MITEL PERFORMANCE ANALYTICS

RELEASE 2.2 INSTALLATION AND MAINTENANCE GUIDE



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INTRODUCTION

Mitel Performance Analytics is a fault and performance management system designed to provide users with fast actionable problem resolution so that optimal service quality levels are maintained for end customers.

Mitel Performance Analytics provides real-time alerts, detailed reporting and ubiquitous accessibility with secure remote access.

DOCUMENT PURPOSE AND INTENDED AUDIENCE

This document is intended for Mitel Performance Analytics deployments where the software is installed on a server in the customer network.

For Mitel Performance Analytics Software as a Service (SaaS) deployments, where the software is hosted in the cloud, refer to the Mitel Performance Analytics online help.

This document contains instructions for installing a new Mitel Performance Analytics system as well as performing backup and restore operations.

For a information required to administer and use a Mitel Performance Analytics monitoring system, refer to the Mitel Performance Analytics online help.

REVISION HISTORY

DOCUMENT DATE	DESCRIPTION
June 15, 2015	Updated to reflect MarWatch R5.0
June 29, 2015	Updated to reflect new installer
November 26, 2015	Updated to reflect MarWatch R5.1
November 17, 2016	Updated to reflect Mitel Performance Analytics R2.1
March 21, 2019	Updated to reflect Mitel Performance Analytics R2.2
Waltin 21, 2010	Ongoing updates and improvements.

BEFORE YOU INSTALL

MITEL PERFORMANCE ANALYTICS SYSTEM NAME, DOMAIN AND IP ADDRESS

Before you start the installation you must have the IP address and a name for the Mitel Performance Analytics server.

Ensure that:

- 1. You have chosen a name for the Mitel Performance Analytics server; for example, mpaserver.
- 2. You know the domain name, for example company.com, that you want to use for the Mitel Performance Analytics server. If you do not want to use your company's domain name, you can use a domain name such as mycompany.net.
- 3. The server name and domain name are combined to provide the Fully Qualified Domain Name (FQDN) for the Mitel Performance Analytics server. In the previous example, the FDQN is mpaserver.mycompany.net.
- 4. You have the required IP address information, as follows:
 - A static IP address for the Mitel Performance Analytics server; for example, 10.0.5.75.
 - The Network Mask; for example 255.255.25.0.
 - The gateway IP address (for example, 10.0.5.1) and the DNS server IP addresses (for example, 8.8.8 and 8.8.4.4).
- 5. Your DNS system is configured so that the Mitel Performance Analytics server FQDN resolves to the static IP address of the Mitel Performance Analytics server; for example, mpaserver.mycompany.net resolves to 10.0.5.75.

EMAIL SERVER INFORMATION

Mitel Performance Analytics can send alerts and reports using an SMTP server.

Ensure you have the following information to configure the email server:

- SMTP server name or address; for example, smtp.gmail.com
- SMTP server port number; typically 25, 465 or 587.
- From email address: When Mitel Performance Analytics generates an email, it displays this email address as the originator.
- Reply-to email address: Replies to a Mitel Performance Analytics-generated email are sent to this email address.
- SMTP encryption; yes or no
- SMTP authentication; yes or no
- STMP username and password (for authentication, if required)

OPTIONAL SETTINGS

Mitel Performance Analytics has optional capabilities that you might want configure during installation.

TWITTER CONFIGURATION

To send alerts and reports using Twitter, ensure you have your Twitter account data:

- Consumer key
- Consumer secret
- Access token
- Access token secret

TWILIO SMS CONFIGURATION

To send alerts and reports using SMS, ensure you have your Twilio account data:

- Account SID
- AuthToken
- Caller ID

MAPQUEST MAPS CONFIGURATION

To enable dashboard maps and map coordinate lookup from street addresses, ensure you have a MapQuest Consumer API key.

SIMPLIFIED UPGRADES

With simplified upgrades:

- An administrator uses the sudo apt-get upgrade command to apply security upgrades.
- An administrator uses the update-mpa command to apply functional upgrades

The alternative to simplified upgrades is to follow the manual procedure described in the *Mitel Performance Analytics Upgrade Guide*.

To allow simplified upgrades, the installed Mitel Performance Analytics server must have:

- An Internet connection
- Access to the packages.martellotech.com website

RECOMMENDED SERVER CAPACITY REQUIREMENTS

The Mitel Performance Analytics server software is provided as a VMware ESXi 5.1 OVA.

This is a virtual machine image that contains an Ubuntu 14.04 Linux server with the Mitel Performance Analytics server application, a Mitel Performance Analytics Probe, and middleware (for example, Java, Postgres, Apache Tomcat and Nginx).

The resource requirements for Mitel Performance Analytics depend on the number of devices being monitored. The following table describes the recommended virtual hardware based on the number of devices being monitored by Mitel Performance Analytics.

NO. OF MONITORED DEVICES	CPU	RAM	DISK
Up to 50	2 virtual CPUs, each vCPU operating at 1.5 GHz	4-8 GB	50 GB
50 to 100	4 virtual CPUs, each vCPU operating at 1.5 GHz	4-8 GB	70 GB
More than 100	Contact support for engineering assistance		

Important: If you experience slowness with your Mitel Performance Analytics environment, and the CPU utilization is sustained above 60%, you need to increase the number of virtual CPUs in your environment.

MITEL PERFORMANCE ANALYTICS SYSTEM INSTALLATION

SERVER INSTALLATION

To install the Mitel Performance Analytics server, do the following steps:

- 1. Download the OVA file using the link provided by Mitel.
- 2. Deploy the OVA file according to VMware instructions.
- Run the virtual machine and login to the virtual machine using the terminal console. The default Linux administrator credentials are: Username: mwadmin Password: changeme
- 4. Specify the keyboard layout you are using. The default layout is Qwerty/US.

Configuring console-data
The keymap records the layout of symbols on the keyboard.
- 'Select keymap from arch list': select one of the predefined keymaps
specific for your architecture (recommended for hon-osp keyboards),
- Don't touch keymap : aon't overwrite the keymap in /etc/console,
which is maintained manually with install-keymaptor,
- keep kernel keymap : prevent any keymap from being loaded next time
the system boots;
- Select keymap from full list : list all the predefined keymaps.
Recommended when using cross-architecture (often USB) keyboards.
Policy for handling keymaps:
Select keuman from arch list
Don't touch keuman
Keen kernel keuman
Select keiman from full list
(Ok) (Cancel)

To keep default layout, select **Don't touch keymap**.

To use a different layout, select **Select keymap from full list**. The full list of possible keyboard layouts is presented sorted by platform (PC, Mac, and so on), keyboard family (Qwerty, Azerty, and so on), and country. Some examples include:

	Configuring	console-data	
If the keyboard is des specific keymap in the	igned for a different full map.	computer architecture	e, you should choose a
Keymap:			
amiga / Unknown amiga / Unknown amiga / Unknown amiga / Unknown amiga / Unknown amiga / Unknown amiga / Unknown atari / Unknown	French / Standard German / Standard I / German / Standard Spanish / Standard Spanish / Standard Swedish / Standard Wiss / German / Standard German / Standard German / Standard German / Standard German / Standard German / Standard German / Standard Wedish / Standard US american / Standard Wis american / Standard British / Standard Finnish / Standard Finnish / Standard	Standard With dead keys Standard With dead keys Standard With dead keys Standard	3
mac / Unknown / mac / Unknown /	French / Standard / French / Standard / French / Standard /	Extended MacBook	Ļ
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Choose your keyboard layout and confirm.

