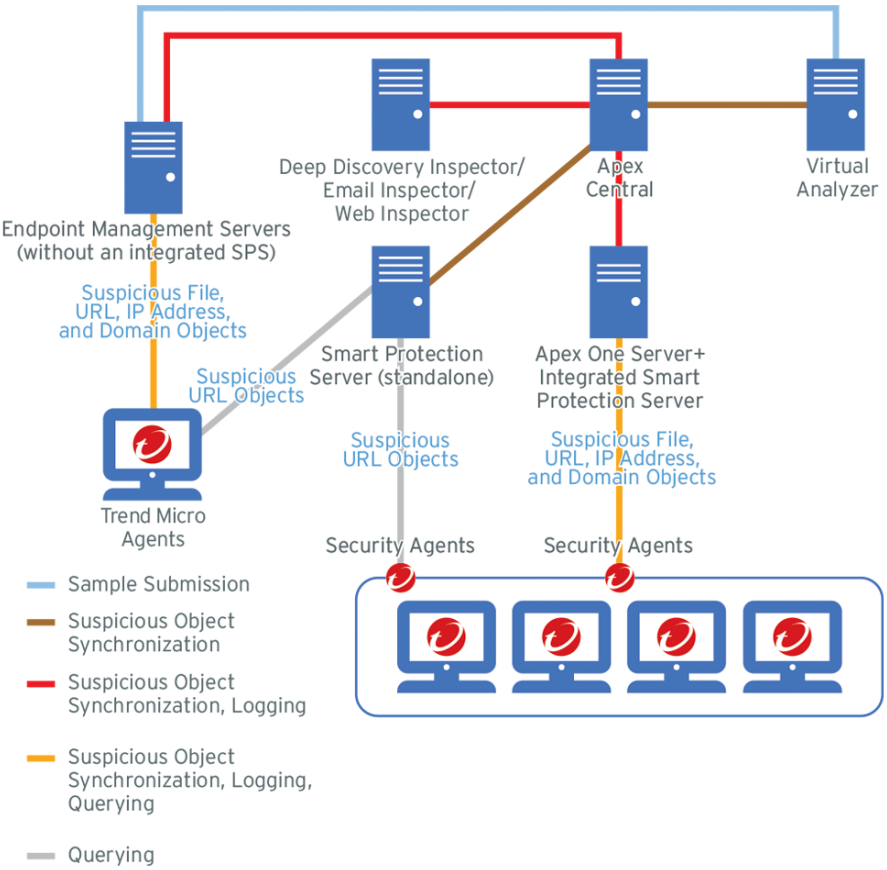


FIGURE 19-1. Endpoint Protection Example Topology

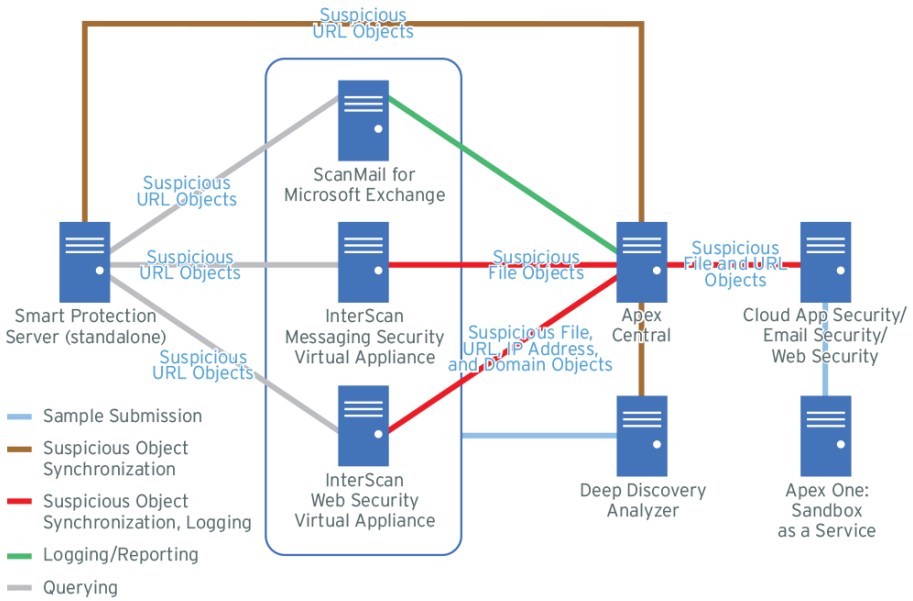


FIGURE 19-2. Messaging and Network Security Example Topology

Apex Central further monitors other registered Trend Micro products through log analysis and comparison of detected files with the synchronized suspicious object lists.

For Apex Central registration and suspicious object list synchronization information for each major product, refer to the following:

Apex Central

REQUIREMENT	DESCRIPTION
Product version	• Apex Central (any version) • Control Manager 7.0 (or later)

Requirement	Description
Apex Central registration	For products that do not register to Apex Central through the Apex Central console, the following Apex Central registration information is required: • Server FQDN or IP address • Port: By default, Apex Central uses HTTP Port 80 or HTTPS Port 443 For products that register using the Apex Central management console, go to **Administration** > **Managed Servers** > **Server Registration**, select the product from the **Server Type** list, and click **Add**.
Suspicious Object list synchronization	For products that do not automatically synchronize the Suspicious Object lists with Apex Central, the following API information is required: • API key: To obtain the API key, open the Apex Central management console and go to **Threat Intel** > **Distribution Settings**.
Integrated Connected Threat Defense features	• Security threat monitoring • Suspicious Object list synchronization • Suspicious Object management • Impact analysis • Endpoint isolation • IOC management

Apex One

Requirement	Description
Product version	• Apex One 2019 • OfficeScan 11.0 SP1 (or later)

Requirement	Description
Apex Central registration	From the Apex One web console at **Administration** > **Settings** > **Apex Central** Required Apex Central information: • Server FQDN or IP address • Port: By default, Apex Central uses HTTP Port 80 or HTTPS Port 443 For more information, see the *Apex One Administrator's Guide*.
Suspicious Object list synchronization	From the Apex One web console at **Administration** > **Settings** > **Suspicious Object List** Required Apex Central information: • None **Note** Apex One automatically obtains the required API key information from the Apex Central server during Apex Central registration
Integrated Connected Threat Defense features	• Security threat monitoring • Suspicious Object list synchronization • Suspicious Object management • Endpoint isolation

Apex One Endpoint Sensor

Requirement	Description
Activation Code	Additional licensing is required. Contact your service provider to obtain an Activation Code.

Requirement	Description
Enable feature	Enable Endpoint Sensor from the Apex Central management console. Go to **Policies** > **Policy Management** and select **Apex One Security Agent** from the **Product** drop-down list to create or modify a policy. Expand **Endpoint Sensor Settings** and select the **Enable Endpoint Sensor** check box. For more information, see the *Apex Central Widget and Policy Management Guide*.
Suspicious Object list synchronization	Apex One Endpoint Sensor does not synchronize Suspicious Object lists with Apex Central
Integrated Connected Threat Defense features	• Security threat monitoring • Suspicious Object sample submission • Suspicious Object management • Impact analysis • Endpoint isolation • IOC management

Apex One Sandbox as a Service

Requirement	Description
Activation Code	Additional licensing is required. Contact your service provider to obtain an Activation Code.
Apex Central registration	Complete the registration from the Apex Central management console. Go to **Administration** > **License Management** > **Apex Central** and click **Specify a new Activation Code** in the **Apex One Sandbox as a Service** section to provide and activate the Activation Code.
Suspicious Object list synchronization	Automatic after registration to Apex Central The Suspicious Object lists synchronize with the Apex Central server every 10 minutes by default.

Requirement	Description
Integrated Connected Threat Defense features	• Security threat monitoring • Suspicious Object list synchronization • Suspicious Object sample submission • Suspicious Object management

Cloud App Security

Requirement	Description
Product version	5.0 (or later)
Apex Central registration	Complete the registration from the Apex Central management console. Go to **Administration** > **Managed Servers** > **Server Registration**, select the product from the **Server Type** list, and click **Add**.
Suspicious Objects list synchronization	For more information, see the *Cloud App Security Online Help*.
Integrated Connected Threat Defense features	• Security threat monitoring • Suspicious Object list synchronization • Suspicious Object management • Suspicious Object scan actions

Deep Discovery Analyzer

Requirement	Description
Product version	6.5 (or later)
Apex Central registration	Complete the registration from the Apex Central management console. Go to **Administration** > **Managed Servers** > **Server Registration**, select the product from the **Server Type** list, and click **Add**.

Requirement	Description
Suspicious Object list synchronization	Automatic after registration to Apex Central The Suspicious Object lists synchronize with the Apex Central server every 10 minutes by default.
Integrated Connected Threat Defense features	• Security threat monitoring • Suspicious Object list synchronization • Suspicious Object sample submission • Suspicious Object management

Deep Discovery Director

Requirement	Description
Product version	5.0 (or later)
Apex Central registration	Complete the registration from the Apex Central management console. Go to **Administration** > **Managed Servers** > **Server Registration**, select the product from the **Server Type** list, and click **Add**.
Suspicious Object list synchronization	Automatic after registration to Apex Central The Suspicious Object lists synchronize with the Apex Central server every 10 minutes by default.
Integrated Connected Threat Defense features	• Security threat monitoring • Suspicious Object list synchronization • Suspicious Object sample submission • Suspicious Object management

Deep Discovery Email Inspector

Requirement	Description
Product version	3.5 (or later)
Apex Central registration	For more information, see the *Deep Discovery Email Inspector Administrator's Guide*.
Suspicious Objects list synchronization	For more information, see the *Deep Discovery Email Inspector Administrator's Guide*.
Integrated Connected Threat Defense features	• Suspicious Object list synchronization • Suspicious Object sample submission

Deep Discovery Inspector

Requirement	Description
Product version	5.0 (or later)
Apex Central registration	From the Deep Discovery Inspector management console at **Administration** > **Integrated Products/Services** > **Apex Central** Required Apex Central information: • Server FQDN or IP address • Port: By default, Apex Central uses HTTP Port 80 or HTTPS Port 443 For more information, see the *Deep Discovery Inspector Administrator's Guide*.

Requirement	Description
Suspicious Object list synchronization	From the Deep Discovery Inspector management console at **Administration** > **Integrated Products/Services** > **Apex Central** Required Apex Central information: • API key: To obtain the API key, open the Apex Central management console and go to **Threat Intel** > **Distribution Settings**. For more information, see the *Deep Discovery Inspector Administrator's Guide*.
Integrated Connected Threat Defense features	• Security threat monitoring • Suspicious Object list synchronization • Suspicious Object sample submission • Suspicious Object management

Deep Discovery Web Inspector

Requirement	Description
Product version	2.5 (or later)
Apex Central registration	For more information, see the *Deep Discovery Web Inspector Administrator's Guide*.
Suspicious Objects list synchronization	For more information, see the *Deep Discovery Web Inspector Administrator's Guide*.
Integrated Connected Threat Defense features	• Suspicious Object list synchronization • Suspicious Object sample submission

Deep Security Manager

Important

Deep Security as a Service does not support Connected Threat Defense. Connected Threat Defense features are only supported by Deep Security Manager on-premises servers.

Requirement	Description
Product version	10.0 (or later)
Apex Central registration	Complete the registration from the Apex Central management console. Go to **Administration** > **Managed Servers** > **Server Registration**, select the product from the **Server Type** list, and click **Add**.
Suspicious Objects list synchronization	Automatic after registration to Apex Central
Integrated Connected Threat Defense features	• Security threat monitoring • Suspicious Object list synchronization • Suspicious Object sample submission • Suspicious Object management • Suspicious Object scan actions

Email Security

Requirement	Description
Apex Central registration	Complete the registration from the Apex Central management console. Go to **Administration** > **Managed Servers** > **Server Registration**, select the product from the **Server Type** list, and click **Add**.
Suspicious Objects list synchronization	For more information, see the *Email Security Administrator Console Online Help*.

Requirement	Description
Integrated Connected Threat Defense features	• Security threat monitoring • Suspicious Object list synchronization • Suspicious Object management • Suspicious Object scan actions

InterScan Messaging Security Virtual Appliance

Requirement	Description
Product version	9.1 (or later)
Apex Central registration	For more information, see the *InterScan Messaging Security Virtual Appliance Administrator's Guide*.
Suspicious Object list synchronization	Automatic after registration to Apex Central
Integrated Connected Threat Defense features	• Security threat monitoring • Suspicious Object list synchronization • Suspicious Object sample submission • Suspicious Object management • Suspicious Object scan actions

InterScan Web Security Virtual Applicance

Requirement	Description
Product version	6.5 SP2 Patch 4 (or later)
Apex Central registration	For more information, see the *InterScan Web Security Virtual Appliance Administrator's Guide*.

Requirement	Description
Suspicious Objects list synchronization	For more information, see the *InterScan Web Security Virtual Appliance Administrator's Guide*.
Integrated Connected Threat Defense features	• Security threat monitoring • Suspicious Object list synchronization • Suspicious Object sample submission • Suspicious Object management • Suspicious Object scan actions

ScanMail for Microsoft Exchange

Requirement	Description
Product version	12.5 (or later)
Apex Central registration	For more information, see the *ScanMail for Microsoft Exchange Administrator's Guide*.
Suspicious Objects list synchronization	For more information, see the *ScanMail for Microsoft Exchange Administrator's Guide*.
Integrated Connected Threat Defense features	• Security threat monitoring • Suspicious Object sample submission

Smart Protection Server

Requirement	Description
Product version	3.3 Patch 2 (or later)
Apex Central registration	Complete the registration from the Apex Central management console. Go to **Administration** > **Managed Servers** > **Server Registration**, select the product from the **Server Type** list, and click **Add**.

Requirement	Description
Suspicious Object list synchronization	From the Smart Protection Server web console, go to **Smart Protection** > **Suspicious Objects**. Required information about the Suspicious Object list source: • Service URL • Port If the list source is Apex Central, the default ports are HTTP Port 80 or HTTPS Port 443. • API key: Provided by the server administrator If the list source is Apex Central, open the Apex Central management console and go to **Administration** > **Suspicious Objects** > **Distribution Settings**. **Note** For Smart Protection Server 3.3 (or later), Apex Central automatically sends the required API key information to the Smart Protection Server during registration. For more information, see the *Smart Protection Server Administrator's Guide*.
Integrated Connected Threat Defense features	• Suspicious Object list synchronization • Suspicious Object scan actions

Endpoint Application Control

Requirement	Description
Product version	2.0 SP1 Patch 1 (or later)
Apex Central registration	Complete the registration from the Apex Central management console. Go to **Administration** > **Managed Servers** > **Server Registration**, select the product from the **Server Type** list, and click **Add**.

Requirement	Description
Suspicious Object list synchronization	Automatic after registration to Apex Central
Integrated Connected Threat Defense features	• Security threat monitoring • Suspicious Object list synchronization • Suspicious Object management

Web Security

Requirement	Description
Apex Central registration	Complete the registration from the Apex Central management console. Go to **Administration** > **Managed Servers** > **Server Registration**, select the product from the **Server Type** list, and click **Add**.
Suspicious Objects list synchronization	For more information, see the *Web Security Online Help*.
Integrated Connected Threat Defense features	• Security threat monitoring • Suspicious Object list synchronization • Suspicious Object management • Suspicious Object scan actions

Chapter 20

Threat Investigation

This section discusses how to perform investigations and analyze the results using Threat Investigation.

Topics include:

- *Threat Investigation Overview on page 20-2*
- *Historical Investigations on page 20-4*
- *Live Investigations on page 20-23*
- *Investigation Results on page 20-33*

Threat Investigation Overview

Use **Threat Investigation** to locate suspicious objects in the network.

Threat Investigations can correlate information from Endpoint Sensor and Active Directory to display attack information about endpoints and user accounts throughout your network.

If the network is the target of an ongoing attack or an APT, a threat investigation can:

- Assess the extent of damage caused by the targeted attack
- Provide information on the arrival and progression of the attack
- Aid in planning an effective security incident response

The following types of threat investigation are available:

- Historical Investigations can quickly identify endpoints which are possible candidates for further analysis. A Historical Investigation uses server metadata to quickly return results.

  For more information, see *Historical Investigations on page 20-4*.

- Live Investigations perform the investigation on the current system state. Live Investigations can be configured to run at specific periods, and also support a wider set of criteria through the use of OpenIOC and YARA rules.

  For more information, see *Live Investigations on page 20-23*.

Endpoint Sensor Metadata

Metadata refers to data collected from the endpoint and uploaded to the server. Endpoint Sensor utilizes the data during a Historical Investigation to identify affected endpoints.

For details, see *Historical Investigations on page 20-4*.

The type of metadata collected depends on the operating system installed on the endpoint.

TABLE 20-1. Metadata by Operating System

OPERATING SYSTEM	METADATA	
Windows	• Host (name / IP address) • User account • File name • File path • Hash values (SHA-1, SHA-256 and MD5)	• Registry key • Registry data • Registry name • Command line • URL
macOS	• Host (name / IP address) • User account • File name • URL	• File path • Hash values (SHA-1, SHA-256 and MD5) • Command line

Note

- URL collection only applies to process callback events and only supports HTTP protocol.
- Use the **Policy Management** screen to configure metadata settings.
- The data available during Historical Investigations is a subset of Security Agent data and only includes information about high risk file types. If an assessment returns no results, you may want to perform a Live Investigation.

Historical Investigations

Historical Investigations can quickly identify endpoints which are possible candidates for further analysis. A Historical Investigation uses server metadata to quickly return results.

To access this screen, go to **Response** > **Historical Investigation**.

The **Historical Investigation** screen has two tabs:

Tab	Description
Assessment	Use an assessment to perform the following: • Evaluate the prevalence of a threat, and how long the threat has been in the network. The assessment goes through all historical data. • Determine the existence of a threat using simple criteria. Assessments support only a limited set of criteria. An assessment supports the following criteria types: • **User-defined**: Specify or load up to 10 user-defined criteria, or load a C&C callback event. For details, see *Supported Formats for User-defined Criteria on page 20-10*. • **OpenIOC file**: Use OpenIOC rules to define investigation criteria. Historical Investigations disregard all conditions and match any of the indicators specified in the OpenIOC file. For more information, see *Supported IOC Indicators for Historical Investigations on page 20-17*. The assessment goes through the server metadata and updates the result pane as soon it finds a match. It may take a few minutes to completely go through the server metadata. For more information, see *Using User-defined Criteria for Historical Investigations on page 20-5*.

Tab	Description
Root Cause Analysis Results	If an assessment returns a match, administrators may generate a Root Cause Analysis to: • List all related objects to the specified criteria • Identify if any of the related objects are noteworthy • Review the sequence of events leading to the execution of the matched object. Generating a Root Cause Analysis may take some time to complete. Use the **Root Cause Analysis** tab to monitor the progress of the task. For more information, see *Analysis Chains on page 20-35*.

Using User-defined Criteria for Historical Investigations

Note

To perform an investigation on the current system state, use Live Investigation.

For more information, see *Starting a One-time Investigation on page 20-25*.

Procedure

1. Go to **Response** > **Historical Investigation**.
2. Click **User-defined**.
3. Select one of the following options:
   - **Match ALL criteria**: Find objects matching all of the criteria specified
   - **Match ANY criteria**: Find objects matching any of the criteria specified
4. Click **New criteria**, select a criteria type, and specify valid information.

   For details, see *Supported Formats for User-defined Criteria on page 20-10*.

   To manage the criteria:

- Click **Reset** to clear all specified criteria.
- To save the criteria for future investigations, click  and specify a criteria name.

Note

Historical Investigations support a maximum of 10 saved user-defined criteria.

5. (Optional) To load existing user-defined criteria, click **Select criteria**.
   a. Click **Yes**.

   Note

   Applying existing criteria overwrites any criteria currently specified.

   b. Go to the **Saved Criteria** tab.
   c. Select criteria.

      To manage the criteria:

      - Sort the criteria using the **Last Used** column.
      - Delete saved criteria using the **Delete** icon.

   d. Click **Add Saved Criteria**.
6. (Optional) To load C&C callback events, click **Select Criteria**.
   a. Click **Yes**.

   Note

   Applying existing criteria overwrites any criteria currently specified.

   b. Go to the **C&C Callback Events** tab.
   c. Select a criteria.

      Click **Period** to filter the C&C callback events by the specified time.

d. Click **Load C&C Callback Events**.

Note

The **Log Query** screen provides additional details about C&C callback events in case you need to review them before selection. To go to the **Log Query** screen, navigate to **Detections** > **Logs** > **Log Query**, and then filter by **Network Events** > **C&C Callback**.

7. Click **Assess**.

8. On the results pane, review the results that appear.

Note

- Allow some time for the Historical Investigation to run. The investigation appends more rows to the results table as soon as matching objects are found in the metadata. It may take a few minutes for the investigation to complete.
- The data available during Historical Investigations is a subset of Security Agent data and only includes information about high risk file types. If an assessment returns no results, you may want to perform a Live Investigation.

The following details are available:

Column Name	Description
Endpoint	Name of the endpoint containing the matching object Click to view more details about the endpoint.
Status	Current connection status of the endpoint
IP Address	IP address of the endpoint containing the matching object The IP address is assigned by the network
Operating System	Operating system used by the endpoint

Column Name	Description
User	User name of the user logged in when the Security Agent first logged the matched object Click the user name to view more details about the user.
Managing Server	Server that manages the affected endpoint
First Seen	Date and time when the Security Agent first logged the matched object
Details	Click the icon to open the **Match Details** screen. The **Match Details** screen displays the following details: • **Criteria**: Criteria used in the assessment • **First Seen**: Date and time when the Security Agent first logged the matched object • **CLI/Registry Occurrences**: Number of matches found in command line or registry entries Click the value to show more details. • **Rating**: Rating assigned by Trend Micro intelligence You can further examine objects with "Malicious" ratings in Threat Connect or VirusTotal. • **Affected Endpoints**: If the rating is malicious, the number of endpoints where a similar match was found The count only includes endpoints affected within the last 90 days.
Asterisk (*)	Indicates an endpoint tagged as *Important*

9. Identify and select one or more endpoints that require further action.

Note

The Historical Investigation results may include macOS endpoints. Since there are no actions available for macOS endpoints, the check boxes for these endpoints are disabled.

Action	Description
Generate Root Cause Analysis	Generates a Root Cause Analysis to review the sequence of events leading to the execution of the matched object. For details, see *Starting a Root Cause Analysis from an Assessment on page 20-19*.
Start Live Investigation	Runs a new investigation with the same criteria on the current system state. **Important** Only available for Security Agents installed on Windows platforms. The **Live Investigation** screen appears and initiates a new one-time investigation using the existing criteria. For assessments using user-defined criteria, **Live Investigation** uses only the selected endpoints as criteria For details, see *Starting a One-time Investigation on page 20-25*.

Action	Description
Isolate Endpoints	Disconnects the selected endpoints from the network. **Important** Only available for Security Agents installed on Windows platforms. After resolving the security threats on an isolated endpoint, the following locations on the **Directories** > **Users/Endpoints** screen provides options to restore the network connection of an isolated endpoint: • **Endpoints** > **All**: Click the name of an endpoint in the table, and click **Task** > **Restore** on the screen that appears. • **Endpoints** > **Filters** > **Network Connection** > **Isolated**: Select the endpoint row in the table, and click **Task** > **Restore Network Connection**.

Supported Formats for User-defined Criteria

Important

If your environment manages both Apex One on-premises and Apex One as a Service Security Agents, some features may be different compared to Apex One as a Service. Apex One as a Service Security Agents continue to send data to Trend Micro servers but investigation capabilities may differ from the Apex Central as a Service console.

Type	Item
User name (exact match only)	Specify the name of the Active Directory account or local user Examples: • jane_smith **Note** Use the local user account name only (<user name>). Do not include the domain name.
File name (exact match only)	Specify the full file name including extension Example: • filename.exe
File directory (exact match only; on-premises only)	Specify the full path excluding file name Example: • `c:\windows\system32\wbem\`
File hash value (exact match only)	Specify the hash value of a file. Example: • `SHA-1: a2da9cda33ce378a21f54e9f03f6c0c9efba61fa` **Note** Endpoint Sensor records SHA-1 values only by default. To use SHA-256 or MD5 hash values, update the agent policy to include additional hash types.

<table>
<tr><th>Type</th><th>Item</th></tr>
<tr><td>FQDN / IP address / Hostname

(exact match only)</td><td>Specify the remote endpoint FQDN, IP address, or hostname to identify network connections that the investigated endpoint made

Note
The IPv6 format is not supported.

Examples:
• cncserver.com
• malicioussite.com
• 192.168.0.1</td></tr>
<tr><td>Registry key

(partial matching supported)</td><td rowspan="3">Specify the full or partial registry key, value name, or value data

Note
• Trend Micro only records the activity of important registry locations to reduce the resource impact on the endpoint.
If your investigation is unsuccessful and you want to investigate further, perform a Live Investigation.
• Do not specify SID values as registry criteria. Investigations do not support SID values as custom registry criteria.
• Using registry data as investigation criteria has the following limitations:
◦ A criteria can contain up to 10 entries.
◦ Each entry must have at least 2 characters.
◦ Entries cannot contain spaces.</td></tr>
<tr><td>Registry value name

(partial matching supported)</td></tr>
<tr><td>Registry value data

(partial matching supported)</td></tr>
</table>

Type	Item
CLI command (partial matching supported)	Specify the full or partial command line string, and press ENTER to add an entry. **Note** Using command line as investigation criteria has the following limitations: • Criteria can contain up to 10 entries. • Each entry must have at least 2 characters. • Entries cannot contain spaces.

Using OpenIOC files for a Historical Investigation

Note

To perform an investigation on the current system state, use **Live Investigation**.

For more information, see *Starting a One-time Investigation on page 20-25*.

Procedure

1. Go to **Response** > **Historical Investigation**.
2. Click the **OpenIOC file** tab.

Note

Using OpenIOC files in Historical Investigations has the following limitations:

- Only one OpenIOC file can be loaded at a time.
- Any operator specified in the OpenIOC file is changed to `OR`.
- The only supported condition is `IS`. Entries using other conditions are ignored and marked with a strikethrough.
- The only supported indicators are the indicators that are applicable to the collected metadata. Entries using unsupported indicators are ignored and marked with a strikethrough.

  For details, see *Supported IOC Indicators for Historical Investigations on page 20-17*.

3. To upload and investigate using a new OpenIOC file:
   a. Click **Upload OpenIOC File**.
   b. Select a valid OpenIOC file.
   c. Click **Open**.
4. To investigate using an existing OpenIOC file:
   a. Click **Use Existing OpenIOC File**.
   b. Select a file.
   c. Click **Apply**.
5. Click **Assess**.
6. On the results pane, review the results that appear.

Note

- Allow some time for the Historical Investigation to run. The investigation appends more rows to the results table as soon as matching objects are found in the metadata. It may take a few minutes for the investigation to complete.
- Hover over the **Endpoints** label to display a pop-up that displays the progress of the assessment.
- The data available during Historical Investigations is a subset of Security Agent data and only includes information about high risk file types. If an assessment returns no results, you may want to perform a Live Investigation.

The following details are available:

Column Name	Description
Endpoint	Name of the endpoint containing the matching object Click to view more details about the endpoint.
Status	Current connection status of the endpoint
IP Address	IP address of the endpoint containing the matching object The IP address is assigned by the network
Operating System	Operating system used by the endpoint
User	User name of the user logged in when the Security Agent first logged the matched object Click the user name to view more details about the user.
Managing Server	Server that manages the affected endpoint
First Seen	Date and time when the Security Agent first logged the matched object

Column Name	Description
Details	Click the icon to open the **Match Details** screen. The **Match Details** screen displays the following details: • **Criteria**: Criteria used in the assessment • **First Seen**: Date and time when the Security Agent first logged the matched object • **CLI/Registry Occurrences**: Number of matches found in command line or registry entries Click the value to show more details. • **Rating**: Rating assigned by Trend Micro intelligence You can further examine objects with "Malicious" ratings in Threat Connect or VirusTotal. • **Affected Endpoints**: If the rating is malicious, the number of endpoints where a similar match was found The count only includes endpoints affected within the last 90 days.
Asterisk (*)	Indicates an endpoint tagged as *Important*

7. Identify and select one or more endpoints that require further action.

Note

The Historical Investigation results may include macOS endpoints. Since there are no actions available for macOS endpoints, the check boxes for these endpoints are disabled.

Action	Description
Generate Root Cause Analysis	Generates a Root Cause Analysis to review the sequence of events leading to the execution of the matched object. For more information, see *Starting a Root Cause Analysis from an Assessment on page 20-19*.

Action	Description
Start Live Investigation	Runs a new investigation with the same criteria on the current system state. The **Live Investigation** screen appears and initiates a new one-time investigation using the existing criteria. For assessments using an OpenIOC file, **Live Investigation** uses both the current OpenIOC file and selected endpoints as criteria For more information, see *Starting a One-time Investigation on page 20-25*.
Isolate Endpoints	Disconnects the selected endpoints from the network. **Note** After resolving the security threats on an isolated endpoint, the following locations on the **Directories** > **Users/Endpoints** screen provides options to restore the network connection of an isolated endpoint: • **Endpoints** > **All**: Click the name of an endpoint in the table, and click **Task** > **Restore** on the screen that appears. • **Endpoints** > **Filters** > **Network Connection** > **Isolated**: Select the endpoint row in the table, and click **Task** > **Restore Network Connection**.

Supported IOC Indicators for Historical Investigations

An OpenIOC file is an XML file which contains one or more Indicators of Compromise (IOCs). Verify that the OpenIOC file uses indicator terms supported by the type of investigation selected.

The table below lists the IOC indicators supported in investigations.

TABLE 20-2. Supported IOC Indicators for Historical Investigations

CATEGORY	ITEM	REQUIRED CONDITION
DNSENTRYITEM	HOST	IS
	RECORDDATA/HOST	IS
	RECORDDATA/IPV4ADDRESS	IS
FILEITEM	FILENAME	IS
	SHA1SUM	IS
	SHA2SUM	IS
	MD5SUM	IS
PORTITEM	LOCALIP	IS
	REMOTEIP	IS
PROCESSITEM	ARGUMENTS	CONTAINS
	NAME	IS
	SECTIONLIST/ MEMORYSECTION/SHA1SUM	IS
	SECTIONLIST/ MEMORYSECTION/ SHA256SUM	IS
	SECTIONLIST/ MEMORYSECTION/MD5SUM	IS
REGISTRYITEM	KEYPATH	CONTAINS
	VALUE	CONTAINS
	VALUENAME	CONTAINS
	USERNAME	IS

Note

After selection, Endpoint Sensor displays a preview of the OpenIOC file. Review the preview to verify if the OpenIOC file contains supported indicators and conditions. Unsupported combinations are formatted with a strike-through and are ignored during the investigation.

Starting a Root Cause Analysis from an Assessment

The Root Cause Analysis is an investigation tool that displays the sequence of events leading to the execution of the matched object.

If an assessment returns a match, administrators may generate a Root Cause Analysis to:

- List all related objects to the specified criteria
- Identify if any of the related objects are noteworthy
- Review the sequence of events leading to the execution of the matched object.

Generating a Root Cause Analysis may take some time to complete.

Procedure

1. Perform a Historical Investigation.

   On the results pane, review the results that appear.

   For more information, see *Using User-defined Criteria for Historical Investigations on page 20-5*.

2. Identify and select one or more endpoints, and click **Generate Root Cause Analysis**.

3. Specify a name for the new **Root Cause Analysis** task.

4. Review the criteria displayed.

- For assessments using user-defined criteria, generating a **Root Cause Analysis** combines multiple criteria using either the `AND` or `OR` operator.
- For assessments using an OpenIOC file, generating a **Root Cause Analysis** uses the indicators in the current OpenIOC file as criteria.

5. Review the target endpoints.

> **Note**
>
> To remove endpoints from the list, click the delete icon.

6. Specify a period.

   By default, the analysis is performed on all logged dates.

7. Click **Generate**.

8. Go to the **Root Cause Analysis Results** tab to monitor the progress of the analysis.

   Generating a Root Cause Analysis may take some time to complete.

   For more information, see *Root Cause Analysis Results on page 20-21*.

9. After the task to complete, click the **Task** name.

Note

The task name is not displayed as a link if Endpoint Sensor is unable to generate a Root Cause Analysis, and may be due to the following reasons:

- The target endpoint has insufficient data.

  Verify that the data has not been purged. If the agent database reaches the maximum database size limit, Endpoint Sensor purges the oldest logs to make space for new event entries. To avoid this issue, specify a larger agent database size.

- The investigation was unable to find an object that matches all of the conditions specified in the OpenIOC file.

  Assessments ignore all conditions in the OpenIOC file to return the initial results. However, a Root Cause Analysis task adds the conditions back as an additional criteria for the investigation. As a result, the Root Cause Analysis task may be unable to generate results that match both the OpenIOC criteria and its conditions.

10. Review the results.

Root Cause Analysis Results

To monitor the progress of a Root Cause Analysis task, go to **Response** > **Historical Investigation**, and click the **Root Cause Analysis Results** tab.

If an assessment returns a match, administrators may generate a Root Cause Analysis to:

- List all related objects to the specified criteria
- Identify if any of the related objects are noteworthy
- Review the sequence of events leading to the execution of the matched object.

Generating a Root Cause Analysis may take some time to complete.

For more information, see *Starting a Root Cause Analysis from an Assessment on page 20-19*.

The following table lists the investigations details available for review.

Column Name	Description
Status	Progress of the Root Cause Analysis task
Name	Name of the Root Cause Analysis task Click to open the **Analysis Chains** and **Object Details** screens. For more information, see *Analysis Chains on page 20-35*. **Note** The task name is not displayed as a link if Endpoint Sensor is unable to generate a Root Cause Analysis, and may be due to the following reasons: • The target endpoint has insufficient data. Verify that the data has not been purged. If the agent database reaches the maximum database size limit, Endpoint Sensor purges the oldest logs to make space for new event entries. To avoid this issue, specify a larger agent database size. • The investigation was unable to find an object that matches all of the conditions specified in the OpenIOC file. Assessments ignore all conditions in the OpenIOC file to return the initial results. However, a Root Cause Analysis task adds the conditions back as an additional criteria for the investigation. As a result, the Root Cause Analysis task may be unable to generate results that match both the OpenIOC criteria and its conditions.
Criteria	Criteria specified for the Root Cause Analysis task
Matched Objects	Number of matching objects found in the endpoint Click the value to view more details.
Asterisk (*)	Indicates an endpoint tagged as *Important*

Column Name	Description
Endpoint	Name of the endpoint containing the matching object Click the **Endpoint** name to view more details about the endpoint.
IP Address	IP address of the endpoint containing the matching object The IP address is assigned by the network
Started	Date and time when the Root Cause Analysis task was started
Elapsed	Length of time elapsed since starting the task
Creator	User who created the task

To delete a Root Cause Analysis task, select an entry in the table and click **Delete**.

Live Investigations

Live Investigations perform the investigation on the current system state. Live Investigations can be configured to run at specific periods, and also support a wider set of criteria through the use of OpenIOC and YARA rules.

Important

Only available for Security Agents installed on Windows platforms.

Live Investigations support the following criteria:

- **OpenIOC rules**: Use OpenIOC rules to scan for all files currently on the disk.

Note

After selection, Endpoint Sensor displays a preview of the OpenIOC file. Review the preview to verify if the OpenIOC file contains supported indicators and conditions. Unsupported combinations are formatted with a strike-through and are ignored during the investigation.

For more information, see *Supported IOC Indicators for Live Investigations on page 20-32*.

- **YARA rules**: Use YARA rules to scan all processes currently running in memory.

Note

Root Cause Analysis results are only available for YARA rules.

Because Live Investigations run on the current system state, some files and registry entries may be locked or in use during this period. Root Cause Analysis results are not available for investigations using OpenIOC rules or registry search. To generate a Root Cause Analysis using OpenIOC rules or registry data, use Historical Investigation.

For more information, see *Historical Investigations on page 20-4*.

- **Search registry**: Specify registry keys, names and data to match on the target endpoints.

Note

Investigations are performed only on registry values under the following root keys:

- HKEY_CURRENT_USER
- HKEY_CLASSES_ROOT
- HKEY_LOCAL_MACHINE
- HKEY_USERS

Administrators can specify the type of Live Investigation to run:

- A one-time investigation runs only once. The investigation runs immediately after creation.

For more information, see *Starting a One-time Investigation on page 20-25*.

- A scheduled investigation can be configured to run automatically at specific intervals.

  For more information, see *Starting a Scheduled Investigation on page 20-28*.

Live Investigations take some time to complete.

Starting a One-time Investigation

Procedure

1. Go to **Response** > **Live Investigation**.
2. Click the **One Time Investigation** tab.
3. Click **New Investigation**.
4. Specify a **Name** for this investigation.
5. Select a **Method** based on what objects need to be matched:
   - **Scan disk files using OpenIOC**: objects on the disk that match the rules provided in an OpenIOC file

     Note

     After selection, Endpoint Sensor displays a preview of the OpenIOC file. Review the preview to verify if the OpenIOC file contains supported indicators and conditions. Unsupported combinations are formatted with a strike-through and are ignored during the investigation.

     For more information, see *Supported IOC Indicators for Live Investigations on page 20-32*.

   - **Scan in-memory processes using YARA**: objects currently in memory that match the rules provided in a YARA file

- **Search registry**: registry keys, names and data that match criteria defined by the user

6. Click **Select Endpoints** and specify which endpoints to include in the investigation.

Note

The **Target Endpoints** screen may not show all endpoints selected for the investigation.

- A user can only view endpoints where he has been granted sufficient access rights.
- Only available for Security Agents installed on Windows platforms.

7. Click **Start Investigation**.
8. To view the results and monitor the progress of one-time investigations:
   a. Go to **Response** > **Live Investigation**.
   b. Click the **One Time Investigation** tab.

   For details, see *One-Time Investigation on page 20-26*.

One-Time Investigation

A one-time investigation is an investigation that runs only once.

To view the results and monitor the progress of one-time investigations, go to **Response** > **Live Investigation**, and click the **One Time Investigation** tab.

The following details are available for review.

Column	Description
Status	Current state of the investigation
Progress	Percentage of completion of the investigation

Column	Description
Name	User-defined name that identifies the investigation Click to view the investigation results.
Method	Method used by the investigation
Criteria	• File name of the OpenIOC or YARA rule file • User-defined registry value
Matched Endpoints	Number of endpoints that contain an object matching the specified criteria
Target Endpoints	Total number of selected endpoints for investigation Click to view more details about the selected endpoints. **Note** The **Target Endpoints** screen may not show all endpoints selected for the investigation. A user can only view endpoints where he has been granted sufficient access rights.
Started	Date and time when the investigation started
Elapsed	Time elapsed since the start of the investigation
Creator	User who created the investigation

Click **New Investigation** to start a new investigation.

Select at least one investigation to enable the following options:

- **Stop**: Cancels the investigation. Stopped investigations cannot be resumed.
- **Delete**: Stops the investigation, and then removes the investigation from the list. Removed investigations cannot be recovered.

