Introduction

Welcome to the *Cisco Secure Malware Analytics Appliance Administration Guide*. This chapter provides a brief description of the appliance, the intended audience and how to access relevant product documentation.

About the Secure Malware Analytics Appliance

The Secure Malware Analytics Appliance provides safe and highly secure on-premises advanced malware analysis, with deep threat analytics and content. The appliance provides the complete malware analysis platform, installed on a Cisco **Secure Malware Analytics** M6 Applicance server (v.2.19 and later) or M5 Appliance server (v2.7.2 and later). It empowers organizations operating under various compliance and policy restrictions to submit malware samples to the appliance.

Note Cisco UCS C220 M4 (TG5400) servers are still supported for Secure Malware Analytics Appliance, but the servers are end of life. The software version for M4 servers is capped at 2.19.6.

Many organizations that handle sensitive data, such as banks and health services, must follow various regulatory rules and guidelines that do not allow certain types of files, such as malware artifacts, to be sent outside of the network for malware analysis. By maintaining a Cisco Secure Malware Analytics Appliance on-premises, organizations are able to send suspicious documents and files to it to be analyzed without leaving the network.

With a Secure Malware Analytics Appliance, security teams can analyze all samples using proprietary and highly secure static and dynamic analysis techniques. The appliance correlates the analysis results with hundreds of millions of previously analyzed malware artifacts, to provide a global view of malware attacks and campaigns, and their distributions. A single sample of observed activity and characteristics can quickly be correlated against millions of other samples to fully understand its behaviors within a historical and global context. This ability helps security teams to effectively defend the organization against threats and attacks from advanced malware.

What's new in this release

The version 2.20.1 release includes security, functional, and documentation fixes.

Updates and Fixes
OpAdmin Security: Resolved critical security vulnerabilities in OpAdmin.
Elasticsearch Migration: Fixed failure notifications for indices created prior to release 2.19.x.
Documentation: Updated the Administrator Guide.

Major Upgrades
PostgreSQL Upgrade: This release features a PostgreSQL database upgrade. Standalone nodes and clusters with only one node are upgraded automatically during the appliance update to 2.20.0. Multi-node clusters require manual intervention by the administrator in OpAdmin after all appliances in the cluster are updated. For more information, see PostgreSQL Cluster Database upgrade.
Elasticsearch Index Migration: The appliance performs an automatic Elasticsearch index migration once all cluster nodes are upgraded to 2.20.0. During migration, API-reported submission statuses may lag while the current month's index is updated; delays should resolve within a few hours. After a successful index migration, reboot the system during a maintenance window.
Certificate Restrictions: OpAdmin blocks the creation of new certificates with SHA-1 hashes or RSA keys larger than 8192 bits (CVE-2023-39533 mitigation). Existing certificates exceeding these limits will function but trigger a system warning.
VirusTotal API Requirement: Ensure your VirusTotal (VT) API key supports the `/api/v3/intelligence/search` endpoint. For details, refer to official VirusTotal documentation.

Updates and Fixes
Datastore Upgrades: Upgraded PostgreSQL to 13.5 (including multi-node upgrade tools) and Elasticsearch to 7.17.16.
Security Hardening: Restricted ciphers and HMACs and blocked non-compliant certificates (SHA-1 or RSA > 8192 bits) to mitigate CVEs.
Configuration Workflows: Changes to RADIUS authentication and Notification settings now apply without a reboot. Note: A reboot is still required for OpenDNS key activation.
Clustering Stability: Enhanced the clustering menu, fixed NFS restore for emergency recovery, and resolved incorrect service notices for `consul` components.
Core Application: Updated to cloud version 3.5.149.
Performance: Disabled `transparent_hugepage` to prevent performance degradation during submission bursts.
Backup Retention: Increased PostgreSQL database backup retention to 10 backups, occurring every other day.
Snapshot Enhancements: Support snapshots now include Prometheus data, system logs, and OpAdmin clj output.

Updates and Fixes
UI/UX Improvements: Added confirmation prompts for updates, constant visibility of the appliance serial number in OpAdmin, and improved administrator documentation.
General Fixes: Resolved flag API operations, fixed "Date out of range" errors in service notices, and added NFS statistics to the storage status page.
Bug Fixes: Fixed connection failure page display during update reboots.

Note Starting with Secure Malware Analytics release 3.0.0, NFS will only be supported on RHEL and Ubuntu-based distributions. Please plan your storage infrastructure accordingly.

