



Secure Enterprise Mobility

User Guide

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About this guide

This user guide helps to get started with and use Secure Enterprise Mobility (SEM) with Cloud Platform.

About Qualys

Qualys, Inc. (NASDAQ: QLYS) is a pioneer and leading provider of cloud-based security and compliance solutions. The Qualys Cloud Platform and its integrated apps help businesses simplify security operations and lower the cost of compliance by delivering critical security intelligence on demand and automating the full spectrum of auditing, compliance and protection for IT systems and web applications.

Founded in 1999, Qualys has established strategic partnerships with leading managed service providers and consulting organizations including Accenture, BT, Cognizant Technology Solutions, Deutsche Telekom, Fujitsu, HCL, HP Enterprise, IBM, Infosys, NTT, Optiv, SecureWorks, Tata Communications, Verizon and Wipro. The company is also a founding member of the [Cloud Security Alliance \(CSA\)](#). For more information, please visit www.qualys.com.

Qualys Support

Qualys is committed to providing you with the most thorough support. Through online documentation, telephone help, and direct email support, Qualys ensures that your questions will be answered in the fastest time possible. We support you 7 days a week, 24 hours a day. Access support information at www.qualys.com/support/.

Get Started

Welcome to the Qualys Secure Enterprise Mobility (SEM) User Guide. Qualys SEM offers you a cloud-based solution to help you secure, monitor, and manage mobile devices (including smartphones and tablets) across your enterprise.

Before starting, let's understand the different users mentioned in this document:

Admin User - Admin user configures all necessary settings required to enroll the mobile devices, creates SEM users, and monitors various dashboards and reports.

SEM User - Users added to the SEM module/application are considered as SEM Users. SEM Users are holders/owners of the mobile devices.

With SEM, you can:

- Comprehensive visibility into mobile devices details, installed apps, and configurations, even if they are not on VPN or network,
- Real-time visibility into vulnerabilities and critical device settings along with monitoring for potentially harmful applications,
- Automatic correlation of vulnerabilities with apps and Android patches, and
- Orchestration of appropriate response actions such as deploying patches from Google Play Store or uninstalling vulnerable apps.

We'll help you get started quickly!

Supported Platforms

- Android (Version 4.4.2 and higher)
- iOS (Version 9.0 and higher)
- iPadOS (Version 13.1 and higher)

What are the steps?

- 1) Setup End User License Agreement (EULA). For information on setting up EULA, refer to [EULA Management](#). (This step is optional)
- 2) Configure APNs certificates if your SEM users have iOS devices to enroll. For more information, refer to [APNs Certificates](#).
- 3) Create SEM users. For detailed steps, refer to [Creating a New SEM User](#). If you add an email address while creating an SEM user, the user will receive an email that contains the credentials and enrollment details. SEM users have the **Bulk User Upload** option to add multiple users in one go!

- 4) Now, SEM users can start enrolling their mobile devices. For more information, refer to [Device Enrollment](#). If devices are already enrolled in any EMM, configure the 'Enroll device without SEM EMM' for iOS and Android, i.e., select the 'All iOS devices' and 'All Android devices' check-boxes. For more details, refer to [Enrollment Settings](#). You can auto-enroll the devices through an automated enrollment process.
- 5) Monitor mobile devices inventory and its security posture using Dashboards and Reports once SEM users enroll their devices.
- 6) If the devices are enrolled in Intune, then configure Intune [Connector](#) to sync the enrolled devices in SEM agentless.

Configurations

This section helps you to create and manage EULA. It also helps you to configure APNs certificates. This section also helps you configure organization-level settings, such as organization information, enrollment settings, application settings, and sync settings.

EULA Management

Your End User License Agreement (EULA) may include the policies and declarations related to the asset management, information access, privacy, Acceptable Use Policy (AUP), reimbursement of expenses, HR policies, non-disclosure of corporate data, and so on.

Typically, the organization's legal team provides EULA.

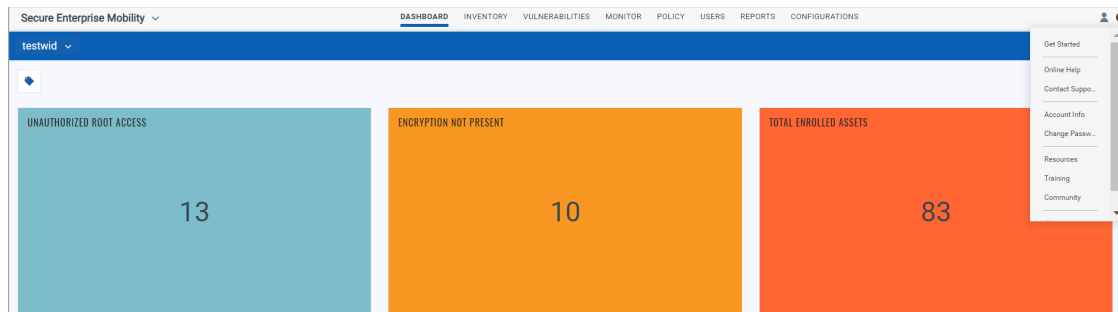
Customer's use of the Cloud Services will result in Personal Identifiable Information being processed by Qualys. Customer acts as a data controller, and Qualys acts as a Data Processor. It is the customers' obligation, and Qualys shall not have any obligation, to gather the appropriate consent from every data subject from whom the customer is gathering Personally Identifiable Information through the Cloud Services. The customer is required to enter into an end-user agreement with each data subject that informs the subject of the data gathered and the use that customer shall make of such data. Qualys offers provision to define such end user agreement and shall not be deemed to have advised customer regarding the appropriateness or completeness of such end-user agreement.

Set up the EULA from the Configuration tab. We provide you with a provision to add the End User License Agreement text. This step is optional. If EULA is configured, the asset user must accept the EULA before enrolling assets.

Qualys allows you to configure your own EULA text based on your organization's needs and policies. When a EULA is associated with an SEM user, the user must accept the EULA at the time of device enrollment.

What are the steps to configure a new EULA?

1) Click the help icon (question mark icon) and then click **Get Started**.



2) Click **Configure End User License Agreement** to open the Edit EULA page. Provide the EULA text and then click **Save**.

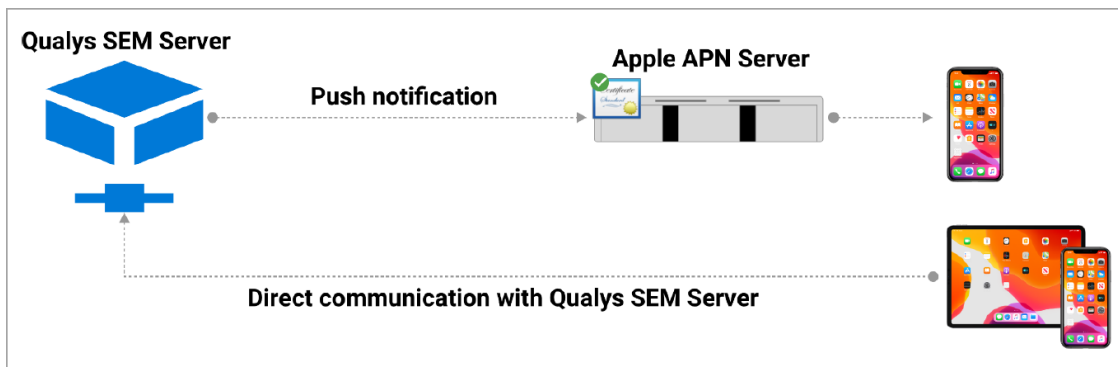
You can also access the EULA from **Configurations** > **EULA**. You can edit the EULA text using the **Edit** action from the quick action menu.

APNs Certificates

This section applies only to the iOS devices. For managing iOS devices, you must obtain Apple Push Notification Service (APNs) certificate for secure communication from Qualys SEM server with the Apple devices. Qualys SEM helps you generate and renew APNs certificates.

What is an APNs Certificate?

SEM uses an APNs certificate to send notifications to the Apple devices when communication is initiated by the administrator or the server for requesting information from the devices or Apps or policies are published on the devices. No data is sent through the APNs service, only the notification.



Pre-requisites to Generate the Certificate

- An Apple ID. (You can create it at <https://appleid.apple.com>). Recommended using the Apple ID, which belongs to the organization.
- Mac OS X or Windows workstation with Administrative permissions
- Web browser (Safari, Mozilla Firefox, or Chrome are required to work with Apple's website)

Steps to Generate APNs Certificate

- 1) Login to the SEM Portal at <https://xxxx.apps.qualys.com>.

2) Navigate to **Configurations > APNs Configuration** and click **New**.

STATUS	DETAILS	APPLE ID	DEVICES	UPLOADED	VALID TILL
Active	Test26m UID: com.apple.mgmt.External.k... Serial # : ...	qdevtest1@gmail.com	13	May 26, 2021 3:16:45 PM IST sem_vg41	May 26, 2022 3:07:45 PM IST
Active	qdevtest1 UID: com.apple.mgmt.External.k... Serial # : ...	qdevtest1@gmail.com	0	May 04, 2021 12:10:07 PM IST sem_vg41	May 04, 2022 12:01:40 PM IST
Expired	Test02 UID: com.apple.mgmt.External.k... Serial # : ...	qdevtest1@gmail.com	0	Feb 12, 2021 3:07:32 PM IST sem_vg41	Feb 28, 2021 2:58:33 PM IST Expired 311 days ago

3) Download the **Certificate Signing Request (CSR)** file and save the file at a known location. Click **Next**.

Configure APNs Certificate

STEPS 1/3

- 1 Download Request File
- 2 Create Certificate
- 3 Upload Certificate

Download Request File

You need to first generate a Certificate Signing Request (CSR) and download it. This CSR is in the process of creating the APNs Certificate from Apple Push Certificate portal.