Starting a Scheduled Investigation

Procedure

1. Go to **Response** > **Live Investigation**.
2. Click the **Scheduled Investigation** tab.
3. Click **New Investigation**.
4. Specify a **Name** for this investigation.
5. Select a **Method** based on what objects need to be matched:
   - **Scan disk files using OpenIOC**: objects on the disk that match the rules provided in an OpenIOC file

     Note

     After selection, Endpoint Sensor displays a preview of the OpenIOC file. Review the preview to verify if the OpenIOC file contains supported indicators and conditions. Unsupported combinations are formatted with a strike-through and are ignored during the investigation.

     For more information, see *Supported IOC Indicators for Live Investigations on page 20-32*.
   - **Scan in-memory processes using YARA**: objects currently in memory that match the rules provided in a YARA file
   - **Search registry**: registry keys, names and data that match criteria defined by the user
6. Click **Select Endpoints** and specify which endpoints to include in the investigation.

Note

The **Target Endpoints** screen may not show all endpoints selected for the investigation.

- A user can only view endpoints where he has been granted sufficient access rights.
- Only available for Security Agents installed on Windows platforms.

7. Specify a schedule for this investigation.
   - **Period**: Specify a starting and ending date for the investigation. The investigation only runs within the dates provided. The default period is set to one month.
   - **Frequency**: Specify how often the investigation repeats during the duration of the schedule. The default frequency is set to **Daily** at **08:00**.
8. Click **Start Investigation**.
9. To view the results and monitor the progress of scheduled investigations:
   a. Go to **Response** > **Live Investigation**.
   b. Click the **Scheduled Investigation** tab.

      For details, see *Scheduled Investigation on page 20-29*.
   c. To view details for each schedule run, click the investigation name to open the **Scheduled Investigation History** screen.

      For details, see *Reviewing the Scheduled Investigation History on page 20-31*.

Scheduled Investigation

A scheduled investigation is an investigation that is set to run automatically at certain periods.

To view the results and monitor the progress of scheduled investigations, go to **Response** > **Live Investigation**, and click the **Scheduled Investigation** tab.

The following table lists the details available for review.

Column	Description
Enable	Current state of the investigation
Name	User-defined name that identifies the investigation Click to open the **Scheduled Task History** screen.
Method	Method used by the investigation
Criteria	File name of the OpenIOC file User-defined registry value
Target Endpoints	Total number of selected endpoints for investigation Click to view more details about the selected endpoints. **Note** The **Target Endpoints** screen may not show all endpoints selected for the investigation. A user can only view endpoints where he has been granted sufficient access rights.
Frequency	How often the investigation repeats during the duration of the schedule
Latest Investigation	Date and time when the latest investigation started
Latest Time Elapsed	Time elapsed since the start of the latest investigation
Latest Match Endpoints	Number of endpoints that contain an object matching the specified criteria for the latest investigation
Creator	User who created the investigation

Click **New Investigation** to start a new investigation.

Click **Delete** to stop the investigation, and then removes the investigation from the list. Removed investigations cannot be recovered.

Note

Deleting an OpenIOC file will automatically disable any scheduled investigation that uses the deleted OpenIOC file.

Reviewing the Scheduled Investigation History

Use the **Scheduled Investigation History** screen to view past schedules and monitor the progress of running schedules.

Procedure

1. Access the **Scheduled Investigation History** screen:
   a. Go to **Response** > **Live Investigation**.
   b. On the **Scheduled Investigation** tab, click a value in the **Name** column.
2. Review the details listed in the schedule overview:
   - **Task name**: Name given to the schedule
   - **Period and frequency**: Shows when and how often the schedule runs the investigation.
   - **Method**: Criteria used for each run of the schedule. Click to show the full criteria.
   - **Target endpoints**: Click to view the list of endpoints included in the schedule.
3. Review the investigation details for each run of the schedule.

Column Name	Description
Status	Current state of the investigation
Progress	Percentage of completion of the investigation

Column Name	Description
Matched Endpoints	Number of endpoints that contain an object matching the specified criteria Click to open the **Investigation Results** screen.
Started	Date and time the investigation started
Elapsed	Time elapsed since the start of the investigation For completed investigations, total time spent running the investigation

4. Select at least one investigation to enable the following options:
   - **Stop**: Cancels the investigation. Stopped investigations cannot be resumed.
   - **Delete**: Stops the investigation, and then removes the investigation from the list. Removed investigations cannot be recovered.

Supported IOC Indicators for Live Investigations

An OpenIOC file is an XML file which contains one or more Indicators of Compromise (IOCs). Verify that the OpenIOC file uses indicator terms supported by the type of investigation selected.

The table below lists the IOC indicators supported in investigations.

Important

When choosing an IOC file, you must ensure that the IOC indicators include the location of the file to match (either "FileItem/FullPath" or "FileItem/FilePath").

Category	Item	Required Condition	Notes
FILEITEM	FULLPATH	IS	Refers to a complete directory path, file name, and extension
	FILEPATH	IS, CONTAINS, STARTS-WITH, ENDS-WITH	Partial matching supported
	FILENAME	IS, CONTAINS, STARTS-WITH, ENDS-WITH	Partial matching supported
	MD5SUM	IS	
	SHA1SUM	IS	
	SHA256SUM	IS	
	SIZEINBYTES	IS	
	CREATED	GREATER-THAN, LESS-THAN	Required format (in UTC): yyyy-mm-ddThh:mm:ss
	MODIFIED	GREATER-THAN, LESS-THAN	Required format (in UTC): yyyy-mm-ddThh:mm:ss
	ACCESSED	GREATER-THAN, LESS-THAN	Required format (in UTC): yyyy-mm-ddThh:mm:ss

Note

After selection, Endpoint Sensor displays a preview of the OpenIOC file. Review the preview to verify if the OpenIOC file contains supported indicators and conditions. Unsupported combinations are formatted with a strike-through and are ignored during the investigation.

Investigation Results

Use the **Investigation Results** screen to get a quick overview of the investigation results. This screen is accessible from the following locations:

- On the **One Time Investigation** tab, click the investigation **Name**.
- On the **Scheduled Investigation** tab, click the investigation **Name**, and then click a value in the **Matched Endpoints** column.

This screen displays the following information:

- A doughnut chart that shows the number of total endpoints already classified as **Matched, No Match, Queued** or **Cancelled**

  A summary of the totals is given on the left of the chart. This summary updates in real time as the investigation progresses.

Icon	Label	Description
	Matched	Number of investigated endpoints containing a matching object
	No match	Number of investigated endpoints that did not have a matching object
	Queued	Number of endpoints still to be investigated. An investigation is complete once there are no more queued endpoints to investigate.
	Cancelled	Number of endpoints not investigated. This may be due to user cancellation, system error, or endpoint timeout.

- Parameters used when the investigation was created.

  Click **Criteria** to review the search conditions used by the investigation.

- A table of results which provides more details about each endpoint included in the investigation.

  This table groups the endpoints into tabs based on the investigation status. This table displays the following details:

Column Name	Description
Asterisk (*)	Indicates an endpoint tagged as “Important”

Column Name	Description
Endpoint	Name of the endpoint containing the matching object Click the **Endpoint** name to view more details about the endpoint.
IP Address	IP address of the endpoint containing the matching object The IP address is assigned by the network.
Operating System	Operating system used by the endpoint
User	User name of the user logged in when the Endpoint Sensor agent first logged the matched object Click the user name to view more details about the user.
Match Details	Click to view details of the match.
Root Cause Analysis	Click to view the **Root Cause Analysis** screen. **Note** Root Cause Analysis results are only available for YARA rules. Because Live Investigations run on the current system state, some files and registry entries may be locked or in use during this period. Root Cause Analysis results are not available for investigations using OpenIOC rules or registry search. To generate a Root Cause Analysis using OpenIOC rules or registry data, use Historical Investigation. For details, see *Starting a Root Cause Analysis from an Assessment on page 20-19*.
Elapsed	Time elapsed since the investigation started.

Analysis Chains

The **Analysis Chains** tab displays the Root Cause Analysis and also highlights additional information which might be beneficial to the investigation.

Threat Investigations can correlate information from Endpoint Sensor and Active Directory to display attack information about endpoints and user accounts throughout your network.

Information	Description
Target Endpoint	Displays details about the endpoint that was investigated Click the endpoint name and user name to view details. Click **Isolate Endpoint** to disconnect the endpoint from the network. During isolation, the agent can only communicate with the server. **Note** After resolving the security threats on an isolated endpoint, the following locations on the **Directories** > **Users/Endpoints** screen provides options to restore the network connection of an isolated endpoint: • **Endpoints** > **All**: Click the name of an endpoint in the table, and click **Task** > **Restore** on the screen that appears. • **Endpoints** > **Filters** > **Network Connection** > **Isolated**: Select the endpoint row in the table, and click **Task** > **Restore Network Connection**.
First Observed Object	The first object in the analysis chain suspected to have been responsible for the creation of the investigated object. This is often the entry point of a targeted attack. Hover over an object and click 🔍 to locate the object in the Analysis Chain.
Matched Objects	Displays the object or a list of objects matching the investigation criteria Hover over an object and click 🔍 to locate the object in the Root Cause Analysis.

Information	Description
Noteworthy Objects	Highlights objects in the chain that are possibly malicious, based on existing Trend Micro intelligence The value counts the number of unique noteworthy objects in the chain. Click to view the list of noteworthy objects. Hover over an object and click  to locate the object in the Analysis Chain.
Root Cause Analysis area	Displays a visual analysis of the objects involved in an event **Note** If the number of nodes in the analysis chain exceeds the presentation limit, only the main analysis chains are displayed. To avoid this issue, refine the investigation criteria. Click any available node to view more information about the selected object. For more information on how to interpret Analysis Chains, see: • *Object Details: Profile Tab on page 20-38* **Note** The **Profile** tab is the default view if no other tabs are available for a selected object. • *Object Details: Related Objects Tab on page 20-39* • *Navigating the Analysis Chain on page 20-40* • *Root Cause Analysis Icons on page 20-41*

Note

To export the data, click and perform one of the following:

- Select **Analysis Chains** to export all root cause chains as `.png` files.
- Select **Object Details** to export all data as CSV files.

Object Details: Profile Tab

The **Profile** tab shows the details applicable for the selected object type.

Some objects may show only a limited set of details, or may not have any details available at the time of execution.

Note

You can further examine objects with "Malicious" ratings in Threat Connect or VirusTotal.

The tab may also display additional options for **Matched Objects** and **Noteworthy Objects**.

Option	Description
Terminate Object	Terminates all running instances of the object only on the target endpoint's current state **Note** This action is available only for unrated, malicious, and suspicious "process" type objects. To verify if the command was successful, go to **Administration** > **Command Tracking**.

Option	Description
Add to Suspicious Objects List	Terminates all running instances of the object only on the target endpoint's current state, and then adds the object to the **User-Defined Suspicious Object** list **Note** If Application Control is enabled, processes that match the hash value of objects added to the **User-Defined Suspicious Object** list are not allowed to run on all endpoints. Endpoint Sensor also terminates "process" type objects before adding them to the list, and Application Control prevents them from starting again.
Add to Historical Investigation List	Adds the object as criteria for a new Historical Investigation To start the investigation, click the **Start a Historical Investigation** button above the Analysis Chain. **Note** If you decide that you no longer want to perform a Historical Investigation on an object in the Analysis Chain, click the object and then click the **Remove from Historical Investigation List** button. For more information, see *Using User-defined Criteria for Historical Investigations on page 20-5*.

Object Details: Related Objects Tab

The **Related Objects** tab displays all the dependencies of the selected object.

Note

The **Related Objects** tab only displays additional information for "Process" objects.

These are the objects required to run the matched object. This tab displays the following details:

Property	Description
Action	Action done by the object
Logged	Date and time of the recorded action
Rating	Rating assigned to the object based on Trend Micro intelligence
Affected Endpoints	Affected endpoints, if any
Destination path	Target destination of the object

The following options are available to manage the **Related Objects** tab:

- The tab provides a drop-down that can filter objects based on the specified action. Click the drop down to view all available actions.
- Click **Show details** to view more details about the object.

Navigating the Analysis Chain

To navigate the analysis chain, click and drag the area or use the available navigation icons.

Icon	Description
	A Root Cause Analysis can contain one or more matched root cause chains. Click the drop-down to view other analysis chains for the selected endpoint.
Start a Historical Investigation	Click to start a Historical Investigation using the objects in the Historical Investigation list. If there are no objects in the Historical Investigation list, this feature is not available. To enable this feature, add at least one matched object or noteworthy object to the Historical Investigation list.

Icon	Description
	Click to enter full screen mode. Click again to exit full screen mode.
	Click to zoom in or zoom out.
	Hover to view an explanation of the symbols appearing in the analysis chain. For more information, see *Root Cause Analysis Icons on page 20-41*.

Root Cause Analysis Icons

The analysis chain shows object types using the following icons:

Icon	Name	Description
	First Observed Object	Marks an object that most likely created the matched object
	Matched Criteria	Marks objects matching the investigation criteria
	Normal Object	Marks objects that have been verified to not pose a threat These are usually common system files.

Icon	Name	Description
	Unrated Object	Marks objects that have not yet been rated
	Suspicious Object	Marks objects that exhibit behaviors that are similar to known threats
	Malicious Object	Marks objects that match a known threat
	Boot	Objects that launch during system startup
	Browser	Objects that are capable of displaying web pages, usually a web browser
	Email client	Objects that can send and receive email messages, usually an email client or server
	File	Objects that are files on the disk
	Network	Objects related to network connections or the Internet
	Process	Objects that are processes running during the time of execution
	Registry	Objects that are registry keys, entries or data
	Event	Indicates actions done by the object
	Association	Indicates relationships between two objects

Object Details

The **Object Details** tab displays the same information as the **Root Cause Analysis** tab, but presents the information as a table. It also organizes the objects into the following tabs:

- **Objects**: Objects involved in the execution of the matched object, grouped by their parent processes. Click ▸ to expand the list.
- **Noteworthy events**: Objects in the chain that are possibly malicious, based on existing Trend Micro intelligence
- **File events**: Objects in the chain that are files
- **Registry events**: Objects in the chain that are registry keys, data and entries
- **IP address / DNS events**: Objects that are IP addresses or DNS events

The table provides the following details:

Column Name	Description
Recorded Object	Name of the recorded object Click the object name to view more details.
PID	Process ID of the recorded object
Recorded	Date and time when the object became involved in the chain
Activity	Action done by the object Click the object name to view more details.
Object Reputation	Rating assigned to the object based on Trend Micro intelligence You can further examine objects with “Malicious” ratings in Threat Connect or VirusTotal.

Column Name	Description
Affected Endpoints	Number of endpoints where the object appears Percentage of endpoints affected, based on the total number of endpoints on the network Click the value to view more details about the endpoint.

Use the following options to manage the table:

- On all tabs, select at least one object in the **Recorded Object** column, and click **Start a Historical Investigation** to start another investigation.
- On the **Objects** tab, click the filter icon ( ) to filter the table according to the specified criteria.
- On the **File events** tab, sort the table by clicking on the **Recorded** and **Object Reputation** columns.

Chapter 21

Managed Detection and Response

This chapter discuses how to configure Managed Detection and Response settings and administer investigation tasks using the Apex Central console.

Topics include:

- *Managed Detection and Response Overview on page 21-2*
- *Tracking Managed Detection and Response Task Commands on page 21-16*
- *Querying Supported Targets on page 21-18*
- *The Threat Investigation Center Agent for Managed Detection and Response on page 21-20*

Managed Detection and Response Overview

The **Managed Detection and Response** screen allows you to deploy Managed Detection and Response settings and investigation tasks to specified targets from the Apex Central console.

Tip

- To view the status of Managed Detection and Response task commands, use the **Command Tracking** screen.

  For more information, see *Tracking Managed Detection and Response Task Commands on page 21-16*.

- To perform an advanced search for targets that support the Managed Detection and Response Service, use the **User/Endpoint Directory** screen.

  For more information, see *Querying Supported Targets on page 21-18*.

Use the **Managed Detection and Response** screen to perform the following tasks.

Task	Description
Register to the Threat Investigation Center server	Click the **Settings** tab to register Apex Central to the Threat Investigation Center server. Apex Central integrates with Trend Micro Threat Investigation Center to enable Managed Detection and Response capabilities. For more information, see *Registering Apex Central to the Threat Investigation Center on page 21-3*.
Unregister from the Threat Investigation Center server	Click the **Settings** tab to unregister Apex Central to the Threat Investigation Center server. For more information, see *Unregistering from the Threat Investigation Center Server on page 21-5*.

Task	Description
Suspend or resume the Managed Detection and Response Service	Click the **Settings** tab to suspend or resume the Managed Detection and Response Service. **Important** Suspending the Managed Detection and Response Service stops the receipt of new investigation tasks and the sending of logs to the Threat Investigation Center server. Apex Central does not cancel any ongoing tasks and the results are still sent to the Threat Investigation Center server. For more information, see *Suspending or Resuming the Managed Detection and Response Service on page 21-6*.
Approve or reject new investigation tasks	Click the **Pending Tasks** tab to approve or reject new investigation tasks. For more information, see *Approving or Rejecting Investigation Tasks on page 21-7*.
Track deployed investigation tasks	Click the **Task Tracking** tab to track and view approved or rejected investigation tasks and commands. For more information, see *Tracking Investigation Tasks on page 21-12*.
View automated analyses	Click the **Automated Analyses** tab to view information about the log data that Trend Micro collects to further protect your network. For more information, see *Viewing Automated Analyses on page 21-15*.

Registering Apex Central to the Threat Investigation Center

Apex Central integrates with Trend Micro Threat Investigation Center to enable Managed Detection and Response capabilities.

Important

- Managed Detection and Response capabilities require purchasing a service plan to obtain a valid server address and company GUID. Contact Trend Micro sales or your reseller to purchase a service plan.

Procedure

1. Go to **Response** > **Managed Detection and Response**.

   The **Managed Detection and Response** screen appears.

2. Click the **Settings** tab.

3. Specify the following information:

   - **Server address**: The Threat Investigation Center server address provided by Trend Micro sales or your reseller
   - **Company GUID**: The Managed Detection and Response Service GUID provided by Trend Micro sales or your reseller

4. Configure automatic approval settings for new investigation tasks.

   Note

   - If automatic approval is enabled, Apex Central will send email notifications to inform recipients of new automatically approved investigation tasks.
   - If automatic approval is disabled, Apex Central will send email notifications for all new investigation tasks to request manual approval.

   - Select the **Automatically approve investigation tasks** check box to enable automatic approval of new investigation tasks.
   - Clear the **Automatically approve investigation tasks** check box to disable automatic approval of new investigation tasks.

5. (Optional) Configure notification recipients.

   Note

   - You can add new user accounts on the **User Accounts** screen (**Administration** > **Account Management** > **User Accounts**).
   - You can add new contact groups on the **Contact Groups** screen (**Detections** > **Notifications** > **Contact Groups**).

- To add recipients, select contacts from the **Available Users and Groups** list and click **>**.

  The selected contacts appear in the **Selected Users and Groups** list.

- To remove recipients, select contacts from the **Selected Users and Groups** list and click **<**.

  The selected contacts appear in the **Available Users and Groups** list.

6. Click **Register**.

   - The **Server address** field displays the address of the registered Threat Investigation Center server.
   - The **Sender ID** field replaces the **Company GUID** field and displays the GUID of the Apex Central server that receives investigation tasks from the registered Threat Investigation Center server.

Unregistering from the Threat Investigation Center Server

Important

Unregistering automatically disables the Managed Detection and Response Service.

Procedure

1. Go to **Response** > **Managed Detection and Response**.

   The **Managed Detection and Response** screen appears.

2. Click the **Settings** tab.
3. Click **Unregister**.

   A confirmation dialog appears.

4. Click **Unregister**.

The Managed Detection and Response Service automatically disables.

Suspending or Resuming the Managed Detection and Response Service

Important

Suspending the Managed Detection and Response Service stops the receipt of new investigation tasks and the sending of logs to the Threat Investigation Center server. Apex Central does not cancel any ongoing tasks and the results are still sent to the Threat Investigation Center server.

Procedure

1. Go to **Response** > **Managed Detection and Response**.

   The **Managed Detection and Response** screen appears.

2. Click the **Settings** tab.

3. To suspend the Managed Detection and Response Service:

   a. Click **Suspend Service**.

   b. On the confirmation dialog that appears:

      - Click **Suspend Service** to suspend the Managed Detection and Response Service.
      - Click **Cancel** to return to the **Settings** screen without suspending the Managed Detection and Response Service.

4. To resume the Managed Detection and Response Service, click **Resume Service**.

   Apex Central resumes the receipt of new investigation tasks and the sending of logs to the Threat Investigation Center server.

Approving or Rejecting Investigation Tasks

The **Pending Tasks** tab on the **Managed Detection and Response** screen displays investigation tasks submitted by the Threat Investigation Center that require manual administrator approval. You can view targets and commands for specific tasks, modify selected targets, and approve or reject selected tasks.

For more information about the Threat Investigation Center task commands that display on the **Managed Detection and Response** screen, see *Threat Investigation Center Task Commands on page 21-10*.

Tip

To view the status of Managed Detection and Response task commands, use the **Command Tracking** screen.

For more information, see *Tracking Managed Detection and Response Task Commands on page 21-16*.

Important

- Apex Central only retains investigation task information for 90 days after submission by the Threat Investigation Center.
- By default, new investigation tasks that are not approved or rejected within 72 hours of receipt by Apex Central will automatically time out.

  For more information about investigation task command statuses, see *Threat Investigation Center Command Statuses on page 21-14*.

Procedure

1. Go to **Response** > **Managed Detection and Response**.

   The **Managed Detection and Response** screen appears.

2. Click the **Pending Tasks** tab.

   A table appears and displays a list of investigation tasks with the following information:

Column	Description
Task Description	The task name manually specified by the Threat Investigation Center administrator
Command	The task command to deploy to selected targets For more information about the Threat Investigation Center task commands that display on the **Managed Detection and Response** screen, see *Threat Investigation Center Task Commands on page 21-10*.
Targets	The number of targets for the task
Expiration	The local time on the Apex Central server for when the task will expire **Important** By default, new investigation tasks that are not approved or rejected within 72 hours of receipt by Apex Central will automatically time out. For more information about investigation task command statuses, see *Threat Investigation Center Command Statuses on page 21-14*.

3. To view targets for a pending task, click the right arrow icon (▶) next to the **Task Description** field.

   A table appears and displays the following details:

Column	Description
Endpoint	The name of the target endpoint
IP Address	The IP address of the target endpoint
User	The name of the user that last logged on to the target endpoint

Column	Description
Endpoint Sensor Service	The status of the Endpoint Sensor Service on the target endpoint For more information, see *Endpoint Sensor Service Statuses on page 21-11*. **Important** In order for Apex Central to deploy investigation tasks to a specified target, the Endpoint Sensor Service must be enabled on the target.

4. To approve pending investigation tasks:

   a. Select the check box next to the name of each task that you want to approve.

   Note
   Selecting a check box for a task selects all targets for that task.

   b. Click the right arrow icon (▶) next to a task name to modify selected targets for the task.

   Important
   In order for Apex Central to deploy investigation tasks to a specified target, the Endpoint Sensor Service must be enabled on the target.

   - Select check box(es) next to the target(s) that you want to include.
   - Clear check box(es) next to the target(s) that you want to exclude.

   c. Repeat the previous steps for each pending task.

   d. Click **Approve**.

   Approved tasks display on the **Task Tracking** tab.

For more information, see *Tracking Investigation Tasks on page 21-12*.

5. To reject pending investigation tasks:

   a. Select the check box next to the name of each task that you want to reject.

   Note

   Selecting a check box for a task selects all targets for that task.

   b. Click the right arrow icon (▶) next to a task name to modify selected targets for the task.

      - Select check box(es) next to the target(s) that you want to include.
      - Clear check box(es) next to the target(s) that you want to exclude.

   c. Repeat the previous steps for each pending task.

   d. Click **Reject**.

      Rejected tasks display on the **Task Tracking** tab.

      For more information, see *Tracking Investigation Tasks on page 21-12*.

Threat Investigation Center Task Commands

The following table describes the Threat Investigation Center task commands that display on the Apex Central **Managed Detection and Response** screen.

Command Name	Description
Collect File Samples	Collects samples of suspicious files from target endpoints and sends the samples to the Threat Investigation Center

Command Name	Description
Run Trend Micro Investigation Kit	Deploys and executes the Trend Micro Investigation Kit on target endpoints
Run Advanced Threat Assessment	Deploys and executes the Trend Micro Anti-Threat Toolkit on target endpoints
Evaluate Impact	Starts an impact evaluation on target endpoints
Run Root Cause Analysis	Starts a root cause analysis on target endpoints by using criteria specified by the Threat Investigation Center administrator

Endpoint Sensor Service Statuses

The following table describes the agent statuses that display in the **Endpoint Sensor Service** column on the **Pending Tasks** tab.

Status	Description
Enabled	The target endpoint has Endpoint Sensor enabled **Important** In order for Apex Central to deploy investigation tasks to a specified target, the Endpoint Sensor Service must be enabled on the target.
Disabled	The target endpoint has Endpoint Sensor disabled
Server license not supported	The Apex One license does not support the Endpoint Sensor Service
Requires a supported Security Agent version	The target endpoint does not have the Security Agent installed or the server version of the target endpoint is not supported

Tracking Investigation Tasks

Use the **Task Tracking** tab on the **Managed Detection and Response** screen to track and view the statuses of approved or rejected investigation tasks and commands.

Tip

To view the status of Managed Detection and Response task commands, use the **Command Tracking** screen.

For more information, see *Tracking Managed Detection and Response Task Commands on page 21-16*.

Important

Apex Central only retains investigation task information for 90 days after submission by the Threat Investigation Center.

Procedure

1. Go to **Response** > **Managed Detection and Response**.

   The **Managed Detection and Response** screen appears.

2. Click the **Task Tracking** tab.

   A table appears and displays a list of investigation tasks with the following information:

Column	Description
Task Description	The task name manually specified by the Threat Investigation Center administrator
Command	The task command to deploy to selected targets For more information, see *Threat Investigation Center Task Commands on page 21-10*.
Targets	The number of targets for the task

Column	Description
Task Status	The deployment status of the investigation task For more information, see *Threat Investigation Center Task Statuses on page 21-13*.
Last Updated	The local time on the Apex Central server of the latest status update

3. Click the right arrow icon (▶) next to a task description to view task command information.

   A table appears and displays the following details:

Column	Description
Command Status	The deployment status of the task command For more information, see *Threat Investigation Center Command Statuses on page 21-14*.
Endpoint	The name of the target endpoint
IP Address	The IP address of the target endpoint
User	The name of the user that last logged on to the target endpoint
Approved / Rejected	The local time on the Apex Central server for when the task was approved or rejected by the administrator
Approved / Rejected By	The user account name of the administrator that approved or rejected the task
Last Updated	The local time on the Apex Central server of the latest status update

Threat Investigation Center Task Statuses

The following table describes the statuses of the Threat Investigation Center tasks that display on the **Task Tracking** tab of the **Managed Detection and Response** screen.

For more information about the Threat Investigation Center task commands that display on the **Managed Detection and Response** screen, see *Threat Investigation Center Task Commands on page 21-10*.

Status	Description
In progress	Scenarios include: • The task was approved but has not been deployed to the Apex One server • The task command was deployed to the Apex One server but has not been completed on the specified targets
Completed	The task was approved or rejected by the Apex Central administrator and completed on the specified targets successfully or unsuccessfully For more information, see *Threat Investigation Center Command Statuses on page 21-14*.

Threat Investigation Center Command Statuses

The following table describes the command statuses that display on the **Task Tracking** screen.

Status	Description
Pending approval	The task has not been approved or rejected by the Apex Central administrator
Rejected	The task has been rejected by the Apex Central administrator
Sending command	The task was approved and Apex Central is sending the task command to the specified targets
In progress	The task command was deployed to the Apex One server but has not been completed on the specified targets
Uploading	The managed product is uploading the task payload
Successful	The task command completed on the specified targets successfully

Status	Description
Unable to process command	The task command completed on the specified targets unsuccessfully
Command time-out	Scenarios include: • The task was not approved by the Apex Central administrator within 72 hours of receipt • The managed product was unable to complete the task command within 9 days after approval • The task command timed out on the Apex One server
No response from agent	The Apex One server is unable to establish communication with the target agent
Endpoint Sensor disabled	The target endpoint has Endpoint Sensor disabled
Requires a supported Security Agent version	The target endpoint does not have the Security Agent installed or the server version of the target endpoint is not supported
Server license not supported	The Apex One license does not support the Endpoint Sensor Service

Viewing Automated Analyses

Trend Micro periodically performs automated analyses to collect log data to further protect your network. Use the **Automated Analyses** tab to view information about the logs that Trend Micro collects.

Important

Apex Central only retains investigation task information for 90 days after submission by the Threat Investigation Center.

Procedure

1. Go to **Response** > **Managed Detection and Response**.

The **Managed Detection and Response** screen appears.

2. Click the **Automated Analyses** tab.

   A table appears and displays the following details:

Column	Description
Start Time	The local time on the Trend Micro server for when the automated analysis task started
End Time	The local time on the Trend Micro server for when the automated analysis task completed
Status	The status of the automated analysis task
Command	The type of automated analysis task
Target	The endpoint name or number of targets of the automated analysis task

3. Click a count in the **Target** column to view targets.

   The **Targets** screen appears and displays a list of affected endpoints.

Tracking Managed Detection and Response Task Commands

Use the **Command Tracking** screen to query and view details of Managed Detection and Response task commands issued by the Apex Central server.

For information about tracking Threat Investigation Center task commands that display on the **Managed Detection and Response** screen, see *Tracking Investigation Tasks on page 21-12*.

Procedure

1. Go to **Administration** > **Command Tracking**.

   The **Command Tracking** screen appears.

2. To filter the command list, specify the following:

   - **Issued**: Specify when Apex Central sent the task command
   - **Command**: Select the command type

     Apex Central Managed Detection and Response task commands include the following:

Command Name	Description
Deploy Threat Investigation Center settings to managed products	Command for deploying Threat Investigation Center settings to managed products
Deploy Threat Investigation Center tasks to managed products	Command for deploying Threat Investigation Center tasks to managed products
Renew Threat Investigation Center certificate	Command for renewing the Threat Investigation Center certificate on the Apex Central server **Note** The Threat Investigation Center server automatically deploys a task to renew the Threat Investigation Center certificate on the Apex Central server 30 days prior to the certificate expiration date.
Pull Threat Investigation Center tasks	Command for pulling tasks from the Threat Investigation Center server **Note** This command only displays on the **Command Tracking** screen if the task command is unsuccessful.

   - **User**: Provide the user account name used to send the command

Tip

Leave this field blank to query commands issued by all users.

- **Status**: Select one or more command statuses and click **Apply**.

3. Click the count in the **Successful**, **Unsuccessful**, **In Progress**, or **All** column to view detailed command information.

   The **Command Details** screen appears.

   For more information, see *Command Details on page 12-4*.

Command Details

The **Command Details** screen displays the following information about an issued command.

Column Name	Description
Last Reported	The date and time when the managed product last sent a response to the Apex Central server
Server/Entity	The host name of the managed product server
Status	The status of the issued command
Description	Additional details about the command status

Note

The **Command Details** screen refreshes every 30 seconds.

Querying Supported Targets

Use the **User/Endpoint Directory** screen to perform an advanced search for targets that support the Managed Detection and Response Service.

Procedure

1. Go to **Directories** > **Users/Endpoints**.

   The **User/Endpoint Directory** screen appears.

2. Click the **Advanced** link above the table.

3. In the **Search** drop-down control, select **Endpoints**.

   The search criteria in the second drop-down control dynamically changes based on your selection.

4. In the second drop-down control, select **Services**.

   A third drop-down control and a fourth drop-down control appear.

5. In the third drop-down control, select **Endpoint Sensor**.

6. In the fourth drop-down control, select the agent status:

   - **Enabled**: Searches for endpoints that have the Endpoint Sensor Service enabled
   - **Disabled**: Searches for endpoints that have the Endpoint Sensor Service disabled

7. Add multiple search criteria using the Boolean operators to the right of the filters.

   - **OR**: Allows you to search for multiple values for the specified criteria. All records that match either value display.
   - **AND**: Allows you to select a new search criteria. Only records that match the values specified for this criteria and all other selected criteria values display.

8. Display results by clicking one of the following:

   - **Search**: Displays the search results in the list but does not save the search criteria.
   - **Save as New Custom Filter**: Displays the search results in the list and prompts you to save the search criteria to a custom filter. The

custom filter displays under the **Endpoints** node in the User/ Endpoint Directory tree.

9. (Optional) Use the drop-down controls below the **Endpoints** tab to specify the time period for the data that displays or to switch between**Tabular view** and **Tabular view**.

10. (Optional) Click **Export** to export the data as a `*.csv` file or `*.png` image.

Note

- **Tabular view** only supports exporting data as a `*.csv` file.
- **Timeline view** can export data as a `*.csv` file or a `*.png` image.

The Threat Investigation Center Agent for Managed Detection and Response

The Threat Investigation Center Agent for Managed Detection and Response automatically sends the following information from the Apex Central server to the Threat Investigation Center server.

Data Type	Description
Apex Central detection logs	Includes logs related to system events, network events, and data protection events detected by managed products registered to the Apex Central server
Apex Central information	Includes Apex Central server information
Managed product information	Includes information about Trend Micro products registered to the Apex Central server
Managed endpoint information	Includes information about endpoints managed by Trend Micro products registered to the Apex Central server

Chapter 22

Suspicious Object Hub and Node Architecture

This section presents material administrators need to synchronize suspicious object lists across multiple Apex Central servers.

Topics include:

- *Suspicious Object Hub and Node Apex Central Servers on page 22-2*
- *Configuring the Suspicious Object Hub and Nodes on page 22-3*
- *Unregistering a Suspicious Object Node from the Hub Apex Central on page 22-5*
- *Configuration Notes on page 22-5*

Suspicious Object Hub and Node Apex Central Servers

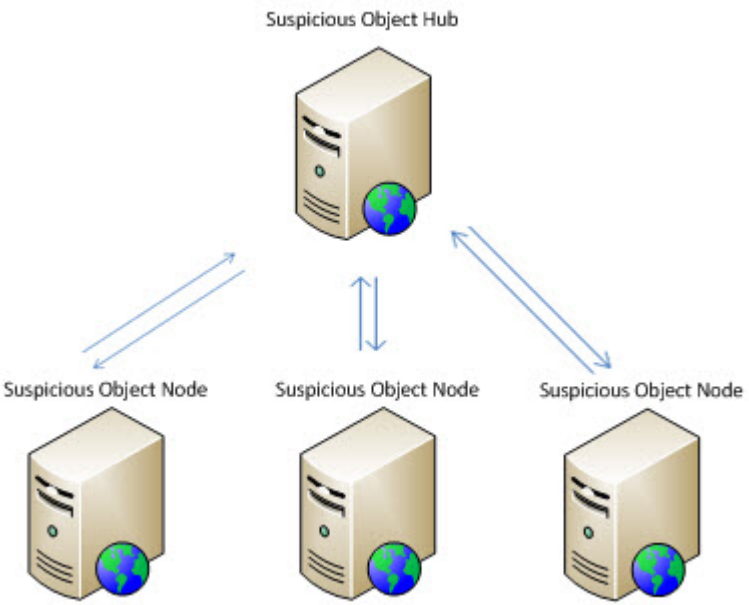
Trend Micro Apex Central™ Suspicious Object Hub and Node architecture allows you to synchronize suspicious object lists across multiple Apex Central servers. The suspicious object lists on the Hub Apex Central server consolidate the suspicious object lists from all Node Apex Central servers, and any other managed products registered to any of these servers, and then deploys the lists back to the Node Apex Central servers.

Administrators must first configure a Suspicious Object Hub Apex Central server and, depending on the environment, assign other Apex Central servers to act as Suspicious Object Node servers. Trend Micro Deep Discovery products can register to the Suspicious Object Hub or any Suspicious Object Node Apex Central server. This architecture requires that you configure all suspicious object actions through the Suspicious Object Hub Apex Central server console.

Important

You must perform all operations on the suspicious object lists through the Suspicious Object Hub Apex Central to ensure that all Node Apex Central servers remain properly synchronized.

Scan actions performed on suspicious objects though a Suspicious Object Node Apex Central may not synchronize to all connected servers.



Configuring the Suspicious Object Hub and Nodes

Procedure

1. Log on to the Suspicious Object Hub Apex Central server console.
2. Go to **Threat Intel** > **Distribution Settings**.

   The **Distribution Settings** screen appears.
3. Click the **Managed Products** tab and copy (write down) the following settings:
   - **Service URL**
   - **API key**

4. Log on to the Suspicious Object Node Apex Central server console.
5. Go to **Threat Intel** > **Distribution Settings**.

   The **Distribution Settings** screen appears.
6. On the **Hub Apex Central** tab, provide the following settings copied from the Suspicious Object Hub Apex Central:
   - **Service URL**
   - **API key**
7. (Optional) Select the **Use a proxy server** check box to connect to the Hub Apex Central through a proxy server.

   Note

   To configure or modify proxy server settings, click **Configure proxy settings**.
8. Click **Register**.

   A confirmation dialog appears with a message indicating that the server is properly registered to the Hub Apex Central.
9. Repeat the process for each Suspicious Object Node Apex Central server.
10. To configure the default synchronization interval:
    a. Select a time period from the **Sync every** drop-down.
    b. Click **Save**.

Unregistering a Suspicious Object Node from the Hub Apex Central

Note

After unregistering a Node Apex Central server, all previously synchronized objects remain in the Node Apex Central server suspicious object lists.

Procedure

1. Log on to the Suspicious Object Node Apex Central server console.
2. Go to **Threat Intel** > **Distribution Settings**.

   The **Distribution Settings** screen appears.
3. In the **Hub Apex Central Settings** section, click **Unregister**.

   A confirmation dialog appears with a message indicating that the server is properly unregistered from the Hub Apex Central.
4. If you are completely stopping the Suspicious Object Hub and Node deployment, repeat the process for each Suspicious Object Node Apex Central server.

Configuration Notes

After successfully setting up the Suspicious Object Hub and registering the Suspicious Object Node Apex Central servers, note the following configuration information.

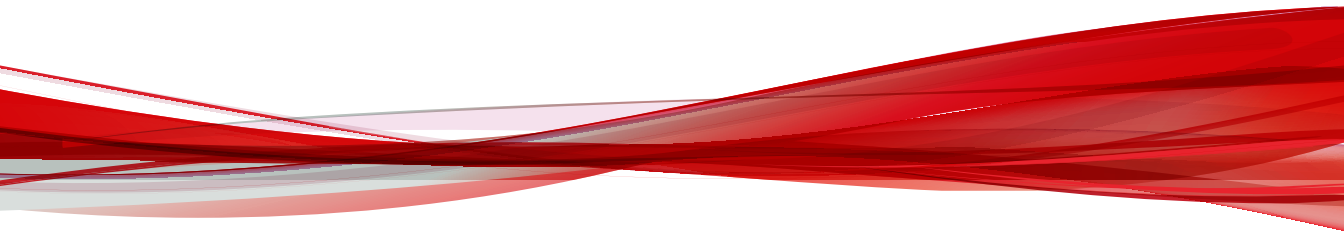
Note

After unregistering a Node Apex Central server, all previously synchronized objects remain in the Node Apex Central server suspicious object lists.