Known Issues
Elasticsearch Migration Failure: If the appliance is reconfigured while the Elasticsearch migration is underway, the migration may fail. Avoid reconfiguring the appliance until the Elasticsearch Migration service notice is cleared.

Audience

This guide is intended to be used by the Secure Malware Analytics Appliance administrator after the appliance has been set up and configured, and an initial test malware sample has been successfully submitted and analyzed. It describes how to manage organizations and users for the malware analysis tool, appliance updates, backups, and other server administration tasks.

This guide also provides information for administrators who are integrating the Secure Malware Analytics Appliance with other Cisco products and services, such as Cisco Email Security Appliance, Cisco Web Security Appliance, and Secure Endpoint Private Cloud devices.

Note For information about Secure Malware Analytics Appliance setup and configuration, see the *Cisco Threat Grid Appliance Getting Started Guide*.

About This Guide

This guide provides planning information, configuration tasks, and general administrative tasks, and is organized as follows:

Chapter	Description
Introduction	Provides brief description of the appliance, the intended audience, how to access relevant product documentation, log in names and passwords, how to reset the administrator password, and contacting Support.
SMA User Interfaces	Describes the 3 different user interfaces available in Secure Malware Analytics for different set of users.

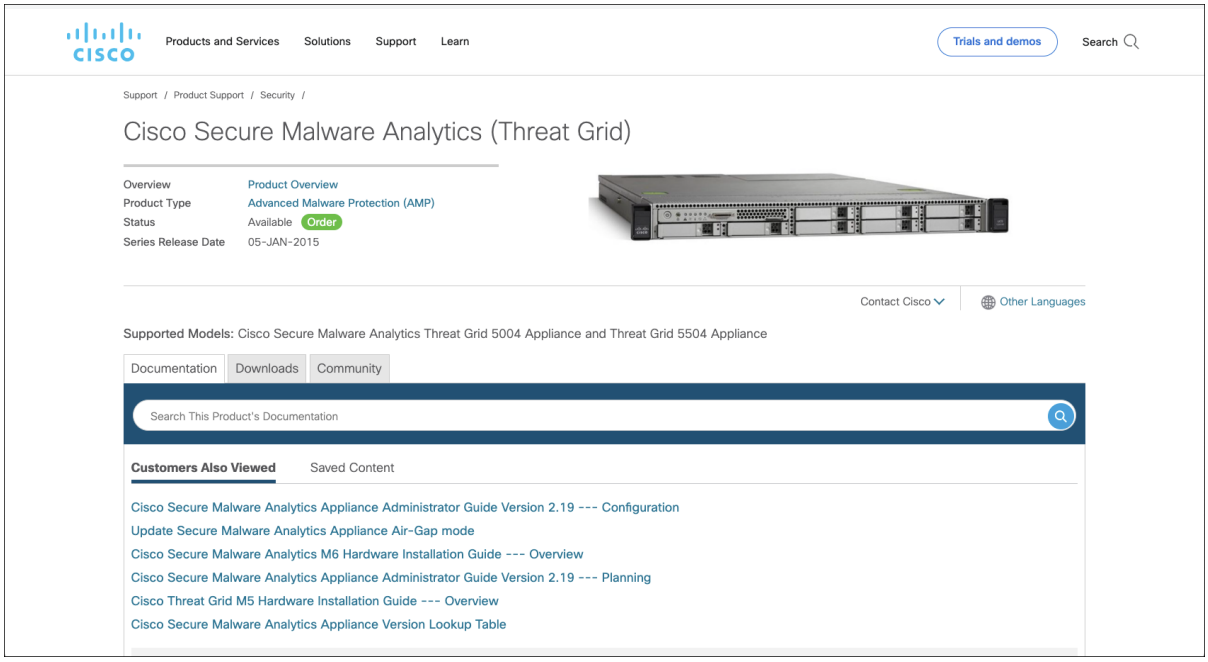
Chapter	Description
Planning	Describes the environmental, hardware, and network requirements that should be reviewed prior to setup and configuration.
Network Configuration Using the TGSH Dialog	Provides information about using the Admin TUI to make changes to your initial network configuration, reconnecting to the Admin TUI, and configuring the network in recovery mode.
Home	Provides information about using the Home screen of the OpAdmin.
Configuration	Provides information about using the OpAdmin to make configuration changes to your appliance.
Status	Provides information about viewing system information in the OpAdmin, such as installed system packages and their version, detailed logs, and available storage.
Operations	Provides information about activating configuration changes, reloading the OpAdmin, managing jobs and power settings, and installing updates.
Support	Provides instructions for starting a live support session and taking support snapshots to aid in resolving issues with the appliance.
Organizations and Users	Provides instructions for creating organizations, managing users, and activating a new device user account.
Inbound and Outbound Connections	Provides information about connecting other Cisco appliances (ESA and WSA), and Secure Endpoint Private Cloud to the Secure Malware Analytics Appliance.
Removing All Data with the Wipe Appliance Boot Option	Describes how to use the Wipe Appliance boot option to remove all data from the Secure Malware Analytics Appliance, including clusters.
Updating Firmware with FirmwareUp	Describes how to update firmware.
CIMC Configuration	Provides information about using the CIMC utility to set up remote server management.

