



2.0 Trend Micro Safe Lock™

Service Pack 1 Patch 1

Administrator's Guide

A powerful lockdown solution for fixed-function computers



Endpoint Security

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<http://docs.trendmicro.com/en-us/enterprise/trend-micro-safe-lock.aspx>

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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.

Detailed information about how to use specific features within the product may be available at the Trend Micro Online Help Center and/or the Trend Micro Knowledge Base.

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Preface

This Administrator's Guide introduces Trend Micro Safe Lock and covers all aspects of product management.

Topics in this chapter include:

- *About the Documentation on page v*
- *Audience on page vi*
- *Document Conventions on page vi*

About the Documentation

Trend Micro Safe Lock documentation includes the following:

TABLE 1. Trend Micro Safe Lock Documentation

DOCUMENTATION	DESCRIPTION
Installation Guide	A PDF document that discusses requirements and procedures for installing Safe Lock.
Administrator's Guide	A PDF document that discusses getting started information and Safe Lock usage and management.
Readme file	Contains a list of known issues. It may also contain late-breaking product information not found in the printed documentation.
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://esupport.trendmicro.com

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

<http://docs.trendmicro.com>




Audience


Trend Micro Safe Lock documentation is intended for administrators responsible for Safe Lock management, including agent installation.

Document Conventions

The following table provides the official terminology used throughout the Trend Micro Safe Lock documentation:

TABLE 2. 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
<i>Italics</i>	References to other documents
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

CONVENTION	DESCRIPTION
 WARNING!	Critical actions and configuration options

Chapter 1

Introduction

Trend Micro Safe Lock delivers a simple, no-maintenance solution to lock down and protect fixed-function computers, helping protect businesses against security threats and increase productivity.

Topics in this chapter include:

- *About Trend Micro Safe Lock on page 1-2*

About Trend Micro Safe Lock

Trend Micro Safe Lock protects fixed-function computers like Industrial Control Systems (ICS), Point of Sale (POS) terminals, and kiosk terminals from malicious software and unauthorized use. By using fewer resources and without the need for regular software or system updates, Safe Lock can reliably secure computers in industrial and commercial environments with little performance impact or downtime.

What's New in Trend Micro Safe Lock 2.0 SP 1 Patch 1

Trend Micro Safe Lock 2.0 SP1 Patch 1 includes the following new features and enhancements.

TABLE 1-1. Features

FEATURE	DESCRIPTION
Platform support	Trend Micro Safe Lock now supports Windows 10.
Protection against storage device access	You can allow or block storage device access to managed endpoints.
Application lockdown enhancement	Application lockdown is enhanced with pop-up notifications on managed endpoints to inform the latest application blocking. This notification is disabled by default. To enable the feature, use the <code>SICmd.exe</code> program.
Enhanced security of agent settings	The agent Setup.ini file can now be encrypted to prevent unauthorized access to important settings such as the password.

Agent Features and Benefits

Trend Micro Safe Lock includes the following features and benefits.

Application Lockdown

By preventing programs, DLL files, drivers, and scripts not specifically on the Approved List of applications from running (also known as application white listing), Safe Lock

provides both improved productivity and system integrity by blocking malicious software and preventing unintended use.

Safe Lock write protection blocks modification and deletion of files, folders, and registry entries.

Exploit Prevention

Known targeted threats like Downad and Stuxnet, as well as new and unknown threats, are a significant risk to ICS and kiosk computers. Systems without the latest operating system updates are especially vulnerable to targeted attacks.

Safe Lock provides both intrusion prevention, which helps prevent threats from spreading to the endpoint, and execution prevention, which helps prevent threats from spreading to the endpoint or from running.

Easy Management

When software needs to be installed or updated, the Trusted Updater and Predefined Trusted Updater List provide an easy way to make changes to the endpoint and automatically add new or modified files to the Approved List, all without having to unlock Trend Micro Safe Lock.

Small Footprint

Compared to other endpoint security solutions that rely on large pattern files that require constant updates, application lockdown uses less memory and disk space, without the need to download updates.

Role Based Administration

Trend Micro Safe Lock provides a separate administrator and Restricted User account, providing full control during installation and setup, as well as simplified monitoring and maintenance after deployment.

Graphical and Command Line Interfaces

Anyone who needs to check the software can use the console, while system administrators can take advantage of the command line interface (CLI) to access all of the features and functions available.

Trend Micro Portable Security Compatible

Out-of-the-box compatibility with Trend Micro Portable Security ensures straightforward removal of any threats that do get on to the endpoint, without the need to update the Approved List or unlock the endpoint.

Self Protection

Self Protection provides ways for Trend Micro Safe Lock to defend its processes and resources, required to function properly, from being disabled by programs or actual users.

Self Protection blocks all attempts to terminate the following services:

- Trend Micro Safe Lock Service (`WkSrv.exe`)
- Trend Micro Unauthorized Change Prevention Service (`TMBMSRV.exe`)
- Trend Micro Personal Firewall (`TmPfw.exe`)

Safe Lock Requirements

This section introduces Safe Lock system requirements and upgrade limitations.

Hardware Requirements

Trend Micro Safe Lock does not have specific hardware requirements beyond those specified by the operating system, with the following exceptions:

TABLE 1-2. Required Hardware for Safe Lock

HARDWARE/SOFTWARE	DESCRIPTION
Available disk space	200MB minimum 300MB recommended
Monitor resolution	640x480

**Important**

Safe Lock cannot be installed on a system that already runs one of the following:

- Trend Micro OfficeScan
- Trend Micro Titanium
- Another Trend Micro endpoint solution



Operating Systems




**Note**



Memory Randomization, API Hooking Prevention, and DLL Injection Prevention are not supported on 64-bit platforms.



TABLE 1-3. List of Supported Operating Systems



WINDOWS VERSION TYPE	WINDOWS VERSION NAME
Windows Clients	Windows 2000 SP4 (32-bit)

WINDOWS VERSION TYPE	WINDOWS VERSION NAME
	 Note Safe Lock installed on Windows 2000 SP4 (without update rollup), Windows XP SP1, or Windows Server 2003 does not support the following functions: DLL/Driver Lockdown, Script Lockdown, Integrity Monitoring, USB Malware Protection, Storage Device Blocking, and Predefined Trusted Updater.
	Windows XP SP1*/SP2/SP3 (32-bit) (except Starter and Home editions)
	 Note <ul style="list-style-type: none"> • Safe Lock installed on Windows 2000 SP4 (without update rollup), Windows XP SP1, or Windows Server 2003 does not support the following functions: DLL/Driver Lockdown, Script Lockdown, Integrity Monitoring, USB Malware Protection, Storage Device Blocking, and Predefined Trusted Updater. • Safe Lock does not support a custom action of “quarantine” on Windows XP or Windows 2003.
	Windows Vista No-SP/SP1/SP2 (32-bit) (except Starter and Home editions)
	Windows 7 No-SP/SP1 (32-bit and 64-bit) (except Starter and Home editions)
	Windows 8 No-SP (32-bit and 64-bit)
	Windows 8.1 No-SP (32-bit and 64-bit)
	Windows 10 Enterprise (32-bit and 64-bit)

WINDOWS VERSION TYPE	WINDOWS VERSION NAME
	<div data-bbox="575 285 685 321">  Note </div> <ul data-bbox="633 329 1177 505" style="list-style-type: none"> • Make sure to unlock the endpoint before updating your Windows 10 operating system for the Anniversary Update. • Memory Randomization is not supported on operating systems running Windows 10 Creators Update. <hr/> <p data-bbox="568 537 1026 561">Windows 10 IoT Enterprise (32-bit and 64-bit)</p> <hr/> <div data-bbox="575 610 685 646">  Note </div> <ul data-bbox="633 654 1177 829" style="list-style-type: none"> • Make sure to unlock the endpoint before updating your Windows 10 operating system for the Anniversary Update. • Memory Randomization is not supported on operating systems running Windows 10 Creators Update.
Windows Server	<p data-bbox="568 865 928 889">Windows 2000 Server SP4* (32-bit)</p> <hr/> <div data-bbox="575 938 685 974">  Note </div> <p data-bbox="633 979 1169 1138">Safe Lock installed on Windows 2000 SP4 (without update rollup), Windows XP SP1, or Windows Server 2003 does not support the following functions: DLL/Driver Lockdown, Script Lockdown, Integrity Monitoring, USB Malware Protection, Storage Device Blocking, and Predefined Trusted Updater.</p> <hr/> <p data-bbox="568 1170 969 1195">Windows Server 2003 SP1/SP2 (32-bit)</p>

WINDOWS VERSION TYPE	WINDOWS VERSION NAME
	 Note <ul style="list-style-type: none"> • Safe Lock installed on Windows 2000 SP4 (without update rollup), Windows XP SP1, or Windows Server 2003 does not support the following functions: DLL/Driver Lockdown, Script Lockdown, Integrity Monitoring, USB Malware Protection, Storage Device Blocking, and Predefined Trusted Updater. • Safe Lock does not support a custom action of “quarantine” on Windows XP or Windows 2003.
	Windows Server 2003 R2 No-SP/SP2 (32-bit and 64-bit)
	 Note <ul style="list-style-type: none"> • Safe Lock installed on Windows 2000 SP4 (without update rollup), Windows XP SP1, or Windows Server 2003 does not support the following functions: DLL/Driver Lockdown, Script Lockdown, Integrity Monitoring, USB Malware Protection, Storage Device Blocking, and Predefined Trusted Updater. • Safe Lock does not support a custom action of “quarantine” on Windows XP or Windows 2003.
	Windows Server 2008 SP1/SP2 (32-bit and 64-bit)
	Windows Server 2008 R2 No-SP/SP1 (64-bit)
	Windows Server 2012 No-SP (64-bit)
	Windows Server 2012 R2 No-SP (64-bit)
Windows Embedded Standard	Windows (Standard) XP Embedded SP1*/SP2 (32-bit)

WINDOWS VERSION TYPE	WINDOWS VERSION NAME
	<div data-bbox="575 285 685 321">  Note </div> <ul data-bbox="631 329 1166 586" style="list-style-type: none"> • Safe Lock installed on Windows 2000 SP4 (without update rollup), Windows XP SP1, or Windows Server 2003 does not support the following functions: DLL/Driver Lockdown, Script Lockdown, Integrity Monitoring, USB Malware Protection, Storage Device Blocking, and Predefined Trusted Updater. • Safe Lock does not support a custom action of “quarantine” on Windows XP or Windows 2003. <hr/> <p data-bbox="568 618 1009 643">Windows Embedded Standard 2009 (32-bit)</p> <p data-bbox="568 667 1080 691">Windows Embedded Standard 7 (32-bit and 64-bit)</p> <p data-bbox="568 716 1080 740">Windows Embedded Standard 8 (32-bit and 64-bit)</p> <p data-bbox="568 764 1099 789">Windows Embedded Standard 8.1 (32-bit and 64-bit)</p>
Windows Embedded POSReady	<p data-bbox="568 818 975 842">Windows Embedded POSReady (32-bit)</p> <p data-bbox="568 867 1032 891">Windows Embedded POSReady 2009 (32-bit)</p> <p data-bbox="568 915 1099 940">Windows Embedded POSReady 7 (32-bit and 64-bit)</p>
Windows Embedded Enterprise	<p data-bbox="568 967 1157 992">Windows Embedded Enterprise XP SP1*/SP2/SP3 (32-bit)</p> <hr/> <div data-bbox="575 1040 685 1076">  Note </div> <ul data-bbox="631 1084 1166 1341" style="list-style-type: none"> • Safe Lock installed on Windows 2000 SP4 (without update rollup), Windows XP SP1, or Windows Server 2003 does not support the following functions: DLL/Driver Lockdown, Script Lockdown, Integrity Monitoring, USB Malware Protection, Storage Device Blocking, and Predefined Trusted Updater. • Safe Lock does not support a custom action of “quarantine” on Windows XP or Windows 2003.

WINDOWS VERSION TYPE	WINDOWS VERSION NAME
	Windows Embedded Enterprise Vista (32-bit)
	Windows Embedded Enterprise 7 (32-bit and 64-bit)
Windows Embedded Server	Windows Embedded Server 2003 SP1/SP2 (32-bit) <hr/>  Note <ul style="list-style-type: none"> • Safe Lock installed on Windows 2000 SP4 (without update rollup), Windows XP SP1, or Windows Server 2003 does not support the following functions: DLL/Driver Lockdown, Script Lockdown, Integrity Monitoring, USB Malware Protection, Storage Device Blocking, and Predefined Trusted Updater. • Safe Lock does not support a custom action of “quarantine” on Windows XP or Windows 2003.
	Windows Embedded Server 2003 R2 (32-bit) <hr/>  Note <ul style="list-style-type: none"> • Safe Lock installed on Windows 2000 SP4 (without update rollup), Windows XP SP1, or Windows Server 2003 does not support the following functions: DLL/Driver Lockdown, Script Lockdown, Integrity Monitoring, USB Malware Protection, Storage Device Blocking, and Predefined Trusted Updater. • Safe Lock does not support a custom action of “quarantine” on Windows XP or Windows 2003.
	Windows Embedded Server 2008 (32-bit and 64-bit)
	Windows Embedded Server 2008 R2 (64-bit)
	Windows Embedded Server 2012 (64-bit)
	Windows Embedded Server 2012 R2 (64-bit)

**Note**

See the latest Safe Lock readme file for the most up-to-date list of supported operating systems for agents.

Agent Upgrade Preparation


**WARNING!**

Before upgrading, take the appropriate action below for your installation method and installed Safe Lock agent version.

Download the latest updates from the Trend Micro Software Download Center. Go to <http://downloadcenter.trendmicro.com/>.

TABLE 1-4. Upgrade Actions Required by Installation Method and Installed Agent Version

INSTALLATION METHOD	INSTALLED AGENT VERSION	REQUIRED ACTION	SETTINGS RETAINED
Local installation using Windows Installer	1.0	No preparation needed	No settings retained
	1.1	No preparation needed	Compatible settings retained
	2.0 or later	No preparation needed	No settings retained
Local installation using Command Line Interface Installer	1.0	Manually uninstall	No settings retained
	1.1	No preparation needed	Compatible settings retained
	2.0 or later	Manually uninstall	No settings retained

INSTALLATION METHOD	INSTALLED AGENT VERSION	REQUIRED ACTION	SETTINGS RETAINED
Remote installation	1.0	Manually uninstall	No settings retained
 Note Safe Lock supports remote installation using Safe Lock Intelligent Manager.	1.1	Manually uninstall	No settings retained
	2.0 or later	Manually uninstall	No settings retained

Agent Use Overview

Trend Micro Safe Lock is a whitelist solution that locks down computers, preventing all applications not on the Approved List from running. Safe Lock can be configured and maintained using the graphical user interface (GUI) agent console or the command line interface (CLI). System updates can be applied without turning off Application Lockdown at the endpoint through the Predefined Trusted Updater List or by using the Trusted Updater.

Consider this typical use case scenario:

1. Set up the Approved List and turn on Application Lockdown on the endpoint so that unapproved applications cannot be run.
2. Use the Trusted Updater to update or install software whose installer is not on the Predefined Trusted Updater list.
3. Configure and enable the Restricted User account for later maintenance.

If someone tries to run an application not specifically on the Approved List, the following message displays:

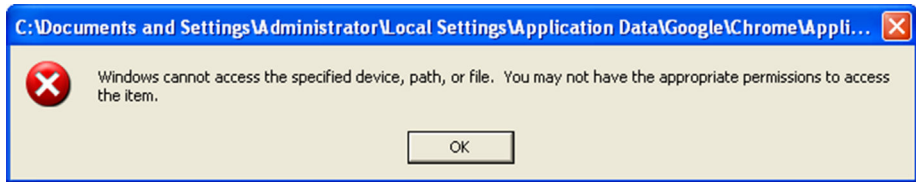


FIGURE 1-1. Trend Micro Safe Lock blocking message

Chapter 2

Using the Agent Console

This chapter describes how to configure Trend Micro Safe Lock using the agent console on the endpoint.

Topics in this chapter include:

- *Setting Up the Approved List on page 2-2*
- *About the Agent Console on page 2-6*
- *About the Approved List on page 2-10*
- *Account Types on page 2-17*
- *About Feature Settings on page 2-19*

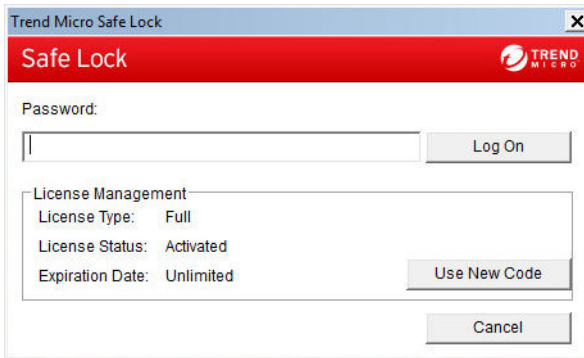
Setting Up the Approved List

Before Trend Micro Safe Lock can protect the endpoint, it must check the endpoint for existing applications and installers necessary for the system to run correctly.

Procedure

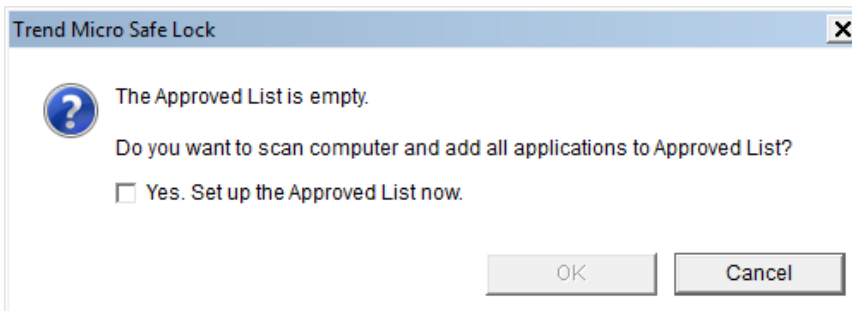
1. Open the Safe Lock console.

The Safe Lock log on screen appears.



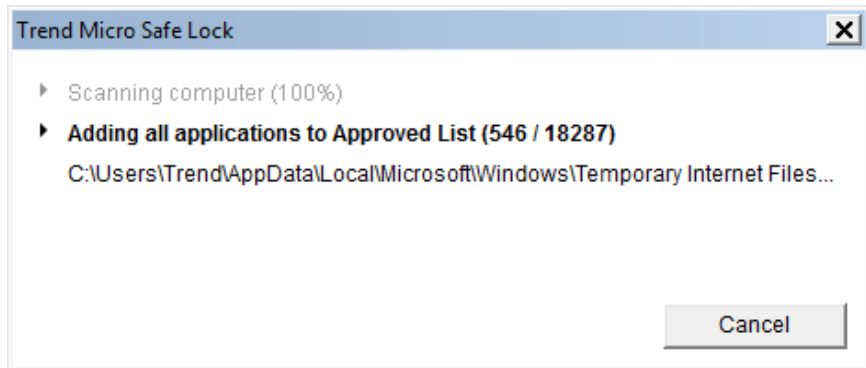
2. Provide the password and click **Login**.

Safe Lock asks if you want to set up the Approved List now.