Certificate Signing Request

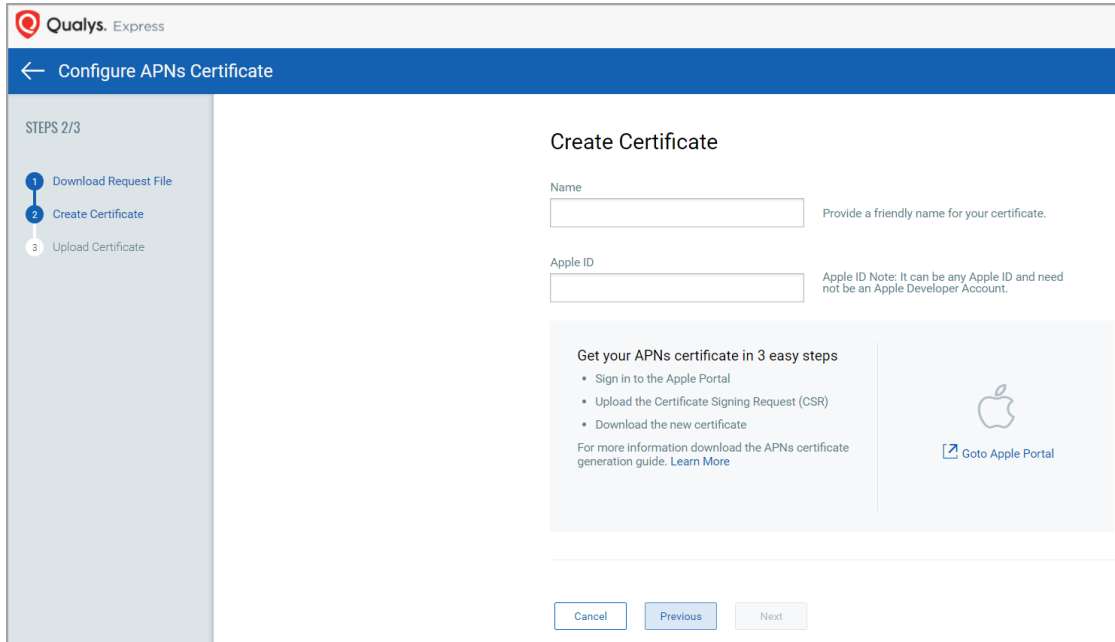
We use your organization's APNs certificate to send notifications to your iOS devices when information is requested from the device at intervals or on demand.

If you do not already have a CSR file from SEM, please download it here. You will need this CSR to download an APNs certificate from Apple portal.

Download CSR

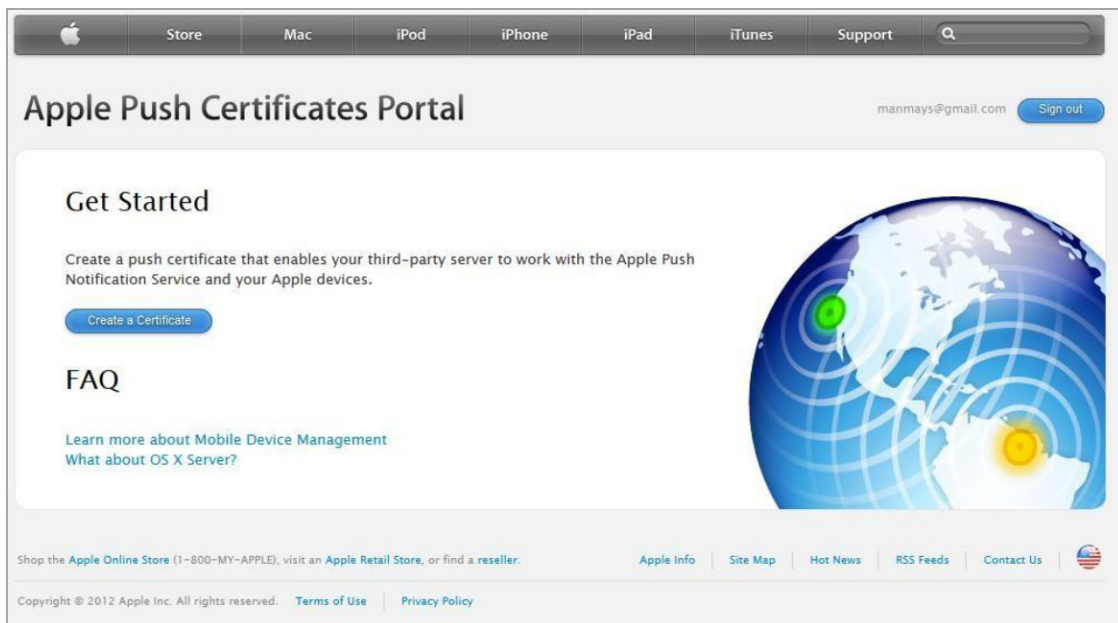
Cancel Next

4) Click the **Goto Apple Portal** link to go to the Apple Push Certificate Portal (<https://identity.apple.com/pushcert/>).



The image shows the 'Configure APNs Certificate' interface in Qualys Express. The page has a blue header with the Qualys Express logo and a back arrow. A sidebar on the left shows 'STEPS 2/3' with three steps: 'Download Request File', 'Create Certificate' (which is highlighted with a blue circle and number 2), and 'Upload Certificate'. The main content area is titled 'Create Certificate' and contains two input fields: 'Name' with a placeholder 'Provide a friendly name for your certificate.' and 'Apple ID' with a placeholder 'Apple ID Note: It can be any Apple ID and need not be an Apple Developer Account.' Below these fields is a section titled 'Get your APNs certificate in 3 easy steps' with a bulleted list: 'Sign in to the Apple Portal', 'Upload the Certificate Signing Request (CSR)', and 'Download the new certificate'. Below the list is a link 'For more information download the APNs certificate generation guide. Learn More'. To the right of this section is an Apple logo and a link 'Goto Apple Portal'. At the bottom of the main content area are three buttons: 'Cancel', 'Previous', and 'Next'.

5) Log in using your corporate Apple ID and password. Click **Create a Certificate**.



The image shows the Apple Push Certificates Portal. The top navigation bar includes links for 'Store', 'Mac', 'iPod', 'iPhone', 'iPad', 'iTunes', and 'Support', along with a search icon. The main header is 'Apple Push Certificates Portal' with a user email 'manmays@gmail.com' and a 'Sign out' button. The main content area is titled 'Get Started' and contains the text 'Create a push certificate that enables your third-party server to work with the Apple Push Notification Service and your Apple devices.' Below this text is a blue button labeled 'Create a Certificate'. To the right of this text is a graphic of a globe with a green dot in North America and a yellow dot in Africa. Below the 'Get Started' section is an 'FAQ' section with the text 'Learn more about Mobile Device Management' and 'What about OS X Server?'. The footer contains links for 'Shop the Apple Online Store (1-800-MY-APPLE), visit an Apple Retail Store, or find a reseller.', 'Apple Info', 'Site Map', 'Hot News', 'RSS Feeds', 'Contact Us', and a US flag icon. The copyright notice at the bottom is 'Copyright © 2012 Apple Inc. All rights reserved. Terms of Use Privacy Policy'.

6) Select **I have read and agree to these terms and conditions** check-box, and then click **Accept**.

StoreMaciPodiPhoneiPadiTunesSupport

manmays@gmail.comSign out

Apple Push Certificates Portal

Terms of Use

PLEASE READ THE FOLLOWING LICENSE AGREEMENT TERMS AND CONDITIONS CAREFULLY BEFORE DOWNLOADING OR USING THE APPLE CERTIFICATES. THESE TERMS AND CONDITIONS CONSTITUTE A LEGAL AGREEMENT BETWEEN YOUR COMPANY/ORGANIZATION AND APPLE.

MDM Certificate Agreement
(for companies deploying mobile device management for iOS products)


Purpose
Your company, organization or educational institution would like to use the MDM Certificates (as defined below) to enable You to either deploy a third-party commercial, enterprise server software product for mobile device management of iOS products, or deploy Your own internal mobile device management for iOS products within Your company, organization or educational institution. Apple is willing to grant You a limited license to use the MDM Certificates as permitted herein on the terms and conditions set forth in this Agreement.

1. Accepting this Agreement; Definitions
1.1 Acceptance
In order to use the MDM Certificates and related services, You must first agree to this License Agreement. If You do not or cannot agree to this License Agreement, You are not permitted to use the MDM Certificates or related services. Do not download or use the MDM Certificates or any related services in that case.


☐ I have read and agree to these terms and conditions.