<table>
<tr><th>CONFIGURATION</th><th>HUB APEX CENTRAL</th><th>NODE APEX CENTRAL</th></tr>
<tr><td>Synchronization interval</td><td>N/A</td><td>5 minutes (default)</td></tr>
<tr><td rowspan="2">Suspicious Object list synchronization</td><td>From the Hub Apex Central to Nodes:
• Virtual Analyzer list
• User-Defined list</td><td>From a Node Apex Central to the Hub:
• Virtual Analyzer list</td></tr>
<tr><td colspan="2">Note
• The Hub Apex Central server does not send data from the Notes column of the User-Defined list or the Exception list to the Node Apex Central servers.
• When synchronizing lists, the User-Defined list has a higher priority than the Virtual Analyzer list.
  • If an object is added to both the User-Defined list and the Virtual Analyzer list on the Hub Apex Central before the next synchronization, the Hub Apex Central server deploys both lists to the Node Apex Central servers.
  • If an object in the Node Apex Central Virtual Analyzer list also exists in the Hub Apex Central User-Defined list, the suspicious object risk level changes to “High” on the Node Apex Central Virtual Analyzer list during the next synchronization.</td></tr>
<tr><td>Configuring Suspicious Object settings</td><td>Recommended
Configuring Suspicious Objects through the Hub Apex Central ensures consistency across the registered Node Apex Central servers.</td><td>N/A</td></tr>
</table>

Part VII

Automation Center



Chapter 23

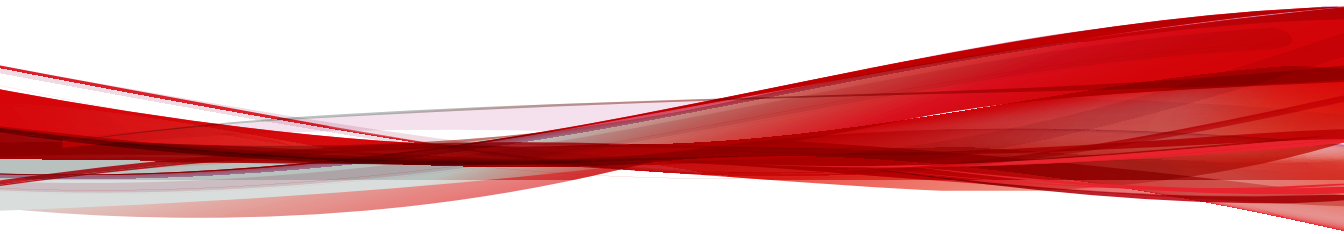
Apex Central Automation Center

Apex Central provides RESTful APIs that allow access to specific product functions. You can use the APIs to integrate third-party solutions with Apex Central, gather and share suspicious object information, and automate investigation and management tasks.

For more information, see https://automation.trendmicro.com/apex-central/home.

Part VIII

Tools and Support



Chapter 24

Administering the Database

This section presents material administrators will need to manage the Apex Central network.

Topics include:

- *Understanding the Apex Central Database on page 24-2*
- *Backing Up db_ApexCentral Using SQL Server Management Studio on page 24-9*
- *Shrinking db_ApexCentral_Log.ldf Using SQL Commands on page 24-11*
- *Shrinking db_ApexCentral_log.ldf Using SQL Server Management Studio on page 24-12*

Understanding the Apex Central Database

Apex Central uses the Microsoft SQL Server database (`db_ApexCentral.mdf`) to store data included in logs, Communicator schedule, managed product and child server information, user account, network environment, and notification settings.

The Apex Central server establishes the database connection using a System DSN ODBC connection. The Apex Central installation generates this connection as well as the ID and password used to access `db_ApexCentral.mdf`. The default ID is sa. Apex Central encrypts the password.

To maximize the SQL server security, configure any SQL account used to manage db_ApexCentral with the following minimum permissions:

- dbcreator for the server role
- db_owner role for db_ApexCentral

Logs from managed products contribute to database expansion. Managed products send various log types to Apex Central.

The following table lists the log count and database size for each log type.

TABLE 24-1. Log Count and Database Size

LOG TYPE	LOG COUNT	DATABASE SIZE (MB)
Virus	100,000	150
	500,000	750
	1,000,000	1,500
Spyware/Grayware	100,000	150
	500,000	750
	1,000,000	1,500

Log Type	Log Count	Database Size (MB)
Web security	100,000	150
	500,000	750
	1,000,000	1,500
Behavior Monitoring	100,000	120
	500,000	600
	1,000,000	1,200
Data Loss Prevention	100,000	300
	500,000	1,500
	1,000,000	3,000
File hash detection	100,000	180
	500,000	900
	1,000,000	1,800
Attack Discovery	100,000	1,200
	500,000	6,000
	1,000,000	12,000
Intrusion Prevention	100,000	70
	500,000	350
	1,000,000	700
Application Control	100,000	200
	500,000	1,000
	1,000,000	2,000

The database space required for log storage can be calculated based on the log type and amount. For example:

- An Apex One managed product sends 20,000 virus logs and 10,000 web security logs to Apex Central daily.
- Apex Central keeps both log types for 90 days.

The database space required is 1.2 GB for virus logs and 1 GB for web security logs. However, there might be an additional space required for log summary or other features.

Because the Apex Central database runs on a scalable database — SQL Server, the theoretical limit is whatever the hardware can handle. Trend Micro has tested up to 2,000,000 entries. If the database server performance is overworked or pushed to its limit, the web console may experience connection time-outs.

Tip

Trend Micro recommends allocating a significant buffer space for database growth and monitoring the database to help obtain a precise database size measurement.

Understanding the db_ApexCentral Tables

To access all tables in the Apex Central database, use a Microsoft Access project (`*.adp` /`*.ade`) or Microsoft SQL Management Studio.

Note

Do not use any of the SQL tools to add, delete, or modify records without instructions from Trend Micro Technical Support.

The following tables make up the Apex Central database:

TABLE 24-2. User/Endpoint Directory Tables

DIRECTORY MANAGEMENT TABLES	DESCRIPTION
tb_WebSecurityLog	Stores Web access violation logs from products

Directory Management Tables	Description
tb_SecurityLog	Stores Content violation logs received from ScanMail and InterScan Messaging products
tb_LogGeneral	Stores Net packet scanning logs from network-based products such as Deep Discovery Inspector
tb_LogDataLossPrevention	Stores Data Loss Prevention related logs sent/received from products
tb_AV*Log * corresponds to Virus, Event, StatusEngineInfo, and StatusPatternInfo	Stores product logs Virus table stores virus/malware incident logs detected by products. Other tables store the product status log as well as the pattern and engine version, update and deploy time, and unhandled virus counts.
tb_SpywareLog	Stores malicious spyware information detected by product
tb_PersonalFirewallLog	Stores personal firewall detection log from OfficeScan
tb_LogBehaviorMonitor	Stores malicious system behavior incident detected by OfficeScan
tb_Network_Content_Inspection_Engine_Log	Stores blocked C&C server connection attempt logs from OfficeScan
tb_FileHashDetectionLog	Stores suspicious file detection logs from managed products
tb_LogIntrusionPrevention	Stores intrusion prevention logs from Deep Security and Vulnerability Protection
tb_MachineLearning_Detection_Log	Stores Predictive Machine Learning detection logs from OfficeScan
tb_ApplicationControlEvent	Stores endpoint application control violation logs from Endpoint Application Control
tb_SandboxDetectionlog	Stores Virtual Analyzer detection logs from managed products

TABLE 24-3. Directory Management Tables

DIRECTORY MANAGEMENT TABLES	DESCRIPTION
CDSM_Entity	Stores the managed product information
CDSM_Agent	Stores Communicator information
CDSM_Registry	Stores registry information
CDSM_UserLog	Stores information as to who, which options, and what time a user accesses the web console; this is useful for auditing web console accesses
CDSM_SystemEventlog	Stores system logs generated by internal processes

TABLE 24-4. Server Command Controller Tables

SERVER COMMAND CONTROLLER TABLES	DESCRIPTION
tb_TVCSCommandList	Stores managed product commands
tb_TVCSCommandTaskQueue	Stores commands issued to managed products
tb_CommandTracking	Stores command status
tb_CommandItemTracking	Stores detailed command status
tb_ProcessInfo	Stores information for `MsgReceiver.exe`, `CmdProcessor.exe`, `LogReceiver.exe`, `LogRetriever.exe`, etc.
tb_LoginUserSessionData	Stores user logon session control
tb_ManualDownload	Stores manual download information
tb_ScheduleDownload	Stores scheduled download information

TABLE 24-5. Managed Product Tables

MANAGED PRODUCT TABLES	DESCRIPTION
tb_EntityInfo	Stores the managed product information

TABLE 24-6. Log Tables

LOG TABLES	DESCRIPTION
tb_TempLog	Stores the raw data of product logs
tb_AV*Log	Stores product log * corresponds to Virus, Event, Status, PEInfo, WebSecurity. These tables store the product status log as well as the pattern and engine version, update and deploy time, and the unhandled virus count.
tb_InValidLog	Stores unidentified log information
• tb_TotalWebSecurityCount • tb_TotalVirusCount • tb_TotalSecurityCount • tb_TopTenSource • tb_TopTenDestination • tb_TopTenVirus	Stores virus summary information for Status Summary and reports
tb_LogPurgePolicy	Stores purge log settings
tb_LogPurgeCounter	Stores purge log counter
• tb_InstanceForVirusOutbreak • tb_InstanceForSpecialVirus • tb_InstanceForVirusOutbreak	Stores log instances used in alert notifications

TABLE 24-7. Notification Tables

NOTIFICATION TABLES	DESCRIPTION
• tb_Alert_NTF_JobList • tb_Event_NTF_JobList	Stores notification queue list

Notification Tables	Description
tb_EventNotificationFilter	Stores Event Center configuration
• tb_SendEMailNotification • tb_SendSNMPTrapNotification • tb_SendWindowsNTEventLogNotification • tb_LaunchAProgramNotification • tb_SendSysLogNotification	Stores notification method settings
tb_VirusOutBreakPolicy	Stores rules used during virus outbreak
tb_SpecialVirusPolicy	Stores the user specified virus name
• tb_VirusOutbreakAccumulate • tb_SpecialVirusAccumulate	Stores virus counter information
• tb_UGNtfRelation • tb_NtfUserGROUP • tb_GroupAndUserRelation	Stores user and group notification settings

Table 24-8. Report Tables

Report Tables	Description
• tb_ReportScheduleTask • tb_ReportTaskQueue	Stores and handles report generation tasks
tb_ReportItemTracking	Stores report template file catalog

TABLE 24-9. Pattern and Engine Deployment Tables

PATTERN AND ENGINE DEPLOYMENT TABLES	DESCRIPTION
• tb_DeploymentPlans • tb_DeploymentPlansTF	Stores deployment plan information
tb_DeploymentPlanTasks	Stores deployment task queue
tb_DeployNowJobList	Stores ongoing deployment plan status
tb_DeployCommandTracking	Stores deployment command tracking information
tb_DeploymentPlanTargets	Stores the managed product information that applied the deploy command

Backing Up db_ApexCentral Using SQL Server Management Studio

When using SQL Server, use the SQL Server Management Studio to back up the Apex Central database.

Note

Trend Micro recommends regular backups of the Apex Central database. Always back up when you are about to modify the Apex Central database (for example, adding or installing a managed product).

Procedure

1. From the Apex Central server, click **Start** > **All Programs** > **Microsoft SQL Server <version>** > **SQL Server Management Studio**.

   `<version>` is the version of SQL Server Management Studio.

2. On the menu bar, click **View** > **Object Explorer**. In the **Object Explorer** panel, double-click <Host\Instance Name>, then double-click **Databases**.

<Host\Instance Name> is the SQL server host name and the SQL instance name.

3. Right-click **db_ApexCentral** and then click **Tasks** > **Back up**.
4. Under **Backup set**, provide the **name** and **description**.
5. Under **Source** > **Backup Type**, select **Full**.
6. Under **Destination**, click **Add** to specify the backup file destination.
7. Click **OK** when the message "The backup operation has been completed successfully." appears.

Restoring Backup db_ApexCentral Using SQL Server Management Studio

Use the SQL Server Management Studio to restore the backup Apex Central database.

Procedure

1. Stop Apex Central.
2. Click **Start** > **Programs** > **Administrative Tools** > **Services** to open the **Services** screen.
3. Right-click **<Apex Central service>**, and then click **Stop**.
4. Click **Programs** > **SQL Server Management Studio** to access the SQL Server Management Studio.
5. On the console, click **SQL server group** > **{SQL server}** > **Databases**.

   {SQL server} is the SQL Server host name.
6. Right-click **db_ApexCentral** > **All tasks** > **Restore Database...**.
7. On the **Restore database** screen, select the database to restore.

8. Click **OK** to start the restoration process.
9. Click **OK** when the message “Restore of database '{Apex Central database"}' completed successfully.” appears.
10. Click **Start** > **Programs** > **Administrative Tools** > **Services** to open the **Services** screen.
11. Right-click **<Apex Central service>**, and then click **Restart**.
12. Start Apex Central.

Shrinking db_ApexCentral_Log.ldf Using SQL Commands

Procedure

1. Backup the Apex Central database using the SQL Server Management Studio.
2. From the available databases, select the `db_ApexCentral` database.
3. Execute the following SQL Script:

```
DBCC shrinkfile('db_ApexCentral_log', 10)
```

4. Verify the size of `db_ApexCentral_Log.LDF` is less than 10MB.

   If `db_ApexCentral_Log.LDF` was not reduced in size, use the following SQL command to identify the Database Recovery Mode used:

```
SELECT name as DatabaseName, DATABASEPROPERTYEX(name, 'Reco
very') as RecoveryMode FROM master.dbo.sysdatabases where n
ame='db_ApexCentral'
```

   If the Database Recovery Mode is `FULL`, execute following SQL script:

```
-- Truncate the log by changing the database recovery model
 to SIMPLE.
```

```
ALTER DATABASE db_ApexCentral
SET RECOVERY SIMPLE;
GO
-- Shrink the truncated log file to 10 MB.
DBCC SHRINKFILE (db_ApexCentral_Log, 10);
GO
-- Reset the database recovery model.
ALTER DATABASE db_ApexCentral
SET RECOVERY FULL;
GO
```

For detailed information on shrinking SQL databases and SQL commands, refer to the *Microsoft SQL Server Administration* documents.

Shrinking db_ApexCentral_log.ldf Using SQL Server Management Studio

The transaction log file for the Apex Central database is …\data \db_ApexCentral_log.LDF. SQL Server generates the transaction log as part of its normal operation.

db_ApexCentral_log.LDF contains all managed product transactions using db_ApexCentral.mdf.

By default, the transaction log file has no file size limit on the SQL Server configuration. This leads to filling up the available disk space.

Shrinking the db_ApexCentral_log.ldf File Size on Microsoft SQL Server 2008 (or later)

Procedure

1. Back up the Apex Central database using the SQL Server Management Studio.

2. Purge the transaction log.
3. On the SQL Server, click **Programs** > **SQL Server Management Studio** to open the SQL Server Management Studio.
4. Select the SQL server and specify the authentication credentials if prompted.
5. Right-click **db_ApexCentral** and select **Properties**.

   The **Properties** dialog box appears.
6. Click **Options**.

   The **Options** work area appears.
7. Select **Simple** from the **Recovery model:** list.
8. Click **OK**.

Chapter 25

Apex Central Tools

This section discusses how to use a number of Apex Central configuration tools.

Topics include:

- *About Apex Central Tools on page 25-2*
- *Using the Agent Migration Tool (AgentMigrateTool.exe) on page 25-2*
- *Using the Database Configuration Tool (DBConfig.exe) on page 25-3*

About Apex Central Tools

Apex Central provides a number of tools to help you with specific configuration tasks. Apex Central houses most tools at the following location:

```
<Apex Central installation directory>\WebUI\download\tools\
```

Using the Agent Migration Tool (AgentMigrateTool.exe)

The Agent Migration tool provided in Apex Central migrates agents administered by another Apex Central server.

Note

The Agent Migration Tool supports Windows-based and Linux-based agent migration.

Procedure

1. Log on to the destination server using the "Administrator" account.

   Important

   Only the "Administrator" account has sufficient permission to run the Agent Migration Tool.

2. Run `AgentMigrateTool.exe` from the following location: `<Apex Central installation directory>\`

Using the Database Configuration Tool (DBConfig.exe)

The `DBConfig.exe` tool allows users to change the user account, password, and the database name for the Apex Central database.

The tool offers the following options:

- **DBName:** Database name
- **DBAccount:** Database account
- **DBPassword:** Database password
- **Mode:** Database authentication mode (SQL Server Authentication or Windows Authentication)

Note

The default database authentication mode is SQL Server Authentication mode. However, Windows Authentication mode is necessary when configuring for Windows authentication.

Procedure

1. Open a command prompt on the Apex Central server.
2. Use the following command to locate the directory which contains the `DBConfig.exe` file:

   ```
   cd <Apex Central installation directory>\DBConfig
   ```

3. Type `dbconfig` and press `ENTER`.

   The DBConfig tool interface appears.

4. Specify which settings you want to modify:

   - Example 1: `DBConfig -DBName="db_your_database>" -DBAccount="sqlAct" -DBPassword="sqlPwd" -Mode="SQL"`

- **Example 2:** `DBConfig -DBName="db_your_database>" -DBAccount="winAct" -DBPassword="winPwd" -Mode="WA"`
- **Example 3:** `DBConfig -DBName="db_your_database>" -DBPassword="sqlPwd"`

Chapter 26

Technical Support

Learn about the following topics:

- *Troubleshooting Resources on page 26-2*
- *Contacting Trend Micro on page 26-3*
- *Sending Suspicious Content to Trend Micro on page 26-4*
- *Other Resources on page 26-5*

Troubleshooting Resources

Before contacting technical support, consider visiting the following Trend Micro online resources.

Using the Support Portal

The Trend Micro Support Portal is a 24x7 online resource that contains the most up-to-date information about both common and unusual problems.

Procedure

1. Go to https://success.trendmicro.com.
2. Select from the available products or click the appropriate button to search for solutions.
3. Use the **Search Support** box to search for available solutions.
4. If no solution is found, click **Contact Support** and select the type of support needed.

   Tip

   To submit a support case online, visit the following URL:

   https://success.trendmicro.com/smb-new-request

   A Trend Micro support engineer investigates the case and responds in 24 hours or less.

Threat Encyclopedia

Most malware today consists of blended threats, which combine two or more technologies, to bypass computer security protocols. Trend Micro combats this complex malware with products that create a custom defense strategy.

The Threat Encyclopedia provides a comprehensive list of names and symptoms for various blended threats, including known malware, spam, malicious URLs, and known vulnerabilities.

Go to https://www.trendmicro.com/vinfo/us/threat-encyclopedia/#malware to learn more about:

- Malware and malicious mobile code currently active or "in the wild"
- Correlated threat information pages to form a complete web attack story
- Internet threat advisories about targeted attacks and security threats
- Web attack and online trend information
- Weekly malware reports

Contacting Trend Micro

In the United States, Trend Micro representatives are available by phone or email:

Address	Trend Micro, Incorporated 225 E. John Carpenter Freeway, Suite 1500 Irving, Texas 75062 U.S.A.
Phone	Phone: +1 (817) 569-8900 Toll-free: (888) 762-8736
Website	https://www.trendmicro.com
Email address	support@trendmicro.com

- Worldwide support offices:

  https://www.trendmicro.com/us/about-us/contact/index.html

- Trend Micro product documentation:

https://docs.trendmicro.com

Speeding Up the Support Call

To improve problem resolution, have the following information available:

- Steps to reproduce the problem
- Appliance or network information
- Computer brand, model, and any additional connected hardware or devices
- Amount of memory and free hard disk space
- Operating system and service pack version
- Version of the installed agent
- Serial number or Activation Code
- Detailed description of install environment
- Exact text of any error message received

Sending Suspicious Content to Trend Micro

Several options are available for sending suspicious content to Trend Micro for further analysis.

Email Reputation Services

Query the reputation of a specific IP address and nominate a message transfer agent for inclusion in the global approved list:

https://servicecentral.trendmicro.com/en-us/ers/

Refer to the following Knowledge Base entry to send message samples to Trend Micro:

https://success.trendmicro.com/solution/1112106

File Reputation Services

Gather system information and submit suspicious file content to Trend Micro:

https://success.trendmicro.com/solution/1059565

Record the case number for tracking purposes.

Web Reputation Services

Query the safety rating and content type of a URL suspected of being a phishing site, or other so-called "disease vector" (the intentional source of Internet threats such as spyware and malware):

https://global.sitesafety.trendmicro.com/

If the assigned rating is incorrect, send a re-classification request to Trend Micro.

Other Resources

In addition to solutions and support, there are many other helpful resources available online to stay up to date, learn about innovations, and be aware of the latest security trends.

Download Center

From time to time, Trend Micro may release a patch for a reported known issue or an upgrade that applies to a specific product or service. To find out whether any patches are available, go to:

https://www.trendmicro.com/download/

If a patch has not been applied (patches are dated), open the Readme file to determine whether it is relevant to your environment. The Readme file also contains installation instructions.

Documentation Feedback

Trend Micro always seeks to improve its documentation. If you have questions, comments, or suggestions about this or any Trend Micro document, please go to the following site:

https://docs.trendmicro.com/en-us/survey.aspx

Appendices

Appendices

Appendix A

Apex Central System Checklists

Use the checklists in this section to record relevant system information as a reference.

Topics include:

- *Server Address Checklist on page A-2*
- *Port Checklist on page A-3*
- *Apex Central Conventions on page A-4*
- *Core Processes and Configuration Files on page A-4*
- *Communication and Listening Ports on page A-6*

Server Address Checklist

You must provide the following server address information during the installation process, as well as during the configuration of the Apex Central server to work with your network. Record the information here for easy reference.

TABLE A-1. Server Address Checklist

INFORMATION REQUIRED	EXAMPLE	YOUR VALUE
Apex Central server information		
IP address	10.1.104.255	
Fully qualified domain name (FQDN)	server.company.com	
NetBIOS (host) name	yourserver	
Web server information		
IP address	10.1.104.225	
Fully qualified domain name (FQDN)	server.company.com	
NetBIOS (host) name	yourserver	
SQL-based Apex Central database information		
IP address	10.1.104.225	
Fully qualified domain name (FQDN)	server.company.com	
NetBIOS (host) name	sqlserver	
Proxy server for component download		
IP address	10.1.174.225	
Fully qualified domain name (FQDN)	proxy.company.com	

Information Required	Example	Your Value
NetBIOS (host) name	proxyserver	
SMTP server information (Optional; for email message notifications)		
IP address	10.1.123.225	
Fully qualified domain name (FQDN)	mail.company.com	
NetBIOS (host) name	mailserver	
SNMP Trap information (Optional; for SNMP Trap notifications)		
Community name	trendmicro	
IP address	10.1.194.225	
Syslog server information (Optional; for syslog notifications)		
IP address	10.1.194.225	
Server port	514	

Port Checklist

Apex Central uses the following ports for the indicated purposes.

Port	Sample	Your Value
SMTP	25	
Proxy	8088	
Web Console and Update/ Deploy components	80	

Apex Central Conventions

Refer to the following conventions applicable for the Apex Central installation or web console configuration.

- User names
  - Max. length: 32 characters
  - Allowed: `A-Z`, `a-z`, `0-9`, `-`, `_`, `.`, `$`
- Folder names
  - Max. length: 32 characters
  - Not allowed: `/`, `>`, `&`, `"`, `%`, `^`, `=`

Note

For the Apex Central server host name, the setup program supports servers with underscores ("_") as part of the server name.

Core Processes and Configuration Files

Apex Central saves system configuration settings and temporary files in XML format.

The following tables describe the configuration files and processes used by Apex Central.

TABLE A-2. Apex Central Configuration Files

CONFIGURATION FILE	DESCRIPTION
`AuthInfo.ini`	Configuration file that contains information about private key file names, public key file names, certificate file names, and the encrypted passphrase of the private key as well as the host ID and port.
`aucfg.ini`	ActiveUpdate configuration file

Configuration File	Description
TVCS_Cert.pem	Certificate used by SSL authentication
TVCS_Pri.pem	Private Key used by SSL
TVCS_Pub.pem	Public Key used by SSL
ProcessManager.xml	Used by ProcessManager.exe
CmdProcessorEventHandler.xml	Used by CmdProcessor.exe
DMRegisterinfo.xml	Used by CasProcessor.exe
DataSource.xml	Stores the connection parameters for Apex Central processes
SystemConfiguration.xml	Apex Central system configuration file
agent.ini	MCP agent file

Table A-3. Apex Central Core Processes

Processes	Description
ProcessManager.exe	Launches and stops other Apex Central core processes
CmdProcessor.exe	Sends XML instructions, formed by other processes, to managed products, processes product registration, sends alerts, performs scheduled tasks, and applies Outbreak Prevention Policies
LogReceiver.exe	Receives managed product logs and messages. Starting with Control Manager 3.0 Service Pack 4, LogReceiver.exe only handles logs coming from Trend Micro Damage Control Services and Trend Micro Vulnerability Assessment
LogProcessor.exe	Receives logs from managed products, and receives entity information from managed products
LogRetriever.exe	Retrieves and saves logs in the Apex Central database
ReportServer.exe	Generates Apex Central reports

Processes	Description
MsgReceiver.exe	Receives messages from the Apex Central server and managed products
CasProcessor.exe	Allows a Apex Central server to manage other Apex Central servers
inetinfo.exe	Microsoft Internet Information Service process
cm.exe	Manages dmserver.exe and mrf.exe
dmserver.exe	Provides the Apex Central web console log on page and manages the Product Directory (Apex Central-side)
sCloudProcessor.NET.exe	Requests the Apex Central web console or other processes to provide a job ID for the issuer to query statuses, query results, and cancel requests; used by the User/Endpoint Directory

Communication and Listening Ports

These are the default Apex Central communication and listening ports.

Service	Service Port
ProcessManager.exe	20501
CmdProcessor.exe	20101
comdProcessor.NET.exe	21003
LogReceiver.exe	20201
LogProcessor.exe	21001
LogRetriever.exe	20301
ReportServer.exe	20601
MsgReceiver.exe	20001
CasProcessor.exe	20801

Service	Service Port
sCloudProcessor.NET.exe	21002

Appendix B

Data Views

This section describes data views that Apex Central supports for customizing report templates and log queries.

Topics include:

- *Data View: Security Logs on page B-2*
- *Data View: Product Information on page B-95*

Data View: Security Logs

Displays information about security threats that managed products detect: viruses, spyware/grayware, phishing sites, and more.

Advanced Threat Information

Displays summary and detailed data about advanced persistent threats and targeted attacks that managed products detect on your network.

Detailed C&C Callback Information

Provides specific information about C&C callback events detected on your network

TABLE B-1. Detailed C&C Callback Information Data View

DATA	DESCRIPTION
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Compromised Host	The IP address, host name, or email address that attempted a callback
Callback Address	The object from/to which a compromised host attempted a callback
C&C List Source	The C&C list source that identified the C&C server • C&C IP List • Global Intelligence List • User-defined IP List • Virtual Analyzer List
Network Groups	The monitored network groups as defined by the administrators of managed products, such as Deep Discovery Inspector

Data	Description
C&C Risk Level	The risk level Trend Micro assigns to the event: • **High**: Known malicious or involved in high-severity connections • **Medium**: IP address/domain/URL is unknown to reputation service • **Low**: Reputation service indicates previous compromise or spam involvement
C&C Server Location	The region and country where the C&C server is located
First Monitored	The date and time the callback address was first detected by Trend Micro
Last Activity	The date and time the callback address was last contacted by a compromised host
Malware Families	The malware names associated with the callback address
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Product Entity	The display name of the managed product server in Apex Central

Detailed Predictive Machine Learning Information

Provides specific information about advanced unknown threats detected by Predictive Machine Learning

Table B-2. Detailed Predictive Machine Learning Information

Data	Description
Detection Time	The date and time the managed product server or the Security Agent detected the threat
Received	The date and time Apex Central received the data from the managed product

Data	Description
Product Entity/ Endpoint	Depending on the related source: • The display name of the managed product server in Apex Central • The name or IP address of the endpoint
Product/Endpoint IP	Depending on the related source: • The IP address of the managed product server • The IP address of the endpoint
Product	The name of the managed product or service
Server	The display name of the managed product server in Apex Central
Probable Threat Type	The most likely type of threat contained in the file after Predictive Machine Learning compared the analysis to other known threats
Security Threat	The name of the security threat
Logon User	The logged on user name at the time of the event
Type	The type of object that triggered the detection ("File" or "Process")
File Path	The path of the file object or the path of the program that executed the process
File Creation Time	The date and time the file object was created
Parent Process	The process that triggered the detected process
Process Command	The command that executed the detected process
Process Owner	The user name that triggered the detected process
Endpoint Infection Channel	The channel that the threat originated from
Infection Source	The origin of the threat
Threat Probability	How closely the file/process matched the malware model
Action Result	The result of the action taken by the managed product
Subject	The subject of the email message that triggered the detection

Data	Description
Delivery Time	The date and time the email message was delivered to the mail server
Sender	The sender of the email message that triggered the detection
Recipients	The recipient(s) of the email message that triggered the detection
Cloud Service Vendor	The name of the cloud service vendor

Detailed Suspicious File Information

Provides specific information about suspicious files detected on your network

Table B-3. Detailed Suspicious File Information Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product
Detected	The date and time the managed product detected the threat
Endpoint	The name of the endpoint
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Product Entity	The display name of the managed product server in Apex Central
Endpoint IP Address	The IP address of the endpoint
Endpoint Host Name	The host name of the endpoint
File Type	The type of file object
File SHA-1	The SHA-1 hash value of the file object
File Path	The path of the file object or the path of the program that executed the process

Data	Description
C&C List Source	The C&C list source that identified the C&C server • C&C IP List • Global Intelligence List • User-defined IP List • Virtual Analyzer List
Action	The action taken by the managed product
Scan Type	The type of scan that reported the event (for example, Real-time Scan, Scheduled Scan, Manual Scan)
Created	The date and time the file object was created
Modified	The date and time the file object was last modified

Virtual Analyzer Detection Information

Provides specific information about advanced unknown threats detected by Virtual Analyzer

Table B-4. Virtual Analyzer Detection Information

Data	Description
Generated	The date and time the managed product generated the data
Received	The date and time Apex Central received the data from the managed product
Product	The name of the managed product or service
Server Name	The name of the server
Host	The name of the host
Entry Channel	The infection channel
Source	The origin of the threat

Data	Description
Destination	The target location of the threat
Process Name	The name of the process that triggered the detection
SHA1	The SHA-1 hash value of the file object that triggered the detection
Type	The type of object that triggered the detection ("File" or "Process")
File Name	The name of the file object that triggered the detection
File Type	The type of file object that triggered the detection
URL	The URL object that triggered the detection
Submission Rule	The rule submitted by Virtual Analyzer
Submission Time	The date and time Virtual Analyzer submitted the rule
Completed Time	The date and time Virtual Analyzer completed the analysis
Security Threat	The name of the security threat
Risk Level	The risk level assigned by Virtual Analyzer
Threat Categories	The type of security threat
Most Critical Threat	The most critical threats by severity level
Cloud Service Vendor	The name of the cloud service vendor

Detailed Virtual Analyzer Suspicious Object Impact Information

Provides detailed information about the impact of Virtual Analyzer suspicious objects

Data	Description
Type	The type of suspicious object
Object	The name of the suspicious object

Data	Description
Scan Action	The scan action taken by the managed product that detected the suspicious object (for example, Log, Bock)
Risk Level	The risk level of the security threat
Expiration	The date and time the suspicious object is set to expire
First Submission Time	The date and time the managed product first submitted the suspicious object to Virtual Analyzer
First Submission Product Name	The name of the managed product that first submitted the suspicious object to Virtual Analyzer
First Submission Host Name	The display name of the managed server that first submitted the suspicious object to Virtual Analyzer
First Submission IP Address	The IP address of the managed server that first submitted the suspicious object to Virtual Analyzer
First Submission File Name	The file name of the suspicious object that the managed product first submitted to Virtual Analyzer
First Submission File Type	The file type of the suspicious object that the managed product first submitted to Virtual Analyzer
First Submission Source	The source of the suspicious object that the managed product first submitted to Virtual Analyzer
First Submission Destination	The destination of the suspicious object that the managed product first submitted to Virtual Analyzer
Latest Submission Time	The date and time the managed product last submitted the suspicious object to Virtual Analyzer
Latest Submission Product Name	The name of the managed product that last submitted the suspicious object to Virtual Analyzer
Latest Submission Host Name	The display name of the managed product that last submitted the suspicious object to Virtual Analyzer
Latest Submission IP Address	The IP address of the last managed server that last submitted the suspicious object to Virtual Analyzer

Data	Description
Latest Submission File Name	The file name of the suspicious object that the managed product last submitted to Virtual Analyzer
Latest Submission File Type	The file type of the suspicious object that the managed product last submitted to Virtual Analyzer
Latest Submission File SHA-1	The file SHA-1 of the suspicious object that the managed product last submitted to Virtual Analyzer
Latest Submission Detection Name	The detection name of the suspicious object that the managed product last submitted to Virtual Analyzer
Latest Submission Source	The source of the suspicious object that the managed product last submitted to Virtual Analyzer
Latest Submission Destination	The destination of the suspicious object that the managed product last submitted to Virtual Analyzer
Endpoint Domain Name	The domain name of the endpoint that triggered the detection
Endpoint Host Name	The display name of the endpoint that triggered the detection
Endpoint User Domain Name	The domain name of the user logged on to the endpoint at the time of the detection
Endpoint User Domain Account	The domain account of the user logged on to the endpoint at the time of the detection
Endpoint User Name	The logged on user name at the time of the event
Endpoint IP Address	The IP address of the endpoint
Endpoint First Found Time	The date and time the suspicious object was first detected on the endpoint
Endpoint First Product Detection	The name of the managed product that first detected the suspicious object on the endpoint
Endpoint First Action Taken	The first action taken on the endpoint by the managed product
Endpoint Last Found Time	The date and time the suspicious object was last detected on the endpoint

Data	Description
Endpoint Last Product Detection	The name of the managed product that last detected the suspicious object on the endpoint
Endpoint Last Action Taken	The last action taken on the endpoint by the managed product
Endpoint Last Action Result	The result of the last action taken on the endpoint by the managed product

Attack Discovery Detections

Displays information provided by Attack Discovery.

Attack Discovery Detection Information

Provides general information about threats detected by Attack Discovery

Table B-5. Attack Discovery Detection Information

Data	Description
Generated	The date and time the managed product generated the data
Received	The date and time Apex Central received the data from the managed product
Endpoint	The name of the endpoint
Product	The name of the managed product or service
Managing Server Entity	The display name of the managed product server in Apex Central to which the endpoint reports
Product Version	The version of the managed product
Tactics	The MITRE ATT&CK™ tactic(s) detected For more information, see https://attack.mitre.org/tactics/enterprise/.

Data	Description
Techniques	The MITRE ATT&CK™ technique(s) detected For more information, see https://attack.mitre.org/techniques/enterprise/.
Endpoint IP	The IP address of the endpoint
Risk Level	The risk level assigned by Attack Discovery
Pattern Version	The Attack Discovery pattern number for the detection type
Rule ID	The serial number of the detection rule
Rule Name	The rules which specify behaviors to be detected by Attack Discovery
Related Objects	The number of detections Click the count to view additional details. For more information, see *Detailed Attack Discovery Detection Information on page B-11*.
Generated (Local Time)	The time in the agent's local timezone when Attack Discovery detected the threat The time is displayed with the UTC offset.
Instance ID	The detection ID assigned to the event Entries having the same instance ID belong under the same event.

Detailed Attack Discovery Detection Information

Provides general information about threats detected by Attack Discovery

Table B-6. Detailed Attack Discovery Detection Information

Data	Description
Object Value	The name of the object targeted by the detected threat
Object Type	The type of object targeted by the detected threat

Data	Description
First Logged	The time when the threat detection was first logged by Attack Discovery
File Directory	The directory of the object targeted by the detected threat
Process ID	The PID of the process
CLI Command	The process command that triggered the threat detection
Signer	The certificate signer
User Domain	The domain name of the detected user account
User Name	The account name associated with the object
Impersonated User Name	The user name that the threat impersonated
Authentication ID	The local unique identifier assigned to the logon session
Integrity Level	The level of protection or access assigned to the logon user
File SHA-1	The SHA-1 hash value of the object file
File SHA-256	The SHA-256 hash value of the object file
File MD5	The MD5 hash value of the object file
Census Rating	The rating determined by Trend Micro threat experts based on the recorded history of the file
File Security Owner	The current owner of the file according to the file properties
File Security Owner Domain	The domain of the current owner of the file according to the file properties
File Security Previous Owner	The previous owner of the file according to the file properties
File Security Previous Owner Domain	The domain of the previous owner of the file according to the file properties
Registry Key	The registry key that the threat accessed

Data	Description
Registry Value Name	The registry value name that the threat accessed
Registry Value Data	The registry value data that the threat accessed
AMSI App Name	The application name or scripting language associated with the threat
AMSI App Full Path	The full path of the application associated with the threat
AMSI App Version	The application version associated with the threat
AMSI Script Source	The file name and extension of the script source
AMSI Script Content	The content of the script
AMSI Script Source SHA-1	The SHA-1 hash value of the script source
AMSI Script Source SHA-256	The SHA-256 hash value of the script source
Source IP Address	The source IP address of the detected threat
Source IP Address Port	The source IP address port number of the detected threat
Destination IP Address	The IP address that the threat accessed
Destination IP Address Port	The IP port number that the threat accessed
Destination URL	The URL that the threat accessed
Destination Domain	The domain name that the threat accessed
WMI Event	The WMI event information associated with the threat
Windows Event Source	The name of the software that logged the event according to the Windows Event Logs
Windows Event Log Content	The Windows Event log content that triggered the detection
Auth Priv Name	The Authorization Privilege Name that the threat modified

Data	Description
Auth Priv Attribute	The Authorization Privilege Attribute that the threat modified
Auth Priv Disable All	The status of the Authorization Privilege Disable All that the threat modified

Content Violation Information

Displays summary and detailed data about prohibited content that managed products detect on your network.

Content Violation Action/Result Summary

Provides a summary of actions managed products take against content violations. Example: the action managed products take against the content violation, the number of email messages affected by the action taken

Table B-7. Content Violation Action/Result Summary Data View

Data	Description
Action	Displays the type of action managed products take against email message in violation of content policies. Example: forwarded, attachments stripped, deleted
Policy Violation Detection Count	Displays the number of violations with the specified action taken by managed products.