User Documentation

Secure Malware Analytics Appliance User Guides

The latest versions of Cisco Secure Malware Analytics Appliance product documentation can be found on Cisco.com.

Figure 1: User Guides on Cisco.com



- *Cisco Secure Malware Analytics Appliance Release Notes*
- *Cisco Secure Malware Analytics Appliance Getting Started Guide*
- *Cisco Secure Malware Analytics Version Lookup Table*
- *Cisco Secure Malware Analytics M6 Hardware Installation Guide*

Note The Cisco Secure Malware Analytics M6 Appliance is supported in appliance version 2.19 and later.

- *Cisco Secure Malware Analytics M5 Hardware Installation Guide*

Note The Cisco Secure Malware Analytics M5 Appliance is supported in appliance version 2.7.2 and later.

Secure Malware Analytics Portal UI Online Help

Secure Malware Analytics Portal user documentation, including Release Notes, Using Secure Malware Analytics Online Help, API documentation, and other information is available from the **?** (**Help**) icon located in the navigation bar in the upper right corner of the Secure Malware Analytics user interface. The help for this interface, including API documentation, is available directly within the product and is not public.

Email Security Appliance and Web Security Appliance Documentation

For information on connecting an Email Security Appliance (ESA) or Web Security Appliance (WSA), see Integrations.

See the instructions for Enabling and Configuring File Reputation and Analysis Services in the online help or user guide for your ESA/WSA:

- *Cisco Secure Email Gateway User Guide*
- *Cisco Secure Web Appliance User Guide*

Login Names and Passwords (Default)

The default login names and passwords are listed in the following table:

User	Login/Password
OpAdmin and Shell User	Use the initial Secure Malware Analytics/Admin TUI randomly generated password, and then the new password entered during the first step of the OpAdmin configuration workflow. If you lose the password, follow the instructions in Resetting the Administrator Password.
Secure Malware Analytics Web portal UI Administrator	Login: **admin** Password: Initialize with the first OpAdmin password, and then it becomes independent.
CIMC	Login: **admin** Password: **password**

Password Criteria

Passwords must include the following:

- Minimum of 8 characters
- At least one number
- At least one special character
- Uppercase and lowercase characters

Resetting the Administrator Password

The default administrator password is only visible in the Admin TUI during the initial appliance setup and configuration. Once the initial configuration is completed, the password is no longer displayed in visible text.