Mitel Performance Analytics Configuration Wizard then guides you through the steps needed to configure the system:



- 5. Change the system administrator account password and make a note of the new password.
- 6. Enter the server name; for example mpaserver. Note: Use lowercase letters when entering the server name.
- **7.** Enter the domain name to use for the Mitel Performance Analytics server; for example mycompany.net.

Note: Use lowercase letters when entering the domain name.

- 8. Enter IP address information for the Mitel Performance Analytics server:
 - Server IP address
 - Server IP subnet mask
 - Server IP local gateway
 - At least one DNS server. This can be either an internal or external DNS server, but it
 must be able to resolve the Mitel Performance Analytics server Fully Qualified Domain
 Name (FQDN).

The following is an example:

	Network Interface Configuration	
Please enter the	network configuration for eth0	
IP Address	10.0.5.75	
Network Mask	255.255.255.0	
Gateway	10.0.5.1	
DNS Server 1	8.8.8	
DNS Server 2	8.8.4.4	
	(Novf) (Back)	
	C DOCK /	

The installer then configures the Mitel Performance Analytics server. This may take up to two or three minutes.



- 9. Enter information for a new Mitel Performance Analytics administrator account:
 - Email address (used as account ID); for example, mpaadmin@mycompany.net
 Note: Ensure you enter a valid email address. It is used to send password reset emails.
 - Administrator first and last name; for example, John Public
 - · Administrator account password; for example, abc xyz

You will use this new account to log into Mitel Performance Analytics and finish initial setup as described in "After You Install: Mitel Performance Analytics System Configuration" on page 14.

When it is finished, the installer shows a summary of the information you have configured for the Mitel Performance Analytics system.



Note the information displayed in this last screen. You need it to configure the Mitel Performance Analytics system as described in "After You Install: Mitel Performance Analytics System Configuration" on page 14.

RESTARTING THE SERVER CONFIGURATION WIZARD

You can manually restart the Mitel Performance Analytics Configuration Wizard to correct input errors or change installation settings.

CAUTION: Rerunning the Configuration Wizard resets the Mitel Performance Analytics database. All existing Mitel Performance Analytics configuration data; including all container, device and user data is lost. You might need to re-enter any data that you had entered previously.

To restart the Configuration Wizard, do the following steps:

1. Login the virtual machine using the terminal console. Use the following credentials: Username: mwadmin

Password: Use the password you entered during the initial server installation. See Step 3 in "Server Installation" on page 9.

2. From the terminal console prompt, enter the following command: mwconfig

The Configuration Wizard restarts. Follow the instruction starting at Step 4 in "Server Installation" on page 9.

UPDATING LINUX AND MITEL PERFORMANCE ANALYTICS

Once you install or upgrade Mitel Performance Analytics, you might also need to update the server operating system Linux kernel.

Do the following steps:

- 1. Open a terminal window to the Mitel Performance Analytics server you want to upgrade.
- 2. Log in as mwadmin.
- 3. Run the following command: sudo apt-get dist-upgrade
- 4. When prompted for the sudo password, supply the mwadmin password. The system displays available updates and asks you if you want to proceed.
- 5. Confirm your intent.

The system applies the available updates.

Mitel recommends that your restart your VM if the applied updates include updates to the Linux kernel.

6. Perform the steps in "Post-Upgrade Steps" on page 1.

AFTER YOU INSTALL: MITEL PERFORMANCE ANALYTICS SYSTEM CONFIGURATION

You need to configure the Mitel Performance Analytics system before it can start monitoring your network.

Mitel Performance Analytics is accessed with a standard web browser using a URL of the following format: https://<system_fqdn>

For the example in "Before you Install" on page 6, the URL is: https://mpaserver.my.company.net

Note 1: You must use a Fully Qualified Domain Name (FQDN) in the Mitel Performance Analytics URL; not an IP address.

Note 2: After 10 unsuccessful login attempts, the account is locked for one hour.

To configure Mitel Performance Analytics do the following steps:

1. Open the system URL in a web browser and log in using the Mitel Performance Analytics administrator credentials configured in "Mitel Performance Analytics System Installation" on page 9.

For the example in "Before you Install" on page 6, the credentials are:

setup user ic setup user p	:mpaadmin@myc assword:abc_xy	company.net z
Welcome!	Please log in.	
Email		
Password		
	Login	Forgot your password?

When asked, supply the Mitel Performance Analytics administrator credentials again to enable administrative functions.

Registration	System Registration
SMTP Server	Choose Online or Offline Licensing
Twitter	 ONLINE Licensing: The system automatically generates licenses based on the needs of
Twilio SMS	your organization, by collecting inventory data on your network.
MapQuest Maps API	 OFFLINE Licensing: To apply licenses to your network, you'll be required to send an inventeering accepted to filences in
Password Policy	order for the system to retrieve the licenses.
	Enter the email address of your organization's Support contact for the MPA system. An email will go to this address with a passphrase that will be required to complete system registration. This email address may also receive periodic notifications of system updates and added functionality.
	Email Address:
	Licensing Options:
	Online Licensing

Once you have logged in, the following screen is displayed:

2. Register your Mitel Performance Analytics system and register for licensing. These are mandatory for online licensing.

You can choose to register your system later, but if you do so:

- A red banner appears at the top of your dashboard to remind you that licensing has not been configured. The banner contains a link to the **System Configuration** panel so you can register your system later.
- Licensed features do not operate until you register your Mitel Performance Analytics system and register for licensing; or manually perform licensing tasks. Licensing tasks include providing a container GUID, uploading a license policy file, uploading license files, and applying licenses. See the Mitel Performance Analytics online help for details.
- **3.** In the **System Registration** pane, supply an email address. This can be any email address. Mitel Performance Analytics does not use the email address for any purpose other than sending a passphrase to complete the registration process.
- 4. Select your licensing option:
 - Online: This option automates all tasks related to licensing.
 - Offline: This option means you need to manually perform licensing tasks. Licensing tasks include uploading a license policy, uploading license files, and applying licenses. See Mitel Performance Analytics online help for details.
- Click Verify. A Passphrase field appears. Mitel Performance Analytics sends a passphrase at the previously specified email address.
- 6. When you receive the passphrase, enter it in the **Passphrase** field.
- 7. Click Verify & Save.

The **System Registration** pane confirms you are now registered in the licensing and support server.

- Click Next. The System Configuration panel displays the SMTP Server Configuration pane.
- **9.** Click the **Registration** tab to display the **License Registration** pane. The **License Registration** pane appears.
- 10. Click Register a Customer.

The following screen is displayed:

Register a Customer
Is the end customer covered by Mitel Premium Software Assurance?
NOTE:
 You can register your PSWAS customer with simply a name and their container. Alternatively, if you are not with the PSWAS program you can register a customer with their License ID.
 If you don't have a License ID, please contact fulfillment@martellotech.com.
← Return to Licensing ← Return to Dashboard

- **11.** Click **Yes** or **No** to specify whether the end customer is covered by Mitel Premium Software Assurance (PSWAS):
 - If yes, do Step12 then proceed to Step 14.
 - If no, do Step 13 then proceed to Step 14.
- 12. In the resulting screen:
 - Input the customer name.
 - Use the dropdown list to choose the container to associate licenses; typically the customers' home container.

Register Custome	er
Customer Name	e.g. Company Name
Home	Select Container
MPA will sync up with	the AMC and license devices based on their software
assurance status	
	← Back ✓ Validate & Save ¥ Later

- **13.** In the resulting screen:
 - Input the customer name.
 - Input the license ID: You are provided the license ID by your supplier once your order has been processed. To obtain your license ID, contact fulfilment@martellotech.com.
 - Use the dropdown list to choose the container that is associated with the license ID. In most cases, this is the customer's home container.