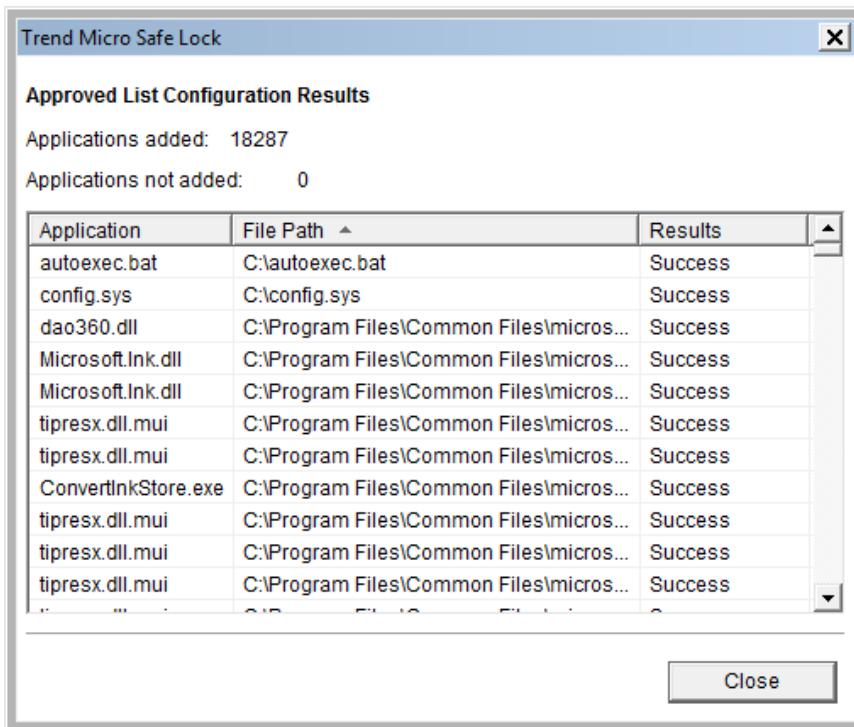


3. At the notification window, select **Yes. Set up the Approved List now** and click **OK**.

Safe Lock scans the endpoint and adds all applications to the Approved List.



Safe Lock displays the Approved List Configuration Results.

**Note**

When Trend Micro Safe Lock Application Lockdown is on, only applications that are in the Approved List will be able to run.

4. Click **Close**.

Configuring Pop-up Notifications for Blocked Files

The administrator can set up a notification that displays on managed endpoints when Safe Lock blocks and prevents unapproved files from running or making changes to managed endpoints. This notification alerts the administrator of any blocking event and provides details about the blocked file.



Note

- This feature is disabled by default.
 - Safe Lock only supports feature customization using the agent Setup.ini file and requires re-deployment to apply the customization.
-

TABLE 2-1. Configuring Pop-up Notifications for Blocked Files

SETTING	DEFAULT	WHERE TO ACCESS THE SETTING	
		BEFORE AGENT DEPLOYMENT	AFTER AGENT DEPLOYMENT
Enable the notification	Disabled	Customize the <code>BlockNotification</code> section of the agent <code>Setup.ini</code> file.	Use agent Command Line Interface to issue a <code>blockedfilenotification</code> command.
Request for administrator password when closing the notification	Enabled (if the notification feature is enabled)		Not supported
Display event details (file name, file path, and event time)			Not supported
Customize the notification title and message	<ul style="list-style-type: none"> Title: Application Blocked Message: A program has been blocked by Trend Micro Safe Lock. Please contact your help desk or administrator. 		Not supported

About the Agent Console

The agent console provides easy access to commonly used features in Trend Micro Safe Lock.

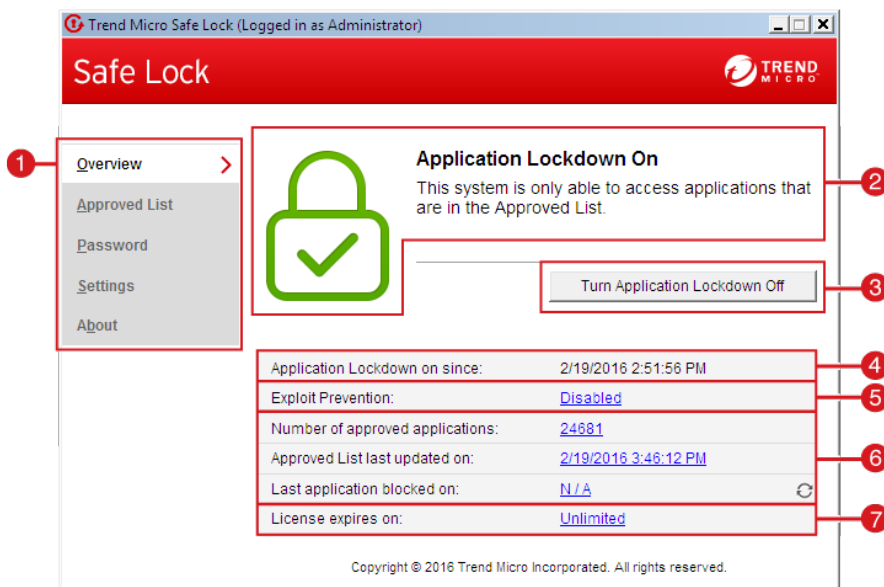



FIGURE 2-1. The Safe Lock console

The following table describes the features available on the console:

TABLE 2-2. Console Feature Descriptions

#	ITEM	DESCRIPTION
1	Overview	Display the software status
	Approved List	Display applications allowed to run and let users manage the list
	Password	Change the Safe Lock administrator or Restricted User passwords (only available to administrators)
	Settings	Enable or disable vulnerability protection settings and export or import the system configuration
	About	Display the product and component version numbers

#	ITEM	DESCRIPTION
2	Status information	The current status of the software
3	Turn Application Lockdown On	Lock down the system, blocking applications not on the Approved List from running
	Turn Application Lockdown Off	Release the system from lock down, allowing applications not on the Approved List to run <div style="border: 1px solid black; padding: 5px;">  Note After disabling Lockdown mode, Safe Lock switches to a “monitor” mode. Safe Lock does not block any applications from running, but logs when applications that are not in the Approved List run. You can use these logs to assess if the Approved List contains all the applications required on the endpoint. </div>
4	Application Lockdown on since	The date and time that Application Lockdown was last turned on
	Application Lockdown off since	The date and time that Application Lockdown was last turned off
5	Exploit Prevention	Enabled: All Exploit Prevention features are enabled Click the status to open the settings screen.
		Enabled (Partly): Some Exploit Prevention features are enabled Click the status to open the settings screen.
		Disabled: No Exploit Prevention features are enabled Click the status to open the settings screen.
6	Approved List status	Click the number of Approved List items or last updated date to open the Approved List. Click the last application blocked date to open the Blocked Application Event Log.

#	ITEM	DESCRIPTION
7	License expires on	The time and date that the software expires Click the date to provide a new Activation Code.

Viewing Safe Lock Statuses





You can view your Safe Lock statuses as indicated by the system tray icons.





Note

System Tray icons display if they were enabled during installation. To enable this feature after agent installation, use the **SLCmd.exe** program from the Intelligent Manager to remotely enable the feature.

TABLE 2-3. Status Icon Descriptions

CONSOLE ICON	SYSTEM TRAY ICON	STATUS	DESCRIPTION
		Locked	The Approved List is being enforced. Unauthorized applications cannot be run.
		Unlocked	The Approved List is not being enforced. Unauthorized applications can be run.

CONSOLE ICON	SYSTEM TRAY ICON	STATUS	DESCRIPTION
N/A		Expired	The Safe Lock license has expired, and the system cannot be locked. Update the Activation Code by clicking on the expiration date.
N/A		Blocked	The Safe Lock has blocked and prevented an unapproved application not from running or making changes to the managed endpoint.

About the Approved List

Use the Approved List to display the files that Safe Lock allows to run or make changes to the endpoint.

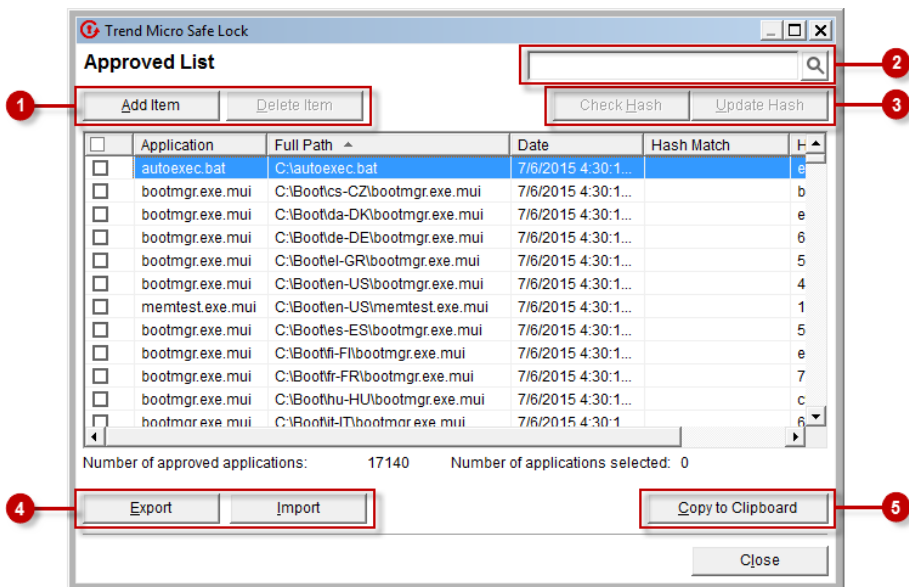


FIGURE 2-2. The Safe Lock Approved List

The following table describes the features available on the **Approved List**.

TABLE 2-4. Approved List Item Descriptions




#	ITEM	DESCRIPTION
1	Add Item/Delete Item	Adds or removes selected items to or from the Approved List.
2	Search bar	Searches the Application and File Path columns.
3	Check Hash/Update Hash	Checks or updates the hash values for applications in the Approved List.
4	Export/Import	Exports or imports the Approved List using a SQL database (.db) file.
5	Copy to Clipboard	Copies the Approved List to the clipboard in the comma separated values (CSV) format for easy review or reporting.

About Hashes

Safe Lock calculates a unique hash value for each file in the Approved List. This value can be used to detect any changes made to a file, since any change results in a different hash value. Comparing current hash values to previous values can help detect file changes.

The following table describes the hash check status icons.

TABLE 2-5. Hash Check Status Icons

ICON	DESCRIPTION
	The calculated hash value matches the stored value.
	The calculated hash value does not match the stored value.
	There was an error calculating the hash value.

Moving or overwriting files manually (without using the Trusted Updater) can result in the hash values not matching, but the mismatch could result from other applications (including malware) altering or overwriting existing files. If unsure why a hash value mismatch has occurred, scan the endpoint for threats with Trend Micro Portable Security.

Checking or Updating Hashes

Checking the hash value of files in the Approved List can help verify the integrity of files currently permitted to run.

Procedure

1. Open the Trend Micro Safe Lock console using the desktop icon (if available) or the **Start** menu by clicking **All Programs > Trend Micro Safe Lock**.
2. Provide the password and click **Login**.
3. Click the **Approved List** menu item to open the list.

To check the file hash values:

- a. Select the files to check. To check all files, select the check box at the top of the Approved List.
- b. Click **Check Hash**.

To update the file hash values:

- a. Select the files to update.
- b. Click **Update Hash**.



Important

If unsure why a hash value mismatch has occurred, scan the endpoint for threats.

Configuring the Approved List

After setting up the Approved List, users can add new programs by clicking **Add Item**, which displays the options in the following table.

TABLE 2-6. Methods for Adding Applications to the Approved List

OPTION	WHEN TO USE
Manually browse and select files	<p>Choose this option when the software already exists on the endpoint and is up-to-date. Adding a file grants permission to run the file, but does not alter the file or the system.</p> <p>For example, if Windows Media Player (<code>wmplayer.exe</code>) is not in the Approved List after initial setup, users can add it to the list using the console.</p>

OPTION	WHEN TO USE
Automatically add files created or modified by the selected application installer (Trusted Updater)	<p>Choose this option when you need to update or install new applications to your managed endpoint without having to unlock Trend Micro Safe Lock. Trend Micro Safe Lock will add any new or modified files to the Approved List.</p> <p>For example, if Mozilla Firefox needs to be installed or updated, select this option to allow the installation or update, and also add any files created or modified in the process to the Approved List.</p>

Adding or Removing Files

Procedure

1. Open the Trend Micro Safe Lock console using the desktop icon (if available) or the **Start** menu by clicking **All Programs > Trend Micro Safe Lock**.
2. Provide the password and click **Login**.
3. Click the **Approved List** menu item to open the list.

To add an item:

- a. Click **Add Item**, select **Manually browse and select files**, and click **Next**.
- b. In the window that opens, choose **Specific applications**, **All applications in selected folders**, or **All applications in a specified path** from the drop-down list.

A selection window appears.

- c. Select the desired application or folder to add, and click **Open** or **OK**.
- d. Click **OK**. Confirm the items to be added, and click **Approve**.
- e. After adding the desired items to the Approved List, click **Close**.

To remove an item:

- a. Search the Approved List for the application to remove.

- b. Select the check box next to the file name to be removed, and click **Delete Item**.
 - c. When asked to remove the item, click **OK**.
 - d. Click **OK** again to close the confirmation window.
-

Updating or Installing Using the Trusted Updater

Trend Micro Safe Lock automatically adds applications to the Approved List after the Trusted Updater adds or modifies the program files.

Procedure

1. Open the Trend Micro Safe Lock console using the desktop icon (if available) or the **Start** menu by clicking **All Programs > Trend Micro Safe Lock**.
 2. Provide the password and click **Login**.
 3. Click the **Approved List** menu item to open the list.
 4. To install or update an application, select the installer that the Trusted Updater should temporarily allow to run:
 - a. Click **Add Item**, select **Automatically add files created or modified by the selected application installer**, and click **Next**.
 - b. In the window that opens, choose **Specific installers**, **All installers in folders and subfolders**, or **All installers in a folder** from the drop-down list.
 - c. Select the desired installation package or folder to add, and click **Open**.
-



Note

Only existing EXE, MSI, BAT, and CMD files can be added to the Trusted Updater.

- d. Check that the correct items appear on the list, and click **Start**.
The **Safe Lock Trusted Updater** window displays.

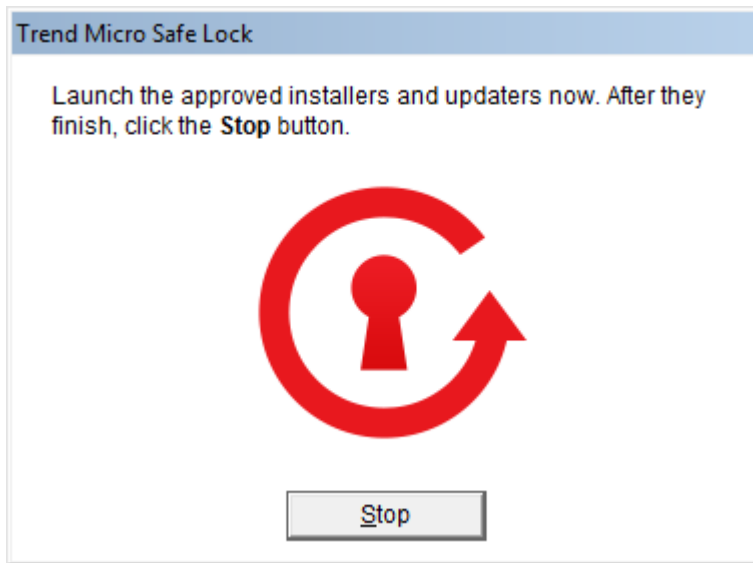


FIGURE 2-3. The Safe Lock Trusted Updater

5. Install or update the program as usual. When finished, click **Stop** on the Trusted Updater.
6. Check that the correct items appear on the Approved List, and click **Approve**, and then click **Close**.

Exporting or Importing the Approved List

Users can export or import the as a database (.db) file for reuse in mass deployment situations. **Copy to Clipboard** creates a CSV version of the list on the Windows clipboard.



WARNING!

The operating system files used by the exporting and importing endpoints must match exactly. Any difference between the operating system files on the endpoints can lead to operating system malfunctions or system lock-out after importing.

Procedure

1. Open the Trend Micro Safe Lock console using the desktop icon (if available) or the **Start** menu by clicking **All Programs > Trend Micro Safe Lock**.
2. Provide the password and click **Login**.
3. Click the **Approved List** menu item to open the list.

To export the Approved List:

- a. Click **Export**, and choose where to save the file.
- b. Provide a filename, and click **Save**.

To import an Approved List:

- a. Click **Import**, and locate the database file.
 - b. Select the file, and click **Open**.
-

Account Types

Trend Micro Safe Lock provides role-based administration, allowing administrators to grant users access to certain features on the main console. Through the configuration file, Safe Lock administrators can specify the features available to the Restricted Users account.

TABLE 2-7. Safe Lock Accounts

ACCOUNT	DETAILS
Administrator	<ul style="list-style-type: none"> • Default account • Full access to Safe Lock functions • Can use both the console and command line interface (CLI)

ACCOUNT	DETAILS
Restricted User	<ul style="list-style-type: none"> • Secondary maintenance account • Limited access to Safe Lock functions • Can only use the console

To enable the Restricted User account, see *Configuring Passwords on page 2-18*. To sign in with a specific account, specify the password for that account.

Configuring Passwords

While the Safe Lock administrator and Restricted User passwords can be changed from the console, only the administrator can change passwords. To log on the console as the administrator account, provide the administrator password when launching the console.



Important

The Safe Lock administrator and Restricted User passwords cannot be the same.

Procedure

1. Open the Trend Micro Safe Lock console using the desktop icon (if available) or the **Start** menu by clicking **All Programs > Trend Micro Safe Lock**.
2. Provide the Safe Lock administrator password and click **Login**.
3. Click the **Password** menu item to display the administrator password page.

To change the Safe Lock administrator password:

- a. Provide the current password, specify and confirm the new password, and click **Save**.



WARNING!

The only way to recover after losing the Safe Lock administrator password is by reinstalling the operating system.

To create a Restricted User password:

- a. Click **Restricted User** at the top of the console.
- b. Select the **Use Restricted User** check box.
- c. Specify and confirm the password, and click **Save**.

To change an existing Restricted User password:

- a. Specify and confirm the new password, and click **Save**.

About Feature Settings

Safe Lock offers the following protection features.

