Trend Micro Apex One™

Patch 15

Administrator's Guide

For Enterprise and Medium Business

for MAC

Document Part No.: APEM149881/231220

Release Date: November 2024

Protected by U.S. Patent No.: Patents pending.

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.

Privacy and Personal Data Collection Disclosure

Certain features available in Trend Micro products collect and send feedback regarding product usage and detection information to Trend Micro. Some of this data is considered personal in certain jurisdictions and under certain regulations. If you do not want Trend Micro to collect personal data, you must ensure that you disable the related features.

The following link outlines the types of data that Trend Micro Apex One (Mac) collects and provides detailed instructions on how to disable the specific features that feedback the information.

https://success.trendmicro.com/data-collection-disclosure

Data collected by Trend Micro is subject to the conditions stated in the Trend Micro Privacy Notice:

https://www.trendmicro.com/privacy

Table of Contents

Chapter 6: Protecting Endpoints from Security Risks

Chapter 9: Managing the Server and Security Agents

Chapter 10: Getting Help

Appendix A: IPv6 Support in Apex One (Mac)

Index

Preface

Preface

Welcome to the Apex One (Mac) Administrator's Guide. This document discusses Apex One (Mac) server and agent installation, getting started information, and server and agent management.

Apex One (Mac) Documentation

Apex One (Mac) documentation includes the following:

Documentation	Description
Administrator's Guide	A PDF document that discusses Apex One (Mac) server and agent installation, getting started information, and server and agent management
Help	HTML files that provide "how to's", usage advice, and field-specific information
Readme file	Contains a list of known issues and basic installation steps. It may also contain late-breaking product information not found in the other documents.
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

View and download product documentation at:

http://docs.trendmicro.com/en-us/enterprise/apex-one-(mac).aspx

Audience

Apex One (Mac) documentation is intended for the following users:

- Apex One (Mac) administrators: Responsible for Apex One (Mac) management, including server and Security Agent installation and management. These users are expected to have advanced networking and server management knowledge.
- End users: Users who have the Apex One (Mac) Security Agent installed on their endpoints. The computer skill level of these individuals ranges from beginner to power user.

Document Conventions

To help you locate and interpret information easily, the Apex One (Mac) documentation uses the following conventions:

TABLE 1. Document Conventions

CONVENTION	DESCRIPTION
ALL CAPITALS	Acronyms, abbreviations, and names of certain commands and keys on the keyboard
Bold	Menus and menu commands, command buttons, tabs, options, and tasks
Italics	References to other documentation or new technology components
<Text>	Indicates that the text inside the angle brackets should be replaced by actual data. For example, `C:\Program Files\<file_name>` can be `C:\Program Files\sample.jpg`.
 **Note**	Provides configuration notes or recommendations
 **Tip**	Provides best practice information and Trend Micro recommendations
 **WARNING!**	Provides warnings about activities that may harm endpoints on your network

Terminology

The following table provides the official terminology used throughout the Apex One (Mac) documentation:

Terminology	Description
Agent or Security Agent	The Apex One (Mac) Security Agent program installed on an endpoint
Endpoint	The computer where the Security Agent is installed
Agent user (or user)	The person managing the Security Agent on the endpoint
Server	The Apex One (Mac) server program
Server computer	The computer where the Apex One (Mac) server is installed
Administrator (or Apex One (Mac) administrator)	The person managing the Apex One (Mac) server
Console	The user interface for configuring and managing Apex One (Mac) server and Security Agent settings The console for the server program is called "web console", while the console for the Security Agent program is called "agent console".
Security risk	The collective term for virus/malware, spyware/grayware, and web threats
Product service	The Apex One (Mac) service, which is managed from the Microsoft Management Console (MMC)
Components	Responsible for scanning, detecting, and taking actions against security risks
`Agent installation folder`	The folder on the endpoint that contains the Security Agent files `/Library/Application Support/TrendMicro`

Terminology	Description
`Server installation folder`	The folder on the server computer that contains the Apex One (Mac) server files. After installing Apex One (Mac) server, the folder is created on the same Apex One server directory. If you accept the default settings during Apex One server installation, you will find the server installation folder at any of the following locations: • `C:\Program Files\Trend Micro\OfficeScan\Addon\TMSM` • `C:\Program Files\Trend Micro\Apex One\Addon\TMSM` • `C:\Program Files (x86)\Trend Micro\OfficeScan\Addon\TMSM` • `C:\Program Files (x86)\Trend Micro\Apex One\Addon\TMSM`
Dual-stack	An entity that has both IPv4 and IPv6 addresses. For example: • A dual-stack endpoint is an endpoint with both IPv4 and IPv6 addresses. • A dual-stack agent refers to an agent installed on a dual-stack endpoint. • A dual-stack proxy server, such as DeleGate, can convert between IPv4 and IPv6 addresses.
Pure IPv4	An entity that only has an IPv4 address
Pure IPv6	An entity that only has an IPv6 address

Chapter 1

Introducing Apex One (Mac)

This chapter introduces Trend Micro Apex One™ (Mac) and provides an overview of its features and capabilities.

About Trend Micro Apex One (Mac)

Trend Micro Apex One™ (Mac) provides the latest endpoint protection against security risks, blended threats, and platform independent web-based attacks.

The Apex One (Mac) server is a plug-in program integrated with Trend Micro products such as Apex One and Worry-free Business Security and installed through the Plug-in Manager framework. The Apex One (Mac) server deploys Security Agents to endpoints.

New in this Release

Apex One (Mac) includes the following new features and enhancements.

Feature/ Enhancement	Description
Platform support	The Apex One (Mac) Security Agent can now be installed on macOS 15 Sequoia endpoints.

Key Features and Benefits

Apex One (Mac) provides the following features and benefits:

Table 1-1. Key Features and Benefits

Feature	Benefits
Smart Scan	Apex One (Mac) uses smart scan to make the scanning process more efficient. This technology works by off-loading a large number of signatures previously stored on the local endpoint to Smart Protection Sources. Using this approach, the system and network impact of the ever-increasing volume of signature updates to endpoint systems is significantly reduced. For information about smart scan and how to deploy it to Security Agents, see *Scan Method Types on page 6-4*.

Feature	Benefits
Damage Cleanup Services	Damage Cleanup Services™ cleans computers of file-based and network viruses, and virus and worm remnants (Trojans, viral files) through a fully-automated process. To address the threats and nuisances posed by Trojans, Damage Cleanup Services does the following: • Detects and removes live Trojans • Kills processes that Trojans create • Repairs system files that Trojans modify • Deletes files and applications that Trojans drop Because Damage Cleanup Services runs automatically in the background, it is not necessary to configure it. Users are not even aware when it runs. However, Apex One (Mac) may sometimes notify users to restart their endpoints to complete the process of removing a Trojan.
Security Risk Protection	Apex One (Mac) protects endpoints from security risks by scanning files and then performing a specific action on each security risk detected. An overwhelming number of security risks detected over a short period of time signals an outbreak. Apex One (Mac) notifies you of any outbreak so you can take immediate action, such as cleaning infected endpoints and isolating them until they are completely risk-free.
Web Reputation	Web Reputation technology proactively protects endpoints within or outside the corporate network from malicious and potentially dangerous websites. Web Reputation breaks the infection chain and prevents downloading of malicious code. Verify the credibility of websites and pages by integrating Apex One with the Smart Protection Server or the Trend Micro Smart Protection Network.
Centralized Management	A web-based management console gives administrators transparent access to all Security Agents on the network. The web console coordinates automatic deployment of security policies, pattern files, and software updates on every Security Agent. Administrators can perform remote administration and configure settings for individual agents or agent groups.

The Apex One (Mac) Server

The Apex One (Mac) server is the central repository for all Security Agent configurations, security risk logs, and updates.

The server performs two important functions:

- Monitors and manages Security Agents
- Downloads components needed by Security Agents. By default, the Apex One (Mac) server downloads components from the Trend Micro ActiveUpdate server and then distributes them to Security Agents.

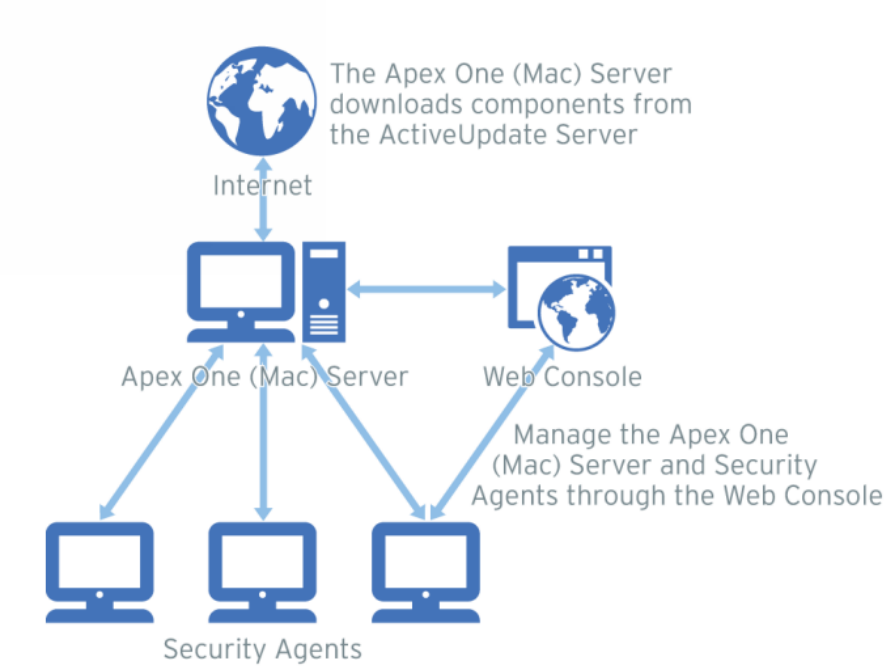


FIGURE 1-1. How the Apex One (Mac) server works

Apex One (Mac) provides real-time, bidirectional communication between the server and Security Agents. Manage the Security Agents from a browser-based web console, which you can access from virtually anywhere on the network. The server communicates with the Security Agents through the ActiveMQ™ protocol.

The Apex One (Mac) Security Agent

Protect endpoints from security risks by installing the Apex One (Mac) Security Agent on each endpoint. The Security Agent provides three scan types:

- Real-time Scan
- Scheduled Scan
- Manual Scan

The Security Agent reports to the parent Apex One (Mac) server from which it was installed. The Security Agent sends events and status information to the server in real time. Security Agents communicate with the server through the ActiveMQ protocol.

Chapter 2

Installing the Server

This chapter describes system requirements and the installation procedure for Apex One (Mac) server.

Server Installation Requirements

Important

Before installing or upgrading to Apex One (Mac) Patch 2 and above, make sure that the certificate is not expired for Microsoft Internet Information Services (IIS).

For more information, see https://success.trendmicro.com/solution/000283033.

The following are the requirements for installing the Apex One (Mac) server:

TABLE 2-1. Server Installation Requirements

RESOURCE	REQUIREMENTS
Apex One server	2019 or later
OfficeScan server	XG or later
Plug-in Manager	2.0 and higher
RAM	1GB minimum, 2GB recommended

Resource	Requirements

Available disk space	• 7GB minimum if the OfficeScan server is installed on the system drive (usually, C: drive)
	• 5GB minimum if the Apex One server is installed on the system drive (usually, C: drive)
	• If the OfficeScan or Apex One server is not installed on the system drive:
	  • 7GB minimum on the drive where the OfficeScan server is installed. The Apex One (Mac) server will be installed on this drive.
	  • 5GB minimum on the drive where the Apex One server is installed. The Apex One (Mac) server will be installed on this drive.
	  • 7GB minimum on the system drive. Third-party programs used by the Apex One (Mac) server will be installed on this drive.

Resource	Requirements

Others	• Microsoft™ .NET Framework 3.5 and 4.6.1
	• Microsoft Windows™ Installer 3.1 and above
	• The following third-party programs will be installed automatically, if it does not exist:
	  • Microsoft SQL Server 2008 R2 Express, 2016 Express, or 2016 SP1 Express
	  • Apache™ ActiveMQ 5.15.4
	  • Microsoft Visual C++ 2017 Redistributable
	
	Note
	• Java runtime environment (JRE) installation is required when you install Apex One (Mac) on an OfficeScan server.
	• For best performance, install JRE 1.8 or later. Install JRE for Windows x86 or JRE for Windows x64, depending on the operating system of the host machine.

Update Source

Before installing the Apex One (Mac) server, check the Plug-in Manager update source by navigating to **Updates** > **Server** > **Update Source** on the OfficeScan or Apex One web console. The update source can be any of the following:

TABLE 2-2. Possible Update Sources

UPDATE SOURCE SELECTED	DESCRIPTION AND INSTRUCTIONS
`ActiveUpdate Server`	The Trend Micro ActiveUpdate server is the default update source. Internet connection is required to connect to this server. If the server computer connects to the Internet through a proxy server, ensure that Internet connection can be established using the proxy settings.
`Other Update Source`	If you have specified multiple update sources: • Ensure the server computer can connect to the first update source on the list. If the server computer cannot connect to the first update source, it does not attempt to connect to the other update sources. • Check if the first update source contains the latest version of the Plug-in Manager component list (`OSCE_AOS_COMP_LIST.xml`) and the Apex One (Mac) installation package. For assistance in setting up an update source, contact your support provider.
`Intranet Location Containing a Copy of the Current File`	If the update source is an intranet location: • Check if there is functional connection between the server computer and the update source. • Check if the update source contains the latest version of the Plug-in Manager component list (`OSCE_AOS_COMP_LIST.xml`) and the Apex One (Mac) installation package. For assistance in setting up the intranet source, contact your support provider.

Installing the Apex One (Mac) Server

Important

Before installing or upgrading to Apex One (Mac) Patch 2 and above, make sure that the certificate is not expired for Microsoft Internet Information Services (IIS).

For more information, see https://success.trendmicro.com/solution/000283033.

Procedure

1. Do the following ONLY if you are installing Apex One (Mac) on a server with a domain controller role:
   a. Go to the `<server installation folder>\PCCSRV\Admin\Utility\SQL` folder.
   b. Open the `InstallCfgFile.ini` file using a text editor.
   c. Change the `SQLSVCACCOUNT` value setting from `NT AUTHORITY\NETWORK SERVICE` to `NT AUTHORITY\SYSTEM`.
   d. Save the file.
2. Open the Apex One or OfficeScan web console and click **Plug-ins** on the main menu.
3. Go to the **Apex One (Mac)** section and click **Download**.

   The size of the file to be downloaded displays beside the **Download** button.

   Plug-in Manager downloads the package to `<server installation folder>\PCCSRV\Download`.

   `<server installation folder>` is typically `C:\Program Files\Trend Micro\OfficeScan` or `C:\Program Files\Trend Micro\Apex One`.
4. Monitor the download progress.

You can navigate away from the screen during the download.

If you encounter problems downloading the package, check the server update logs on the Apex One or OfficeScan web console. On the main menu, click **Logs** > **Server Updates**.

5. After the download process is complete, click **Install** to install Apex One (Mac).
6. Read the license agreement and accept the terms by clicking **Agree**.

   The installation starts.
7. Monitor the installation progress. After the installation, the Plug-in Manager screen reloads.

Activating the Product for the First Time

Procedure

1. Open the Apex One or OfficeScan web console and click **Plug-ins** on the main menu.
2. Go to the **Apex One (Mac)** section and click **Manage Program**.
3. Type the Activation Code for the product and click **Save**. The Activation Code is case-sensitive.

   If you do not have the Activation Code, click the **register online** link to access the Trend Micro registration website. After you complete the registration, Trend Micro sends an email with the Activation Code. You can then continue with activation.

   If you have activated an evaluation version license, ensure that you upgrade to the full version before the license expires.
4. In the License Details screen that appears, click **Launch** to open the web console.
5. Click **Launch** to open the web console.

Performing Post-installation Tasks on the Server

Procedure

1. Verify that the following services display on the Microsoft Management Console:
   - **ActiveMQ for Apex One (Mac)**
   - **Apex One (Mac) Main Service**
2. Verify that the following process is running on Windows Task Manager: **TMSMMainService.exe**
3. Verify that the following registry key exists in Registry Editor: `HKEY_LOCAL_MACHINE\Software\TrendMicro\OfficeScan\service\AoS\OSCE_ADDON_TMSM`
4. Verify that the Apex One (Mac) server files are found under the <*Server installation folder*>.

Uninstalling the Apex One (Mac) Server

Procedure

1. Open the Apex One or OfficeScan web console and click **Plug-ins** on the main menu.
2. Go to the Apex One (Mac) section and click **Uninstall**.
3. Monitor the uninstallation progress. You can navigate away from the screen during the uninstallation. After the uninstallation is complete, the Apex One (Mac) server is again available for installation.

Note

The uninstallation package does not remove Java runtime environment (JRE) used by Apex One (Mac). You can remove JRE if no other application is using it.

Chapter 3

Getting Started

This chapter describes how to get started with Apex One (Mac) and initial configuration settings.

Getting Started Tasks

Getting Started Tasks provides a high-level overview of procedures required to get Apex One (Mac) up and running as quickly as possible.

Procedure

1. Configure agent-server communication settings.

   For more information, see *Configuring Agent-Server Communication Settings on page 9-14*.

2. If a firewall is in use on the computer where you installed the Trend Micro Apex One (Mac) server, verify that the firewall does not block traffic through the listening port for agent-server communication.

   If the Apex One Security Agent firewall has been enabled on the computer, add a policy exception that allows incoming and outgoing traffic through the listening port.

3. Install the Apex One (Mac) Security Agent on endpoints.

   For more information, see *Installing the Security Agent on page 4-1*.

The Web Console

The web console is the central point for monitoring Security Agents and configuring settings to be deployed to Security Agents. The console comes with a set of default settings and values that you can configure based on your security requirements and specifications.

Use the web console to do the following:

- Manage Security Agents installed on endpoints
- Organize Security Agents into logical groups for simultaneous configuration and management
- Set scan configurations and initiate scanning on a single or multiple endpoints

- Configure security risk notifications and view logs sent by Security Agents
- Configure outbreak criteria and notifications

Opening the Web Console

Before you begin

Open the web console from any endpoint on the network that has the following resources:

- Monitor that supports 1024 x 768 resolution at 256 colors or higher
- Web browser:
  - Microsoft Internet Explorer 10
  - Microsoft Edge
  - Microsoft Edge Chromium
  - Firefox
  - Chrome
  - Safari

Procedure

1. On a web browser, type the Apex One or OfficeScan server URL.
2. Type the user name and password to log on to the Apex One or OfficeScan server.
3. On the main menu, click **Plug-ins**.
4. Go to the **Apex One (Mac)** section and click **Manage Program**.

Security Summary

The **Summary** screen appears when you open the Apex One (Mac) web console or click **Summary** in the main menu.

Tip

Refresh the screen periodically to get the latest information.

Agents

The **Agents** section displays the following information:

- The connection status of all Security Agents with the Apex One (Mac) server. Clicking a link opens the agent tree where you can configure settings for the Security Agents.
- The number of detected security risks and web threats
- The number of endpoints with detected security risks and web threats. Clicking a number opens the agent tree displaying a list of endpoints with security risks or web threats. In the agent tree, perform the following tasks:
  - Select one or several Security Agents, click **Logs** > **Security Risk Logs**, and then specify the log criteria. In the screen that displays, check the **Results** column to see if the scan actions on the security risks were successfully carried out.

    For a list of scan results, see *Scan Results on page 6-38*.
  - Select one or several Security Agents, click **Logs** > **Web Reputation Logs**, and then specify the log criteria. In the screen that displays, check the list of blocked websites. You can add websites you do not want blocked to the list of approved URLs.

    For details, see *Configuring the Approved and Blocked URL Lists on page 7-6*.

Detection Status

The **Detection Status** table displays the total number of detections for security risks and web threats, and the number of affected endpoints.