Register License ID		
Customer Name	MPA Customer	
License ID	M62700126	
Home Container	Home 🗘	
	← Back ✓ Validate & Save ★ Later	

14. Click Validate & Save.

Mitel Performance Analytics connects to the licensing server and download its licenses.

License Re	gistration				
License ID Reg	jistration				
NOTE:					
The Licen The Licen Home con You can a Customer Name	se ID allows auto se ID registratior tainer but can be dd a customer n Home Container	mated downl assigns the any contain ame to the Li License	load of licensin License ID to a er in the syster cense ID regist	g information. a container. This m. tration for your c Licensing	is typically the with the source of the second s
			Policy	Status	Actions
MPA customer	Home	M62700126	MPA-Plus	Status Up-to-date	Actions
MPA customer	Home cense ID With Co	M62700126 ontainer	MPA-Plus	Status Up-to-date	Actions

15. Confirm the licenses are downloaded and assigned to the expected container. Go to the dashboard of the container you specified and click Licenses under the Settings icon. The Licensing panel displays the licenses that are attached to the container.

Licensing: Cor	ntain	er - Ho	ome	
License Policy: Your license policy is: MPA-Plus				
License Status: License Tier: MPA-Plus (Click her Licenses (required / allocated): 1 / 100 Expiration Date: 1-Jan-2023 See details	e to start A	ll Features Licens	sed trial)	
Attach License:			•	+ Attach License
Attached Licenses:				
License Type	Count	Start	End	License ID
Device & MPA-Plus & Monitoring	100	1-Jan-2013	1-Jan-2023	cd8fce47-052d-4afe-89a2-455bcb8a4b30 Detach
				C Enforce + Return to Dashboard

You can also use the **License Registration** pane to refresh online licensing, delete a customer, or display unregistered customers. See the Mitel Performance Analytics online help for details.

Configure your SMTP server

The SMTP server is used by Mitel Performance Analytics to:

- Send email notification of alarms
- Send forgotten password reset links by email
- Deliver scheduled reports by email

Do the following steps:

- 1. Select the SMTP Server tab.
- 2. In the SMTP Server Configuration pane, enter the SMTP server configuration settings:
 - SMTP server name or address; for example, smtp.gmail.com
 - SMTP server port number; typically 25, 465 or 587
 - From email address; When Mitel Performance Analytics generates an email, it displays this email address as the originator.
 - Reply-to email address; Replies to a Mitel Performance Analytics-generated email are sent to this email address.
 - SMTP encryption; yes or no. Mitel recommends that you use encryption.
 - SMTP authentication; yes or no
 - STMP username and password (for authentication, if required)

You can also disable SMTP configuration thus avoiding reminders and notifications when you log in that the SMTP server has not been configured.

3. Click Validate and Save.

Optionally configure a Twitter account

The Twitter account lets you to receive alarm notification through Twitter.

Do the following steps:

- **1.** Select the **Twitter** tab.
- 2. In the Twitter Configuration pane, enter your Twitter account data:
 - Consumer key
 - Consumer secret
 - Access token
 - Access token secret
- 3. Click Validate and Save.

Optionally configure a Twilio SMS account

The Twilio account lets you to receive alarm notification through SMS.

Do the following steps:

- 1. Select the Twilio SMS tab.
- 2. In the Twilio Configuration pane, enter your Twilio account data:
 - Account SID
 - AuthToken
 - Caller ID
- 3. Click Validate and Save.

Optionally configure a MapQuest Consumer key

The MapQuest Consumer key enables dashboard maps and map coordinate lookup from street addresses.

Do the following steps:

- 1. Select the MapQuest Maps API tab.
- 2. In the MapQuest API Configuration pane, enter your MapQuest Consumer API key.
- 3. Click Validate and Save.

Optionally configure a Mitel Performance Analytics password policy

The password policy lets you set:

- How long before passwords need to be changed
- Valid password criteria

Do the following steps:

- 1. Select the Password Policy tab.
- 2. In the **Password Policy** pane, enter the policy settings:
 - Select whether to enable password expiry. If selected, the **Password Expiry Time** field is displayed. Enter a value from 7-365.
 - Select the minimum password strength level. Your choices are:
 - **Strong**: Passwords must:
 - Have at least 8 characters
 - Contain at least 1 uppercase character
 - Contain at least 1 digit character
 - Contain at least 1 special character
 - Weak: Password must have at least 3 characters. Mitel Performance Analytics systems previous to Release 2.2 used this setting.
 - For **Strong** password strength, select whether to force all users to update their passwords. If selected, users must provide a new password the next time they log in.
- 3. Click Validate and Save.

٩					
			0 Hidden	Hide Alarms Older Than 1 H	bur 🔽
SystemProbe	Alarms				? 🖒
	Date v	Message [Device Child	Grandchild Status	Owner Ticket # +
	Device	Alarm	Device	New Alarm Rate	? 🖒
	Status	Severity	Types	Year Month Week	ay Hour
					10/1
					5/h
				4	0/h
				4 pm	Jun 18 8 am
					errica

After system configuration is complete, the following screen is displayed:

Set up your Mitel Performance Analytics data structure

Do the following steps:

1. Follow the steps in the chapter titled "Getting Started" in the *Mitel Performance Analytics Quick Start Guide* to set up Mitel Performance Analytics users, containers and devices.

If you registered your system, chose online licensing, and registered for licensing, licensing is automatic. In case of issues, you can start trial licenses. See the Mitel Performance Analytics online help for details.

HOW MITEL PERFORMANCE ANALYTICS ORGANIZES DATA

Mitel Performance Analytics uses the idea of containers, devices and users to enable you to organize how you want to view your network and devices.

CONTAINERS

A container is a logical grouping of objects. Objects can include devices and other containers.

Containers can be used to represent:

- Geographical locations, such as Europe, North America, and Asia
- Functional or organizational groupings, such as Research and Development, Support, Finance, and Manufacturing
- Customer groupings, such as Large Customers, Small Customers, and Offshore Customers

Containers can be of type **None**, **Customer**, **Reseller**, or **Location**. Container types are used for data queries or reports.

There is no limit to the number of subcontainers or levels of subcontainers that can be created. Thus, users can create a hierarchical structure that best suits their business needs.

At this level, Mitel Performance Analytics shows aggregated status and alarms for this container and all the objects that it contains.

DEVICES

This is the lowest level element in the hierarchy.

Devices are created within a container. Data reporting is done on a per container basis. So when a user accesses a dashboard page, it shows the data for the devices in that container and the devices in any subcontainer.

USERS

Mitel Performance Analytics users are created within a container. A user's scope is strictly limited to that container and all objects that it contains, including subcontainers. A user's dashboard shows aggregated status and alarms for all the devices in their container and its subcontainers.

Each user can also be granted permissions to perform tasks. So within a container, some users can do all administrative tasks, other users can only do some administrative tasks, while other users cannot do any administrative tasks.

When a user attempts an administrative task, they must supply their login credentials before they are granted access to the required Web pages.

Note: Once a user has been added to a container, it cannot be moved to another container.

ADDING MITEL PERFORMANCE ANALYTICS USERS

Use your Mitel Performance Analytics administrator account, for example mpaadmin@mycompany.net, to create other users with varying levels of privilege to suite your business needs. Refer to the *Mitel Performance Analytics Quick Start Guide* and the Mitel Performance Analytics online help for details.