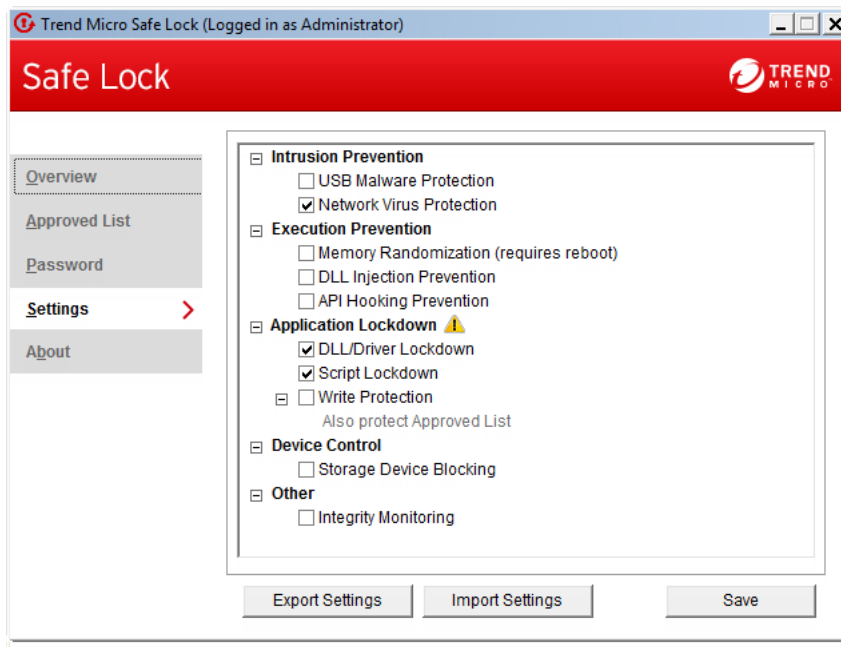



FIGURE 2-4. Safe Lock settings screen

TABLE 2-8. Intrusion Prevention

SETTING	DESCRIPTION
USB Malware Protection	<p>USB Malware Protection prevents automated threats on USB or remote drives from infecting the endpoint. Just viewing the contents of the drive may be enough to pass along an infection.</p> <p>Enable this feature to prevent files on USB devices from automatically infecting the endpoint.</p>
Network Virus Protection	<p>Network Virus Protection scans incoming and outgoing network traffic, blocking threats from infected computers or other devices on the network.</p> <p>Enable this feature to prevent threats on the network from infecting the endpoint.</p>

TABLE 2-9. Execution Prevention

SETTING	DESCRIPTION
Memory Randomization	<p>Address Space Layout Randomization helps prevent shellcode injection by randomly assigning memory locations for important functions, forcing an attacker to guess the memory location of specific processes.</p> <p>Enable this feature on older operating systems such as Windows XP or Windows Server 2003, which may lack or offer limited Address Space Layout Randomization (ASLR) support.</p> <hr/> <p> Note The endpoint must be restarted to enable or disable Memory Randomization.</p> <hr/>
DLL Injection Prevention	<p>DLL Injection Prevention detects and blocks API call behaviors used by malicious software. Blocking these threats helps prevent malicious processes from running.</p> <p>Never disable this feature except in troubleshooting situations since it protects the system from a wide variety of serious threats.</p>

SETTING	DESCRIPTION
API Hooking Prevention	<p>API Hooking Prevention detects and blocks malicious software that tries to intercept and alter messages used in critical processes within the operating system.</p> <p>Never disable this feature except in troubleshooting situations since it protects the system from a wide variety of serious threats.</p>

TABLE 2-10. Application Lockdown



SETTING	DESCRIPTION	
DLL/Driver Lockdown	DLL/Driver Lockdown prevents unapproved DLLs or drivers from being loaded into the memory of protected endpoints.	 Important To enable DLL/Driver Lockdown, Script Lockdown, or Write Protection, make sure that Application Lockdown is also enabled on the managed endpoint.
Script Lockdown	Script Lockdown prevents unapproved script files from being run on protected endpoints.	
Write Protection	Write Protection prevents write access to objects (files, folders, and registry entries) in the Write Protection List and optionally prevents write access to files in the Approved List.	

TABLE 2-11. Device Control

SETTING	DESCRIPTION
Storage Device Blocking	Blocks storage devices, including USB drives, CD/DVD drives, floppy disks, and network drives from accessing the managed endpoint.

TABLE 2-12. Other

SETTING	DESCRIPTION
Integrity Monitoring	<p>Integrity Monitoring logs events related to changes for files, folders, and the registry on the managed endpoint.</p> <hr/> <p> Note To view Integrity Monitoring logs on the managed endpoint, go to Start > Control Panel > Administrative Tools and access Event Viewer.</p>

Enabling or Disabling Feature Settings



Note

By default, Trend Micro Safe Lock enables the **DLL/Driver Lockdown** and **Script Lockdown** features of the Exploit Prevention settings. If Network Virus Protection was not included in the initial installation, it cannot be selected. Reinstall Trend Micro Safe Lock if Network Virus Protection is not available.

Procedure

1. Open the Trend Micro Safe Lock console using the desktop icon (if available) or the **Start** menu by clicking **All Programs > Trend Micro Safe Lock**.
2. Provide the password and click **Login**.
3. Click the **Settings** menu item to configure Exploit Prevention settings.
4. Enable or disable the desired features.
5. Click **Save**.

Chapter 3

Using the Agent Command Line Interface (CLI)

This chapter describes how to configure and use Trend Micro Safe Lock using the command line interface (CLI).

Topics in this chapter include:

- *Using SLCmd at the Command Line Interface (CLI) on page 3-2*

Using SLCmd at the Command Line Interface (CLI)

Administrators can work with Trend Micro Safe Lock directly from the command line interface (CLI) using the **SLCmd.exe** program.

Procedure

1. Open a command prompt window with Windows administrator privileges.
2. Navigate to the Trend Micro Safe Lock installation folder using the **cd** command.

For example, type the following command to reach the default location:

```
cd /d "c:\Program Files\Trend Micro\Trend Micro Safe Lock\"
```

3. Type **SLCmd.exe**.
-

SLCmd Program and Console Function Comparison

The following table lists the Trend Micro Safe Lock features available in SLCmd program and the Safe Lock console program..

TABLE 3-1. SLCmd Program at the Command Line Interface (CLI) and Console Function Comparison

FUNCTION	SLCMD PROGRAM AT THE COMMAND LINE INTERFACE (CLI)	CONSOLE
Account Management	Yes	Yes
Approved List Management	Yes	Yes
Decrypt/Encrypt configuration file	Yes	No
Display the blocked log	Yes	Yes
Export/Import Approved List	Yes	Yes

FUNCTION	SLCMD PROGRAM AT THE COMMAND LINE INTERFACE (CLI)	CONSOLE
Export/Import configuration	Yes	Yes
Install	Yes	Yes
Windows Update Support	Yes	No
Application Lockdown	Yes	Yes
Write Protection	Yes	Yes
Write Protection Exceptions	Yes	No
Integrity Monitoring	Yes	Yes
Exception Paths	Yes	No
License Management	Yes	Yes
Administrator password	Yes	Yes
Turn on/off Application Lockdown	Yes	Yes
Enable/disable pop-up notifications for blocked files	Yes	No
Start/Stop Trusted Updater	Yes	Yes
Trusted Hash List	Yes	No
Start/Stop the service	Yes	No
Uninstall	No	No

Not all settings are available through the command line interface (CLI) or console. See [Working with the Agent Configuration File on page 4-2](#) for information about modifying the system configuration.

SLCmd Program Commands

The following tables list a summary commands available using the **SLCmd** program at the command line interface (CLI). To use the program, type **SLCmd** and the desired command. Type **SLCmd** and press ENTER to display the list of available commands.



Note

Only a Safe Lock administrator with Windows administrator privileges can use **SLCmd** at the command line interface (CLI). **SLCmd** will prompt for the administrator password before running certain commands.

The following is a full list of commands available using the **SLCmd** program.

General Commands

Perform general actions using the Command Line Interface.

The following table lists the available abbreviated forms of parameters.

TABLE 3-2. Abbreviations and Uses

PARAMETER	ABBREVIATION	USE
adminpassword	ap	Manage the Safe Lock administrator password
lock	lo	Manage Application Lockdown status
blockedlog	bl	Manage the applications blocked by Safe Lock
license	lc	Manage the Safe Lock license
settings	set	Manage the Safe Lock settings
service	srv	Manage the Safe Lock service

The following table lists the commands, parameters, and values available.

TABLE 3-3. General Commands

COMMAND	PARAMETER	VALUE	DESCRIPTION
help			<p>Display a list of Safe Lock commands</p> <p>For example, type:</p> <pre>SLCmd.exe help</pre>
activate		<activation_code>	<p>Activate the Safe Lock program using the specified Activation Code</p> <p>For example, type:</p> <pre>SLCmd.exe activate XX-XXXX-XXXXX-XXXXX-XXXXX-XXXXX</pre>
set	adminpassword	<new_password>	<p>Change the currently logged on administrator password to the newly specified password</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set adminpassword P@ssW0Rd</pre>
			<p>Prompt the currently logged on administrator to specify a new password</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set adminpassword</pre>
set	lock	enable	<p>Turn on Application Lockdown</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set lock enable</pre>

COMMAND	PARAMETER	VALUE	DESCRIPTION
		disable	Turn off Application Lockdown For example, type: <code>SILCmd.exe -p <admin_password> set lock disable</code>
			Display the current Safe Lock Application Lockdown status For example, type: <code>SILCmd.exe -p <admin_password> set lock</code>
set	blockedfilenotification	enable	Display a notification on the managed endpoint when Safe Lock blocks a file. For example, type: <code>SILCmd.exe -p <admin_password> set blockedfilenotification enable</code>
		Disable	Do not display any notification when Safe Lock blocks a file. For example, type: <code>SILCmd.exe -p <admin_password> set blockedfilenotification disable</code>
			Display the current notification setting For example, type: <code>SILCmd.exe -p <admin_password> set blockedfilenotification</code>

COMMAND	PARAMETER	VALUE	DESCRIPTION
show	blockedlog		<p>Display a list of applications blocked by Safe Lock</p> <p>For example, type:</p> <pre>SILCmd.exe -p <admin_password> show blockedlog</pre>
show	license		<p>Display the current Safe Lock license information</p> <p>For example, type:</p> <pre>SILCmd.exe show license</pre>
show	settings		<p>Display the current status of the vulnerability attack prevention features</p> <p>For example, type:</p> <pre>SILCmd.exe -p <admin_password> show settings</pre>
start	service		<p>Start the Safe Lock service</p> <p>For example, type:</p> <pre>SILCmd.exe start service</pre>
status			<p>Display the current status of Application Lockdown and the auto update function of the Approved List</p> <p>For example, type:</p> <pre>SILCmd.exe -p <admin_password> status</pre>
stop	service		<p>Stop the Safe Lock service</p> <p>For example, type:</p>

COMMAND	PARAMETER	VALUE	DESCRIPTION
			SLCmd.exe -p <admin_password> stop service
version			Display the current versions of Safe Lock components For example, type: SLCmd.exe -p <admin_password> version

Central Management Commands

Configure central management features using the Command Line Interface by typing your command in the following format:

SLCmd.exe -p <admin_password> <command> <parameter> <value>

The following table lists the available abbreviated forms of parameters.


TABLE 3-4. Abbreviations and Uses

PARAMETER	ABBREVIATION	USE
managedmodeconfiguration	mmc	Manage the configuration file
servercertification	sc	Manage server certificate files
managedmode	mm	Manage agent "Managed Mode"

The following table lists the commands, parameters, and values available.

TABLE 3-5. Central Management Commands

COMMAND	PARAMETER	VALUE	DESCRIPTION
decrypt	managedmodeconfiguration	<path_of_encrypted_file> <path_of_decrypted_output_file>	Decrypt the configuration file used by Managed Mode

COMMAND	PARAMETER	VALUE	DESCRIPTION
encrypt	managedmodeconfiguration	<path_of_file> <path_of_encrypted_output_file>	Encrypt the configuration file used by Managed Mode
export	managedmodeconfiguration	<path_of_encrypted_output>	Export the encrypted configuration file used by Managed Mode
	servercertification	<path_of_certification_file>	Export the encrypted Safe Lock Intelligent Manager SSL communication certificate file
import	managedmodeconfiguration	<path_of_encrypted_input>	Import the encrypted configuration file used by Managed Mode
	servercertification	<path_of_certification_file>	Import the encrypted Safe Lock Intelligent Manager SSL communication certificate file
set	managedmode	enable [-cfg <path_of_encrypted_file>] [-sc <path_of_certification_file>]	<p>Enable Managed Mode</p> <hr/> <p> Note Using the optional <code>-cfg</code> value specifies the path of the configuration file.</p> <p>Using the optional <code>-sc</code> value specifies the path of the certificate file.</p> <hr/>
	managedmode		Display the current Managed Mode status

COMMAND	PARAMETER	VALUE	DESCRIPTION
show	managedmodeconfiguration		Display the configuration used by Managed Mode
test	managedmode		Connect a test Managed Mode session with Safe Lock Intelligent Manager

Optional Feature Commands

Configure optional security features using the Command Line Interface by typing your command in the following format:

SLCmd.exe -p <admin_password> <command> <parameter> <value>

The following table lists the available abbreviated forms of parameters.

TABLE 3-6. Abbreviations and Uses

PARAMETER	ABBREVIATION	USE
apihookingprevention	api	Manage API Hooking Prevention
customaction	ca	Manage actions taken when Safe Lock blocks specific types of events
dlldriverlockdown	dd	Manage DLL/Driver Lockdown
dllinjectionprevention	dll	Manage DLL Injection Prevention
exceptionpath	ep	Manage exceptions to Application Lockdown
integritymonitoring	in	Manage Integrity Monitoring
memoryrandomization	mr	Manage Memory Randomization

PARAMETER	ABBREVIATION	USE
networkvirusprotection	net	Manage Network Virus Protection
script	scr	Manage Script Lockdown
storagedeviceblocking	sto	Allows or blocks storage devices (CD/DVD drives, floppy disks, and network drives) from accessing the managed endpoint.
usbmalwareprotection	usb	Manage USB Malware Protection
writeprotection	wp	Manage Write Protection
writeprotection- includes-approvedlist	wpal	Manage Write Protection includes Approved List

The following table lists the commands, parameters, and values available.

TABLE 3-7. Optional Feature Commands

COMMAND	PARAMETER	VALUE	DESCRIPTION
set	usbmalwareprotection	enable	Enable USB Malware Protection For example, type: <code>SLCmd.exe -p <admin_password> set usbmalwareprotection enable</code>
		disable	Disable USB Malware Protection For example, type: <code>SLCmd.exe -p <admin_password> set</code>

COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p><code>usbmalwareprotection disable</code></p> <p>Display the current status of USB Malware Protection</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set usbmalwareprotection</pre>
set	networkvirusprotection	enable	<p>Enable Network Virus Protection</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set networkvirusprotection enable</pre>
		disable	<p>Disable Network Virus Protection</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set networkvirusprotection disable</pre>
			<p>Display the current status of Network Virus Protection</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set networkvirusprotection</pre>
set	memoryrandomization	enable	<p>Enable Memory Randomization</p> <p>For example, type:</p>


COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p>SLCmd.exe -p <admin_password> set memoryrandomization enable</p>
		disable	<p>Disable Memory Randomization</p> <p>For example, type:</p> <p>SLCmd.exe -p <admin_password> set memoryrandomization disable</p>
			<p>Display the current status of Memory Randomization</p> <p>For example, type:</p> <p>SLCmd.exe -p <admin_password> set memoryrandomization</p>
set	dllinjectionprevention	enable	<p>Enable DLL Injection Prevention</p> <p>For example, type:</p> <p>SLCmd.exe -p <admin_password> set dllinjectionprevention enable</p>
		disable	<p>Disable DLL Injection Prevention</p> <p>For example, type:</p> <p>SLCmd.exe -p <admin_password> set dllinjectionprevention disable</p>

COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p>Display the current status of DLL Injection Prevention</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set dllinjectionprevention</pre>
set	apihookingprevention	enable	<p>Enable API Hooking Prevention</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set apihookingprevention enable</pre>
		disable	<p>Disable API Hooking Prevention</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set apihookingprevention disable</pre>
			<p>Display the current status of API Hooking Prevention</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set apihookingprevention</pre>
set	dlldriverlockdown	enable	<p>Enable DLL/Driver Lockdown</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set</pre>

COMMAND	PARAMETER	VALUE	DESCRIPTION
			<code>dlldriverlockdown enable</code>
		<code>disable</code>	Disable DLL/Driver Lockdown For example, type: <pre>SLCmd.exe -p <admin_password> set dlldriverlockdown disable</pre>
			Display the current status of DLL/Driver Lockdown For example, type: <pre>SLCmd.exe -p <admin_password> set dlldriverlockdown</pre>
<code>set</code>	<code>script</code>	<code>enable</code>	Enable Script Lockdown For example, type: <pre>SLCmd.exe -p <admin_password> set script enable</pre>
		<code>disable</code>	Disable Script Lockdown For example, type: <pre>SLCmd.exe -p <admin_password> set script disable</pre>
			Display the current status of Script Lockdown For example, type: <pre>SLCmd.exe -p <admin_password> set script</pre>

COMMAND	PARAMETER	VALUE	DESCRIPTION
set	writeprotection	enable	Enable Write Protection For example, type: SLCmd.exe -p <admin_password> set writeprotection enable
		disable	Disable Write Protection For example, type: SLCmd.exe -p <admin_password> set writeprotection disable
			Display the current status of Write Protection For example, type: SLCmd.exe -p <admin_password> set writeprotection
set	writeprotection -includes- approvedlist	enable	Enable protection of the Approved List (in addition to the Write Protection List) when Write Protection is enabled For example, type: SLCmd.exe -p <admin_password> set writeprotection- includes-approvedlist enable
		disable	Disable protection of the Approved List (in addition to the Write Protection List) when Write Protection is enabled

COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set writeprotection- includes-approvedlist disable</pre>
			<p>Display the current status of Write Protection includes Approved List</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set writeprotection- includes-approvedlist</pre>
set	integritymonito ring	enable	<p>Enable Integrity Monitoring</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set integritymonitoring enable</pre>
		disable	<p>Disable Integrity Monitoring</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set integritymonitoring disable</pre>
			<p>Display the current status of Integrity Monitoring</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set integritymonitoring</pre>

COMMAND	PARAMETER	VALUE	DESCRIPTION
set	customaction	ignore	<p>Ignore blocked files or processes when Application Lockdown blocks any of the following events:</p> <ul style="list-style-type: none"> • Process launch • DLL loading • Script file access <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set customaction ignore</pre>
		quarantine	<p>Quarantine blocked files or processes when Application Lockdown blocks any of the following events:</p> <ul style="list-style-type: none"> • Process launch • DLL loading • Script file access <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set customaction quarantine</pre> <hr/> <p> Note Safe Lock does not support a custom action of “quarantine” on Windows XP or Windows 2003.</p> <hr/>
		ask	Ask what to do for blocked files or processes when Application Lockdown

COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p>blocks any of the following events:</p> <ul style="list-style-type: none"> • Process launch • DLL loading • Script file access <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set customaction ask</pre>
			Display the current setting for actions taken when Safe Lock blocks specific types of events
set	exceptionpath	enable	<p>Enable exceptions to Application Lockdown</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set customaction enable</pre>
		disable	<p>Disable exceptions to Application Lockdown</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> set customaction disable</pre>
			<p>Display current setting for using exceptions to Application Lockdown</p> <p>For example, type:</p>

COMMAND	PARAMETER	VALUE	DESCRIPTION
			<code>SLCmd.exe -p <admin_password> set customaction</code>

Restricted User Account Commands

Configure the Restricted User Account using the Command Line Interface by typing your command in the following format:

`SLCmd.exe -p <admin_password> <command> <parameter> <value>`

The following table lists the available abbreviated forms of parameters.

TABLE 3-8. Abbreviations and Uses

PARAMETER	ABBREVIATION	USE
user	us	Manage the Restricted User account
userpassword	up	Manage the Restricted User password

The following table lists the commands, parameters, and values available.