[Printable Version >](#)

[Decline](#) [Accept](#)

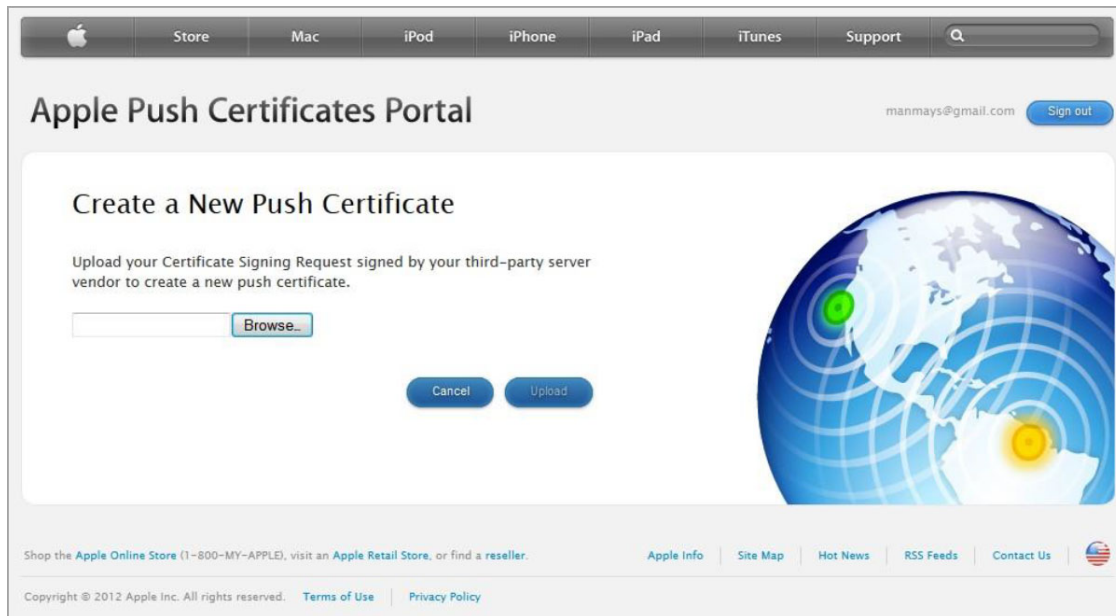


Shop the [Apple Online Store](#) (1-800-MY-APPLE), visit an [Apple Retail Store](#), or find a [reseller](#).

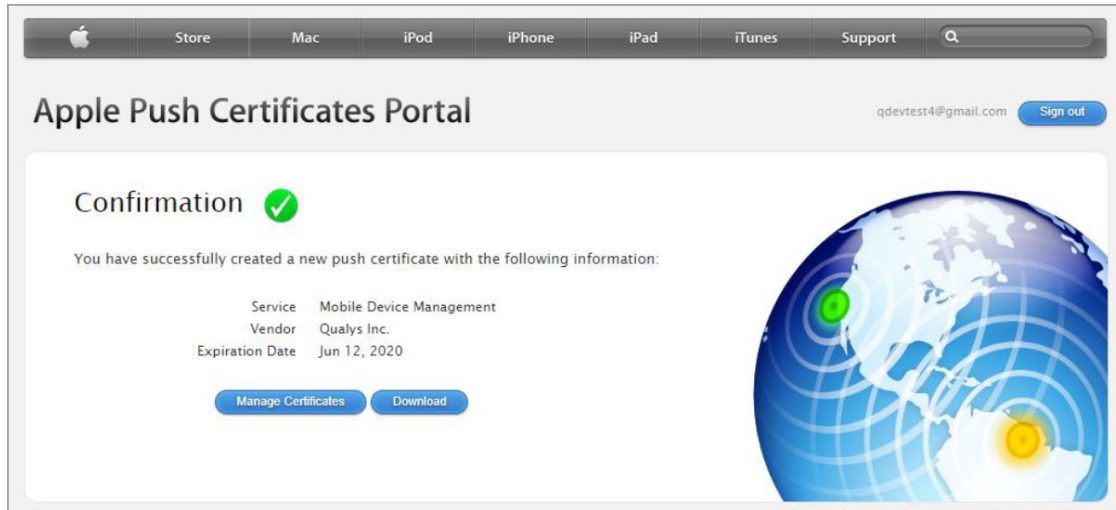
[Apple Info](#) | [Site Map](#) | [Hot News](#) | [RSS Feeds](#) | [Contact Us](#) 

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7) Browse to the location where you saved the Qualys_CertificateSigningRequest.txt file and then upload the certificate file.



8) In the confirmation window, download the PEM file to a known location.



9) Go back to your Configure APNs Certificate wizard in the Qualys portal. In the Create Certificate tab, enter the **APNs Name** and the **Apple ID** using which you have generated the PEM file and click **Next**.

The screenshot shows the 'Create Certificate' step (Step 2 of 3) in the Qualys Express 'Configure APNs Certificate' wizard. The left sidebar shows the progress: 1. Download Request File, 2. Create Certificate (active), and 3. Upload Certificate. The main content area has a title 'Create Certificate' and two input fields: 'Name' and 'Apple ID'. The 'Name' field has a placeholder text 'Provide a friendly name for your certificate.' The 'Apple ID' field has a placeholder text 'Apple ID Note: It can be any Apple ID and need not be an Apple Developer Account.' Below these fields is a section titled 'Get your APNs certificate in 3 easy steps' with a list of steps: 'Sign in to the Apple Portal', 'Upload the Certificate Signing Request (CSR)', and 'Download the new certificate'. A link 'For more information download the APNs certificate generation guide. Learn More' is provided. To the right of this list is an Apple logo and a link 'Goto Apple Portal'. At the bottom of the wizard are three buttons: 'Cancel', 'Previous', and 'Next'.

10) Upload the certificate file (.pem) that you downloaded from the Apple portal.

The screenshot shows the 'Upload Certificate' step (Step 3 of 3) in the Qualys Express 'Configure APNs Certificate' wizard. The left sidebar shows the progress: 1. Download Request File, 2. Create Certificate, and 3. Upload Certificate (active). The main content area has a title 'Upload Certificate' and a subtitle 'Upload APNs certificate you downloaded from Apple push certificate portal.' Below this is a section titled 'Upload the certificate file (.pem) that you downloaded from the Apple Portal'. This section contains a dashed box with a cloud icon and the text 'Drop file here to attach or browse'. Below this is a file upload area showing '1 file' with a file named 'MDM_Qualys Inc._Certificate.pem' (22/Dec/2020 8:51 PM, 2 KB). At the bottom of the wizard are three buttons: 'Cancel', 'Previous', and 'Save'.

11) Enter the Qualys portal password and Click **Save**.

The APNs Configuration tab lists the APNs certificate, and you can start using it to manage your Apple devices. The validity of the APNs certificate is 365 days, so you must renew the APNs Certificate before expiring the certificate. To know more, refer to [Renew APNs Certificate](#).

Organization Information

This section helps you configure the organization-level information. The sender's address helps to send out any communication or notification from the organization.

Settings

This section helps you to configure various enrollment settings, application settings, and sync settings.

Enrollment Settings

Enrollment details are required to enroll the SEM user device, including ownership of the device, asset communication mode, option to provide a mobile number, and device enrollment without SEM EMM.

The screenshot shows the 'Settings' page with the 'Enrollment Settings' section. It includes a dropdown for 'Default Ownership of Assets' set to 'User Prompt', with notes explaining its function. Below is the 'Default Asset Communication Mode (only for android)' section with radio buttons for 'Push' (selected) and 'Poll'. The 'Mandate Mobile Number' section has radio buttons for 'No' (selected) and 'Yes', with a note about its requirement. At the bottom, there are checkboxes for 'Enroll devices without SEM EMM', specifically 'All iOS Devices' and 'All Android Devices'.

Settings

Enrollment Settings

Default Ownership of Assets

User Prompt ▼

Notes:

- If User Prompt is selected, User will need to choose the Assets Ownership during the enrollment process.
- Assets Ownership cannot be changed post enrollment of the asset.

Default Asset Communication Mode *(only for android)*

☒ Push ☐ Poll

Mandate Mobile Number

☒ No ☐ Yes

Note: If checked, User will be required to enter the Mobile Number of the assets being enrolled.

Enroll devices without SEM EMM

☐ All iOS Devices

☐ All Android Devices

For Android devices, you need to choose asset communication mode (Push and Poll) using the radio button.

- Push: Qualys server initiates communication with the device when required.
- Poll: Device will communicate to the Qualys server after the specified regular interval. You can set the polling intervals in [Sync Settings](#).

If you need to enroll devices without SEM EMM, select the appropriate check-box. You can enroll all iOS devices or Android devices without SEM EMM.

Note: Please select the check-boxes if your organization devices are already enrolled in any EMM to enroll iOS devices or Android devices without SEM EMM.

Application Settings

This setting allows you to set a default value for the Maximum Enrollable Assets field while creating SEM users.

Application Settings
Default Maximum Enrollable Assets

Sync Settings

These settings allow you to define various sync intervals like polling interval, asset sync interval, and heartbeat interval.

Sync Settings
Recommended values are shown by default. Lowering any of these values will increase battery usage and data consumption on your assets.

Polling Interval (in Minutes) *

Note: Reducing this will increase battery usage and data consumption on asset. Minimum value should be 15 mins.

Asset Sync Interval (in Hours) *

Note: Reducing this will increase battery usage and data consumption on asset.

Heartbeat Interval (in Hours) *

Note: Reducing this will increase battery usage and data consumption on asset.

- Polling Interval (in Minutes): If the device is in poll mode, it will communicate with the server at the time interval as per configuration.

- Asset Sync Interval (in Hours): Device regularly sends the asset update information such as newly installed apps, changes in settings, and so on, to the Qualys server as per the intervals set here.

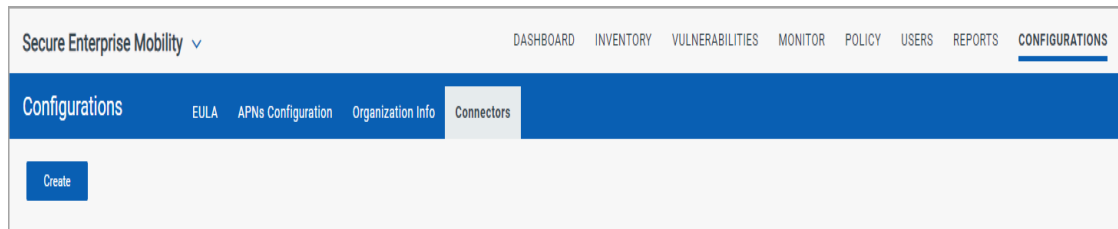
- Heartbeat Interval (in Hours): Device regularly communicates to the Qualys server notifying its status as per interval set here.