Content Violation Detection Over Time Summary

Provides a summary of content violation detections over a period of time (daily, weekly, monthly). Example: time and date of when summary data was collected, number of endpoints affected by the content violation, total number of unique content violations and total number of content violations on the network

TABLE B-8. Content Violation Detection Over Time Summary Data View

DATA	DESCRIPTION
Date/Time	Displays the time that the summary of the data occurs.
Unique Policies	Displays the number of unique policies in violation managed products detect. Example: A managed product detects 10 violation instances of the same policy on one computer. Detections = 10
Unique Senders/ Users	Displays the number of unique email message addresses or users sending content that violates managed product policies. Example: A managed product detects 10 violation instances of the same policy coming from 3 computers. Unique Senders/Users = 3
Unique Recipients	Displays the number of unique email message recipients receiving content that violate managed product policies. Example: A managed product detects 10 violation instances of the same policy on 2 computers. Unique Recipients = 2
Detections	Displays the total number of policy violations managed products detect. Example: A managed product detects 10 violation instances of the same policy on one computer. Detections = 10

Content Violation Policy Summary

Provides a summary of content violation detections due to specific policies. Example: name of the policy in violation, the type of filter that detects the content violation, the total number of content violations on the network

TABLE B-9. Content Violation Policy Summary Data View

DATA	DESCRIPTION
Policy	Displays the name of the policy that endpoints violate.
Filter Type	Displays the type of filter that triggers the violation. Example: content filter, phishing filter, URL reputation filter
Unique Senders/ Users	Displays the number of unique email message addresses or users sending content that violates managed product policies. Example: A managed product detects 10 violation instances of the same policy coming from 3 computers. Unique Senders/Users = 3
Unique Recipients	Displays the number of unique email message recipients receiving content that violate managed product policies. Example: A managed product detects 10 violation instances of the same policy on 2 computers. Unique Recipients = 2
Detections	Displays the total number of policy violations managed products detect. Example: A managed product detects 10 violation instances of the same policy on one computer. Detections = 10

Content Violation Sender Summary

Provides a summary of content violation detections due to specific senders. Example: name of the content sender, the number of unique content violations, the total number of content violations on the network

TABLE B-10. Content Violation Sender Summary Data View

DATA	DESCRIPTION
Sender/User	Displays the email message address or users sending content that violates managed product policies.

Data	Description
Detections	Displays the total number of policy violations managed products detect. Example: A managed product detects 10 violation instances of the same policy on one computer. Detections = 10
Unique Recipients	Displays the number of unique email message recipients receiving content that violate managed product policies. Example: A managed product detects 10 violation instances of the same policy on 2 computers. Unique Recipients = 2
Unique Policies	Displays the number of unique policies in violation managed products detect. Example: A managed product detects 10 violation instances of the same policy on one computer. Detections = 10

Detailed Content Violation Information

Provides specific information about the email messages with content violations, such as the managed product that detected the content violation, the sender(s) and recipients(s) of the email message, the name of the content violation policy, and the total number of violations detected

Table B-11. Detailed Content Violation Information Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity	The display name of the managed product server in Apex Central

Data	Description
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Recipient	The email recipients receiving content that violate managed product policies
Sender/User	The email address or user sending content that violates managed product policies
Subject	The content of the subject line of the email that violates a policy
Policy	The name of the policy an email violates
Policy Settings	The settings for the policy that an email violates
File Location	The location of the file that violates a policy
File	The name of the file that violates a policy
URL	The URL in violation of the specified policy
Risk Level	The Trend Micro assessment of risk to your network Example: high security, low security, medium security
Filter Type	The type of filter that detects the email in violation Example: content filter, size filter, attachment filter
Sub-filter Type	The type of sub-filter that detects the email in violation
Filter Action	The action the detecting filter takes against email in violation of a policy Example: clean, quarantine, strip
Filter Action Result	The result of the action taken by the filter that detected the violation
Action	The action taken by the managed product Example: deliver, strip, forward
Detections	The total number of detections

Email Messages with Advanced Threats

Provides specific information about email messages with advanced threats, such as anomalous behavior, false or misleading data, suspicious and malicious behavior patterns, and strings that indicate system compromise but require further investigation to confirm

Data	Description
Received	The date and time Apex Central received the data from the managed product
Product Entity	The display name of the managed product server in Apex Central
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Recipients	The recipient(s) of the email message that triggered the detection
Sender	The sender of the email message that triggered the detection
Subject	The subject of the email message that triggered the detection
Attachment Count	The number of email attachments
Attachment	The name of the email attachment
Attachment Type	The type of email attachment
Action	The action taken by the managed product Example: deliver, strip, quarantine
Threat Type	The type of security threat
Threat Name	The name of the security threat
Risk Level	The email message risk level after investigation
Source IP	The message transfer agent (MTA) IP address nearest to the email sender
Message ID	The administrator-configured unique message ID
Link Count	The number of links in the email message

Data	Description
Links	The list of links in the email message

Data Discovery Information

Displays information about Data Discovery detections.

Data Discovery Data Loss Prevention Detection Information

Displays specific information about incidents detected by Data Discovery

Table B-12. Data Discovery Data Loss Prevention Detection Information

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Rule	The name of the rule that triggered the detection
Endpoint	The name or IP address of the endpoint
Domain	The domain to which the managed product belongs
User	The logged on user name at the time of the event
User Domain	The name of the domain to which the user belongs
File Path	The full path of the location containing the digital asset or channel (if no source is available)
File	The name of the file object that the threat accessed
Template	The exact rule name(s) and template(s) triggered by the incident
Action	The action taken by the managed product
Details	Additional information, such as the reason a user has provided for continuing to transfer sensitive data

Data Discovery Endpoint Information

TABLE B-13. Data Discovery Endpoint Information

DATA	DESCRIPTION
Generated	Displays the time when the log data was generated in the managed product.
Endpoint	Displays the IP address or host name of a computer where Data Loss Prevention detected the transmission.
Device Class	Displays the name of the device category as shown in Windows Device Manager.
Device Display Name	Displays the display name of the device, as shown in Windows Device Manager.
Provider	Displays the name of the company that provides the device.

Data Loss Prevention Information

Displays information about DLP incidents, template matches, and incident sources collected from the managed products.

DLP Incident Information

Provides specific information about incidents detected by Data Loss Prevention

TABLE B-14. DLP Incident Information

DATA	DESCRIPTION
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Incident ID	The identifier of the incident
Severity	The severity level of the event

Data	Description
Status	The detection status of the incident
Manager	The name of the manager of the department
Department	The name of the department
Policy	The policy that triggered the detection
Product Entity/ Endpoint	The name of the endpoint
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Product/Endpoint IP	Depending on the related source: • The IP address of the managed product server • The IP address of the endpoint
Product/Endpoint MAC	Depending on the related source: • The MAC address of the managed product server • The MAC address of the Security Agent endpoint
Managing Server	The display name of the managed product server in Apex Central to which the endpoint reports
Endpoint	The IP address or host name of a computer with an agent (for example, Apex One agent) installed
Incident Source (AD Display Name)	The Active Directory display name of the incident source
Incident Source (AD Account)	The Active Directory account name of the incident source
Incident Source (Sender)	The source email address
Website	The URL of the website that triggered the incident
Recipient	The destination email address

Data	Description
Subject	The subject of the email message
File Location	The location and the name of the file
File	The name of the file from which the incident was triggered
File/Data Size	The size of the file or data that triggered the incident
Rule	The name of the rule triggered by the incident
Template	The name of the template in which a template match was triggered
Channel	The entity through which a digital asset was transmitted
Destination	The destination of the transmission
Action	The action taken by the managed product
Incidents	The number of incidents
Cloud Service Vendor	The name of the cloud service vendor

DLP Template Match Information

Table B-15. DLP Template Match Information

Data	Description
ID	Displays the unique ID for the log.
Received	Displays the time when the managed product received the incident information.
Generated	Displays the time when the incident was triggered.
Product Entity/ Endpoint	This data column displays one of the following: • The entity display name for a managed product. Apex Central identifies managed products using the managed product's entity display name. • The IP address or host name of a computer with an agent (for example, Apex One agent) installed.

Data	Description
Product	Displays the name of the managed product. Example: Apex One, ScanMail for Microsoft Exchange
Product/Endpoint IP	This data column displays one of the following: • The IP address of the server on which the managed product installs. • The IP address of a computer with an agent (for example, Apex One agent) installed.
Product/Endpoint MAC	This data column displays one of the following: • The MAC address of the server on which the managed product installs. • The MAC address of a computer with an agent (for example, Apex One agent) installed.
Managing Server	Displays the entity display name for a managed product to which an endpoint is registered. Apex Central identifies managed products using the managed product's entity display name.
Endpoint	Displays the IP address or host name of a computer with an agent (for example, Apex One agent) installed.
Incident Source (User)	Displays the logged on user name.
Recipient	Displays the destination email address.
Subject	Displays the subject of the email message.
File Location	Displays the location and the name of the file.
File	Displays the name of the file from which the incident was triggered.
Rule	Displays the name of the rule triggered by the incident.
Template	Displays the name of the template in which a template match was triggered.
Channel	Displays the entity through which a digital asset was transmitted.

Deep Discovery Information

Displays summary and detailed data about suspicious activity that managed products detect on your network.

Detailed Correlation Information

Provides specific information about detailed threat analyses and remediation recommendations

TABLE B-16. Detailed Correlation Information Data View

DATA	DESCRIPTION
Generated	The date and time the managed product generated the data
IP Address	The IP address of the endpoint
Network Group	The monitored network group
Protocol	The broad protocol group from which the managed product detected the threat
Threat Type	The type of security threat Example: virus, spyware/grayware, fraud
Severity	The severity level of the event
Detection	The type of detection based on the correlation rules
Details	Remarks or comments related to the detection
MAC Address	The MAC address of the endpoint
Host Name	The name of the endpoint
Correlation Rule ID	The rule ID of the correlation rule

Detailed Mitigation Information

Provides specific information about tasks carried out by mitigation servers to resolve threats on your network

TABLE B-17. Detailed Mitigation Information Data View

DATA	DESCRIPTION
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Mitigation Entity	The display name of the managed product server in Apex Central
Product	The name of the managed product or service
Endpoint IP	The IP address of the endpoint
Endpoint	The name of the endpoint
Data Source	The Deep Discovery product or task that generated the threat event information
Data Source Host	The host name of the Deep Discovery product that generated the threat event information
Threat Event	The threat-related events logged by the mitigation server For more information, see http://docs.trendmicro.com/all/ent/tms/v2.6/en-us/tmtm_2.6_olh/help/info/threat_event_logs.htm.
Mitigation Status	The threat events by status groups For more information, see http://docs.trendmicro.com/all/ent/tms/v2.6/en-us/tmtm_2.6_olh/help/info/threat_event_logs.htm.
Mitigation Details	The mitigation details about the threat events For more information, see http://docs.trendmicro.com/all/ent/tms/v2.6/en-us/tmtm_2.6_olh/help/info/mitigation_status.htm.
Detections	The total number of detections
Detailed Information	The details about the threats

Detailed Suspicious Threat Information

Provides specific information about suspicious threats on your network, such as the managed product that detected the suspicious threat, specific

information about the source and destination, and the total number of suspicious threats on the network

TABLE B-18. Detailed Suspicious Threat Information Data View

DATA	DESCRIPTION
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity	The display name of the managed product server in Apex Central
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Mitigation Host	The host name of the mitigation server (for example, Network VirusWall Enforcer or Threat Mitigator)
Traffic/Connection	The direction of the transmission
Protocol Group	The broad protocol group from which the managed product detected the threat Example: FTP, HTTP, P2P
Protocol	The protocol from which the managed product detected the suspicious threat Example: ARP, BitTorrent
Destination IP Address	The IP address that the threat accessed
Destination Host	The display name of the endpoint that the threat accessed
Destination Port	The IP port number that the threat accessed
Destination MAC Address	The MAC address that the threat accessed
Destination OS	The operating system on the endpoint that the threat accessed

DATA	DESCRIPTION
Destination User <x>	The name used to log on to the target host <x> is the user name
Logon (Destination User <x>)	The logon timestamp <x> represents the number of logon times and the specific timestamp
Source IP Address	The source IP address of the detected threat
Source Host Name	The name of the endpoint from which the security threat originated
Source Port	The source IP address port number of the detected threat
Source MAC Address	The source MAC address of the detected threat
Source OS	The operating system on the endpoint from which the security threat originated
Source User <x>	The name used to log on to the target source host <x> is the user names
Logon (Source User <x>)	The logon timestamp on the source <x> represents the number of logon times and the specific timestamp
Source Domain	The domain of the endpoint from which the threat originated
Security Threat Type	The type of security threat Example: virus, spyware/grayware, fraud
Policy/Rule	The policy or rule that triggered the detection
Recipient	The recipient(s) of the transmission that triggered the detection
Sender	The sender of the transmission that triggered the detection
Subject	The subject of the email message that triggered the detection
Attachment File Name	The file name and extension of the attachment
Attachment File Type	The file type of the attachment

Data	Description
Attachment SHA-1	The SHA-1 hash value of the attachment
URL	The URL considered a suspicious threat
User	The user name logged on to the destination when the managed product detected the threat
IM/IRC User	The instant messaging or IRC user name logged on when Deep Discovery Inspector detects a violation.
Browser/FTP Client	The web browser or FTP endpoint where the suspicious threat originates.
File	The name of the file object or the program that executed the process
File in Compressed File	The name of the affected file object in the compressed archive
Archive SHA-1	The SHA-1 hash value of the archived file object
Archive File Type	The type of archived file object
Shared Folder	Displays whether the suspicious threat originates from a shared folder
SHA-1	The SHA-1 hash value of the file object
Mitigation Action	The action taken by the mitigation server Example: File cleaned, File dropped, File deleted
Mitigation Result	The result of the action taken by the mitigation server
Source IP Group	The IP address group of the source where the suspicious threat originates
Source Network Zone	The network zone of the source where the suspicious threat originates
Endpoint Group	The IP address group of the endpoint the suspicious threat affects
Endpoint Network Zone	The network zone of the endpoint the suspicious threat affects

Data	Description
Detections	The total number of detections Example: A managed product detects 10 violation instances of the same type on one computer. Detections = 10
C&C List Source	The C&C list source that identified the C&C server • C&C IP List • Global Intelligence List • User-defined IP List • Virtual Analyzer List
C&C Risk Level	The risk level of the C&C callback
Remarks	Additional information about the event
C&C Server	The name, URL, or IP address of the C&C server
C&C Server Type	The type of C&C server
Malware Type	The type of malware

Overall Suspicious Threat Summary

Provides specific information about suspicious threats on your network. Example: the policy/rule in violation, summary information about the source and destination, the total number of suspicious threats on the network

Table B-19. Overall Suspicious Threat Summary Data View

Data	Description
Policy/Rule	Displays the name of the policy/rule in violation.
Protocol	Displays the protocol over which the violation takes place. Example: HTTP, FTP, SMTP

Data	Description
Unique Endpoints	Displays the number of unique computers affected by the suspicious threat. Example: A managed product detects 10 suspicious threat instances of the same type on 2 computers. Unique Endpoints = 2
Unique Sources	Displays the number of unique sources where suspicious threats originate. Example: A managed product detects 10 suspicious threat instances of the same type originating from 3 computers. Unique Sources = 3
Unique Recipients	Displays the number of unique email message recipients receiving content that violates managed product suspicious threat policies. Example: A managed product detects 10 suspicious threat violation instances of the same policy on 2 computers. Unique Recipients = 2
Unique Senders	Displays the number of unique email message senders sending content that violates managed product suspicious threat policies. Example: A managed product detects 10 suspicious threat violation instances of the same policy coming from 3 computers. Unique Senders = 3
Detections	Displays the total number of policy/rule violations managed products detect. Example: A managed product detects 10 violation instances of the same type on one computer. Detections equals 10.
Mitigations	Displays the number of endpoints Network VirusWall Enforcer devices or Trend Micro™ Threat Mitigator™ take action against.
Cleaned Endpoints	Displays the total number of endpoints Trend Micro Threat Mitigator cleans.

Data	Description
Clean Endpoint Rate (%)	Displays the percentage of endpoints Trend Micro Threat Mitigator cleans compared to the total Detections.

Suspicious Source Summary

Provides a summary of suspicious threat detections from a specific source. Example: name of the source, summary information about the destination and rules/violations, the total number of suspicious threats on the network

Table B-20. Suspicious Source Summary Data View

Data	Description
Source IP	Displays the IP addresses of sources where suspicious threats originate.
Unique Policies/Rules	Displays the number of unique policies/rules the source computer violates. Example: A managed product detects 10 policy violation instances of the same policy on 2 computers. Unique Policies/Rules = 1
Unique Endpoints	Displays the number of unique computers affected by the suspicious threat. Example: A managed product detects 10 suspicious threat instances of the same type on 2 computers. Unique Endpoints = 2
Detections	Displays the total number of policy/rule violations managed products detect. Example: A managed product detects 10 violation instances of the same type on one computer. Detections = 10

Suspicious Riskiest Endpoints Summary

Provides a summary of the endpoints with the most suspicious threat detections. Example: name of the destination, summary information about the source and rules/violations, the total number of suspicious threats on the network

TABLE B-21. Suspicious Threat Riskiest Endpoints Summary Data View

DATA	DESCRIPTION
Endpoint IP	Displays the IP addresses of computers affected by suspicious threats.
Unique Policies/Rules	Displays the number of unique policies/rules the source computer violates. Example: A managed product detects 10 policy violation instances of the same policy on 2 computers. Unique Policies/Rules = 1
Unique Sources	Displays the number of unique sources where suspicious threats originate. Example: A managed product detects 10 suspicious threat instances of the same type originating from 3 computers. Unique Sources = 3
Detections	Displays the total number of policy/rule violations managed products detect. Example: A managed product detects 10 violation instances of the same type on one computer. Detections = 10

Suspicious Riskiest Recipient Summary

Provides a summary of the recipients with the most suspicious threat detections. Example: name of the recipient, summary information about the senders and rules/violations, the total number of suspicious threats on the network

TABLE B-22. Suspicious Riskiest Recipient Summary Data View

DATA	DESCRIPTION
Recipient	Displays the email address of the recipient affected by the suspicious threat.
Unique Policies/Rules	Displays the number of unique policies/rules the source computer violates. Example: A managed product detects 10 policy violation instances of the same policy on 2 computers. Unique Policies/Rules = 1
Unique Senders	Displays the number of unique email message senders sending content that violates managed product suspicious threat policies. Example: A managed product detects 10 suspicious threat violation instances of the same policy coming from 3 computers. Unique Senders = 3
Detections	Displays the total number of policy/rule violations managed products detect. Example: A managed product detects 10 violation instances of the same type on one computer. Detections = 10

Suspicious Sender Summary

Provides a summary of suspicious threat detections from a specific sender. Example: name of the sender, summary information about the recipient and rules/violations, the total number of suspicious threats on the network

TABLE B-23. Suspicious Sender Summary Data View

DATA	DESCRIPTION
Sender	Displays the email address for the source of policy/rule violations.

Data	Description
Unique Policies/Rules	Displays the number of unique policies/rules the source computer violates. Example: A managed product detects 10 policy violation instances of the same policy on 2 computers. Unique Policies/Rules = 1
Unique Recipients	Displays the number of unique email message recipients receiving content that violate managed product suspicious threat policies. Example: A managed product detects 10 suspicious threat violation instances of the same policy on 2 computers. Unique Recipients = 2
Detections	Displays the total number of policy/rule violations managed products detect. Example: A managed product detects 10 violation instances of the same type on one computer. Detections = 10

Suspicious Threat Protocol Detection Summary

Provides a summary of suspicious threat detections over a specific protocol. Example: name of the protocol, summary information about the source and destination, the total number of suspicious threats on the network

Table B-24. Suspicious Threat Protocol Detection Summary Data View

Data	Description
Protocol	Displays the name of the protocol over which the suspicious threat occurs. Example: HTTP, FTP, SMTP

Data	Description
Unique Policies/Rules	Displays the number of unique policies/rules the source computer violates. Example: A managed product detects 10 policy violation instances of the same policy on 2 computers. Unique Policies/Rules = 1
Unique Endpoints	Displays the number of unique computers affected by the suspicious threat. Example: A managed product detects 10 suspicious threat instances of the same type on 2 computers. Unique Endpoints = 2
Unique Sources	Displays the number of unique sources where suspicious threats originate. Example: A managed product detects 10 suspicious threat instances of the same type originating from 3 computers. Unique Sources = 3
Unique Recipients	Displays the number of unique email message recipients receiving content that violates managed product suspicious threat policies. Example: A managed product detects 10 suspicious threat violation instances of the same policy on 2 computers. Unique Recipients = 2
Unique Senders	Displays the number of unique email message senders sending content that violates managed product suspicious threat policies. Example: A managed product detects 10 suspicious threat violation instances of the same policy coming from 3 computers. Unique Senders = 3
Detections	Displays the total number of policy/rule violations managed products detect. Example: A managed product detects 10 violation instances of the same type on one computer. Detections = 10

Suspicious Threat Detection Over Time Summary

Provides a summary of suspicious threat detections over a period of time (daily, weekly, monthly). Example: time and date when summary data was collected, summary information about the source and destination, the total number of suspicious threats on the network

TABLE B-25. Suspicious Threat Detection Over Time Summary Data View

DATA	DESCRIPTION
Date/Time	Displays the time that the summary of the data occurs.
Unique Policies/Rules	Displays the number of unique policies/rules the source computer violates. Example: A managed product detects 10 policy violation instances of the same policy on 2 computers. Unique Policies/Rules = 1
Unique Endpoints	Displays the number of unique computers affected by the suspicious threat. Example: A managed product detects 10 suspicious threat instances of the same type on 2 computers. Unique Endpoints = 2
Unique Sources	Displays the number of unique sources where suspicious threats originate. Example: A managed product detects 10 suspicious threat instances of the same type originating from 3 computers. Unique Sources = 3
Unique Recipients	Displays the number of unique email message recipients receiving content that violates managed product suspicious threat policies. Example: A managed product detects 10 suspicious threat violation instances of the same policy on 2 computers. Unique Recipients = 2

Data	Description
Unique Senders	Displays the number of unique email message senders sending content that violates managed product suspicious threat policies. Example: A managed product detects 10 suspicious threat violation instances of the same policy coming from 3 computers. Unique Senders = 3
Detections	Displays the total number of policy/rule violations managed products detect. Example: A managed product detects 10 violation instances of the same type on one computer. Detections = 10

Gray Detection Information

Provides detailed information about possible indicators of attack detected on your network

Table B-26. Gray Detection Information Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Endpoint	The name of the endpoint
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Managing Server Entity	The display name of the managed product server in Apex Central to which the endpoint reports
Detection Type	The type of gray detection
Rule	The policy or rule that triggered the detection

Data	Description
Details	The JSON object containing additional information about the detection
Tactics	The MITRE ATT&CK™ tactic(s) detected For more information, see https://attack.mitre.org/tactics/enterprise/.
Techniques	The MITRE ATT&CK™ technique(s) detected For more information, see https://attack.mitre.org/techniques/enterprise/.

Overall Threat Information

Displays summary and statistical data about the overall threat landscape of your network.

Network Protection Boundary Information

Displays information for a broad overview of security threats affecting your entire network. Examples: managed product network protection type (gateway, email), type of security threat, number of endpoints affected

Table B-27. Network Protection Boundary Information Data View

Data	Description
Product Category	Displays the category to which the managed product belongs. Example: desktop products, mail server products, network products
Product	Displays the name of the managed product. Example: Apex One, ScanMail for Microsoft Exchange
Security Threat Category	Displays the broad category of the security threat managed products detect. Example: Antivirus, Antispyware, Antiphishing

Data	Description
Unique Endpoints	Displays the number of unique computers affected by the security threat/violation. Example: Apex One detects 10 virus instances of the same virus on 2 computers. Unique Endpoints = 2
Unique Sources	Displays the number of unique computers where security threats/ violations originate. Example: Apex One detects 10 virus instances of the same virus, coming from 3 sources, on 2 computers. Unique Sources = 3
Detections	Displays the total number of security threats/violations managed products detect. Example: Apex One detects 10 virus instances of the same virus on one computer. Detections = 10

Network Security Threat Analysis Information

Displays information for overall security threats affecting your desktops. Examples: name of the security threat, total number of security threat detections, number of endpoints affected

Table B-28. Network Security Threat Analysis Information Data View

Data	Description
Security Threat Category	Displays the broad category of the security threat managed products detect. Example: Antivirus, Antispyware, Antiphishing
Security Threat	Displays the name of security threat managed products detect.

Data	Description
Entry Type	Displays the entry point for the security threat that managed products detect. Example: virus found in file, HTTP, Windows Live Messenger (MSN)
Unique Endpoints	Displays the number of unique computers affected by the security threat/violation. Example: Apex One detects 10 virus instances of the same virus on 2 computers. Unique Endpoints = 2
Unique Sources	Displays the number of unique computers where security threats/violations originate. Example: Apex One detects 10 virus instances of the same virus, coming from 3 sources, on 2 computers. Unique Sources = 3
Detections	Displays the total number of security threats/violations managed products detect. Example: Apex One detects 10 virus instances of the same virus on one computer. Detections = 10

Security Threat Endpoint Analysis Information

Displays information with affected endpoints as the focus. Examples: name of the endpoint, the broad range of how the security threat enters your network, number of endpoints affected

Table B-29. Security Threat Endpoint Analysis Information Data View

Data	Description
Endpoint	Displays the name of the computer affected by the security threat/violation.

Data	Description
Security Threat Category	Displays the broad category of the security threat managed products detect. Example: Antivirus, Antispyware, Antiphishing
Security Threat Name	Displays the name of security threat managed products detect.
Detections	Displays the total number of security threats/violations managed products detect. Example: Apex One detects 10 virus instances of the same virus on one computer. Detections = 10
Detected	Displays the time and date of the last security threat/violation detection on the computer affected the security threat/violation.

Security Threat Entry Analysis Information

Displays information with the entry point of security threats as the focus. Examples: managed product network protection type (gateway, email, desktop), name of the security threat, time of the last security threat detection

Table B-30. Security Threat Entry Analysis Information Data View

Data	Description
Entry Type	Displays the point of entry for security threats managed products detect. Example: Virus found in file, FTP, File transfer
Product	Displays the name of the managed product which detects the security threat. Example: Apex One, ScanMail for Microsoft Exchange
Security Threat Category	Displays the specific category for security threats managed products detect. Example: Antivirus, Antispyware, Content filtering

Data	Description
Unique Endpoints	Displays the number of unique computers affected by the security threat/violation. Example: Apex One detects 10 virus instances of the same virus on 2 computers. Unique Endpoints = 2
Unique Sources	Displays the number of unique computers where security threats/violations originate. Example: Apex One detects 10 virus instances of the same virus, coming from 3 sources, on 2 computers. Unique Sources = 3
Detections	Displays the total number of security threats/violations managed products detect. Example: Apex One detects 10 virus instances of the same virus on one computer. Detections = 10

Security Threat Source Analysis Information

Displays information with the security threat source as the focus. Examples: name of the security threat source, the broad range of how the security threat enters your network, number of endpoints affected

Table B-31. Security Threat Source Analysis Information Data View

Data	Description
Source Host	Displays the name of the computer where the cause of the security threat/violation originates.
Security Threat Category	Displays the broad category of the security threat managed products detect. Example: Antivirus, Antispyware, Antiphishing
Security Threat	Displays the name of security threat managed products detect.

Data	Description
Detections	Displays the total number of security threats/violations managed products detect. Example: Apex One detects 10 virus instances of the same virus on one computer. Detections = 10
Detected	Displays the time and date of the last security threat/violation detection on the computer affected the security threat/violation.

Policy/Rule Violation Information

Displays summary and detailed data about policy/rule violations that managed products detect on your network.

Device Access Control Information

Provides specific information about events on your network that are related to Device Access Control.

Table B-32. Device Access Control Information Data View

Data	Description
Received	Displays the time that Apex Central receives data from the managed product
Generated	Displays the time that the managed product generates data
Product Entity/ Endpoint	This data column displays one of the following: • The entity display name for a managed product. Apex Central identifies managed products using the managed product's entity display name • The IP address or host name of a computer with an agent (for example, Apex One agent) installed

Data	Description
Product	Displays the name of the managed product Example: Apex One
Target Process	Displays the process the violation has targeted
File Name	Displays the name of the file
Device Type	Displays the type of device accessed
Permission	Displays the permission type
User	Displays the name of the user that was logged on to the endpoint when the managed product detected the event

Detailed Application Activity

Displays specific information about application activities that violate network security policies

Table B-33. Detailed Application Activity Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity	The display name of the managed product server in Apex Central
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
VLAN ID	The VLAN ID (VID) of the source from which the suspicious threat originates
Detected By	The filter, scan engine, or managed product which detects the suspicious threat

Data	Description
Traffic/Connection	The direction of network traffic or the position on the network the suspicious threat originates
Protocol Group	The broad protocol group from which a managed product detects the suspicious threat Example: FTP, HTTP, P2P
Protocol	The protocol from which a managed product detects the suspicious threat Example: ARP, Bearshare, BitTorrent
Description	Detailed description of the incident by Trend Micro
Endpoint Host	The host name of the computer in compliance of the policy/rule
Source IP	The IP address of the source from which the suspicious threat originates
Source MAC	The MAC address of the source from which the suspicious threat originates
Source Port	The port number of the source from which the suspicious threat originates
Source IP Group	The IP address group of the source where the violation originates
Source Network Zone	The network zone of the source where the violation originates
Endpoint IP	The IP address of the endpoint the suspicious threat affects
Endpoint Port	The port number of the endpoint the suspicious threat affects
Endpoint MAC	The MAC address of the endpoint the suspicious threat affects
Endpoint Group	The IP address group of the endpoint the suspicious threat affects
Endpoint Network Zone	The network zone of the endpoint the suspicious threat affects

Data	Description
Detections	The total number of detections Example: Apex One detects 10 virus instances of the same virus on one computer. Detections = 10
Threat Type	The specific type of security threat managed products detect
Detection Severity	The severity level of the incident
IP Address (Interested)	The IP address of the target endpoint (source or destination) For an exchange occurring within the network, the Interested IP is the source IP address. If the traffic is an external traffic, the Interested IP is the destination IP address.
IP Address (Peer)	The IP address opposite of the Interested IP For example, if the Interested IP is the source IP address, then the Peer IP is the destination IP address.
Matching Classified Events	The log count matching the same aggregated rule
Aggregated Matching Classified Events	The aggregated log count matching the same rule
Network Group	The name of the group
Host Severity	The host severity
Log ID	The log ID

Detailed Application Control Violation Information

Provides specific information about application control violations on your network, such as the violated Security Agent policy and criteria

TABLE B-34. Detailed Application Control Violation Information Data View

DATA	DESCRIPTION
Generated	The date and time the managed product generated the data
Received	The date and time Apex Central received the data from the managed product
User Name	The logged on user name at the time of the event
Endpoint	The name of the endpoint
Action	The action taken by the managed product
File	The name of the file object or the program that executed the process
Process	The process executed by the file object
Policy	The name of the policy applied by the Apex Central or managed product console
Criteria	The name of the rule for application usage
Match Method	The method used to identify applications in the allow and block criteria
Version	The Certified Safe Software Pattern version
Hash Type	The type of hash algorithm used
Hash Value	The hash value of the file object
Certificate Signer	The issuer of the certificate
Server	The display name of the managed product server in Apex Central to which the endpoint reports
Connection Status	The status of the connection between the endpoint and the managed product server
Endpoint IP Address	The IP address of the endpoint
Command	The command issued
Process Owner	The user name of the account that issued the command

Data	Description
Application	The name of the application to which the file object belongs
Matched File Path	The directory location of the file object
Detections	The total number of detections
File Last Modified	The date and time the file object was last modified

Detailed Behavior Monitoring Information

Provides specific information about events on your network that are related to Behavior Monitoring.

Table B-35. Detailed Behavior Monitoring Information Data View

Data	Description
Time Received From Entity	Displays the time that Apex Central received the data from the managed product
Time Generated at Entity	Displays the time that the managed product generates data
Host	Displays the IP address or host name of the computer accessed
Risk Level	Displays the Trend Micro assessment of risk to your network
Log Type	Displays the type of log that triggers the violation
Policy	Displays the name of the policy triggered by the violation
Subject	Displays the specific file, including its directory
Event Type	Displays the type of violation
Target	Displays the path or directory specified by the Event Type
Action	Displays the action taken by the managed product
Operation	Displays read/write or execute operation
Endpoint	Displays the host name of the computer under attack

Data	Description
Endpoint IP	Displays the IP address of the computer under attack
Endpoint Infection Channel	Displays the channel the threat originated from
Cloud Service Vendor	Displays the name of the cloud service vendor

Detailed Endpoint Security Compliance Information

Provides specific information about endpoint security compliance on your network

Table B-36. Detailed Endpoint Security Compliance Information Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity	The display name of the managed product server in Apex Central
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Endpoint	The host name of the computer in compliance of the policy/rule
Endpoint IP	The IP address of the computer in compliance of the policy/rule
Endpoint MAC	The MAC address of the computer in compliance of the policy/rule
Policy/Rule	The name of the policy/rule in compliance
Service	The name of the service/program in compliance of the policy/rule
User	The logged on user name at the time of the event
Description	The detailed description of the incident provided by Trend Micro

Data	Description
Detections	The total number of detections Example: Apex One detects 10 virus instances of the same virus on one computer. Detections = 10

Detailed Endpoint Security Violation Information

Provides specific information about endpoint security violations on your network

Table B-37. Detailed Endpoint Security Violation Information Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity	The display name of the managed product server in Apex Central
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Endpoint	The name of the endpoint
Endpoint IP	The IP address of the endpoint
Endpoint MAC	The MAC address of the endpoint
Policy/Rule	The name of the policy/rule that triggered the detection
Service	The name of the service/program that triggered the detection
User	The logged on user name at the time of the event
Enforcement Action	The action enforced by the policy/rule
Remediation Action	The action that helps stop payload caused by the violation

Data	Description
Description	The detailed description of the incident by Trend Micro
Detections	The total number of detections Example: Apex One detects 10 security violations of the same type on one computer. Detections = 10

Detailed Firewall Violation Information

Provides specific information about firewall violations on your network, such as the managed product that detected the violation, the source and destination of the transmission, and the total number of firewall violations

Table B-38. Detailed Firewall Violation Information Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity/ Endpoint	Depending on the related source: • The display name of the managed product server in Apex Central • The name or IP address of the endpoint
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Event Type	The type of event that triggered the detection Example: intrusion, policy violation
Risk Level	The Trend Micro assessment of risk to your network Example: High security, low security, medium security
Traffic/Connection	The direction of the transmission

Data	Description
Protocol	The protocol the intrusion uses Example: HTTP, SMTP, FTP
Source Port	The source IP address port number of the detected threat
Source IP	The source IP address of the detected threat
Destination Port	The port number accessed by the detected threat
Destination IP	The IP address of the endpoint accessed by the detected threat
Target Process	The process the violation targeted
Description	The detailed description of the incident by Trend Micro
Action	The action taken by the managed product Example: file cleaned, file quarantined, file passed
Detections	The total number of detections Example: A managed product detects 10 violation instances of the same type on one computer Detections = 10

Detailed Intrusion Prevention Information

Provides specific information to help you achieve timely protection against known and zero-day attacks, defend against web application vulnerabilities, and identify malicious software accessing the network

Data	Description
Generated	The date and time the managed product generated the data
Received	The date and time Apex Central received the data from the managed product
Server	The display name of the managed product server

Data	Description
Product Entity/ Endpoint	The name or IP address of the endpoint
Affected IP Address	The IP address of the endpoint affected by the threat
Reason/Rule	The Intrusion Prevention Rule triggered by the event
Mode	The network engine detection mode used by the Intrusion Prevention module
Action	The action taken by the managed product
Application Type	The **Application Type** associated with the Intrusion Prevention Rule triggered by the event
Attack Source	The source of the detected threat
Source IP Address	The source IP address of the detected threat
Source MAC Address	The source MAC address of the detected threat
Source Port	The source port of the detected threat
Destination IP Address	The IP address that the threat accessed
Destination MAC Address	The MAC address that the threat accessed
Destination Port	The port number that the threat accessed
MAC Address (Interested)	Depending on the direction of network traffic: • The **Source MAC Address** of inbound network traffic • The **Destination MAC Address** of outbound network traffic
Protocol	The protocol that the threat used to enter the network
Direction	The direction of the transmission
Priority	The importance of the detection according to the ranking system used by the standalone version of Vulnerability Protection
Severity	The severity level of the event

Integrity Monitoring Information

Use to monitor specific changes to an endpoint, such as installed software, running services, processes, files, directories, listening ports, registry keys, and registry values

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Server	The host name of the managed product server
Change	The change detected by the integrity rule
User	The logged on user name at the time of the event
Process	The process from which the event originated
Type	The type of registry key
Key	The registry key
Rank	The integrity rank
Severity	The severity level of the event

Network Content Inspection Information

Provides specific information about network content violations on your network

Table B-39. Network Content Inspection Information Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data

Data	Description
Product/Endpoint IP	Depending on the related source: • The display name of the managed product server in Apex Central • The name or IP address of the endpoint
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Traffic Direction	The direction of the transmission
Local IP Address	The IP address of the Security Agent endpoint
Local IP Address Port	The IP address port number of the Security Agent endpoint
Remote IP Address	The IP address of the external endpoint
Remote IP Address Port	The IP address port number of the external endpoint
Remote Domain	The domain name associated with the detection
Process	The process through which the contact was attempted (path \application_name)
Action	The action taken by the managed product
Pattern Type	The type of pattern associated with the detection
Threat Name	The name of the security threat

Spam Violation Information

Displays summary and detailed data about spam that managed products detect on your network.

Detailed Spam Information

Provides specific information about the spam violations on your network, such as the managed product that detected the content violation, the name of

the specific policy in violation, and the total number of spam violations on the network

TABLE B-40. Detailed Spam Information Data View

DATA	DESCRIPTION
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity	The display name of the managed product server in Apex Central
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Recipient	The recipient(s) of the email message that triggered the detection
Sender	The sender of the email message that triggered the detection
Subject	The subject of the email message that triggered the detection
Policy	The policy that triggered the detection
Action	The action taken by the managed product
Detections	The total number of detections Example: The managed product detects 10 violation instances of the same spam on one endpoint. Detections = 10

Overall Spam Violation Summary

Provides a summary of spam violations on the network

DATA	DESCRIPTION
Recipient Domain	Domain of recipients affected by spam

Data	Description
Unique Recipients	Displays the number of unique recipients receiving spam from the specified domain. Example: A managed product detects 10 violation instances of spam from the same domain on 3 computers. Unique Recipients = 3
Detections	Displays the total number of spam violations managed products detect. Example: A managed product detects 10 violation instances of the same spam on one computer. Detections = 10

Spam Connection Information

Provides specific information about the source of spam on your network, such as the managed product that detected the spam, the specific action taken by the managed product, and the total number of spam detected

Table B-41. Spam Connection Information Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity	The display name of the managed product server in Apex Central
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Source IP	The source IP address of the detected threat
Filter Type	The type of filter that detected the event

Data	Description
Action	The action taken by the managed product Example: drop connection, bypass connection
Detections	The total number of detections Example: Apex One detects 10 violation instances of the same spam on one computer. Detections = 10

Spam Detection Over Time Summary

Provides a summary of spam detections over a period of time (daily, weekly, monthly). Example: time and date of when summary data was collected, number of endpoints affected by spam, the total number of spam violations on the network

Table B-42. Spam Detection Over Time Summary Data View

Data	Description
Summary Time	Displays the time that the summary of the data occurs.
Unique Recipient Domains	Displays the total number of unique recipient domains affected by spam. Example: A managed product detects 10 violation instances of the same spam from 2 domains on 1 recipient domain. Unique Recipient Domains = 1
Unique Recipients	Displays the number of unique recipients receiving spam from the specified domain. Example: A managed product detects 10 violation instances of spam from the same domain on 3 computers. Unique Recipients = 3

Data	Description
Detections	Displays the total number of spam violations managed products detect. Example: A managed product detects 10 violation instances of the same spam on one computer. Detections = 10

Spam Recipient Summary

Provides a summary of spam violations on specific endpoints. Example: name of endpoint, total number of instances of viruses/malware on the endpoint

Table B-43. Spam Recipient Summary Data View

Data	Description
Recipient	Displays the name of the recipient who receives spam.
Detections	Displays the total number of spam violations managed products detect. Example: A managed product detects 10 violation instances of the same spam on one computer. Detections = 10

Spyware/Grayware Information

Displays summary and detailed data about spyware/grayware that managed products detect on your network.