Update Status

The **Update Status** table contains information about Apex One (Mac) components and the Security Agent program that protects endpoints from security risks.

Tasks in this table:

- Update outdated components immediately.

  For details, see *Launching Agent Update from the Summary Screen on page 5-13*.

- Upgrade Security Agents to the latest program version or build if you recently upgraded the server.

  For agent upgrade instructions, see *Upgrading the Server and Security Agents on page 9-4*.

The Agent Tree

The Apex One (Mac) agent tree displays all the Security Agents that the server currently manages. All Security Agents belong to a certain group. Use the menu items above the agent tree to simultaneously configure, manage, and apply the same configuration to all Security Agents belonging to a group.

Agent Tree General Tasks

Below are the general tasks you can perform when the agent tree displays:

Procedure

- Click the root icon () to select all groups and agents. When you select the root icon and then choose a task above the agent tree, a screen for configuring settings displays. On the screen, choose from the following general options:

  - **Apply to All Agents**: Applies settings to all existing agents and to any new agent added to an existing/future group. Future groups are groups not yet created at the time you configure the settings.

  - **Apply to Future Groups Only**: Applies settings only to agents added to future groups. This option will not apply settings to new agents added to an existing group.

- To select multiple adjacent groups or agents, click the first group or agent in the range, hold down the SHIFT key, and then click the last group or agent in the range.
- To select a range of non-contiguous groups or agents, hold down the CTRL key and then click the groups or agents that you want to select.
- Search for an agent to manage by specifying a full or partial endpoint name in the **Search for endpoints** text box. A list of matching agent names will appear in the agent tree.
- Sort agents based on column information by clicking the column name.
- View the total number of agents below the agent tree.
- Click the **Export** button (Export) to export the list and status for agents from the agent tree, in a `csv.` format.

Agent Tree Specific Tasks

Above the agent tree are menu items that allow you perform the following tasks:

Menu Button	Task
Tasks	• Update agent components. For details, see *Agent Updates on page 5-8*. • Run Scan Now on endpoints. For details, see *Scan Now on page 6-22*.

Menu Button	Task

Settings	• Configure the scan method.
	For details, see *Scan Method Types on page 6-4*.
	• Configure scan settings.
	  • *Manual Scan on page 6-14*
	  • *Real-time Scan on page 6-11*
	  • *Scheduled Scan on page 6-17*
	  • *Scan Exclusions on page 6-25*
	  • *Cache Settings for Scans on page 6-29*
	• Configure Web Reputation settings.
	For details, see *Configuring Web Reputation Settings on page 7-3*.
	• Configure agent self-protection.
	For details, see *Configuring Agent Self-protection on page 9-2*.
	• Configure device control settings
	For details, see *Configuring Device Control Settings on page 8-3*.
	• Configure update settings.
	For details, see *Configuring Agent Update Settings on page 5-11*.
	• Configure the Trusted Program List.
	For details, see *Configuring the Trusted Program List on page 6-32*.
	• Configure the Predictive Machine Learning setting.
	For details, see *Enabling Predictive Machine Learning on page 9-3*.

Logs	View logs and reset statistics. • *Viewing Security Risk Logs on page 6-37* • *Viewing Web Reputation Logs on page 7-7* • *Viewing Scan Operation Logs on page 6-33* • *Viewing Device Control Logs on page 8-6* • *Resetting Security Risk Count on page 6-40*

Menu Button	Task
Manage Agent Tree	Manage Apex One (Mac) groups. For details, see *Groups on page 3-8*.

Groups

A group in Apex One (Mac) is a set of agents that share the same configuration and run the same tasks. By organizing agents into groups, you can simultaneously configure, manage, and apply the same configuration to all agents belonging to the groups.

For ease of management, group agents based on their departments or the functions they perform. You can also group agents that are at a greater risk of infection to apply a more secure configuration to all of them. You can add or rename groups, move agents to a different group, move agents to another server, or remove agents permanently. An agent removed from the agent tree is not automatically uninstalled from the endpoint. The agent can still perform server-dependent tasks, such as updating components. However, the server is unaware of the existence of the agent and therefore cannot send configurations or notifications to the agent.

If the agent has been uninstalled from the endpoint, it is not automatically removed from the agent tree and its connection status is "Offline". Manually remove the agent from the agent tree.

Adding a Group

Procedure

1. Navigate to **Agent Management**.
2. Click **Manage Agent Tree** > **Add Group**.
3. Type a name for the group you want to add.
4. Click **Add**.

   The new group appears in the agent tree.

Deleting a Group or Security Agent

Before you begin

Before deleting a group, check if there are Security Agents that belong to the group and then move the Security Agents to another group.

For details about moving agents, see *Moving Agents to Another Group on page 3-10*.

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, select specific groups or Security Agents.
3. Click **Manage Agent Tree** > **Remove Group/Agent**.
4. Click **OK** to confirm the deletion.

Renaming a Group

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, select the group to rename.
3. Click **Manage Agent Tree** > **Rename Group**.
4. Type a new name for the group.
5. Click **Rename**.

   The new group name appears in the agent tree.

Moving Security Agents

You can move Security Agents to another agent group or Apex One (Mac) server.

Moving Agents to Another Group

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, select one or several agents.
3. Click **Manage Agent Tree** > **Move Agent**.
4. Select **Move selected agent(s) to another group**.
5. Select the group from the drop-down list.
6. Decide whether to apply the settings of the new group to the agents.

   Tip

   Alternatively, you can drag and drop the agents to another group in the agent tree.

7. Click **Move**.

Moving Security Agents to Another Server

Note

- You can move Security Agents only to another Trend Micro Apex One (Mac) server of the same version or later.
- If you are moving Security Agents from an on-premises Trend Micro Apex One (Mac) server to a Server as a Service (SaaS) server (or vice versa), ensure that Trend Micro Apex One (Mac) Security Agents can communicate with the server through the listening port and that no application is using the same port on the Security Agent endpoints.

  The following table shows the listening ports.

TABLE 3-1. Agent-server communication ports

SERVER TYPE	LISTENING PORT
On-premises	• For Security Agent version 3.5.3xxx or later: 4343 • For Security Agent version 3.5.2xxx or earlier: 61617
SaaS	443

For more information, see *Configuring Agent-Server Communication Settings on page 9-14*.

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, select one or more Security Agents.
3. Click **Manage Agent Tree** > **Move Agent**.
4. Select **Move selected agent(s) to another server**.

5. Type the server name or address, and HTTPS port number.
6. Select **Force move offline agents** to move offline Security Agents to the specified server.

   Note

   If an offline Security Agent is not online after 7 days, the Security Agent remains on the original server and is not moved to the specified server.

7. Click **Move**.

Widgets

Manage Apex One (Mac) widgets on the Apex One dashboard. The widgets are available after activating Apex One (Mac).

For details on working with widgets, see the Apex One documentation.

Agent Connectivity (Mac) Widget

The Agent Connectivity (Mac) widget shows the connection status of agents with the Apex One (Mac) server. Data displays in a table and pie chart. You can switch between the table and pie chart by clicking the display icons ().

Agent Connectivity (Mac) Widget Presented as a Table

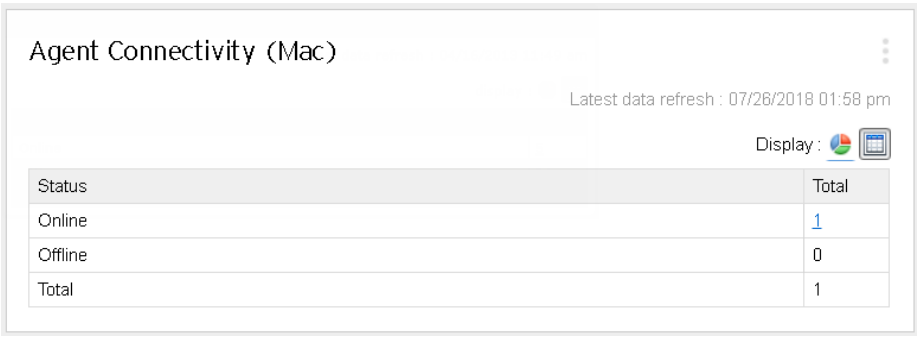


FIGURE 3-1. Agent Connectivity (Mac) widget displaying a table

If the number of agents for a particular status is 1 or more, you can click the number to view the agents in the Apex One (Mac) agent tree. You can initiate tasks on these agents or change their settings.

Agent Connectivity (Mac) Widget Presented as a Pie Chart

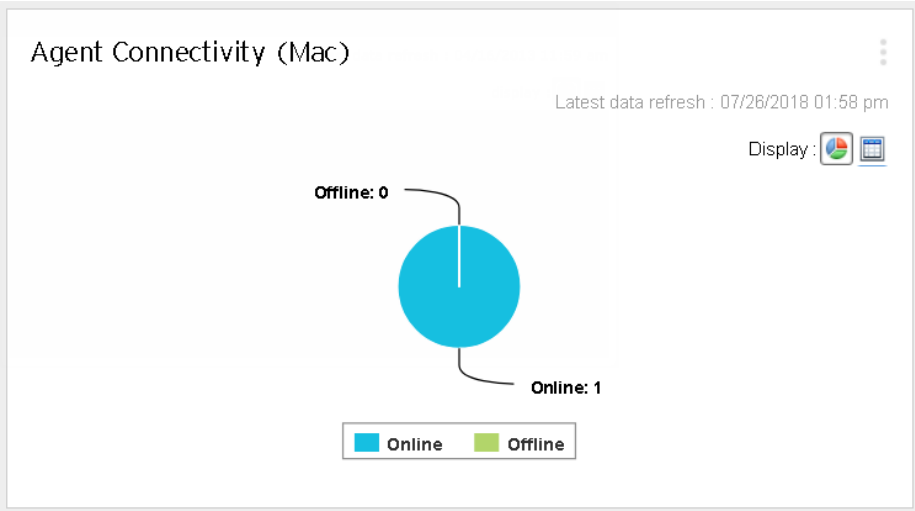
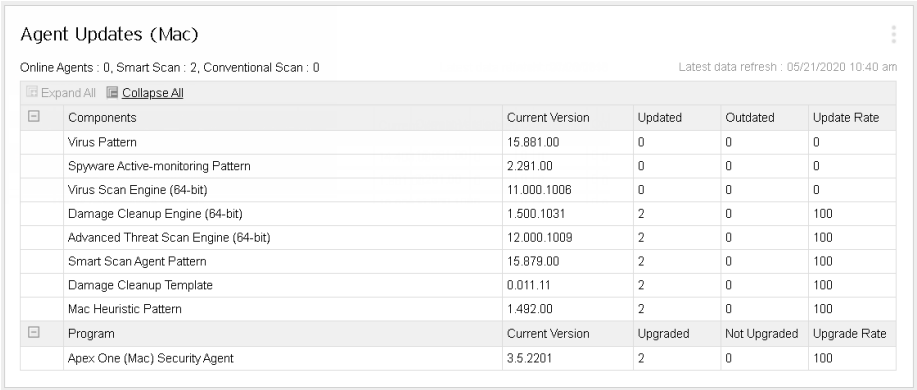


FIGURE 3-2. Agent Connectivity (Mac) widget displaying a pie chart

The pie chart shows the number of agents for each status but does not provide links to the Apex One (Mac) agent tree. Clicking a status separates it from, or re-connects it to, the rest of the pie.

Agent Updates (Mac) Widget

The Agent Updates (Mac) widget shows components and programs that protect endpoints from security risks.



Agent Updates (Mac)

Online Agents : 0, Smart Scan : 2, Conventional Scan : 0

Latest data refresh : 05/21/2020 10:40 am

Expand All | Collapse All

Components	Current Version	Updated	Outdated	Update Rate
Virus Pattern	15.881.00	0	0	0
Spyware Active-monitoring Pattern	2.291.00	0	0	0
Virus Scan Engine (64-bit)	11.000.1006	0	0	0
Damage Cleanup Engine (64-bit)	1.500.1031	2	0	100
Advanced Threat Scan Engine (64-bit)	12.000.1009	2	0	100
Smart Scan Agent Pattern	15.879.00	2	0	100
Damage Cleanup Template	0.011.11	2	0	100
Mac Heuristic Pattern	1.492.00	2	0	100
Program	**Current Version**	**Upgraded**	**Not Upgraded**	**Upgrade Rate**
Apex One (Mac) Security Agent	3.5.2201	2	0	100

FIGURE 3-3. Agent Updates (Mac) widget

In this widget, you can:

- View the current version for each component.
- View the number of agents with outdated components under the **Outdated** column. If there are agents that need to be updated, click the number link to start the update.
- For the agent program, view the agents that have not been upgraded by clicking the number link.

Note

The links open the Apex One (Mac) server console, where you can perform additional tasks.

Security Risk Detections (Mac) Widget

The Security Risk Detections (Mac) widget shows the number of security risks and web threats.

If the number of infected endpoints is 1 or more, you can click the number to view the agents in the Apex One (Mac) agent tree. You can initiate tasks on these agents or change their settings.

Trend Micro Smart Protection

Trend Micro™smart protection is a next-generation cloud-client content security infrastructure designed to protect customers from security risks and web threats. It powers both local and hosted solutions to protect users whether they are on the network, at home, or on the go, using light-weight agents to access its unique in-the-cloud correlation of email, web and file reputation technologies, as well as threat databases. Customers' protection is automatically updated and strengthened as more products, services, and users access the network, creating a real-time neighborhood watch protection service for its users.

By incorporating in-the-cloud reputation, scanning, and correlation technologies, the Trend Micro smart protection solutions reduce reliance on conventional pattern file downloads and eliminate the delays commonly associated with desktop updates.

Smart Protection Services

Smart protection services include:

- **File Reputation Services**: File Reputation Services off-loads a large number of anti-malware signatures that were previously stored on agent endpoints to smart protection sources.
- **Web Reputation Services**: Web Reputation Services allows local smart protection sources to host URL reputation data that were previously hosted solely by Trend Micro. Both technologies ensure smaller bandwidth consumption when updating patterns or checking a URL's validity.

  For details, see *Web Reputation on page 7-2*.
- **Smart Feedback**: Trend Micro continues to harvest information sent from Trend Micro products worldwide to proactively determine each new threat.

For details, see *Smart Feedback on page 3-19*.

Smart Protection Sources

File Reputation Services and Web Reputation Services are delivered through **smart protection sources**, namely, **Trend Micro Smart Protection Network** and **Smart Protection Servers**.

Trend Micro Smart Protection Network is a globally scaled, Internet-based, infrastructure and is intended for users who do not have immediate access to their corporate network.

Smart Protection Servers are for users who have access to their local corporate network. Local servers localize smart protection services to the corporate network to optimize efficiency.

Smart Protection Source for External Security Agents

External agents, which are Security Agents that are unable to maintain a functional connection with the Apex One (Mac) or OfficeScan server, send Web Reputation queries to Smart Protection Network. Internet connection is required to send queries successfully.

Go to the Web Reputation Services screen and enable Web Reputation policy for external agents. For the detailed steps, see *Configuring Web Reputation Settings on page 7-3*.

Smart Protection Sources for Internal Security Agents

Internal agents, which are Security Agents that maintain a functional connection with the Apex One (Mac) or OfficeScan server, can send queries to either Smart Protection Server or Smart Protection Network.

Source	Details
Smart Protection Servers	Configure Smart Protection Servers as source if you have privacy concerns and want to keep Web Reputation queries within the corporate network.
Smart Protection Network	Configure Smart Protection Network as source if you do not have the resources required to set up and maintain Smart Protection Servers.

Smart Protection Servers as Source for Internal Security Agents

With this option, Apex One (Mac) Security Agents send queries to Smart Protection Servers configured for Apex One or OfficeScan Security Agents.

Note

If your Apex One (Mac) server is installed with OfficeScan, upgrade OfficeScan to Apex One version 2019 or later.

If your OfficeScan version is XG or later, read the following guidelines to allow Security Agents to send queries to Smart Protection Servers successfully:

1. Set up the smart protection environment, if you have not done so. For instructions and guidelines on setting up the environment, refer to the OfficeScan documentation.
2. On the web console for the OfficeScan server, go to the Web Reputation Settings screen and enable the option **Send queries to Smart Protection Servers**. For the detailed steps, see *Configuring Web Reputation Settings on page 7-3*.

   Important

   If this option is enabled from Apex Central or Control Manager Policy Management and then deployed to Apex One (Mac) server installed with OfficeScan, the setting will not take effect and the option will remain disabled.
3. Be sure that Smart Protection Servers are available. If all Smart Protection Servers are unavailable, agents do not send queries to Smart Protection Network, leaving endpoints vulnerable to threats.
4. Be sure to update Smart Protection Servers regularly so that protection remains current.

Smart Protection Network as Source for Internal Agents

Internet connection is required to send queries to Smart Protection Network successfully.

To configure Smart Protection Network as source for internal agents, go to the Web Reputation Services screen and enable Web Reputation policy for internal agents. Be sure not to select the option **Send queries to Smart Protection Servers**. For the detailed steps, see *Configuring Web Reputation Settings on page 7-3*.

Smart Feedback

Trend Micro Smart Feedback provides continuous communication between Trend Micro products and its 24/7 threat research centers and technologies. Each new threat identified through every single customer's routine reputation check automatically updates all Trend Micro threat databases, blocking any subsequent customer encounters of a given threat.

By continuously processing the threat intelligence gathered through its extensive global network of customers and partners, Trend Micro delivers automatic, real-time protection against the latest threats and provides "better together" security, much like an automated neighborhood watch that involves the community in the protection of others. Because the gathered threat information is based on the reputation of the communication source, not on the content of the specific communication, the privacy of a customer's personal or business information is always protected.

Samples of information sent to Trend Micro:

- File checksums
- File information, including sizes and paths
- Names of executable files

You can terminate your participation to the program anytime from the web console.

Tip

You do not need to participate in Smart Feedback to protect your endpoints. Your participation is optional and you may opt out at any time. Trend Micro recommends that you participate in Smart Feedback to help provide better overall protection for all Trend Micro customers.

For more information on the Smart Protection Network, visit:

http://www.smartprotectionnetwork.com

Chapter 4

Installing the Security Agent

This chapter describes Apex One (Mac) Security Agent installation requirements and procedures.

For details on upgrading the Security Agent, see *Upgrading the Server and Security Agents on page 9-4*.

Agent Installation Requirements

The following are the requirements for installing the Security Agent on a Mac endpoint.

TABLE 4-1. Security Agent installation requirements

RESOURCE	REQUIREMENT
Operating system	• macOS™ Sequoia 15 • macOS™ Sonoma 14 • macOS™ Ventura 13 • macOS™ Monterey 12 • macOS™ Big Sur 11

Hardware	• **Processor**:
	  • Intel® Core
	  • Apple® Silicon
	• **RAM**: 2GB minimum
	• **Available disk space**: 512MB minimum

Resource	Requirement

Server-agent communication	• SSL port (Used by the Endpoint Sensor feature. The same SSL port number configured on the Apex One server.)
	• Listening port:
	  • For Security Agent version 3.5.3xxx or later: 4343
	
	Important
	Make sure the listening port is the same as configured on the Apex One server.
	
	If you plan to update the listening port, do so before installing Security Agents. If you have installed Security Agents and then make changes, Security Agents will lose connection with the server and the only way to re-establish connection is to re-deploy the Security Agents.
	
	For more information, see *Configuring Agent-Server Communication Settings on page 9-14*.
	
	  • For Security Agent version 3.5.2xxx or earlier: 61617

Others	• Access to *.trendmicro.com • If required, proxy server settings for Internet connection

Agent Installation Methods and Setup Files

You can install the Security Agent using one of the following ways:

- Install on a single endpoint by launching the installation package (`tmsminstall.zip`) on the endpoint
- Install on several endpoints by deploying an operating system image that includes the Security Agent. After installation, the Security Agent automatically registers to the Apex One (Mac) server.