Connector

Configure the connector to sync the devices enrolled in EMM/MDM solution in SEM. For now, you can sync only those devices that are enrolled in Intune EMM using a connector.

Following are the steps to configure a new connector:

1) Navigate to the **Configurations > Connectors** sub-tab and click **Create**.



2) Enter Name and Description in Basic Details and click **Next**.

 The screenshot shows the "Create Connector" form. The top bar is blue with a back arrow and the text "Create Connector". On the left, a sidebar shows "STEPS 1/3" with three steps: 1. Basic Details (active), 2. Authentication Details, and 3. Review and Confirm. The main area is titled "Basic Details" and contains two input fields: "Name *" with the value "System" and "Description" which is a large text area. A character count "250/250 characters remaining" is visible at the bottom right of the description field. At the bottom of the form are "Cancel" and "Next" buttons.

3) Enter Authentication Details.

Mark device as De-enrolled if the device is de-enrolled from the Intune.

Note: Polling frequency can be set to a minimum of 1 hour, which means, after every one hour sync will try to fetch all the devices that are enrolled against the mentioned Tenant ID.

4) Click **Next**.

5) Once the entered details are reviewed and confirmed, click **Configure**.

← Create Connector

STEPS 3/3

1 Basic Details

2 Authentication Details

3 Review and Confirm

Review and Confirm

Basic Details

Name

System

Description

-

Authentication Details

Tenant ID

23

Mark device as De-enrolled if devices are de-enrolled from Intune.

Yes

Polling Frequency

Hours

4

Minutes

0

Cancel

Previous

Configure

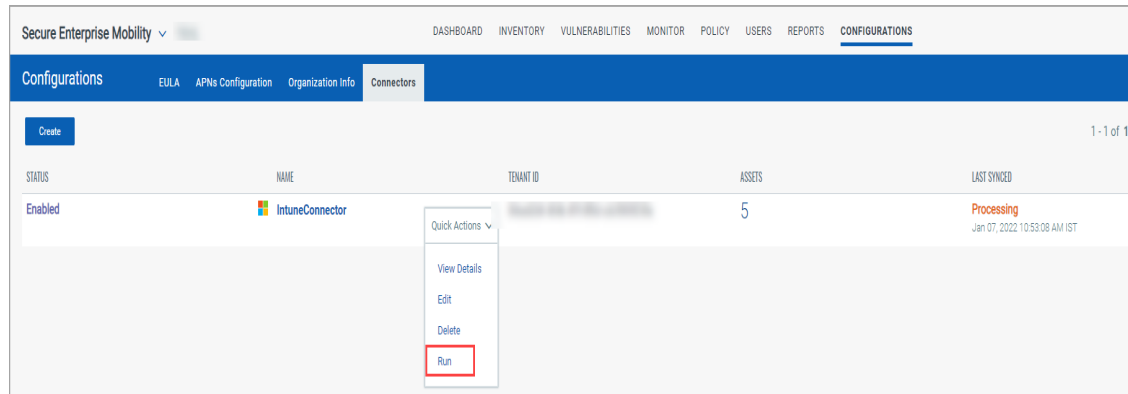
You will be redirected to the Microsoft portal, where all the required permissions are mentioned.

6) Click **Accept**.

The newly created connector will be listed under the **Configurations > Connectors** sub-tab.

Secure Enterprise Mobility					
DASHBOARDINVENTORYVULNERABILITIESMONITORPOLICYUSERSREPORTSCONFIGURATIONS					
ConfigurationsEULAAPNs ConfigurationOrganization InfoConnectors					
Create1 - 1 of 1					
STATUS	NAME	TENANT ID	ASSETS	LAST SYNCED	
Enabled	IntuneConnector		5	Processing Jan 07, 2022 10:53:08 AM IST	

Wait for a while to allow the devices to sync with the new connector. You can also sync manually by selecting the drop-down icon next to the required connector and clicking **Run**.



Other actions possible for the existing connectors are **View Details**, **Edit**, and **Delete**.

The added devices can be searched in the **Inventory** sub-tab.

Note: These devices are enrolled without SEM EMM.

Auto-merging of Cloud Agent Assets with Intune Synced Assets

Once a connector is configured, the assets enrolled in EMM/MDM solution are automatically synced with Intune assets. It is optional if you want to install the Cloud Agent on the synced assets. Installing the Cloud Agent lets you leverage the benefits for both the Cloud Agent and Intune.

Once the agent is enrolled, the Cloud Agent asset gets automatically merged into the respective Intune synced asset. Once it is merged, only one asset entity appears on the UI.

In the **Asset Details** window, you can confirm the following:

- If the agent is installed on the asset or not, by referring to the **Qualys Cloud Agent Installed** field. If the agent is installed on the asset then the **Qualys Cloud Agent Installed** field displays **Yes**.
- If the asset is enrolled with Intune or not, by referring to the **Source** field. If the asset is synced through Intune then the **Source** field displays **Intune**.

← Asset Details: _8_3_2021_12_29_PM_Android_Google

INVENTORY

Asset Summary

System Information

Network Information

Installed Applications

COMPLIANCE

Controls Evaluated

SECURITY


Vulnerabilities

MANAGEMENT

Actions

Logs

Asset Summary



_8_3_2021_12_29_PM_Android_Google

Last Seen: Apr 26, 2022 7:41:38 AM IST (3 hours ago)

Status: **Enrolled**

Identification

Mode: Active

Ownership: Corporate - Owned

IMEI:

MAC Address:

UDID: 440551e1-19cf-4812-9907-b04518cc1ee4

Asset ID: 474305070

Username: -

GSF ID: -

Enrolled with SEM EMM: No

Qualys Cloud Agent Installed: **Yes**

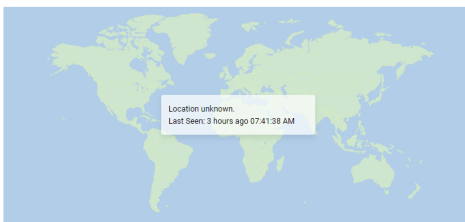
Source: Intune

Security Posture

Vulnerable: Yes

Encryption: Encryption Complete

Last Location



Location unknown.
Last Seen: 3 hours ago 07:41:38 AM

Tags

No Asset Group

No Hostname

No NetBIOS Name

SEM

OS: Android

Type: Mobile Device

Security Agents

Assets with no Vuln

Assets with no...

OS: Android (All)

Type: Mobile...

Type: Mobile...

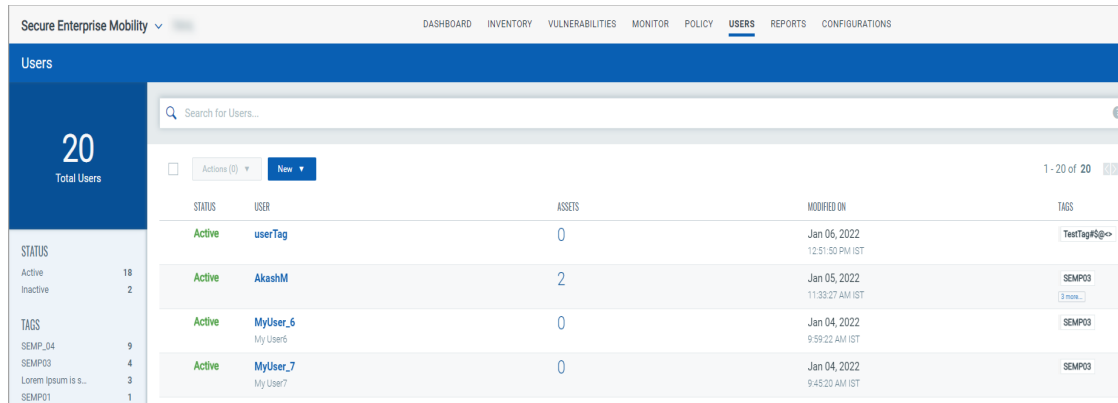
decom

SEM User Management

SEM users are the users who enroll their devices as per email received from the Admin User. The email contains detailed steps to enroll the mobile device. To enroll the device, refer to [Device Enrollment](#).

SEM offers organizations flexible options to manage and organize SEM user accounts. The SEM users are the device owners and are different from Portal users.

Navigate to the **Users** tab to see the list of existing users.

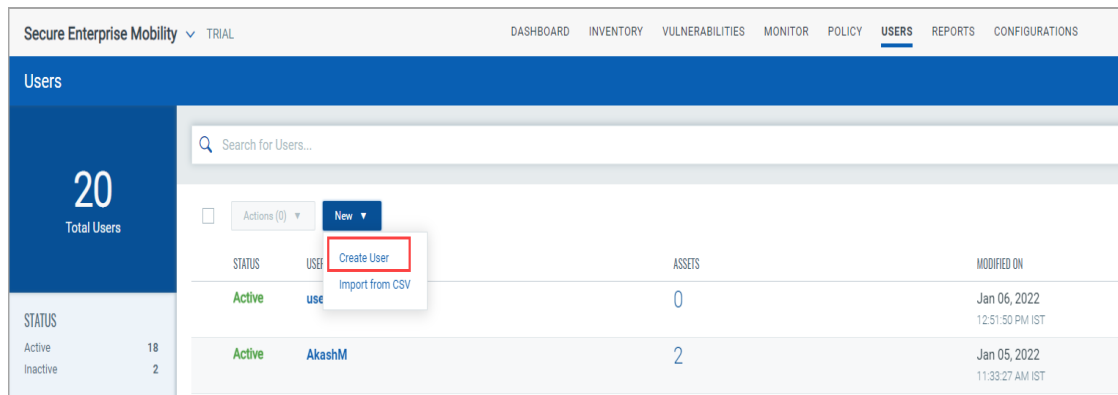


STATUS	USER	ASSETS	MODIFIED ON	TAGS
Active	userTag	0	Jan 06, 2022 12:51:50 PM IST	TestTag#&@>
Active	AkashM	2	Jan 05, 2022 11:33:27 AM IST	SEMP03 3 more...
Active	MyUser_6 My User6	0	Jan 04, 2022 9:59:22 AM IST	SEMP03
Active	MyUser_7 My User7	0	Jan 04, 2022 9:45:20 AM IST	SEMP03

Creating a New SEM User

You'll be able to create a new SEM user with the following steps:

- 1) Navigate to the **Users** tab and click **Create User** from the **New** drop-down menu.