Detailed Spyware/Grayware Information

Provides specific information about the spyware/grayware detections on your network, such as the managed product that detected the spyware/grayware, the name of the spyware/grayware, and the name of the infected endpoint

TABLE B-44. Detailed Spyware/Grayware Information Data View

DATA	DESCRIPTION
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity/ Endpoint	Depending on the related source: • The display name of the managed product server in Apex Central • The name or IP address of the endpoint
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Product/Endpoint IP	Depending on the related source: • The IP address of the managed product server • The IP address of the endpoint
Product/Endpoint MAC	Depending on the related source: • The MAC address of the managed product server • The MAC address of the Security Agent endpoint
Managing Server Entity	The display name of the managed product server in Apex Central to which the endpoint reports
Spyware/Grayware	The name of the security threat
Endpoint	The name or IP address of the endpoint
Source Host	The IP address or name of the endpoint from which the security threat originated
User	The logged on user name at the time of the event
Result	The result of the action taken by the managed product Example: successful, further action required

Data	Description
Action	The action taken by the managed product Example: File cleaned, File quarantined, File deleted
Detections	The total number of detections Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware on one computer. Detections = 10
Entry Type	The entry point of the security threat
Detailed Information	A link that displays additional information about the specific detection
Endpoint Infection Channel	The channel that the threat originated from
Apex One Domain Hierarchy	The agent tree domain or subdomain to which the Security Agent belongs
Domain	The domain of the managed product server to which the endpoint reports
Operating System	The operating system on the endpoint
Cloud Service Vendor	The name of the cloud service vendor

Endpoint Spyware/Grayware

Provides specific information about endpoints with spyware/grayware detections, such as the managed product that detected the spyware/grayware, the type of scan that detected the spyware/grayware, and the file path on the endpoint to the detected spyware/grayware

Table B-45. Endpoint Spyware/Grayware Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product

Data	Description
Generated	The date and time the managed product generated the data
Product Entity/ Endpoint	Depending on the related source: • The display name of the managed product server in Apex Central • The name or IP address of the Security Agent endpoint
Product/Endpoint IP	Depending on the related source: • The IP address of the managed product server • The IP address of the endpoint
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Managing Server Entity	The display name of the managed product server in Apex Central to which the endpoint reports
Spyware/Grayware	The name of the security threat
Endpoint	The IP address or name of the endpoint that the threat accessed
Source Host	The IP address or name of the endpoint from which the security threat originated
User	The logged on user name at the time of the event
Scan Type	The type of scan that reported the event (for example, Real-time Scan, Scheduled Scan, Manual Scan)
Resource	The specific resource affected by the security threat Example: `application.exe`, `H Key Local Machine\SOFTWARE\ACME`
Resource Type	The type of resource affected by the security threat Example: registry, memory resource
Security Threat Type	The type of security threat Example: adware, COOKIE, peer-to-peer application

Data	Description
Risk Level	The risk level of the security threat Example: High security, Medium security, Low security
Result	The result of the action taken by the managed product Example: successful, further action required
Action	The action taken by the managed product Example: File cleaned, File quarantined, File deleted
Detections	The total number of detections
Cloud Service Vendor	The name of the cloud service vendor

Endpoint Spyware/Grayware Summary

Provides a summary of spyware/grayware detections from specific endpoints. Example: name of endpoint, number of specific spyware/grayware instances on the endpoint, total number of instances of spyware/grayware on the network

Table B-46. Endpoint Spyware/Grayware Summary Data View

Data	Description
Endpoint	Displays the host name or IP address of the computer affected by spyware/grayware.
Unique Sources	Displays the number of unique sources where spyware/grayware originates. Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware originating from 2 infection sources. Unique Sources = 2

Data	Description
Unique Detections	Displays the number of unique spyware/grayware managed products detect. Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware on one computer. Unique Detections = 1
Detections	Displays the total number of spyware/grayware managed products detect. Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware on one computer. Detections = 10

Email Spyware/Grayware

Provides specific information about email messages with spyware/grayware detections, such as the managed product that detected the spyware/grayware, the subject line content of the email message, and the sender of the email message containing spyware/grayware

Table B-47. Email Spyware/Grayware Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity	The display name of the managed product server in Apex Central
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Spyware/Grayware	The name of the security threat
Recipient	The recipient(s) of the email message that triggered the detection
Sender	The sender of the email message that triggered the detection

Data	Description
User	The logged on user name at the time of the event
Subject	The subject of the email message that triggered the detection
File	The name of the file object that the threat accessed
File in Compressed File	The name of the affected file object in the compressed archive
Result	The result of the action taken by the managed product Example: successful, further action required
Action	The action taken by the managed product Example: File cleaned, File quarantined, File deleted
Detections	The total number of detections Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware on one computer. Detections = 10
Cloud Service Vendor	The name of the cloud service vendor

Network Spyware/Grayware

Provides specific information about the spyware/grayware instances found in network traffic, such as the managed product that detected the spyware/grayware, the protocol the spyware/grayware used to enter your network, and specific information about the source and destination of the spyware/grayware

Table B-48. Network Spyware/Grayware Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data

Data	Description
Product Entity/ Endpoint	Depending on the related source: • The display name of the managed product server in Apex Central • The name or IP address of the Security Agent endpoint
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Spyware/Grayware	The name of the security threat
Traffic/Connection	The direction of the transmission
Protocol	The protocol that the threat used to enter the network Example: HTTP, SMTP, FTP
Endpoint IP	The IP address that the threat accessed
Endpoint	The IP address or name of the endpoint that the threat accessed
Endpoint Port	The IP port number that the threat accessed
Endpoint MAC	The MAC address that the threat accessed
Source IP	The source IP address of the detected threat
Source Host	The IP address or name of the endpoint from which the security threat originated
Source Port	The source IP address port number of the detected threat
Source MAC	The source MAC address of the detected threat
User	The logged on user name at the time of the event
File	The name of the file object that the threat accessed
Result	The result of the action taken by the managed product Example: successful, further action required
Action	The action taken by the managed product Example: File cleaned, File quarantined, File deleted

Data	Description
Detections	The total number of detections Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware on one computer. Detections = 10
Cloud Service Vendor	The name of the cloud service vendor

Overall Spyware/Grayware Summary

Provides overall specific summary for spyware/grayware detections. Example: name of spyware/grayware, number of endpoints affected by the spyware/grayware, total number of instances of the spyware/grayware on the network

Table B-49. Overall Spyware/Grayware Summary Data View

Data	Description
Spyware/Grayware	Displays the name of spyware/grayware managed products detect.
Unique Endpoints	Displays the number of unique computers affected by the spyware/grayware. Apex One detects 10 spyware/grayware instances of the same spyware/grayware on 3 different computers. Unique Endpoints = 3
Unique Sources	Displays the number of unique sources where spyware/grayware originates. Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware originating from 2 infection sources. Unique Sources = 2
Detections	Displays the total number of spyware/grayware managed products detect.

Spyware/Grayware Action/Result Summary

Provides a summary of the actions managed products take against spyware/grayware. Example: specific actions taken against spyware/grayware, the result of the action taken, total number of instances of spyware/grayware on the network

TABLE B-50. Spyware/Grayware Action/Result Summary Data View

DATA	DESCRIPTION
Result	Displays the results of the action managed products take against spyware/grayware. Example: successful, further action required
Action	Displays the type of action managed products take against spyware/grayware. Example: File cleaned, File quarantined, File deleted
Unique Endpoints	Displays the number of unique computers affected by the spyware/grayware. Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware on 3 different computers. Unique Endpoints = 3
Unique Sources	Displays the number of unique sources where spyware/grayware originates. Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware originating from 2 infection sources. Unique Sources = 2
Detections	Displays the total number of spyware/grayware managed products detect. Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware on one computer. Detections = 10

Spyware/Grayware Detection Over Time Summary

Provides a summary of spyware/grayware detections over a period of time (daily, weekly, monthly). Example: time and date of when summary data was collected, number of endpoints affected by the spyware/grayware, total number of instances of spyware/grayware on the network

TABLE B-51. Spyware/Grayware Detection Over Time Summary Data View

DATA	DESCRIPTION
Date/Time	Displays the time that the summary of the data occurs.
Unique Detections	Displays the number of unique spyware/grayware managed products detect. Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware on one computer. Unique Detections = 1
Unique Endpoints	Displays the number of unique computers affected by the spyware/grayware. Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware on 3 different computers. Unique Endpoints = 3
Unique Sources	Displays the number of unique sources where spyware/grayware originates. Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware originating from 2 infection sources. Unique Sources = 2
Detections	Displays the total number of spyware/grayware managed products detect. Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware on one computer. Detections = 10

Spyware/Grayware Source Summary

Provides a summary of spyware/grayware detections from the source of the outbreak. Example: name of source computer, number of specific spyware/grayware instances from the source computer, total number of instances of spyware/grayware on the network

TABLE B-52. Spyware/Grayware Source Summary Data View

DATA	DESCRIPTION
Source Host	Displays the name of the computer where spyware/grayware originates.
Unique Endpoints	Displays the number of unique computers affected by the spyware/grayware. Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware on 3 different computers. Unique Endpoints = 3
Unique Detections	Displays the number of unique spyware/grayware managed products detect. Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware on one computer. Unique Detections = 1
Detections	Displays the total number of spyware/grayware managed products detect. Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware on one computer. Detections = 10

Web Spyware/Grayware

Provides specific information about the spyware/grayware instances found in HTTP or FTP traffic, such as the managed product that detected the spyware/grayware, the direction of traffic where the spyware/grayware occurs, and the web browser or FTP client that downloaded the spyware/grayware

TABLE B-53. Web Spyware/Grayware Data View

DATA	DESCRIPTION
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity/ Endpoint	Depending on the related source: • The display name of the managed product server in Apex Central • The name or IP address of the Security Agent endpoint
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Spyware/Grayware	The name of the security threat
IP	The IP address of the endpoint
Source URL	The URL of the web/FTP site from which the security threat originated
Traffic/Connection	The direction of the transmission
Browser/FTP Client	The web browser or FTP client that the threat accessed
User	The logged on user name at the time of the event
Result	The result of the action taken by the managed product Example: successful, further action required
Action	The action taken by the managed product Example: File cleaned, File quarantined, File deleted
Detections	The total number of detections Example: Apex One detects 10 spyware/grayware instances of the same spyware/grayware on one computer. Detections = 10
Cloud Service Vendor	The name of the cloud service vendor

Virus/Malware Information

Displays summary and detailed data about malware/viruses that managed products detect on your network.

Detailed Virus/Malware Information

Provides specific information about the virus/malware detections on your network, such as the managed product that detected the viruses/malware, the name of the virus/malware, and the infected endpoint

TABLE B-54. Detailed Virus/Malware Information Data View

DATA	DESCRIPTION
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity/ Endpoint	Depending on the related source: • The display name of the managed product server in Apex Central • The name or IP address of the endpoint
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Product/Endpoint IP	Depending on the related source: • The IP address of the managed product server • The IP address of the endpoint
Product/Endpoint MAC	Depending on the related source: • The MAC address of the managed product server • The MAC address of the Security Agent endpoint
Managing Server Entity	The display name of the managed product server in Apex Central to which the endpoint reports

Data	Description
Domain	The domain of the managed product server to which the endpoint reports
Virus/Malware	The name of the security threat
Endpoint Infection Channel	The channel that the threat originated from
Endpoint	The name or IP address of the endpoint
Source Host	The IP address or name of the endpoint from which the security threat originated
User	The logged on user name at the time of the event
Result	The result of the action taken by the managed product
Action	The action taken by the managed product
Detections	The total number of detections Example: Apex One detects 10 virus instances of the same virus on one computer. Detections = 10
Entry Type	The entry point of the security threat
Detailed Information	A link that displays additional information about the specific detection
Apex One Domain Hierarchy	The agent tree domain or subdomain to which the Security Agent belongs
Department	The Active Directory department to which the endpoint belongs
Operating System	The operating system on the endpoint
Pattern/Rule	The pattern or rule that triggered the detection
Pattern/Rule Version	The version of the pattern or rule that triggered the detection
Cloud Service Vendor	The name of the cloud service vendor
File	The name of the file object or the program that executed the process

Data	Description
File Path	The path of the file object or the path of the program that executed the process

Endpoint Virus/Malware Information

Provides specific information about endpoints with virus/malware detections, such as the managed product that detected the viruses/malware, the type of scan that detected the virus/malware, and the file path on the endpoint to the detected viruses/malware

Table B-55. Endpoint Virus/Malware Information Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity/ Endpoint	Depending on the related source: • The display name of the managed product server in Apex Central • The name or IP address of the Security Agent endpoint
Product/Endpoint IP	Depending on the related source: • The IP address of the managed product server • The IP address of the Security Agent endpoint
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Managing Server Entity	The display name of the managed product server in Apex Central to which the endpoint reports
Virus/Malware	The name of the security threat Example: `NIMDA, BLASTER, I_LOVE_YOU.EXE`
Endpoint	The name of the endpoint

Data	Description
User	The logged on user name at the time of the event
Scan Type	The type of scan that reported the event (for example, Real-time Scan, Scheduled Scan, Manual Scan)
File	The name of the file object that the threat accessed
File Path	The path of the file object that the threat accessed
File in Compressed File	The name of the affected file object in the compressed archive
Result	The result of the action taken by the managed product Example: successful, further action required
Action	The action taken by the managed product Example: File cleaned, File quarantined, File deleted
Detections	The total number of detections Example: Apex One detects 10 virus instances of the same virus on one computer. Detections = 10
Cloud Service Vendor	The name of the cloud service vendor

Email Virus/Malware Information

Provides specific information about email messages with virus/malware detections, such the managed product that detected the viruses/malware, the subject line content of the email message, and the sender of the email message containing viruses/malware

Table B-56. Email Virus/Malware Information Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product

Data	Description
Generated	The date and time the managed product generated the data
Product Entity	The display name of the managed product server in Apex Central
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Virus/Malware	The name of the security threat Example: `NIMDA, BLASTER, I_LOVE_YOU.EXE`
Recipient	The recipient(s) of the email message that triggered the detection
Sender	The sender of the email message that triggered the detection
User	The logged on user name at the time of the event
Subject	The subject of the email message that triggered the detection
File	The name of the file object that the threat accessed
File in Compressed File	The name of the affected file object in the compressed archive
Result	The result of the action taken by the managed product Example: successful, further action required
Action	The action taken by the managed product Example: File cleaned, File quarantined, File deleted
Detections	The total number of detections Example: Apex One detects 10 virus instances of the same virus on one computer. Detections = 10
Cloud Service Vendor	The name of the cloud service vendor

Network Virus/Malware Information

Provides specific information about the virus/malware instances found in network traffic, such as the managed product that detects the viruses/malware, the protocol the virus/malware uses to enter your network, specific information about the source and destination of the virus/malware

TABLE B-57. Network Virus/Malware Information Data View

DATA	DESCRIPTION
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity/ Endpoint	Depending on the related source: • The display name of the managed product server in Apex Central • The name or IP address of the endpoint
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Virus/Malware	The name of the security threat Example: `NIMDA, BLASTER, I_LOVE_YOU.EXE`
Endpoint	The IP address or name of the endpoint that the threat accessed
Source Host	The IP address or name of the endpoint from which the security threat originated
User	The logged on user name at the time of the event
Traffic/Connection	The direction of the transmission
Protocol	The protocol that the threat used to enter the network Example: HTTP, SMTP, FTP
Endpoint Computer	The IP address or name of the endpoint that the threat accessed
Endpoint Port	The IP port number that the threat accessed

Data	Description
Endpoint MAC	The MAC address that the threat accessed
Source Computer	The IP address or name of the endpoint from which the security threat originated
Source Port	The source IP address port number of the detected threat
Source MAC	The source MAC address of the detected threat
File	The name of the file object that the threat accessed
Result	The result of the action taken by the managed product Example: successful, further action required
Action	The action taken by the managed product Example: File cleaned, File quarantined, File deleted
Detections	The total number of detections Example: Apex One detects 10 virus instances of the same virus on one computer. Detections = 10
Cloud Service Vendor	The name of the cloud service vendor

Overall Virus/Malware Summary

Provides overall specific summary for virus/malware detections. Example: name of virus/malware, number of endpoints affected by the virus, total number of instances of the virus on the network

Table B-58. Overall Virus/Malware Summary Data View

Data	Description
Virus/Malware	Displays the name of viruses/malware managed products detect. Example: NIMDA, BLASTER, I_LOVE_YOU.EXE

Data	Description
Unique Endpoints	Displays the number of unique computers affected by the virus/malware. Example: Apex One detects 10 virus instances of the same virus on 3 different computers. Unique Endpoints = 3
Unique Sources	Displays the number of unique infection sources where viruses/malware originate. Example: Apex One detects 10 virus instances of the same virus originating from 2 infection sources. Unique Sources = 2
Detections	Displays the total number of viruses/malware managed products detect. Example: Apex One detects 10 virus instances of the same virus on one computer. Detections = 10

Virus/Malware Action/Result Summary

Provides a summary of the actions managed products take against viruses/malware. Example: specific actions taken against viruses/malware, the result of the action taken, total number of instances of viruses/malware on the network

Table B-59. Virus/Malware Action/Result Summary Data View

Data	Description
Result	Displays the results of the action managed products take against viruses/malware. Example: successful, further action required

Data	Description
Action	Displays the type of action managed products take against viruses/malware. Example: File cleaned, File quarantined, File deleted
Unique Endpoints	Displays the number of unique computers affected by the virus/malware. Example: Apex One detects 10 virus instances of the same virus on 3 different computers. Unique Endpoints = 3
Unique Sources	Displays the number of unique infection sources where viruses/malware originate. Example: Apex One detects 10 virus instances of the same virus originating from 2 infection sources. Unique Sources = 2
Detections	Displays the total number of viruses/malware managed products detect. Example: Apex One detects 10 virus instances of the same virus on one computer. Detections = 10

Virus/Malware Detection Over Time Summary

Provides a summary of virus/malware detections over a period of time

Data	Description
Date/Time	Displays the time that the summary of the data occurs.
Unique Detections	Displays the number of unique virus/malware detections. Example: A managed product detects the same virus on 2 endpoints. Unique Detections = 1

Data	Description
Unique Endpoints	Displays the number of unique endpoints with virus/malware detections. Example: A managed product detects a virus on 4 endpoints. Unique Endpoints = 4
Unique Sources	Displays the number of unique sources of virus/malware. Example: A managed product detects 10 viruses from two different sources. Unique Sources = 2
Detections	Displays the total number of viruses/malware managed products detect. Example: A managed product detects 10 viruses/malware on one computer. Detections = 10

Virus/Malware Endpoint Summary

Provides a summary of virus/malware detections from specific endpoints. Example: name of endpoint, number of specific virus/malware instances on the endpoint, total number of instances of viruses/malware on the network

Table B-60. Virus/Malware Endpoint Summary Data View

Data	Description
Endpoint	Displays the IP address or host name of the computer affected by viruses/malware.
Unique Sources	Displays the number of unique infection sources where viruses/malware originate. Example: Apex One detects 10 virus instances of the same virus originating from 2 infection sources. Unique Sources = 2

Data	Description
Unique Detections	Displays the number of unique virus/malware managed products detect. Example: Apex One detects 10 virus instances of the same virus on one computer. Unique Detections = 1
Detections	Displays the total number of viruses/malware managed products detect. Example: Apex One detects 10 virus instances of the same virus on one computer. Detections = 10

Virus/Malware Source Summary

Provides a summary of virus/malware detections from the source of the outbreak. Example: name of source computer, number of specific virus/malware instances from the source computer, total number of instances of viruses/malware on the network

Table B-61. Virus/Malware Source Summary Data View

Data	Description
Source Host	Displays the IP address or host name of the computer where viruses/malware originate
Unique Endpoints	Displays the number of unique computers affected by the virus/malware Example: Apex One detects 10 virus instances of the same virus on 3 different computers Unique Detections = 3

Data	Description
Unique Detections	Displays the number of unique virus/malware managed products detect Example: Apex One detects 10 virus instances of the same virus on one computer Detections = 10
Detections	Displays the total number of viruses/malware managed products detect Example: Apex One detects 10 virus instances of the same virus on one computer Detections = 10
Department	Displays the name of the department that the endpoint belongs to

Web Virus/Malware Information

Provides specific information about the virus/malware instances found in HTTP or FTP traffic, such as the managed product that detected the viruses/malware, the direction of traffic, and the web browser or FTP client that downloaded the virus/malware

Table B-62. Web Virus/Malware Information Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity/ Endpoint	Depending on the related source: • The display name of the managed product server in Apex Central • The name or IP address of the endpoint
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange

Data	Description
Virus/Malware	The name of the security threat Example: `NIMDA, BLASTER, I_LOVE_YOU.EXE`
Endpoint	The IP address or name of the endpoint that the threat accessed
Source URL	The URL of the web/FTP site from which the security threat originated
User	The logged on user name at the time of the event
Traffic/Connection	The direction of the transmission
Browser/FTP Client	The web browser or FTP client that the threat accessed
Result	The result of the action taken by the managed product
Action	The action taken by the managed product
Detections	The total number of detections Example: Apex One detects 10 virus instances of the same virus on one computer. Detections = 10
Cloud Service Vendor	The name of the cloud service vendor

Web Violation/Reputation Information

Displays summary and detailed data about Internet violations that managed products detect on your network.

Detailed Web Reputation Information

Provides compliance information about application activity detected by Web Reputation Services

TABLE B-63. Detailed Web Reputation Information Data View

DATA	DESCRIPTION
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity	The display name of the managed product server in Apex Central
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
VLAN ID	The VLAN ID (VID) of the source from which the suspicious threat originates
Detected By	The filter, scan engine, or managed product that detected the threat
Traffic/Connection	The direction of the transmission
Protocol Group	The broad protocol group from which a managed product detects the suspicious threat Example: FTP, HTTP, P2P
Protocol	The protocol from which a managed product detects the suspicious threat Example: ARP, BitTorrent
Description	Detailed description of the incident by Trend Micro
Endpoint	The host name of the computer in compliance of the policy/rule
Source IP	The source IP address of the detected threat
Source MAC	The source MAC address of the detected threat
Source Port	The source IP address port number of the detected threat
Source IP Group	The IP address group of the source where the suspicious threat originates
Source Network Zone	The network zone of the source where the suspicious threat originates
Endpoint IP	The IP address of the endpoint the suspicious threat affects

Data	Description
Endpoint Port	The port number of the endpoint the suspicious threat affects
Endpoint MAC	The MAC address of the endpoint the suspicious threat affects
Endpoint Group	The IP address group of the endpoint the suspicious threat affects
Endpoint Network Zone	The network zone of the endpoint the suspicious threat affects
Policy/Rule	The policy or rule that triggered the detection
URL	The URL object that triggered the detection
Detections	The total number of detections Example: A managed product detects 10 violations of the same type on one computer. Detections = 10
C&C List Source	The C&C list source that identified the C&C server
C&C Risk Level	The risk level of the C&C server
Threat Type	The type of security threat
Detection Severity	The severity level of the event
IP Address (Interested)	The IP address of the target endpoint (source or destination) For an exchange occurring within the network, the Interested IP is the source IP address. If the traffic is an external traffic, the Interested IP is the destination IP address.
IP Address (Peer)	The IP address opposite of the Interested IP For example, if the Interested IP is the source IP address, then the Peer IP is the destination IP address.
Matching Classified Events	The log count matching the same aggregated rule
Aggregated Matching Classified Events	The aggregated log count matching the same rule

Data	Description
Network Group	The name of the group
Host Severity	The host severity
Log ID	The log ID
Attack Phase	The phase with which the attack happened
Remarks	Additional information about the event
C&C Server	The name, URL, or IP address of the C&C server
C&C Server Type	The type of C&C server
Sender	The sender of the transmission that triggered the detection
Recipient	The recipient(s) of the transmission that triggered the detection
Subject	The subject of the email message containing the web URL

Detailed Web Violation Information

Provides specific information about web violations on your network

Table B-64. Detailed Web Violation Information Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Managing Server Entity	The display name of the managed product server in Apex Central to which the endpoint reports
Product Entity	The display name of the managed product server in Apex Central
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Traffic/Connection	The direction of the transmission

Data	Description
Protocol	The protocol over which the violation takes place Example: HTTP, FTP, SMTP
URL	The URL object that triggered the detection
User/IP	The user or IP address of the endpoint that violates a policy
User Group	The user group for the user that violates a policy
Endpoint	The IP address of the endpoint that violates a policy
Endpoint Host	The IP address or host name of the endpoint that violates a policy
Product Host	The IP address or host name of the managed product which detects the violation
Filter/Blocking Type	The type of filter/blocking preventing access to the URL in violation Example: URL blocking, URL filtering, web blocking
Blocking Rule	The blocking rule preventing access to the URL in violation Example: URL blocking
Policy	The policy that triggered the detection
File	The name of the file that violates a policy
Process	The name of the process that violates a policy
Web Reputation Rating	The relative safety, as a percentage, of a website according to Trend Micro
Action	The action taken by the managed product Example: pass, block
Detections	The total number of detections Example: A managed product detects 10 violation instances of the same URL on one computer. Detections = 10

Overall Web Violation Summary

Provides a summary of web violations of specific policies. Example: name of the policy in violation, the type of filter/blocking to stop access to the URL, the total number of web violations on the network

TABLE B-65. Overall Web Violation Summary Data View

DATA	DESCRIPTION
Policy	Displays the name of the policy the URL violates.
Filter/Blocking Type	Displays the type of filter/blocking preventing access to the URL in violation. Example: URL blocking, URL filtering, web blocking
Unique Endpoints	Displays the number of unique endpoints in violation of the specified policy. Example: A managed product detects 10 violation instances of the same URL on 4 computers. Unique Endpoints = 4
Unique URLs	Displays the number of unique URLs in violation of the specified policy. Example: A managed product detects 10 violation instances of the same URL on one computer. Unique URLs = 1
Detections	Displays the total number of web violations managed products detect. Example: A managed product detects 10 violation instances of the same URL on 1 computer. Detections = 10

Web Violation Detection Over Time Summary

Provides a summary of web violation detections over a period of time (daily, weekly, monthly). Example: time and date of when summary data was collected, number of endpoints in violation, the total number of web violations on the network

TABLE B-66. Web Violation Detection Over Time Summary Data View

DATA	DESCRIPTION
Date/Time	Displays the time that the summary of the data occurs.
Unique Policies	Displays the number of the policies in violation. Example: A managed product detects 10 policy violation instances of the same policy on 2 computers. Unique Policies = 1
Unique Endpoints	Displays the number of unique endpoints in violation of the specified policy. Example: A managed product detects 10 violation instances of the same URL on 4 computers. Unique Endpoints = 4
Unique URLs	Displays the number of unique URLs in violation of the specified policy. Example: A managed product detects 10 violation instances of the same URL on one computer. Unique URLs = 1
Detections	Displays the total number of web violations managed products detect. Example: A managed product detects 10 violation instances of the same URL on one computer. Detections = 10

Web Violation Detection Summary

Provides a summary of web violation detections over a period of time (daily, weekly, monthly). Example: time and date of when summary data was collected, number of endpoints in violation, the total number of web violations on the network

TABLE B-67. Web Violation Detection Summary Data View

DATA	DESCRIPTION
Unique Policies	Displays the number of the policies in violation. Example: A managed product detects 10 policy violation instances of the same policy on 2 computers. Unique Policies = 1
Unique Endpoints	Displays the number of unique endpoints in violation of the specified policy. Example: A managed product detects 10 violation instances of the same URL on 4 computers. Unique Endpoints = 4
Unique URLs	Displays the number of unique URLs in violation of the specified policy. Example: A managed product detects 10 violation instances of the same URL on one computer. Unique URLs = 1
Unique Users/IPs	Displays the number of unique users or IP addresses of endpoints in violation of the specified policy. Example: A managed product detects 10 violation instances of the same URL from one user. Unique Users/IPs = 1
Unique User Groups	Displays the number of unique user groups for users in violation of the specified policy. Example: A managed product detects 10 violation instances of the same URL from one user group. Unique User Groups = 1
Detections	Displays the total number of web violations managed products detect. Example: A managed product detects 10 violation instances of the same URL on one computer. Detections = 10

Web Violation Endpoint Summary

Provides a summary of web violation detections from a specific endpoint. Example: IP address of the endpoint in violation, number of policies in violation, the total number of web violations on the network

TABLE B-68. Web Violation Endpoint Summary Data View

DATA	DESCRIPTION
Endpoint	Displays the IP address or host name of endpoints in violation of web policies.
Unique Policies	Displays the number of the policies in violation. Example: A managed product detects 10 policy violation instances of the same policy on 2 computers. Unique Policies = 1
Unique URLs	Displays the number of unique URLs in violation of the specified policy. Example: A managed product detects 10 violation instances of the same URL on one computer. Unique URLs = 1
Detections	Displays the total number of web violations managed products detect. Example: A managed product detects 10 violation instances of the same URL on one computer. Detections = 10

Web Violation Filter/Blocking Type Summary

Provides a summary of the action managed products take against web violations. Example: the type of filter/blocking to stop access to the URL, the total number of web violations on the network

TABLE B-69. Web Violation Filter/Blocking Type Summary Data View

DATA	DESCRIPTION
Blocking Category	Displays the broad type of filter/blocking preventing access to the URL in violation. Example: URL blocking, URL filtering, Anti-spyware
Filter/Blocking Type	Displays the specific type of filter/blocking preventing access to the URL in violation. Example: URL blocking, URL filtering, Virus/Malware
Detections	Displays the total number of web violations managed products detect. Example: A managed product detects 10 violation instances of the same URL on one computer. Detections = 10

Web Violation URL Summary

Provides a summary of web violation detections from specific URLs. Example: name of the URL causing the web violation, the type of filter/blocking to stop access to the URL, the total number of web violations on the network

TABLE B-70. Web Violation URL Summary Data View

DATA	DESCRIPTION
URL	Displays the URL violating a web policy.
Filter/Blocking Type	Displays the type of filter/blocking preventing access to the URL in violation. Example: URL blocking, URL filtering, web blocking

Data	Description
Unique Endpoints	Displays the number of unique endpoints in violation of the specified policy. Example: A managed product detects 10 violation instances of the same URL on 4 computers. Unique Endpoints = 4
Detections	Displays the total number of web violations managed products detect. Example: A managed product detects 10 violation instances of the same URL on one computer. Detections = 10

Data View: Product Information

Displays information about Apex Central, managed products, components, and licenses.

Apex Central Information

Displays information about Apex Central user access, Command Tracking information, and Apex Central server events.

Apex Central Event Information

Provides information about Apex Central server events, such as managed products registering to Apex Central, component updates, and Activation Code deployments

Table B-71. Apex Central Event Information Data View

Data	Description
Date/Time	The that the event occurred

Data	Description
Event Type	The type of event that occurred (Example: notify TMI agent, server notify user, report service notify user)
Result	The result of the event (Example: successful, unsuccessful)
Description	The description of the activity (if available)

Command Tracking Information

Provides information about commands Apex Central issued to managed products, such as the date and time Apex Central issued commands for component updates or Activation Code deployments, and the status of the commands

Table B-72. Command Tracking Information Data View

Data	Description
Date/Time	The time that the issuer of the command issues the command
Command Type	The type of command issued (Example: scheduled update, Activation Code deployment)
Command Parameter	The specific information relating to the command (Example: specific pattern file name, specific Activation Code)
User	The user who issued the command
Status Update	The time of the latest status check of all commands for the selected Apex Central
Successful	The number of successful commands
Unsuccessful	The number of unsuccessful commands
In Progress	The number of commands that are still in progress
All	The total number of commands (Successful + Unsuccessful + In progress)

Detailed Command Tracking Information

Displays detailed information relating to commands. Examples: managed products registering to Apex Central, component updates, Activation Code deployments

TABLE B-73. Detailed Command Tracking Information Data View

DATA	DESCRIPTION
Date/Time	Displays the time that the command was issued.
Command Type	Displays the type of command issued. Example: scheduled update, Activation Code deployment
Command Parameter	Displays the specific information relating to the command. Example: specific pattern file name, specific Activation Code
Product Entity	Displays the managed product to which the command was issued.
User	Displays the user who issued the command.
Command Status	Displays the status of the command: successful, unsuccessful, in progress
Status Update	Displays the time of the latest status check of all commands for the selected Apex Central.
Result Detail Description	Displays the description Apex Central provides for events.

Unmanaged Endpoint Information

Provides information about detected endpoints that do not have a Trend Micro Security Agent installed

TABLE B-74. Unmanaged Endpoint Information Data View

DATA	DESCRIPTION
Endpoint	The name of the endpoint

User Access Information

Provides information about Apex Central user access and the activities users perform while logged on to Apex Central

TABLE B-75. User Access Information Data View

DATA	DESCRIPTION
Date/Time	Date and time the activity started
User	Name of the user who initiated the activity
Active Directory Group	Name of the Active Directory group
User Role	User role assigned to the user account in Apex Central
Activity	Activity the user performed on Apex Central (Example: log on, edit user account, add deployment plan)
Result	Result of the activity
Description	Description of the activity (if available)
Description of Role	Description of the user role assigned to the user account

Component Information

Displays status, detailed, and summary information about out of date and up to date and component deployment of managed product components.

Endpoint Pattern/Engine Status Summary

Displays summary information about pattern files/scan engine managed products use.

TABLE B-76. Endpoint Pattern/Engine Status Summary

DATA	DESCRIPTION
Product Host	Displays the host name of the server on which the managed product installs.
Domain	Displays the domain name of the host.
Endpoints	Displays the host name of a computer with an agent (for example Apex One agent) installed.
Patterns Out-of-Date	Displays the number of managed products with out-of-date pattern files.
Pattern Up-to-Date Rate (%)	Displays the percentage of managed products with up-to-date pattern files. This includes pattern files that return n/a as a value.
Engines Out-of-Date	Displays the number of managed products with out-of-date scan engines.
Engine Up-to-Date Rate (%)	Displays the percentage of managed products with up-to-date scan engines. This includes scan engines that return n/a as a value.

Endpoint Pattern/Rule Update Status Summary

This data view displays summary information about the update status of patterns or rules.

TABLE B-77. Endpoint Pattern/Rule Update Status Summary Data View

DATA	DESCRIPTION
Pattern/Rule	Displays the name of the pattern or rule
Pattern/Rule Status	Indicates whether the current version of the pattern or rule is up-to-date
Pattern/Rule Version	Displays the version of the pattern or rule
Pattern/Rule Updated	Indicates whether the pattern or rule has been updated successfully
Endpoint Count	Displays the number of endpoints that use the current version of the pattern or rule

Data	Description
Total Endpoints	Displays the total number endpoints that use the pattern or rule
Rate (%)	Displays the percentage of endpoints using the current version of the pattern or rule

Engine Status

Displays detailed information about scan engines managed products use. Examples: scan engine name, time of the latest scan engine deployment, and which managed products use the scan engine

Table B-78. Engine Status Data View

Data	Description
Product Entity/ Endpoint	This data column displays one of the following: • The entity display name for a managed product. Apex Central identifies managed products using the managed product's entity display name. • The IP address or host name of a computer with an agent (for example, Apex One agent) installed.
Product Host/ Endpoint	This data column displays one of the following: • The host name of the server on which the managed product installs. • The IP address of a computer with an agent (for example, Apex One agent) installed.
Product/Endpoint IP	This data column displays one of the following: • The IP address of the server on which the managed product installs. • The IP address of a computer with an agent (for example, Apex One agent) installed.

Data	Description
Connection Status	This data column displays one of the following: • The managed product's connection status to Apex Central. Example: Normal, Abnormal, Offline • The endpoint agent's connection status to a managed product (Apex One). Example: Normal, Abnormal, Offline
Product	Displays the name of the managed product. Example: Apex One, ScanMail for Microsoft Exchange
Product Version	Displays the managed product's or managed product agent's version number. Example: Apex One 2019, Apex Central 2019
Product Role	Displays the role the managed product or a computer with an agent (for example, Apex One agent) has in the network environment. Example: server
Engine	Displays the name of the scan engine. Example: Anti-spam Engine (Windows), Virus Scan Engine IA 64 bit Scan Engine
Engine Version	Displays the version of the scan engine. Example: Anti-spam Engine (Windows): 3.000.1153, Virus Scan Engine IA 64 bit Scan Engine: 8.000.1008
Engine Status	Displays the scan engine currency status. Example: up-to-date, out-of-date
Engine Updated	Displays the time of the latest scan engine deployment to managed products or endpoints.

Pattern/Rule Status

Displays detailed information about pattern files/rules managed products use. Examples: pattern file/rule name, time of the latest pattern file/rule deployment, and which managed products use the pattern file/rule

TABLE B-79. Pattern/Rule Status Data View

DATA	DESCRIPTION
Product Entity/ Endpoint	This data column displays one of the following: • The entity display name for a managed product. Apex Central identifies managed products using the managed product's entity display name. • The IP address or host name of a computer with an agent (for example, Apex One agent) installed.
Operating System	This data column displays the operating system of the server on which the managed product installs.
Product Host/ Endpoint	This data column displays one of the following: • The host name of the server on which the managed product installs. • The IP address of a computer with an agent (for example, Apex One agent) installed.
Product/Endpoint IP	This data column displays one of the following: • The IP address of the server on which the managed product installs. • The IP address of a computer with an agent (for example, Apex One agent) installed.
Update Agent	This data column displays Update Agents for the managed product.
Domain	This data column displays the domain of the server on which the managed product installs.
Managing Server Entity Display Name	This data column displays the managing server entity display name.
Connection Status	This data column displays one of the following: • The managed product's connection status to Apex Central. Example: Normal, Abnormal, Offline • The endpoint agent's connection status to a managed product (Apex One). Example: Normal, Abnormal, Offline

Data	Description
Product	Displays the name of the managed product. Example: Apex One, ScanMail for Microsoft Exchange
Product Version	Displays the managed product's or managed product agent's version number. Example: Apex One 2019, Apex Central 2019
Product Role	Displays the role the managed product or a computer with an agent (for example, Apex One agent) has in the network environment. Example: server
Pattern/Rule	Displays the name of the pattern file or rule. Example: Virus Pattern File, Anti-spam Pattern
Pattern/Rule Version	Displays the version of the pattern file or rule. Example: Virus Pattern File: 3.203.00, Anti-spam Pattern: 14256
Pattern/Rule Status	Displays the pattern file/rule currency status. Example: up-to-date, out-of-date
Pattern/Rule Updated	Displays the time of the latest pattern file/rule deployment to managed products or endpoints.
Apex One Domain Hierarchy	Displays the path on the Apex One domain hierarchy.