Important

Include the TMMakeGoldenImage tool in the master operating system image to resolve the issue of duplicate Security Agent IDs on the Apex One (Mac) server. Obtain the tool and follow the procedure on the following web site:

https://success.trendmicro.com/dcx/s/solution/1107539-deploying-tmsm-client-using-a-cloned-mac-image-in-version-2-0-3-0-or-apex-one-mac?language=en_US

Note

To upgrade Security Agents, see *Upgrading the Server and Security Agents on page 9-4*.

Obtain the necessary agent installation package from the Apex One (Mac) server and copy it to the endpoint.

There are several ways to obtain the package:

- On the Apex One (Mac) web console, navigate to **Agents** > **Agent Setup Files** and click a link under **Agent Installation File**.

  Note

  The links to the Security Agent uninstallation packages are also available on this screen. Use these packages to remove the Security Agent program from endpoints. Choose the package according to the version of the Security Agent program that you wish to remove.

  For information on uninstalling the Apex One (Mac) Security Agent, see *Agent Uninstallation on page 4-17*.

- Navigate to <*Server installation folder*>`TMSM_HTML\ActiveUpdate\ClientInstall\`.
- From the Apex Central web console

For more information, see the *Trend Micro Apex Central Administrator's Guide*.

Installing on a Single Endpoint

The process of installing the Apex One (Mac) Security Agent on a single endpoint is similar to the installation process for other Mac software.

During the installation, users may be prompted to allow connections to **iCoreService**, which is used to register the Security Agent to the server. Instruct users to allow the connection when prompted.

Procedure

1. Check for and uninstall any security software on the endpoint.
2. Obtain the agent installation package `tmsminstall.zip`.

   For information on obtaining the package, see *Agent Installation Methods and Setup Files on page 4-3*.
3. Copy `tmsminstall.zip` on the endpoint and then launch it using a built-in archiving tool, such as Archive Utility.

   WARNING!

   The files on `tmsminstall.zip` may become corrupted if users launch it using archiving tools not built-in on the Mac.

   To launch `tmsminstall.zip` from Terminal, use the following command:

   ```
   ditto -xk <tmsminstall.zip file path> <destination folder>
   ```

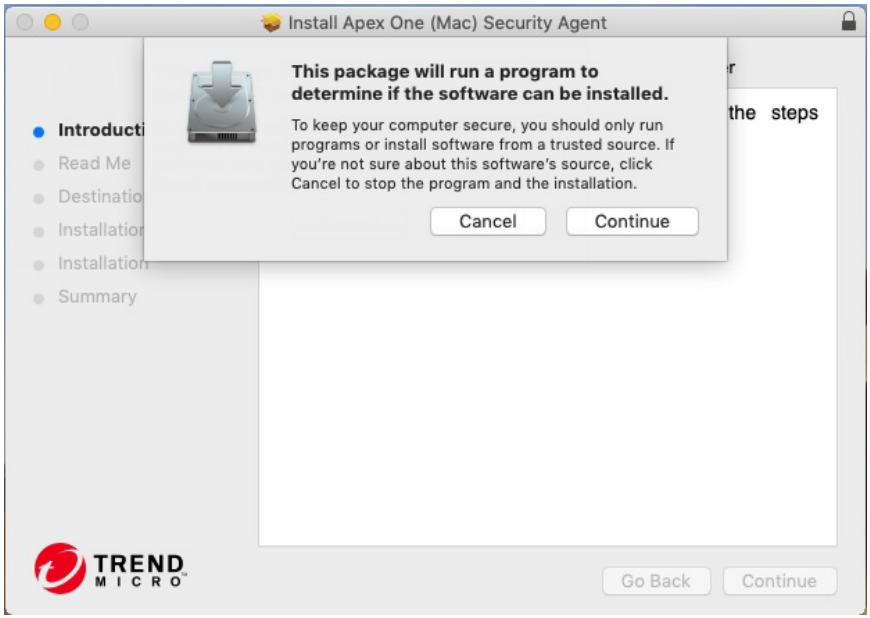
   For example:

   ```
   ditto -xk users/mac/Desktop/tmsminstall.zip users/mac/
   Desktop
   ```

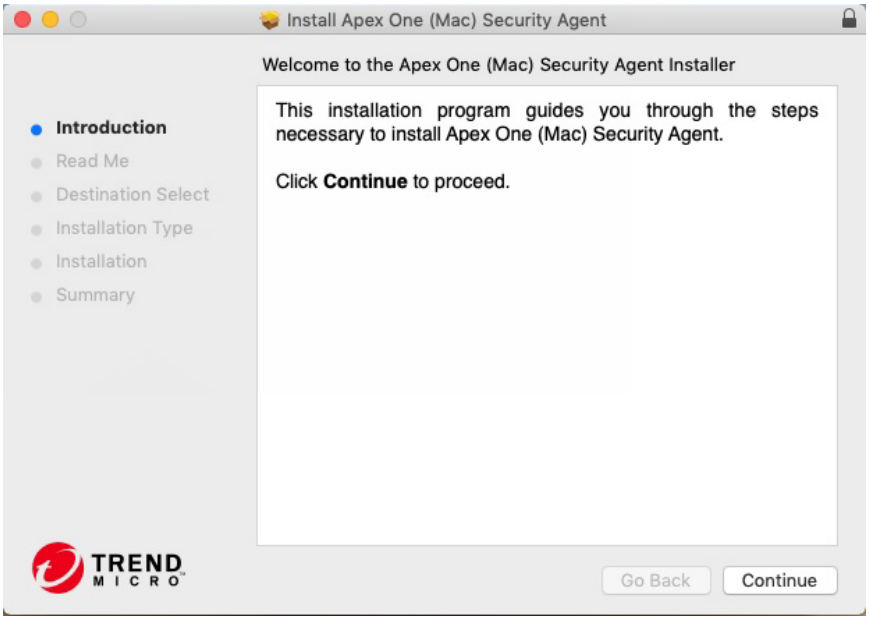
Launching `tmsminstall.zip` creates a new folder `tmsminstall`.

4. Open the `tmsminstall` folder and launch `tmsminstall.pkg`.

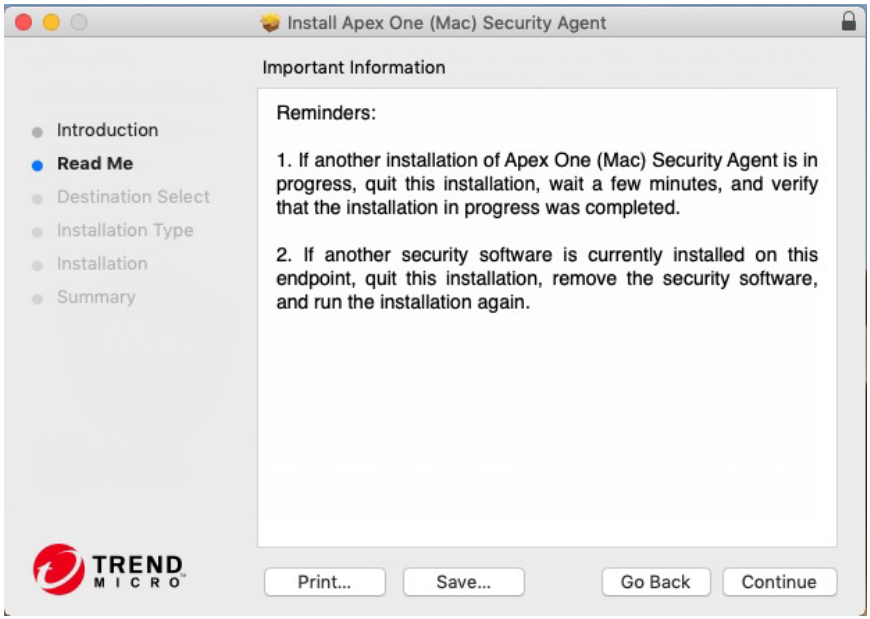
5. When a message prompting you to continue with installation displays, click **Continue**.



6. On the Introduction screen, click **Continue** to proceed.



7. Read the reminders and click **Continue**.

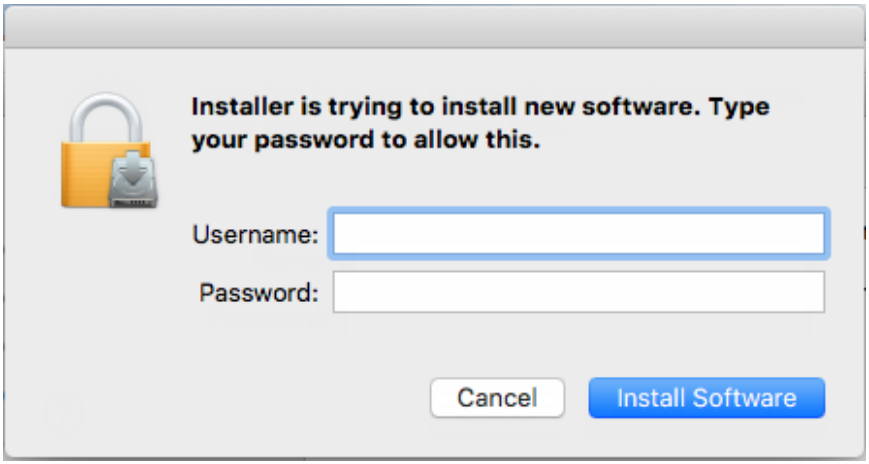


8. On the Installation Type screen, click **Install**.

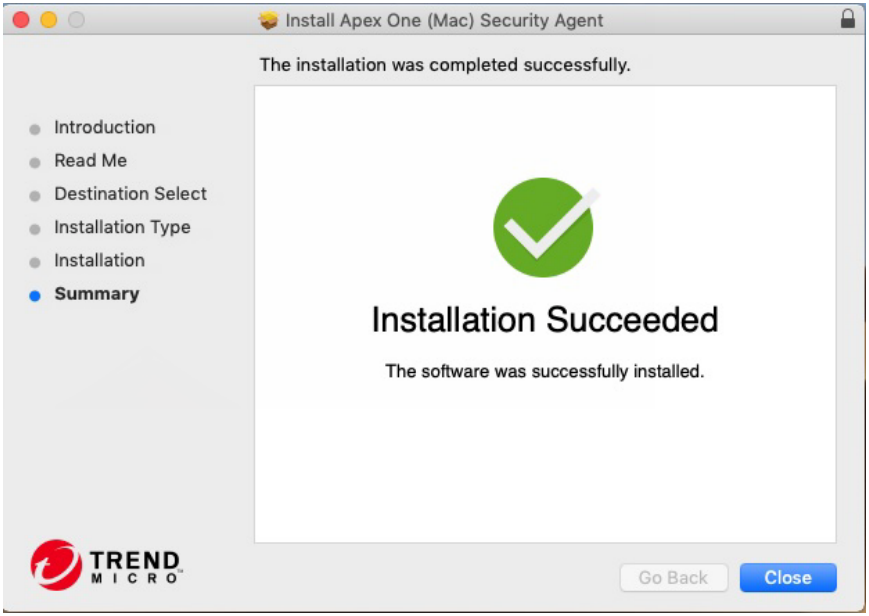
9. Fill in the **Name** and **Password** fields to begin the installation process.

Note

Specify the name and password for an account with administrative rights on the endpoint.



10. If the installation was successful, click **Close** to finish the installation process.



The Security Agent automatically registers to the server where the agent installation package was obtained. The Security Agent also updates for the first time.

What to do next

Perform agent post-installation tasks. For details, see *Agent Post-installation on page 4-11*.

Agent Post-installation

Procedure

1. If this is the first time you install the Security Agent on an endpoint running a supported macOS™ version, the system displays the setup wizard that prompts you to allow the required permissions for the Security Agent to function. Follow the on-screen instruction to complete the settings.

   The following describes the complete procedure. The setup wizard automatically skips the permission settings that are not required for your macOS™ version.

   For macOS 15:

   a. Click **Open Login Items & Extensions** or access the Apple menu and go to **System Settings** > **General** > **Login Items & Extensions**.

   b. Scroll down to the **Extensions** > **Endpoint Security Extensions** section.

   c. Click the **(i)** button on the right and turn on the **iCore Service**.

   d. Provide your macOS administrator password and click **OK**.

   e. Click **Done**.

   f. Look for **Network Extensions** and repeat Steps c to e.

   g. If prompted, click **Allow** to allow the Security Agent to filter network content and click **Continue**.

h. Click **Open Full Disk Access** or access the Apple menu and go to **System Settings** > **Privacy & Security** > **Full Disk Access**.

i. Click **Open File Location** and locate the `com.trendmicro.icore.es.systemextension` file; then, drag and drop the file into the Full Disk Access table.

j. Click **Open File Location** and drag and drop `Apex One (Mac) Security Agent` from the Applications folder into the Full Disk Access table, click **Later** on the screen that appears.

k. Click **Open File Location** and locate the `iCore Service` file; then, drag and drop the file into the Full Disk Access table.

l. Click the toggle switch to turn on the following apps:

- iCore Service
- Apex One (Mac) Security Agent
- Trend Micro Extension (if available)

m. Click **Continue**.

n. Restart the computer to make the changes take effect.

For macOS 13 and 14:

a. Click **Open Privacy & Security** or access the Apple menu and go to **System Settings** > **Privacy & Security**.

b. Scroll to the **Security** section and click **Details**.

c. Provide your macOS administrator password and click **Unlock** or **Modify Settings** to make changes.

d. Click the toggle switch to turn on all iCore Service entries and click **OK**.

e. Click **Allow** to allow the Security Agent to filter network content.

f. Click **Continue**.

g. Click **Open Full Disk Access** or access the Apple menu and go to **System Settings** > **Privacy & Security** > **Full Disk Access**.

h. Click **Open File Location** and locate the `com.trendmicro.icore.es.systemextension` file; then, drag and drop the file into the Full Disk Access table.

i. Click **Open File Location** and drag and drop `Apex One (Mac) Security Agent` from the Applications folder into the Full Disk Access table, click **Later** on the screen that appears.

j. Click **Open File Location** and locate the `iCore Service` file; then, drag and drop the file into the Full Disk Access table.

k. Click the toggle switch to turn on the following apps:

- iCore Service
- Apex One (Mac) Security Agent
- Trend Micro Extension (if available)

l. Click **Continue**.

m. Restart the computer to make the changes take effect.

For macOS 11 and 12:

a. Click **Open Security & Privacy** or access the Apple menu and go to **System Preferences** > **Security & Privacy** > **General**.

b. Click the lock icon in the bottom left corner and provide your macOS administrator password to make changes.

c. Click **Allow** to install the Trend Micro certificate.

d. Click **Continue**.

e. On the **Security & Privacy** screen, click **Allow**.

f. Select all **Trend Micro Inc.** options and click **OK**.

g. Click **Allow** to allow the Security Agent to filter network content.

h. Click **Continue**.

i. On the **Security & Privacy** screen, select **Full Disk Access** from the list of services.

j. Click **Open File Location** and locate the `iCore Service` file; then, drag and drop the file into the Full Disk Access table.

k. Click **Open File Location** and drag and drop `Apex One (Mac) Security Agent` from the Applications folder into the Full Disk Access table.

l. Make sure the following apps are selected:

- iCore Service
- Apex One (Mac) Security Agent
- Trend Micro Extension (if available)

m. Click **Continue**.

n. Restart the computer to make the changes take effect.

2. The system displays an alert notification prompting you to install and enable the Trend Micro Toolbar for Mac extension. Complete the following steps for your web browser:

- Safari 17 and above:

  a. On the alert notification window, click **Enable Extension**.

     The configuration overview screen appears.

  b. Click **Open Safari Extensions**.

  c. Select the **Trend Micro Toolbar for Mac** option to enable the extension.

  d. In the Permissions section, click **Always Allow on Every Website...**.

  e. When asked whether to allow the extension on every website, click **Always Allow on Every Website**.

- Safari 16 and lower:

  a. On the alert notification window, click **Enable Extension**.

     The configuration overview screen appears.

b. Click **Open Safari Extensions**.

c. Select the **Trend Micro Toolbar for Mac** option to enable the extension.

- Firefox:

a. On the alert notification window, click **Enable Extension**.

The configuration overview screen appears.

b. Click **Open File Location** to locate `Trend Micro Toolbar for Mac extension.xpi` file; then, drag and drop the file into the Firefox window to install the file.

c. Click **Add** to install the Trend Micro Toolbar for Mac extension.

- (Required for macOS 11.0 and above) Google Chrome:

a. On the alert notification window, click **Enable Extension**.

The configuration overview screen appears.

b. Click **Open File Location** to locate and double-click `Trend Micro Toolbar For Mac (Chrome).mobileconfig` file.

c. Click **Open Profiles**.

d. On the Profiles screen, select `Trend Micro Toolbar for Mac (Chrome)` and click **Install ...**.

e. Click **Install**.

f. When prompted, type the macOS administrator password and click **OK**.

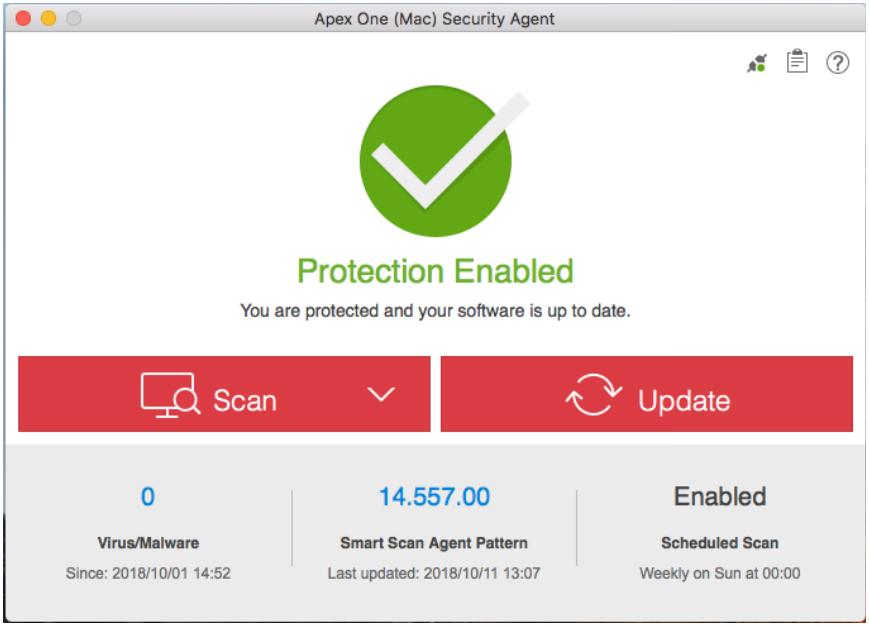
g. Restart Google Chrome to make the changes take effect.

3. Verify the following:

- The Security Agent icon () displays on the menu bar of the endpoint.
- The Apex One (Mac) Security Agent files are found under the <*Agent installation folder*>.

- The Security Agent appears on the web console's agent tree. To access the agent tree, click **Agent Management** on the main menu.

4. Update Apex One (Mac) components by clicking **Update** on the agent console. The Security Agent downloads components from the Apex One (Mac) server. See *Agent Updates on page 5-8* for details.



If the Security Agent cannot connect to the server, it downloads directly from the Trend Micro ActiveUpdate server. Internet connection is required to connect to the ActiveUpdate server.

5. To start a manual scan on the endpoint, click **Scan** and choose one of the following scan options:

   - **Quick Scan**: Scans areas of the endpoint typically targeted by security risks. The pattern files on the Security Agent contain information on the endpoint areas to scan.
   - **Custom Scan**: Scans the files or folders of your choice. Run custom scan on files or folders that you suspect to be infected.

- **Full Scan**: Scans all files, except encrypted and password-protected files.

What to do next

If there are problems with the Security Agent after installation, try uninstalling and then reinstalling the Security Agent.

Agent Uninstallation

Uninstall the Security Agent program only if you encounter problems with the program. Reinstall it immediately to keep the endpoint protected from security risks.