STATUS	USER	ASSETS	MODIFIED ON
Active	use	0	Jan 06, 2022 12:51:50 PM IST
Active	AkashM	2	Jan 05, 2022 11:33:27 AM IST

2) On the **Add User** page, enter the user information in the **Personal Information** section and then click **Next**.

The screenshot shows the 'Add User' page in Qualys Express. The page has a blue header with the Qualys Express logo and a back arrow. Below the header, there's a sidebar on the left with 'STEPS 1/2' and two steps: '1 Personal Information' (active) and '2 User Configuration'. The main content area is titled 'Personal Information' and contains several input fields: 'First Name' (John), 'Middle Name' (empty), 'Last Name' (Doe), 'Username' (jdoe_q, with a green highlight indicating it's available), 'Email ID' (jdoe@qualys.com), and 'Contact Number' (876234651910288). At the bottom, there are 'Cancel' and 'Next' buttons.

3) On the **Add User** page, provide the following user configurations in the **User Configuration** section.

- **EULA**: Configure the EULA message you want users to read and accept. For more information, refer to [EULA Management](#). EULA configuration is optional. However, if EULA is configured, you need to associate it with the SEM user, and the SEM user must accept the EULA while enrolling their device.
- **Maximum Enrollable Assets**: This is the maximum number of assets that can be enrolled for this SEM user. The default value for maximum enrollable assets is configured in [Application Settings](#).

- **Status:** You can create a user in the Active or Inactive state. An active user can enroll devices, while inactive users won't be able to enroll the devices.

The screenshot shows the 'Add User' form in Qualys Express. The left sidebar indicates 'STEPS 2/2' with '1 Personal Information' and '2 User Configuration'. The main form area is titled 'User Configuration' and contains the following fields:

- EULA ***: A dropdown menu with 'eula11' selected.
- Maximum Enrollable Assets ***: A text input field containing '200000'.
- Status**: Two radio buttons, 'Active' (selected) and 'Inactive'.

At the bottom of the form are three buttons: 'Cancel', 'Previous', and 'Add'.

4) Click **Add**, and you'll see a user in the list.

Once you add a user with a valid email address, an email is sent to the user to enroll the device.

Bulk User Upload

SEM offers the option to upload users in bulk. With this feature, the admin can import a CSV file containing a list of users in SEM.

Importing Users

You'll be able to import users with the following steps:

1) Navigate to the **Users** tab, and from the **New** drop-down, click **Import from CSV**.

The screenshot shows the 'Users' page in the Qualys Secure Enterprise Mobility interface. The top navigation bar includes 'DASHBOARD', 'INVENTORY', 'VULNERABILITIES', 'MONITOR', 'POLICY', 'USERS' (selected), 'REPORTS', and 'CONFIGURATIONS'. The 'Users' page header shows '20 Total Users'. A search bar is present with the text 'Search for Users...'. Below the search bar is a table with columns: 'STATUS', 'USER', 'ASSETS', and 'MODIFIED ON'. The table contains two rows of user data. A 'New' button with a dropdown arrow is located above the table, and a red box highlights the 'Import from CSV' option in the dropdown menu.

STATUS	USER	ASSETS	MODIFIED ON
Active	use	0	Jan 06, 2022 12:51:50 PM IST
Active	AkashM	2	Jan 05, 2022 11:33:27 AM IST

2) You can download a sample template CSV file by clicking the **Download** link from the **Import Users** page.

Qualys. Express

← Import Users

STEPS 1/2

1 File Upload

2 Review Users Data

File Upload

You can download the template of the .CSV file and system will help verify the data before uploading pre-approved assets data in the system.

Download Sample Template
Download the sample template file to understand the expected format of information in .csv file. [Learn More](#) [Download](#)

Drag and drop a .csv file to the designated area below

Drop file here to attach or [browse](#)

☐ Send asset enrollment details
Your organization is set up to send enrollment details via email. If the email ID is missing for the user, they will not be able to receive the enrollment details.

To upload the users in SEM, make sure you have met the following conditions:

- The file you are uploading must be in CSV format (tab or comma delimited)
- The file must contain 1 row of information for each user that needs to be registered/enrolled
- The first row contains the column titles/attributes
- If mandatory fields are left blank or file contains duplicate data; you will be informed of the line numbers and data that needs to be fixed. Data will be saved only when all the errors are cleared
- Make sure you have the latest CSV file format. Refer to the following table to fill the correct information in the CSV file:

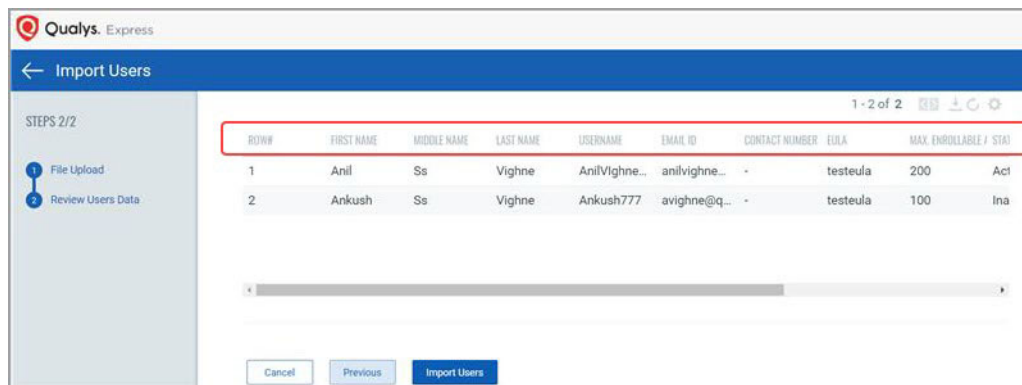
Fields	Mandatory / Optional	Validations
Username	Mandatory	Should be alphanumeric and '+', '@', '.', '_', '-' these five characters are allowed. Must be at least 6 characters in length and maximum 250 characters are allowed.
First_Name	Optional	Should be alphanumeric. Must be at least 2 characters in length and maximum 250 characters are allowed.
Middle_Name	Optional	Should be alphanumeric. Must be at least 2 characters in length and maximum 250 characters are allowed.
Last_Name	Optional	Should be alphanumeric. Must be at least 2 characters in length and maximum 250 characters are allowed.

Fields	Mandatory / Optional	Validations
Email_ID	Optional	Must be in standard email format. For example: yourname@yourdomain.com
Contact_Number	Optional	Should be numeric. Must be at least 4 digits in length.
EULA	Optional	If EULA is configured for your organization, then only EULA will be mandatory, else optional. It should be alphanumeric, and the EULA name is case sensitive. It must be at least 6 characters in length. Note: EULA should exist.
Maximum Enrollable Assets	Mandatory	Should be numeric. Must be greater than zero.
Status	Mandatory	Copy and paste the status as mentioned. This field is case sensitive. Status can be Active or Inactive.
Tag	Optional	Should be alphanumeric and Tag name is case-sensitive.

If your CSV file is not proper (invalid), click the **View Errors** link to see the Error List page with a list of errors in the CSV file. Following is the screen for sample errors:

ROW#	FIRST NAME	MIDDLE NAME	LAST NAME	USERNAME	EMAIL ID	CONTACT NUMBER	EULA	MAX ENROLLABLE / STATUS	TAGS
1	Anil	S	Vighne	AnilVighne...	anilvighne...	-	testeula	200 Active	SEM,tag01,tag02
2	Ankush	S	Vighne	Ankush777	avighne@q...	-	testeula	100 Inactive	SEM,tag01,tag02

3) Click **Next** after uploading a valid CSV file. Review the user list and click **Import Users** to upload the users.



Qualys Express

← Import Users

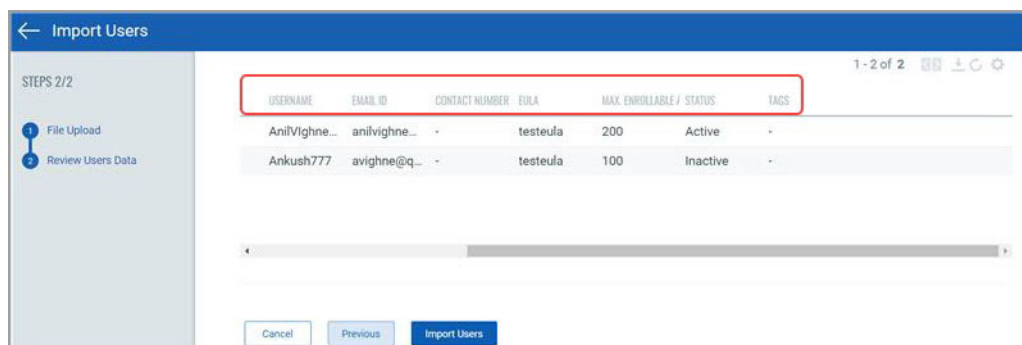
STEPS 2/2

- 1 File Upload
- 2 Review Users Data

1 - 2 of 2

ROW#	FIRST NAME	MIDDLE NAME	LAST NAME	USERNAME	EMAIL ID	CONTACT NUMBER	EULA	MAX. ENROLLABLE / STA
1	Anil	Ss	Vighne	AnilVighne...	anilvighne...	-	testeula	200
2	Ankush	Ss	Vighne	Ankush777	avighne@q...	-	testeula	100

Cancel Previous Import Users



← Import Users

STEPS 2/2

- 1 File Upload
- 2 Review Users Data

1 - 2 of 2

USERNAME	EMAIL ID	CONTACT NUMBER	EULA	MAX. ENROLLABLE / STATUS	TAGS
AnilVighne...	anilvighne...	-	testeula	200	Active
Ankush777	avighne@q...	-	testeula	100	Inactive

Cancel Previous Import Users

Mobile Device Inventory

Once the SEM users enroll their mobile devices, you can view the list under the **Inventory** tab.