User names must be valid email addresses; for example mpauser@mycompany.net.

ADDING CONTAINERS

At installation, the Mitel Performance Analytics system has a root container called Home.

Create other containers that map to the way you want to group network devices and Mitel Performance Analytics users.

For example, create an MX-ONE container within which you could add MX-ONE systems (telephony servers) and application servers.

CONTAINER EXAMPLES

Here are possible Mitel Performance Analytics container and user organizations for small and large enterprises

SMALL ORGANIZATIONS

The following diagram shows a possible Mitel Performance Analytics configuration for a small organization.



In the previous diagram:

- User1 is part of the container labeled Customer1. User1 has full administrative privileges and can create subcontainers such as Office1 and Office2, as well as other users such as User2 and User4. User1's dashboard shows alarm and status information for both offices and all devices.
- User2 is part of the container labeled Office1. User2 was created by User1 and was granted administrative privileges for creating containers only. User2 could use these privileges to create subcontainers in Office1 representing floors and place new devices in those containers. User2's dashboard shows alarm and status information for Office1 and its devices only.
- User3 is part of the container labeled Office1. User3 was created by User1 but was not granted any administrative privileges. User3's dashboard shows alarm and status information for Office1 and its devices only.

- User4 is part of the container labeled Office2. Like User2, User4 was created by User1 and was granted administrative privileges for creating containers only. User4's dashboard shows alarm and status information for Office2 and its devices only.
- User5 is part of the container labeled Office2. Like User3, User5 was created by User1 but was not granted any administrative privileges. User5's dashboard shows alarm and status information for Office2 and its devices only.

LARGE ORGANIZATIONS

The following diagram shows a possible Mitel Performance Analytics configuration for a large organization.



In the previous diagram:

- User1 is part of the container labeled Customer1. User1 has full administrative privileges and can create subcontainers such as East Coast, Central, and West Coast, as well as other users such as User2 and User4. User1's dashboard shows alarm and status information for all regions, organizations, and devices.
- User2 is part of the container labeled East Coast. User2 was created by User1 and was granted administrative privileges for creating containers only. User2 could use these privileges to create subcontainers in East Coast representing a new organization, such as Customer Service, new devices in those containers. User2's dashboard shows alarm and status information for East Coast and all its devices only.

- User3 is part of the container labeled East Coast. User3 was created by User1 but was not granted any administrative privileges. User3's dashboard shows alarm and status information for East Coast and all its devices only. Similarly, if a user is created in the Manufacturing container, their dashboard would show only alarm and status information for Manufacturing devices.
- User4 is part of the container labeled Central. Like User2, User4 was created by User1 and was granted administrative privileges for creating containers only. User4's dashboard shows alarm and status information for Central and all its devices only.
- User5 is part of the container labeled Central. Like User3, User5 was created by User1 but was not granted any administrative privileges. User5's dashboard shows alarm and status information for Central and its devices only.

CONTAINER RECOMMENDATIONS FOR SERVICE PROVIDERS

If you are a service provider with Mitel Performance Analytics installed in your data center, Mitel strongly recommends that you use the following container structure:

- Use a separate container for each of your customers.
- If your business also provides reseller services, create two top-level containers: one to house all your service customer containers and one to house all of your reseller customer containers.

The following figure shows the recommended container structure for a service provider without reseller services.



The following figure shows the recommended container structure for a service provider with reseller services.



The previous recommendations ensure easier use and greater accuracy of Mitel Performance Analytics automated licensing capabilities.

LICENSING OVERVIEW

Mitel Performance Analytics licensing tracks purchased and authorized system capabilities, including devices, software features, capacity and services.

Mitel Performance Analytics has multiple trial license capabilities:

- An All Features Licensed trial is available that activates all features for all device types for a 30-day period. After the 30-day period, the system warns that licenses have expired and stops providing the licensed capability. The All Features Licensed trial can only be activated once per Mitel Performance Analytics system. After the trial period, all of the licensed features are disabled.
- Per device type feature trials are available for a 30-day period. After the trial period, the system warns that licenses have expired and applies a 60-day grace period before the system stops providing the licensed capability. If a trial period for one device type feature expires, you can still activate a trial for another device type feature.

Mitel Performance Analytics automatically assigns a 30-day per device type trial license to newly added devices. You can also manually activate trials. See the Mitel Performance Analytics online help for details.

If you have not already done so, use the trial period and the grace period to complete your order for Mitel Performance Analytics with your supplier. If licensing has not been applied, Mitel Performance Analytics features are suspended after the grace period ends. Suspended features are indicated in a red banner on the dashboard and in the **Licensing** window of the root container.

Licensing, including trial licenses, begin to be enforced automatically shortly after initial installation. The period varies but is no longer than 24 hours. Mitel recommends that you use this initial startup period to set up Mitel Performance Analytics users, containers and devices. This step loads your Mitel Performance Analytics system with the device types needed for trial licenses. Additional devices can be added after licensing has been applied.

If you registered your system, chose online licensing, and registered for licensing, licensing is automatic. In case of issues, you can start trial licenses. See the Mitel Performance Analytics online help for details.

If you chose not to register your system or to use offline licensing, then you need to manually perform licensing tasks. Licensing tasks include: providing a container GUID, providing the results of Online Licensing Server Device query, uploading a license policy file, uploading license files, and applying licenses. See:

"Manual Licensing Tasks" on page 27

If there is an issue with a licensed capability, the system warns about the issue and applies a 60-day grace period before the system stops providing the licensed capability.

MANUAL LICENSING TASKS

If you chose not to register your system or to use offline licensing, after initial installation you need to:

1. Use the initial startup period to set up Mitel Performance Analytics users, containers and devices. See the chapter titled "Getting Started" in the *Mitel Performance Analytics Quick*

Start Guide. This step loads your Mitel Performance Analytics system with the device types needed for trial licenses. Thus you can begin using Mitel Performance Analytics immediately. You can add Mitel Performance Analytics users, containers and devices after licensing has been applied.

- **2.** Provide Mitel with a globally unique identifier (GUID) for your Mitel Performance Analytics system container. See the Mitel Performance Analytics online help for details.
- **3.** Provide Mitel with the results of the Online Licensing Server Devices query. See the Mitel Performance Analytics online help for details.
- **4.** You are then sent a license file based on the number of licenses you are entitled to. Once you receive it, you need to upload it to your system and assign it to your devices. See the Mitel Performance Analytics online help for details.

INSTALLING THE MITEL PERFORMANCE ANALYTICS CA CERTIFICATE FOR WEB BROWSERS

The Mitel Performance Analytics server uses TLS to ensure that the connection between your browser and the server is secure.

When your Mitel Performance Analytics server is installed, it generates a unique Certification Authority (CA) certificate that can be used to ensure that the connection between your browser and the Mitel Performance Analytics server is secure. This is the Mitel Performance Analytics CA certificate, stored in the cacert.crt file.

The CA certificate allows your browser to provide:

- Authentication confirms that the web address you are using is connected to the Mitel Performance Analytics server; and
- Encryption ensures that no one else can read the data being sent between your browser and the Mitel Performance Analytics server

By default, the system uses a self-signed Certificate Authority (CA) certificate to approve connections to the Mitel Performance Analytics server. You can optionally install an alternative CA certificate. See "Installing an Alternate CA Certificate" on page 43.