Procedure

1. Obtain the Security Agent uninstallation package (`tmsmuninstall.zip`) from the Apex One (Mac) server. On the Apex One (Mac) web console, navigate to **Agents** > **Agent Setup Files** and click the link under **Agent Uninstallation File**.
2. Copy and then launch the package on the endpoint.
3. Fill in the **Name** and **Password** fields to begin the uninstallation process.

   Note

   Specify the name and password for an account with administrative rights on the endpoint.

4. (For macOS 11.0 and above) Click **Continue** to remove the system extensions.
5. If the uninstallation was successful, click **Close** to finish the uninstallation process.

What to do next

Unregister the Security Agent from the server.

1. On the web console, click **Agent Management** and select the Security Agent that was uninstalled.
2. Click **Manage Agent Tree** > **Remove Group/Agent**.

Chapter 5

Keeping Protection Up-to-Date

This chapter describes Apex One (Mac) components and update procedures.

Components

Apex One (Mac) makes use of components to keep endpoints protected from the latest security risks. Keep these components up-to-date by running manual or scheduled updates.

In addition to the components, Security Agents also receive updated configuration files from the Apex One (Mac) server. Security Agents need the configuration files to apply new settings. Each time you modify Apex One (Mac) settings through the web console, the configuration files change.

Component	Description
Agent Program	The Security Agent program provides the actual protection from security risks.
Advanced Threat Scan Engine (Universal)	The Advanced Threat Scan Engine protects against viruses, malware, and exploits to vulnerabilities in software such as Java and Flash. Integrated with the Trend Micro Virus Scan Engine, the Advanced Threat Scan Engine employs signature-based, behavior-based, and aggressive heuristic detection.
Damage Cleanup Engine (Universal)	The Damage Cleanup Engine scans for and removes Trojans and Trojan processes.
Damage Cleanup Template	The Damage Cleanup Template is used by the Damage Cleanup Engine to identify Trojan files and processes so the engine can eliminate them.
Mac Heuristic Pattern	The Mac Heuristic Pattern is used by Smart Scan to identify malware targeting Mac platforms.
Smart Scan Agent Pattern	The pattern file that the Security Agent uses to identify threats. This pattern file is stored on the agent endpoint.
Spyware Active-monitoring Pattern	The Spyware Active-monitoring Pattern contains information that helps Apex One (Mac) identify spyware and grayware.

Component	Description
Virus Scan Engine (Universal)	At the heart of all Trend Micro products lies the scan engine, which was originally developed in response to early file-based computer viruses. The scan engine today is exceptionally sophisticated and capable of detecting different types of security risks, including spyware. The scan engine also detects controlled viruses that are developed and used for research. By storing the most time-sensitive information about security risks in the pattern files, Trend Micro minimizes the number of scan engine updates while keeping protection up-to-date. Nevertheless, Trend Micro periodically makes new scan engine versions available. Trend Micro releases new engines under the following circumstances: • Incorporation of new scanning and detection technologies into the software • Discovery of a new, potentially harmful security risk that the scan engine cannot handle • Enhancement of the scanning performance • Addition of file formats, scripting languages, encoding, and/or compression formats
Virus Pattern	The Virus Pattern contains information that helps Apex One (Mac) identify the latest virus/malware and mixed threat attack. Trend Micro creates and releases new versions of the Virus Pattern several times a week, and any time after the discovery of a particularly damaging virus/malware.

Update Overview

All component updates originate from the Trend Micro ActiveUpdate server. When updates are available, the Apex One (Mac) server downloads the updated components.

You can configure the Apex One (Mac) server to update from a source other than the Trend Micro ActiveUpdate server. To do this, you need to set up

a custom update source. For assistance in setting up this update source, contact your support provider.

The following table describes the different component update options for the Apex One (Mac) server and Security Agents:

TABLE 5-1. Server-Agent Update Options

UPDATE OPTION	DESCRIPTION
ActiveUpdate server  Apex One (Mac) server  Security Agents	The Apex One (Mac) server receives updated components from the Trend Micro ActiveUpdate server (or another update source if a custom source has been set up) and then deploys the components to Security Agents.
ActiveUpdate server  Security Agents	Security Agents receive updated components directly from the ActiveUpdate server if they cannot connect to the Apex One (Mac) server.

Server Update

The Apex One (Mac) server downloads the following components and deploys them to Security Agents:

- Virus Pattern
- Spyware Active-monitoring Pattern
- Virus Scan Engine (32-bit/64-bit)
- Damage Cleanup Engine (64-bit)
- Damage Cleanup Template
- Smart Scan Agent Pattern

- Apex One (Mac) Security Agent
- Mac Heuristic Pattern
- Advanced Threat Scan Engine (64-bit)

View the current versions of components on the web console's Summary screen, and determine the number of Security Agents with updated and outdated components.

If you use a proxy server to connect to the Internet, use the correct proxy settings to download updates successfully.

Configuring the Server Update Source

Configure the Apex One (Mac) server to download components from the Trend Micro ActiveUpdate server or from another source.

Note

If the server only has an IPv6 address, read the IPv6 limitations for server updates in *Pure IPv6 Server Limitations on page A-2*.

After the server downloads any available updates, it automatically notifies Security Agents to update their components. If the component update is critical, let the server notify the Security Agents at once by navigating to **Agents** > **Agent Management** > **Tasks** > **Update**.

Procedure

1. Navigate to **Updates** > **Update Source**.
2. Select the location from where you want to download component updates.
   - If you choose ActiveUpdate server:
     - Ensure that the Apex One (Mac) server has Internet connection.
     - If you are using a proxy server, test if Internet connection can be established using the proxy settings.

For details, see *Configuring Proxy Settings for Server Updates on page 5-6*.

- If you choose a custom update source:
  - Set up the appropriate environment and update resources for this update source.
  - Ensure that there is functional connection between the server computer and this update source. For assistance in setting up an update source, contact your support provider.
  - You can obtain updates from Trend Micro Apex Central by typing the Trend Micro Apex Central server address.

3. Click **Save**.

Configuring Proxy Settings for Server Updates

Configure the Apex One (Mac) server to use proxy settings when downloading updates from the Trend Micro ActiveUpdate server.

Note

If the server only has an IPv6 address, read the IPv6 limitations for proxy settings in *Pure IPv6 Server Limitations on page A-2*.

Procedure

1. Navigate to **Administration** > **External Proxy Settings**.
2. Select the check box to enable the use of a proxy server.
3. Specify the proxy server name or IPv4/IPv6 address and port number.
4. If the proxy server requires authentication, type the user name and password in the fields provided.
5. Click **Save**.

Server Update Methods

Update Apex One (Mac) server components manually or by configuring an update schedule.

- **Manual update**: When an update is critical, perform manual update so the server can obtain the updates immediately. See *Manually Updating the Server on page 5-8* for details.
- **Scheduled update**: The Apex One (Mac) server connects to the update source during the scheduled day and time to obtain the latest components. See *Scheduling Updates for the Server on page 5-7* for details.

After the server finishes an update, it immediately notifies agents to update.

Scheduling Updates for the Server

Configure the Apex One (Mac) server to regularly check its update source and automatically download any available updates. Using scheduled update is an easy and effective way of ensuring that protection against security risks is always current.

After the server finishes an update, it notifies agents to update.

Procedure

1. Navigate to **Updates** > **Scheduled Update**.
2. Select the components to update.
3. Specify the update schedule.

   For daily, weekly, and monthly updates, the period of time is the number of hours during which Apex One (Mac) will perform the update. Apex One (Mac) updates at any given time during this time period.

   For monthly updates, if you selected the 29th, 30th, or 31st day and a month does not have this day, Apex One (Mac) runs the update on the last day of the month.

4. Click **Save**.

Manually Updating the Server

Manually update the components on the Apex One (Mac) server after installing or upgrading the server and whenever there is an outbreak.

Procedure

1. Navigate to **Updates** > **Manual Update**.
2. Select the components to update.
3. Click **Update**.

   The server downloads the updated components.

   After the server finishes an update, it immediately notifies agents to update.

Agent Updates

To ensure that Security Agents stay protected from the latest security risks, update agent components regularly. Also update Security Agents with severely out-of-date components and whenever there is an outbreak. Components become severely out-of-date when the Security Agent is unable to update from the Apex One (Mac) server or the ActiveUpdate server for an extended period of time.

Agent Update Methods

There are several ways to update Security Agents.

Update Method	Description
Administrator-initiated manual update	Initiate an update from the following web console screens: • Agent Management screen. For details, see *Launching Agent Update from the Agent Management Screen on page 5-13*. • Summary screen. For details, see *Launching Agent Update from the Summary Screen on page 5-13*.
Automatic update	• After the server finishes an update, it immediately notifies Security Agents to update. For details, see *Configuring Agent Automatic Update on page 5-10*. • Updates can run according to the schedule that you configured. You can configure a schedule that applies to one or several Security Agents and domains, or to all the Security Agents that the server manages. For details, see *Configuring Agent Update Settings on page 5-11*.
User-initiated manual update	Users launch the update from their endpoints.

Agent Update Source

By default, Security Agents download components from the Apex One (Mac) server. In addition to components, Security Agents also receive updated configuration files when updating from the Apex One (Mac) server. Security Agents need the configuration files to apply new settings. Each time you modify Apex One (Mac) settings on the web console, the configuration files change.

Before updating the Security Agents, check if the Apex One (Mac) server has the latest components.

For information on how to update the Apex One (Mac) server, see *Server Update on page 5-4*.

Configure one, several, or all Security Agents to download from the Trend Micro ActiveUpdate server if the Apex One (Mac) server is unavailable.

For details, see *Configuring Agent Update Settings on page 5-11*.

Note

If a Security Agent only has an IPv6 address, read the IPv6 limitations for agent updates in *Pure IPv6 Agent Limitations on page A-3*.

Agent Update Notes and Reminders

- Security Agents can use proxy settings during an update. Proxy settings are configured on the agent console.
- During an update, the Security Agent icon on the menu bar of the endpoint indicates that the product is updating. If an upgrade to the Security Agent program is available, Security Agents update and then upgrade to the latest program version or build. Users cannot run any task from the console until the update is complete.
- Access the Summary screen to check if all Security Agents have been updated.

Configuring Agent Automatic Update

Automatic update relieves you of the burden of notifying all Security Agents to update and eliminates the risk of endpoints not having up-to-date components.

In addition to components, Apex One (Mac) Security Agents also receive updated configuration files during automatic update. Security Agents need the configuration files to apply new settings. Each time you modify Apex One (Mac) settings through the web console, the configuration files change.

The Apex One (Mac) server can notify online Security Agents to update components after it downloads the latest components, and offline Security Agents when they restart and then connect to the server. Optionally initiate **Scan Now** (manual scan) on Trend Micro Apex One (Mac) Security Agent endpoints after the update.

1. Click **Updates** > **Agent Automatic Update**.
2. Select the options.

TABLE 5-2. Event-triggered Update

OPTION	DESCRIPTION
Initiate component update on agents immediately after the server downloads a new component	The Apex One (Mac) server notifies Security Agents to update as soon as it completes an update.
Let agents initiate component update after restarting and connecting to the server	Any Security Agent that missed an update immediately downloads components when it establishes connection with the server. The Security Agent may miss an update if it is offline or if the endpoint where it is installed is not up and running.

Note

By default, update notifications are retained on the Trend Micro Apex One (Mac) server for up to seven days. Offline Security Agents will receive update notifications if the Security Agents are online within the seven-day period.

3. Click **Save**.

Configuring Agent Update Settings

For a detailed explanation of agent updates, see *Agent Updates on page 5-8*.

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, click the root icon () to include all Security Agents or select specific groups or Security Agents.
3. Click **Settings** > **Update Settings**.
4. Select **Agents download updates from the Trend Micro ActiveUpdate server when unable to connect to the Apex One (Mac) server** to allow

external Security Agents to download updates from the Trend Micro ActiveUpdate server.

Note

If a Security Agent only has an IPv6 address, read the IPv6 limitations for agent updates in *Pure IPv6 Agent Limitations on page A-3*.

5. Select **Agents can update the components but not upgrade the agent program or install hot fixes** to allow component updates to proceed but prevents Apex One (Mac) Security Agent upgrade.
6. To set up scheduled updates, complete the following steps:
   a. Select **Enable scheduled update**.
   b. Configure the schedule.
   c. If you select **Daily** or **Weekly**, specify the time of the update and the time period the Apex One (Mac) server will notify Security Agents to update components. For example, if the start time is 12pm and the time period is 2 hours, the server randomly notifies all online Security Agents to update components from 12pm until 2pm. This setting prevents all online Security Agents from simultaneously connecting to the server at the specified start time, significantly reducing the amount of traffic directed to the server.
7. If you selected one or more groups or Security Agents on the agent tree, click **Save** to apply settings to the groups or Security Agents. If you selected the root icon (), choose from the following options:
   - **Apply to All Agents**: Applies settings to all existing Security Agents and to any new agent added to an existing/future group. Future groups are groups not yet created at the time you configure the settings.
   - **Apply to Future Groups Only**: Applies settings only to Security Agents added to future groups. This option will not apply settings to new Security Agents added to an existing group.

Launching Agent Update from the Summary Screen

For other agent update methods, see *Agent Updates on page 5-8*.

Procedure

1. Click **Summary** in the main menu.
2. Go to the **Update Status** section and click the link under the **Outdated** column.

   The agent tree opens, showing all the Security Agents that require an update.
3. Select the Security Agents that you want to update.
4. Click **Tasks** > **Update**.

   Security Agents that receive the notification start to update. On endpoints, the Apex One (Mac) icon on the menu bar indicates that the product is updating. Users cannot run any task from the console until the update is complete.

Launching Agent Update from the Agent Management Screen

For other agent update methods, see *Agent Updates on page 5-8*.

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, click the root domain icon () to include all Security Agents or select specific groups or Security Agents.
3. Click **Tasks** > **Update**.

   Security Agents that receive the notification start to update. On endpoints, the Apex One (Mac) icon on the menu bar indicates that the product is updating. Users cannot run any task from the console until the update is complete.

Chapter 6

Protecting Endpoints from Security Risks

This chapter describes how to protect endpoints from security risks using file-based scanning.

About Security Risks

Security risk includes viruses, malware, spyware, and grayware. Apex One (Mac) protects endpoints from security risks by scanning files and then performing a specific action for each security risk detected. An overwhelming number of security risks detected over a short period of time signals an outbreak, which Apex One (Mac) can help contain by enforcing outbreak prevention policies and isolating infected endpoints until they are completely risk-free. Notifications and logs help you keep track of security risks and alert you if you need to take immediate action.

Viruses and Malware

Tens of thousands of virus/malware exist, with more being created each day. Endpoint viruses today can cause a great amount of damage by exploiting vulnerabilities in corporate networks, email systems and websites.

Apex One (Mac) protects endpoints from the following virus/malware types:

Virus/Malware Types	Description
Joke program	A joke program is a virus-like program that often manipulates the appearance of things on an endpoint monitor.
Trojan horse program	A Trojan horse is an executable program that does not replicate but instead resides on endpoints to perform malicious acts, such as opening ports for hackers to enter. This program often uses Trojan ports to gain access to endpoints. An application that claims to rid an endpoint of viruses when it actually introduces viruses to the endpoint is an example of a Trojan program.

Virus/Malware Types	Description
Virus	A virus is a program that replicates. To do so, the virus needs to attach itself to other program files and execute whenever the host program executes. • **Boot sector virus**: A virus that infects the boot sector of a partition or a disk • **Java malicious code**: Operating system-independent virus code written or embedded in Java • **Macro virus**: A virus encoded as an application macro and often included in a document • **VBScript, JavaScript, or HTML virus**: A virus that resides on web pages and downloads through a browser • **Worm**: A self-contained program or set of programs able to spread functional copies of itself or its segments to other endpoints, often through email
Test virus	A test virus is an inert file that is detectable by virus scanning software. Use test viruses, such as the EICAR test script, to verify that the antivirus installation scans properly.
Packer	Packers are compressed and/or encrypted Windows or Linux™ executable programs, often a Trojan horse program. Compressing executables makes packers more difficult for antivirus products to detect.
Probable virus/ malware	Suspicious files that have some of the characteristics of virus/malware are categorized under this virus/malware type. For details about probable virus/malware, see the following page on the Trend Micro online Virus Encyclopedia: http://www.trendmicro.com/vinfo/virusencyclo/
Others	"Others" include viruses/malware not categorized under any of the virus/malware types.

Spyware and Grayware

Spyware and grayware refer to applications or files not classified as viruses or malware, but can still negatively affect the performance of the endpoints

on the network. Spyware and grayware introduce significant security, confidentiality, and legal risks to an organization. Spyware/Grayware often performs a variety of undesired and threatening actions such as irritating users with pop-up windows, logging user keystrokes, and exposing endpoint vulnerabilities to attack.

Apex One (Mac) protects endpoints from the following spyware/grayware types:

Spyware/ Grayware Types	Description
Spyware	Spyware gathers data, such as account user names, passwords, credit card numbers, and other confidential information, and transmits it to third parties.
Adware	Adware displays advertisements and gathers data, such as web surfing preferences, used for targeting future advertising at the user.
Dialer	A dialer changes client Internet settings and can force an endpoint to dial pre-configured phone numbers through a modem. These are often pay-per-call or international numbers that can result in a significant expense for an organization.
Hacking tool	A hacking tool helps hackers enter an endpoint.
Remote access tool	A remote access tool helps hackers remotely access and control an endpoint.
Password cracking application	This type of application helps decipher account user names and passwords.
Others	"Others" include potentially malicious programs not categorized under any of the spyware/grayware types.

Scan Method Types

Apex One (Mac) Security Agents can use one of two scan methods when scanning for security risks. The scan methods are smart scan and conventional scan.

- **Smart Scan**

Security Agents that use smart scan are referred to as “smart scan agents” in this document. Smart scan agents benefit from local scans and in-the-cloud queries provided by File Reputation Services.

- **Conventional Scan**

  Security Agents that do not use smart scan are called “conventional scan agents”. A conventional scan agent stores all Apex One (Mac) components on the agent endpoint and scans all files locally.

Default Scan Method

The default scan method for fresh Apex One (Mac) server installations is smart scan.

Scan Methods Compared

The following table provides a comparison between the two scan methods.

TABLE 6-1. Conventional Scan and Smart Scan Compared

BASIS OF COMPARISON	CONVENTIONAL SCAN	SMART SCAN
Availability	Available in this Apex One (Mac) version.	Available in this Apex One (Mac) version.
Scanning behavior	The conventional scan agent performs scanning on the local endpoint.	• The smart scan agent performs scanning on the local endpoint. • If the Security Agent cannot determine the risk of the file during the scan, the Security Agent verifies the risk by sending a scan query to a smart protection source. • The Security Agent "caches" the scan query result to improve the scan performance.

Basis of Comparison	Conventional Scan	Smart Scan
Components in use and updated	All components available on the update source, except the Mac Heuristic Pattern and Smart Scan Agent Pattern.	All components available on the update source, except the Virus Pattern and Spyware Active-monitoring Pattern.
Typical update source	Apex One (Mac) server	Apex One (Mac) server

Changing the Scan Method

Procedure

1. Go to **Agents** > **Agent Management**.
2. In the agent tree, click the root icon ( ) to include all Security Agents or select specific groups or Security Agents.
3. Click **Settings** > **Scan Methods**.
4. Select **Conventional scan** or **Smart scan**.
5. If you selected one or more groups or Security Agent in the agent tree, click **Save**. If you clicked the root icon, choose from the following options:
   - **Apply to All Agents**: Applies settings to all existing Security Agents and to any new Security Agent added to an existing/future group. Future groups are groups not yet created at the time you configured the settings.
   - **Apply to Future Groups Only**: Applies settings only to Security Agents added to future groups. This option will not apply settings to new Security Agent added to an existing group.

Switching from Smart Scan to Conventional Scan

The following table provides other considerations when switching Security Agents to conventional scan.