TABLE 3-9. Restricted User Account Commands

COMMAND	PARAMETER	VALUE	DESCRIPTION
<code>set</code>	user	enable	Enable the Restricted User account For example, type: <code>SLCmd.exe -p <admin_password> set user enable</code>
		disable	Disable the Restricted User account For example, type:

COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p><code>SLCmd.exe -p <admin_password> set user disable</code></p> <p>Display the the Restricted User account status</p> <p>For example, type:</p> <p><code>SLCmd.exe -p <admin_password> set user</code></p>
set	userpassword	<new_password>	<p>Change the Restricted User account password to the newly specified password</p> <p>For example, type:</p> <p><code>SLCmd.exe -p <admin_password> set userpassword P@ssW0rd</code></p>
			<p>Prompt the currently logged on administrator to specify a new Restricted User account password</p> <p>For example, type:</p> <p><code>SLCmd.exe -p <admin_password> set userpassword</code></p>

Script Commands

Deploy scripts using the Command Line Interface by typing your command in the following format:

SLCmd.exe -p <admin_password> **<command>** <parameter> <value>

The following table lists the available abbreviated forms of parameters.


TABLE 3-10. Abbreviations and Uses

PARAMETER	ABBREVIATION	USE
script	scr	Manage script commands

The following table lists the commands, parameters, and values available.

TABLE 3-11. Script Commands

COMMAND	PARAMETER	VALUE	DESCRIPTION
add	script	<extension> <interpreter1 > [interpreter2]	<p>Add the specified script extension and the interpreter(s) required to execute the script</p> <p>For example, to add the script extension <code>JSP</code> with the interpreter file <code>jscript.js</code>, type:</p> <pre>SLCmd.exe -p <admin_password> add script jsp C:\Scripts\jscript.js</pre>
remove	script	<extension> [interpreter1] [interpreter2]	<p>Remove the specified script extension and the interpreter(s) required to execute the script</p> <p>For example, to remove the script extension <code>JSP</code> with the interpreter file <code>jscript.js</code>, type:</p> <pre>SLCmd.exe -p <admin_password> remove script jsp C:\Scripts \jscript.js</pre>

COMMAND	PARAMETER	VALUE	DESCRIPTION
			 Note If you do not specify any interpreter, the command removes all interpreters related to the script extension. If you specify interpreters, the command only removes the interpreters specified from the script extension rule.
show	script		Display all script rules For example, type: <pre>SLCmd.exe -p <admin_password> show script</pre>

Approved List Commands

Configure the Approved List using the Command Line Interface by typing your command in the following format:

SLCmd.exe -p <admin_password> <command> <parameter> <value>


The following table lists the available abbreviated forms of parameters.


TABLE 3-12. Abbreviations and Uses


PARAMETER	ABBREVIATION	USE
approvedlist	al	Manage files in the Approved List
list	li	Manage the Approved List import and export functions

The following table lists the commands, parameters, and values available.

TABLE 3-13. Approved List Commands

COMMAND	PARAMETER	VALUE	DESCRIPTION
add	approvedlist	<code>[-r] <file_or_folder_path></code>	<p>Add the specified file to the Approved List</p> <p>For example, to add all Microsoft Office files to the Approved List, type:</p> <pre>SLCmd.exe -p <admin_password> add approvedlist -r "C:\Program Files\Microsoft Office"</pre> <hr/> <p> Note Using the optional <code>-r</code> value includes the specified folder and related subfolders.</p>
remove	approvedlist	<code><file_path></code>	<p>Remove the specified file from the Approved List</p> <p>For example, to remove <code>notepad.exe</code> from the Approved List, type:</p> <pre>SLCmd.exe -p <admin_password> remove approvedlist C:\Windows \notepad.exe</pre>
show	approvedlist		<p>Display the files in the Approved List</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> show approvedlist</pre>
check	approvedlist	<code>-f</code>	<p>Update the hash values in the Approved List and displays detailed results</p>

COMMAND	PARAMETER	VALUE	DESCRIPTION
			For example, type: <code>SLCmd.exe -p <admin_password> check approvedlist -f</code>
		-q	Update the hash values in the Approved List and displays summarized results For example, type: <code>SLCmd.exe -p <admin_password> check approvedlist -q</code>
		-v	Compare the hash values in the Approved List with the hash values calculated from the actual files and prompts the user after detecting mismatched values For example, type: <code>SLCmd.exe -p <admin_password> check approvedlist -v</code>
export	list	<output_file>	Export the Approved List to the file path and file name specified For example, type: <code>SLCmd.exe -p <admin_password> export list c:\approvedlist\ap.db</code>  Note The output file type must be DB format.
import	list	[-o] <input_file>	Import an Approved List from the file path and file name specified

COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> import list c:\approvedlist\ap.db</pre> <hr/> <p> Note</p> <p>The input file type must be DB format.</p> <p>Using the optional <code>-o</code> value overwrites the existing list.</p>

Application Lockdown Commands

Perform actions related to Application Lockdown using the Command Line Interface by typing your command in the following format:

```
SLCmd.exe -p <admin_password> <command> <parameter> <value>
```

The following table lists the available abbreviated forms of parameters.


TABLE 3-14. Abbreviations and Uses



PARAMETER	ABBREVIATION	USE
quarantinedfile	qf	Manage quarantined files
exceptionpath	ep	Manage exceptions to Application Lockdown

The following table lists the commands, parameters, and values available.

TABLE 3-15. Application Lockdown Commands

COMMAND	PARAMETER	VALUE	DESCRIPTION
show	quarantinedfile		Display a list of quarantined files

COMMAND	PARAMETER	VALUE	DESCRIPTION
restore	quarantinedfile	<id> [-a1] [-f]	Restore the specified file from quarantine Using the optional <code>-a1</code> value also adds the restored file to Approved List. Using the optional <code>-f</code> value forces the restore.
remove	quarantinedfile	<id>	Delete the specified file
show	exceptionpath		Display current exceptions to Application Lockdown
add	exceptionpath	-e <file_path>-t file	Add an exception for the specified file
		-e <folder_path>- t folder	Add an exception for the specified folder
		-e <folder_path>- t folderandsub	Add an exception for the specified folder and related subfolders
remove	exceptionpath	-e <file_path>-t file	Remove an exception for the specified file <hr/>  Note Specify the exact <file_path> originally specified in the corresponding add command. <hr/>
		-e <folder_path>- t folder	Remove an exception for the specified folder

COMMAND	PARAMETER	VALUE	DESCRIPTION
			 Note Specify the exact <folder_path> originally specified in the corresponding add command.
		-e <folder_path>- t folderandsub	Remove an exception for the specified folder and related subfolders  Note Specify the exact <folder_path> originally specified in the corresponding add command.

Write Protection Commands

Configure Write Protection List and Write Protection Exception List using the Command Line Interface by typing your command in the following format:

SLCmd.exe -p <admin_password> <command> <parameter> <value>

The following table lists the available abbreviated forms of parameters.

TABLE 3-16. Abbreviations and Uses

PARAMETER	ABBREVIATION	USE
writeprotection	wp	Manage the Write Protection feature
writeprotection-file	wpfi	Manage files in the Write Protection List


PARAMETER	ABBREVIATION	USE
writeprotection- folder	wpfo	Manage folders in the Write Protection List
writeprotection- regvalue	wprv	Manage registry values and associated registry keys in the Write Protection List
writeprotection- regkey	wprk	Manage registry keys in the Write Protection List
writeprotection- file-exception	wpfie	Manage files in the Write Protection Exception List
writeprotection- folder-exception	wpfoe	Manage folders in the Write Protection Exception List
writeprotection- regvalue-exception	wprve	Manage registry values and associated registry keys in the Write Protection Exception List
writeprotection- regkey-exception	wprke	Manage registry keys in the Write Protection Exception List


The following tables list the commands, parameters, and values available.


TABLE 3-17. Write Protection List “File” Commands


COMMAND	PARAMETER	VALUE	DESCRIPTION
show	writeprotection		Display the entire Write Protection List
	writeprotection- file		Display the files in the Write Protection List For example, type: <code>SLCmd.exe -p <admin_password> show writeprotection-file</code>


COMMAND	PARAMETER	VALUE	DESCRIPTION
	writeprotection-file-exception		<p>Display the files in the Write Protection Exception List</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> show writeprotection-file-exception</pre>
	writeprotection-folder		<p>Display the folders in the Write Protection List</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> show writeprotection-folder</pre>
	writeprotection-folder-exception		<p>Display the folders in the Write Protection Exception List</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> show writeprotection-folder-exception</pre>
add	writeprotection-file	<file_path>	<p>Add the specified file to the Write Protection List</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> add writeprotection-file archive.txt</pre>


COMMAND	PARAMETER	VALUE	DESCRIPTION
			 Note The <file_path> value pattern matches from the end of the path toward the beginning of the path. For example, specifying <code>userfile.txt</code> matches <code>c:\Windows\userfile.txt</code> and <code>c:\Temp\userfile.txt</code> .
	<code>writeprotection-file-exception</code>	<code>-t <file_path></code> <code>-p</code> <code><process_path></code> <code>></code>	Add the specified file and a specific process path for that file to the Write Protection Exception List For example, to add write access by a process named <code>notepad.exe</code> to a file named <code>userfile.txt</code> , type: <pre>SLCmd.exe -p <admin_password> add writeprotection-file-exception -t userfile.txt -p notepad.exe</pre>


COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p> Note</p> <p>The <code>-p</code> and <code>-t</code> values pattern match from the end of the path toward the beginning of the path. For example, specifying <code>userfile.txt</code> matches <code>c:\Windows\userfile.txt</code> and <code>c:\Temp\userfile.txt</code>.</p> <hr/> <p><code>-t <file_path></code> Add the specified file to the Write Protection Exception List</p> <p>For example, to add write access by any process to a file named <code>userfile.txt</code>, type:</p> <pre>SILCmd.exe -p <admin_password> add writeprotection-file- exception -t userfile.txt</pre>



COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p> Note</p> <p>The <code>-t</code> value pattern matches from the end of the path toward the beginning of the path. For example, specifying <code>userfile.txt</code> matches <code>c:\Windows\userfile.txt</code> and <code>c:\Temp\userfile.txt</code>.</p> <hr/> <p><code>-p</code> <code><process_path</code> <code>></code></p> <p>Add the specified process path to the Write Protection Exception List</p> <p>For example, to add write access by a process named <code>notepad.exe</code> to any files, type:</p> <pre>SLCmd.exe -p <admin_password> add writeprotection-file-exception -p notepad.exe</pre>


COMMAND	PARAMETER	VALUE	DESCRIPTION
			 Note The <code>-p</code> value pattern matches from the end of the process path toward the beginning of the path. For example, specifying <code>notepad.exe</code> matches <code>c:\Windows\notepad.exe</code> and <code>c:\Temp\notepad.exe</code> .
	writeprotection-folder	[-r] <folder_path>	Add the specified folder(s) to the Write Protection List For example, type: <pre>SLCmd.exe -p <admin_password> add writeprotection-folder -r userfolder</pre>



COMMAND	PARAMETER	VALUE	DESCRIPTION
			 Note Using the optional <code>-r</code> value includes the specified folder and related subfolders. The <code><folder_path></code> value pattern matches from the end of the path toward the beginning of the path. For example, specifying <code>userfile.txt</code> matches <code>c:\Windows\userfolder</code> and <code>c:\Temp\userfolder</code> .
	<code>writeprotection- folder-exception</code>	<code>[-r] -t <folder_path> -p <process_path> ></code>	Add the specified folder and processes run from the specified path to the Write Protection Exception List For example, to add write access by a process named <code>notepad.exe</code> to a folder and related subfolders at <code>c:\Windows\System32\Temp</code> , type: <pre>SLCmd.exe -p <admin_password> add writeprotection- folder-exception -r -t c:\Windows \System32\Temp -p notepad.exe</pre>


COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p> Note</p> <p>Using the optional <code>-r</code> value includes the specified folder and related subfolders.</p> <p>The <code>-p</code> and <code>-t</code> values pattern match from the end of the path toward the beginning of the path. For example, specifying <code>userfile.txt</code> matches <code>c:\Windows\userfile.txt</code> and <code>c:\Temp\userfile.txt</code>.</p> <hr/> <p><code>[-r] -t</code> <code><folder_path></code></p> <p>Add the specified folder(s) to the Write Protection Exception List</p> <p>For example, to add write access by any process to a folder at <code>userfolder</code>, type:</p> <pre>SLCmd.exe -p <admin_password> add writeprotection- folder-exception -r -t userfolder</pre>


COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p> Note</p> <p>Using the optional <code>-r</code> value includes the specified folder and related subfolders.</p> <p>The <code>-t</code> value pattern matches from the last part of the folder path toward the beginning of the path. For example, specifying <code>userfolder</code> matches <code>c:\Windows\userfolder</code> and <code>c:\Temp\userfolder</code>.</p> <hr/> <p><code>-p</code> <code><process_path</code> <code>></code></p> <p>Add processes run from the specified paths to the Write Protection Exception List</p> <p>For example, to add write access by a process named <code>notepad.exe</code> to any folder, type:</p> <pre>SLCmd.exe -p <admin_password> add writeprotection- folder-exception -p c: \Windows\notepad.exe</pre>


COMMAND	PARAMETER	VALUE	DESCRIPTION
			 Note The <code>-p</code> value pattern matches from the end of the process path toward the beginning of the path. For example, specifying <code>notepad.exe</code> matches <code>c:\Windows\notepad.exe</code> and <code>c:\Temp\notepad.exe</code> .
remove	writeprotection-file	<file_path>	Remove the specified file from the Write Protection List For example, type: <pre>SLCmd.exe -p <admin_password> remove writeprotection-file archive.txt</pre> <hr/>  Note Specify the exact <file_path> originally specified in the corresponding add command.
	writeprotection-file-exception	-t <file_path> -p <process_path>	Remove the specified file and process path from the Write Protection Exception List For example, type:

COMMAND	PARAMETER	VALUE	DESCRIPTION
			<pre>SICmd.exe -p <admin_password> remove writeprotection-file- exception -t userfile.txt -p notepad.exe</pre> <hr/> <p> Note Specify the exact <file_path> and <process_path> originally specified in the corresponding add command.</p> <hr/>
		-t <file_path>	<p>Remove the specified file from the Write Protection Exception List</p> <p>For example, type:</p> <pre>SICmd.exe -p <admin_password> remove writeprotection-file- exception -t userfile.txt</pre>

COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p data-bbox="817 256 862 295"> Note</p> <p data-bbox="876 295 1092 592">The <code>-t</code> value pattern matches from the end of the path toward the beginning of the path. For example, specifying <code>userfile.txt</code> matches <code>c:\Windows\userfile.txt</code> and <code>c:\Temp\userfile.txt</code>.</p> <hr/> <p data-bbox="638 636 790 701"><code>-p</code> <code><process_path</code> <code>></code></p> <p data-bbox="813 630 1092 706">Remove the specified process path from the Write Protection Exception List</p> <p data-bbox="813 727 1001 750">For example, type:</p> <pre data-bbox="813 776 1072 938">SLCmd.exe -p <admin_password> remove writeprotection-file- exception -p notepad.exe</pre> <hr/> <p data-bbox="817 987 862 1026"> Note</p> <p data-bbox="876 1026 1092 1351">The <code>-p</code> value pattern matches from the end of the process path toward the beginning of the path. For example, specifying <code>notepad.exe</code> matches <code>c:\Windows\notepad.exe</code> and <code>c:\Temp\notepad.exe</code>.</p>

COMMAND	PARAMETER	VALUE	DESCRIPTION
	writeprotection- folder	<code>[-r] <folder_path></code>	<p>Remove the specified folder(s) from the Write Protection List</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> remove writeprotection-folder -r c:\Windows</pre> <hr/> <p> Note</p> <p>Using the optional <code>-r</code> value includes the specified folder and related subfolders.</p> <p>Specify the exact <code><folder_path></code> and <code>-r</code> value originally specified in the corresponding add command.</p>
	writeprotection- folder-exception	<code>[-r] -t <folder_path> -p <process_path> ></code>	<p>Remove the specified folder and process path from the Write Protection Exception List</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> remove writeprotection- folder-exception -r -t c:\Windows \System32\Temp -p c: \Windows\notepad.exe</pre>

COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p> Note</p> <p>Using the optional <code>-r</code> value includes the specified folder and related subfolders.</p> <p>Specify the exact <code><folder_path></code>, <code><process_path></code>, and <code>-r</code> value originally specified in the corresponding add command.</p> <hr/> <p><code>[-r] -t</code> <code><folder_path></code></p> <p>Remove the specified folder(s) from the Write Protection Exception List</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> remove writeprotection- folder-exception -r -t userfolder</pre>

COMMAND	PARAMETER	VALUE	DESCRIPTION
			 Note Using the optional <code>-r</code> value includes the specified folder and related subfolders. The <code>-t</code> value pattern matches from the last part of the folder path toward the beginning of the path. For example, specifying <code>userfolder</code> matches <code>c:\Windows\userfolder</code> and <code>c:\Temp\userfolder</code> .
		<code>-p</code> <code><process_path</code> <code>></code>	Remove the specified process path from the Write Protection Exception List For example, type: <pre> SLCmd.exe -p <admin_password> remove writeprotection- folder-exception -p c: \Windows\System32 </pre>








COMMAND	PARAMETER	VALUE	DESCRIPTION
			 Note The <code>-p</code> value pattern matches from the end of the process path toward the beginning of the path. For example, specifying <code>notepad.exe</code> matches <code>c:\Windows\notepad.exe</code> and <code>c:\Temp\notepad.exe</code> .