Pattern File/Rule Status Summary

Displays summary information about pattern files/rules that managed products use. Examples: pattern file/rule name, pattern file/rule up-to-date rate, and the number of pattern files/rules out-of-date

Table B-80. Pattern File/Rule Status Summary Data View

Data	Description
Pattern File/Rule	Displays the name of the pattern file or rule. Example: Virus Pattern File, Anti-spam Pattern
Version	Displays the version of the pattern file or rule. Example: Virus Pattern File: 3.203.00, Anti-spam Pattern: 14256

Data	Description
Up-to-Date	Displays the number of managed products with up-to-date pattern files or rules.
Out-of-Date	Displays the number of managed products with out-of-date pattern files or rules.
Up-to-Date Rate (%)	Displays the percentage of managed products with up-to-date pattern files/rules. This includes pattern files/rules that return n/a as a value.
1 Version Old Rate (%)	Displays the percentage of managed products with pattern files/rules that are 1 version old
2 Versions Old Rate (%)	Displays the percentage of managed products with pattern files/rules that are 2 versions old
3 Versions Old Rate (%)	Displays the percentage of managed products with pattern files/rules that are 3 versions old
4 Versions Old Rate (%)	Displays the percentage of managed products with pattern files/rules that are 4 versions old
5 Versions Old Rate (%)	Displays the percentage of managed products with pattern files/rules that are 5 versions old
6 or More Versions Old Rate (%)	Displays the percentage of managed products with pattern files/rules that are 6 or more versions old

Product Component Deployment

Displays detailed information about components managed products use. Examples: pattern file/rule name, pattern file/rule version number, and scan engine deployment status

Table B-81. Product Component Deployment Data View

Data	Description
Product Entity	Displays the entity display name for a managed product. Apex Central identifies managed products using the managed product's entity display name.

Data	Description
Product	Displays the name of the managed product. Example: Apex One, ScanMail for Microsoft Exchange
Product Version	Displays the managed product's version number. Example: Apex One 2019, Apex Central 2019
Connection Status	Displays the connection status between the managed product and Apex Central server or managed products and their endpoints.
Pattern/Rule Status	Displays the pattern file/rule currency status. Example: up-to-date, out-of-date
Pattern/Rule Deployment Status	Displays the deployment status for the latest pattern file/rule update. Example: successful, unsuccessful, in progress
Pattern/Rule Deployment	Displays the time of the latest pattern file/rule deployment to managed products or endpoints.
Engine Status	Displays the scan engine currency status. Example: up-to-date, out-of-date
Engine Deployment Status	Displays the deployment status for the latest scan update. Example: successful, unsuccessful, in progress
Engine Deployment	Displays the time of the latest scan engine deployment to managed products or endpoints.

Scan Engine Status Summary

Displays summary information about scan engines managed products use. Examples: scan engine name, scan engine rate, and the number of scan engines out-of-date

Table B-82. Engine Status Summary Data View

Data	Description
Engine	Displays the name of the scan engine. Example: Anti-spam Engine (Windows), Virus Scan Engine IA 64 bit Scan Engine

Data	Description
Version	Displays the version of the scan engine. Example: Anti-spam Engine (Windows): 3.000.1153, Virus Scan Engine IA 64 bit Scan Engine: 8.000.1008
Up-to-Date	Displays the number of managed products with up-to-date scan engines.
Out-of-Date	Displays the number of managed products with out-of-date scan engines.
Up-to-Date Rate (%)	Displays the percentage of managed products with up-to-date scan engines. This includes scan engines that return N/A as a value.

License Information

Displays status, detailed, and summary information about Apex Central and managed product license information.

Detailed Product License Information

Provides information about the Activation Codes and licensing status of managed products or services, such as the managed product version and license expiration date

Table B-83. Detailed Product License Information Data View

Data	Description
Product Entity	The display name of the managed product server in Apex Central
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Product Version	The version of the managed product or service
Managed Service	The name of the managed service Example: Web Reputation Service

Data	Description
License Status	The status of the license for managed products Example: Activated, Expired, In grace period
Product Type	The type of managed product the Activation Code provides Example: Trial version, Full version
Activation Code	The Activation Code for the managed product or service
License Expiration	The date the license expires for the managed product or service
Seats	The number of seats the Activation Code allows
Description	The description for the Activation Code

Product License Information Summary

Displays detailed information about the Activation Code and information on managed products that use the Activation Code. Examples: seat count that the Activation Code allows, evaluation or full product version, user-defined description about the Activation Code

Table B-84. Product License Information Summary Data View

Data	Description
Activation Code	Displays the Activation Code for managed products.
User-defined Description	Displays the user-defined description for the Activation Code.
Products/Services	Displays the number of managed products or services that use the Activation Code.
License Status	Displays the status of the license for managed products. Example: Activated, Expired, In grace period
Product Type	Displays the type of managed product the Activation Code provides. Example: Trial version, Full version
License Expiration	Displays the date the license expires for the managed product.

Data	Description
Seats	Displays the number of seats the Activation Code allows.

Product License Status

Displays detailed information about the managed product and information about the Activation Code the managed product uses. Examples: managed product information, whether the Activation Code is active, the number of managed products the Activation Code activates

Table B-85. Product License Status Data View

Data	Description
Product Entity	Displays the entity display name for a managed product. Apex Central identifies managed products using the managed product's entity display name.
Product	Displays the name of the managed product. Example: Apex One, ScanMail for Microsoft Exchange
Product Version	Displays the managed product's version number. Example: Apex One 2019, Apex Central 2019
Service	Displays the name of the managed product service. Example: Outbreak Protection Services
License Status	Displays the status of the license for managed products. Example: Activated, Expired, In grace period
Activation Code	Displays the Activation Code for managed products.
Activation Codes	Displays the number of Activation Codes a managed products uses.
License Expiration	Displays the date the license expires for the managed product.

Managed Product Information

Displays status, detailed, and summary information about managed products or managed product endpoints.

Product Auditing Event Log

Provides information about managed product auditing events, such as managed product console access

TABLE B-86. Product Auditing Event Log Data View

DATA	DESCRIPTION
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Host	Depending on the related source: • The display name of the managed product server • The display name of the Security Agent endpoint
User	The logged on user name at the time of the event
Event Category	The type of event Example: management console access
Event Level	The severity level of the event
Event Description	A description of the event

Product Distribution Summary

Displays summary information about managed products registered to Apex Central. Examples: managed product name, version number, and number of managed products

TABLE B-87. Product Distribution Summary Data View

DATA	DESCRIPTION
Registered to Apex Central	Displays the Apex Central server to which the managed product is registered.

Data	Description
Product Category	Displays the threat protection category for a managed product. Example: Server-based products, Desktop (computers and mobile devices) products **Note** Desktop products includes mobile device solutions.
Product	Displays the name of the managed product. Example: Apex One, ScanMail for Microsoft Exchange
Product Version	Displays the managed product's version number. Example: Apex One 2019, Apex Central 2019
Product Role	Displays the role the managed product has in the network environment. Example: server, client
Products	Displays the total number of a specific managed product a network contains.

Product Event Information

Provides information about managed product events, such as managed products registering to Apex Central, component updates, and Activation Code deployments

Table B-88. Product Event Information Data View

Data	Description
Received	The date and time Apex Central received the data from the managed product
Generated	The date and time the managed product generated the data
Product Entity	The display name of the managed product server in Apex Central
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange

Data	Description
Product Version	The version of the managed product or service
Event Severity	The severity level of the event
Event Type	The type of event Example: download virus found, file blocking, rollback
Command Status	The status of the command Example: successful, unsuccessful, in progress
Description	A description of the event

Product Status Information

Provides detailed information about managed products registered to the Apex Central server, such as the managed product version and build number, and the managed product server operating system

Table B-89. Product Status Information Data View

Data	Description
Product Entity/ Endpoint	Depending on the related source: • The display name of the managed product server in Apex Central • The name or IP address of the Security Agent endpoint
Product Host/ Endpoint	Depending on the related source: • The display name of the managed product server • The display name of the Security Agent endpoint
Product/Endpoint IP	Depending on the related source: • The IP address of the managed product server • The IP address of the Security Agent endpoint

Data	Description
Product/Endpoint MAC	Depending on the related source: • The MAC address of the managed product server • The MAC address of the Security Agent endpoint
Managing Apex Central Entity	The display name of the Apex Central server to which the managed product server reports
Managing Server Entity	The display name of the managed product server in Apex Central to which the endpoint reports
Domain	The domain to which the managed product belongs
Connection Status	Depending on the related source: • The status of the managed product server connection to Apex Central (Example: Normal, Abnormal, Offline) • The status of the Security Agent endpoint connection to the managed product server (Example: Normal, Abnormal, Offline)
Data Protection Status	The Data Loss Prevention status of the Security Agent Example: Installed, Not installed
Pattern Status	The status of the pattern files/rules used by the managed product or Security Agent Example: up-to-date, out-of-date
Engine Status	The status of the scan engines used by the managed product or Security Agent Example: up-to-date, out-of-date
Product	The name of the managed product or service Example: Apex One, ScanMail for Microsoft Exchange
Product Version	The version of the managed product or service
Endpoint Sensor Version	The version of Endpoint Sensor

Data	Description
Application Control Version	The version of Application Control
Vulnerability Protection Version	The version of Vulnerability Protection
Product Build	The build number of the managed product
Product Role	The role the managed product server or Security Agent endpoint has in the network environment. (for example, server)
Operating System	The operating system on the managed product server or Security Agent endpoint
OS Version	The version of the operating system on the managed product server or Security Agent endpoint
OS Service Pack	The service pack number of the operating system on the managed product server or Security Agent endpoint
Update Agent	If the Security Agent is an Update Agent
Last Scheduled Scan	The date and time of the last Scheduled Scan
Last Manual Scan	The date and time of the last Manual Scan
Last Scan Now	The date and time of the last Scan Now action
Real-time Scan	If Real-time Scan is enabled
Firewall	If the firewall is enabled
Pattern/Rule Deployment Status	The deployment status of the pattern/rule
Pattern/Rule Deployment	The date and time of the pattern/rule deployment
Engine Deployment Status	The scan engine deployment status
Engine Deployment	The date and time of the scan engine deployment

Data	Description
Logon User	The down-level logon name (NetBIOS_Domain\User_Name) of the last user logged on to the managed endpoint
Last Startup	The date and time the Security Agent last started running
Offline Time	The date and time the Security Agent last went offline
User Name	The logged on user name at the time of the event

Appendix C

Token Variables

This section describes token variables that Apex Central supports for customizing event notification messages.

Topics include:

- *Standard Token Variables on page C-2*
- *Advanced Threat Activity Token Variables on page C-2*
- *Attack Discovery Token Variables on page C-6*
- *C&C Callback Token Variables on page C-7*
- *Content Policy Violation Token Variables on page C-9*
- *Data Loss Prevention Token Variables on page C-9*
- *Known Threat Activity Token Variables on page C-11*
- *Network Access Control Token Variables on page C-14*
- *Web Access Policy Violation Token Variables on page C-14*

Standard Token Variables

The following table describes token variables for customizing all event notification messages.

Note

Some event notifications support additional token variables. For the complete list of supported token variables for a specific event notification, refer to the notification method information for the specific event notification.

VARIABLE	DESCRIPTION
%cmserver%	The Apex Central server name
%computer%	The name of the endpoint
%entity%	The display name of the managed product server in Apex Central
%event%	The event detected
%pname%	The name of the managed product
%pver%	The version of the managed product
%time%	The time (hh:mm) when the event occurred
%vloginuser%	The logged on user name at the time of the event
%act%	The action taken by the managed product. Example: file cleaned, file deleted, file quarantined

Advanced Threat Activity Token Variables

Note

For the list of standard token variables supported by all event notifications, see *Standard Token Variables on page C-2*.

The following table describes token variables for customizing Advanced Threat Activity event notification messages.

VARIABLE	DESCRIPTION
%hostIP%	Depending on the traffic direction, %hostIP% is IP address determined by Deep Discovery Inspector: • Outbound traffic (internal traffic going to an external network): %hostIP% is the IP address of the endpoint in the network (source) • Traffic within the network: %hostIP% is the IP address of the endpoint in the network • External traffic to an endpoint in a network: %hostIP% is the IP address of the endpoint in the network • Traffic outside the network: %hostIP% is the IP address of the endpoint outside the network
%group%	The name of the subnetwork
%START_TIME%	The start date and time of the detection period **Note** The specified time period for the notification criteria determines the start and end times.
%END_TIME%	The end date and time of the detection period The start and end times define the time range interval. When logs are received during a certain interval, Apex Central calculates those logs. If the alert criteria is met, Apex Central counts the logs. %START_TIME% is the start time of the interval and %END_TIME% is the end time of the interval. The length of the interval is determined by the period threshold in the alert settings. **Note** The specified time period for the notification criteria determines the start and end times.

VARIABLE	DESCRIPTION
%detections%	The number of detections For example: Event: High risk Virtual Analyzer detections IP address: %hostIP% Host name: %computer% Group: %group% Time range: %START_TIME% - %END_TIME% Detections: %detections%

The following table describes token variables for customizing event notification messages for Behavior Monitoring violations and Predictive Machine Learning detections.

VARIABLE	DESCRIPTION
%hostIP%	Depending on the traffic direction, %hostIP% is IP address determined by Deep Discovery Inspector: • Outbound traffic (internal traffic going to an external network): %hostIP% is the IP address of the endpoint in the network (source) • Traffic within the network: %hostIP% is the IP address of the endpoint in the network • External traffic to an endpoint in a network: %hostIP% is the IP address of the endpoint in the network • Traffic outside the network: %hostIP% is the IP address of the endpoint outside the network
%START_TIME%	The start date and time of the detection period **Note** The specified time period for the notification criteria determines the start and end times.

VARIABLE	DESCRIPTION
%END_TIME%	The end date and time of the detection period The start and end times define the time range interval. When logs are received during a certain interval, Apex Central calculates those logs. If the alert criteria is met, Apex Central counts the logs. %START_TIME% is the start time of the interval and %END_TIME% is the end time of the interval. The length of the interval is determined by the period threshold in the alert settings.  **Note** The specified time period for the notification criteria determines the start and end times.

%detections%	The number of detections
	
	For example:
	
	`Event: High risk Virtual Analyzer detections`
	
	`IP address: %hostIP%`
	
	`Host name: %computer%`
	
	`Group: %group%`
	
	`Time range: %START_TIME% - %END_TIME%`
	
	`Detections: %detections%`

%domain%	The root domain of the target in the Apex One domain hierarchy
%hierarchy%	The full path of the target in the Apex One domain hierarchy
%BM_policy%	The Behavior Monitoring policy ID
%risklevel%	The risk level of the event
%target%	The target of the event

Attack Discovery Token Variables

The following table describes token variables for customizing Attack Discovery event notification messages.

Variable	Description
%cmserver%	The Apex Central server name
%computer%	The name of the endpoint
%entity%	The display name of the managed product server in Apex Central
%event%	The event detected
%pname%	The name of the managed product
%pver%	The version of the managed product
%time%	The time (hh:mm) when the event occurred
%vloginuser%	The logged on user name at the time of the event
%act%	The action taken by the managed product. Example: file cleaned, file deleted, file quarantined
%actresult%	The result of the action taken by the managed product. Example: successful, further action required
%highrisk_detection%	The number of high-risk detections for the specified period
%highrisk_detection_endpoint%	The number of endpoints with high-risk detections for the specified period
%mediumrisk_detection%	The number of medium-risk detections for the specified period
%mediumrisk_detection_endpoint%	The number of endpoints with medium-risk detections for the specified period
%start_time%	The start date and time of the detection period
%end_time%	The end date and time of the detection period

C&C Callback Token Variables

The following table describes token variables for customizing C&C Callback event notification messages.

Note

For the list of standard token variables supported by all event notifications, see *Standard Token Variables on page C-2*.

Variable	Description
%CnC_LIST_SRC%	Name of the list that contains the callback address
%CNC_PD_NAME%	Product ID of the managed product server that sent the log
%CNC_PD_VERSION%	Version of the managed product server that sent the log
%CNC_PD_NODE%	Endpoint name of the managed product server that sent the log
%CNC_PD_IP%	IP address of the managed product server that sent the log
%CNC_EVTTIME%	Time the log was generated
%CNC_AGENTNAME%	Name of the Security Agent endpoint that detected the callback
%CNC_AGENTIP%	IP address of the Security Agent endpoint that detected the callback
%CNC_AGENTDOMAIN%	Apex One domain of the Security Agent endpoint that detected the callback
%CNC_POLICY_RULE%	Name or rule ID of the policy that detected the callback
%CNC_ACTION%	Action result from the security log, personal firewall, NCIE log, or web security log
%CNC_EMAIL_SENDER%	Email sender associated with the callback
%CNC_EMAIL_SUBJECT%	Email subject associated with the callback

Variable	Description
%CNC_RISKLEVEL%	Risk level of the malware groups associated with the C&C server
%CNC_DETECT_SOURCE%	The C&C list that defined the detection rule
%CNC_CHANNEL%	The type ID that indicates the destination format
%CNC_URL%	The remote URL that the endpoint attempted to contact
%CNC_URL_CATEGORY%	The URL category of the site that the endpoint attempted to contact
%CNC_IP_PORT%	The C&C server IP address and port
%CNC_EMAIL_REPT%	Email recipient associated with the callback
%CNC_FIRST_SEEN%	The first known detection of the C&C server
%CNC_LAST_SEEN%	The last known detection of the C&C server
%CNC_LOCATION%	The country code of the C&C server
%CNC_MALEWARE_FAMILY%	The malware family associated with the C&C detection
%CNC_ATTACK_GROUP%	The C&C group lists
%CNC_PROCESS_NAME%	The process name associated with the C&C detection
%CALLBACK_ADDR%	URL, IP address, or email address to which a compromised host attempts a callback
%COMPR_HOST%	Affected host or email address
%CALLBACK_NUM%	Number of contacts made between callback addresses and compromised hosts
%COMPR_HOST_NUM%	Number of compromised hosts involved in the outbreak
%CALLBACK_ADDR_NUM%	Number of callback addresses involved in the outbreak

Content Policy Violation Token Variables

The following table describes token variables for customizing Content Policy Violation event notification messages.

Note

For the list of standard token variables supported by all event notifications, see *Standard Token Variables on page C-2*.

Variable	Description
%subject%	Subject header of the email notification
%sender%	Sender's email address
%recipient%	Recipient's email address
%filtername%	Name of the content filter rule/policy that has been violated
%filteract%%	Action applied by the filter
%msgact%	Action applied to the message

Data Loss Prevention Token Variables

The following table describes token variables for customizing Data Loss Prevention event notification messages.

Note

For the list of standard token variables supported by all event notifications, see *Standard Token Variables on page C-2*.

VARIABLE	DESCRIPTION
%DLP_INCIDENT_TOTAL_NUM%	The total number of incidents triggered by directly managed users
%DLP_INCIDENT_HIGH_NUM%	The total number of high severity incidents triggered by directly managed users
%DLP_INCIDENT_MED_NUM%	The total number of medium severity incidents triggered by directly managed users
%DLP_INCIDENT_LOW_NUM%	The total number of low severity incidents triggered by directly managed users
%DLP_INCIDENT_INFO_NUM%	The total number of informational incidents triggered by directly managed users
%DLP_INCIDENT_UNDEFINED_NUM%	The total number of undefined severity incidents triggered by directly managed users
%DLP_INCIDENT_ALLTOTAL_NUM%	The total number of incidents triggered by all managed users
%DLP_INCIDENT_ALLHIGH_NUM%	The total number of high severity incidents triggered by all managed users
%DLP_INCIDENT_ALLMED_NUM%	The total number of medium severity incidents triggered by all managed users
%DLP_INCIDENT_ALLLOW_NUM%	The total number of low severity incidents triggered by all managed users
%DLP_INCIDENT_ALLINFO_NUM%	The total number of informational incidents triggered by all managed users
%DLP_INCIDENT_ALLUNDEFINED_NUM%	The total number of undefined severity incidents triggered by all managed users
%DLP_START_TIME%	The start date and time for the reporting period
%DLP_END_TIME%	The end date and time for the reporting period
%weblink%	The link to view details of the incident information listed in the notification message
%INCIDENTID%	Incident ID number

VARIABLE	DESCRIPTION
%SEVERITY%	Incident severity level
%POLICY%	Apex Central policy name **Note** For incidents triggering DLP policies created on the managed product console, the Apex Central policy name appears as **N/A**.
%ACCOUNT%	User name
%OLD_STATUS%	Incident status before modification
%NEW_STATUS%	Incident status after modification
%LATEST_COMMENT%	The latest comments about the incident
%DLP_VIOLATION_NUM%	The number of violations matching DLP policies
%DLP_THRESHOLD%	The number of violations that must be triggered to indicate a significant increase on policy violations
%DLP_TEMPLATE%	Template matching the significant incident increase
%DLP_USER_NAME%	The user name associated with the endpoint that triggered the DLP policy violation
%DLP_SENDER%	The sender of the message that triggered the DLP policy violation
%DLP_CHANNEL%	The channel of the incident that triggered the DLP policy violation
%STATUS_CHANGE_TIME%	Incident details updated

Known Threat Activity Token Variables

The following table describes token variables for customizing Known Threat Activity or Outbreak Prevention Service event notification messages.

Note

For the list of standard token variables supported by all event notifications, see *Standard Token Variables on page C-2*.

VARIABLE	DESCRIPTION
%device_ip%	IP address of an infected endpoint
%egnver%	• Scan engine version • Used by the alert event category as well as the "Active Outbreak Prevention Policy received" and "Outbreak Prevention Mode started" notifications. For the notification types of the alert event category, this variable refers to the scan engine version currently installed on the managed product server. • For the "Active Outbreak Prevention Policy received" and "Outbreak Prevention Mode started" notifications, this variable refers to the Outbreak Prevention Policy required.
%hierarchy%	• The location of the endpoint within the Apex One domain hierarchy • Used by the alert event category
%ptnver%	• Virus pattern version • Used by the alert event category and the "Active Outbreak Prevention Policy received" and "Outbreak Prevention Services started" notifications. For the notification types of the alert event category, this variable refers to the virus pattern version currently installed on the managed product server. • For the "Active Outbreak Prevention Policy received" and "Outbreak Prevention Services started" notifications, this variable refers to the Outbreak Prevention Policy required.

Variable	Description
%scanmethod%	The scan method for specific virus actions. This token is only available for the following alerts: • Virus found-first action unsuccessful and second action unavailable • Virus found-first and second actions unsuccessful • Virus found-first action successful • Virus found-second action successful
%threat_info%	• Virus/malware threat information provided by outbreak prevention policies • Used by "Active Outbreak Prevention Policy received" and "Outbreak Prevention Services started"
%vcnt%	• Virus count. • Used by virus outbreak alert.
%vdest%	• Virus/malware destination. • Examples: Email detection: %vdest% is the intended recipient Host-based/Endpoint detection: %vdest% is the endpoint IP address or host name • Used by the alert event category
%vfile%	Infected file name. Used by the alert event category.
%vfilepath%	Infected file directory. Used by the alert event category.
%vname%	Virus or malware name. Used by the alert event category.
%vsrc%	• Virus/malware origin or infection source. • For example, the message sender takes the value of %vsrc% if an antivirus managed product detected a virus/malware in an email message. • Used by the alert event category as well as the network virus alert notification type.

Network Access Control Token Variables

The following table describes token variables for customizing Network Access Control event notification messages.

Note

For the list of standard token variables supported by all event notifications, see *Standard Token Variables on page C-2*.

VARIABLE	DESCRIPTION
`%action%`	Network VirusWall Enforcer action (pass, drop, or quarantine) taken on the network virus
`%description%`	Error description used by the potential vulnerability attack detected events

Web Access Policy Violation Token Variables

The following table describes token variables for customizing Web Access Policy Violation event notification messages.

Note

For the list of standard token variables supported by all event notifications, see *Standard Token Variables on page C-2*.

VARIABLE	DESCRIPTION
`%url%`	URL in question
`%vdestip%`	IP address of the target URL
`%blockrule%`	Name of the rule that has been violated
`%blocktype%`	Action applied to the URL

Appendix D

IPv6 Support

This appendix contains information on the extent of IPv6 support in Apex Central.

Topics include:

- *Apex Central Server Requirements on page D-2*
- *IPv6 Support Limitations on page D-2*
- *Configuring IPv6 Addresses on page D-3*
- *Screens That Display IP Addresses on page D-3*

Apex Central Server Requirements

IPv6 support is automatically enabled after installing and enabling the IPv6 stack on the Apex Central server.

Note

Trend Micro assumes that the reader is familiar with IPv6 concepts and the tasks involved in setting up a network that supports IPv6 addressing.

IPv6 Support Limitations

The following table lists the limitations for IPv6 support:

ITEM	LIMITATION
Dual IP stacks	Apex Central only supports dual IP stacks. IPv6 support may not work properly if the IPv4 stack is removed.
IPv4 loopback interface	The IPv4 loopback interface is required. To verify that the TCP/IP software is working properly, ping `127.0.0.1`.
IPv6 address format	Apex Central does not support the **%** character for IPv6 server addresses.
Apex Central reports	The following static reports do not support IPv6 addresses: • Policy violation report • Service violation report
Apex Central features	The following features do not support IPv6 addresses: • IP address ranges for advanced log queries • IPv6 address normalization for suspicious object logs

Configuring IPv6 Addresses

The web console allows you to configure an IPv6 address. The following are some configuration guidelines.

- Apex Central accepts standard IPv6 address presentations.

  For example:

  `2001:0db7:85a3:0000:0000:8a2e:0370:7334`

  `2001:db7:85a3:0:0:8a2e:370:7334`

  `2001:db7:85a3::8a2e:370:7334`

  `::ffff:192.0.2.128`

- Apex Central also accepts link-local IPv6 addresses, such as:

  fe80::210:5aff:feaa:20a2

  WARNING!

  Exercise caution when specifying a link-local IPv6 address because even though Apex Central can accept the address, it might not work as expected under certain circumstances. For example, Apex Central cannot update from an update source if the source is on another network segment and is identified by its link-local IPv6 address.

- When the IPv6 address is part of a URL, enclose the address in square brackets ([]).

Screens That Display IP Addresses

IP addresses are shown on the following screens:

- **Product Directory**
- **Log Query Results**

- **Server Registration**
- **Dashboard Widgets**

Appendix E

MIB Files

This section discusses the management information base (MIB) files that Apex Central supports.

Topics include:

- *Using the Apex Central MIB File on page E-2*
- *Using the NVW Enforcer SNMPv2 MIB File on page E-2*

Using the Apex Central MIB File

Download the Apex Central MIB file from the following link and use an application that supports SNMP protocol to extract and import the file.

https://CM_IP:CM_Port/TVCSDownload/tools/ApexCentral_mib.zip

Using the NVW Enforcer SNMPv2 MIB File

Download the NVW Enforcer SNMPv2 MIB file from the following link and use an application that supports SNMP protocol to extract and import the file.

- https://CM_IP:CM_Port/TVCSDownload/tools/nvw2_mib2.zip

Appendix F

Syslog Content Mapping - CEF

The following tables map syslog content between Apex Central log output and CEF syslog types.

Topics include:

- *CEF Attack Discovery Detection Logs on page F-3*
- *CEF Behavior Monitoring Logs on page F-9*
- *CEF C&C Callback Logs on page F-15*
- *CEF Content Security Logs on page F-20*
- *CEF Data Loss Prevention Logs on page F-28*
- *CEF Device Access Control Logs on page F-36*
- *CEF Endpoint Application Control Logs on page F-43*
- *CEF Engine Update Status Logs on page F-46*
- *CEF Intrusion Prevention Logs on page F-48*
- *CEF Managed Product Logon/Logoff Events on page F-51*
- *CEF Network Content Inspection Logs on page F-52*
- *CEF Pattern Update Status Logs on page F-56*

- *CEF Predictive Machine Learning Logs on page F-59*
- *CEF Product Auditing Events on page F-64*
- *CEF Sandbox Detection Logs on page F-65*
- *CEF Spyware/Grayware Logs on page F-69*
- *CEF Suspicious File Logs on page F-77*
- *CEF Virus/Malware Logs on page F-81*
- *CEF Web Security Logs on page F-86*

CEF Attack Discovery Detection Logs

Note

If one Attack Discovery detection log relates to more than 4 objects, Apex Central only forwards the first 4 objects.

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Appliance vendor	Trend Micro
Header (pname)	Appliance product	Apex Central
Header (pver)	Appliance version	2019
Header (eventid)	Event ID	700220
Header (eventName)	Log name	Attack Discovery Detections
Header (severity)	Severity	3
deviceExternalId	ID	Example: “38”
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT +00:00”
dhost	Endpoint host name	Example: “ApexOneClient01”
dst	Client IPv4 address	Example: “10.0.8.20”
C6a3	Client IPv6 address	Example: “fd96:7521:9502:6:b5b0:b2b5:4173:3f5d”
duser	User name	Example: “Admin004”
customerExternalID	Instance ID	Example: “8c1e2d8f-a03b-47ea-aef8-5aeab99ea697”
cn1Label	Corresponding label for the "cn1" field	“SLF_RiskLevel”

CEF Key	Description	Value
cn1	Risk Level	Example: “0” • 0: Unknown • 100: Low risk • 500: Medium risk • 1000: High risk
cn2Label	Corresponding label for the "cn2" field	“SLF_PatternNumber”
cn2	Pattern Number	Example: “30.1012.00”
cs1Label	Corresponding label for the "cs1" field	“SLF_RuleID”
cs1	Rule ID	Example: “powershell invoke expression”
cat	Category ID	Example: “point of entry”
cs2Label	Corresponding label for the "cs2" field	“SLF_ADEObjectGroup_Info_1”

CEF Key	Description	Value

cs2	Attack Discovery object information	Example:
		<pre>process - powershell.exe - {
		"META_FILE_MD5" :
		"9393f60b1739074eb17c5f4ddd
		efe239",
		"META_FILE_NAME" :
		"powershell.exe",
		"META_FILE_SHA1" :
		"887ce4a295c163791b60fc23d2
		85e6d84f28ee4c",
		"META_FILE_SHA2" :
		"de96a6e50044335375dc1ac238
		336066889d9ffc7d73628ef4fe
		1b1b160ab32c",
		"META_PATH" :
		"c:\\windows\\system32\\wi
		ndowspowershell\\v1.0\\",
		"META_PROCESS_CMD" :
		["powershell cmd "],
		"META_PROCESS_PID" : 7132,
		"META_SIGNER" :
		"microsoft windows",
		"META_SIGNER_VALIDATION" :
		true,
		"META_USER_USER_NAME" :
		"Administrator",
		"META_USER_USER_SERVERNAME" :
		"Host",
		"OID" : 1
		}</pre>

cs3Label	Corresponding label for the "cs3" field	“SLF_ADEObjectGroup_Info_2”

CEF Key	Description	Value

cs3	Attack Discovery object information	Example:
		<pre>process - powershell.exe - {
		"META_FILE_MD5" :
		"9393f60b1739074eb17c5f4ddd
		efe239",
		"META_FILE_NAME" :
		"powershell.exe",
		"META_FILE_SHA1" :
		"887ce4a295c163791b60fc23d2
		85e6d84f28ee4c",
		"META_FILE_SHA2" :
		"de96a6e50044335375dc1ac238
		336066889d9ffc7d73628ef4fe
		1b1b160ab32c",
		"META_PATH" :
		"c:\\windows\\system32\\wi
		ndowspowershell\\v1.0\\",
		"META_PROCESS_CMD" :
		["powershell cmd "],
		"META_PROCESS_PID" : 7132,
		"META_SIGNER" :
		"microsoft windows",
		"META_SIGNER_VALIDATION" :
		true,
		"META_USER_USER_NAME" :
		"Administrator",
		"META_USER_USER_SERVERNAME" :
		"Host",
		"OID" : 1
		}</pre>

cs4Label	Corresponding label for the "cs4" field	“SLF_ADEObjectGroup_Info_3”

CEF Key	Description	Value

cs4	Attack Discovery object information	Example:
		<pre>process - powershell.exe - {
		"META_FILE_MD5" :
		"9393f60b1739074eb17c5f4ddd
		efe239",
		"META_FILE_NAME" :
		"powershell.exe",
		"META_FILE_SHA1" :
		"887ce4a295c163791b60fc23d2
		85e6d84f28ee4c",
		"META_FILE_SHA2" :
		"de96a6e50044335375dc1ac238
		336066889d9ffc7d73628ef4fe
		1b1b160ab32c",
		"META_PATH" :
		"c:\\windows\\system32\\wi
		ndowspowershell\\v1.0\\",
		"META_PROCESS_CMD" :
		["powershell cmd "],
		"META_PROCESS_PID" : 7132,
		"META_SIGNER" :
		"microsoft windows",
		"META_SIGNER_VALIDATION" :
		true,
		"META_USER_USER_NAME" :
		"Administrator",
		"META_USER_USER_SERVERNAME" :
		"Host",
		"OID" : 1
		}</pre>

cs5Label	Corresponding label for the "cs5" field	“SLF_ADEObjectGroup_Info_4”

CEF Key	Description	Value

cs5	Attack Discovery object information	Example:
		<pre>process - powershell.exe - {
		"META_FILE_MD5" :
		"9393f60b1739074eb17c5f4ddd
		efe239",
		"META_FILE_NAME" :
		"powershell.exe",
		"META_FILE_SHA1" :
		"887ce4a295c163791b60fc23d2
		85e6d84f28ee4c",
		"META_FILE_SHA2" :
		"de96a6e50044335375dc1ac238
		336066889d9ffc7d73628ef4fe
		1b1b160ab32c",
		"META_PATH" :
		"c:\\windows\\system32\\wi
		ndowspowershell\\v1.0\\",
		"META_PROCESS_CMD" :
		["powershell cmd "],
		"META_PROCESS_PID" : 7132,
		"META_SIGNER" :
		"microsoft windows",
		"META_SIGNER_VALIDATION" :
		true,
		"META_USER_USER_NAME" :
		"Administrator",
		"META_USER_USER_SERVERNAME" :
		"Host",
		"OID" : 1
		}</pre>

deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1
TMCMLogDetectedHost	Endpoint name where the log event occurred	Example: MachineHostName
TMCMLogDetectedIP	IP address where the log event occurred	Example: 10.1.2.3
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019

CEF Key	Description	Value
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697
TMCMdevicePlatform	Endpoint operating system	Example: Windows 7 6.1 (Build 7601) Service Pack 1

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|700211|Attack Discovery
Detections|3|deviceExternalId=5 rt=Jan 17 2019 03:38:06 GMT+
00:00 dhost=VCAC-Window-331 dst=10.201.86.150 customerExtern
alID=8c1e2d8f-a03b-47ea-aef8-5aeab99ea697 cn1Label=SLF_RiskL
evel cn1=0 cn2Label=SLF_PatternNumber cn2=30.1012.00 cs1Labe
l=SLF_RuleID cs1=powershell invoke expression cat=point of e
ntry cs2Label=SLF_ADEObjectGroup_Info_1 cs2=process - code9.
exe - {USER: administrator09} deviceNtDomain=APEXTMCM dntdom
=OSCEDomain1 TMCMLogDetectedHost=VCAC-Window-331 TMCMLogDete
ctedIP=10.201.86.150 ApexCentralHost=TW-CHRIS-W2019devicePay
loadId=1C00290C0360-9CDE11EB-D4B8-F51F-C697 TMCMdevicePlatfo
rm=Windows 7 6.1 (Build 7601) Service Pack 1
```

CEF Behavior Monitoring Logs

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Product vendor	Trend Micro
Header (pname)	Product name	Apex Central
Header (pver)	Product version	2019
Header (eventid)	Behavior Monitoring policy ID	BM:1000
Header (eventName)	Log name	Behavior Monitoring
Header (severity)	Severity	3

CEF Key	Description	Value
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT+00:00”
dvchost	Host name	Example: “localhost”
cs2Label	Corresponding label for the “cs2” field	“Policy”
cs2	Policy type	• Compromised executable file • New startup program • Host file modification • Program library injection • New Internet Explorer plugin • Internet Explorer setting modification • Shell modification • New service • Security policy modification • Firewall policy modification • System file modification • Duplicated system file • Layered service provider • System process modification • Suspicious behavior • Newly encountered programs • Unauthorized file encryption • Threat behavior analysis • User-defined policy

CEF Key	Description	Value
sproc	Target of the event	Example: “C:\\Windows\ \SysWOW64\\rundll32.exe”
cs3Label	Corresponding label for the “cs3” field	“Event_Type”
cs3	Event type	• Process • Process image • Registry • File system • Driver • SDT • System API • User Mode • Exploit • All
cs4Label	Corresponding label for the “cs4” field	“Operation”

CEF Key	Description	Value
cs4	The operation to be performed by the target of the event	• Create Process • Open • Terminate • Delete • Write • Access • Create File • Close • Execute • Invoke • Exploit • Unhandled Operation
cs5Label	Corresponding label for the “cs5” field	“Risk_Level”
cs5	Risk level	Example: “1” • 0: Low • 1: High
TMCMLogTarget	Target host	Example: “HKCU\\Software\ \Microsoft\\Windows\ \CurrentVersion\\Run\\COM+”

CEF Key	Description	Value
act	Translated action	• Allow • Ask • Deny • Terminate • Read Only • Read/Write Only • Read/Execute Only • Feedback • Clean • Unknown • Assess • Terminated. Files were recovered. • Terminated. Some files were not recovered. • Terminated. Files were not recovered. • Terminated. Restart result: Files were recovered. • Terminated: Restart result: Some files were not recovered. • Terminated: Restart result: Files were not recovered.
shost	Source host (endpoint)	Example: “shost1”
src	Source host IP address	Example: "10.0.147.105"
deviceFacility	Product	Example: “Apex One”

CEF Key	Description	Value
reason	Critical threat type	Example: “E” • A: Known Advanced Persistent Threat (APT) • B: Social engineering attack • C: Vulnerability attack • D: Lateral movement • E: Unknown threats • F: C&C callback • G: Ransomware
deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1
TMCMLogDetectedHost	Endpoint name where the log event occurred	Example: MachineHostName
TMCMLogDetectedIP	IP address where the log event occurred	Example: 10.1.2.3
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697
TMCMdevicePlatform	Endpoint operating system	Example: Windows 7 6.1 (Build 7601) Service Pack 1

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|BM:1000|Behavior Monitor
ing|3|rt=Sep 20 2019 01:02:03 GMT+00:00 dvchost=localhost cs
5Label=Risk_Level cs5=1 cs2Label=Policy cs2=Threat Behavior
Analysis sproc=subject cs3Label=Event_Type cs3=File system
TMCMLogTarget=HKCU\\Software\\Microsoft\\Windows\\CurrentVer
sion\\Run\\COM+ act=Ask cs4Label=Operation cs4=Create Proces
s shost=shost1 src=10.0.76.40 deviceFacility=Apex One reason
```

```
=G deviceNtDomain=APEXTMCM dntdom=OSCEDomain1 TMCMLogDetecte
dHost=shost1 TMCMLogDetectedIP=10.0.76.40 ApexCentralHost=TW
-CHRIS-W2019 devicePayloadId=1C00290C0360-9CDE11EB-D4B8-F51F
-C697 TMCMdevicePlatform=Windows 7 6.1 (Build 7601) Service
Pack 1
```