TABLE 6-2. Considerations When Switching to Conventional Scan

CONSIDERATION	DETAILS
Number of Security Agents to switch	Switching a relatively small number of Security Agents at a time allows efficient use of the Trend Micro Apex One (Mac) server and Smart Protection Server resources. These servers can perform other critical tasks while Security Agents change their scan methods.
Timing	When switching back to conventional scan, Security Agents will likely download the full version of the Virus Pattern and Spyware-active Monitoring Pattern from the Trend Micro Apex One (Mac) server. These pattern files are only used by conventional scan agents. Consider switching during off-peak hours to ensure the download process finishes within a short amount of time. Also consider switching when no Security Agent is scheduled to update from the server.
Agent tree settings	Scan method is a granular setting that can be set on the root, domain, or individual Security Agent level. When switching to conventional scan, you can: • Create a new group and assign conventional scan as its scan method. Any Security Agent you move to this group will use conventional scan. When you move the Security Agent, enable the setting **Apply settings of new group to selected agent(s)**. • Select a group and configure it to use conventional scan. Smart scan agents belonging to the group will switch to conventional scan. • Select one or several smart scan agents from a group and then switch them to conventional scan. **Note** Any changes to the group's scan method overrides the scan method you have configured for individual Security Agents.

Switching from Conventional Scan to Smart Scan

If you are switching Security Agents from conventional scan to smart scan, ensure that you have set up Smart Protection Services on the Apex One server. For details, see the Apex One documentation.

The following table provides other considerations when switching Security Agent to smart scan.

TABLE 6-3. Considerations When Switching to Smart Scan

CONSIDERATION	DETAILS
Product license	To use smart scan, ensure that you have activated the licenses for the following services on the Apex One server and that the licenses are not expired: • Antivirus • Web Reputation and Anti-spyware
Apex One (Mac) server	Ensure that Security Agents can connect to the Apex One (Mac) server. Only online Security Agents will be notified to switch to smart scan. Offline Security Agents get notified when they become online. Roaming Security Agents are notified when they become online or, if the Security Agent has scheduled update privileges, when scheduled update runs. Also verify that the Trend Micro Apex One (Mac) server has the latest components because smart scan agents need to download the Mac Heuristic Pattern and Smart Scan Agent Pattern from the server. To update components, see *Server Update on page 5-4*.
Number of Security Agents to switch	Switching a relatively small number of Security Agents at a time allows efficient use of Apex One (Mac) server resources. The Apex One (Mac) server can perform other critical tasks while Security Agents change their scan methods.

Consideration	Details
Timing	When switching to smart scan for the first time, Security Agents need to download the full version of the Mac Heuristic Pattern and Smart Scan Agent Pattern from the Apex One (Mac) server. The Smart Scan Pattern is only used by smart scan agents. Consider switching during off-peak hours to ensure the download process finishes within a short amount of time. Also consider switching when no Security Agent is scheduled to update from the server.
Agent tree settings	Scan method is a granular setting that can be set on the root, group, or individual agent level. When switching to smart scan, you can: • Create a new group and assign smart scan as its scan method. Any Security Agent you move to this group will use smart scan. When you move the Security Agent, enable the setting **Apply settings of new group to selected agent(s)**. • Select a group and configure it to use smart scan. Conventional scan agents belonging to the group will switch to smart scan. • Select one or several conventional scan agents from a group and then switch them to smart scan. **Note** Any changes to the group's scan method overrides the scan method you have configured for individual Security Agents.

Consideration	Details
IPv6 support	Smart scan agents send scan queries to smart protection sources. A pure IPv6 smart scan agent cannot send queries directly to pure IPv4 sources, such as: • Smart Protection Server 3.0 (integrated or standalone) **Note** IPv6 support for Smart Protection Server starts in version 2.5. • Trend Micro Smart Protection Network Similarly, a pure IPv4 smart scan agent cannot send queries to pure IPv6 Smart Protection Servers. A dual-stack proxy server that can convert IP addresses, such as DeleGate, is required to allow smart scan agents to connect to the sources.

Scan Types

Apex One (Mac) provides the following scan types to protect endpoints from security risks:

Scan Type	Description
Real-time Scan	Automatically scans a file on the endpoint as it is received, opened, downloaded, copied, or modified See *Real-time Scan on page 6-11*.
Manual Scan	A user-initiated scan that scans a file or a set of files requested by the user See *Manual Scan on page 6-14*.
Scheduled Scan	Automatically scans files on the endpoint based on the schedule configured by the administrator See *Scheduled Scan on page 6-17*.

Scan Type	Description
Scan Now	An administrator-initiated scan that scans files on one or several target endpoints See *Scan Now on page 6-22*.

Real-time Scan

Real-time Scan is a persistent and ongoing scan. Each time a file is received, opened, downloaded, copied, or modified, Real-time Scan scans the file for security risks. If Apex One (Mac) does not detect a security risk, the file remains in its location and users can proceed to access the file. If Apex One (Mac) detects a security risk, it displays a notification message, showing the name of the infected file and the specific security risk.

Configure and apply Real-time Scan settings to one or several Security Agents and groups, or to all Security Agents that the server manages.

Configuring Real-time Scan Settings

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, click the root icon ( ) to include all Security Agents or select specific groups or Security Agents.
3. Click **Settings** > **Real-time Scan Settings**.
4. Select the check box to enable Real-time Scan.
5. Click the **Target** tab to configure file activities and scan settings.

   For more information, see *Real-time Scan: Target Tab on page 6-12*.
6. Click the **Action** tab to configure the scan actions Apex One (Mac) performs on detected security threats.

   For more information, see *Real-time Scan: Action Tab on page 6-13*.

7. If you selected one or more groups or Security Agents on the agent tree, click **Save** to apply settings to the groups or Security Agents. If you selected the root icon (), choose from the following options:

   - **Apply to All Agents**: Applies settings to all existing Security Agents and to any new Security Agent added to an existing/future group. Future groups are groups not yet created at the time you configure the settings.
   - **Apply to Future Groups Only**: Applies settings only to Security Agents added to future groups. This option will not apply settings to new Security Agents added to an existing group.

Real-time Scan: Target Tab

Procedure

1. Under **User Activity on Files**, choose activities on files that will trigger Real-time Scan. Select from the following options:

   - **Scan files being created/modified**: Scan new files introduced into the endpoint (for example, after downloading a file) or files being modified
   - **Scan files being retrieved/executed**: Scan files as they are opened
   - **Scan files being created/modified and retrieved/executed**
   - **Scan files being created/modified/executed**

   For example, if the third option is selected, a new file downloaded to the endpoint will be scanned and stays in its current location if no security risk is detected. The same file will be scanned when a user opens the file and, if the user modified the file, before the modifications are saved.

2. Under **Scan Settings**, select one or more from the following options:

   - **Scan compressed files**: Scan individual files within an archive file

     For more information, see *Supported Compressed File Types on page 6-22*.

- **Scan network drive**: Scan directories physically located on other endpoints, but mapped to the local endpoint

Real-time Scan: Action Tab

On the **Actions** tab, configure the scan actions Apex One (Mac) performs on detected security threats.

Procedure

1. Under **Action**, specify the scan actions.

Option	Description
Use ActiveAction	ActiveAction is a set of pre-configured scan actions for different types of security risks. If you are unsure which scan action is suitable for a certain type of security risk, Trend Micro recommends using ActiveAction. ActiveAction settings are constantly updated in the pattern files to protect endpoints against the latest security risks and the latest methods of attacks.
Use the same action for all security risk types	Select this option if you want the same action performed on all types of security risks, except probable virus/malware. For Probable Virus/Malware, the action is always "Pass". If you choose "Clean" as the first action, select a second action that Apex One (Mac) performs if cleaning is unsuccessful. If the first action is not "Clean", no second action is configurable. For details about scan actions, see *Scan Actions on page 6-23*.

2. Select **Display a notification message on the agent endpoint when virus/malware is detected** to display a notification message when Apex One (Mac) detects a security risk during Real-time Scan.

Manual Scan

Manual Scan is an on-demand scan and starts immediately after a user runs the scan on the agent console. The time it takes to complete scanning depends on the number of files to scan and the endpoint's hardware resources.

Configure and apply Manual Scan settings to one or several Security Agents and groups, or to all Security Agents that the server manages.

Configuring Manual Scan Settings

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, click the root icon ( ) to include all Security Agents or select specific groups or Security Agents.
3. Click **Settings** > **Manual Scan Settings**.
4. Click the **Target** tab to configure the general scan and CPU usage settings.

   For more information, see *Manual Scan: Target Tab on page 6-15*.
5. Click the **Action** tab to configure the scan actions Apex One (Mac) performs on detected security threats.

   For more information, see *Manual Scan: Action Tab on page 6-16*.
6. If you selected one or more groups or Security Agents on the agent tree, click **Save** to apply settings to the groups or Security Agents. If you selected the root icon ( ), choose from the following options:

   - **Apply to All Agents**: Applies settings to all existing Security Agents and to any new Security Agent added to an existing/future group. Future groups are groups not yet created at the time you configure the settings.

- **Apply to Future Groups Only**: Applies settings only to Security Agents added to future groups. This option will not apply settings to new Security Agents added to an existing group.

Manual Scan: Target Tab

Procedure

1. In the **Files to Scan** section, select from the following:

   - **All scannable files**: Includes all scannable files. Unscannable files are password protected files, encrypted files, or files that exceed the user-defined scanning restrictions.

     Note

     Scanning every file requires a lot of time and resources and might be redundant in some situations. Therefore, you might want to limit the amount of files the Security Agent includes in the scan.

   - **Scan only Mach-O files**: Only scan Mach-O files on endpoints. Apex One (Mac) Security Agents do not scan other file types for malware.

     Note

     If you select this option, you must enable the smart scan feature to ensure protection against the latest malware attacks targeting OS X and macOS platforms.

2. Under **Scan Settings**, select one or more from the following options:

   - **Scan compressed files**: Scan individual files within an archive file

     For more information, see *Supported Compressed File Types on page 6-22*.

   - **Scan network drive**: Scan directories physically located on other endpoints, but mapped to the local endpoint

- **Scan Time Machine**: Only scan files on Time Machine drives

Note

After enabling the **Scan Time Machine** option for Manual and Scheduled Scan, Apex One (Mac) can only detect malware threats but not take any action (clean, quarantine, or delete) due to a permission limitation in Mac OS. Configured scan actions display as unsuccessful in the product logs.

3. In the **CPU Usage** section, configure the required settings.
   - **High**: No pausing between scans
   - **Low**: Pause between file scans if CPU consumption is higher than 20%, and do not pause if 20% or lower

Manual Scan: Action Tab

On the **Actions** tab, configure the scan actions Apex One (Mac) performs on detected security threats.

Option	Description
Use ActiveAction	ActiveAction is a set of pre-configured scan actions for different types of security risks. If you are unsure which scan action is suitable for a certain type of security risk, Trend Micro recommends using ActiveAction. ActiveAction settings are constantly updated in the pattern files to protect endpoints against the latest security risks and the latest methods of attacks.

Option	Description
Use the same action for all security risk types	Select this option if you want the same action performed on all types of security risks, except probable virus/malware. For Probable Virus/Malware, the action is always "Pass". If you choose "Clean" as the first action, select a second action that Apex One (Mac) performs if cleaning is unsuccessful. If the first action is not "Clean", no second action is configurable. For details about scan actions, see *Scan Actions on page 6-23*.

Scheduled Scan

Scheduled Scan runs automatically on the appointed date and time. Use Scheduled Scan to automate routine scans on the Security Agent and improve scan management efficiency.

Configure and apply Scheduled Scan settings to one or several Security Agents and groups, or to all Security Agents that the server manages.

Configuring Scheduled Scan Settings

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, click the root icon ( ) to include all Security Agents or select specific groups or Security Agents.
3. Click **Settings** > **Scheduled Scan Settings**.
4. Select the check box to enable Scheduled Scan.
5. Click the **Target** tab to configure the general scan and CPU usage settings, and the scan schedule.

   For more information, see *Scheduled Scan: Target Tab on page 6-18*.
6. Click the **Action** tab to configure the scan actions Apex One (Mac) performs on detected security threats.

For more information, see *Scheduled Scan: Action Tab on page 6-19*.

7. If you selected one or more groups or Security Agents on the agent tree, click **Save** to apply settings to the groups or Security Agents. If you selected the root icon (), choose from the following options:

   - **Apply to All Agents**: Applies settings to all existing Security Agents and to any new Security Agent added to an existing/future group. Future groups are groups not yet created at the time you configure the settings.
   - **Apply to Future Groups Only**: Applies settings only to Security Agents added to future groups. This option will not apply settings to new Security Agents added to an existing group.

Scheduled Scan: Target Tab

Procedure

1. Under **Schedule**, configure how often (daily, weekly, or monthly) and what time Scheduled Scan will run.

   For monthly Scheduled Scans, if you selected the 29th, 30th, or 31st day and a month does not have this day, Apex One (Mac) runs Scheduled Scan on the last day of the month.

2. In the **Files to Scan** section, select from the following:

   - **All scannable files**: Includes all scannable files. Unscannable files are password protected files, encrypted files, or files that exceed the user-defined scanning restrictions.

     Note

     Scanning every file requires a lot of time and resources and might be redundant in some situations. Therefore, you might want to limit the amount of files the Security Agent includes in the scan.

- **File types scanned by IntelliScan**: Only scan files known to potentially harbor malicious code, including files disguised by a harmless extension name.
- **Specify path or full path** : Manually specify the files or directories to scan. For example, `/Shared/Files/mytext.txt` or `/Shared/Files`.

3. Under **Scan Settings**, select one or more from the following options:
   - **Scan compressed files**: Scan individual files within an archive file

     For more information, see *Supported Compressed File Types on page 6-22*.
   - **Scan Time Machine**: Only scan files on Time Machine drives

Note

After enabling the **Scan Time Machine** option for Manual and Scheduled Scan, Apex One (Mac) can only detect malware threats but not take any action (clean, quarantine, or delete) due to a permission limitation in Mac OS. Configured scan actions display as unsuccessful in the product logs.

4. In the **CPU Usage** section, configure the required settings.
   - **High**: No pausing between scans
   - **Low**: Pause between file scans if CPU consumption is higher than 20%, and do not pause if 20% or lower

Scheduled Scan: Action Tab

On the **Actions** tab, configure the scan actions Apex One (Mac) performs on detected security threats.

Procedure

1. Under **Action**, specify the scan actions.

Option	Description
Use ActiveAction	ActiveAction is a set of pre-configured scan actions for different types of security risks. If you are unsure which scan action is suitable for a certain type of security risk, Trend Micro recommends using ActiveAction. ActiveAction settings are constantly updated in the pattern files to protect endpoints against the latest security risks and the latest methods of attacks.
Use the same action for all security risk types	Select this option if you want the same action performed on all types of security risks, except probable virus/malware. For Probable Virus/Malware, the action is always "Pass". If you choose "Clean" as the first action, select a second action that Apex One (Mac) performs if cleaning is unsuccessful. If the first action is not "Clean", no second action is configurable. For details about scan actions, see *Scan Actions on page 6-23*.

2. Under **Scheduled Scan Privileges**, specify whether users can postpone or skip a scheduled scan.

Privilege	Description
Postpone Scheduled Scan	Users with the "Postpone Scheduled Scan" privilege can perform the following actions: • Postpone Scheduled Scan before it runs and then specify the postpone duration. Scheduled Scan can only be postponed once. • If Scheduled Scan is in progress, users can stop scanning and restart it later. Users then specify the amount of time that should elapse before scanning restarts. When scanning restarts, all previously scanned files are scanned again. Scheduled Scan can be stopped and then restarted only once. Configure the number of hours and minutes, which corresponds to: • The maximum postpone duration • The maximum amount of time that should elapse before scanning restarts
Skip and Stop Scheduled Scan	This privilege allows users to perform the following actions: • Skip Scheduled Scan before it runs • Stop Scheduled Scan when it is in progress

3. Under **Scheduled Scan Settings**, specify the notification and battery power settings.

Setting	Description
Display a notification before Scheduled Scan runs	When you enable this option, a notification message displays on the endpoint several minutes before Scheduled Scan runs. Users are notified of the scan schedule (date and time) and their Scheduled Scan privileges, such as postponing, skipping, or stopping Scheduled Scan. Configure the timing for displaying the notification message, in number of minutes.

Setting	Description
Automatically stop Scheduled Scan when scanning lasts more than __ hours and __ minutes	The Security Agent stops scanning when the specified amount of time is exceeded and scanning is not yet complete. The Security Agent immediately notifies users of any security risk detected during scanning.
Skip Scheduled Scan When a Wireless Endpoint's Battery Life is Less Than __ % and its AC Adapter is Unplugged	Apex One (Mac) skips a Scheduled Scan if it detects that a wireless endpoint's battery life is running low and its AC adapter is not connected to any power source. If battery life is low but the AC adapter is connected to a power source, scanning proceeds. If a scan is in progress when the battery life is low, the scan is not terminated.

Scan Now

Scan Now is initiated remotely by a Apex One (Mac) administrator through the web console and can be run on one or several endpoints.

Initiate Scan Now on endpoints that you suspect to be infected.

Initiating Scan Now

Before you begin

All the Scheduled Scan settings, except the actual schedule, are used during Scan Now. To configure settings before initiating Scan Now, follow the steps in *Configuring Scheduled Scan Settings on page 6-17*.

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, click the root icon ( ) to include all Security Agents or select specific groups or Security Agents.
3. Click **Tasks** > **Scan Now**.

Supported Compressed File Types

Apex One (Mac) supports the following compression types.

Extension	Type
.zip	Archive created by Pkzip
.rar	Archive created by RAR
.tar	Archive created by Tar
.arj	ARJ Compressed archive
.hqx	BINHEX
.gz; .gzip	Gnu ZIP
.Z	LZW/Compressed 16bits
.bin	MacBinary
.cab	Microsoft Cabinet file
Microsoft Compressed/MSCOMP	
.eml; .mht	MIME
.td0	Teledisk format
.bz2	Unix BZ2 Bzip compressed file
.uu	UUEncode
.ace	WinAce

Scan Actions

Specify the action Apex One (Mac) performs when a particular scan type detects a security risk.

The action Apex One (Mac) performs depends on the scan type that detected the security risk. For example, when Apex One (Mac) detects a security risk during Manual Scan (scan type), it cleans (action) the infected file.

The following are the actions Apex One (Mac) can perform against security risks:

Scan Action	Details
Delete	Apex One (Mac) removes the infected file from the endpoint.
Quarantine	Apex One (Mac) renames and then moves the infected file to the quarantine directory on the endpoint located in `<Agent installation folder>/common/lib/vsapi/quarantine`. Once in the quarantine directory, Apex One (Mac) can perform another action on the quarantined file, depending on the action specified by the user. Apex One (Mac) can delete, clean, or restore the file. Restoring a file means moving it back to its original location without performing any action. Users may restore the file if it is actually harmless. Cleaning a file means removing the security risk from the quarantined file and then moving it to its original location if cleaning is successful.
Clean	Apex One (Mac) removes the security risk from an infected file before allowing users to access it. If the file is uncleanable, Apex One (Mac) performs a second action, which can be one of the following actions: Quarantine, Delete, and Pass. To configure the second action, navigate to **Agent Management** > **Settings** > **{Scan Type}** and click the **Action** tab.
Pass	Apex One (Mac) performs no action on the infected file but records the detected security risk in the logs. The file stays where it is located. Apex One (Mac) always performs "Pass" on files infected with the Probable Virus/Malware type to mitigate a False Positive. If further analysis confirms that probable virus/malware is indeed a security risk, a new pattern will be released to allow Apex One (Mac) to perform the appropriate scan action. If actually harmless, probable virus/malware will no longer be detected. For example: Apex One (Mac) detects "x_probable_virus" on a file named "123.pdf" and performs no action at the time of detection. Trend Micro then confirms that "x_probable_virus" is a Trojan horse program and releases a new Virus Pattern version. After loading the new pattern, Apex One (Mac) will detect "x_probable_virus" as a Trojan program and, if the action against such programs is "Delete", will delete "123.pdf". **Note** This action is not available for Real-time Scan.