Unless you install the Mitel Performance Analytics server CA certificate for your web browser, it displays a certificate warning when navigating to Mitel Performance Analytics. The following is an example:



To avoid this warning and to ensure connection security, install the Mitel Performance Analytics server CA certificate. To download the certificate from Mitel Performance Analytics, use the following URL:

https://<server_FQDN>/cacert.crt

For the example in this document, the URL is:

https://mpaserver.local.net/cacert.crt

You can confirm that the certificate has been correctly installed by clicking on the lock icon ($^{\bigcirc}$ or $^{\bigcirc}$) to the left of the URL in the Mitel Performance Analytics browser window.

WINDOWS - CHROME

To install the Mitel Performance Analytics CA certificate on Windows, do the following steps:

- 1. Download the cacert.crt file from the Mitel Performance Analytics server by navigating to: https://<Mitel Performance Analytics_server>/cacert.crt
- **2.** A privacy warning is displayed in your browser as follows: For Chrome:



- **3.** Continue to the web page and download the cacert.crt file as follows: For Chrome:
 - Choose Advanced. When the panel expands, choose Proceed to <Mitel Performance Analytics_server> (unsafe) to download the cacert.crt file.
 For Internet Explorer:
 - Choose Continue to this website (not recommended) and download the cacert.crt file.
- 4. Go the folder where you downloaded the cacert.crt file and right-click on the file name.
- 5. Select Install Certificate.



6. If you are presented with an Open File - Security Warning dialog, click Open.

Open File	- Security W	arning
Do you	want to op	en this file?
	Name:	C:\Users\Felix\Downloads\cacert.crt
	Publisher:	Unknown Publisher
	Type:	Security Certificate
	From:	C:\Users\Felix\Downloads\cacert.crt
		Open Cancel
🔽 Alwa	ys ask before	opening this file
٢	While files fro potentially ha open this sof	om the Internet can be useful, this file type can arm your computer. If you do not trust the source, do not tware. <u>What's the risk?</u>

- 7. Use the Certificate Import Wizard to import the certificate:
 - Ensure that the cacert.crt file is installed as a Trusted Root Certificate.

Certificate Import Wizard
Certificate Store
Certificate stores are system areas where certificates are kept.
Windows can automatically select a certificate store, or you can specify a location for the certificate.
$\ensuremath{\bigcirc}$ Automatically select the certificate store based on the type of certificate
Place all certificates in the following store
Certificate store:
Trusted Root Certification Authorities Browse
Learn more about certificate stores
<pre></pre> < Back Next > Cancel

• When prompted, confirm that you want to install cacert.crt as a **Trusted Root Authority**.

Security Wa	arning
4	You are about to install a certificate from a certification authority (CA) claiming to represent: mpaserver.local.net
	Windows cannot validate that the certificate is actually from "mpaserver.local.net". You should confirm its origin by contacting "mpaserver.local.net". The following number will assist you in this process:
	Thumbprint (sha1): 790DF40C 784C8269 42B592B8 A0184AB6 457E3ACB
	Warning: If you install this root certificate, Windows will automatically trust any certificate issued by this CA. Installing a certificate with an unconfirmed thumbprint is a security risk. If you click "Yes" you acknowledge this risk.
	Do you want to install this certificate?
	Yes No

8. Close and restart the browser.

The Mitel Performance Analytics CA certificate is now installed for your Windows account.

WINDOWS CA CERTIFICATE TROUBLESHOOTING

If you encounter problems using the Mitel Performance Analytics CA certificate, try the following steps before contacting support.

- 1. Quit and restart the browser.
- **2.** Check the Mitel Performance Analytics CA certificate is installed as a Trusted Root Certification Authority:
 - Open Internet Explorer, go the Tools / Internet Options menu.
 - Select Content / Certificates.
 - Go the Trusted Certification Authority tab.

Certificates Intended purpose: <a>All>	ithoritide Trusted Root Cr	ertification Aut	horities Trusted Publ	×
Issued To AddTrust External Baltimore CyberTru Copyright (c) 1997 DigiCert Assured ID DigiCert Assured ID DigiCert High Assur Entrust Root Certifi Entrust Root Certifi	Issued By AddTrust External CA Baltimore CyberTrust Class 3 Public Primary Copyright (c) 1997 Mi DigiCert Assured ID R DigiCert High Assuran Entrust Root Certifica Entrust Root Certifica	Expiratio 5/30/2020 5/12/2025 8/1/2028 12/30/1999 11/9/2031 11/9/2031 11/9/2031 11/27/2026 12/7/2030	Friendly Name The USERTrust Baltimore Cyber VeriSign Class 3 Microsoft Timest DigiCert DigiCert DigiCert Entrust Entrust.net	• II
Import Export Certificate intended purpose	Remove s		View Close	

 Verify that the Mitel Performance Analytics CA certificate is installed. The Issued To and Issued By settings for the certificate reflect the host name and domain where you installed the Mitel Performance Analytics server. For the example in this document, the settings are mpaserver.local.net.

hternet Properties		? x			
Certificates			×	Certificate	×
Intended purpose:	>		•	General Details Certification Path	
Intermediate Certification	Authorities Trusted Root (Certification Authoritie	Trusted Publ	Certificate Information	
Issued To	Issued By	Expiratio Frier	ndly Name 🔺		_
Microsoft Root Cert. Microsoft Root Cert. Microsoft Root Cert. Microsoft Root Cert. Microsoft Root Cert. Microsoft Root Cert. No LIABILITY ACC	Microsoft Root Certifi Microsoft Root Certifi Microsoft Root Certifi Microsoft Root Certifi mpaserver.local.net NO LIABILITY ACCEP Securate CA	5/9/2021 Micro 6/23/2035 Micro 3/22/2036 Micro 3/22/2036 Micro 3/18/2036 <no 1/7/2004 Veris 12/31/2029 Trute</no 	osoft Root C osoft Root C osoft Root C osoft Root C sign Time St	This certificate is intended for the following purpose(s): • All issuance policies • All application policies	
Starfield Class 2 Ce.	Starfield Class 2 Certi Starfield Root Certific	6/29/2034 Star 12/31/2037 Star	field Class 2 field Root C 🔻	Issued to: mpaserver.local.net	_
Import Export.	Remove		Advanced	Issued by: mpaserver.local.net	
Certificate intended purpo <all></all>	ses		View	Valid from 3/ 23/ 2016 to 3/ 18/ 2036	
Learn more about <u>certificat</u>	<u>es</u>		Close	Learn more about <u>certificates</u>	ment
	OK Can	cel Apply			ОК

If the Mitel Performance Analytics CA certificate is not installed, or if it is installed as any kind of certificate other than a Trusted Root Certification Authority, delete and reinstall.

FIREFOX - WINDOWS AND OS X

Mozilla Firefox does not use the Windows or OS X certificate storage facilities. It implements its own certificate management.

To install the Mitel Performance Analytics CA certificate in Firefox, do the following steps:

1. Download the cacert.crt file from the Mitel Performance Analytics server by navigating to: https://<Mitel Performance Analytics_server>/cacert.crt

A warning is displayed indicating that the Connection is not secure.

2. Click Advanced. In the resulting pane, click Add Exception.



3. Confirm the security exception in the resulting dialog. Ensure that the checkbox **Permanently** store this exception is left unchecked.

Add Security Exception
You are about to override how Firefox identifies this site. Legitimate banks, stores, and other public sites will not ask you to do this.
Location: https://mpaserver.local.net/cacert.crt Get Certificate
Certificate Status
This site attempts to identify itself with invalid information.
Unknown Identity
The certificate is not trusted because it hasn't been verified as issued by a trusted authority using a secure signature.
Permanently store this exception
<u>C</u> onfirm Security Exception Cancel

4. Click OK in the next dialog to confirm the installation of the CA certificate. Ensure that the **Trust this CA to identify websites** checkbox is selected.