TABLE 3-18. Write Protection List “Registry” Commands



COMMAND	PARAMETER	VALUE	DESCRIPTION
show	<code>writeprotection</code>		Display the entire Write Protection List
	<code>writeprotection-regvalue</code>		Display the registry values in the Write Protection List
	<code>writeprotection-regvalue-exception</code>		Display the registry values in the Write Protection Exception List
	<code>writeprotection-regkey</code>		Display the registry keys in the Write Protection List
	<code>writeprotection-regkey-exception</code>		Display the registry keys in the Write Protection Exception List
add	<code>writeprotection-regvalue</code>	<code><path_of_registry_key></code> <code><registry_value></code>	Add the specified registry value and its related registry key to the Write Protection List For example, to add the registry value of “testvalue” in the “HKEY\test” registry key to the Write Protection List, type:



COMMAND	PARAMETER	VALUE	DESCRIPTION
			<pre>SIcmd.exe -p <admin_password> add writeprotection-regvalue HKEY\test testvalue</pre>
	writeprotection- regvalue- exception	-t <path_of _registry _key> <registry _value> -p <process _path>	Add the specified registry value and its related registry key and a specific process path for that value to the Write Protection Exception List <hr/>  Note This command allows write access by the specified process to the specified registry values. The -p value pattern matches from the end of the path toward the beginning of the path.
		-t <path_of _registry _key> <registry _value>	Add the specified registry value and its related registry key to the Write Protection Exception List <hr/>  Note This command allows write access by any process to the specified registry value.
		-p <process _path>	Add the specified process to the Write Protection Exception List



COMMAND	PARAMETER	VALUE	DESCRIPTION
			 Note This command allows write access by the specified process to any registry values. The <code>-p</code> value pattern matches from the end of the process path toward the beginning of the path.
	<code>writeprotection-regkey</code>	<code>[-r] <path_of_registry_key></code>	Add the specified registry key to the Write Protection List  Note Using the optional <code>-r</code> value includes the specified registry key and related subkeys.
	<code>writeprotection-regkey-exception</code>	<code>[-r] -t <path_of_registry_key> -p <process_path></code>	Add the specified registry key and processes run from the specified path to the Write Protection Exception List

COMMAND	PARAMETER	VALUE	DESCRIPTION
			 Note This command allows write access by the specified process to the specified registry keys. Using the optional <code>-r</code> value includes the specified registry key and related subkeys. The <code>-p</code> value pattern matches from the end of the process path toward the beginning of the path.
		<code>[-r] -t <path_of _registry _key></code>	Add the specified registry key to the Write Protection Exception List <hr/>  Note This command allows write access by any process to the specified registry keys. Using the optional <code>-r</code> value includes the specified registry key and related subkeys.
		<code>-p <process _path></code>	Add processes run from the specified paths to the Write Protection Exception List

COMMAND	PARAMETER	VALUE	DESCRIPTION
			 Note This command allows write access by the specified process to any registry keys. The <code>-p</code> value pattern matches from the end of the process path toward the beginning of the path.
remove	<code>writeprotection-regvalue</code>	<code><path_of_registry_key></code> <code><registry_value></code>	Remove the specified registry value from the Write Protection List <hr/>  Note Specify the exact <code><path_of_registry_key></code> and <code><registry_value></code> originally specified in the corresponding add command.
	<code>writeprotection-regvalue-exception</code>	<code>-t</code> <code><path_of_registry_key></code> <code><registry_value></code> <code>-p</code> <code><process_path></code>	Remove the specified registry value and process path from the Write Protection Exception List

COMMAND	PARAMETER	VALUE	DESCRIPTION
			 Note Specify the exact <path_of_registry_key>, <registry_value>, and <process_path> originally specified in the corresponding add command. The -p value pattern matches from the end of the path toward the beginning of the path.
		-t <path_of_registry_key> <registry_value>	Remove the specified registry value from the Write Protection Exception List
		-p <process_path>	Remove the specified process path from the Write Protection Exception List  Note The -p value pattern matches from the end of the path toward the beginning of the path.
writeprotection-regkey		[-r] <path_of_registry_key>	Remove the specified registry key from the Write Protection List

COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p> Note</p> <p>Specify the exact <code><path_of_registry_key></code> and <code>-r</code> value originally specified in the corresponding add command.</p> <p>Using the optional <code>-r</code> value includes the specified registry key and related subkeys.</p>
	writeprotection-regkey-exception	<pre>[-r] -t <path_of_registry_key> -p <process_path></pre>	<p>Remove the specified registry key and process path from the Write Protection Exception List</p> <hr/> <p> Note</p> <p>Specify the exact <code><path_of_registry_key></code>, <code><process_path></code>, and <code>-r</code> value originally specified in the corresponding add command.</p> <p>Using the optional <code>-r</code> value includes the specified registry key and related subkeys.</p> <p>The <code>-p</code> value pattern matches from the end of the path toward the beginning of the path.</p>
		<pre>[-r] -t <path_of_registry_key></pre>	<p>Remove the specified registry key from the Write Protection Exception List</p>

COMMAND	PARAMETER	VALUE	DESCRIPTION
			 Note Using the optional <code>-r</code> value includes the specified registry key and related subkeys.
		<code>-p</code> <code><process_path></code>	Remove the specified process path from the Write Protection Exception List  Note The <code>-p</code> value pattern matches from the end of the path toward the beginning of the path.

Trusted Certification Commands

Configure Trusted Certificates using the Command Line Interface by typing your command in the following format:

SICmd.exe `-p` `<admin_password>` **<command>** `<parameter>` `<value>`

The following table lists the available abbreviated forms of parameters.

TABLE 3-19. Abbreviations and Uses

PARAMETER	ABBREVIATION	USE
trustedcertification	tc	Manage Trusted Certifications

The following table lists the commands, parameters, and values available.

TABLE 3-20. Trusted Certificate Commands

COMMAND	PARAMETER	VALUE	DESCRIPTION
set	trustedcertification	enable	Enable using Trusted Certifications
		disable	Disable using Trusted Certifications
			Display current setting for using Trusted Certifications
show	trustedcertification	[-v]	Display the certificate files in the Trusted Certifications List Using the optional -v value displays detailed information.
add	trustedcertification	-c <file_path> [-l <label>] [-u]	Add the specified certificate file to the Trusted Certifications List Using the optional -l value specifies the unique label for this certificate file. Using the optional -u value treats the file signed by this certificate file as a Trusted Updater.
remove	trustedcertification	-l <label>	Remove a certificate file from the Trusted Certifications List by specifying its label

Trusted Hash List Commands

Configure trusted hash values using the Command Line Interface by typing your command in the following format:

```
SLCmd.exe -p <admin_password> <command> <parameter> <value>
```

The following table lists the available abbreviated forms of parameters.



TABLE 3-21. Abbreviations and Uses

PARAMETER	ABBREVIATION	USE
trustedhash	th	Manage trusted hash values (files) added by the Safe Lock administrator.

The following table lists the commands, parameters, and values available.

TABLE 3-22. Trusted Hash List Commands

COMMAND	PARAMETER	VALUE	DESCRIPTION
set	trustedhash	enable	Enable using Trusted Hash List
		disable	Disable using Trusted Hash List
			Display current setting for using Trusted Hash List
show	trustedhash		Display the hash values in the Trusted Hash List For example, type: <code>SLCmd.exe -p <admin_password> show trustedhash</code>
add	trustedhash	-v <hash> [-l <label>] [-u][-al][-t <file_path>] [[-n <note>]	Add the specified hash value to the Trusted Hash List For example, to add a trusted file with a hash value xxx to the Trusted Hash List, type: <code>SLCmd.exe -p <admin_password> add trustedhash -v xxx</code> Using the optional -l value specifies the unique label for this hash value. Using the optional -u value treats the file of the specified hash value as a Trusted Updater.

COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p> Note The <code>-u</code> value requires the Predefined Trusted Updater List enabled.</p> <hr/> <p>Using the optional <code>-al</code> value adds the file of the specified hash value to Approved List.</p> <p>Using the optional <code>-t</code> value specifies a file path to check for the hash value</p> <hr/> <p> Note The <code>-t</code> value pattern matches from the end of the path toward the beginning of the path. For example, specifying <code>userfile.txt</code> matches <code>c:\Windows\userfile.txt</code> and <code>c:\Temp\userfile.txt</code>.</p> <hr/> <p>Using the optional <code>-n</code> value adds a note for the file hash</p>
<code>remove</code>	<code>trustedhash</code>	<code>-l <label></code>	Remove a file from the Trusted Hash List by specifying its label
<code>remove</code>	<code>trustedhash</code>	<code>-a</code>	Remove all the hash values in the Trusted Hash List

Trusted Updater Commands

To execute installers or files not specified in agent Approved Lists, configure Trusted Updater by typing your command in the following format:

SLCmd.exe -p <admin_password> <command> <parameter> <value>


The following table lists the available abbreviated forms of parameters.


TABLE 3-23. Abbreviations and Uses

PARAMETER	ABBREVIATION	USE
trustedupdater	tu	Manage the Predefined Trusted Updater tool process

The following table lists the commands, parameters, and values available.

TABLE 3-24. Trusted Updater Commands

COMMAND	PARAMETER	VALUE	DESCRIPTION
start	trustedupdater	[-r] <path_of_installer>	<p>Start Trusted Updater to add installer files (EXE and MSI file types) to the specified folder of the Approved List.</p> <hr/> <p> Note Using the optional -r value includes the specified folder and related subfolders.</p> <hr/> <p>For example, to include all installation packages in the C:\Installers folder and all subfolders, type:</p> <pre>SLCmd.exe -p <admin_password> start trustedupdater -r C:\Installers</pre>
stop	trustedupdater	[-f]	Disable Trusted Updater to stop adding new or updated files to the Approved List.

COMMAND	PARAMETER	VALUE	DESCRIPTION
			 Note Using the optional <code>-f</code> value specifies that the Trusted Updater does not prompt the administrator before committing a file to the Approved List.
			For example, to stop the Trusted Updater and commit all identified installers (identified before receiving the stop command) to the Approved List after receiving a prompt, type: <pre>SLCmd.exe -p <admin_password> stop trustedupdater -f</pre>

Predefined Trusted Updater Commands



Important

The add command for adding files to the Predefined Trusted Updater List follows a different format than the general commands specified in the Predefined Trusted Updater Commands table. For details on adding files to the Predefined Trusted Updater List, see [Predefined Trusted Updater "Add" Command on page 3-61](#).

Configure Predefined Trusted Updaters using the Command Line Interface by typing your command in the following format:

```
SLCmd.exe -p <admin_password> <command> <parameter> <value>
```


The following table lists the available abbreviated forms of parameters.

TABLE 3-25. Abbreviations and Uses

PARAMETER	ABBREVIATION	USE
predefinedtrustedupdater	ptu	Manage files in the Predefined Trusted Updater Lists

The following table lists the commands, parameters, and values available.

TABLE 3-26. Predefined Trusted Updater Commands

COMMAND	PARAMETER	VALUE	DESCRIPTION
add	predefinedtrustedupdater	-e <folder_or_file_exception>	<p>Add the specified file or folder to the Predefined Trusted Updater Exception List</p> <hr/> <p> Important</p> <p>The <code>add</code> command for adding files to the Predefined Trusted Updater List follows a different format than the other commands specified in the this list. For details on adding files to the Predefined Trusted Updater List (not the Predefined Trusted Updater Exception List), see Predefined Trusted Updater "Add" Command on page 3-61.</p> <hr/> <p>For example, to add <code>notepad.exe</code> to the</p>

COMMAND	PARAMETER	VALUE	DESCRIPTION
			<p>Predefined Trusted Updater Exception List, type:</p> <pre>SLCmd.exe -p <admin_password> add predefinedtrustedupdater -e C:\Windows\notepad.exe</pre>
decrypt	predefinedtrustedupdater	<path_of_encrypted_file> <path_of_decrypted_output_file>	<p>Decrypt a file to the specified location</p> <p>For example, to decrypt C:\Notepad.xen to C:\Editors\notepad.exe, type:</p> <pre>SLCmd.exe -p <admin_password> decrypt predefinedtrustedupdater C:\Notepad.xen C:\Editors\notepad.exe</pre>
encrypt	predefinedtrustedupdater	<path_of_file> <path_of_encrypted_output_file>	<p>Encrypt a file to the specified location</p> <p>For example, to encrypt C:\notepad.exe to C:\Editors\notepad.xen, type:</p> <pre>SLCmd.exe -p <admin_password> encrypt predefinedtrustedupdater C:\Editors\notepad.exe C:\Notepad.xen</pre>

COMMAND	PARAMETER	VALUE	DESCRIPTION
export	predefinedtrustedupdater	<path_of_encrypted_output>	Export the Predefined Trusted Updater List to the specified encrypted file For example, type: <code>SLCmd.exe -p <admin_password> export predefinedtrustedupdater C:\Lists \ptu_list.xen</code>
import	predefinedtrustedupdater	<path_of_encrypted_input>	Import a Predefined Trusted Updater List from the specified encrypted file For example, type: <code>SLCmd.exe -p <admin_password> import predefinedtrustedupdater C:\Lists \ptu_list.xen</code>
remove	predefinedtrustedupdater	-l <label_name>	Remove the specified labeled rule from the Predefined Trusted Updater List For example, to remove the "Notepad" rule, type: <code>SLCmd.exe -p <admin_password> remove predefinedtrustedupdater -l Notepad</code>

COMMAND	PARAMETER	VALUE	DESCRIPTION
		-e <folder_or_file_exc eption>	Remove the specified exception from the Predefined Trusted Updater Exception List For example, to remove the <code>notepad.exe</code> exception, type: <code>SLCmd.exe -p <admin_password> remove predefinedtrustedup dater -e C:\Windows \notepad.exe</code>
set	predefinedtruste dupdater	enable	Enable the Predefined Trusted Updater List
		disable	Disable the Predefined Trusted Updater List
show	predefinedtruste dupdater		Display the files in the Predefined Trusted Updater List For example, type: <code>SLCmd.exe -p <admin_password> show predefinedtrustedup dater</code>
		-e	Display the files in the Predefined Trusted Updater Exception List For example, type: <code>SLCmd.exe -p <admin_password> show</code>

COMMAND	PARAMETER	VALUE	DESCRIPTION
			predefinedtrustedupdater -e

Predefined Trusted Updater "Add" Command

Add processes, files, or folders to the Predefined Trusted Updater List using the Command Line Interface by typing your command in the following format:

```
SICmd.exe -p <admin_password> add predefinedtrustedupdater -u
<folder_or_file> -t <type_of_object> [<optional_values>]
```

The following table lists the command, parameter, and base value.


TABLE 3-27. Predefined Trusted Updater "Add" Command



COMMAND	PARAMETER	VALUE	DESCRIPTION
add	predefinedtrustedupdater	<folder_or_file>	Add a specified file or folder to the Predefined Trusted Updater List For example, to add <code>notepad.exe</code> to the Predefined Trusted Updater List, type: SICmd.exe -p <admin_password> add predefinedtrustedupdater C:\Windows\notepad.exe

Append the following additional values at the end of the command:

TABLE 3-28. Predefined Trusted Updater "Add" Additional Values

VALUE	REQUIRED / OPTIONAL	DESCRIPTION	EXAMPLE
-u <folder_or_file>	Required	Add the specified file or folder to the Predefined Trusted Updater List	N/A

VALUE	REQUIRED / OPTIONAL	DESCRIPTION	EXAMPLE
			 Note This parameter requires the use of the -t <type_of_object> value.
-t <type_of_object>	Required	Specify the type of object to add to the Predefined Trusted Updater List located in -u <folder_or_file> Available objects types are as follows:	<pre>SLCmd.exe -p <admin_password> add predefinedtrust edupdater -u C: \Windows \notepad.exe -t process</pre>
process	Indicates only EXE file types		
file	Indicates only MSI and BAT file types		
folder	Indicates all EXE, MSI, and BAT files in the specified folder		
folderandsub	Indicates all EXE, MSI, and BAT files in the specified folder and related subfolders		
-p <parent_process>	Optional	Add the full file path to the specified parent process used to invoke the file(s) specified in -u <folder_or_file>	<pre>SLCmd.exe -p <admin_password> add predefinedtrust edupdater -u C: \Windows \notepad.exe -t</pre>

VALUE	REQUIRED / OPTIONAL	DESCRIPTION	EXAMPLE
			<pre>process -p C:\batch files\note.bat</pre>
-l <label_name>	Optional	Specify a label name for the file(s) specified in -u <folder_or_file>  Note When left blank, Safe Lock assigns an arbitrary label name.	<pre>SLCmd.exe -p <admin_password> > add predefinedtrust edupdater -u C:\Windows\notepad.exe -t process -l EDITOR</pre>
-al enable	Optional	Compare the hash values in the Approved List with the hash values calculated from the actual files  Note Enabled by default even when -al is not specified.	<pre>SLCmd.exe -p <admin_password> > add predefinedtrust edupdater -u C:\Windows\notepad.exe -t process -al enable</pre>
-al disable	Optional	Do not compare the hash values in the Approved List with the hash values calculated from the actual files	<pre>SLCmd.exe -p <admin_password> > add predefinedtrust edupdater -u C:\Windows\notepad.exe -t process -al disable</pre>

Windows Update Support

Configure Windows Update Support using the Command Line Interface by typing your command in the following format:

SLCmd.exe -p <admin_password> <command> <parameter> <value>

The following table lists the available abbreviated forms of parameters.

TABLE 3-29. Abbreviations and Uses

PARAMETER	ABBREVIATION	USE
windowsupdatesupport	wus	Allow Windows Update to run on the agent with the Application Lockdown on.

The following table lists the commands, parameters, and values available.

TABLE 3-30. Windows Update Support Commands

COMMAND	PARAMETER	VALUE	DESCRIPTION
set	windowsupdatesupport	enable	Enable Windows Update Support
		disable	Disable Windows Update Support
			Display current setting for Windows Update Support

Blocked File Notification Commands

Enable or disable notifications for file blocking using the Command Line Interface by typing your command in the following format:

SLCmd.exe -p <admin_password> <command> <parameter> <value>

The following table lists the available abbreviated forms of parameters.

TABLE 3-31. Abbreviations and Uses

PARAMETER	ABBREVIATION	USE
blockedfilenotification	bfn	Display notifications on the managed endpoint when Safe Lock blocks and prevents an application from running or making changes to the endpoint.

The following table lists the commands, parameters, and values available.

TABLE 3-32. Blocked File Notification Commands

COMMAND	PARAMETER	VALUE	DESCRIPTION
set	blockedfilenotification	enable	Enable pop-up notifications.
		disable	Disable pop-up notifications.
			Display the current setting.

Configuration File Commands

Perform actions on the configuration file using the Command Line Interface by typing your command in the following format:

SLCmd.exe -p <admin_password> <command> <parameter> <value>

The following table lists the available abbreviated forms of parameters.

TABLE 3-33. Abbreviations and Uses

PARAMETER	ABBREVIATION	USE
configuration	con	Manage the configuration file

The following table lists the commands, parameters, and values available.

TABLE 3-34. Configuration File Commands

COMMAND	PARAMETER	VALUE	DESCRIPTION
decrypt	configuration	<path_of_encrypted_file> <path_of_decrypted_output_file>	<p>Decrypts a configuration file to the specified location</p> <p>For example, to decrypt C:\config.xml to C:\config.xml, type:</p> <pre>SLCmd.exe -p <admin_password> decrypt configuration C:\config.xml</pre>
encrypt	configuration	<path_of_file> <path_of_encrypted_output_file>	<p>Encrypts a configuration file to the specified location</p> <p>For example, to encrypt C:\config.xml to C:\config.xml, type:</p> <pre>SLCmd.exe -p <admin_password> encrypt configuration C:\config.xml</pre>
export	configuration	<path_of_encrypted_output>	<p>Export the configuration file to the specified location</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> export configuration C:\config.xml</pre>
import	configuration	<path_of_encrypted_input>	<p>Import a configuration file from the specified location</p> <p>For example, type:</p> <pre>SLCmd.exe -p <admin_password> import</pre>

COMMAND	PARAMETER	VALUE	DESCRIPTION
			configuration C: \config.xen

Chapter 4

Working with the Agent Configuration File

This chapter describes how to configure Trend Micro Safe Lock using the configuration file.

Topics in this chapter include:

- *Working with the Agent Configuration File on page 4-2*

Working with the Agent Configuration File

The configuration file allows administrators to create and deploy a single configuration across multiple machines. See *Exporting or Importing a Configuration File on page 4-2* for more information.

Changing Advanced Settings

Some settings can only be changed through the configuration file using the command line interface (CLI). See *Using SLCmd at the Command Line Interface (CLI) on page 3-2* for more information.

Procedure

1. Export the configuration file.
2. Decrypt the configuration file.
3. Edit the configuration file with Windows Notepad or another text editor.



Important

Safe Lock only supports configuration files in the UTF-8 file format.



Tip

To update multiple agents with shared settings, you may choose to only import the modified settings.

4. Encrypt the edited configuration file.
 5. Import the edited configuration file.
-

Exporting or Importing a Configuration File

Trend Micro Safe Lock encrypts the configuration file before export. Users must decrypt the configuration file before modifying the contents.

Procedure

1. Open the Trend Micro Safe Lock console using the desktop icon (if available) or the **Start** menu by clicking **All Programs > Trend Micro Safe Lock**.
2. Provide the password and click **Login**.
3. Click the **Settings** menu item to access the **Export/Import Configuration** section.