Refer to [Device Enrollment](#) to enroll the mobile devices. This gives you in-depth visibility of all mobile devices across your enterprise, including their configuration and installed applications.

Select the **Asset** option to view the assets details and security posture in your inventory. You can use the various metadata filters, group by options, and custom query capabilities to find what you are interested in.

STATUS	ASSET	MODEL	USER	LAST SEEN	TAGS	CONTROLS EVALUATED	VULNERABILITIES
Enrolled	PiyushSonawane_IP...	iPad	—	Jan 07, 2022 6:55:22 AM IST	SEM	1	1
Enrolled	PiyushSonawane_An...	SM-G973F	—	Jan 07, 2022 6:55:22 AM IST	SEM	0	1
Enrolled	PiyushSonawane_IP...	iPhone 12	—	Jan 07, 2022 6:55:22 AM IST	SEM	1	3
Enrolled	PiyushSonawane_An...	Lenovo TB-7504X	—	Jan 07, 2022 6:55:22 AM IST	SEM	3	14

With quick actions for a specific asset, you can view the details for the asset, deactivate the asset or send the message.

The asset listing provides a holistic view of all assets with a number of vulnerabilities for the asset. It also gives status details with a number of assets such as enrolled, de-enrolled, and ready for re-enrollment.

- Enrolled: Device is ready for management
- De-enrolled: Corporate data is deleted, and the device is being not managed
- Ready for Re-enrollment: Device is added but currently not managed

Assets are also segregated based on platforms, ownership, tags, and whether it is vulnerable or not.

Click a particular asset to view the asset details.

The screenshot displays the Qualys Express interface for viewing an asset's details. The top navigation bar shows 'Asset Details: mitchell_Android_Google'. A left sidebar contains a menu with categories: INVENTORY (Asset Summary, System Information, Network Information, Asset Settings, Installed Applications, CA Certificates, Location), SECURITY (Vulnerabilities, Security Tokens), and MANAGEMENT (Actions, Logs). The main content area is titled 'Asset Summary' and features an Android icon, the asset name 'mitchell_Android_Google', and its status 'Enrolled'. Below this, the 'Identification' section lists various identifiers: Mode (Active), Ownership (Corporate - Owned), IMEI (351564321421919), MAC Address (08:00:27:EC:EC:78), UDID (7ADCDA0165003C0B0894674472F3C00EDF86A587), Asset ID (61522), Username (msingh), GSF ID (3d7cccd1238e160e), and Enrollment with SEM EMM (Yes). The 'Security Posture' section shows Vulnerable (No), Encryption (No Encryption), and Unauthorized Root Access (No). The 'Last Location' section includes a world map and a callout box displaying the MAC address and location. A 'Tags' section at the bottom right shows a single tag labeled 'SEM'.

It includes:

Inventory

- Asset Summary: Summary view with security posture
- System Information: Inventory information which includes specifications and hardware details
- Network Information: Network information which includes the cellular and Wi-Fi information
- Asset Settings: Displays last synced configurations for settings that may make the device vulnerable, such as developer option settings, USB debugging, etc.
- Apps: Get visibility into the list of apps installed on the device
- CA Certificates: Displays list of CA certificates issued for the device
- Location: Displays device location over the period of time

Security

- Vulnerabilities: Displays vulnerabilities on the device with severity levels and status
- Security Tokens: Displays list of security tokens used in the device

Management

- Actions: Lists various actions that can be performed on the device
- Logs: Displays various audit logs, sent messages and diagnostic logs

Vulnerability Assessment

Qualys Vulnerability Assessment is a cloud-based service that gives you immediate, global visibility into where your IT systems might be vulnerable to the latest Internet threats and how to protect them. It helps you to continuously identify threats and monitor the unexpected changes in your network before they turn into breaches.

Vulnerability Assessment in SEM

Vulnerability Assessment in SEM gives you visibility into mobile devices vulnerable to threats due to outdated OS.

On enrollment, vulnerability scanning is done for each mobile device. Within a couple of minutes, the vulnerability is evaluated, and you can see the detected vulnerabilities. We have the best coverage of vulnerabilities of Android and iOS, it includes:

Device vulnerabilities including vulnerable OS versions with CVEs details. We cover OS vulnerabilities from 2016 to the latest for Android and iOS, which helps you secure from the attacks, as explained above. It also detects the OS vulnerabilities exploits too.

Detection of Jailbreak/Rooted devices, Encryption disabled, Password removed/disabled.

For App vulnerabilities, we detect the CVE of the vulnerable apps, such as the Google Chrome application vulnerabilities shown in the above example and detect the potentially harmful applications. We cover the application's vulnerabilities from 2016 till the latest.

We detect the devices connected to an open Wi-Fi network for network vulnerabilities.

For Android, if the device manufacturers such as Samsung, Google, LG, and Huawei have published the advisory of security updates for such devices, the QIDs are marked as Confirmed, and for the rest of the devices, the QIDs are marked as Potential.

Navigate to the **Vulnerabilities** tab to see the list of vulnerability detections for the mobile devices.

Secure Enterprise Mobility

Vulnerabilities

293
Total Detections

SEVERITY

5182

475

331

25

CATEGORY

Mobile Device249

Mobile Application44

TYPE DETECTED

Confirmed196

Potential97

PATCHABLE

No291

Yes2

PLATFORM

Android171

iOS122

TYPE

DASHBOARD

INVENTORY

VULNERABILITIES

MONITOR

POLICY

USERS

REPORTS

CONFIGURATIONS

Vulnerabilities

Jobs

Vulnerability

Search...

Group By...

Filters

1 - 50 of 293

QID	TITLE	SEVERITY	RELEASED ON	LAST DETECTED	ASSET	PATCH
610059	Google Android Devices August 2019 Security ... Active	■■■■■	Aug 01, 2019	Jan 06, 2022 6:56:13 PM IST	PiyushSonawane_Android... Enrolled	Patch Now
610143	Google Android Devices September 2018 Secu... Active	■■■■■	Sep 01, 2018	Jan 06, 2022 6:56:13 PM IST	PiyushSonawane_Android... Enrolled	Patch Now
610052	Google Android Devices January 2019 Security ... Active	■■■■■	Jan 01, 2019	Jan 06, 2022 6:56:13 PM IST	PiyushSonawane_Android... Enrolled	Patch Now
610055	Google Android Devices April 2019 Security Pa... Active	■■■■■	Apr 01, 2019	Jan 06, 2022 6:56:13 PM IST	PiyushSonawane_Android... Enrolled	Patch Now
610061	Google Android Devices October 2019 Security... Active	■■■■■	Oct 01, 2019	Jan 06, 2022 6:56:13 PM IST	PiyushSonawane_Android... Enrolled	Patch Now
610144	Google Android Devices October 2018 Security... Active	■■■■■	Oct 01, 2018	Jan 06, 2022 6:56:13 PM IST	PiyushSonawane_Android... Enrolled	Patch Now
610145	Google Android Devices November 2018 Secur... Active	■■■■■	Nov 01, 2018	Jan 06, 2022 6:56:13 PM IST	PiyushSonawane_Android... Enrolled	Patch Now
610054	Google Android Devices March 2019 Security ... Active	■■■■■	Mar 01, 2019	Jan 06, 2022 6:56:13 PM IST	PiyushSonawane_Android... Enrolled	Patch Now
610053	Google Android Devices February 2019 Securi... Active	■■■■■	Feb 01, 2019	Jan 06, 2022 6:56:13 PM IST	PiyushSonawane_Android... Enrolled	Patch Now
610060	Google Android Devices September 2019 Secu... Active	■■■■■	Sep 01, 2019	Jan 06, 2022 6:56:13 PM IST	PiyushSonawane_Android... Enrolled	Patch Now
610146	Google Android Devices December 2018 Secu... Active	■■■■■	Dec 01, 2018	Jan 06, 2022	PiyushSonawane_Android ...	Patch Now

Click a particular QID to view the vulnerability details.