Scan Action	Details
Deny access	When Apex One (Mac) detects an attempt to open or execute an infected file, it immediately blocks the operation. Users can manually delete the infected file.

Scan Exclusions

Configure scan exclusions to increase the scanning performance and skip scanning files that are known to be harmless. When a particular scan type runs, Apex One (Mac) checks the scan exclusion list to determine which files on the endpoint will be excluded from scanning.

Scan Exclusion List	Details
Files	Apex One (Mac) will not scan a file if: • The file is located under the directory path specified in the scan exclusion list • The file matches the full file path (directory path and file name) specified in the scan exclusion list
File extensions	Apex One (Mac) will not scan a file if its file extension matches any of the extensions included in this exclusion list.

Configuring Scan Exclusion Lists

For details about Scan Exclusion Lists, see *Scan Exclusions on page 6-25*.

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, click the root icon () to include all Security Agents or select specific groups or Security Agents.
3. Click **Settings** > **Scan Exclusion Settings**.
4. Select the check box to enable scan exclusion.

5. To configure the **Scan Exclusion List (Files)**:

   a. Type a full file path or directory path and click **Add**.

   Reminders:

   - It is not possible to type only a file name.
   - You can specify a maximum of 64 paths. See the following table for examples.

PATH	DETAILS	EXAMPLES
Full file path	Excludes a specific file on the endpoint	• Example 1: `/file.log` • Example 2: `/System/file.log`

Path	Details	Examples

Directory path	Excludes all files located on a specific folder and all its subfolders	• Example 1:
		`/System/`
		Examples of files excluded from scans:
		• `/System/file.log`
		• `/System/Library/file.log`
		Examples of files that will be scanned:
		• `/Applications/file.log`
		• Example 2:
		`/System/Library`
		Examples of files excluded from scans:
		• `/System/Library/file.log`
		• `/System/Library/Filters/file.log`
		Examples of files that will be scanned:
		• `/System/file.log`

- Use the asterisk wildcard (*) in place of folder names.

  See the following table for examples.

Path	Wildcard Usage Examples
Full file path	`/Users/Mac/*/file.log` Examples of files excluded from scans: • `/Users/Mac/Desktop/file.log` • `/Users/Mac/Movies/file.log` Examples of files that will be scanned: • `/Users/file.log` • `/Users/Mac/file.log`

Directory path	• Example 1:
	`/Users/Mac/*`
	Examples of files excluded from scans:
	• `/Users/Mac/doc.html`
	• `/Users/Mac/Documents/doc.html`
	• `/Users/Mac/Documents/Pics/pic.jpg`
	Examples of files that will be scanned:
	• `/Users/doc.html`
	• Example 2:
	`/*/Components`
	Examples of files excluded from scans:
	• `/Users/Components/file.log`
	• `/System/Components/file.log`
	Examples of files that will be scanned:
	• `/file.log`
	• `/Users/file.log`
	• `/System/Files/file.log`

- Partial matching of folder names is not supported. For example, it is not possible to type `/Users/*user/temp` to

exclude files on folder names ending in “user”, such as “end_user” or “new_user”.

b. To delete a path, select it and click **Remove**.

6. To configure the **Scan Exclusion List (File Extensions)**:

   a. Type a file extension without a period (.) and click **Add**. For example, type `pdf`. You can specify a maximum of 64 file extensions.

   b. To delete a file extension, select it and click **Remove**.

7. If you selected one or more groups or Security Agents on the agent tree, click **Save** to apply settings to the groups or Security Agents. If you selected the root icon (), choose from the following options:

   - **Apply to All Agents**: Applies settings to all existing Security Agents and to any new Security Agent added to an existing/future group. Future groups are groups not yet created at the time you configure the settings.
   - **Apply to Future Groups Only**: Applies settings only to Security Agents added to future groups. This option will not apply settings to new Security Agents added to an existing group.

Cache Settings for Scans

Each time scanning runs, the Security Agent checks the modified files cache to see if a file has been modified since the last agent startup.

- If a file has been modified, the Security Agent scans the file and adds it to the scanned files cache.
- If a file has not been modified, the Security Agent checks if the file is in the scanned files cache.
  - If the file is in the scanned files cache, the Security Agent skips scanning the file.
  - If the file is not in the scanned files cache, the Security Agent checks the approved files cache.

Note

The approved files cache contains files that Apex One (Mac) deems trustworthy. Trustworthy files have been scanned by successive versions of the pattern and declared threat-free each time, or threat-free files that have remained unmodified for an extended period of time.

- If the file is in the approved files cache, the Security Agent skips scanning the file.
- If the file is not in the approved files cache, the Security Agent scans the file and adds it to the scanned files cache.

All or some of the caches are cleared whenever the scan engine or pattern is updated.

If scans are run frequently and many files hit the caches, the scanning time reduces significantly.

If scans are seldom run, disable the caches so that files can be checked for threats with each scan.

Configuring Cache Settings for Scans

For details about the on-demand scan cache, see *Cache Settings for Scans on page 6-29*.

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, click the root icon ( ) to include all Security Agents or select specific groups or Security Agents.
3. Click **Settings** > **Cache Settings for Scans**.
4. Select **Enable the on-demand scan cache**.

5. If you selected one or more groups or Security Agents on the agent tree, click **Save** to apply settings to the groups or Security Agents. If you selected the root icon (), choose from the following options:

   - **Apply to All Agents**: Applies settings to all existing Security Agents and to any new Security Agent added to an existing/future group. Future groups are groups not yet created at the time you configure the settings.
   - **Apply to Future Groups Only**: Applies settings only to Security Agents added to future groups. This option will not apply settings to new Security Agents added to an existing group.

Trusted Program List

You can configure Security Agents to skip scanning of trusted processes during Real-time Scan and event recording. After adding a program to the Trusted Program List, the Security Agent does not subject the program or any processes initiated by the program to Real-time Scan and event recording. Add trusted programs to the Trusted Program List to improve the performance of scanning on endpoints.

Note

You can add files to the Trusted Program List if the following requirements are met:

- The file is not located in the system directory.
- The file has a valid digital signature.

After adding a program to the Trusted Program List, the Security Agent automatically excludes the program from the following:

- Real-time Scan file checking
- Real-time Scan process scanning
- Event recording

Configuring the Trusted Program List

The Trusted Program List excludes programs and all child processes called by the program from Real-time Scan.

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, click the root icon ( ) to include all Security Agents or select specific groups or Security Agents.
3. Click **Settings** > **Trusted Program List**.
4. Type the full program path of the program to exclude from the list.
5. Click **+ Add**.
6. To remove a program from the list, click the **Delete** icon.
7. To export the Trusted Program List, click **Export** and select a location for the file.

   Note

   Apex One (Mac) saves the list in DAT format.

   ---

8. To import a Trusted Program List, click **Import**. and select the location of the file.
   a. Click **Browse...** and select the location of the DAT file.
   b. Click **Import**.
9. If you selected one or more groups or Security Agents on the agent tree, click **Save** to apply settings to the groups or Security Agents. If you selected the root icon ( ), choose from the following options:
   - **Apply to All Agents**: Applies settings to all existing Security Agents and to any new Security Agent added to an existing/future group. Future groups are groups not yet created at the time you configure the settings.

- **Apply to Future Groups Only**: Applies settings only to Security Agents added to future groups. This option will not apply settings to new Security Agents added to an existing group.

Viewing Scan Operation Logs

When a Manual Scan or Scheduled Scan runs, the Apex One (Mac) Security Agent creates a scan log that contains information about the scan. You can view the scan log by accessing the Apex One (Mac) server or agent consoles.

Procedure

1. Navigate to **Agents** > **Agent Management**.
2. In the agent tree, click the root icon ( ) to include all Security Agents or select specific groups or Security Agents.
3. Click **Logs** > **Scan Operation Logs**.
4. Specify the log criteria and click **Display Logs**.

   The **Scan Operation Logs** screen appears.
5. To save logs to a comma-separated value (CSV) file, click **Export**. Open the file or save it to a specific location.

What to do next

To keep the size of logs from occupying too much space on the hard disk, manually delete logs or configure a log deletion schedule. For more information about managing logs, see *Managing Logs on page 9-7*.

Security Risk Notifications and Logs

Apex One (Mac) comes with a set of default notification messages to inform you and other Apex One (Mac) administrators of detected security risks or any outbreak that has occurred.

Apex One (Mac) generates logs when it detects security risks.

Configuring Administrator Notification Settings

When security risks are detected or when an outbreak occurs, Apex One (Mac) administrators can receive notifications through email.

Procedure

1. Navigate to **Notifications** > **General Settings**.
2. In the **SMTP server** field, type either an IPv4/IPv6 address or endpoint name.
3. Type a port number between 1 and 65535.
4. Type the sender's email address in the **From** field.
5. Click **Save**.

Configuring Security Risk Notifications for Administrators

Configure Apex One (Mac) to send a notification when it detects a security risk, or only when the action on the security risk is unsuccessful and therefore requires your intervention.

You can receive notifications through email. Configure administrator notification settings to allow Apex One (Mac) to successfully send notifications through email.

Procedure

1. Navigate to **Notifications** > **Standard Notifications**.
2. In the **Criteria** tab, specify whether to send notifications each time Apex One (Mac) detects a security risk, or only when the action on the security risks is unsuccessful.
3. Click **Save**.
4. In the **Email** tab:
   a. Enable notifications to be sent through email.

b. Specify the email recipients and accept or modify the default subject.

Token variables are used to represent data in the **Message** field.

Variable	Description
%v	Security risk name
%s	The endpoint where the security risk was detected
%m	Agent group name
%ii	Endpoint IP address
%nm	Endpoint MAC address
%p	Location of the security risk
%y	Date and time of detection
%a	Scan action performed

5. Click **Save**.

Configuring Outbreak Notifications for Administrators

Define an outbreak by the number of security risk detections and the detection period. After defining the outbreak criteria, configure Apex One (Mac) to notify you and other Apex One (Mac) administrators of an outbreak so you can respond immediately.

You can receive notifications through email. Configure administrator notification settings to allow Apex One (Mac) to successfully send notifications through email. For details, see *Configuring Administrator Notification Settings on page 6-34*.

Procedure

1. Navigate to **Notifications** > **Outbreak Notifications**.

2. In the **Criteria** tab, specify the following:
   - Number of unique sources of security risks
   - Number of detections
   - Detection period

   Tip

   Trend Micro recommends accepting the default values in this screen.

   Apex One (Mac) declares an outbreak and sends a notification message when the number of detections is exceeded. For example, if you specify 10 unique sources, 100 detections, and a time period of 5 hours, Apex One (Mac) sends the notification when 10 different Security Agents have reported a total of 101 security risks within a 5-hour period. If all instances are detected on only one Security Agent within a 5- hour period, Apex One (Mac) does not send the notification.

3. Click **Save**.

4. In the **Email** tab:

   a. Enable notifications to be sent through email.

   b. Specify the email recipients and accept or modify the default subject.

   Token variables are used to represent data in the **Message** field.

VARIABLE	DESCRIPTION
%CV	Total number of security risks detected
%CC	Total number of endpoints with security risks

5. Select additional information to include in the email. You can include the Security Agent or group name, security risk name, path and infected file, date and time of detection, and scan result.

6. Click **Save**.

Viewing Security Risk Logs

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, click the root icon ( ) to include all Security Agents or select specific groups or Security Agents.
3. Click **Logs** > **Security Risk Logs**.
4. Specify the log criteria and click **Display Logs**.
5. View logs. Logs contain the following information:
   - Date and time of security risk detection
   - Endpoint with security risk
   - Security risk name
   - Security risk source
   - Scan type that detected the security risk
   - Scan results, which indicate whether scan actions were performed successfully. For details about scan results, see *Scan Results on page 6-38*.
   - Platform
6. To save logs to a comma-separated value (CSV) file, click **Export**. Open the file or save it to a specific location.

Note

If you are exporting a large number of logs, wait for the export task to finish. If you close the page before the export task is finished, the .csv file will not be generated.

What to do next

To keep the size of logs from occupying too much space on the hard disk, manually delete logs or configure a log deletion schedule. For more information about managing logs, see *Managing Logs on page 9-7*.

Scan Results

The following scan results display in the virus/malware logs:

- **Deleted**
  - First action is Delete and the infected file was deleted.
  - First action is Clean but cleaning was unsuccessful. Second action is Delete and the infected file was deleted.
- **Quarantined**
  - First action is Quarantine and the infected file was quarantined.
  - First action is Clean but cleaning was unsuccessful. Second action is Quarantine and the infected file was quarantined.
- **Cleaned**

  An infected file was cleaned.
- **Passed**
  - First action is Pass. Apex One (Mac) did not perform any action on the infected file.
  - First action is Clean but cleaning was unsuccessful. Second action is Pass so Apex One (Mac) did not perform any action on the infected file.
- **Unable to clean or quarantine the file**

  Clean is the first action. Quarantine is the second action, and both actions were unsuccessful.

  Solution: See "Unable to quarantine the file" below.
- **Unable to clean or delete the file**

Clean is the first action. Delete is the second action, and both actions were unsuccessful.

Solution: See “Unable to delete the file” below.

- **Unable to quarantine the file**

  The infected file may be locked by another application, is executing, or is on a CD. Apex One (Mac) will quarantine the file after the application releases the file or after it has been executed.

  Solution

  For infected files on a CD, consider not using the CD as the virus may infect other endpoints on the network.

- **Unable to delete the file**

  The infected file may be locked by another application, is executing, or is on a CD. Apex One (Mac) will delete the file after the application releases the file or after it has been executed.

  Solution

  For infected files on a CD, consider not using the CD as the virus may infect other endpoints on the network.

- **Unable to clean the file**

  The file may be uncleanable. For details and solutions, see *Uncleanable Files on page 6-39*.

Uncleanable Files

The Virus Scan Engine is unable to clean the following files:

Uncleanable File	Explanation and Solution
Files infected with worms	A computer worm is a self-contained program (or set of programs) able to spread functional copies of itself or its segments to other endpoint systems. The propagation usually takes place through network connections or email attachments. Worms are uncleanable because the file is a self-contained program. **Solution**: Trend Micro recommends deleting worms.
Write-protected infected files	**Solution**: Remove the write-protection to allow the Security Agent to clean the file.
Password-protected files	Includes password-protected files or compressed files. **Solution**: Remove the password protection for the Security Agent to clean these files.
Backup files	Files with the RB0~RB9 extensions are backup copies of infected files. The Security Agent creates a backup of the infected file in case the virus/malware damaged the file during the cleaning process. **Solution**: If the Security Agent successfully cleans the infected file, you do not need to keep the backup copy. If the endpoint functions normally, you can delete the backup file.

Resetting Security Risk Count

You can go to the **Reset Statistics** screen to reset the detection count for security risks back to zero.

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, click the root icon () to include all Security Agents or select specific groups or Security Agents.
3. Click **Logs** > **Reset Statistics**.

Note

The **Security Risk** field displays the total detection count for the selected Security Agents, all Security Agents in the selected groups, or all Security Agents.

4. Click **Reset**.
5. Click **OK**.

Chapter 7

Protecting Endpoints from Web-based Threats

This chapter describes web-based threats and using Apex One (Mac) to protect your network and endpoints from web-based threats.

Web Threats

Web threats encompass a broad array of threats that originate from the Internet. Web threats are sophisticated in their methods, using a combination of various files and techniques rather than a single file or approach. For example, web threat creators constantly change the version or variant used. Because the web threat is in a fixed location of a website rather than on an infected endpoint, the web threat creator constantly modifies its code to avoid detection.

In recent years, individuals once characterized as hackers, virus writers, spammers, and spyware makers have become known as cyber criminals. Web threats help these individuals pursue one of two goals. One goal is to steal information for subsequent sale. The resulting impact is leakage of confidential information in the form of identity loss. The infected endpoint may also become a vector to deliver phish attacks or other information capturing activities. Among other impacts, this threat has the potential to erode confidence in web commerce, corrupting the trust needed for Internet transactions. The second goal is to hijack a user's CPU power to use it as an instrument to conduct profitable activities. Activities include sending spam or conducting extortion in the form of distributed denial-of-service attacks or pay-per-click activities.

Web Reputation

Web reputation technology tracks the credibility of web domains by assigning a reputation score based on factors such as a website's age, historical location changes, and indications of suspicious activities discovered through malware behavior analysis. It will then continue to scan sites and block users from accessing infected ones.

Security Agents send queries to smart protection sources to determine the reputation of websites that users are attempting to access. A website's reputation is correlated with the specific web reputation policy enforced on the endpoint. Depending on the policy in use, the Security Agents will either block or allow access to the website.

Note

This feature supports the latest Safari™, Mozilla™ Firefox™, and Google Chrome™ browsers.

Configuring Web Reputation Settings

Web Reputation settings include policies that dictate whether Apex One (Mac) will block or allow access to a website. To determine the appropriate policy to use, Apex One (Mac) checks the location of the Security Agent. The location of a Security Agent is "internal" if the Security Agent can connect to the Apex One (Mac) server. Otherwise, the location for the Security Agent is "external".

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, click the root icon ( ) to include all Security Agents or select specific groups or Security Agents.
3. Click **Settings** > **Web Reputation Settings**.
4. To configure a policy for external Security Agents:
   a. Click the **External Agents** tab.
   b. Select **Enable Web Reputation policy**.

      When the policy is enabled, external Security Agents send web reputation queries to the Smart Protection Network.

      Note

      If a Security Agent only has an IPv6 address, read the IPv6 limitations for Web Reputation queries in *Pure IPv6 Agent Limitations on page A-3*.

   c. Select from the available web reputation security levels: **High**, **Medium** or **Low**

Note

The security levels determine whether Apex One (Mac) will allow or block access to a URL. For example, if you set the security level to Low, Apex One (Mac) only blocks URLs that are known to be web threats. As you set the security level higher, the web threat detection rate improves but the possibility of false positives also increases.

d. To submit web reputation feedback, click the URL provided. The Trend Micro Web Reputation Query system opens in a browser window.

5. To configure a policy for internal Security Agents:

a. Click the **Internal Agents** tab.

b. Select **Enable Web Reputation policy**.

When the policy is enabled, internal Security Agents send web reputation queries to:

- Smart Protection Servers if the **Send queries to Smart Protection Servers** option is enabled.
- Smart Protection Network if the **Send queries to Smart Protection Servers** option is disabled.

Note

If a Security Agent only has an IPv6 address, read the IPv6 limitations for Web Reputation queries in *Pure IPv6 Agent Limitations on page A-3*.

c. Select **Send queries to Smart Protection Servers** if you want internal Security Agents to send web reputation queries to Smart Protection Servers.

- If you enable this option, Security Agents refer to the same smart protection source list used by Apex One Security Agents to determine the Smart Protection Servers to which they send queries.

Important

Before enabling this option, read the guidelines in *Trend Micro Smart Protection on page 3-16*.

- If you disable this option, Security Agents send web reputation queries to Smart Protection Network. Endpoints must have Internet connection to send queries successfully.

d. Select from the available web reputation security levels: **High**, **Medium** or **Low**

Note

The security levels determine whether Apex One (Mac) will allow or block access to a URL. For example, if you set the security level to Low, Apex One (Mac) only blocks URLs that are known to be web threats. As you set the security level higher, the web threat detection rate improves but the possibility of false positives also increases.

Security Agents do not block untested websites, regardless of the security level.

e. To submit web reputation feedback, click the URL provided. The Trend Micro Web Reputation Query system opens in a browser window.

f. Select whether to allow the Security Agents to send web reputation logs to the server. Allow Security Agents to send logs if you want to analyze URLs being blocked by Apex One (Mac) and take the appropriate action on URLs you think are safe to access.