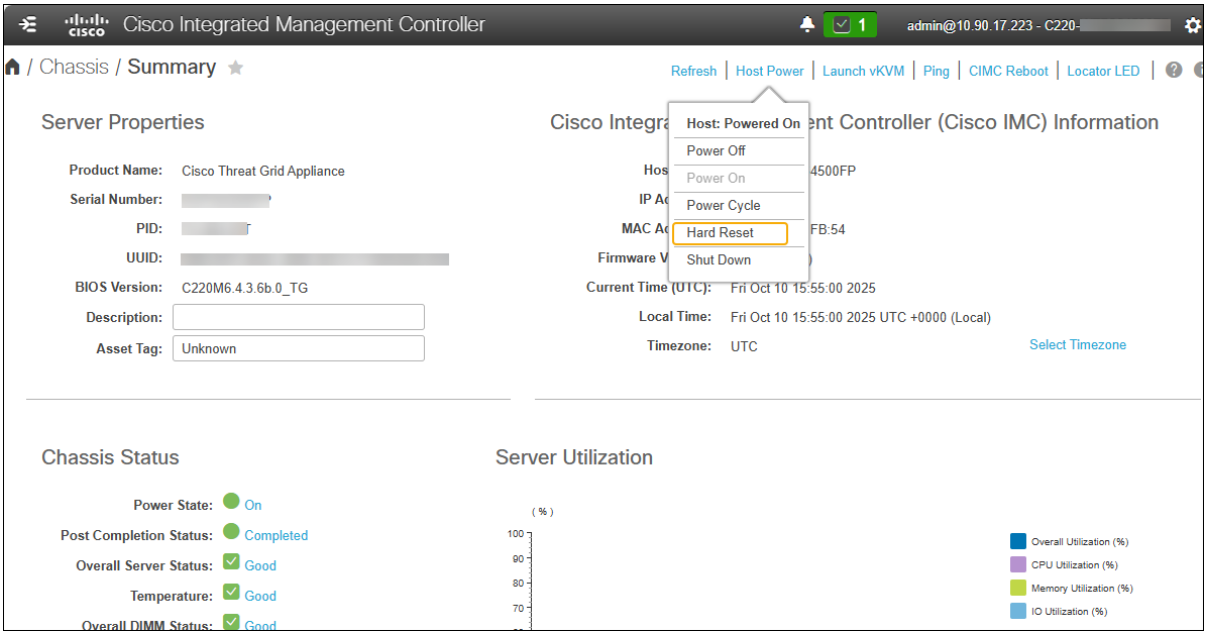
Note LDAP/RADIUS authentication is available for Admin TUI and OpAdmin login when you have multiple administrators. If the appliance is configured for LDAP or RADIUS authentication only, resetting the password in recovery mode will reconfigure the authentication mode to allow login with system password as well.

If you lose the administrator password and are unable to log in to the OpAdmin, do one of the following to reboot the appliance.

Procedure

Step 1 In CIMC, click **Host Power** > **Hard Reset**

Figure 2: CIMC - Hard Reset



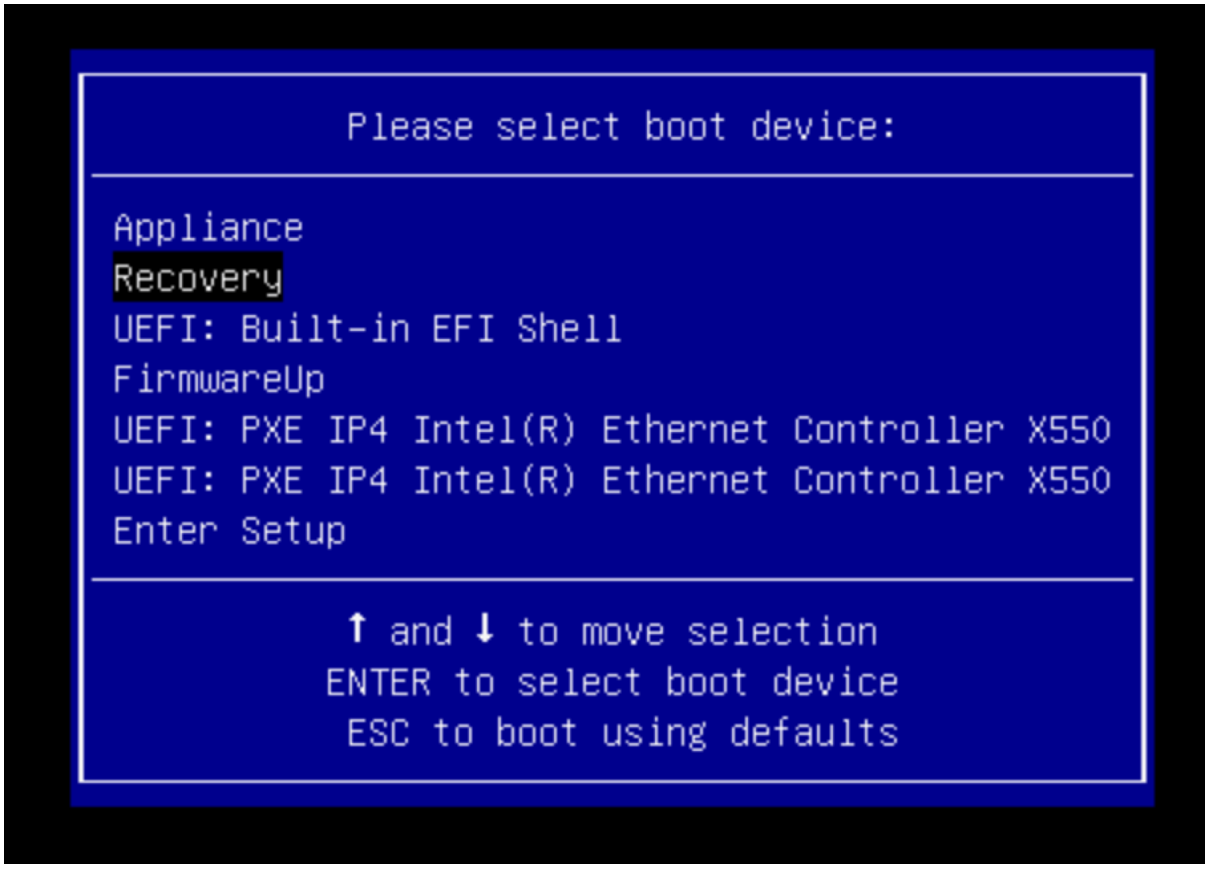
Step 2 Press the **Power on** button on the Secure Malware Analytics Appliance. When you physically press the power on button, the appliane reboots, and opens the BIOS.