Downloading Certificate	
You have been asked to trust a new Certificate Authority (CA).	
Do you want to trust "mpaserver.local.net" for the following purposes?	
✓ Trust this CA to identify websites.	
Trust this CA to identify email users.	
Trust this CA to identify software developers.	
Before trusting this CA for any purpose, you should examine its certificate and its policy and procedures (if available).	
OK Cancel	

5. Quit and re-open Firefox.

The Mitel Performance Analytics CA certificate is now installed for Firefox.

FIREFOX CA CERTIFICATE TROUBLESHOOTING

If you encounter problems using the Mitel Performance Analytics CA certificate, try the following steps before contacting support.

- 1. Close and restart Firefox.
- **2.** Check the Mitel Performance Analytics CA certificate is installed as a Trusted Root Certification Authority:



Open the Firefox Options menu. Choose Advanced and then the Certificates tab.

• Click on View Certificates and choose the Authorities tab.

Fou have certificates on the that identity the	se certificate authorities:
Certificate Name	Security Device
CA沃通根证书	Builtin Object Token
CA WoSign ECC Root	Builtin Object Token
⊿Xceedium	
rh5x64porter1.cpa.intra	Software Security Device
⊿XRamp Security Services Inc	
XRamp Global Certification Authority	Builtin Object Token
⊿XYZ corporation	
mpaserver.local.net	Software Security Device

• Verify that your certificate is listed. The certificate reflects the host name and domain where you installed the Mitel Performance Analytics server. For the example in this document, the certificate is for **mpaserver.local.net**.

If the certificate cannot be found, download it from the Mitel Performance Analytics server and reinstall, making sure to import the Mitel Performance Analytics cacert.crt file from the Authorities tab and to authorize it to verify websites.

If you get an error message such as the following:

An error occurred during a connection to mpaserver local net.
an er or occurred daning a connection to impuser remocument
You have received an invalid certificate. Please contact the server administrator or email correspondent and give them the following information:
Your certificate contains the same serial number as another certificate issued by the certificate authority. Please get a new certificate containing a unique serial number.
(Error code: sec_error_reused_issuer_and_serial)
 The page you are trying to view cannot be shown because the authenticity of the received data could not be verified.
 Please contact the website owners to inform them of this problem. Alternatively, use the command found in the help menu to report this broken site.

then do the following:

- 1. Clear your browser history.
- 2. Go to the Firefox **Options** menu, **Advanced** options, **Certificates** tab, delete your certificate from any of the **Certificates** tabs it may appear.
- 3. Reinstall the cacert.crt file.
- 4. Close and restart the browser.

OS X - CHROME AND SAFARI

To install the Mitel Performance Analytics CA certificate on OS X, do the following steps:

- Download the cacert.crt file from the Mitel Performance Analytics server by navigating to https://<Mitel Performance Analytics_server>/cacert.crt
- **2.** A privacy warning is displayed in your browser as follows: For Safari:

0	mpaserver.local.net	×	1 0 +
	Safari can't verify the identity of the web The certificate for this website is invalid. You n website that is pretending to be "messerver.loc confidential information at risk. Would you like anyway?	bsite "mpaserver.local.net". might be connecting to a cal.net", which could put your to connect to the website	
?	Show Certificate	Cancel Continue	

For Chrome:

Privacy error ×			1	Viall
← → C 🕅 https://mwserver.local.n	et/cacert.crt	🔂 😋 🔀 🖣	1	≡
	Your connection is not private			
	Attackers might be trying to steal your information from mwserver.local.net (for			
	example, passwords, messages, or credit cards). NET::ERR_CERT_AUTHORITY_INVALID			
	Hide advanced Back to safety			
	This server could not prove that it is mwserver.local.net ; its security certificate is not			
	or an attacker intercepting your connection.			
	Proceed to mwserver.local.net (unsafe)			

- 3. Continue to the web page and download the cacert.crt file.
- **4.** Go the folder where you downloaded the cacert.crt file and right-click on the file name. This action opens the Keychain Access application and asks you to approve adding the cacert.crt file to your system keychain.

For Safari:

\mathbf{O}	Add Certificates
Certificate	Do you want to add the certificate(s) from the file "cacert.crt" to a keychain? New root certificates should be added to the login keychain for the current user, or to the System keychain if they are to be shared by all users of this machine.
View Cer	Keychain: login 🗘

		Keychain Acces	e	
Click to lock the	login keychain.	rie yonan rie ooo		Q Search
Keychains login liCloud System System Roots	Centificate September 2014 Centificate Expires: Wednesday, Ju © This certificate is val	Integration Certific authority Jy 26, 2017 at 3:16:09 id	ation Authority PM Eastern Daylight Time	
	Name Apple Applictification Authority	Kind certificate	Expires Jul 26, 2017, 3:16:09 PM	Keychain login
Catagony	 Class F Public Microlin Automy com.apple.id496b6a54773d3d COMODO CliSecure Email CA 	certificate	Apr 14, 2016, 4:47:54 PM May 30, 2020, 6:48:38 AM	login login
All Items	Deutsche Telekom Root CA 2 DFN-Verein PCA Global - G01	certificate certificate	Jul 9, 2019, 7:59:00 PM Jul 9, 2019, 7:59:00 PM	login
Secure Notes My Certificates	MarWatch Application Roland Karch	certificate certificate certificate	Jun 29, 2019, 8:00:00 PM Jun 7, 2035, 9:33:53 AM Apr 16, 2017, 8:56:24 AM	login login login
Certificates	UTN-USERFitication and Email UTN-USERFitication and Email VeriSign Clasbscriber CA - G2	certificate certificate certificate	May 30, 2020, 6:48:38 AM May 30, 2020, 6:48:38 AM Oct 27, 2015, 7:59:59 PM	login login login
	VeriSign Clasbscriber CA - G3	certificate certificate	Apr 30, 2019, 7:59:59 PM Jul 16, 2036, 7:59:59 PM	login login
	+ i Copy		14 items	

For Chrome:

- 5. Approve the action with your OS X user ID and password.
- 6. Close and restart the browser.

The Mitel Performance Analytics CA certificate is now installed for your OS X account.

OS X CA CERTIFICATE TROUBLESHOOTING

If you encounter problems using the Mitel Performance Analytics CA certificate, try the following steps before contacting support.

- 1. Quit and restart the browser (Safari or Chrome).
- **2.** Check the Mitel Performance Analytics CA certificate is installed as a Trusted Root Certification Authority:
 - Open the **Keychain Access** application and search for the certificate. The certificate reflects the host name and domain where you installed the Mitel Performance Analytics server. For the example in this document, the certificate is for mpaserver.local.net.

•	Keychain Access								
	Click to lock the lo	gin keychain.					Q mpa		۵
G 🛠 💷 📔	Keychains Iogin iCloud System System Roots	Certificate Rod	mpaserver.local Root certificate auth Expires: Tuesday, M C This certificate is	.net hority arch 18, 2036 at 8:55:19 marked as trusted for thi	AM Eastern Daylight Time s account				
		Name		 Kind 	Date Modified	Expire	s	Keychain	
	Category	🛛 🔀 mpaserv	er.local.net	certificate		Mar 18	, 2036, 8:55:19 AM	login	
₽ ₽ ₽	All Items Passwords Secure Notes My Certificates Keys Certificates								
		+ i Cop	у		1 item				

• Double click the certificate.

	mpaserver.local.net		
Certificate Root certificate authority Expires: Tuesday, March 18, 2036 at 8:55:19 AM Eastern Daylight Time This certificate is marked as trusted for this account			
 Details 			
Subject Nam Countr State/Provinc Localit Organization Organizational Un Common Nam	e e y Ottawa n XYZ corporation it Main e mpaserver.local.net		
Issuer Nam Countr State/Provinc Locali Organizatic Organizational Un Common Nam	e e y Ottawa n XYZ corporation it Main e mpaserver.local.net		

- Check that the certificate is marked as trusted for this account.
- **3.** If the certificate cannot be found, download it from the Mitel Performance Analytics server and reinstall, making sure to trust the certificate.