6. If you selected one or more groups or Security Agents on the agent tree, click **Save** to apply settings to the groups or Security Agents. If you selected the root icon (), choose from the following options:

- **Apply to All Agents**: Applies settings to all existing Security Agents and to any new Security Agent added to an existing/future group. Future groups are groups not yet created at the time you configure the settings.

- **Apply to Future Groups Only**: Applies settings only to Security Agents added to future groups. This option will not apply settings to new Security Agents added to an existing group.

Configuring the Approved and Blocked URL Lists

Add websites that you consider safe or dangerous to the approved or blocked list. When Apex One (Mac) detects access to any of these websites, it automatically allows or blocks the access and no longer sends a query to smart protection sources.

Procedure

1. Navigate to **Agents** > **Web Reputation Approved/Blocked URL List**.
2. Specify a URL in the text box. You can add a wildcard character (*) anywhere on the URL.

   Examples:

   - `www.trendmicro.com/*` means all pages on the www.trendmicro.com domain.
   - `*.trendmicro.com/*` means all pages on any sub-domain of trendmicro.com.

   You can type URLs containing IP addresses. If a URL contains an IPv6 address, enclose the address in square brackets.
3. Click **Add to Approved List** or **Add to Blocked List**.
4. To delete an entry, select an option from the **View** drop-down list and click the icon next to a URL.
5. Click **Save**.

Viewing Web Reputation Logs

Before you begin

Configure internal Security Agents to send Web Reputation logs to the server. Do this if you want to analyze URLs that Apex One (Mac) blocks and take appropriate actions on URLs you think are safe to access.

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, click the root icon () to include all Security Agents or select specific groups or Security Agents.
3. Click **Logs** > **Web Reputation Logs**.
4. Specify the log criteria and click **Display Logs**.
5. View logs. Logs contain the following information:
   - Date/Time Apex One (Mac) blocked the URL
   - Endpoint where the user accessed the URL
   - Blocked URL
   - URL's risk level
   - Link to the Trend Micro Web Reputation Query system that provides more information about the blocked URL
6. To save logs to a comma-separated value (CSV) file, click **Export**. Open the file or save it to a specific location.

Note

If you are exporting a large number of logs, wait for the export task to finish. If you close the page before the export task is finished, the .csv file will not be generated.

What to do next

To keep the size of logs from occupying too much space on the hard disk, manually delete logs or configure a log deletion schedule.

For more information about managing logs, see *Managing Logs on page 9-7*.

Chapter 8

Using Device Control

This chapter describes how to protect endpoints from security risks using the Device Control feature.

Device Control

Device Control regulates access to external storage devices and network resources connected to endpoints. Device Control helps prevent data loss and leakage and, combined with file scanning, helps guard against security risks.

You can configure Device Control policies for internal and external agents. Administrators typically configure a stricter policy for external agents.

Policies are granular settings in the agent tree. You can enforce specific policies to agent groups or individual Security Agents. You can also enforce a single policy to all Security Agents.

Permissions for Storage Devices

Device Control permissions for storage devices are used when you:

- Allow access to USB storage devices, CD/DVD, SD cards, network drives, and Thunderbolt SATA storage devices. You can grant full access to these devices or limit the level of access.
- Configure the list of approved USB storage devices. Device Control allows you to block access to all USB storage devices, except those that have been added to the list of approved devices. You can grant full access to the approved devices or limit the level of access.

The following table lists the permissions for storage devices.

TABLE 8-1. Device Control Permissions for Storage Devices

PERMISSIONS	FILES ON THE DEVICE	INCOMING FILES
Full access	Permitted operations: Copy, Move, Open, Save, Delete, Execute	Permitted operations: Save, Move, Copy This means that a file can be saved, moved, and copied to the device.
Read only	Permitted operations: Copy, Open Prohibited operations: Save, Move, Delete, Execute	Prohibited operations: Save, Move, Copy

Permissions	Files on the Device	Incoming Files
Block	Prohibited operations: All operations The device and the files it contains are not visible to the user (for example, from Finder).	Prohibited operations: Save, Move, Copy

Note

The read-only permission is not available for network drives.

Configuring Device Control Settings

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, click the root icon ( ) to include all Security Agents or select specific groups or Security Agents.
3. Click **Settings** > **Device Control Settings**.
4. Click the **External Agents** tab to configure settings for external agents or the **Internal Agents** tab to configure settings for internal agents.
5. Select **Enable Device Control**.
6. Under **Devices**, select a permission for each storage device.

   For details about permissions, see *Permissions for Storage Devices on page 8-2*.
7. (Optional) If the permission for USB storage devices is **Block**, you can configure a list of approved devices under **USB Storage Device Approved List**. Users can access these devices and you can control the level of access using permissions.

Tip

The approved list for USB devices supports the use of the asterisk (*) wildcard. Replace any field with the asterisk (*) to include all devices that satisfy the other fields. For example, [manufacturer]-[product ID]-* places all USB devices from the specified manufacturer and the specified product type, regardless of serial number, to the approved list.

a. Type the device manufacturer, product ID, and serial number for a USB storage device.

b. Click **Add**.

Tip

To delete a device from the list, select an entry and click **Remove**.

c. Select the permission for the device.

For details about permissions, see *Permissions for Storage Devices on page 8-2*.

Note

USB storage devices on the approved list must have a higher permission level than the permission setting for USB storage devices in the **Devices** section.

8. Under **Notification**, select the **Display a notification message on the agent endpoint when a new device is detected** option to display a notification when a new storage device is connected to the endpoint. The notification indicates the access permission for the new storage device.

9. If you selected one or more groups or Security Agents on the agent tree, click **Save** to apply settings to the groups or Security Agents. If you selected the root icon ( ), choose from the following options:

- **Apply to All Agents**: Applies settings to all existing Security Agents and to any new Security Agent added to an existing/future group. Future groups are groups not yet created at the time you configure the settings.
- **Apply to Future Groups Only**: Applies settings only to Security Agents added to future groups. This option will not apply settings to new Security Agents added to an existing group.

Device List Tool

Run the Device List Tool locally on a Windows computer to query external devices connected to the computer. The tool scans for external devices and then displays device information in a browser window. You can then use the information when configuring device settings for Device Control.

Running the Device List Tool

Note

The device list tool does not support endpoints running macOS or OS X.

Procedure

1. On the Apex One (Mac) server computer, go to <Server installation folder>`\PCCSRV\Admin\Utility\ListDeviceInfo`.
2. Connect external devices to a target Windows computer.
3. Copy `listDeviceInfo.exe` to the Windows computer.
4. On the Windows computer, run `listDeviceInfo.exe`.
5. View device information in the browser window that displays. Device Control use the following information:
   - Vendor or manufacturer
   - Model or product ID

- Serial ID or serial number

Configuring Device Control Notifications for Security Agents

You can configure Apex One (Mac) to display notification messages on Security Agent endpoints to notify end users when device control violations occur.

Procedure

1. Navigate to **Notifications** > **Agent Notifications**.
2. Under **Device Control Violations**, accept or modify the default message.

   The following table describes the token variables you can use to represent data for notification message display.

TOKEN	DESCRIPTION
%DeviceType%	Device type (for example, "USB storage device") for a Security Agent endpoint
%Permission%	Device Control policy setting (for example, "Block")

3. Click **Save**.

Viewing Device Control Logs

When a new storage device is connected to an endpoint, the Apex One (Mac) Security Agent creates a log entry for the event with the access permission based on the device control settings.

Procedure

1. Navigate to **Agents** > **Agent Management**.
2. In the agent tree, click the root icon ( ) to include all Security Agents or select specific groups or Security Agents.

3. Click **Logs** > **Device Control Logs**.
4. Specify the log criteria and then click **Display Logs**.

   The **Device Control Logs** screen appears.
5. To save logs to a comma-separated value (CSV) file, click **Export to CSV**. Open the file or save it to a specific location.

Chapter 9

Managing the Server and Security Agents

This chapter describes Apex One (Mac) server and agent management and additional configurations.

Privileges and Other Settings

On the **Privileges and Other Settings** screen, you can configure the agent self-protection feature to prevent other programs and even the user from modifying or deleting files that the Security Agent uses.

When you enable **Protect files used by the agent** and the Security Agent is running on an endpoint, Apex One (Mac) locks the following files and folders:

- /Library/Application Support/TrendMicro/RPD
- /Users/*/Library/Application Support/TrendMicro/dlpmac.app
- /Library/LaunchDaemons/com.trendmicro.tmes.plugin.plist
- /Library/LaunchDaemons/com.trendmicro.tmsm.rpd.plist
- /Users/*/Library/Application Support/TrendMicro/chromeNativeDLP
- /Users/*/Library/Application Support/TrendMicro/firefoxNativeDLP

Note

Apex One (Mac) allows files to be added in the `/Library/Application Support/TrendMicro/Tools` folder, files cannot be deleted from the folder.

Configuring Agent Self-protection

Procedure

1. Navigate to **Agent Management**.
2. In the agent tree, click the root icon () to include all Security Agents or select specific groups or Security Agents.
3. Click **Settings** > **Privileges and Other Settings**
4. Under Security Agent Self-protection, select **Protect files used by the agent**.

5. If you selected one or more groups or Security Agents on the agent tree, click **Save** to apply settings to the groups or Security Agents. If you selected the root icon (), choose from the following options:

   - **Apply to All Agents**: Applies settings to all existing Security Agents and to any new Security Agent added to an existing/future group. Future groups are groups not yet created at the time you configure the settings.
   - **Apply to Future Groups Only**: Applies settings only to Security Agents added to future groups. This option will not apply settings to new Security Agents added to an existing group.

Enabling Certified Safe Software Service

The Certified Safe Software Service queries Trend Micro datacenters to verify the safety of a program detected by antivirus scans. Enable Certified Safe Software Service to reduce the likelihood of false positive detections.

Procedure

1. Navigate to **Agents** > **Certified Safe Software Service**.
2. Select **Enable Certified Safe Software Service for antivirus scan**.
3. Click **Save**.

Note

- If endpoints within your network require a proxy server to access the Internet, configure proxy settings for internal agents.
- For more information, see *Configuring Agent-Server Communication Settings on page 9-14*.

Enabling Predictive Machine Learning

Trend Micro Predictive Machine Learning uses advanced machine learning technology to correlate threat information and perform in-depth file

analysis to detect emerging unknown security risks through digital DNA fingerprinting, API mapping, and other file features. Predictive Machine Learning also performs a behavioral analysis on unknown or low-prevalence processes to determine if an emerging or unknown threat is attempting to infect your network.

Predictive Machine Learning is a powerful tool that helps protect your environment from unidentified threats and zero-day attacks.

To enable this feature, go to **Agents** > **Agent Management** > **Settings** > **Predictive Machine Learning Settings** and select **Enable Predictive Machine Learning**.

Note

If endpoints within your network require a proxy server to access the Internet, configure proxy settings for internal agents.

For more information, see *Configuring Agent-Server Communication Settings on page 9-14*.

Upgrading the Server and Security Agents

The Plug-in Manager console displays any new Apex One (Mac) build or version.

Upgrade the server and Security Agents immediately when the new build or version becomes available.

Before upgrading, be sure that the server and Security Agents have the resources outlined in *Server Installation Requirements on page 2-2* and *Agent Installation Requirements on page 4-2*.

Upgrading the Server

Before you begin

Important

Before installing or upgrading to Apex One (Mac) Patch 2 and above, make sure that the certificate is not expired for Microsoft Internet Information Services (IIS).

For more information, see https://success.trendmicro.com/solution/000283033.

Trend Micro recommends backing up the server's program files and database, which can be restored if there are problems with the upgrade.

- Program files
  - Default path:
    - `C:\Program Files\Trend Micro\OfficeScan\Addon\TMSM`
    - `C:\Program Files\Trend Micro\Apex One\Addon\TMSM`

    Or

    - `C:\Program Files (x86)\Trend Micro\OfficeScan\Addon\TMSM`
    - `C:\Program Files (x86)\Trend Micro\Apex One\Addon\TMSM`
  - Files to back up:
    - `..\apache-activemq\conf\.*`
    - `..\apache-activemq\bin\wrapper.conf`
    - `.\ServerInfo.plist`
- Database files. See *Backing Up the Server Database on page 9-9*.

Procedure

1. Open the Apex One or OfficeScan web console and click **Plug-ins** on the main menu.
2. Go to the **Apex One (Mac)** section and click **Download**.

   The size of the file to be downloaded displays beside the **Download** button.

   Plug-in Manager downloads the package to `<server installation folder>\PCCSRV\Download`.

   `<server installation folder>` is typically `C:\Program Files\Trend Micro\OfficeScan` or `C:\Program Files\Trend Micro\Apex One`.
3. Monitor the download progress.

   You can navigate away from the screen during the download.

   If you encounter problems downloading the package, check the server update logs on the Apex One or OfficeScan web console. On the main menu, click **Logs** > **Server Update**.
4. To upgrade Apex One (Mac) immediately, click **Upgrade Now**, or to install at a later time, perform the following:

   a. Click **Upgrade Later**.

   b. Open the Plug-in Manager screen.

   c. Go to the **Apex One (Mac)** section and click **Upgrade**.
5. Monitor the upgrade progress. After the upgrade, the Plug-in Manager screen reloads.

Upgrading Security Agents

Attention

To allow agent upgrades, clear the **Agents can update components but not upgrade the agent program or install hot fixes** check box on the **Agent Management** > **Settings** > **Update Settings** screen.

Procedure

1. Perform any of the following steps:

   - Perform a manual update. Ensure that you select **Apex One (Mac) Agent** from the list of components.
   - On the agent tree, select the Security Agents to upgrade and then click **Tasks** > **Update**.
   - If scheduled update has been enabled, ensure that **Apex One (Mac) Agent** is selected.
   - Instruct users to click **Update** from the agent console.

   Security Agents that receive the notification start to upgrade. On the endpoint, the Apex One (Mac) icon on the menu bar indicates that the product is updating. Users cannot run any task from the console until the upgrade is complete.

2. Check the upgrade status.

   a. Click Summary on the main menu and go to the **Program** section under **Update Status**.

   b. Click the link under the **Not Upgraded** column. The agent tree opens, showing all the Security Agents that have not been upgraded.

   c. To upgrade the Security Agents that have not been upgraded, click **Tasks** > **Update**.

Managing Logs

Apex One (Mac) keeps comprehensive logs about security risk detections, blocked URLs, scan operations, and device control events. Use these logs to assess your organization's protection policies and to identify Security Agents that are at a higher risk of infection or attack.

To keep the size of logs from occupying too much space on the hard disk, manually delete logs or configure a log deletion schedule from the web console.

Procedure

1. Navigate to **Administration** > **Log Maintenance**.
2. Select **Enable scheduled deletion of logs**.
3. Select whether to delete all logs or only logs older than a certain number of days.
4. Specify the log deletion frequency and time.
5. Click **Save**.

Managing Licenses

View, activate, and renew the Apex One (Mac) license on the web console.

The status of the product license determines the features available to users. Refer to the table below for details.

License Type and Status	Features			
	Real-time Scan	Scheduled Scan	Web Reputation	Pattern Update
Full version and Activated	Enabled	Enabled	Enabled	Enabled
Evaluation (trial) version and Activated	Enabled	Enabled	Enabled	Enabled
Full version and Expired	Enabled	Enabled	Enabled	Disabled
Evaluation version and Expired	Disabled	Disabled	Disabled	Disabled
Not activated	Disabled	Disabled	Disabled	Disabled

Note

If the server only has an IPv6 address, read the IPv6 limitations for license updates in *Pure IPv6 Server Limitations on page A-2*.

Procedure

1. Navigate to **Administration** > **Product License**.
2. View license information. To get the latest license information, click **Update Information**.

   The **License Information** section provides you the following details:

   - **Status**: Displays either "Activated" or "Expired"
   - **Version**: Displays either "Full" or "Evaluation" version. If you are using an evaluation version, you can upgrade to the full version anytime. For upgrade instructions, click **View license upgrade instructions**.
   - **Seats**: The maximum number of agent installations the license supports
   - **License expires on**: The expiration date of the license
   - **Activation Code**: The code used to activate the license
   - **Last Updated**: Date and time the license was last updated.
3. To specify a new Activation Code, click **New Activation Code**.
4. In the screen that opens, type the Activation Code and click **Save**.

   This screen also provides a link to the Trend Micro website where you can view detailed information about your license.

Backing Up the Server Database

Procedure

1. Stop the following services from Microsoft Management Console:
   - **ActiveMQ for Apex One (Mac)**
   - **Apex One (Mac) Main Service**

2. Open SQL Server Management Studio (for example, from **Windows Start menu** > **Programs** > **Microsoft SQL Server {version}** > **SQL Server Management Studio**.
3. Search for `db_TMSM` and then use the **backup** function in SQL Server Management Studio to back up the database files.

   See the SQL Server Management Studio documentation for details.
4. Start the stopped services.

Restoring the Server Database

Before you begin

Prepare the backup of the database files created during backup. For details, see *Backing Up the Server Database on page 9-9*.

Procedure

1. Stop the following services from Microsoft Management Console:
   - **ActiveMQ for Apex One (Mac)**
   - **Apex One (Mac) Main Service**
2. Open SQL Server Management Studio (for example, from **Windows Start menu** > **Programs** > **Microsoft SQL Server {version}** > **SQL Server Management Studio**.
3. Search for `db_TMSM` and then use the **detach** option in SQL Server Management Studio to detach the current database files.

   See the SQL Server Management Studio documentation for details.
4. Use the **attach** option to attach the backup of the database files.
5. Start the stopped services.

Trend Micro Apex Central and Control Manager Integration in this Release

This Apex One (Mac) release supports Trend Micro Apex Central v4476 or later. In this release, you can create, manage, and deploy Apex One (Mac) policies and monitor endpoints from Trend Micro Apex Central.

You can monitor endpoints using the **Apex One (Mac) Key Performance Indicators** widget in Trend Micro Apex Central.

For details, see *Key Performance Indicators Widget on page 9-11*.

See the Trend Micro Apex Central documentation for details.

Note

You can also specify Trend Micro Apex Central or Control Manager as the Apex One (Mac) server's update source. For details, see *Configuring the Server Update Source on page 5-5*.

Key Performance Indicators Widget

Use this widget on the Trend Micro Apex Central **Dashboard** screen to display Apex One (Mac) key performance indicators (KPIs) based on selected criteria.

For information on how to add a widget to the **Dashboard** screen, see the Trend Micro Apex Central or Control Manager documentation.

Tip

By default, the widget marks events as "Important" ( ) at 15 occurrences and "Critical" ( ) at 30 occurrences. Optionally, mark events as Important or Critical by customizing event thresholds.

Configuring Server Connection Settings

Specify the Trend Micro Apex Central server to obtain data for widget display.

1. Go to the **Dashboard** screen on Trend Micro Apex Central.
2. Click the tab on which the **Apex One (Mac) Key Performance Indicators** widget is added.
3. Select the **Server Settings** icon ( ) from the top-right menu ( ) of the widget.
4. Select one or more Apex One (Mac) servers.
5. Click **Save**.

Configuring Key Performance Indicators

In Trend Micro Apex Central or Control Manager, access the **Apex One (Mac) Key Performance Indicators** widget on the **Dashboard** to perform the following indicator-related tasks.

TABLE 9-1. KPI Widget Indicator Tasks

TASK	STEPS
Add a new indicator	1. Click **Add Indicator**. The **Add Indicator** screen appears. 2. Select an option from the **Name** drop-down list and optionally customize settings. 3. Click **Save**.
Edit an indicator	1. Click the indicator in the list. The **Edit Indicator** screen appears. 2. Customize settings. 3. Click **Save**.
Delete an indicator	1. Click the indicator in the list. The **Edit Indicator** screen appears. 2. Click **Delete**. 3. Click **OK**.