To export the configuration file as a database (.xen) file:

- a. Click **Export**, and choose the location to save the file.
- b. Provide a filename, and click **Save**.

To import the configuration file as a database (.xen) file:

- a. Click **Import**, and locate the database file.
- b. Select the file, and click **Open**.

Trend Micro Safe Lock overwrites the existing configuration settings with the settings in the database file.

Configuration File Syntax

The configuration file uses the XML format to specify parameters used by Safe Lock.



Important

The configuration file only supports UTF-8 encoding.

Refer to the following example of the configuration file:

```
<?xml version="1.0" encoding="UTF-8"?>
<Configurations version="1.00.000"
  xmlns:xsi="http://www.w3.org/2001/
  XMLSchema-instance"
  xsi:noNamespaceSchemaLocation="WKConfig.xsd">
```

```
<Configuration>
  <AccountGroup>
    <Account
      ID="{24335D7C-1204-43d1-9CBB-332D688C85B6}"
      Enable="no">
      <Password/>
    </Account>
  </AccountGroup>
</UI>
  <SystemTaskTrayIcon Enable="yes"/>
</UI>
<Feature>
  <ApplicationLockDown LockDownMode="2">
    <WhiteList
      RecentHistoryUnapprovedFilesLimit="50"/>
    <ScriptLockdown Enable="yes">
      <Extension ID="bat">
        <Interpreter>cmd.exe</Interpreter>
      </Extension>
      <Extension ID="cmd">
        <Interpreter>cmd.exe</Interpreter>
      </Extension>
      <Extension ID="com">
        <Interpreter>ntvdm.exe</Interpreter>
      </Extension>
      <Extension ID="dll">
        <Interpreter>ntvdm.exe</Interpreter>
      </Extension>
      <Extension ID="drv">
        <Interpreter>ntvdm.exe</Interpreter>
      </Extension>
      <Extension ID="exe">
        <Interpreter>ntvdm.exe</Interpreter>
      </Extension>
      <Extension ID="js">
        <Interpreter>cscript.exe</Interpreter>
        <Interpreter>wscript.exe</Interpreter>
      </Extension>
      <Extension ID="msi">
        <Interpreter>msiexec.exe</Interpreter>
      </Extension>
      <Extension ID="pif">
```



```
        <Interpreter>ntvdm.exe</Interpreter>
    </Extension>
    <Extension ID="ps1">
        <Interpreter>powershell.exe
        </Interpreter>
    </Extension>
    <Extension ID="sys">
        <Interpreter>ntvdm.exe</Interpreter>
    </Extension>
    <Extension ID="vbe">
        <Interpreter>cscript.exe</Interpreter>
        <Interpreter>wscript.exe</Interpreter>
    </Extension>
    <Extension ID="vbs">
        <Interpreter>cscript.exe</Interpreter>
        <Interpreter>wscript.exe</Interpreter>
    </Extension>
</ScriptLockdown>
<TrustedUpdater>
    <PredefinedTrustedUpdater Enable="no">
        <RuleSet/>
    </PredefinedTrustedUpdater>
    <WindowsUpdateSupport Enable="yes"/>
</TrustedUpdater>
<DllDriverLockDown Enable="yes"/>
<ExceptionPath Enable="no">
    <ExceptionPathList/>
</ExceptionPath>
<TrustedCertification Enable="yes"/>
<TrustedHash Enable="no"/>
<WriteProtection Enable="yes" ActionMode="1"
ProtectApprovedList="yes"/>
    <CustomAction ActionMode="0"/>
</ApplicationLockDown>
<UsbMalwareProtection Enable="yes" ActionMode="1"/>
<DllInjectionPrevention Enable="yes"
ActionMode="1"/>
<ApiHookingPrevention Enable="yes" ActionMode="1"/>
<MemoryRandomization Enable="yes"/>
<NetworkVirusProtection Enable="yes"
ActionMode="1"/>
<IntegrityMonitoring Enable="yes"/>
```

```
<Log>
  <EventLog Enable="yes">
    <Level>
      <WarningLog Enable="yes" />
      <InformationLog Enable="yes" />
    </Level>
    <BlockedAccessLog Enable="yes"/>
    <ApprovedAccessLog Enable="yes">
      <TrustedUpdaterLog Enable="yes"/>
      <DllDriverLog Enable="yes"/>
      <ExceptionPathLog Enable="yes"/>
      <TrustedCertLog Enable="yes"/>
      <TrustedHashLog Enable="yes"/>
      <WriteProtectionLog Enable="yes"/>
    </ApprovedAccessLog>
    <SystemEventLog Enable="yes">
      <ExceptionPathLog Enable="yes"/>
      <WriteProtectionLog Enable="yes"/>
    </SystemEventLog>
    <ListLog Enable="yes"/>
    <UsbMalwareProtectionLog Enable="yes"/>
    <ExecutionPreventionLog Enable="yes"/>
    <NetworkVirusProtectionLog Enable="yes"/>
    <IntegrityMonitoringLog>
      <FileCreatedLog Enable="yes"/>
      <FileModifiedLog Enable="yes"/>
      <FileDeletedLog Enable="yes"/>
      <FileRenamedLog Enable="yes"/>
      <RegValueModifiedLog Enable="yes"/>
      <RegValueDeletedLog Enable="yes"/>
      <RegKeyCreatedLog Enable="yes"/>
      <RegKeyDeletedLog Enable="yes"/>
      <RegKeyRenamedLog Enable="yes"/>
    </IntegrityMonitoringLog>
  </EventLog>
  <DebugLog Enable="no"/>
</Log>
</Feature>
<ManagedMode Enable="yes">
  <Agent>
    <Port/>
    <SslAllowBeast>1</SslAllowBeast>
```

```
</Agent>
<Server>
  <HostName/>
  <FastPort/>
  <SlowPort/>
  <ApiKey/>
</Server>
<Message>
  <Register Trigger="1"/>
  <Unregister Trigger="1"/>
  <UpdateStatus Trigger="1"/>
  <UploadBlockedEvent Trigger="1"/>
  <CheckFileHash Trigger="1"/>
  <QuickScanFile Trigger="1"/>
</Message>
<MessageRandomization TotalGroupNum="1"
OwnGroupIndex="0"
  TimePeriod="0"/>
<Proxy Mode="0">
  <HostName/>
  <Port/>
  <UserName/>
  <Password/>
</Proxy>
</ManagedMode>
</Configuration>
<Permission>
  <AccountRef
  ID="{24335D7C-1204-43d1-9CBB-332D688C85B6}">
    <UIControl ID="DetailSetting" State="no"/>
    <UIControl ID="LockUnlock" State="yes"/>
    <UIControl ID="LaunchUpdater" State="yes"/>
    <UIControl ID="RecentHistoryUnapprovedFiles"
      State="yes"/>
    <UIControl ID="ImportExportList" State="yes"/>
    <UIControl ID="ListManagement" State="yes"/>
  </AccountRef>
</Permission>
</Configurations>
```

Configuration File Parameters

The configuration file contains sections that specify parameters used by Safe Lock.

TABLE 4-1. Configuration File Sections and Descriptions

SECTION	DESCRIPTION	ADDITIONAL INFORMATION	
Configuration	Container for the Configuration section		
	AccountGroup	Parameters to configure the Restricted User account	See AccountGroup Section on page 4-10 . See Account Types on page 2-17 .
	UI	Parameters to configure the display of the system tray icon	See UI Section on page 4-10 .
	Feature	Container for the Feature section	


SECTION		DESCRIPTION	ADDITIONAL INFORMATION
	ApplicationLockDown	Parameters to configure Safe Lock features and functions	See Feature Section on page 4-13 .
	UsbMalwareProtection		
	DllInjectionPrevention		
	ApiHookingPrevention		
	MemoryRandomization		
	NetworkVirusProtection		
	IntegrityMonitoring		
	StorageDeviceBlocking	A parameter to control storage device access to managed endpoints	
	Log	Parameters to configure individual log types	See Log Section on page 4-24 . See Agent Event Log Descriptions on page 7-4 .
	ManagedMode	Parameters to configure Centralized Management functions	See ManagedMode Section on page 4-28 .
Permission		Container for the Permission section	
	AccountRef	Parameters to configure the Safe Lock console controls available to the Restricted User account	See AccountRef Section on page 4-32 . See Account Types on page 2-17 .

AccountGroup Section

Parameters to configure the Restricted User account

See *Account Types on page 2-17*.

TABLE 4-2. Configuration File AccountGroup Section Parameters

PARAMETER	SETTING	VALUE	DESCRIPTION
Configuration			Container for the Configuration section
AccountGroup			Container for the AccountGroup section
Account	ID	<GUID>	Restricted User account GUID
	Enable	yes	Enable the Restricted User account
		no	Disable the Restricted User account
	Password	<Safe_Lock_password>	Password for the Restricted User account to access the Safe Lock console
			<hr/>  Note The Safe Lock administrator and Restricted User passwords cannot be the same. <hr/>

UI Section

Parameters to configure the display of the system tray icon

TABLE 4-3. Configuration File `UI` Section Parameters

PARAMETER	SETTING	VALUE	DESCRIPTION
Configuration			Container for the Configuration section

PARAMETER		SETTING	VALUE	DESCRIPTION
UI				Container for the UI section
	SystemTrayIcon	Enable	yes	Display the system tray icon and Windows notifications
			no	Hide the system tray icon and Windows notifications
	BlockNotifi cation	Enable	yes	Display a notification on the managed endpoint when a file not specified in the agent Approved List is blocked.
			no	Do not display any notifications on the managed endpoint when files not specified in the agent Approved List are blocked.
	Authenti cate		yes	Prompt for the administrator password when the user attempts to close the notification.
			no	Password is not required to close the notification.
	ShowDeta ils		yes	Show file path of the blocked file and the event time.
			no	Do not show event details.
	AlwaysOn Top		yes	Keep the notification on top of any other screen.
			no	Allow other screens to cover the notification.
	Title		<Title>	Specify the title for the notification.
	Message		<Messag e>	Specify the message for the notification.

Feature Section

Parameters to configure Safe Lock features and functions

See *About Feature Settings on page 2-19*.

TABLE 4-4. Configuration File `feature` Section Parameters

PARAMETER	SETTING	VALUE	DESCRIPTION
Configuration			Container for the Configuration section
Feature			Container for the Feature section
ApplicationLockDown	LockDown Mode	1	Turn on Application Lockdown
		2	Turn off Application Lockdown
WhiteList	RecentHistoryUnapprovedFilesLimit	0 - 65535	Maximum number of entries in the Blocked Files log
ScriptLockDown	Enable	yes	Enable Script Lockdown
		no	Disable Script Lockdown
Extension	ID	<file_extension>	File extension for Script Lockdown to block For example, specify a value of <code>MSI</code> to block <code>.msi</code> files.
		Interpreter	<file_name>

PARAMETER	SETTING	VALUE	DESCRIPTION
TrustedUpdater			Container for the TrustedUpdater section
PredefinedTrustedUpdater	Enable	yes	Enable Trusted Updater
		no	Disable Trusted Updater
RuleSet			Container for RuleSet conditions
Condition	ID	<unique_ruleset_name>	Unique name for the set of rules
ApprovedListCheck	Enable	yes	Enable hash checks for Trusted Updaters
		no	Disable hash checks for Trusted Updaters
ParentProcess	Path	<process_path>	Path of the parent process to add to the Trusted Updater List
Exception	Path	<process_path>	Path to exclude from the Trusted Updater List
Rule	Label	<unique_rule_name>	Unique name for this rule
Updater	Type	process	Use the specified EXE file
		file	Use the specified MSI or BAT file
		folder	Use the EXE, MSI or BAT files in the specified folder
		folderandsub	Use the EXE, MSI or BAT files in the specified folder and its subfolders

PARAMETER				SETTING	VALUE	DESCRIPTION	
				Path	<updater_path>	Updater path	
				ConditionRef	<condition_ID>	Condition ID to provide a more detailed rule for the updater	
			WindowsUpdateSupport	Enable	yes	Allow Windows Update to run on the managed endpoint when it is locked down.	
					no	Block Windows Update on the managed endpoint when it is locked down.	
			DLLDriverLockdown	Enable	yes	Enable DLL/Driver Lockdown	
					no	Disable DLL/Driver Lockdown	
			ExceptionPath	Enable	yes	Enable exception paths	
					no	Disable exception paths	
			ExceptionPathList			Container for the Exception List	
			ExceptionPath	Path	<exception_path>	Exception path	
					Type	file	Use only the specified file
					folder	Use the files in the specified folder	
					folderandsub	Use the files in the specified folder and its subfolders	
			TrustedCertification	Enable	yes	Enable using Trusted Certifications	

PARAMETER	SETTING	VALUE	DESCRIPTION
		no	Disable using Trusted Certifications
PredefinedTrustedCertification	Type	updater	File signed by this certificate is treated as a Trusted Updater
		lockdown	File signed by this certificate is not treated as a Trusted Updater
	Hash	<SHA-1_hash_value>	SHA1-hash value of this certificate
	Label	<label>	Description of this certificate
	Subject	<subject>	Subject of this certificate
	Issuer	<issuer>	Issuer of this certificate
	TrustedHash	Enable	yes
no			Disable using the Trusted Hash List
PredefinedTrustedHash	Type	updater	File matched by this hash value is treated as a Trusted Updater
		lockdown	File matched by this hash value is not treated as a Trusted Updater
	Hash	<SHA-1_hash_value>	SHA-1 hash value of this file
	Label	<label>	Description of this file

PARAMETER				SETTING	VALUE	DESCRIPTION	
				AddToApprovedList	yes	Add the file matched by this hash value to the Approved List when it is accessed for the first time	
					no	Do not add the file matched by this hash value to the Approved List	
				Path	<file_path>	File path	
				Note	<note>	Add a note for the file matched by this hash value	
	WriteProtection	Enable			yes	Enable Write Protection	
					no	Disable Write Protection	
		ActionMode				0	Allow actions such as edit, rename, and delete
						1	Block actions such as edit, rename, and delete
		ProtectApprovedList				yes	Enable protection of the Approved List (in addition to the Write Protection List) when Write Protection is enabled
						no	Disable protection of the Approved List (in addition to the Write Protection List) when Write Protection is enabled
List					Container for the Write Protection List		
	File		Path	<file_path>	File path		

PARAMETER				SETTING	VALUE	DESCRIPTION		
	Folder	Path		<folder_path>	Folder path			
			Includesubfolder	yes	Use the files in the specified folder and its subfolders			
				no	Use the files in the specified folder			
	RegistryKey	Key		<reg_key >	Registry key <reg_key> can be abbreviated or expanded as shown below: <ul style="list-style-type: none"> • HKEY_LOCAL_MACHINE\test HKLM\test • HKEY_CURRENT_CONFIG\test HKCC\test • HKEY_CLASSES_ROOT\test HKCR\test • HKEY_CURRENT_USER\test HKCU\test • HKEY_USERS\test HKU\test 			
						Includesubkey	yes	Include any subkeys
							no	Do not include any subkeys
						RegistryValue	Key	

PARAMETER				SETTING	VALUE	DESCRIPTION
						<p><reg_key> can be abbreviated or expanded as shown below:</p> <ul style="list-style-type: none"> HKEY_LOCAL_MACHINE\test HKLM\test HKEY_CURRENT_CONFIG\test HKCC\test HKEY_CLASSES_ROOT\test HKCR\test HKEY_CURRENT_USER\test HKCU\test HKEY_USERS\test HKU\test
				Name	<reg_value_name>	Registry value name
			ExceptionList			Container for the Write Protection Exception List
			Process	Path	<process_path>	Path of the process
			File	Path	<file_path>	File path
			Folder	Path	<folder_path>	Folder path
				IncludesSubfolder	yes	

PARAMETER				SETTING	VALUE	DESCRIPTION
					no	Use the files in the specified folder
			RegistryKey	Key	<reg_key >	<p>Registry key</p> <p><reg_key> can be abbreviated or expanded as shown below:</p> <ul style="list-style-type: none"> • HKEY_LOCAL_MACHINE\test HKLM\test • HKEY_CURRENT_CONFIG\test HKCC\test • HKEY_CLASSES_ROOT\test HKCR\test • HKEY_CURRENT_USER\test HKCU\test • HKEY_USERS\test HKU\test
				IncludesSubkey	yes	Include any subkeys
					no	Do not include any subkeys
			RegistryValue	Key	<reg_key >	<p>Registry key</p> <p><reg_key> can be abbreviated or expanded as shown below:</p> <ul style="list-style-type: none"> • HKEY_LOCAL_MACHINE\test HKLM\test

PARAMETER				SETTING	VALUE	DESCRIPTION
						<ul style="list-style-type: none"> • HKEY_CURRENT_CONFIG\test • HKCC\test • HKEY_CLASSES_ROOT\test • HKCR\test • HKEY_CURRENT_USER\test • HKCU\test • HKEY_USERS\test • HKU\test
				Name	<reg_value_name>	Registry value name
			CustomAction	ActionMode	0	Ignore blocked files or processes when Application Lockdown blocks any of the following events: <ul style="list-style-type: none"> • Process launch • DLL loading • Script file access
					1	Quarantine blocked files or processes when Application Lockdown blocks any of the following events: <ul style="list-style-type: none"> • Process launch • DLL loading • Script file access
					2	Ask what to do for blocked files or processes when Application Lockdown

PARAMETER	SETTING	VALUE	DESCRIPTION
			blocks any of the following events: <ul style="list-style-type: none"> • Process launch • DLL loading • Script file access
UsbMalwareProtection	Enable	yes	Enable USB Malware Protection
		no	Disable USB Malware Protection
	ActionMode	0	Allow action by detected malware
		1	Block action by detected malware
DllInjectionPrevention	Enable	yes	Enable DLL Injection Prevention
		no	Disable DLL Injection Prevention
	ActionMode	0	Allows DLL injections
		1	Blocks DLL injections
ApiHookingPrevention	Enable	yes	Enable API Hooking Prevention
		no	Disable API Hooking Prevention
	ActionMode	0	Allow API hooking
		1	Block API hooking
MemoryRandomization	Enable	yes	Enable Memory Randomization

PARAMETER	SETTING	VALUE	DESCRIPTION
		no	Disable Memory Randomization
NetworkVirusProtection	Enable	yes	Enable Network Virus Protection
		no	Disable Network Virus Protection
	ActionMode	0	Allow action by detected network viruses
		1	Block action by detected network viruses
IntegrityMonitoring	Enable	yes	Enable Integrity Monitoring
		no	Disable Integrity Monitoring
StorageDeviceBlocking	Enable	yes	Blocks access of storage devices (CD/DVD drives, floppy disks, and network drives) to managed endpoints
	Disable	no	Allows access of storage devices (CD/DVD drives, floppy disks, and network drives) to managed endpoints
	ActionMode	0	Allow actions such as edit, rename, and delete
		1	Block actions such as edit, rename, and delete
	Log		Container for configuring logs See Log Section on page 4-24 .

Log Section

Parameters to configure individual log types

See *Agent Event Log Descriptions* on page 7-4.