INSTALLING THE MITEL PERFORMANCE ANALYTICS CA CERTIFICATE FOR PROBES

The Mitel Performance Analytics server uses TLS to ensure that the connection between Mitel Performance Analytics probes and the Mitel Performance Analytics server is secure. When your Mitel Performance Analytics server is first installed, it generates a unique self-signed Certification Authority (CA) certificate.

Note: Mitel Performance Analytics Probes must have the correct certificate to connect to the Mitel Performance Analytics server. If you are using the default Mitel Performance Analytics CA certificate, then it must be installed with the Probe. If you have replaced the Mitel Performance Analytics CA certificate with a certificate provided by recognized CA, you do not need to install the Mitel Performance Analytics CA certificate.

INSTALLING THE CA CERTIFICATE FOR A LINUX PROBE

These instructions apply to the Linux RPM, MiCollab Blade, and Virtual Appliance Probe software packages. Refer to the *Mitel Performance Analytics Probe Installation and Configuration Guide* for a description of these Probe software packages.

Some variations may be required if you are installing the Probe on a different Linux platform.

The Root Certificate file must be added to Java JRE cacerts file. To do so, do the following steps:

 Download and extract the Root Certificate file to the Linux system where the Probe is planned to be installed. From your home directory, run the following command using the URL for the Mitel Performance Analytics CA certificate:

wget --no-check-certificate https://server FQDN/cacert.crt

For the example in this document, the command is:

wget --no-check-certificate mpaserver.local.net/cacert.crt

2. Find the location of the Java JRE cacerts file with the following command: sudo find / -name "cacerts"

The following is a typical result:

/etc/jre/security/cacerts

3. Run the following command to add the Root Certificate file to the Java JRE cacerts file: sudo keytool -import -keystore <path to java jre cacerts file> alias mpaca -file <path to the extracted Root Cert file>

For the example in this document, the command is:

```
sudo keytool -import -keystore /etc/jre/security/cacerts -alias
mpaca -file ~/cacert.crt
```

4. When prompted, supply the password for the Java JRE cacerts file. The default password is changeit. Do not change the password for the Java JRE cacerts file.

INSTALLING THE CA CERTIFICATE FOR A WINDOWS PROBE

The Root Certificate file must be added to Java JRE cacerts file. To do so, do the following steps:

 Download and extract the Root Certificate file to the Windows system where the Probe is planned to be installed. Use a web browser and navigate to the following URL: https://server FQDN/cacert.crt

For the example in this document, the URL is:

htps://mpaserver.local.net/cacert.crt

 Find the location of the Java JRE cacerts file. Typically, it is located in the Java JRE installation directory. The following are examples: For 64-bit Windows systems:

```
C:\Program Files (x86)\Martello Technologies\MarProbe\jre1.8.0_
65\lib\security\cacert
```

For 32-bit Windows systems:

```
C:\Program Files\Martello Technologies\MarProbe\jre1.8.0_
65\lib\security\cacert
```

Note: The particular version of JRE may vary depending on your version of Mitel Performance Analytics.

- 3. Open a Command Prompt window as a Windows administrator:
 - Navigate to Start > All Programs > Accessories.
 - Right-click Command Prompt.
 - Select Run as Administrator.
- **4.** Run the following command in the **Command Prompt** window to add the Root Certificate file to the Java JRE cacerts file:

```
C:\Program Files (x86)\Martello Technologies\MarProbe\jre1.8.0_
65\bin\keytool -importcert -keystore "<path to java jre cacerts
file>" -alias mpaca -file "<path to the extracted Root Cert file>"
```

The following is an example for a 64-bit Windows system:

```
C:\Program Files (x86)\Martello Technologies\MarProbe\jre1.8.0_
65\bin\keytool -importcert -keystore "C:\Program Files
(x86)\Martello Technologies\MarProbe\jre1.8.0_
65\lib\security\cacerts" -alias mpaca -file
"C:\Users\rsally\Documents\cacert.crt"
```

Note: In the previous command and example, replace "Program Files (x86)" with "Program Files" for 32-bit Windows systems.

5. When prompted, supply the password for the Java JRE cacerts file. The default password is changeit. Do not change the password for the Java JRE cacerts file.

Note: When using the Windows keytool command, you must use quotes to specify file paths.

PROBE INSTALLATION AND CONFIGURATION

After preparing the certificate, follow the appropriate Probe installation and configuration procedure described in the *Mitel Performance Analytics Probe Installation and Configuration Guide*.

INSTALLING AN ALTERNATE CA CERTIFICATE

The following procedure applies only if you want to use your own Certification Authority (CA) certificate or a CA certificate provided by a recognized CA instead of the Mitel Performance Analytics self-signed certificate.

Note: If you install your own CA certificate, you also need to install it for web browsers and for Mitel Performance Analytics Probes. See "Installing the Mitel Performance Analytics CA Certificate for Web Browsers" on page 29 and "Installing the Mitel Performance Analytics CA Certificate for Probes" on page 41.

PROCEDURE PREREQUISITES

You need the following files:

- Your private certificate key; for example private.key.
- The certificate that has been signed by a recognized CA; for example public.crt.
- The CA root certificate; for example, root.cert.

PROCEDURE STEPS

The following instructions assume you use the sudo/vi editor. Mitel Performance Analytics also provides the sudo/nano editor. You can use either one to update files.

To replace the self-signed certificate with one from a recognized CA, do the following steps:

 Copy all three files (for example, private.key, public.crt, and root.cert) from your local machine to the Mitel Performance Analytics server. If you are using a Linux local machine and the IP address of the Mitel Performance Analytics server is 10.10.5.10:

scp private.key root@10.10.5.10:/mwadmin/

scp public.crt root@10.10.5.10:/mwadmin/

```
scp root.cert root@10.10.5.10:/mwadmin/
```

If you are using a Windows local machine:

- Start the WinSCP application.
- Connect to the Mitel Performance Analytics server.
- Using the WinSCP GUI, drag the three files to the target Mitel Performance Analytics server.
- On the Mitel Performance Analytics server, move all three files to the following location: /etc/nginx/certs/:

```
sudo mv private.key /etc/nginx/certs/
sudo mv public.crt /etc/nginx/certs/
sudo mv root.cert /etc/nginx/certs/
```

- 3. Change your working directory to be /etc/nginx/certs/: cd /etc/nginx/certs/
- 4. Run the following command to combine your signed public certificate to the root certificate. sudo bash -c "cat /etc/nginx/certs/public.crt /etc/nginx/certs/root.crt >> /etc/nginx/certs/chained.crt"

The previous sudo bash command combines the **public.crt** file with the **root.crt** file to create a new third file called **chained.crt**. The chained.crt file is used in subsequent steps.