Task	Steps
Configure event threshold settings	1. On the **Add Indicator** or **Edit Indicator** screen, select **Enable alerts at the following thresholds**. 2. Type the minimum number of event occurrences for each event type. 3. Click **Save**. **Note** The important or critical icon displays in the **Occurrences** column if both of the following are true: • The number of event occurrences that match this indicator is equal to or more than the threshold. • **Enable alerts at the following threshold** is selected.

Configuring Widget Settings

On the Trend Micro Apex Central or Control Manager **Dashboard** screen, select **Widget Settings** from the menu on the top-right of the widget to perform the following tasks.

Table 9-2. KPI Widget Settings

Task	Steps
Edit widget title	Type the widget title in the text field.

Task	Steps
Configure daily update time	From the drop-down list, select the hour to generate the widget data every day. **Tip** To manually refresh the widget data, click the refresh ( ) icon.

Configuring Agent-Server Communication Settings

Security Agents identify the server that manages them by the server's name or IPv4/IPv6 address. During the Apex One (Mac) server installation, the installer identifies the server computer's IP addresses, which are then displayed on the **Agent-Server Communication** screen.

Important

If you plan to update or replace all of the existing server names and IPv4/IPv6 addresses or change the listening port (in Apex One) or proxy settings, do so before installing Security Agents. If you have installed Security Agents and then make changes, Security Agents will lose connection with the server and the only way to re-establish connection is to re-deploy the Security Agents.

Depending on the version of the Security Agents, the server communicates with Security Agents through one of the following listening ports:

- For Security Agent version 3.5.3xxx or later: 4343

  Security Agents use the same listening port (the default is 4343) as configured in Apex One.

- For Security Agent version 3.5.2xxx or earlier: 61617

  Security Agents use the existing server and listening port settings. You cannot change the settings.

Note

- Ensure that the port numbers are not currently in use to prevent conflicts with other applications and agent-server communication issues.
- If a firewall application is in use on the server computer, ensure that the firewall does not block agent-server communication through the listening port. For example, if the Apex One Security Agent firewall has been enabled on the endpoint, add a policy exception that allows incoming and outgoing traffic through the listening port.
- You can configure Security Agents to connect to the server through a proxy server. A proxy server, however, is usually not required for agent-server connections within the corporate network.

Procedure

1. Navigate to **Administration** > **Agent-Server Communication**.

   The **Server Name and Listening Port** section displays the server address and listening port information.

2. Under **Proxy Settings**, select an option.

   - No proxy: Select this option if Security Agents connect directly to the server.
   - Use system proxy settings on agents: Select this option to use the system proxy settings configured on the agent conole.
   - Use the following proxy settings when agents connect to the server: Select this option and set the following fields to configure the proxy settings.

     a. Select the proxy server protocol.

     b. Type the proxy server name or IPv4/IPv6 address, and port number.

     c. If the proxy server requires authentication, type the user name and password in the fields provided.

3. Click **Save**.
4. If you are prompted to restart Apex One (Mac) services for the settings to take effect, perform the following steps:
   a. Navigate to the <*Server installation folder*>.
   b. Double-click `restart_TMSM.bat`.
   c. Wait until all the services have restarted.

Inactive Security Agents

Apex One (Mac) displays Security Agents as inactive:

- If you use the agent uninstallation program to remove the agent program from the endpoints but do not unregister the Security Agent from the server.
- If you reformatted the endoint hard drive without unregistering the Security Agent from the server.
- If you manually removed the agent files.
- If a user unloads or disables the Security Agent for an extended period of time.

To have the agent tree display active Security Agents only, configure Apex One (Mac) to automatically remove inactive Security Agents from the agent tree.

Automatically Removing Inactive Security Agents

Procedure

1. Go to **Administration** > **Inactive Agents**.
2. Select **Enable automatic removal of inactive agents**.
3. Select how many days should pass before Apex One (Mac) considers the Security Agent inactive.

4. Click **Save**.

Agent Icons

Icons on the endpoint's system tray and main console indicate the status of a Security Agent and the task it is currently running.

Tray Icon	Menu Icon	Description
		The Security Agent is up and running and is connected to its parent server.
		The product license has been activated.
		The Security Agent is up and running but is disconnected from its parent server.
		A new component version is available. Update the Security Agent immediately.
		The Security Agent has detected a security threat that requires a computer restart to fix.
		The Security Agent is scanning for security risks and is connected to its parent server.
		The Security Agent is updating components from its parent server.
		A component update requires you to restart the Security Agent to finish installation.
		Smart Scan or Web Reputation service is not available on the Security Agent. Check your network connection.
		The Security Agent has been registered to its parent server but the product license has not been activated. Some Security Agent features will not be available if the license has not been activated. For details, see *Managing Licenses on page 9-8*.

Tray Icon	Menu Icon	Description
		The Security Agent has not been registered to its parent server. The product license may or may not have been activated. If the Security Agent is not registered to its parent server, all functions (including Real-Time Scan, Manual Scan, Scheduled Scan, Web Reputation, and pattern updates) are disabled.
		The product license (full or evaluation version) has been activated but has expired. Some Security Agent features will not be available if the license has expired.
		The Security Agent has been installed on an unsupported platform.
		The Security Agent is not functioning properly. Upgrade the Security Agent to the latest release or contact technical support.
		The Security Agent has completed a scan or has detected a security threat.

Chapter 10

Getting Help

This chapter describes troubleshooting issues that may arise and how to contact support.

Troubleshooting

Web Console Access

Problem:

The web console cannot be accessed.

Procedure

1. Check if the endpoint meets the requirements for installing and running Apex One (Mac) server.

   For details, see *Server Installation Requirements on page 2-2*.

2. Check if the following services have been started:

   - **ActiveMQ for Apex One (Mac)**
   - **Apex One Plug-in Manager**
   - **Apex One (Mac) Main Service**

3. Collect debug logs. Use 'error' or 'fail' as keyword when performing a search on the logs.

   - **Installation logs**: `C:\TMSM*.log`
   - **General debug logs**: <*Server installation folder*>`\debug.log`
   - **Apex One**: `C:\Program Files\Trend Micro\Apex One\PCCSRV\Log\ofcdebug.log`

     a. If the file does not exist, enable debug logging. On the banner of the Apex One web console, click the first "A" in "Apex One", specify debug log settings, and click **Save**.

     b. Reproduce the steps that led to the web console access problem.

     c. Obtain the debug logs.

4. Check the Apex One (Mac) registry keys by navigating to `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\TrendMicro\TMSM`.

5. Check the database files and registry keys.

   a. Check if the following files exist under `C:\Program Files\Microsoft SQL Server\MSSQL.x\MSSQL\Data\` or `C:\Program Files(x86)\Microsoft SQL Server\MSSQL.x\MSSQL\Data\`:

      - `db_TMSM.mdf`
      - `db_TMSM_log.LDF`

   b. Check if the Apex One (Mac) database instance on the Microsoft SQL server registry key exists:

      - `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL Server\TMSM`
      - `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL Server\ TMSM\ MSSQLServer\CurrentVersion`

6. Send the following to Trend Micro:

   - Registry files

     a. Navigate to `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL server\TMSM`.

     b. Click **File** > **Export** and then save the registry key to a `.reg` file.

   - Server computer information
     - Operating system and version
     - Available disk space
     - Available RAM
     - Whether other plug-in programs, such as Intrusion Defense Firewall, is installed

7. Restart the Apex One (Mac) services.

   a. Navigate to the <*Server installation folder*>.

b. Double-click `restart_TMSM.bat`.

c. Wait until all the services have restarted.

8. The Apex One (Mac) service should always be running. If this service is not running, there may be a problem with the ActiveMQ service.

   a. Back up ActiveMQ data in `C:\Program Files\Trend Micro\OfficeScan\Addon\TMSM\apache-activemq\data\*.*` or `C:\Program Files\Trend Micro\Apex One\Addon\TMSM\apache-activemq\data\*.*`.

   b. Delete the ActiveMQ data.

   c. Try to restart the Apex One (Mac) service by double-clicking `restart_TMSM.bat`.

   d. Try to access the web console again to check if the access problem has been resolved.

Server Uninstallation

Problem:

The following message displays:

```
Unable to uninstall the plug-in program. The uninstallation
command for the plug-in program is missing in the registry key.
```

Procedure

1. Open registry editor and navigate to `HKEY_LOCAL_MACHINE\SOFTWARE\TrendMicro\Wow6432Node\OfficeScan\service\AoS\OSCE_Addon_Service_CompList_Version`.

2. Reset the value to `1.0.1000`.

3. Delete the plug-in program registry key; for example, `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\TrendMicro\OfficeScan\service\AoS\OSCE_ADDON_xxxx`.

4. Restart the Apex One Plug-in Manager service.
5. Download, install, and then uninstall the plug-in program.

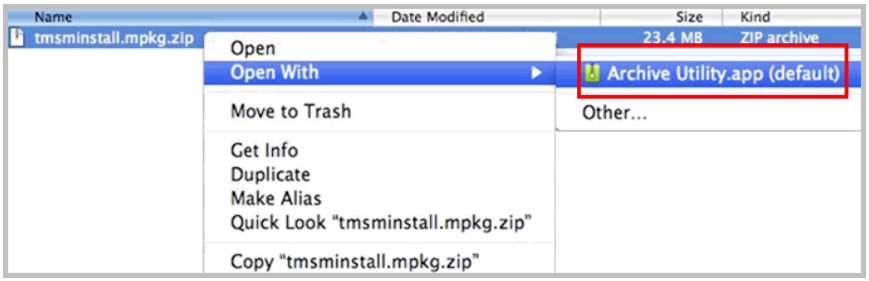
Agent Installation

Problem:

The installation was unsuccessful. The installation package (`tmsminstall.zip` or `tmsminstall.mpkg.zip`) was launched using an archiving tool not built-in on the Mac or through an unsupported command (such as `unzip`) issued from a command-line tool, causing the extracted folder (`tmsminstall`) or file (`tmsminstall.mpkg`) to become corrupted.

Procedure

1. Remove the extracted folder (`tmsminstall`) or file (`tmsminstall.mpkg`).
2. Launch the installation package again using a built-in archiving tool such as Archive Utility.



You can also launch the package from the command line by using the following command:

- If the package is `tmsminstall.zip`:

  ```
  ditto -xk <tmsminstall.zip file path> <destination folder>
  ```

  For example:

```
ditto -xk users/mac/Desktop/tmsminstall.zip users/mac/
Desktop
```

- If the package is `tmsminstall.mpkg.zip`:

  ```
  ditto -xk <tmsminstall.mpkg.zip file path> <destination
  folder>
  ```

  For example:

  ```
  ditto -xk users/mac/Desktop/tmsminstall.mpkg.zip
  users/mac/Desktop
  ```

Agent-Server Communication

Problem:

Security Agents cannot communicate with the server.

If you have updated the web host certificate on the Apex One server, Security Agents automatically authenticates the new certificate before reconnecting to the server. This may take some time. During this process, Security Agents will be disconnected from the server.

To verify Security Agents have authenticated the new certificate, check that the following files are updated with a recent timestamp:

- On the Security Agent endpoint:

  `/Library/Application Support/TrendMicro/common/conf/website.pem`

- On the Apex One server:
  - `<TMSM>\TMSM_HTML\ActiveUpdate\ClientInstall\tmsminstall.zip`
  - `<TMSM>\TMSM_HTML\A0FB621601F4D0FAB00B64F415A2C68C\ClientInstall\ServerInfoHttps.zip`
  - `<TMSM>\TMSM_HTML\A0FB621601F4D0FAB00B64F415A2C68C\ClientInstall\ServerInfoHttpsLocal.zip`

If Security Agents are not connected to the server after certificate authentication is complete, do the following to check the logs:

Procedure

1. On the server, get the logs from <Server installation folder>\debug.log
2. On the Security Agent endpoint, follow the steps in *General Agent Error on page 10-7* to collect logs.
3. Search the logs using the keyword "error" or "fail".

General Agent Error

Problem:

An error or problem was encountered on the Security Agent.

Procedure

1. Open `<agent installation folder>/Tools` and launch Trend Micro Debug Manager.
2. Follow the on-screen instructions in the tool to successfully collect data.

WARNING!

The tool will not work if a user moves it to a different location on the endpoint. If the tool has been moved, uninstall and then install the Security Agent.

If the tool was copied to another location, remove the copied version and then run the tool from its original location.

Technical support

Learn about the following topics:

- *Troubleshooting resources on page 10-8*

Troubleshooting resources

Before contacting technical support, consider visiting the following Trend Micro online resources.

Using the support portal

The Trend Micro Support Portal is a 24x7 online resource that contains the most up-to-date information about both common and unusual problems.

Procedure

1. Go to https://success.trendmicro.com.
2. Select from the available products or click the appropriate button to search for solutions.
3. Use the **Search Support** box to search for available solutions.
4. If no solution is found, click **Contact Support** and select the type of support needed.

   Tip

   To submit a support case online, visit the following URL:

   https://success.trendmicro.com/en-US/contactus/

   A Trend Micro support engineer investigates the case and responds in 24 hours or less.

Threat encyclopedia

Most malware today consists of blended threats, which combine two or more technologies, to bypass computer security protocols. Trend Micro

combats this complex malware with products that create a custom defense strategy. The Threat Encyclopedia provides a comprehensive list of names and symptoms for various blended threats, including known malware, spam, malicious URLs, and known vulnerabilities.

Go to https://www.trendmicro.com/vinfo/us/threat-encyclopedia/#malware to learn more about:

- Malware and malicious mobile code currently active or "in the wild"
- Correlated threat information pages to form a complete web attack story
- Internet threat advisories about targeted attacks and security threats
- Web attack and online trend information
- Weekly malware reports

Contacting Trend Micro

In the United States, Trend Micro representatives are available by phone or email:

Address	Trend Micro, Incorporated 225 E. John Carpenter Freeway, Suite 1500 Irving, Texas 75062 U.S.A. ※ ※
Phone	Phone: +1 (817) 569-8900 Toll-free: (888) 762-8736
Website	https://www.trendmicro.com
Email address	support@trendmicro.com

- Worldwide support offices:

  https://www.trendmicro.com/us/about-us/contact/index.html

- ※

※

- Trend Micro product documentation:

  https://docs.trendmicro.com

Speeding up the support call

To improve problem resolution, have the following information available:

- Steps to reproduce the problem
- Appliance or network information
- Computer brand, model, and any additional connected hardware or devices
- Amount of memory and free hard disk space
- Operating system and service pack version
- Version of the installed agent
- Serial number or Activation Code
- Detailed description of install environment
- Exact text of any error message received

Sending suspicious content to Trend Micro

Several options are available for sending suspicious content to Trend Micro for further analysis.

Email Reputation Services

Query the reputation of a specific IP address and nominate a message transfer agent for inclusion in the global approved list:

https://servicecentral.trendmicro.com/en-us/ers/

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

https://success.trendmicro.com/en-US/solution/KA-0001177

File Reputation Services

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

https://success.trendmicro.com/en-US/solution/KA-0002449

Record the case number for tracking purposes.

Web Reputation Services

Query the safety rating and content type of a URL suspected of being a phishing site, or other so-called "disease vector" (the intentional source of Internet threats such as spyware and malware):

https://global.sitesafety.trendmicro.com/

If the assigned rating is incorrect, send a re-classification request to Trend Micro.

Other resources

In addition to solutions and support, there are many other helpful resources available online to stay up to date, learn about innovations, and be aware of the latest security trends.

Download center

From time to time, Trend Micro may release a patch for a reported known issue or an upgrade that applies to a specific product or service. To find out whether any patches are available, go to:

https://www.trendmicro.com/download/

If a patch has not been applied (patches are dated), open the Readme file to determine whether it is relevant to your environment. The Readme file also contains installation instructions.

Documentation feedback

Trend Micro always seeks to improve its documentation. If you have questions, comments, or suggestions about this or any Trend Micro document, please go to the following site:

https://docs.trendmicro.com/en-us/survey.aspx

Appendix A

IPv6 Support in Apex One (Mac)

This appendix is required reading for users who plan to deploy Apex One (Mac) in an environment that supports IPv6 addressing. This appendix contains information on the extent of IPv6 support in Apex One (Mac).

Trend Micro assumes that the reader is familiar with IPv6 concepts and the tasks involved in setting up a network that supports IPv6 addressing.

IPv6 Support for Apex One (Mac) Server and Security Agents

IPv6 support is automatically enabled after installing or upgrading the Apex One (Mac) server and Security Agents that satisfy the IPv6 requirements.

Apex One (Mac) Security Agent IPv6 Requirements

All Mac OS X versions supported by the Apex One (Mac) Security Agent also support IPv6.

It is preferable for the Security Agent to have both IPv4 and IPv6 addresses as some of the entities to which it connects only support IPv4 addressing.

Pure IPv6 Server Limitations

The following table lists the limitations when the Apex One (Mac) server only has an IPv6 address.

TABLE A-1. Pure IPv6 Server Limitations

ITEM	LIMITATION
Agent management	A pure IPv6 server cannot manage pure IPv4 agents.
Updates and centralized management	A pure IPv6 server cannot update from pure IPv4 update sources or report to pure IPv4 central management products, such as: • Trend Micro ActiveUpdate Server • Any pure IPv4 custom update source
Product registration, activation, and renewal	A pure IPv6 server cannot connect to the Trend Micro Online Registration Server to register the product, obtain the license, and activate/renew the license.
Proxy connection	A pure IPv6 server cannot connect through a pure IPv4 proxy server.

Most of these limitations can be overcome by setting up a dual-stack proxy server that can convert between IPv4 and IPv6 addresses (such as DeleGate).

Position the proxy server between the Apex One (Mac) server and the entities to which it connects or the entities that it serves.

Pure IPv6 Agent Limitations

The following table lists the limitations when Security Agents only have an IPv6 address.

TABLE A-2. Pure IPv6 Agent Limitations

ITEM	LIMITATION
Parent server	Pure IPv6 agents cannot be managed by a pure IPv4 server.
Updates	A pure IPv6 agent cannot update from pure IPv4 update sources, such as: • Trend Micro ActiveUpdate Server • A pure IPv4 Apex One (Mac) server
Web Reputation queries	A pure IPv6 agent cannot send Web Reputation queries to Trend Micro Smart Protection Network.
Proxy connection	A pure IPv6 agent cannot connect through a pure IPv4 proxy server.
Agent deployment	Apple Remote Desktop is unable to deploy the agent to pure IPv6 endpoints because these endpoints always appear as offline.

Most of these limitations can be overcome by setting up a dual-stack proxy server that can convert between IPv4 and IPv6 addresses (such as DeleGate). Position the proxy server between the agents and the entities to which they connect.

Configuring IPv6 Addresses

The web console allows you to configure an IPv6 address or an IPv6 address range. The following are some configuration guidelines.

- Apex One (Mac) accepts standard IPv6 address presentations.

  For example:

`2001:0db7:85a3:0000:0000:8a2e:0370:7334`

`2001:db7:85a3:0:0:8a2e:370:7334`

`2001:db7:85a3::8a2e:370:7334`

`::ffff:192.0.2.128`

- Apex One (Mac) also accepts link-local IPv6 addresses, such as:

  `fe80::210:5aff:feaa:20a2`

  WARNING!

  Exercise caution when specifying a link-local IPv6 address because even though Apex One (Mac) can accept the address, it might not work as expected under certain circumstances. For example, agents cannot update from an update source if the source is on another network segment and is identified by its link-local IPv6 address.

- When the IPv6 address is part of a URL, enclose the address in square brackets.
- For IPv6 address ranges, a prefix and prefix length are usually required.

Screens That Display IP Addresses

The agent tree displays the IPv6 addresses of agents under the **IPv6 Address** column.

Index

TREND MICRO INCORPORATED
225 E. John Carpenter Freeway, Suite 1500
Irving, Texas 75062 U.S.A.
Phone: +1 (817) 569-8900, Toll-free: (888) 762-8736
Email: support@trendmicro.com

www.trendmicro.com
Item Code: APEM159967/241107