TABLE 4-5. Configuration File Log Section Parameters

PARAMETER		SETTING	VALUE	DESCRIPTION
Configuration				Container for the Configuration section
Feature				Container for the Feature section
Log				Container for configuring logs
EventLog		Enable	yes	Log the Safe Lock events specified in the following elements
			no	Do not log the Safe Lock events specified in the following elements
Level				Container for configuring log levels
WarningLog		Enable	yes	Log "Warning" level events related to Safe Lock
			no	Do not log "Warning" level events related to Safe Lock
InformationLog		Enable	yes	Log "Information" level events related to Safe Lock
			no	Do not log "Information" level events related to Safe Lock
BlockedAccessLog		Enable	yes	Log files blocked by Safe Lock
			no	Do not log files blocked by Safe Lock

PARAMETER		SETTING	VALUE	DESCRIPTION
	ApprovedAccessLog	Enable	yes	Log files approved by Safe Lock
			no	Do not log files approved by Safe Lock
	TrustedUpdaterLog	Enable	yes	Log Trusted Updater approved access
			no	Do not log Trusted Updater approved access
	DLLDriverLog	Enable	yes	Log DLL/Driver approved access
			no	Do not log DLL/Driver approved access
	ExceptionPathLog	Enable	yes	Log Application Lockdown exception path approved access
			no	Do not log Application Lockdown exception path approved access
	TrustedCertificateLog	Enable	yes	Log Trusted Certifications approved access
			no	Do not log Trusted Certifications approved access
	WriteProtectionLog	Enable	yes	Log Write Protection approved access
			no	Do not log Write Protection approved access
	SystemEventLog	Enable	yes	Log events related to the system
			no	Do not log events related to the system

PARAMETER		SETTING	VALUE	DESCRIPTION
	ExceptionPathLog	Enable	yes	Log exceptions to Application Lockdown
			no	Do not log exceptions to Application Lockdown
	WriteProtectionLog	Enable	yes	Log Write Protection events
			no	Do not log Write Protection events
	ListLog	Enable	yes	Log events related to the Approved list
			no	Do not log events related to the Approved list
	USBMalwareProtectionLog	Enable	yes	Log events that trigger USB Malware Protection
			no	Do not log events that trigger USB Malware Protection
	ExecutionPreventionLog	Enable	yes	Log events that trigger Execution Prevention
			no	Do not log events that trigger Execution Prevention
	NetworkVirusProtectionLog	Enable	yes	Log events that trigger Network Virus Protection
			no	Do not log events that trigger Network Virus Protection
	IntegrityMonitoringLog			Container for configuring Integrity Monitoring logs
	FileCreatedLog	Enable	yes	Log file and folder created events
no			Do not log file and folder created events	

PARAMETER				SETTING	VALUE	DESCRIPTION
			FileModifiedLog	Enable	yes	Log file modified events
					no	Do not log file modified events
			FileDeletedLog	Enable	yes	Log file and folder deleted events
					no	Do not log file and folder deleted events
			FileRenamedLog	Enable	yes	Log file and folder renamed events
					no	Do not log file and folder renamed events
			RegValueModifiedLog	Enable	yes	Log registry value modified events
					no	Do not log registry value modified events
			RegValueDeletedLog	Enable	yes	Log registry value deleted events
					no	Do not log registry value deleted events
			RegKeyCreatedLog	Enable	yes	Log registry key created events
					no	Do not log registry key created events
			RegKeyDeletedLog	Enable	yes	Log registry key deleted events
					no	Do not log registry key deleted events
			RegKeyRenamedLog	Enable	yes	Log registry key renamed events
					no	Do not log registry key renamed events

PARAMETER			SETTING	VALUE	DESCRIPTION
		DeviceControlLog	Enable	yes	Log storage device control events.
				no	Do not log storage device control events.
		DebugLog	Enable	yes	Log debugging information
				no	Do not log debugging information

ManagedMode Section



Parameters to configure Centralized Management functions

TABLE 4-6. Configuration File ManagedMode Section Parameters

PARAMETER			SETTING	VALUE	DESCRIPTION
Configuration					Container for the Configuration section
	ManagedMode		Enable	yes	Enable managed mode
				no	Disable managed mode
	Agent				Container for configuring Safe Lock agents
	Port			<server_messages_port>	Specify the secure port for server communications (formerly the agent listening port)
	SslAllowBeast			0	Allow upload of large files (>10MB) on Windows Server 2008 platforms
				1	Prevent the unsuccessful upload of

PARAMETER	SETTING	VALUE	DESCRIPTION
			large files (>10MB) on Windows Server 2008 platforms (default value)
Server			Container for configuring Safe Lock Intelligent Manager
HostName		<hostname>	Specify the host name of the Intelligent Manager server
FastPort		<logs_port>	Specify secure port for collecting logs and status (formerly Fast Lane)
SlowPort		<files_port>	Specify secure port for collecting files for scanning (formerly Slow Lane)
ApiKey		<API_key>	Specify API key
Message			Container for configuring automated messages to Safe Lock Intelligent Manager
Register	Trigger	1	Send as soon as possible after the event occurs
		2	Do not send unless requested to by Intelligent Manager
Unregister	Trigger	1	Send as soon as possible after the event occurs

PARAMETER	SETTING	VALUE	DESCRIPTION
		2	Do not send unless requested to by Intelligent Manager
UpdateStatus	Trigger	1	Send as soon as possible after the event occurs
		2	Do not send unless requested to by Intelligent Manager
UploadBlockedEvent	Trigger	1	Send as soon as possible after the event occurs
		2	Do not send unless requested to by Intelligent Manager
CheckFileHash	Trigger	1	Send as soon as possible after the event occurs
		2	Do not send unless requested to by Intelligent Manager
QuickScanFile	Trigger	1	Send as soon as possible after the event occurs
		2	Do not send unless requested to by Intelligent Manager
MessageRandomization			

PARAMETER	SETTING	VALUE	DESCRIPTION
 Note Safe Lock agents respond as soon as possible to direct requests from Safe Lock Intelligent Manager. For details, refer to Applying Message Time Groups in the Safe Lock Administrator's Guide.			
	TotalGroupNum	Positive Integer (≥ 1)	Specify the total number of message time groups
	OwnGroupIndex	Zero or Positive Integer, $< \text{TotalGroupNum}$	Specify the message time group ID number of this Safe Lock agent
	TimePeriod	Zero or Positive Integer	Specify the duration of time in whole seconds that this message time group ID number will send automated messages to Intelligent Manager when this group's message-sending cycle is active  Note Message time groups do not become active if their duration is set to zero (0).
Proxy	Mode	0	Do not use a proxy (direct access)
		1	Use a proxy (manual setting)
		2	Synchronize proxy settings with Internet Explorer

PARAMETER				SETTING	VALUE	DESCRIPTION
			HostName		<proxy_hostname>	Specify the proxy host name
			Port		<proxy_port>	Specify the proxy port number
			UserName		<proxy_username>	Specify the proxy user name
			Password		<proxy_password>	Specify the proxy password


AccountRef Section

Parameters to configure the Safe Lock console controls available to the Restricted User account

See [Account Types on page 2-17](#).

TABLE 4-7. Configuration File AccountRef Section Parameters

PARAMETER				SETTING	VALUE	DESCRIPTION
			Configuration			Container for the Configuration section
			Permission			Container for the Permission section
			AccountRef			Container for the AccountRef section
			UIControl	ID	DetailSetting	Access the features and functions on the Safe Lock console Settings page

PARAMETER				SETTING	VALUE	DESCRIPTION
						 Note The Password page is not available to the Restricted User account.
				LockUnlock		Access the Application Lockdown setting on the Overview screen
				LaunchUpdater		Access the Automatically add files created or modified by the selected application installer option when a Restricted User clicks Add Item on the Approved List screen
				RecentHistoryUnapprovedFiles		Access the Block logs if a Restricted User clicks Last application blocked on the Overview screen
				ImportExportList		Access the Import List and Export List buttons
				ListManagement		Access the following items on the Approved List screen: <ul style="list-style-type: none"> • The Delete Item button • The Update Hash button • The Add Item > Add Files/Folders menu
				State	yes	Enable the permission specified by ID
				State	no	Disable the permission specified by ID

Chapter 5

Troubleshooting

This chapter describes troubleshooting techniques and frequently asked questions about Trend Micro Safe Lock.

Topics in this chapter include:

- *Frequently Asked Questions (FAQ) on page 5-2*
- *Troubleshooting Safe Lock on page 5-2*

Frequently Asked Questions (FAQ)

What if the endpoint becomes infected by a threat?

Use Trend Micro Portable Security to remove the threat without having to update the Approved List or turn off Application Lockdown at the endpoint.

Where can I get more help with Trend Micro Safe Lock?

Get the most up-to-date information and support from the Trend Micro support website at:

<http://esupport.trendmicro.com/en-us/business/>

Troubleshooting Safe Lock

The Trend Micro Safe Lock Diagnostic Toolkit offers administrators the ability to perform a number of diagnostic functions, including:

- Create, collect, and delete debugging logs
- Enable or disable Self Protection

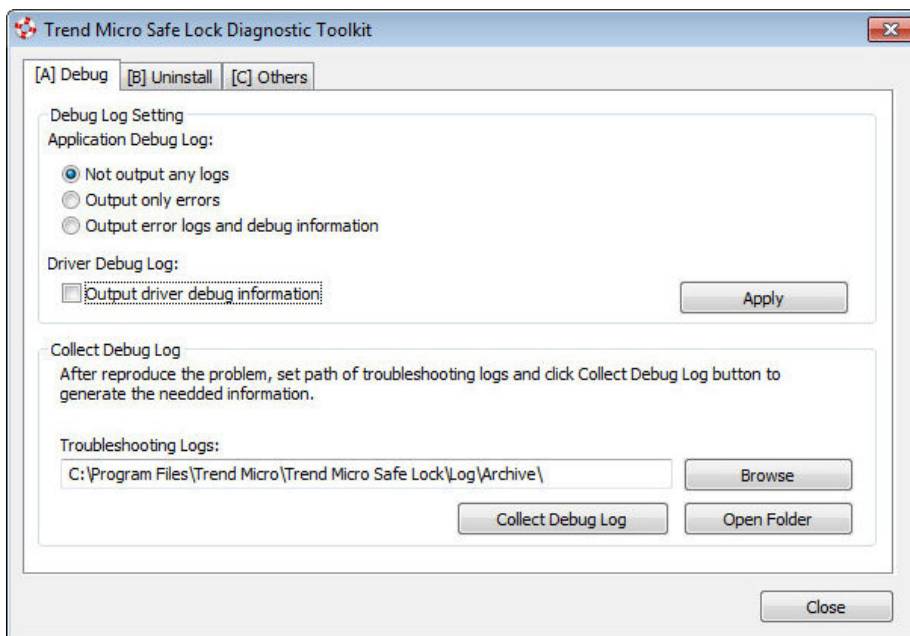


FIGURE 5-1. The Trend Micro Safe Lock Diagnostic Toolkit Debug Tab

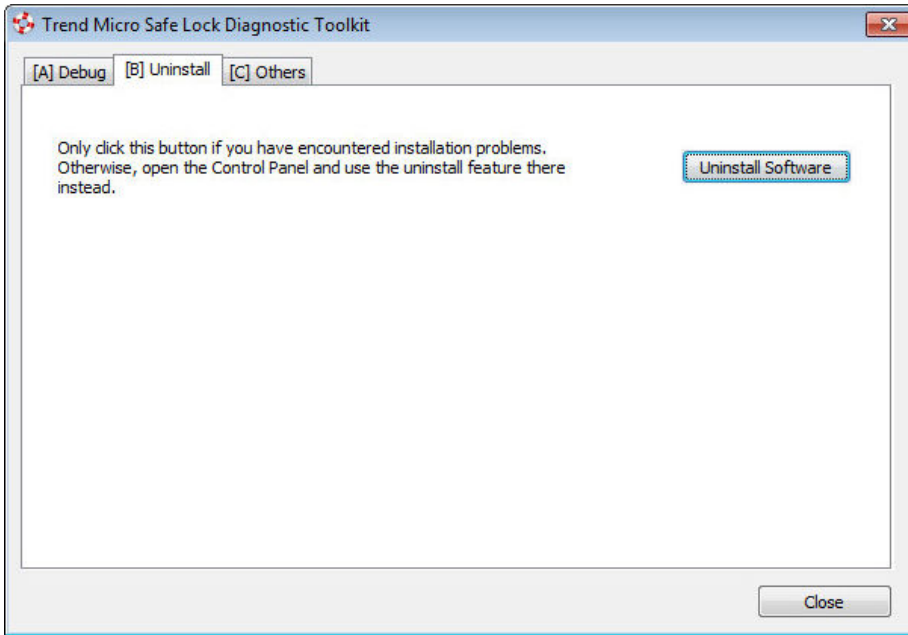


FIGURE 5-2. The Trend Micro Safe Lock Diagnostic Uninstall Tab

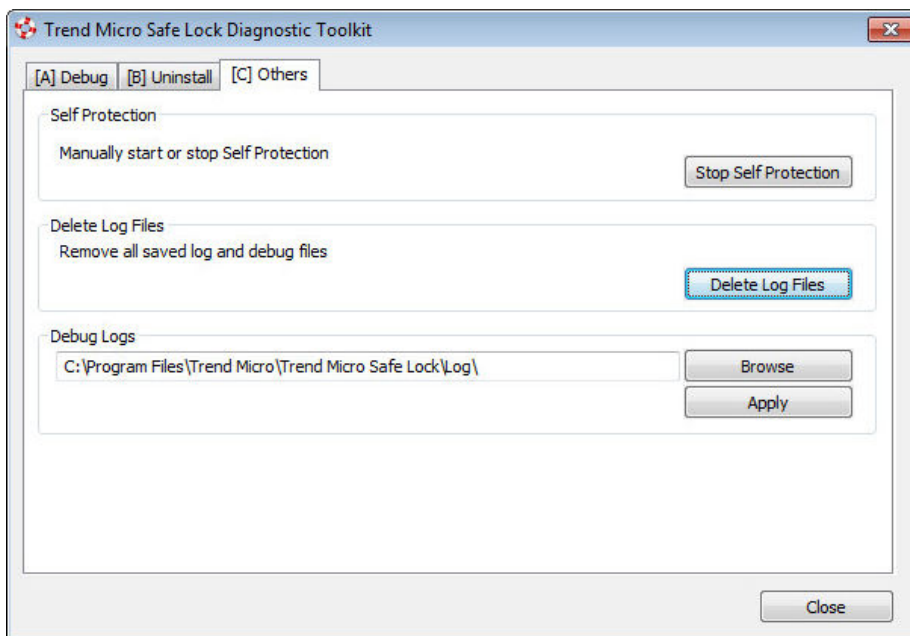


FIGURE 5-3. The Trend Micro Safe Lock Diagnostic Toolkit Others Tab

Using the Diagnostic Toolkit

If Trend Micro Safe Lock experiences problems, generate a complete set of application and driver diagnostic logs for analysis, or send them to Trend Micro Technical Support. Both the Trend Micro administrator and Restricted User accounts can collect the logs.

Procedure

1. Open the Diagnostic Toolkit and enable full logging:
 - a. Open the Trend Micro Safe Lock installation folder and run `WKSsupportTool.exe`.



Note

The default installation location is `c:\Program Files\Trend Micro\Safe Lock\`.

- b. Provide the Trend Micro administrator or Restricted User password and click **OK**.
 - c. On the **[A] Debug** tab, select **Output error logs and debug information** and **Output driver debug information**, and click **Apply**.
2. Reproduce the problem.
 3. Collect the diagnostic logs:
 - a. Reopen the Diagnostic Toolkit.
 - b. On the **[A] Debug** tab, click **Browse** to choose the location where Trend Micro Safe Lock saves the logs.



Note

The default location for saved logs is: `c:\Program Files\Trend Micro\Safe Lock\Log\Archive\`.

- c. Click **OK** when finished.
 - d. Click **Collect Debug Log**.
 - e. Once the Debug Logs have been collected, click **Open Folder** to access the zipped log files for review, or to send them to Trend Micro Technical Support.
-

Diagnostic Toolkit Commands

The following table lists the commands available using the Diagnostic Toolkit, `WKSUPPORTTOOL.exe`.

**Note**

Only the Safe Lock administrator can use the Diagnostic Toolkit, and `WKSsupportTool.exe` will prompt for the administrator password before running a command.

TABLE 5-1. Diagnostic Toolkit Commands

COMMAND	DESCRIPTION
<code>-p <password></code>	Authenticates the user, allowing the command to run.
<code>debug [on off] [verbose normal] [-drv on] [-drv off]</code>	Turns the debug logs on or off, specifies the log detail level, and if driver logs are included.
<code>collect [path]</code>	Collects debugging information and creates a zip file to the specified path. If no path is specified, the default log location <code><installation directory>\Log\Archive</code> is used.
<code>selfprotection [on off]</code>	Turns on or off Safe Lock self protection.
<code>deletelogs</code>	Deletes all Safe Lock logs.
<code>uninstall</code>	Uninstalls Trend Micro Safe Lock.
<code>changelogpath [path]</code>	Change debug log output folder.
<code>EncryptSetupIni Setup.ini Setup.bin</code>	Encrypt the Setup.ini file.

Chapter 6

Technical Support

Learn about the following topics:

- *Troubleshooting Resources on page 6-2*
- *Contacting Trend Micro on page 6-3*
- *Sending Suspicious Content to Trend Micro on page 6-4*
- *Other Resources on page 6-5*

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 <http://esupport.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:

<http://esupport.trendmicro.com/srf/SRFMain.aspx>

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 <http://about-threats.trendmicro.com/us/threatencyclopedia#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	http://www.trendmicro.com
Email address	support@trendmicro.com

- Worldwide support offices:
<http://www.trendmicro.com/us/about-us/contact/index.html>
- Trend Micro product documentation:
<http://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://ers.trendmicro.com/>

Refer to the following Knowledge Base entry to send message samples to Trend Micro:

<http://esupport.trendmicro.com/solution/en-US/1112106.aspx>

File Reputation Services

Gather system information and submit suspicious file content to Trend Micro:

<http://esupport.trendmicro.com/solution/en-us/1059565.aspx>

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):

<http://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:

<http://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:

<http://www.trendmicro.com/download/documentation/rating.asp>

Chapter 7

Appendix: Reference

This Installation Guide introduces Trend Micro Safe Lock and guides administrators through installation and deployment.

Topics in this chapter include:

- *Enabling Local Administrator Accounts on page 7-2*
- *Enabling Local Accounts for Default Shares on page 7-3*
- *Agent Event Log Descriptions on page 7-4*
- *Agent Error Code Descriptions on page 7-26*

Enabling Local Administrator Accounts

Windows NT Version 6.x (Windows Vista, Windows 7, Windows 8, Windows 8.1, Windows Server 2008 and Windows Server 2012) requires special steps to allow you to use local Windows administrator accounts.

Procedure

1. Open **Computer Management**.

- a. Open the **Start** menu.
- b. Right-click **Computer**.
- c. Go to **Manage**.

The **Computer Management** window appears.

2. In the list on the left, go to **Computer Management > System Tools > Local Users and Groups > Users**.

The list of local Windows user accounts displays.

3. In the list of user accounts, right-click **Administrator**, then go to **Properties**.

The **Administrator Properties** window appears.

4. In the **General** tab, clear **Account is disabled**.

5. Click **OK**.

The **Computer Management** window reappears, displaying the list of local Windows user accounts.

6. Right-click **Administrator**, then go to **Set Password...**

A message displays instructions for setting the password.