CEF C&C Callback Logs

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Appliance vendor	Trend Micro
Header (pname)	Appliance product	Apex Central
Header (pver)	Appliance version	2019
Header (eventid)	CnC:Action	CnC:Block
Header (eventName)	Name	CnC Callback
Header (severity)	Severity	3
deviceExternalId	ID	Example: “12”
cat	Log type	Example: “1756”
deviceFacility	Product	Example: “Apex One”
cs2Label	Corresponding label for the “cs2” field	Example: “El_ProductVersion”
cs2	Product version	Example: “11.0”
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT+00:00”
shost	Endpoint host name	Example: “ApexOneClient01”
src	Endpoint IPv4 address	Example: “10.201.86.187”

CEF Key	Description	Value
c6a2Label	Corresponding label for the “c6a2” field	Example: “SLF_ClientIP”
c6a2	Endpoint IPv6 address	Example: “2620:101:4003:7a0:fd4b:52ed:53bd:ae3d”
cs3Label	Corresponding label for the “cs3” field	Example: “SLF_DomainName”
cs3	Domain name	Example: “DOMAIN1”
cs4Label	Corresponding label for the “cs4” field	Example: “SLF_PolicyName”
cs4	Policy name	Example: “C&C Server URL in Web Reputation Services database - HTTP (Request)”
act	Action	Example: “Block” • 0: Unknown • 1: Pass • 2: Block • 3: Monitor • 4: Delete • 5: Quarantine • 6: Warn • 7: Warn and continue • 8: Override
cn1Label	Corresponding label for the “cn1” field	Example: “SLF_CCCA_RiskLevel”

CEF Key	Description	Value
cn1	C&C risk level	Example: “1” • 0: SLF_CCCA_RISKLEVEL_UNKNOWN • 1: SLF_CCCA_RISKLEVEL_LOW • 2: SLF_CCCA_RISKLEVEL_MEDIUM • 3: SLF_CCCA_RISKLEVEL_HIGH
cn2Label	Corresponding label for the “cn2” field	Example: “SLF_CCCA_DetectionSource”
cn2	C&C list source	Example: “1” • 0: SLF_CCCA_GLOBAL_LIST • 1: SLF_CCCA_CUSTOM_LIST • 2: SLF_CCCA_CUSTOM_LIST_USER_DEFINED
cn3Label	Corresponding label for the “cn3” field	Example: “SLF_CCCA_DetectionFormat”
cn3	Callback address format	Example: “1” • 0: IP • 1: IP • 2: HTTP • 3: SMTP
request	URL	Example: “http://CC13.jojo.com”
deviceCustomDate1Label	Corresponding label for the “deviceCustomDate1” field	Example: “SLF_FirstSeen”

CEF Key	Description	Value
deviceCustomDate1	The UTC time when the callback attempt was first monitored	Example: “Oct 10 2017 16:58:03 GMT+00:00”
deviceCustomDate2Label	Corresponding label for the “deviceCustomDate2” field	Example: “SLF_LastSeen”
deviceCustomDate2	The UTC time when the callback attempt was last monitored	Example: “Oct 11 2017 10:58:03 GMT+00:00”
cs5Label	Corresponding label for the “cs5” field	Example: “CnCDestination”
cs5	Callback URL address	Example: “http://CC13.jojo.com”
dst	Callback IPv4 address	Example: “10.201.86.195”
c6a3Label	Corresponding label for the “c6a3” field	Example: “CnCDestination”
c6a3	Callback IPv6 address	Example: “fe80::38ca:cd15:443c:40bb%11”
deviceProcessName	Process name	Example: “C:\\Program Files (x86)\\Internet Explorer\ \iexplore.exe”
dvchost	Host name	Example: "localhost"
deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1
TMCMLogDetectedHost	Endpoint name where the log event occurred	Example: MachineHostName
TMCMLogDetectedIP	IP address where the log event occurred	Example: 10.1.2.3
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697

CEF Key	Description	Value
deviceDirection	Network traffic direction	Example: 0 The meaning of the value varies depending on the “cat” field value. If the “cat” field value is 1756, 1707, or 1733: • 0: Unknown • 1: Inbound • 2: Outbound If the “cat” field value is 1739, 1741, or 1723: • 0: Outbound • 1: Inbound • 2: Unknown If the “cat” field value is 1705, 1735, or 1775: • -1: Unknown • 0: Outbound email • 1: Inbound email • 2: Internal email
TMCMdevicePlatform	Endpoint operating system	Example: Windows 7 6.1 (Build 7601) Service Pack 1

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|CnC:Block|CnC Callback
|3|deviceExternalId=12 rt=Oct 11 2017 06:34:09 GMT+00:00 cat
=1756 deviceFacility=Apex One cs2Label=EI_ProductVersion cs2
=11.0 shost=ApexOneClient01 src=10.201.86.187 cs3Label=SLF_D
omainName cs3=DOMAIN act=Block cn1Label=SLF_CCCA_RiskLevel c
n1=1 cn2Label=SLF_CCCA_DetectionSource cn2=1 cn3Label=SLF_CC
CA_DestinationFormat cn3=1 dst=10.201.86.195 deviceProcessNa
```

```
me=C:\\Program Files (x86)\\Internet Explorer\\iexplore.exe
deviceNtDomain=APEXTMCM dntdom=OSCEDomain1 dvchost=localhost
TMCMLogDetectedHost=ApexOneClient01 TMCMLogDetectedIP=10.201
.86.187 ApexCentralHost=TW-CHRIS-W2019 devicePayloadId=1C002
90C0360-9CDE11EB-D4B8-F51F-C697 deviceDirection=0 TMCMdevice
Platform=Windows 7 6.1 (Build 7601) Service Pack 1
```

CEF Content Security Logs

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Appliance vendor	Trend Micro
Header (pname)	Appliance product	Apex Central
Header (pver)	Appliance product version	2019
Header (eventid)	MS: Filter action	MS:Clean
Header (eventName)	Policy name	Policy
Header (severity)	Severity	3
cnt	Number of detections	Example: 10
dhost	List of all recipients	Example: employee_a1@Acompany.com;employee_a2@Acompany.com
duser	One of the recipients	Example: employee_a1@Acompany.com
act	Filter action	Example: “Clean” For more information, see *Filter Action Mapping Table on page F-25*.
cs1Label	Corresponding label for the “cs1” field	Example: “Policy_Settings”

CEF Key	Description	Value
cs1	Policy settings	Example: “Default_policy”
cs2Label	Corresponding label for the “cs2” field	Example: “Product_Version”
cs2	Product version	Example: “11”
cs3Label	Corresponding label for the “cs3” field	Example: “Filter_Type”
cs3	Filter type	Example: “URL reputation filter” • 0: Unknown • 1: ContentFilter • 2: AttachmentFilter • 3: StandardFilter • 4: SizeFilter • 5: DisclaimerMgr • 6: SpamFilter • 7: OPP • 8: ImportFilter • 9: PhishingFilter • 10: UrlReputationFilter
cs4Label	Corresponding label for the “cs4” field	Example: “CLF_ReasonCode”
cs4	Reason Code	Example: “access”
cs5Label	Corresponding label for the “cs5” field	Example: “CLF_ReasonCodeSource”
cs5	Reason code source	Example: “web”
cs6Label	Corresponding label for the “cs6” field	Example: “Action_on_Message”

CEF Key	Description	Value
cs6	Action	Example: “3” • 0: Unknown • 1: N/A • 2: Deliver • 3: Delete • 4: Quarantine • 5: Postpone • 6: Forward • 7: Replace • 8: Archive • 100: Strip • 101: Pass
cat	Log type	Example: “1705”
dvchost	Endpoint host name	Example: “ApexOneClient01”
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT+00:00”
cn1Label	Corresponding label for the “cn1” field	Example: “Severity”
cn1	Severity code	Example: “2” • 0: Unknown • 1: Information • 2: Warning • 3: Error • 4: Critical
TMCMLogSeverity	Description of severity	Second scan engine

CEF Key	Description	Value
cn2Label	Corresponding label for the “cn2” field	Filter_Action_Result
cn2	Filter action result	Example: 21 For more information, see *Filter Action Result Mapping Table on page F-26*.
deviceExternalId	ID	Example: “5”
fname	File	Example: “RERERW~42w.exe”
msg	Subject	Example: “Open this email to win a free phone”
shost	List of all senders/users in violation	Example: "bear" <bear@abc.mail.com>;"yumi" <yumi@abc.mail.com>
suser	One of the senders/users in violation	Example: "bear" <bear@abc.mail.com>
deviceFacility	Product	Example: “Deep Discovery Email Inspector”
src	Email sender IP address	Example: “10.206.155.122”
filepath	Suspicious file location	Example: “https://ca91-1.testurl.com:443”
request	Suspicious URL	Example: “https://ca91-1.testurl.com:443”

CEF Key	Description	Value
reason	Critical threat type	Example: “E” • A: Known Advanced Persistent Threat (APT) • B: Social engineering attack • C: Vulnerability attack • D: Lateral movement • E: Unknown threats • F: C&C callback • G: Ransomware
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697
TMCMdevicePlatform	Endpoint operating system	Example: Windows 7 6.1 (Build 7601) Service Pack 1

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|MS:Clean|This is a policy
name|3|deviceExternalId=90045 rt=Sep 17 2018 01:27:42 GMT+00
:00 dhost=user@test.com duser=user@test.com act=Clean cs1Label
=Policy_Settings cs1=This is policy content cs2Label=CLF_Produ
ctVersion cs2=3.2 cs3Label=Filter_Type cs3=URL reputation filt
er cs5Label=CLF_ReasonCodeSource cs5=20 cs6Label=Action_on_Mes
sage cs6=0 cat=1705 dvchost=ApexOneClient01 cn1Label=Severity
cn1=2 TMCMLogSeverity=Second scan engine fname=NE_AEP.1550
msg=plain_qp_no8_av1u_NE_AEP.1550 shost=user2@test.com suser=
user2@test.com cn2Label=Filter_Action_Result cn2=21 deviceFaci
lity=Deep Discovery Email Inspector src=10.206.155.122 reason=
B,G ApexCentralHost=TW-CHRIS-W2019 devicePayloadId=1C00290C036
0-9CDE11EB-D4B8-F51F-C697 TMCMdevicePlatform=Windows 7 6.1 (B
uild 7601) Service Pack 1
```

Filter Action Mapping Table

Value	Description
0	Unknown
1	N/A
2	Clean
3	Delete
4	Move
5	Rename
6	Pass/Log
7	Strip
8	Drop
9	Quarantine
10	Insert/Replace
11	Archive
12	Stamp
13	Block
14	Redirect mail for approval
81	Encrypt
90	Detect
257	Reset

Filter Action Result Mapping Table

Value	Description
0	Unknown
1	N/A
21	File cleaned
22	File deleted
23	File quarantined
24	File renamed
25	File passed
26	Unable to clean file. Passed
27	Unable to clean file. Deleted
28	Unable to clean file. Renamed
29	Unable to clean file. Quarantined
30	File stripped
31	Unable to clean file. Stripped
32	File replaced
33	File dropped
34	File archived
35	File blocked successfully
36	File quarantined successfully
37	File stamped successfully
38	File uploaded
39	Unable to clean file. Quarantined

VALUE	DESCRIPTION
40	Unable to clean file. Passed
41	Access denied
42	No action
43	Reboot system successfully
44	Spyware/Grayware unsafe to clean
45	Stop scan manually successfully
46	Redirect Mail for Approval successfully
81	Encrypted
121	Unable to clean file
122	Unable to delete file
123	Unable to quarantine file
124	Unable to rename file
125	Unable to pass file
126	Unable to clean or pass file
127	Unable to clean or delete file
128	Unable to clean or rename file
129	Unable to clean or quarantine file
130	Unable to strip file
131	Unable to clean or strip file
132	Unable to replace file
133	Unable to drop file
134	Unable to archive file
135	Unable to block file

Value	Description
136	Unable to quarantine file
137	Unable to stamp file
138	Unable to upload file
139	Unable to clean or quarantine file
140	Unable to clean or pass file
141	Unable to deny access
142	Unable to perform action
143	Action required - Restart the endpoint to finish cleaning the security threat
145	Unable to stop scan manually
146	Unable to Redirect Mail for Approval
201	Action required - Perform a full system scan
202	Action required - Use the "Rescue Disk" tool in the Apex One ToolBox to remove this threat. If the problem persists, contact Support
203	Action required - Use the "Rootkit Buster" tool in the Apex One ToolBox to remove this threat. If the problem persists, contact Support
204	Action required - Use the "Clean Boot" tool in the Apex One ToolBox to remove this threat. If the problem persists, contact Support

CEF Data Loss Prevention Logs

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Appliance vendor	Trend Micro
Header (pname)	Appliance product	Apex Central

CEF Key	Description	Value
Header (pver)	Appliance version	2019
Header (eventid)	Event ID	700106
Header (eventName)	Log name	Data Loss Prevention
Header (severity)	Severity	3
cs1Label	Corresponding label for the “cs1” field	"Policy GUID"
cs1	Policy GUID	Example: "FAF492CF-164C-4672-9A79-F1AB9CB288A3"
cn1Label	Corresponding label for the “cn1” field	"Product"
cn1	Product type value	Example: "15"
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT+00:00”
src	Source host IP address	Example: "10.0.57.160"
smac	Source host MAC address	Example: "74-27-00-0C-65-E7"
shost	Source host name	Example: "shost1"
cs4Label	Corresponding label for the “cs4” field	"Incident_Source_(AD_Account)"
cs4	The user name in violation	Example: "Trend"
suser	Email sender	Example: "sender@example.com"
request	The URL accessed	Example: "https://example.com/api/content"
duser	Comma (,) separated list of recipients	Example: “user1@example.com;user2@example.com;”

CEF Key	Description	Value
msg	Subject	Example: “Sample,20171017”
filepath	File path	Example: “D:\\Windows Live Mail\\Storage Folders\\Imported Fo e52\\Local Folders\\Sent Items\\Archive Aft de1\\Clients,Adv 22b\\”
fname	Trigger file name	Example: “2B43363A-000000A4.eml”
fsize	File size in bytes	Example: “3”
cs5Label	Corresponding label for the “cs5” field	"Rule"
cs5	Rule name	Example: "SAMPLE RULE SET"
cs6Label	Corresponding label for the “cs6” field	“Template”
cs6	Template name	Example: “Apex One policy”
cn3Label	Corresponding label for the “cn3” field	“Channel”
cn3	Channel type	Example: “3” For more information, see *Channel Mapping Table on page F-34*.
cn2Label	Corresponding label for the “cn2” field	“Action”
cn2	Action result	Example: “4” For more information, see *Action Result Mapping Table on page F-32*.
cs2Label	Corresponding label for the “cs2” field	“Policy”

CEF Key	Description	Value
cs2	Policy name	Example: “OfficeScan”
cs3Label	Corresponding label for the “cs3” field	“Product_Entity/Endpoint”
cs3	Endpoint host name	Example: “Sample_Host”
dvchost	Server host name	Example: “localhost”
deviceFacility	Product name	Example: “Apex One”
deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1
externalId	Log ID of the event	Example: “101”
cfp1Label	Corresponding label for the “cfp1Label” field	“ForensicFileAvailable”
cfp1	Indicates whether the forensic file can be downloaded	• 0: The file cannot be downloaded • 1: The file can be downloaded
TMCMLogDetectedHost	Endpoint name where the log event occurred	Example: MachineHostName
TMCMLogDetectedIP	IP address where the log event occurred	Example: 10.1.2.3
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697
TMCMdevicePlatform	Endpoint operating system	Example: Windows 7 6.1 (Build 7601) Service Pack 1

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|700106|Data Loss Prevent
ion|3|cs3Label=Product_Entity/Endpoint cs3=Sample_Host dvc
host=Sampledvchost cs2Label=Policy cs2=N/A cn1Label=Product
cn1=15 rt=Oct 13 2017 02:54:04 GMT+00:00 src=10.0.9.34 smac=
34-E6-D7-84-BC-7F shost=shost1 cs4Label=Incident_Source_(AD_
Account) cs4=12467 filePath=D:\\2. DRIVER\\drivers WIN7\\Dri
vers\\DP_CardReader_14032.7z\\O2Micro\\FORCED\\6x86\\ fname=
O2MDFvst.INF cs5Label=Rule cs5=SAMPLE RULE SET cs6Label=Temp
late cs6=Apex One policy cn3Label=Channel cn3=0 cn2Label=Act
ion cn2=4 deviceFacility=Apex One deviceNtDomain=APEXTMCM dn
tdom=OSCEDomain1 externalId=101 cfp1Label=ForensicFileAvaila
ble cfp1=0 dvchost=localhost TMCMLogDetectedHost=ApexOneClie
nt01 TMCMLogDetectedIP=10.201.86.187 ApexCentralHost=TW-CHRI
S-W2019 devicePayloadId=1C00290C0360-9CDE11EB-D4B8-F51F-C697
 TMCMdevicePlatform=Windows 7 6.1 (Build 7601) Service Pack
 1
```

Action Result Mapping Table

Value	Description
-1	Not available
0	Blocked
1	Deleted
2	Delivered
3	Logged
4	Passed
5	Quarantined
6	Replaced
7	Archived
8	Archived (message body only)
9	Quarantined (message body only)

Value	Description
10	Passed (message body only)
11	Encrypted
12	Alerted (endpoint)
13	Alerted (server)
14	Data recorded
15	User justified
16	Handed off
17	Recipient altered
18	Blind carbon copied
19	Delivery postponed
20	Stamped
21	Attachment deleted
22	Subject tagged
23	X-header tagged
24	Decrypted
25	Re-encrypted
26	Tagged (mail)
27	Encrypted (user key)
28	Encrypted (group key)
29	Moved
30	Passed (encrypted)
31	Passed (user justified)
32	Blocked (Endpoint Encryption not installed)

Value	Description
33	Blocked (user justified)
34	Blocked (Endpoint Encryption logged off)
35	Blocked (Endpoint Encryption error)
36	web upload

Channel Mapping Table

Value	Description
65535	Not available
0	Removable storage
1	SMB
2	Email
3	IM
4	FTP
5	HTTP
6	HTTPS
7	PGP
8	Data recorders
9	Printer
10	Clipboard
11	Sync
12	P2P
13	Webmail

Value	Description
14	Document management
15	Cloud storage
121	SMTP email
122	Exchange Client Mail
123	Lotus Note Email
130	Webmail (Yahoo! Mail)
131	Webmail (Hotmail)
132	Webmail (Gmail)
133	Webmail (AOL Mail)
140	IM (MSN)
141	IM (AIM)
142	IM (Yahoo Messenger)
143	IM (Skype)
191	P2P (BitTorrent)
192	P2P (EMule)
193	P2P (Winny)
194	P2P (HTCSYN)
195	P2P (iTunes)
196	Cloud storage (DropBox)
197	Cloud storage (Box)
198	Cloud storage (Google Drive)
199	Cloud storage (OneDrive)
200	Cloud storage (SugarSync)

Value	Description
201	Cloud storage (Hightail)
202	IM (QQ)
203	Webmail (other)
204	Cloud storage (Evernote)
211	Document management (SharePoint)

CEF Device Access Control Logs

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Appliance vendor	Trend Micro
Header (pname)	Appliance product	Apex Central
Header (pver)	Appliance version	2019
Header (eventid)	Event ID	700107
Header (eventName)	Log name	Device Access Control
Header (severity)	Severity	3
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT+00:00”
cs1Label	Corresponding label for the “cs1” field	“Product Entity/Endpoint”
cs1	Server host name	Example: “Sample_Host”
shost	Source host name	Example: “shost1”
duser	User name	Example: “testserver\ \administrator”

CEF Key	Description	Value
dvchost	Target host name	Example: “localhost”
cn1Label	Corresponding label for the “cn1” field	“Product”
cn1	Product ID	Example: “Apex One” For more information, see *Product ID Mapping Table on page F-38*.
sproc	Target process	Example: “C:\\Windows\\explorer.exe”
fname	File name	Example: “F:\\Autorun.inf”
cn2Label	Corresponding label for the “cn2” field	“Device_Type”
cn2	Device type	Example: “0” • 0: USB storage device • 1: Non-storage USB • 2: CD/DVD • 3: Floppy disks • 4: Network driver
cn3Label	Corresponding label for the “cn3” field	“Permission”
cn3	Permission	Example: “3” • 0: Modify • 1: Read and execute • 2: Read • 3: List device content only • 4: Block
deviceFacility	Product	Example: “Apex One”

CEF Key	Description	Value
deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1
TMCMLogDetectedHost	Endpoint name where the log event occurred	Example: MachineHostName
TMCMLogDetectedIP	IP address where the log event occurred	Example: 10.1.2.3
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697
TMCMdevicePlatform	Endpoint operating system	Example: Windows 7 6.1 (Build 7601) Service Pack 1

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|700107|Device Access C
ontrol|3|rt=Aug 16 2017 04:49:15 GMT+00:00 cs1Label=Product_
Entity/Endpoint cs1=Sample_Host shost=shost1 dvchost=localho
st cn1Label=Product cn1=15 sproc=C:\\Windows\\explorer.exe f
name=F:\\Autorun.inf cn2Label=Device_Type cn2=0 cn3Label=Per
mission cn3=3 deviceFacility=Apex One deviceNtDomain=APEXTMC
M dntdom=OSCEDomain1 TMCMLogDetectedHost=shost1 TMCMLogDetec
tedIP=10.0.76.40 ApexCentralHost=TW-CHRIS-W2019 devicePayloa
dId=1C00290C0360-9CDE11EB-D4B8-F51F-C697 TMCMdevicePlatform
=Windows 7 6.1 (Build 7601) Service Pack 1
```

Product ID Mapping Table

Value	Description
0	Unknown product
1	ScanMail for ccMail

VALUE	DESCRIPTION
2	ScanMail for Lotus Domino
3	ScanMail for Microsoft Exchange
4	ScanMail for Microsoft Mail
5	ScanMail for OpenMail
6	Reserved 1
7	Reserved 2
8	Reserved 3
9	Reserved 4
10	InterScan WebProtect
11	Reserved 5
12	Reserved 6
13	Reserved 7
14	PC-cillin Corporate Edition
15	Apex One
16	Apex One for Microsoft SBS
18	ServerProtect for Windows
19	ServerProtect for Windows (SOHO)
20	Apex Central
21	Generic
22	InterScan VirusWall for Unix
23	InterScan VirusWall for Windows
24	MOCA
25	GoldenGate

Value	Description
26	ActiveUpdate
27	IS_Y2K_SCANNER
28	Y2K VIRUS TECH SUPPORT SRV
30	HouseCall
31	PC-cillin ISP server
32	PC-cillin ISP client
33	eManager for ScanMail Exchange
34	InterScan Messaging Security Suite for Windows
35	InterScan Messaging Security Suite for UNIX
36	PortalProtect
37	GateLock Corporate Edition
38	Firewall management (NetScreen)
39	InterScan Web Security Suite for Solaris
40	InterScan Web Security Suite for Windows NT
41	Nokia Message Protector
42	InterScan Web Security Suite for Linux
43	InterScan Web Security Suite for Appliance
44	InterScan Messaging Security Appliance
45	InterScan for Small and Medium Business for Windows NT
46	InterScan Web Security Virtual Appliance
47	InterScan Messaging Security Virtual Appliance
50	InterScan Gateway Security Appliance
51	ServerProtect for Linux

Value	Description
52	ServerProtect for EMC
53	ServerProtect for NetApp
56	Child Apex Central Server
60	Damage Cleanup Services
65	Golden Gate for NT
66	Network VirusWall 1200
67	Network VirusWall MIPS
68	Network VirusWall 2500
69	Network VirusWall 2500 v2
70	Vulnerability Assessment
71	Network Virus Wall Enforcer 1200
72	Network VirusWall Enforcer
73	Network VirusWall Enforcer
75	Trend Micro Threat Mitigator
85	Anti-Spyware Enterprise Edition
87	Trend Micro InterScan for Cisco CSC SSM-20
88	Trend Micro InterScan for Cisco CSC SSM-10
90	IM Security
95	InterScan VirusWall
96	InterScan VirusWall for Linux
100	Control Manager Agent
200	eDoctor Server
300	eDoctor Agent

Value	Description
132	InterScan Messaging Security Suite for Solaris
120	Threat Discovery Appliance
131	Database Protect for Linux
151	Total Discovery Mitigation Server
154	Deep Discovery Inspector
155	ScanMail for IBM Domino
156	Deep Discovery Email Inspector
1000	InterScan eManager
1001	InterScan AppletTrap
1002	InterScan VirusWall Java
1003	IS_SEMAIL
1004	InterScan WebProtect for ICAP
10001	NEC StarOffice
20001	Dr. Soloman Anti-virus
20002	Inoculan
20003	Norton Anti-virus
20004	Sophos Sweep
20005	Intel LANProtect
20006	McAfee Virus Scan
20007	FProt
21000	Other third-party product
31001	Apex One (Mac)
31002	Trend Micro Endpoint Encryption

Value	Description
31003	Trend Micro Endpoint Application Control
31004	Trend Micro Deep Security
31006	Vulnerability Protection
31005	Trend Micro Mobile Security
31007	Trend Micro Safe Mobile Workforce
31008	Deep Discovery Analyzer
31009	Trend Micro Endpoint Sensor
31012	Deep Discovery Web Inspector
31101	Trend Micro Email Security
31102	Worry Free Business Security Services
31103	Trend Micro Web Security
31104	Cloud App Security
55555	Demo product

CEF Endpoint Application Control Logs

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Appliance vendor	Trend Micro
Header (pname)	Appliance product	Apex Central
Header (pver)	Appliance version	2019

CEF Key	Description	Value
Header (eventid)	Device event class ID	• 0: Allow • 1: Block • 2: Lockdown
Header (eventName)	Event name	Endpoint Application Control Violation Information
Header (severity)	Severity	3
deviceExternalId	ID	Example: “39”
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT+00:00”
dvchost	Computer name	Example: “localhost”
shost	Client host name	Example: “shost1”
cs1	Product server pattern version	Example: “1297”
suser	Client user name	Example: “TREND\User”
cs2	Client IPv4 address	Example: “10.0.17.6”
c6a3	Client IPv6 address	Example: “fe80::38ca:cd15:443c:40bb%11”
cn1	Client status	• 1: Rebuilding database • 2: Online • 3: Offline
filehash	Application file SHA-1 hash	Example: “D6712CAE5EC821F910E14945153AE7871AA536CA”
fname	Application file name	Example: “notepad.exe”
cs3	Application process command line	Example: “notepad.exe”
duser	User name	Example: “Admin004”

CEF Key	Description	Value
cs4	Rule name	Example: “SAMPLE RULE SET”
cs5	Policy name	Example: “SAMPLE POLICY”
act	Policy action	• 0: Allowed • 1: Blocked • 2: Reported as allowed • 3: Reported as blocked
deviceFacility	Product name	Example: “Trend Micro Endpoint Application Control”
deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697
TMCMdevicePlatform	Endpoint operating system	Example: Windows 7 6.1 (Build 7601) Service Pack 1

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|EAC:1|Endpoint Applica
tion Control Violation Information|3|deviceExternalId=39 rt=
Jun 27 2012 03:14:03 GMT+00:00 cs1Label=Version cs1=1.299.00
 suser=TMCM\\QA cs2Label=ApplicationControlEvent_ClientIPAdd
ress_V4 cs2=0.0.0.0 cn1Label=Connection_Status cn1=0 fileHas
h=c0869b72C5606D22D92A6AC986686BB87485A25b fname=P2P_TEST.ex
e cs3Label=Command cs3=C:\\P2P_TEST.exe duser=QA cs4Label=Ru
le cs4=Test cs5Label=Policy cs5=TestPolicy act=Blocked devic
eFacility=Trend Micro Endpoint Application Control deviceNtD
omain=APEXTMCM dntdom=OSCEDomain1 ApexCentralHost=TW-CHRIS-
W2019 devicePayloadId=1C00290C0360-9CDE11EB-D4B8-F51F-C697
TMCMdevicePlatform=Windows 7 6.1 (Build 7601) Service Pack
1
```

CEF Engine Update Status Logs

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Product vendor	Trend Micro
Header (pname)	Product name	Apex Central
Header (pver)	Product version	2019
Header (eventid)	Event ID	800102
Header (eventName)	Log name	Engine Update Status
Header (severity)	Severity	3
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT+00:00”
shost	Product Entity/Endpoint	Example: “shost1”
cs2Label	Corresponding label for the “cs2” field	“Product/Endpoint IP”
cs2	Product/Endpoint IP	Example: “10.0.17.6”
cn1Label	Corresponding label for the “cn1” field	“Connection Status”
cn1	Connection status	Example: “100” • 0: Unable to connect • 1: Active • 2: Inactive • 100: Product active • 101: Product inactive but agent is active • 102: Roaming

CEF Key	Description	Value
cn2Label	Corresponding label for the “cn2” field	“Engine”
cn2	Engine	Example: “4096”
cn5Label	Corresponding label for the “cn5” field	“Engine Version”
cs5	Engine version	Example: “9.950.1006”
cn3Level	Corresponding label for the “cn3” field	“Engine Status”
cn3	Engine status	Example: “1” • 1: Up-to-date • 2: Out-of-date
cs6Label	Corresponding label for the “cs6” field	“AUComponent_Type”
cs6	ActiveUpdate component type	Example: “1” • 1: Engine
deviceFacility	Managed product name	Example: “Apex One”
msg	Engine type display name	Example: "Virus Scan Engine DLL (Windows 2000/NT, 32-bit)"
deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|800102|Engine Update S
tatus|3|rt=Apr 20 2017 12:04:34 GMT+00:00 shost=shost1 cs2La
```

```
bel=Product/Endpoint_IP cs2=10.0.17.6 cn1Label=Connection_St
atus cn1=100 cn2Label=Engine cn2=4096 cs5Label=Engine_Versio
n cs5=9.950.1006 cn3Label=Engine_Status cn3=1 cs6Label=AUCom
ponent_Type cs6=1 deviceFacility=Apex One deviceNtDomain=APE
XTMCM dntdom=OSCEDomain1
```

CEF Intrusion Prevention Logs

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Product vendor	Trend Micro
Header (pname)	Product name	Apex Central
Header (pver)	Product version	2019
Header (eventid)	Event ID	
Header (eventName)	Log name	
Header (severity)	Severity	3
dvchost	Display name of the managed endpoint	Example: “localhost”
rt	Log generation time in UTC	Example: “Nov 15 2017 08:43:57 GMT +00:00”
src	Source IPv4 address	Example: "10.1.152.12"
c6a2Label	Corresponding label for the "c6a2" field	SLF_SourceIPv6
c6a2	Source IPv6 address	"2001:b011:1004:325b:8db7:6ca9:8fc5:321a"
smac	Source MAC address	Example: "18:31:BF:4F:30:DD"
spt	Source port	Example: "60886"
dst	Destination IPv4 address	Example: "10.1.153.151"

CEF Key	Description	Value
c6a3Label	Corresponding label for the "c6a3" field	SLF_DestinationIPv6
c6a3	Destination IPv6 address	Example: "2001:b011:1004:325b:8db7:6ca9:8fc5:654a"
dmac	Destination host MAC address	Example: "D0:17:C2:95:ED:71"
dpt	Destination port	Example: "139"
cn2Label	Corresponding label for the "cn2" field	SLF_IsDetectionOnly
cn2	Indicates whether the system is in "detection only" mode	Example: "0" • 0 or NULL = No • 1 = Yes
act	Action	Example: "LOG" SLF_ACTION maps: • 0 = UNKNOWN • 3 = DELETE • 6 = LOG • 10 = INSERT/REPLACE • 13 = BLOCK • 257 = RESET
deviceDirection	Incoming or outgoing direction	Example: "Apex One"
cn3Label	Corresponding label for the "cn3" field	SLF_Rank
cn3	Weighted priority of the incident	Example: "3" Calculated from Severity x Asset Value

CEF Key	Description	Value
cn4Label	Corresponding label for the "cn4" field	SLF_SeverityCode
cn4	The system defined incident severity value	Example: "1" • 1 = LOW • 2 = MEDIUM • 3 = HIGH • 4 = CRITICAL
proto	The network protocol being exploited	Example: "10009" • 28 = ICMP • 46 = ICMPv6 • 10003 = TCP • 10004 = UDP • 10005 = IGMP • 10006 = GGP • 10007 = PUP • 10008 = IDP • 10009 = ND • 10010 = RAW
cs2Label	Corresponding label for the "cs2" field	SLF_ConnectionType
cs2	The network application name	Example: "DCERPC Services"
cn1Label	Corresponding label for the "cn1" field	SLF_RuleID
cn1	The ID of the inspection rule	Example: "1005448"
cs1Label	Corresponding label for the "cs1" field	SLF_RuleContent

CEF Key	Description	Value
cs1	The string literal of the rule ID and description	Example: "1005448 - SMB Null Session Detected - 1"
cnt	Aggregated count	Example: "1"
deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|Log|1009549 - Detected T
erminal Services (RDP) Server Traffic - 1 (ATT&CK T1015,T104
3,T1076,T1048,T1032,T1071)|3|rt=Apr 20 2020 03:33:20 GMT+00:
00 dvchost=OSCEClient23 deviceFacility=Apex One act=Log,src=
10.1.1.9 dst=80.1.1.9 smac=54-BF-64-84-7F-09 spt=89 dmac=54-
BF-64-84-7F-19 dpt=449 cn2Label=SLF_IsDetectionOnly cn2=0 de
viceDirection=Inbound cn3Label=SLF_Rank cn3=1 cn4Label=SLF_S
everityCode cn4=1 proto=10009 cs2Label=SLF_ConnectionType cs
2=N/A cn1Label=SLF_RuleID cn1=1009549 cs1Label=SLF_RuleConte
nt cs1=1009549 - Detected Terminal Services (RDP) Server Tra
ffic - 1 (ATT&CK T1015,T1043,T1076,T1048,T1032,T1071) cnt=1
deviceNtDomain=APEXTMCM dntdom=OSCEDomain1
```

CEF Managed Product Logon/Logoff Events

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Appliance vendor	Trend Micro
Header (pname)	Appliance product	Apex Central
Header (pver)	Appliance version	2019
Header (eventid)	Event ID	700211

CEF Key	Description	Value
Header (eventName)	Log name	Managed Product Logon/Logoff Events
Header (severity)	Severity	3
deviceExternalId	ID	Example: “38”
deviceFacility	Product name	Example: “ScanMail for Microsoft Exchange”
cs1Label	Corresponding label for the “cs1” field	Product_Version
cs1	Product version	Example: “14”
cn1Label	Corresponding label for the “cn1” field	Command_Status
cn1	Command status	Example: “110”
msg	Detailed event information	Example: “Sample Message”
shost	Product server name	Example: “SMEX01”

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|700211|Managed Product L
ogon/Logoff Events|3|deviceExternalId=11 shost=SMEX01 device
Facility=ScanMail for Microsoft Exchange cs1Label=Product_Ve
rsion cs1=14 cn1Label=Command_Status cn1=110 msg=A user with
 the Administrator role(s) has logged on. Detail Information
:UserName:TEST2013\\administrator,IP address:10.204.166.127,
EventType:Log in/out,SourceType:SMEX UI. #015
```

CEF Network Content Inspection Logs

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0

CEF Key	Description	Value
Header (vendor)	Appliance vendor	Trend Micro
Header (pname)	Appliance product	Apex Central
Header (pver)	Appliance version	2019
Header (eventid)	NCIE:Action	NCIE:Pass
Header (eventName)	Name	Suspicious Connection
Header (severity)	Severity	3
deviceExternalId	ID	Example: “1”
cat	Log type	Example: “1756”
deviceFacility	Product	Example: “Apex One”
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT+00:00”
deviceProcessName	Process	Example: “C:\\Windows\ \system32\\svchost-1.exe”
src	Local IPv4 address	Example: “10.201.86.152”
c6a2Label	Corresponding label for the “c6a2” field	Example: “SLF_SourceIP”
c6a2	Local IPv6 address	Example: “2620:101:4003:7a0:fd4b:52ed:53bd:ae3d”
spt	Local IP address port	Example: “54594”
dst	Remote IPv4 address	Example: “10.69.81.64”
c6a3Label	Corresponding label for the “c6a3” field	Example: “SLF_DestinationIP”
c6a3	Remote IPv6 address	Example: “fe80::38ca:cd15:443c:40bb%11”
dpt	Remote IP address port	Example: “80”

CEF Key	Description	Value
act	Action	Example: “Pass” • 0: Unknown • 1: Pass • 2: Block • 3: Monitor • 4: Delete • 5: Quarantine • 6: Warn • 7: Warn and continue • 8: Override
deviceDirection	Traffic direction	Example: “Inbound” • 0: None • 1: Inbound • 2: Outbound
cn1Label	Corresponding label for the “cn1” field	Example: “SLF_PatternType”
cn1	Pattern type	Example: “2” • 0: Global C&C pattern • 1: Relevance rules • 2: User-defined block list
cs2Label	Corresponding label for the “cs2” field	Example: “NCIE_ThreatName”
cs2	Threat name	Example: “Malicious_identified_CnC_querying_on_UDP_detected”

CEF Key	Description	Value
reason	Critical threat type	Example: “E” • A: Known Advanced Persistent Threat (APT) • B: Social engineering attack • C: Vulnerability attack • D: Lateral movement • E: Unknown threats • F: C&C callback • G: Ransomware
dvchost	Host name	Example: "localhost"
deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1
TMCMLogDetectedHost	Endpoint name where the log event occurred	Example: MachineHostName
TMCMLogDetectedIP	IP address where the log event occurred	Example: 10.1.2.3
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697
TMCMdevicePlatform	Endpoint operating system	Example: Windows 7 6.1 (Build 7601) Service Pack 1

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|NCIE:Pass|Suspicious
Connection|3|deviceExternalId=1 rt=Oct 11 2017 06:34:06 GMT+0
0:00 cat=1756 deviceFacility=Apex One deviceProcessName=C:\\W
indows\\system32\\svchost-1.exe act=Pass src=10.201.86.152 ds
t=10.69.81.64 spt=54594 dpt=80 deviceDirection=None cn1Label=
```