← Vulnerability Details: Google Android Devices February 2021 Security Patch Missing

VIEW MODE Detection Summary General Information Exploitability Patches Malware	<h2 style="text-align: center;">Detection Summary</h2> <div style="float: right; border: 1px solid #ccc; border-radius: 15px; padding: 2px 10px; margin-top: -100px;">Patch Now</div> <div style="margin-top: 20px; border: 1px solid #ccc; padding: 10px; background-color: #f9f9f9;"> <p>Google Android Devices February 2021 Security Patch Missing</p> <p>ID: 610317 Active</p> <p>Last Found on Apr 20, 2021 4:51:02 PM IST ■ ■ ■ ■ ■</p> </div> <div style="margin-top: 20px; background-color: #fff9c4; padding: 10px; border: 1px solid #ccc;"> <p>Vulnerability Result</p> <p>Android Security Patch Level on Device : 2021-01-01 Required Patch Level : 2021-02-01</p> </div> <div style="margin-top: 20px; border: 1px solid #ccc; padding: 10px;"> <p>Vulnerability Description</p> <p>Android is a mobile operating system based on a modified version of the Linux kernel and other open source software, designed primarily for touchscreen mobile devices such as smartphones and tablets.</p> <p>Following security issues were discovered</p> <ul style="list-style-type: none"> CVE-2020-11297,CVE-2020-11296,CVE-2020-11269,CVE-2020-11177,CVE-2020-11170,CVE-2021-0329,CVE-2021-0328,CVE-2021-0305,CVE-2021-0302,CVE-2017-18509,CVE-2020-11180,CVE-2021-0325,CVE-2021-0327,CVE-2021-0326,CVE-2021-0341,CVE-2021-0340,CVE-2020-11187,CVE-2020-11280,CVE-2020-11281,CVE-2020-11282,CVE-2020-11283,CVE-2020-11286,CVE-2020-11287,CVE-2021-0338,CVE-2021-0339,CVE-2021-0314,CVE-2020-11163,CVE-2021-0332,CVE-2021-0333,CVE-2021-0330,CVE-2021-0331,CVE-2021-0336,CVE-2021-0337,CVE-2021-0334,CVE-2021-0335,CVE-2020-11253,CVE-2020-11278,CVE-2020-11271,CVE-2020-11270,CVE-2020-11272,CVE-2020-11275,CVE-2020-11277,CVE-2020-11276 </div>	ABOUT ASSET <div style="text-align: center;"> Swapnil_Android_OnePlus <small>Last Seen: Jul 22, 2021 7:29:16 PM Status: Enabled</small> </div> Identification <table style="width: 100%; border-collapse: collapse;"> <tr><td style="padding: 5px;">Mode:</td><td style="padding: 5px;">Active</td></tr> <tr><td style="padding: 5px;">Ownership:</td><td style="padding: 5px;">Corporate - Owned</td></tr> <tr><td style="padding: 5px;">IMEI:</td><td style="padding: 5px;">-</td></tr> <tr><td style="padding: 5px;">MAC Address:</td><td style="padding: 5px;">AA:C4:0C:D9:C4:DA</td></tr> <tr><td style="padding: 5px;">UUID:</td><td style="padding: 5px;">D93EB2CF6817B0F497ADA4D519BD12A473EC96</td></tr> <tr><td style="padding: 5px;">Asset ID:</td><td style="padding: 5px;">3563999820</td></tr> <tr><td style="padding: 5px;">Username:</td><td style="padding: 5px;">sahmaro</td></tr> </table> Activity <table style="width: 100%; border-collapse: collapse;"> <tr><td style="padding: 5px;">Last Seen:</td><td style="padding: 5px;">Jul 22, 2021 7:29:16 PM IST</td></tr> <tr><td style="padding: 5px;">Enrolled On:</td><td style="padding: 5px;">May 25, 2021 3:48:40 PM IST</td></tr> <tr><td style="padding: 5px;">Modified On:</td><td style="padding: 5px;">-</td></tr> </table>	Mode:	Active	Ownership:	Corporate - Owned	IMEI:	-	MAC Address:	AA:C4:0C:D9:C4:DA	UUID:	D93EB2CF6817B0F497ADA4D519BD12A473EC96	Asset ID:	3563999820	Username:	sahmaro	Last Seen:	Jul 22, 2021 7:29:16 PM IST	Enrolled On:	May 25, 2021 3:48:40 PM IST	Modified On:	-
Mode:	Active																					
Ownership:	Corporate - Owned																					
IMEI:	-																					
MAC Address:	AA:C4:0C:D9:C4:DA																					
UUID:	D93EB2CF6817B0F497ADA4D519BD12A473EC96																					
Asset ID:	3563999820																					
Username:	sahmaro																					
Last Seen:	Jul 22, 2021 7:29:16 PM IST																					
Enrolled On:	May 25, 2021 3:48:40 PM IST																					
Modified On:	-																					

Vulnerability details include the following:






- Detection Summary: Displays vulnerability detected
- General Information: Displays vulnerability summary with possible threats and solution
- Exploitability: Lists known exploits for this vulnerability available from third-party vendors and/or publicly available sources
- Patches: Displays available patches for this vulnerability
- Malware: Displays any published malware, where you can assess its malware family and risk

Tell me about Severity Levels

The severity level assigned to a vulnerability tells you the security risk associated with its exploitation.

Confirmed Vulnerabilities






Confirmed vulnerabilities (QIDs) are the design flaws, programming errors, or misconfigurations that make your mobile device susceptible to malicious attacks. Depending on the level of the security risk, the successful exploitation of a confirmed vulnerability can vary from the disclosure of information to a complete compromise of the mobile device. Even if the device isn't fully compromised, an exploited confirmed vulnerability could still lead to the mobile devices being used to launch attacks against users of the mobile device.

Severity	Level	Description
	Minimal	Basic information disclosure might enable intruders to discover other vulnerabilities, but lack of this information does not make the vulnerability harder to find.
	Medium	Intruders may be able to collect sensitive information about the mobile device, such as the precise version of software used. With this information, intruders can easily exploit known vulnerabilities specific to software versions. Other types of sensitive information might disclose a few lines of source code or hidden directories.
	Serious	Vulnerabilities at this level typically disclose security-related information that could result in misuse or an exploit. Examples include source code disclosure or transmitting authentication credentials over non-encrypted channels.
	Critical	Intruders can exploit the vulnerability to gain highly sensitive content or affect other users of the mobile device. Examples include certain types of cross-site scripting and SQL injection attacks.
	Urgent	Intruders can exploit the vulnerability to compromise the mobile device's data store, obtain information from other users' accounts, or obtain command execution on a host in the mobile device's architecture.

Potential Vulnerabilities




Potential Vulnerabilities indicate the observation of a weakness or error commonly used to attack a mobile device are unable to confirm if the weakness or error could be exploited. Where possible, the QID's description and results section include information and hints for following up with manual analysis. For example, the exploitability of a QID

may be influenced by characteristics that cannot be confirmed, such as the native Android vulnerabilities which might be present on the Android manufacturer's devices for which advisory is not published.

Severity	Level	Description
	Minimal	Presence of this vulnerability is indicative of basic information disclosure and might enable intruders to discover other vulnerabilities. For example in this scenario, information such as web server type, programming language, passwords or file path references can be disclosed.
	Medium	Presence of this vulnerability is indicative of basic information disclosure and might enable intruders to discover other vulnerabilities. For example version of software or session data can be disclosed, which could be used to exploit.
	Serious	Presence of this vulnerability might give access to security-related information to intruders who are bound to misuse or exploit. Examples of what could happen if this vulnerability was exploited include bringing down the server or causing hindrance to the regular service.
	Critical	Presence of this vulnerability might give intruders the ability to gain highly sensitive content or affect other users of the mobile device.
	Urgent	Presence of this vulnerability might enable intruders to compromise the mobile device's data store, obtain information from other users' accounts, or obtain command execution on a host in the mobile device's architecture. For example in this scenario, the mobile device users can potentially be targeted if the device is exploited.

Information Gathered

Information Gathered issues (QIDs) include visible information about the mobile device's platform, OS version, model, and installed security patch level.

Severity	Level	Description
	Minimal	Intruders may be able to retrieve sensitive information related to the mobile device.
	Medium	Intruders may be able to retrieve sensitive information related to internal functionality or business logic of the mobile device.
	Serious	Intruders may be able to detect highly sensitive data, such as personally identifiable information (PII) about other users of the mobile device.

Tell me about vulnerability status

You'll see the status of the detected vulnerabilities under Inventory > Vulnerabilities tab. We continuously update the status of detected vulnerabilities based on the mobile asset data synced as per the asset sync interval.

Each vulnerability instance is assigned a status - New, Active, Fixed, or Reopened.

New - The first time a vulnerability is detected by a scan, the status is set to New.

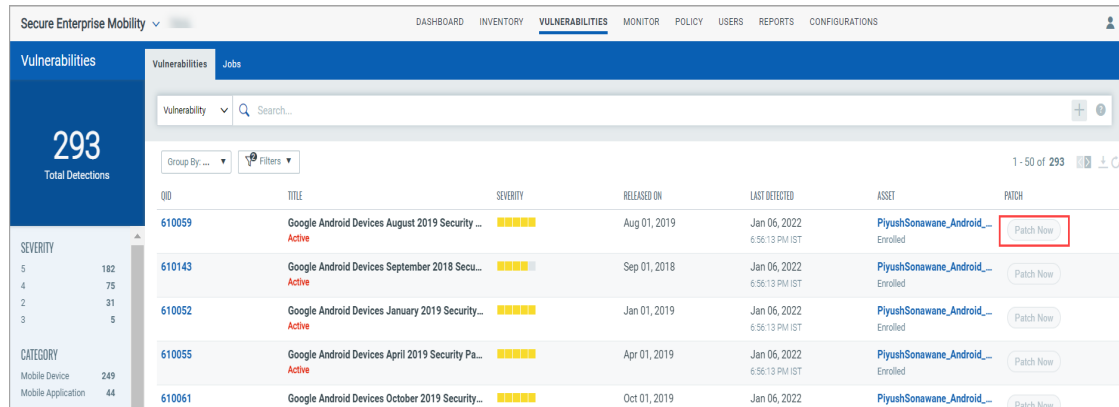
Active - A vulnerability detected by two or more scans is set to Active.

Fixed - The most recent scan verified a vulnerability as fixed, and this vulnerability was detected by the previous scan.