7. Set the password.

8. Exit **Computer Management**.

Enabling Local Accounts for Default Shares

Windows NT Version 6.x, Windows Vista, Windows 7, Windows 8, Windows 8.1, Windows 10, Windows Server 2008, and Windows Server 2012 require special steps to allow local Windows administrator accounts to access default shares, for example the default share `admin$`.



Tip

Steps vary depending on your Windows version. For specific instructions and help for your Windows version, refer to the Microsoft Knowledgebase at <http://msdn.microsoft.com>.

Procedure

1. Open **Registry Editor** (`regedit.exe`).
 - a. Go to **Start > Run**
 - b. Type **regedit**, then press ENTER.
2. Locate and click the following registry subkey:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows  
\CurrentVersion\Policies\System
```
3. Locate the `LocalAccountTokenFilterPolicy` registry entry.

If the registry entry does not exist, follow these steps:

 - a. Go to **Edit > New**.
 - b. Select `DWORD Value`.
 - c. Type `LocalAccountTokenFilterPolicy`, then press ENTER.
4. Right-click `LocalAccountTokenFilterPolicy`, then go to **Modify**.
5. In the **Value** field, type `1`.
6. Click **OK**.

7. Exit **Registry Editor**.

Agent Event Log Descriptions

Trend Micro Safe Lock leverages the Windows™ Event Viewer to display the Safe Lock event log. Access the Event Viewer at **Start > Control Panel > Administrative Tools**.



Tip

Safe Lock event logging can be customized by doing the following:

- Before installation, modify the Setup.ini file. See *Setup.ini File Arguments > EventLog Section* in the Safe Lock Installation Guide.
- After installation, modify the configuration file. See *Configuration File Parameters > Log Section on page 4-24*.

TABLE 7-1. Windows Event Log Descriptions

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
1000	System	Information	Service started.
1001	System	Warning	Service stopped.
1002	System	Information	Application Lockdown Turned On.
1003	System	Warning	Application Lockdown Turned Off.
1004	System	Information	Disabled.
1005	System	Information	Administrator password changed.
1006	System	Information	Restricted User password changed.
1007	System	Information	Restricted User account enabled.
1008	System	Information	Restricted User account disabled.
1009	System	Information	Product activated.

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
1010	System	Information	Product deactivated.
1011	System	Warning	License Expired. Grace period enabled.
1012	System	Warning	License Expired. Grace period ended.
1013	System	Information	Product configuration import started: <full_path>
1014	System	Information	Product configuration import complete: <full_path>
1015	System	Information	Product configuration exported to: <full_path>
1016	System	Information	USB Malware Protection set to Allow.
1017	System	Information	USB Malware Protection set to Block.
1018	System	Information	USB Malware Protection enabled.
1019	System	Warning	USB Malware Protection disabled.
1020	System	Information	Network Virus Protection set to Allow.
1021	System	Information	Network Virus Protection set to Block.
1022	System	Information	Network Virus Protection enabled.
1023	System	Warning	Network Virus Protection disabled.
1025	System	Information	Memory Randomization enabled.
1026	System	Warning	Memory Randomization disabled.
1027	System	Information	API Hooking Prevention set to Allow.
1028	System	Information	API Hooking Prevention set to Block.
1029	System	Information	API Hooking Prevention enabled.
1030	System	Warning	API Hooking Prevention disabled.
1031	System	Information	DLL Injection Prevention set to Allow.

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
1032	System	Information	DLL Injection Prevention set to Block.
1033	System	Information	DLL Injection Prevention enabled.
1034	System	Warning	DLL Injection Prevention disabled.
1035	System	Information	Predefined Trusted Updater enabled.
1036	System	Information	Predefined Trusted Updater disabled.
1037	System	Information	DLL/Driver Lockdown enabled.
1038	System	Warning	DLL/Driver Lockdown disabled.
1039	System	Information	Script Lockdown enabled.
1040	System	Warning	Script Lockdown disabled.
1041	System	Information	Script added. [Details] File extension: <extension> Interpreter: <interpreter>
1042	System	Information	Script removed. [Details] File extension: <extension> Interpreter: <interpreter>
1044	System	Information	Exception path enabled.
1045	System	Information	Exception path disabled.

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
1046	System	Information	Event Log settings changed. [Details] Windows Event Log: <ON off> System Log: <on OFF> Exception Path Log: <ON off> Write Protection Log: <ON off> List Log: <ON off> Approved Access Log: <ON off> DLL Driver Log: <on OFF> Trusted Updater Log: <ON off> Exception Path Log: <ON off> Trusted Certification Log: <ON off> Write Protection Log: <ON off> Blocked Access Log: <ON off> USB Malware Protection Log: <on OFF> Execution Prevention Log: <on OFF> Network Virus Protection Log: <on OFF> Integrity Monitoring Log File Created Log: <ON off> File Modified Log: <ON off> File Deleted Log: <ON off> File Renamed Log: <ON off> RegValue Modified Log: <ON off> RegValue Deleted Log: <ON off> RegKey Created Log: <ON off> RegKey Deleted Log: <ON off> RegKey Renamed Log: <ON off> Debug Log: <on OFF>

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
1047	System	Information	Trusted certificate enabled.
1048	System	Information	Trusted certificate disabled.
1049	System	Information	Write Protection enabled.
1050	System	Warning	Write Protection disabled.
1051	System	Information	Write Protection set to Allow.
1052	System	Information	Write Protection set to Block.
1055	System	Information	Added file to Write Protection List. Path: <full_path>
1056	System	Information	Removed file from Write Protection List. Path: <full_path>
1057	System	Information	Added file to Write Protection Exception List Path: <full_path> Process: <process>
1058	System	Information	Removed file from Write Protection Exception List. Path: <full_path> Process: <process>
1059	System	Information	Added folder to Write Protection List. Path: <full_path> Scope: Folder
1060	System	Information	Removed folder from Write Protection List. Path: <full_path> Scope: Folder

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
1061	System	Information	Added folder to Write Protection Exception List. Path: <full_path> Scope: Folder Process: <process>
1062	System	Information	Removed folder from Write Protection Exception List. Path: <full_path> Scope: Folder Process: <process>
1063	System	Information	Added registry value to Write Protection List. Registry Key: <reg_key> Registry Value Name: <reg_value>
1064	System	Information	Removed registry value from Write Protection List. Registry Key: <reg_key> Registry Value Name: <reg_value>
1065	System	Information	Added registry value to Write Protection Exception List. Registry Key: <reg_key> Registry Value Name: <reg_value> Process: <process>

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
1066	System	Information	Removed registry value from Write Protection Exception List. Registry Key: <reg_key> Registry Value Name: <reg_value> Process: <process>
1067	System	Information	Added registry key to Write Protection List. Registry Key: <reg_key> Scope: Registry Key
1068	System	Information	Removed registry key from Write Protection List. Registry Key: <reg_key> Scope: Registry Key
1069	System	Information	Added registry key to Write Protection Exception List. Registry Key: <reg_key> Scope: Registry Key Process: <process>
1070	System	Information	Removed registry key from Write Protection Exception List. Registry Key: <reg_key> Scope: Registry Key Process: <process>
1071	System	Information	Custom Action set to Ignore.
1072	System	Information	Custom Action set to Quarantine.

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
1073	System	Information	Custom Action set to Ask Intelligent Manager.
1074	System	Information	Quarantined file is restored. [Details] Original Location: <full_path> Source: <source>
1075	System	Information	Quarantined file is deleted. [Details] Original Location: <full_path> Source: <source>
1076	System	Information	Integrity Monitoring enabled.
1077	System	Information	Integrity Monitoring disabled.
1078	System	Information	Root cause analysis report failed. [Details] Access Image Path: <full_path>
1079	System	Information	Server certificate imported: <full_path>
1080	System	Information	Server certificate exported to: <full_path>
1081	System	Information	Managed mode configuration imported: <full_path>
1082	System	Information	Managed mode configuration exported to: <full_path>
1083	System	Information	Managed mode enabled.
1084	System	Information	Managed mode disabled.

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
1085	System	Information	When Write Protection is enabled, it includes the Write Protection List and the Approved List.
1086	System	Warning	When Write Protection is enabled, it includes the Write Protection List only.
1087	System	Information	Event log settings changed.
1088	System	Information	Windows Update Support enabled.
1089	System	Information	Windows Update Support disabled.
1094	System	Information	Trend Micro Safe Lock updated. File applied: <file_name>
1096	System	Information	Trusted Hash List enabled.
1097	System	Information	Trusted Hash List disabled.
1098	System	Information	Event log settings changed.
1099	System	Information	Storage device access set to Allow.
1100	System	Information	Storage device access set to Block.
1101	System	Information	Storage device control enabled.
1102	System	System	Storage device control disabled.
1103	System	System	Event Log settings changed.
1500	List	Information	Trusted Updater started.
1501	List	Information	Trusted Updater stopped.
1502	List	Information	Approved List import started: <full_path>
1503	List	Information	Approved List import complete: <full_path>
1504	List	Information	Approved List exported to: <full_path>

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
1505	List	Information	Added to Approved List: <full_path>
1506	List	Information	Added to Trusted Updater List: <full_path>
1507	List	Information	Removed from Approved List: <full_path>
1508	List	Information	Removed from Trusted Updater List: <full_path>
1509	List	Information	Approved List updated: <full_path>
1510	List	Information	Trusted Updater List updated: <full_path>
1511	List	Warning	Unable to add to or update Approved List: <full_path>
1512	List	Warning	Unable to add to or update Trusted Updater List: <full_path>
1513	List	Information	Added to Exception Path List. [Details] Type: <exception_path_type> Path: <exception_path>
1514	List	Information	Removed from Exception Path List. [Details] Type: <exception_path_type> Path: <exception_path>

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
1515	List	Information	Added to Trusted Certificate List. [Details] Label: <label> Hash: <hash_value> Type: <type> Subject: <subject> Issuer: <issuer>
1516	List	Information	Removed from Trusted Certificate List. [Details] Label: <label> Hash: <hash_value> Type: <type> Subject: <subject> Issuer: <issuer>
1517	System	Information	Hash value added to the Trusted Hash List. [Details] Label: <label> Hash: <hash_value> Type: <type> Add to Approved List: <yes no> Path: <file_path> Note: <note>

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
1518	System	Information	Hash value removed from the Trusted Hash List. [Details] Label: <label> Hash: <hash_value> Type: <type> Add to Approved List: <yes no> Path: <file_path> Note: <note>
2000	Access Approved	Information	File access allowed: <full_path> [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode> List: <list>
2001	Access Approved	Warning	File access allowed: <full_path> [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode>

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
2002	Access Approved	Warning	File access allowed: <full_path> Unable to get the file path while checking the Approved List. [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode>
2003	Access Approved	Warning	File access allowed: <full_path> Unable to calculate hash while checking the Approved List. [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode>
2004	Access Approved	Warning	File access allowed: <full_path> Unable to get notifications to monitor process.
2005	Access Approved	Warning	File access allowed: <full_path> Unable to add process to non exception list.
2006	Access Approved	Information	File access allowed: <full_path> [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode>

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
2007	Access Approved	Warning	<p>File access allowed: <full_path></p> <p>An error occurred while checking the Exception Path List.</p> <p>[Details]</p> <p>Access Image Path: <full_path></p> <p>Access User: <user_name></p> <p>Mode: <mode></p>
2008	Access Approved	Warning	<p>File access allowed: <full_path></p> <p>An error occurred while checking the Trusted Certificate List.</p> <p>[Details]</p> <p>Access Image Path: <full_path></p> <p>Access User: <user_name></p> <p>Mode: <mode></p>
2011	Access Approved	Information	<p>Trusted registry value access allowed.</p> <p>Registry Key: <reg_key></p> <p>Registry Value Name: <reg_value></p> <p>[Details]</p> <p>Access Image Path: <full_path></p> <p>Access User: <user_name></p> <p>Mode: <mode></p>

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
2012	Access Approved	Information	Trusted registry key access allowed. Registry Key: <reg_key> [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode>
2013	Access Approved	Information	Change of File/Folder allowed by Exception List: <full_path> [Details] Access Image Path: Access User: <user_name> Mode: <mode>
2015	Access Approved	Information	Change of Registry Value allowed by Exception List. Registry Key: <reg_key> Registry Value Name: <reg_value> [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode>

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
2016	Access Approved	Information	Change of Registry Key allowed by Exception List. Registry Key: <reg_key> [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode>
2017	Access Approved	Warning	Change of File/Folder allowed: <full_path> [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode>
2019	Access Approved	Warning	Change of Registry Value allowed. Registry Key: <reg_key> Registry Value Name: <reg_value> [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode>
2020	Access Approved	Warning	Change of Registry Key allowed. Registry Key: <reg_key> [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode>

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
2021	Access Approved	Warning	File access allowed: <full_path> An error occurred while checking the Trusted Hash List. [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode>
2503	Access Blocked	Warning	Change of File/Folder blocked: <full_path> [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode>
2505	Access Blocked	Warning	Change of Registry Value blocked. Registry Key: <reg_key> Registry Value Name: <reg_value> [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode>

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
2506	Access Blocked	Warning	Change of Registry Key blocked. Registry Key: <reg_key> [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode>
2507	Access Blocked	Information	Specified action is taken: <full_path> [Details] Action: <action> Source: <source>
2508	Access Blocked	Warning	Failed to take specified action: <full_path> [Details] Action: <action> Source: <source>
2509	Access Blocked	Warning	File access blocked: <full_path> [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode> Reason: Not in Approved List

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
2510	Access Blocked	Warning	File access blocked: <full_path> [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode> Reason: Hash does not match expected value
2511	Access Blocked	Information	Change of File/Folder blocked: <full_path> [Details] Access Image Path: <full_path> Access User: <user_name> Mode: <mode>
3000	USB Malware Protection	Warning	Device access allowed: <full_path> [Details] Access Image Path: <full_path> Access User: <user_name> Device Type: <type>
3001	USB Malware Protection	Warning	Device access blocked: <full_path> [Details] Access Image Path: <full_path> Access User: <user_name> Device Type: <type>

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
3500	Network Virus Protection	Warning	Network virus allowed: <name> [Details] Protocol: TCP Source IP Address: <ip_address> Source Port: <port> Destination IP Address: <ip_address> Destination Port: <port>
3501	Network Virus Protection	Warning	Network virus blocked: <name> [Details] Protocol: TCP Source IP Address: <ip_address> Source Port: <port> Destination IP Address: <ip_address> Destination Port: <port>
4002	Process Protection Event	Warning	API Hooking allowed: <full_path> [Details] Threat Image Path: <full_path> Threat User: <user_name>
4003	Process Protection Event	Warning	API Hooking blocked: <full_path> [Details] Threat Image Path: <full_path> Threat User: <user_name>

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
4004	Process Protection Event	Warning	DLL Injection allowed: <full_path> [Details] Threat Image Path: <full_path> Threat User: <user_name>
4005	Process Protection Event	Warning	DLL Injection blocked: <full_path> [Details] Threat Image Path: <full_path> Threat User: <user_name>
4500	Changes in System	Information	File/Folder created: <full_path> [Details] Access Image Path: <full_path> Access Process ID: <proc_id> Access User: <user_name>
4501	Changes in System	Information	File modified: <full_path> [Details] Access Image Path: <full_path> Access Process ID: <proc_id> Access User: <user_name>
4502	Changes in System	Information	File/Folder deleted: <full_path> [Details] Access Image Path: <full_path> Access Process ID: <proc_id> Access User: <user_name>

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
4503	Changes in System	Information	File/Folder renamed: <full_path> New path: <full_path> [Details] Access Image Path: <full_path> Access Process ID: <proc_id> Access User: <user_name>
4504	Changes in System	Information	Registry Value modified. Registry Key: <reg_key> Registry Value Name: <reg_value> Registry Value Type: <reg_value_type> [Details] Access Image Path: <full_path> Access Process ID: <proc_id> Access User: <user_name>
4505	Changes in System	Information	Registry Value deleted. Registry Key: <reg_key> Registry Value Name: <reg_value> [Details] Access Image Path: <full_path> Access Process ID: <proc_id> Access User: <user_name>

EVENT ID	TASK CATEGORY	LEVEL	DESCRIPTION
4506	Changes in System	Information	Registry Key created. Registry Key: <reg_key> [Details] Access Image Path: <full_path> Access Process ID: <proc_id> Access User: <user_name>
4507	Changes in System	Information	Registry Key deleted. Registry Key: <reg_key> [Details] Access Image Path: <full_path> Access Process ID: <proc_id> Access User: <user_name>
4508	Changes in System	Information	Registry Key renamed. Registry Key: <reg_key> New Registry Key: <reg_key> [Details] Access Image Path: <full_path> Access Process ID: <proc_id> Access User: <user_name>

Agent Error Code Descriptions

This list describes the various error codes used in Trend Micro Safe Lock.

TABLE 7-2. Trend Micro Safe Lock Error Code Descriptions

CODE	DESCRIPTION
0x00040200	Operation successful.
0x80040201	Operation unsuccessful.
0x80040202	Operation unsuccessful.
0x00040202	Operation partially successful.
0x00040203	Requested function not installed.
0x80040203	Requested function not supported.
0x80040204	Invalid argument.
0x80040205	Invalid status.
0x80040206	Out of memory.
0x80040207	Busy. Request ignored.
0x00040208	Retry. (Usually the result of a task taking too long)
0x80040208	System Reserved. (Not used)
0x80040209	The file path is too long.
0x0004020a	System Reserved. (Not used)
0x8004020b	System Reserved. (Not used)
0x0004020c	System Reserved. (Not used)
0x0004020d	System Reserved. (Not used)
0x8004020d	System Reserved. (Not used)
0x0004020e	Reboot required.
0x8004020e	Reboot required for unexpected reason.
0x0004020f	Allowed to perform task.
0x8004020f	Permission denied.

CODE	DESCRIPTION
0x00040210	System Reserved. (Not used)
0x80040210	Invalid or unexpected service mode.
0x00040211	System Reserved. (Not used)
0x80040211	Requested task not permitted in current status. Check license.
0x00040212	System Reserved. (Not used)
0x00040213	System Reserved. (Not used)
0x80040213	Passwords do not match.
0x00040214	System Reserved. (Not used)
0x80040214	System Reserved. (Not used)
0x00040215	Not found.
0x80040215	"Expected, but not found."
0x80040216	Authentication is locked.
0x80040217	Invalid password length.
0x80040218	Invalid characters in password.
0x00040219	Duplicate password. Administrator and Restricted User passwords cannot match.
0x80040220	System Reserved. (Not used)
0x80040221	System Reserved. (Not used)
0x80040222	System Reserved. (Not used)
0x80040223	File not found (as expected, and not an error).
0x80040224	System Reserved. (Not used)
0x80040225	System Reserved. (Not used)
0x80040240	Library not found.

CODE	DESCRIPTION
0x80040241	Invalid library status or unexpected error in library function.
0x80040260	System Reserved. (Not used)
0x80040261	System Reserved. (Not used)
0x80040262	System Reserved. (Not used)
0x80040263	System Reserved. (Not used)
0x80040264	System Reserved. (Not used)
0x00040265	System Reserved. (Not used)
0x80040265	System Reserved. (Not used)
0x80040270	System Reserved. (Not used)
0x80040271	System Reserved. (Not used)
0x80040272	System Reserved. (Not used)
0x80040273	System Reserved. (Not used)
0x80040274	System Reserved. (Not used)
0x80040275	System Reserved. (Not used)
0x80040280	Invalid Activation Code.
0x80040281	Incorrect Activation Code format.

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