a) In the BIOS window, press **F6** to open the **Boot** menu.

Figure 3: BIOS Window - Choose Boot Menu <F6> for Recovery Mode

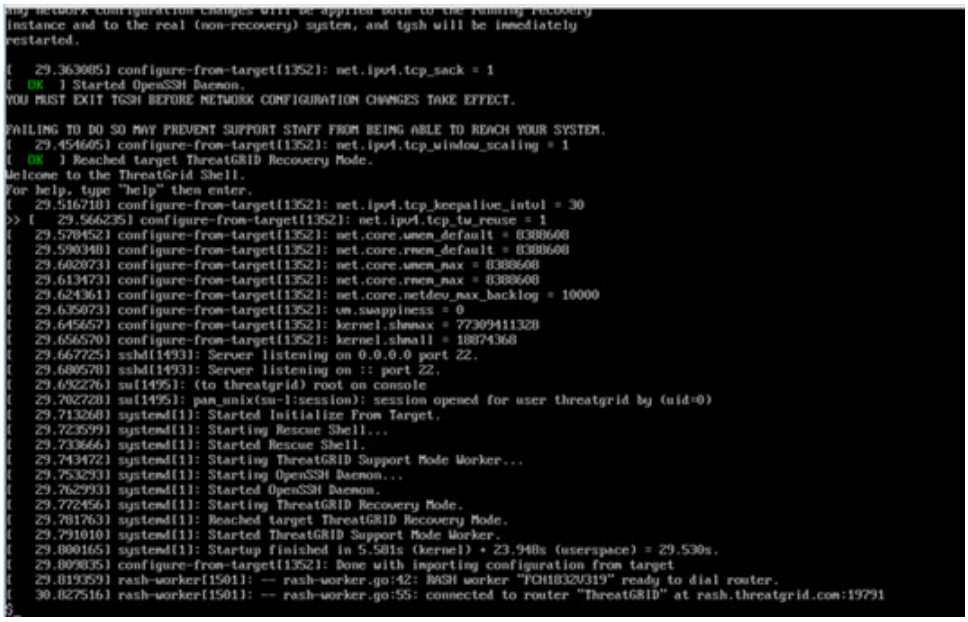
b) Choose **Recovery** and press **Enter**.

Figure 4: Boot Menu



The Secure Malware Analytics Shell opens in Recovery Mode.

Figure 5: Secure Malware Analytics Shell (tgsh) in Recovery Mode



c) Run **passwd** to change the password.

Figure 6: Enter New Password

Note
Recovery mode now includes basic password validation to ensure minimum security standards are met during the emergency reset.

Step 3 Enter the password and press **Enter**.

Step 4 Re-type the password and press **Enter**.

Note
As you type, the password characters will not be displayed, and there will be no visual feedback (such as asterisks or dots).

Step 5 Type **reboot** and press **Enter** to start the appliance in normal mode.

Important
The system now automatically forces a password reset after a recovery mode change. Upon the first login following the use of the recovery image, you will be automatically prompted to set a new, compliant password. Because the system enforces this transition upon login, a manual reset via OpAdmin is no longer required to ensure compliance.