- 5. Open your nginx.conf file to include your certificates for use: sudo vi /etc/nginx/nginx.conf
- 6. Locate the following two lines in the nginx.conf file. ssl_certificate /etc/nginx/certs/marwatch_chained.crt; ssl certificate key /etc/nginx/certs/marwatch.key;
- 7. Press i to enter edit mode.
- 8. Perform the following changes. Ensure the names match the names of your files from: ssl certificate /etc/nginx/certs/marwatch chained.crt;

```
to:ssl_certificate /etc/nginx/certs/chained.crt;
from:ssl_certificate_key /etc/nginx/certs/marwatch.key;
to:ssl_certificate_key /etc/nginx/certs/private.key;
```

The first change configures ssl certificate to be your file created in Step 4.

The second change configures ssl_certificate_key to be your private certificate key: private.key.

- 9. Press esc to leave edit mode and return to command mode.
- **10.** Press : wq to save and close the **nginx.conf** file.
- **11.** Restart nginx for your changes to take effect: sudo /etc/init.d/nginx restart

MITEL PERFORMANCE ANALYTICS BACKUP AND RESTORE

Mitel recommends that you use your virtual operating environment to do a full backup of your Mitel Performance Analytics image. This approach protects both the Mitel Performance Analytics server software and its data. If this approach is not feasible, you can use the mw-backup and mw-restore scripts to safeguard your Mitel Performance Analytics data.

Note: The restored Mitel Performance Analytics server must use the same fully qualified domain name as the previous server, from which the back-up was taken. It might be necessary to change the DNS configuration to ensure the FQDN resolves to the static IP address of the restored server.

The mw-backup script produces a tar file of the Mitel Performance Analytics data and key configuration files. Once created, you can copy the tar file to another machine or network location.

BACKUP SCRIPT USAGE

For mw-backup.sh, the usage is:

mw-backup.sh [--unattended-backup] [--dest=<backup-file-destination>]

The --unattended-backup parameter performs the backup without shutting down services.

The -dest parameter specifies where to put the backup file on the local machine. The default location is /home/mwadmin.

RESTORE SCRIPT USAGE

For mw-restore.sh, the usage is:

```
mw-restore.sh [--backup-file-mibs] [--temp-dest=<temp-destination>]
--backup-file=<backup-file.tar.gz>
```

The --backup-file-mibs parameter retains the MIBs from the backup file. The default is to use the MIBs currently deployed in the system.

The --temp-dest parameter specifies the location to extract the backup file. The default location is /tmp.

The --backup-file parameter specifies the backup file to restore.

BACKUP PROCEDURE

Do the following steps:

- 1. Open a terminal window to the Mitel Performance Analytics server you want to backup.
- 2. Log in as mwadmin.
- 3. Run the mw-backup script using sudo. By default the backup file is saved in the mwadmin home directory.

sudo ./scripts/mw-backup.sh

- 4. When prompted for the sudo password, supply the mwadmin password.
- 5. After the script ends, copy the resulting backup file to another machine or network location.

6. Shut down this Mitel Performance Analytics server. This is necessary, as the server to which the data is being restored must use the same fully qualified domain name.

RESTORE PROCEDURE

Do the following steps:

- 1. Open a terminal window to the Mitel Performance Analytics server you want to restore.
- 2. Log in as mwadmin.
- 3. Transfer the desired backup file to the local Mitel Performance Analytics server.
- 4. Run the mw-restore script using sudo: sudo ./scripts/mw-restore.sh <backup-file.tar.gz> Example:

 $\texttt{sudo} \ \texttt{./scripts/mw-restore.sh} \ \texttt{mpaserver-backup-1474127212}.\texttt{tar.gz}$

5. Ensure the DNS system is configured so that the fully qualified domain name for the Mitel Performance Analytics system (i.e mpaserver.mycompany.net) resolves to the static IP address of the restored server.

RESETTING THE MWADMIN PASSWORD

If you forget the MWADMIN password that was set during the Mitel Performance Analytics installation process, you can reset the password.

To reset the MWADMIN password, do the following:

- 1. From the vSphere client console shut down the Mitel Performance Analytics server.
- **2.** Power on the Mitel Performance Analytics server while holding down the Shift key to display the "GNU GRUB" start up page.

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	жUbuntu		
	Advanced options for Ubuntu	u	
	Memory test (memtest86+)		
	Memory test (memtest86+, se	erial console 115200)	
	Use the ↑ and ↓ keys to Press enter to boot the before booting or `c' fo	select which entry is highlig selected OS, `e' to edit the o or a command-line.	nted. commands

3. Using the keyboard Up and Down arrow keys, select **Advanced options for Ubuntu** from the menu and press Enter.

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4. Select the first "recovery mode" item from menu and press Enter. **Note:** Your kernel numbers will not be the same as shown below.

mpa-ova-2.2.124 c1f97291-ESXi5.1 🕞 🖬 🚍 🎒 Actions 🛞 GNU GRUB version 2.02~beta2-9ubuntu1.12 Ubuntu, with Linux 4.4.0-101-generic *Ubuntu, with Linux 4.4.0-101-generic (recovery mode) Ubuntu, with Linux 4.4.0-96-generic Ubuntu, with Linux 4.4.0-96-generic (recovery mode) Ubuntu, with Linux 4.4.0-83-generic Ubuntu, with Linux 4.4.0-83-generic (recovery mode) Use the ↑ and ↓ keys to select which entry is highlighted. Press enter to boot the selected OS, `e' to edit the commands before booting or `c' for a command-line. ESC to return previous

∏ ⊕ mp	a-ova-2.2.124 c1f97	291-ESXI5.1		🕼 Actions 🛞
	Recovery Me	enu (filesystem sta	te: read/write)	
		resume	Resume normal boot	
		clean duka	Try to make free space Repair broken packages	
		fsck	Check all file systems	
		grub petwork	Update grub bootloader	
		root	Drop to root shell prompt	
		system-summary	System summary	
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5. On the Recovery Menu, select grub **Update grub bootloader** and press Enter.

6. On the confirmation page, ensure Yes is selected and press Enter.



7. Once the update is complete, press Enter to return to the Recovery Menu.



8. From the Recovery Menu, select root Drop to root shell prompt and press Enter.

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	Recovery Menu	(filesystem stat	te: read-only)	
	rd c dj f: gj nd sj	esume lean pkg sck rub etwork <mark>oot</mark> ystem-summary	Resume normal boot Try to make free space Repair broken packages Check all file systems Update grub bootloader Enable networking Drop to root shell prompt System summary	
,			<0k>	

9. At the prompt, type passwd mwadmin and press Enter to change the password for the mwadmin user.

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Recove:	ry Menu (filesystem st	ate: read ⁹ write)	
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root@sip:~# pa Enter new UNI Retype new UN	asswd mwadmin X password: IX password:	lu	
root@sip:~# _	oru upuateu successiui	iy	

- 10. Type the new password and press enter, then re-enter it to confirm. The passwd: password updated successfully message is displayed in the terminal prompt.
- **11.** Type init 6 at the prompt to reboot the system.

mpa-ova-2.2.124 c	1f97291-ESXi5.1		🖬 🖬 📑 🙀 Actions 🚫
	resume clean dpkg fsck grub network root	Resume normal boot Try to make free space Repair broken packages Check all file systems Update grub bootloader Enable networking Drop to root shell prompt	
	system-summary	System summary <ok></ok>	
	cud musdmin		
rootusip: # pas Enter new UNIX Retype new UNIX passwd: passwor root@sip:~#	swa mwaamin password: password: d updated successful	ly	

12. Once the Mitel Performance Analytics server is up and running, you can log in using the new password.



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