```
SLF_PatternType cn1=2 cs2Label=NCIE_ThreatName cs2=Malicious_
identified_CnC_querying_on_UDP_detected reason=F deviceNtDoma
in=APEXTMCM dntdom=OSCEDomain1 dvchost=shost1 TMCMLogDetected
Host=shost1 TMCMLogDetectedIP=10.1.2.3ApexCentralHost=TW-CHRI
S-W2019 devicePayloadId=1C00290C0360-9CDE11EB-D4B8-F51F-C697
TMCMdevicePlatform=Windows 7 6.1 (Build 7601) Service Pack 1
```

CEF Pattern Update Status Logs

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Product vendor	Trend Micro
Header (pname)	Product name	Apex Central
Header (pver)	Product version	2019
Header (eventid)	Event ID	800101
Header (eventName)	Log name	Pattern Update Status
Header (severity)	Severity	3
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT+00:00”
shost	Product Entity/Endpoint	Example: “shost1”
cs1Label	Corresponding label for the “cs1” field	“Operating System”
cs1	Operating system	Example: “Windows 7”
cs2Label	Corresponding label for the “cs2” field	“Product/Endpoint IP”
cs2	Product/Endpoint IP	Example: “10.0.7.20”
cs3Label	Corresponding label for the “cs3” field	“Update Agent”

CEF Key	Description	Value
cs3	Update Agent	Example: “0”
cs4Label	Corresponding label for the “cs4” field	“Domain”
cs4	Domain	Example: “Default”
cn1Label	Corresponding label for the “cn1” field	“Connection Status”
cn1	Connection status	Example: “100” • 0: Unable to connect • 1: Active • 2: Inactive • 100: Product active • 101: Product inactive but agent is active • 102: Roaming
cn2Label	Corresponding label for the “cn2” field	“Pattern/Rule”
cn2	Pattern/Rule	Example: “2048”
cs5Label	Corresponding label for the “cs5” field	“Pattern/Rule Version”
cs5	Pattern/Rule version	Example: “1548”
cn3Label	Corresponding label for the “cn3” field	“Pattern/Rule Status”

CEF Key	Description	Value
cn3	Pattern/Rule status	Example: “1” • 1: Up-to-date • 2: 1 version old • 3: 2 versions old • 4: 3 versions old • 5: 4 versions old • 6: 5 versions old • 7: 6 or more versions old
cs6Label	Corresponding label for the “cs6” field	“AUComponent_Type”
cs6	ActiveUpdate component type	Example: “2” • 2: Pattern
deviceFacility	Managed product name	Example: “Apex One”
msg	Pattern type display name	Example: "Virus Pattern"
deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|800101|Pattern Update
Status|3|rt=Nov 02 2017 12:46:44 GMT+00:00 shost=shost1 cs1L
abel=Operating_System cs1=Windows 7  cs2Label=Product/Endpoi
nt_IP cs2=10.0.7.20 cs3Label=Update_Agent cs3=0 cs4Label=Dom
ain cs4=Default cn1Label=Connection_Status cn1=100 cn2Label=
Pattern/Rule cn2=2048 cs5Label=Pattern/Rule_Version cs5=1548
 cn3Label=Pattern/Rule_Status cn3=1 cs6Label=AUComponent_Typ
```

```
e cs6=2 deviceFacility=Apex One deviceNtDomain=APEXTMCM dntd
om=OSCEDomain1
```

CEF Predictive Machine Learning Logs

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Product vendor	Trend Micro
Header (pname)	Product name	Apex Central
Header (pver)	Product version	2019
Header (eventid)	PML:Action result	PML:File cleaned
Header (eventName)	Detection name	virusa
Header (severity)	Severity	3
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT+00:00”
dvchost	Product server	Example: “Sample_Host”
cn1Label	Corresponding label for the “cn1” field	“ThreatType”
cn1	Probable threat type	Example: “35143” For more information, see *Threat Type Mapping Table on page F-63*.
cs2Label	Corresponding label for the “cs2” field	“DetectionName”
cs2	Security threat	Example: “Troj.Win32.TRX.XXPE002FF017”
shost	Infected endpoint	Example: “10.0.0.1”

CEF Key	Description	Value
suser	Logon user	Example: “TREND\\User”
cn2Label	Corresponding label for the “cn2” field	“DetectionType”
cn2	Detection type	Example: “0” • 0: File • 1: Process
filePath	File path	Example: "D:\\"
fname	File name	Example: "ALCORMP.EXE"
deviceCustomDate1	File creation time	Example: “2017-04-26 05:53:27.000”
sproc	System process	Example: “notepad.exe”
cn4Label	Corresponding label for the “cn4” field	“ProcessCommandLine”
cs4	Process command	Example: “notepad.exe”
duser	Process owner	Example: “user1”
app	Infection channel	Example: “10” • 0: Unknown • 1: Local drive • 2: Network drive • 3: AutoRun files • 10: Web • 11: Email • 999: Local or network drive
cs3Label	Corresponding label for the “cs3” field	“InfectionLocation”
cs3	Infection source	Example: “http://10.0.0.1/”

CEF Key	Description	Value
dst	Product/Endpoint IPv4 Address	Example: “10.0.17.6”
c6a3Label	Corresponding label for the “c6a3” field	“Product/Endpoint IP”
c6a3	Product/Endpoint IPv6 Address	Example: “fd66:5168:9882:6:b5b0:b2b5:4173:3f5d”
cn3Label	Corresponding label for the “cn3” field	“Confidence”
cn3	Threat probability	Example: “82”
act	Action result	Example: “21” For more information, see *Action Mapping Table on page F-73*.
filehash	File SHA-1	Example: “52c17c785b45ee961f68fb17744276076f383085”
dhost	Product entity/endpoint	Example: “dhost1”
deviceExternalId	Log sequence number	Example: “100”
deviceFacility	Product	Example: “Apex One”
reason	Critical threat type	Example: “E” • A: Known Advanced Persistent Threat (APT) • B: Social engineering attack • C: Vulnerability attack • D: Lateral movement • E: Unknown threats • F: C&C callback • G: Ransomware

CEF Key	Description	Value
deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1
TMCMLogDetectedHost	Endpoint name where the log event occurred	Example: MachineHostName
TMCMLogDetectedIP	IP address where the log event occurred	Example: 10.1.2.3
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697
TMCMdevicePlatform	Endpoint operating system	Example: Windows 7 6.1 (Build 7601) Service Pack 1

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|PML:File cleaned|Detecti
on01|3|deviceExternalId=1 rt=Dec 01 2018 16:01:00 GMT+00:00
deviceFacility=15 dvchost=OSCE01 cn1Label=ThreatType cn1=1 c
s2Label=DetectionName cs2=Detection01 shost=10.0.0.1 suser=S
ample_Domain\\Sample_User cn2Label=DetectionType cn2=0 fileP
ath=C:\\test01\\aaa.exe fname=aaa.exe deviceCustomDate1Label
=FileCreationDate deviceCustomDate1=Dec 02 2018 00:01:00 GMT
+00:00 sproc=notepad.exe cs4Label=ProcessCommandLine cs4=not
epad.exe -test duser=admin01 app=1 cs3Label=InfectionLocatio
n cs3=https://10.1.1.1 dst=80.1.1.1 cn3Label=Confidence cn3=
81 act=21 fileHash=177750B65A21A9043105FD0820B85B58CF148A01
dhost=OSCEClient11 reason=E deviceNtDomain=APEXTMCM dntdom=O
SCEDomain1 TMCMLogDetectedHost=OSCEClient11 TMCMLogDetectedI
P=80.1.1.1 ApexCentralHost=TW-CHRIS-W2019 devicePayloadId=1C
00290C0360-9CDE11EB-D4B8-F51F-C697 TMCMdevicePlatform=Windo
ws 7 6.1 (Build 7601) Service Pack 1
```

Threat Type Mapping Table

Value	Description
35140	Adware
35141	Backdoor
35142	Browser modifier
35143	DDoS
35144	Dialer
35145	Exploit
35146	Hacking tool
35147	Joke program
35148	PUA
35149	Ransomware
35150	Rootkit
35151	Spyware
35152	Trojan
35153	Trojan clicker
35154	Trojan downloader
35155	Trojan dropper
35156	Trojan proxy
35157	Trojan spyware
35158	File infector
35159	Worm
35160	Boot

CEF Product Auditing Events

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Product vendor	Trend Micro
Header (pname)	Product name	Apex Central
Header (pver)	Product version	2019
Header (eventid)	Event ID	1745
Header (eventName)	Log name	Product Auditing Events
Header (severity)	Severity	3
cat	Log type	1745
deviceFacility	Managed product	Example: “Apex One”
dvchost	Display name of the managed endpoint	Example: “localhost”
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT+00:00”
cn1Label	Corresponding label for the “cn1” field	SLF_CategoryID
cn1	Category ID	Example: “536,870,912”
cn2Label	Corresponding label for the "cn2" field	SLF_SeverityLevel
cn2	Severity level	Example: “4” • 1 = ERROR • 2 = WARNING • 4 = INFORMATION • 16 = FAILURE AUDIT

CEF Key	Description	Value
suser	The name of the user on whose behalf the event occurred	Example: "administrator"
deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|Delete|1009490 - Block A
dministrative Share - 1 (ATT&CK T1077,T1105)|3|rt=Apr 20 202
0 03:33:15 GMT+00:00 dvchost=OSCEClient22 deviceFacility=Ape
x One act=Delete, src=10.1.1.8 dst=80.1.1.8 smac=54-BF-64-84
-7F-08 spt=88 dmac=54-BF-64-84-7F-18 dpt=448 cn2Label=SLF_Is
DetectionOnly cn2=1 deviceDirection=Outbound cn3Label=SLF_Ra
nk cn3=100 cn4Label=SLF_SeverityCode cn4=4 proto=10008 cs2La
bel=SLF_ConnectionType cs2=Suspicious Client Application Act
ivity cn1Label=SLF_RuleID cn1=1009490 cs1Label=SLF_RuleConte
nt cs1=1009490 - Block Administrative Share - 1 (ATT&CK T107
7,T1105) cnt=1 deviceNtDomain=APEXTMCM dntdom=OSCEDomain1
```

CEF Sandbox Detection Logs

Note

Sandbox Detection logs are called Virtual Analyzer Detections on the Apex Central console.

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0

CEF Key	Description	Value
Header (vendor)	Appliance vendor	Trend Micro
Header (pname)	Appliance product	Apex Central
Header (pver)	Appliance version	2019
Header (eventid)	Device event class ID	VAD
Header (eventName)	Event name	Virtual Analyzer detection name
Header (severity)	Severity	3
deviceExternalId	ID	Example: “2”
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT+00:00”
deviceFacility	Product	Example: “Apex One”
dvchost	Server name	Example: “OSCE01”
dhost	Endpoint name	Example: “Isolate-ClientA”
dst	Endpoint IPv4 address	Example: “10.0.17.6”
c6a3	Endpoint IPv6 address	Example: “fe80::38ca:cd15:443c:40bb%11”
app	Entry channel	Example: “0” For more information, see *Protocol Mapping Table on page F-93*
sourceServiceName	Source	Example: “Test1@tmcm.extbeta.com”
destinationServiceName	Destination	Example: “Test2@tmcm.extbeta.com;Test3@tmcm.extbeta.com”
sproc	Process name	Example: “VA”

CEF Key	Description	Value
fileHash	File SHA-1 hash	Example: "D6712CAE5EC821F910E14945153AE7871AA536CA"
fname	File name	Example: "C:\\\\QA_Log.zip"
request	URL	Example: "http://127.1.1.1"
cs1	The name of the security threat determined by Virtual Analyzer	Example: "VAN_RANSOMWARE.umxxhelloransom_abc"
cn1	Displays the risk level assigned by Virtual Analyzer	Example: "0" • 0: No risk • 1: Low risk • 2: Medium risk • 3: High risk • 9999: Unknown
cs2	Displays the security threat type	Example: "Anti-security, self-preservation"

CEF Key	Description	Value
cs3	Cloud storage vendor	Example: “Google Drive” • Dropbox • Box • Google Drive • Microsoft OneDrive • SugarSync • Hightail • Evernote • Microsoft Exchange Online • Microsoft SharePoint Online • Unknown • N/A
reason	Critical threat type	Example: “E” • A: Known Advanced Persistent Threat (APT) • B: Social engineering attack • C: Vulnerability attack • D: Lateral movement • E: Unknown threats • F: C&C callback • G: Ransomware
deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1
TMCMLogDetectedHost	Endpoint name where the log event occurred	Example: MachineHostName

CEF Key	Description	Value
TMCMLogDetectedIP	IP address where the log event occurred	Example: 10.1.2.3
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697
TMCMdevicePlatform	Endpoint operating system	Example: Windows 7 6.1 (Build 7601) Service Pack 1

Log sample:

```
CEF: 0|Trend Micro|Apex Central|2019|VAD|VAN_RANSOMWARE.um
xxhelloransom_abc|3|deviceExternalId=2 rt=Mar 22 2018 08:23:
23 GMT+00:00 deviceFacility=Apex One dvchost=OSCE01 dhost=
Isolate-ClientA dst=0.0.0.0 app=1 sourceServiceNameTest1@tre
nd.com.tw destinationServiceName=Test2@tmcm.extbeta.com;Test
3@tmcm.extbeta.com sproc=VA fileHash=3395856CE81F2B7382DEE72
602F798B642F14140 fname=C:\\\\QA_Log.zip request=http://127.
1.1.1 cs1Label=Security_Threat cs1=VAN_RANSOMWARE.umxxhellor
ansom_abc cn1Label=Risk_Level cn1=0 cs2Label=Threat_Categori
es cs2=Anti-security, self-preservation cs3Label=Cloud_Servi
ce_Vendor cs3=Google Drive reason=E deviceNtDomain=APEXTMCM
dntdom=OSCEDomain1 TMCMLogDetectedHost=OSCEClient TMCMLogDe
tectedIP=0.0.0.0 ApexCentralHost=TW-CHRIS-W2019 devicePaylo
adId=1C00290C0360-9CDE11EB-D4B8-F51F-C697 TMCMdevicePlatfor
m=Windows 7 6.1 (Build 7601) Service Pack 1
```

CEF Spyware/Grayware Logs

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Appliance vendor	Trend Micro

CEF Key	Description	Value
Header (pname)	Appliance product	Apex Central
Header (pver)	Appliance version	2019
Header (eventid)	Device event class ID	Spyware Detected
Header (eventName)	Event name	Spyware Detected
Header (severity)	Severity	3
cnt	Number of detections	Example: “10”
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT+00:00”
cn1Label	Corresponding label for the “cn1” field	Example: “Pattern Type”
cn1	Pattern type	Example: “1073741840”
cs1Label	Corresponding label for the “cs1” field	Example: “VirusName”
cs1	Spyware/Grayware	Example: “ADW_OPENCANDY”
cs2Label	Corresponding label for the “cs2” field	Example: “EngineVersion”
cs2	Engine version	Example: “6.2.3027”
cs5Label	Corresponding label for the “cs5” field	Example: “ActionResult”
cs5	Action	Example: “Reboot system successfully” For more information, see *Action Mapping Table on page F-73*.
cs6Label	Corresponding label for the “cs6” field	Example: “PatternVersion”
cs6	Pattern version	Example: “1297”

CEF Key	Description	Value
cat	Log type	Example: “1727”
dvchost	Endpoint host name	Example: “ApexOneClient01”
deviceExternalId	ID	Example: “3”
fname	Resource	Example: “F:\\Malware\\psas\ \rsrc2.bin”
filePath	Resource	Example: “F:\\Malware\\psas\ \rsrc2.bin”
dhost	Endpoint host name	Example: “ApexOneClient01”
dst	Endpoint IPv4 address	Examle: “50.8.1.1”
c6a3Label	Corresponding label for the “c6a3” field	Example: “SLP_DestinationIP”
c6a3	Endpoint IPv6 address	Example: “fe80::38ca:cd15:443c:40bb%11”
fileHash	File SHA-1	Example: “D6712CAE5EC821F910E14945153AE7871AA536CA”
deviceFacility	Product	Example: “Apex One”
duser	User name	Example: “Admin004”
cn2Label	Corresponding label for the “cn2” field	Example: “Scan_Type”
cn2	Scan type	Example: “Scan Now” For more information, see *Spyware/Grayware Scan Type Mapping Table on page F-75*.
cn3Label	Corresponding label for the “cn3” field	Example: “Security_Threat_Type”

CEF Key	Description	Value
cn3	Security threat type	Example: “Adware” For more information, see *Spyware/Grayware Risk Type Mapping Table on page F-76*.
deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1
TMCMLogDetectedHost	Endpoint name where the log event occurred	Example: MachineHostName
TMCMLogDetectedIP	IP address where the log event occurred	Example: 10.1.2.3
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697
TMCMdevicePlatform	Endpoint operating system	Example: Windows 7 6.1 (Build 7601) Service Pack 1

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|Spyware Detected|Spywa
re Detected|3|deviceExternalId=3 rt=Oct 06 2017 08:39:46 GMT
+00:00 cnt=1 dhost=ApexOneClient01 cn1Label=PatternType cn1=
1073741840 cs1Label=VirusName cs1=ADW_OPENCANDY cs2Label=Eng
ineVersion cs2=6.2.3027 cs5Label=ActionResult cs5=Reboot sys
tem successfully cs6Label=PatternVersion cs6=1297 cat=1727 d
vchost=ApexOneClient01 fname=F:\\Malware\\psas\\rsrc2.bin fi
lePath=F:\\Malware\\psas\\rsrc2.bin dst=50.8.1.1 deviceFacil
ity=Apex One deviceNtDomain=APEXTMCM dntdom=OSCEDomain1 TMCM
LogDetectedHost=ApexOneClient01 TMCMLogDetectedIP=50.8.1.1
ApexCentralHost=TW-CHRIS-W2019 devicePayloadId=1C00290C0360-
9CDE11EB-D4B8-F51F-C697 TMCMdevicePlatform=Windows 7 6.1 (Bu
ild 7601) Service Pack 1
```

Action Mapping Table

Value	Description
0	Unknown
1	N/A
21	File cleaned
22	File deleted
23	File quarantined
24	File renamed
25	File passed
26	Unable to clean file. Passed
27	Unable to clean file. File deleted
28	Unable to clean file. File renamed
29	Unable to clean file. File quarantined
31	Unable to clean file. File deleted
32	File replaced
34	File archived
35	Blocked successfully
36	Quarantined successfully
37	Added additional information to email message body successfully
38	File uploaded
39	Unable to clean file. File quarantined
40	Unable to clean file. Passed
41	Access denied

Value	Description
42	No action
43	System rebooted
44	Spyware/Grayware unsafe to clean
45	Scan manually stopped successfully
46	Email message redirected for approval successfully
81	Encrypted
121	Unable to clean file
122	Unable to delete file
123	Unable to quarantine file
124	Unable to rename file
125	Unable to pass file
126	Unable to clean or pass file
127	Unable to clean or delete file
128	Unable to clean or rename file
129	Unable to clean or quarantine file
130	Unable to delete attachment
131	Unable to clean or delete attachment
132	One of the following: • Unable to replace file content • Attachment name matched a content rule and the name changed
134	Unable to archive file
135	Unable to block file
136	Unable to quarantine file

Value	Description
137	Unable to add additional information to email message body
138	Unable to upload file
139	Unable to clean or quarantine file
140	Unable to clean or pass file
141	Unable to deny access
142	Unable to perform no action
143	Action required - Restart the endpoint to finish cleaning the security threat
144	Undefined
145	Unable to stop scan manually
146	Unable to redirect mail for approval
201	Action required - Perform a full system scan
202	Action required - Use the "Rescue Disk" tool in the OfficeScan
203	Action required - Use the "Rootkit Buster" tool in the OfficeScan ToolBox to remove this threat. If the problem persists, contact Support
204	Action required - Use the "Clean Boot" tool in the OfficeScan ToolBox to remove this threat. If the problem persists, contact Support

Spyware/Grayware Scan Type Mapping Table

Value	Description
0	Unknown
1	N/A
11	Real-time Scan
12	Manual Scan

Value	Description
13	Scheduled Scan
14	Real-time Mail Scan
15	Real-time Database Scan
16	Scan Now
17	Card Scan
18	Damage Cleanup Services
19	Storage Scan

Spyware/Grayware Risk Type Mapping Table

Value	Description
0	Unknown
1	Trackware
2	Adware
3	Cookie
4	Dialer
5	Security low
6	General
7	Key logger
8	Trojan
9	Suspect
10	Hijack
11	Parasite

Value	Description
12	Browser Helper Object (BHO)
13	LSP
15	URL shortcut
16	Peer-to-Peer application
17	Worm
19	Downloader
20	Virus
21	Eulaware
22	Variant
23	Security medium
24	Security high
25	Vulnerability Assessment

CEF Suspicious File Logs

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Appliance vendor	Trend Micro
Header (pname)	Appliance product	Apex Central
Header (pver)	Appliance version	2019
Header (eventid)	FH:Action	FH:Log
Header (eventName)	Name	Suspicious Files
Header (severity)	Severity	3

CEF Key	Description	Value
deviceExternalId	ID	Example: “1”
cat	Log type	Example: “1766”
deviceFacility	Product	Example: “Apex One”
cn1Label	Corresponding label for the “cn1” field	Example: “SLF_ProductVersion”
cn1	Product version	Example: “11”
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT+00:00”
dst	Endpoint IPv4 address	Example: “10.201.86.151”
c6a3Label	Corresponding label for the “c6a3” field	Example: “Endpoint IPv6 Address”
c6a3	Endpoint IPv6 address	Example: “2620:101:4003:7a0:fd4b:52ed:53bd:ae3d”
dhost	Endpoint host name	Example: “APEX-ONE-CLIENT-1”
cs2Label	Corresponding label for the “cs2” field	Example: “SLF_TrueFileType”
cs2	File type	Example: “TEXT”
fileHash	File SHA-1	Example: “D6712CAE5EC821F910E14945153AE7871AA536CA”
cs3Label	Corresponding label for the “cs3” field	Example: “SLF_FileSource”
cs3	File path	Example: “C:\\Users\\Administrator\\Desktop\\BT-SHA1-SAMPLE\\BT-SHA1-SAMPLE\\017545113A434757C5F0F13095DBBF138BD76A40;0x36D572AE”

CEF Key	Description	Value
cn2Label	Corresponding label for the “cn2” field	Example: “SLF_SourceType”
cn2	C&C list source	Example: “0” • 0: Sandbox • 1: User-defined
act	Action	Example: “Log” • 1: Log • 2: Block • 3: Quarantine
cn3Label	Corresponding label for the “cn3” field	Example: “SLF_ScanType”
cn3	Scan type	Example: “1” • 1: Scheduled scan • 2: Manual scan • 3: Scan now • 4: Real-time scan
reason	Critical threat type	Example: “E” • A: Known Advanced Persistent Threat (APT) • B: Social engineering attack • C: Vulnerability attack • D: Lateral movement • E: Unknown threats • F: C&C callback • G: Ransomware
deviceNtDomain	Active Directory domain	Example: APEXTMCM

CEF Key	Description	Value
dntdom	Apex One domain hierarchy	Example: OSCEDomain1
TMCMLogDetectedHost	Endpoint name where the log event occurred	Example: MachineHostName
TMCMLogDetectedIP	IP address where the log event occurred	Example: 10.1.2.3
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697
TMCMdevicePlatform	Endpoint operating system	Example: Windows 7 6.1 (Build 7601) Service Pack 1

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|FH:Log|Suspicious File
s|3|deviceExternalId=1 rt=Nov 15 2016 02:47:21 GMT+00:00 cat
=1766 deviceFacility=Apex One cn1Label=SLF_ProductVersion cn
1=11 dst=10.201.86.151 dhost=APEX-ONE-CLIENT-1 cs2Label=SLF_
TrueFileType cs2=SLF_TrueFileType fileHash=D6712CAE5EC821F91
0E14945153AE7871AA536CA cs3Label=SLF_FileSource cs3=C:\\User
s\\Administrator\\Desktop\\BT-SHA1-SAMPLE\\BT-SHA1-SAMPLE\\0
17545113A434757C5F0F13095DBBF138BD76A40;0x36D572AE cn2Label=
SLF_SourceType cn2=0 act=Log cn3Label=SLF_ScanType cn3=1 rea
son=E deviceNtDomain=APEXTMCM dntdom=OSCEDomain1 TMCMLogDete
ctedHost=APEX-ONE-CLIENT-1 TMCMLogDetectedIP=10.201.86.151
ApexCentralHost=TW-CHRIS-W2019 devicePayloadId=1C00290C0360-
9CDE11EB-D4B8-F51F-C697 TMCMdevicePlatform=Windows 7 6.1 (Bu
ild 7601) Service Pack 1
```

CEF Virus/Malware Logs

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Appliance vendor	Trend Micro
Header (pname)	Appliance product	Apex Central
Header (pver)	Appliance version	2019
Header (eventid)	AV:Action	AV:File renamed
Header (eventName)	Virus/Malware name	JS_EXPLOIT.SMDN
Header (severity)	Severity	3
cnt	Detections	Example: “10”
dhost	Endpoint	Example: “ApexOneClient01”
duser	User	Example: “Admin004”
act	Action	Example: “File renamed” For more information, see *Action Mapping Table on page F-73*.
rt	Log generation time in UTC	Example: Oct 06 2017 08:39:46 GMT+00:00
cn1Label	Corresponding label for the “cn1” field	Example: “VLF_PatternNumber”
cn1	Pattern/Rule version	Example: “920500”
cn2Label	Corresponding label for the “cn2” field	Example: “VLF_SecondAction”
cn2	Second action	Example: “3” For more information, see *Second Action Mapping Table on page F-85*.

CEF Key	Description	Value
cs1Label	Corresponding label for the “cs1” field	Example: “VLF_FunctionCode”
cs1	Scan type	Example: “Manual Scan” • 0: Unknown • 1: N/A • 11: Real-time Scan • 12: Manual Scan • 13: Scheduled Scan • 16: Scan Now • 17: Card Scan • 18: Damage Cleanup Services • 19: Storage Scan
cs2Label	Corresponding label for the “cs2” field	Example: “VLF_EngineVersion”
cs2	Engine version	Example: “9.500.1005”
cs3Label	Corresponding label for the “cs3” field	Example: “CLF_ProductVersion”
cs3	Product version	Example: “11”
cs4Label	Corresponding label for the “cs4” field	Example: “CLF_ReasonCode”
cs4	Reason code	Example: “virus log”
cs5Label	Corresponding label for the “cs5” field	Example: “VLF_FirstActionResult”
cs5	First action result	Example: “Unable to clean file” For more information, see *Action Mapping Table on page F-73*.

CEF Key	Description	Value
cs6Label	Corresponding label for the “cs6” field	Example: “Second Action Result”
cs6	Second action result	Example: “Unable to clean file. Passed” For more information, see *Action Mapping Table on page F-73*.
cat	Log type	Example: “1703”
dvchost	Product server name	Example: “ApexOneServer01”
cn3Label	Corresponding label for the “cn3” field	Example: “CLF_SeverityCode”
cn3	Severity code	Example: “2” • 0: Unknown • 1: Information • 2: Warning • 3: Error • 4: Critical
deviceExternalId	ID	Example: “3”
fname	File	Example: “FakeMalwareRebootDel.exe”
filePath	File path	Example: “C:\\Users\\ADMINI~1\\AppData\\Local\\Temp\\Rar $DR01.046\\”
msg	File in compressed file	Example: “BMAC Schedule of Events.xls”

CEF Key	Description	Value
shost	Source host, UNC, or email address **Note** The system may not include this key in logs.	Example: “xxx@test.com”
dst	Endpoint IPv4 address	Examle: “50.8.1.1”
c6a3Label	Corresponding label for the “c6a3” field	Example: “SLP_DestinationIP”
c6a3	Endpoint IPv6 address	Example: “fe80::38ca:cd15:443c:40bb%11”
fileHash	File SHA-1	Example: “D6712CAE5EC821F910E14945153AE7871AA536CA”
deviceFacility	Product	Example: “Apex One”
reason	Critical threat type	Example: “E” • A: Known Advanced Persistent Threat (APT) • B: Social engineering attack • C: Vulnerability attack • D: Lateral movement • E: Unknown threats • F: C&C callback • G: Ransomware
deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|AV:File renamed|JS_EXP
LOIT.SMDN|3|deviceExternalId=104 rt=Feb 18 2016 14:34:00 G
MT+00:00 cnt=1 dhost=ApexOneClient01 duser=Admin004 act=Fi
le renamed cn1Label=VLF_PatternNumber cn1=920500 cn2Label=
VLF_SecondAction cn2=3 cs1Label=VLF_FunctionCode cs1=Manua
l Scan cs2Label=VLF_EngineVersion cs2=9.500.1005 cs3Label=
CLF_ProductVersion cs3=10.6 cs4Label=CLF_ReasonCode cs4=vi
rus log cs5Label=VLF_FirstActionResult cs5=File renamed cs
6Label=VLF_SecondActionResult cs6=N/A cat=1703 dvchost=Ape
xOneServer01 cn3Label=CLF_ServerityCode cn3=2 fname=0348C6
93056617D34FC5B5BAB4643885FEE5FEDF;0xD5D56AC2 filePath=C:\
\Users\\Administrator\\Desktop\\trend_test_virus\\Trojans\
\ msg=BMAC Schedule of Events.xls shost=xxx@test.com dst=1
0.201.129.24 devic eFacility=Apex One reason=B deviceNtDom
ain=APEXTMCM dntdom=O SCEDomain1 ApexCentralHost=TW-CHRIS-
W2019 devicePayloadId=1C00290C0360-9CDE11EB-D4B8-F51F-C697
```

Second Action Mapping Table

Value	Description
0	Unknown
1	N/A
2	Clean
3	Delete
4	Move
5	Rename
6	Pass/Log
7	Strip
8	Drop
9	Quarantine
10	Insert/Replace

Value	Description
11	Archive
12	Stamp
13	Block
14	Redirect mail for approval
81	Encrypted
90	Detect
257	Reset

CEF Web Security Logs

CEF Key	Description	Value
Header (logVer)	CEF format version	CEF:0
Header (vendor)	Appliance vendor	Trend Micro
Header (pname)	Appliance product	Apex Central
Header (pver)	Appliance version	2019
Header (eventid)	WB:Filter/Blocking Type	WB:1
Header (eventName)	“Blocking Rule” or “Filter/ Blocking Type”	5
Header (severity)	Severity	3
app	Protocol	Example: “3” For more information, see *Protocol Mapping Table on page F-93*.
cnt	Detections	Example: “10”

CEF Key	Description	Value
dpt	Server port	Example: “80”
act	Action	Example: “0” • 0: Unknown • 1: Pass • 2: Block • 3: Monitor • 4: Delete • 5: Quarantine • 6: Warn • 7: Warn and continue • 8: Override
rt	Event trigger time in UTC	Example: “Mar 22 2018 08:23:23 GMT+00:00”
src	Endpoint IPv4 address	Example: “10.1.128.34”
c6a2Label	Corresponding label for the “c6a2” field	Example: “SLF_SourceIP”
c6a2	Endpoint IPv6 address	Example: “2620:101:4003:7a0:fd4b:52ed:53bd:ae3d”
cs1Label	Corresponding label for the “cs1” field	Example: “SLF_PolicyName”
cs1	Policy	Example: “External User Policy”
cs4Label	Corresponding label for the “cs4” field	Example: “CLF_ReasonCode”
cs4	Reason Code	Example: “access”
cs5Label	Corresponding label for the “cs5” field	Example: “CLF_ReasonCodeSource”

CEF Key	Description	Value
cs5	Reason code source	Example: “web”
deviceDirection	Traffic/Connection	Example: “2” • 0: None • 1: Inbound • 2: Outbound
cat	Filter/Blocking Type	Example: “7” For more information, see *Filter/Blocking Type Mapping Table on page F-91*.
dvchost	Endpoint host name	Example: “ApexOneClient08”
cn1Label	Corresponding label for the “cn1” field	Example: “CLF_SeverityCode”
cn1	Severity code	Example: “0” • 0: Unknown • 1: Information • 2: Warning • 3: Error • 4: Critical
deviceExternalId	ID	Example: “38”
fname	File	Example: “test.txt”
request	URL	Example: “http://www.violetsoft.net/counter/insert.php?dbserver\=db1&c_pcode\=25&c_pid\=funpop1&c_kind\=4&c_mac\=FE-ED-BE-EF-0C-E1”
deviceFacility	Product	Example: “Apex One”

CEF Key	Description	Value
duser	User name	Example: “Admin004”
shost	Client host name	Exmaple: “ABC-HOST-WKS12”
cs2Label	Corresponding label for the “cs2” field	Example: “Blocking_Rule”
cs2	Blocking rule	Example: “content filter”
deviceProcessName	Process name	Example: “C:\\Windows\ \system32\\svchost-1.exe”
cn3Label	Corresponding label for the “cn3” field	Example: “ReputationScore”
cn3	Reputation score	Example: “49”
dst	Server IP address	Example: “10.69.81.64”
cn2Label	Corresponding label for the “cn2” field	Example: “SLF_SeverityLevel”
cn2	Severity level	Example: “100” • 100: High • 300: Medium high • 500: Medium • 700: Medium low • 900: Low

CEF Key	Description	Value
reason	Critical threat type	Example: “E” • A: Known Advanced Persistent Threat (APT) • B: Social engineering attack • C: Vulnerability attack • D: Lateral movement • E: Unknown threats • F: C&C callback • G: Ransomware
deviceNtDomain	Active Directory domain	Example: APEXTMCM
dntdom	Apex One domain hierarchy	Example: OSCEDomain1
TMCMLogDetectedHost	Endpoint name where the log event occurred	Example: MachineHostName
TMCMLogDetectedIP	IP address where the log event occurred	Example: 10.1.2.3
ApexCentralHost	Apex Central host name	Example: TW-CHRIS-W2019
devicePayloadId	Unique message GUID	Example: 1C00290C0360-9CDE11EB-D4B8-F51F-C697
TMCMdevicePlatform	Endpoint operating system	Example: Windows 7 6.1 (Build 7601) Service Pack 1

Log sample:

```
CEF:0|Trend Micro|Apex Central|2019|WB:7|7|3|deviceExterna
lId=38 rt=Nov 15 2017 08:43:57 GMT+00:00 app=17 cntLabel=Agg
regatedCount cnt=1 dpt=80 act=1 src=10.1.128.46 cs1Label=SLF
_PolicyName cs1=External User Policy deviceDirection=2 cat=7
 dvchost=ApexOneClient08 fname=test.txt request=http://www.v
ioletsoft.net/counter/insert.php?dbserver\=db1&c_pcode\=25&c
_pid\=funpop1&c_kind\=4&c_mac\=FE-ED-BE-EF-0C-E1 deviceFacil
```

```
ity=Apex One shost=ABC-HOST-WKS12 reason=G deviceNtDomain=AP
EXTMCM dntdom=OSCEDomain1 TMCMLogDetectedHost=ABC-HOST-WKS12
TMCMLogDetectedIP=10.1.128.46 ApexCentralHost=TW-CHRIS-W2019
devicePayloadId=1C00290C0360-9CDE11EB-D4B8-F51F-C697 TMCMdev
icePlatform=Windows 7 6.1 (Build 7601) Service Pack 1
```

Filter/Blocking Type Mapping Table

Value	Description
0	Unknown
1	File name
2	Webmail site
3	Web server
4	URL pattern
5	Java/VB script
6	True file type
7	User-defined
8	Server-defined
9	Web policy
11	Phishing
12	Phishing/Spyware/Grayware
13	Phishing/Virus/Malware accomplice
14	Phishing/Forged signature
15	Phishing/Disease vector
16	Phishing/Malicious applet
17	Phishing reputation

Value	Description
20	IP translation policy
21	Java scanning policy
22	Malicious mobile code policy
31	Pharming
32	URL blocking
33	URL filtering
34	Client IP blocking
35	Destination port blocking
36	Web reputation
41	Unsupported file type
42	Exceeds total file count limit
43	Exceeds file size limit
44	Exceeds decompression layer limit
45	Exceeds decompression time frame
46	Exceeds compression ratio limit
47	Password protected file
48	Restricted spyware/grayware type
60	String pattern
70	HTTP inspection
-1	Virus/Malware
-2	Spyware/Grayware
-3	Network virus
-4	IntelliTrap

Value	Description
-5	Suspicious virus/malware
-6	Suspicious spyware/grayware
-7	Fraud
-8	Suspicious behavior

Protocol Mapping Table

Value	Description
0	Unknown
1	SMTP
2	POP3
3	IRC
4	DNS Response
5	HTTP
6	FTP
7	TFTP
8	SMB
9	Windows Live Messenger (MSN)
10	AIM
11	Yahoo! Messenger
12	Gmail
13	Yahoo! Mail
14	Windows Live Hotmail

Value	Description
15	RDP
16	DHCP
17	Telnet
18	LDAP
19	File transfer
20	SSH
21	Dameware
22	VNC
23	Cisco Telnet
24	Kerberos
25	DCE RPC
26	SQL
27	pcAnywhere
28	ICMP
29	SNMP
30	Virus pattern TCP
31	Virus pattern UDP
32	HTTPS
33	SMB2
34	MMS
35	IMAP4
36	RADIUS
37	Radmin

Value	Description
38	FTP_Response
48	RTSP/RTP-UDP
49	RTSP/RTP-TCP
50	RTSP/RDT-UDP
51	RTSP/RDT-TCP
52	WMSP
53	SHOUTCast
54	RTMP
68	DNS Request
256	BitTorrent
257	Kazaa
258	Limewire
259	Bearshare
260	Bluester
261	Edonkey emule
262	Edonkey2000
263	Filezilla
264	Guncleus
265	Gnutella
266	Winny
267	Napster
268	Morpheus
269	Napster

Value	Description
270	Shareaza
271	WinMX
272	Mldonkey
273	Direct Connect
274	Soulseek
275	OpenAP
276	Kuro
277	Imesh
278	Skype
279	Google Talk
317	Cabos
318	Zultrax
319	Foxy
320	eDonkey
321	Ares
322	Miranda
323	Kceasy
324	MoodAmp
325	Deepnet Explorer
326	FreeWire
327	Gimme
328	GnucDNA GWebCache
329	Jubster

Value	Description
330	MyNapster
331	Nova GWebCache
332	Swapper GWebCache
333	Xnap
334	Xolox
335	Ppstream
640	AIM Express
641	Chikka SMS Messenger
642	eBuddy
643	ICQ2Go
644	ILoveIM Web Messenger
645	IMUnitive
646	Mabber
647	Meebo
648	Yahoo! Web Messenger
848	SIP2
1024	GPass
10001	IP
10002	ARP
10003	TCP
10004	UDP
10005	IGMP
60	ORACLE

Value	Description
44	MySQL
520	MSSQL
337	Postgres
41	ICMPv6
10006	GGP
10007	PUP
10008	IDP
10009	ND
10010	RAW

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TREND MICRO INCORPORATED

225 E. John Carpenter Freeway, Suite 1500
Irving, Texas 75062 U.S.A.
Phone: +1 (817) 569-8900, Toll-free: (888) 762-8736
Email: support@trendmicro.com

www.trendmicro.com

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