Reopened - The most recent scan reopened a vulnerability, and this vulnerability was verified as fixed by the previous scan. The next time the vulnerability is detected by a scan, the status is set to Active.

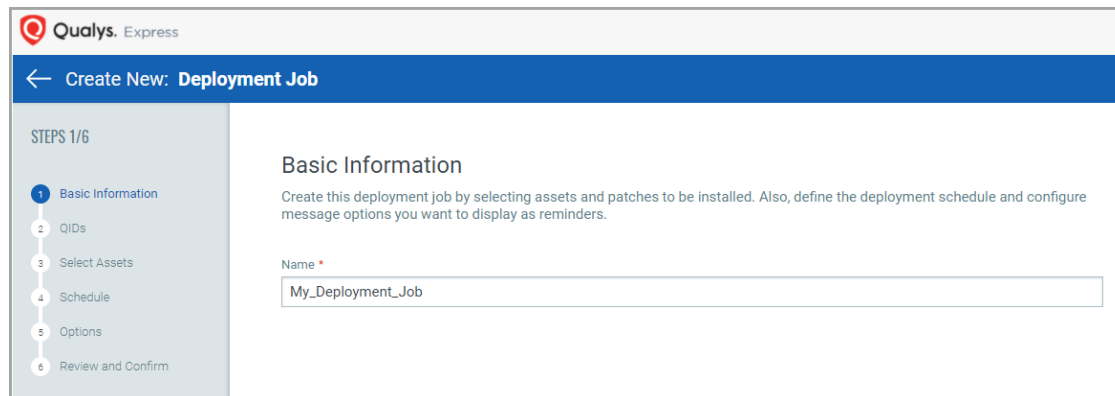
Patch Management

For the Android public app (Google Play Store) vulnerabilities, you can patch them using the **Patch Now** option. The **Patch Now** button will be enabled only for the patchable vulnerabilities. This option updates the application to the latest version.



QID	TITLE	SEVERITY	RELEASED ON	LAST DETECTED	ASSET	PATCH
610059	Google Android Devices August 2019 Security ... <i>Active</i>	■■■■■	Aug 01, 2019	Jan 06, 2022 6:56:13 PM IST	PiyushSonawane_Android_... Enrolled	Patch Now
610143	Google Android Devices September 2018 Secu... <i>Active</i>	■■■■■	Sep 01, 2018	Jan 06, 2022 6:56:13 PM IST	PiyushSonawane_Android_... Enrolled	Patch Now
610052	Google Android Devices January 2019 Security... <i>Active</i>	■■■■■	Jan 01, 2019	Jan 06, 2022 6:56:13 PM IST	PiyushSonawane_Android_... Enrolled	Patch Now
610055	Google Android Devices April 2019 Security Pa... <i>Active</i>	■■■■■	Apr 01, 2019	Jan 06, 2022 6:56:13 PM IST	PiyushSonawane_Android_... Enrolled	Patch Now
610061	Google Android Devices October 2019 Security...	■■■■■	Oct 01, 2019	Jan 06, 2022	PiyushSonawane_Android_...	Patch Now

Click **Patch Now** to update the particular application. This opens the **Deployment Job** wizard.



Qualys. Express

← Create New: **Deployment Job**

STEPS 1/6

- 1 Basic Information
- 2 QIDs
- 3 Select Assets
- 4 Schedule
- 5 Options
- 6 Review and Confirm

Basic Information

Create this deployment job by selecting assets and patches to be installed. Also, define the deployment schedule and configure message options you want to display as reminders.

Name *

My_Deployment_Job

Provide the name for the deployment job and click **Next**.

Qualys Express

Create New: Deployment Job

STEPS 2/6

1 Basic Information

2 QIDs

3 Select Assets

4 Schedule

5 Options

6 Review and Confirm

QIDs

Patchable QIDs for this job

Selected QIDs (1)

QID	TITLE	CVE IDS	SEVERITY
630147	Firefox For Android Improper Restriction of Rendered UI Vulnerability	CVE-2020-6827 CVE-2020-6828	<div><div></div><div></div><div></div><div></div><div></div></div>

Associated QIDs (11)

QID	TITLE	CVE IDS	SEVERITY
630355	Firefox For Android Incorrect Authorization Vulnerability	CVE-2018-12391	<div><div></div><div></div><div></div><div></div><div></div></div>
630356	Firefox For Android Exposure of Sensitive Information Vulnerability	CVE-2018-12400	<div><div></div><div></div><div></div><div></div><div></div></div>
630301	Firefox For Android Permission Issues Vulnerability	CVE-2016-9061	<div><div></div><div></div><div></div><div></div><div></div></div>
630049	Mozilla Firefox For Android Out of Bounds Memory Write Vulnerability	CVE-2018-5146 CVE-2018-5147	<div><div></div><div></div><div></div><div></div><div></div></div>
630390	Mozilla Firefox For Android Improper Input Validation Vulnerability	CVE-2018-12382	<div><div></div><div></div><div></div><div></div><div></div></div>
630003	Mozilla Firefox For Android Remote Code Execution Vulnerability	CVE-2016-5267	<div><div></div><div></div><div></div><div></div><div></div></div>
630007	Mozilla Firefox For Android Remote Code Execution Vulnerability	CVE-2016-1780 CVE-2016-2810	<div><div></div><div></div><div></div><div></div><div></div></div>
630010	Mozilla Firefox For Android MITM Vulnerability	CVE-2016-1948	<div><div></div><div></div><div></div><div></div><div></div></div>
630011	Mozilla Firefox For Android Remote Code Execution Vulnerability	CVE-2016-1940 CVE-2016-1943	<div><div></div><div></div><div></div><div></div><div></div></div>

This shows the selected QIDs and the associated QIDs. Click **Next**.

Qualys Express

Create New: Deployment Job

STEPS 3/6

1 Basic Information

2 QIDs

3 Select Assets

4 Schedule

5 Options

6 Review and Confirm

Select Assets

Select assets to deploy patch

Include the following assets

as3_Android_One...

ONEPLUS A6010

jjoequays

Dec 16, 2020

Select Assets

Search for Assets...

1 - 1 of 1

ASSET	MODEL	USER	LAST SEEN
<input checked="" type="checkbox"/> as3_Android_One...	ONEPLUS A6010	jjoequays	Dec 16, 2020

Cancel

Add

Cancel

Previous

Next

Click **Select Assets** and select the assets you need to apply patches. Click **Add** to add the selected assets, and then click **Next**.

Qualys. Express

← Create New: **Deployment Job**

STEPS 4/6

- 1 Basic Information
- 2 QIDs
- 3 Select Assets
- 4 **Schedule**
- 5 Options
- 6 Review and Confirm

Schedule deployment

Schedule the deployment job to run on the demand or as per schedule.

On Demand: this assessment will run once enabled

START DATE:
 START TIME:

TIMEZONE: By default the system will use the server timezone. [Set timezone](#)

Click **On Demand** to run the job and click **Schedule** to schedule the deployment job in the future. Click **Next**.

Qualys. Cloud Platform

← Create New: **Deployment Job**

STEPS 5/6

- 1 Basic Information
- 2 QIDs
- 3 Select Assets
- 4 Schedule
- 5 **Options**
- 6 Review and Confirm

Deployment Communication Options

Configure communication messages and it's frequency for patch deployment. For default configurations, refer [Online Help](#).

Deployment Messages

Configure Deferment for Deployment

Configure display messages, and it's frequency for deferment.

Configure Enforcement for Deployment

Configure display messages, and it's frequency for enforcement.

TITLE *

MESSAGE *

193/255 characters remaining

Start Enforcement In *

If you enable the **Configure Enforcement for Deployment** option, you must configure the title, message, and time to enforce the deployment.

If you don't configure the enforcement, the default title and message will be displayed. The default enforcement starts in 5 minutes.

The screenshot shows the 'Create New: Deployment Job' interface in Qualys Express. The left sidebar indicates 'STEPS 5/6' with a progress bar showing steps 1 through 6. The main content area is titled 'Deployment Communication Options' and includes a sub-section 'Deployment Messages'. Under 'Deployment Messages', there is a toggle for 'Configure Deferment for Deployment' which is currently 'ON'. Below this toggle, there are input fields for 'TITLE' (with a '35 Character Limit' placeholder) and 'MESSAGE' (with a '255 Character Limit' placeholder and a '255/255 characters remaining' indicator). Below the message field, there is a 'DEFERMENT' section with a 'Remind in' field set to '1' hour and a 'Number of Deferments' field set to '8' times. At the bottom, there is a toggle for 'Configure Enforcement for Deployment' which is also 'ON'.

Deployment communication options are optional to configure. If you enable the **Configure Deferment for Deployment** option, you need to configure the title, message, deferment, and the number of deferments.

If you don't configure the deferment, the default title and message will be displayed. The default deferment is reminded after every 1 hour and for a maximum of 8 times before enforcement.

If you don't configure both deferment and enforcement, the default deferment with the default title and message is displayed. The default deferment is reminded after every 1 hour and for maximum of 8 times before enforcement.

After default deferment, default enforcement will be applied.

Click **Next** to review your selection. Click **Save** to complete the deployment job.

You can check the status of the deployment job on the **Jobs** tab.

Secure Enterprise Mobility

DASHBOARD

INVENTORY

VULNERABILITIES

MONITOR

POLICY

USERS

REPORTS

CONFIGURATIONS

Vulnerabilities

Vulnerabilities

Jobs

17

Total Jobs

STATUS

Completed16

Enabled1

SCHEDULED

On-demand14

Once3

Job

Search...

Create Job

1 - 17 of 17

STATUS	NAME	CREATED BY	SCHEDULE	QID	ASSETS	RESULT			
						PENDING	SUCCESS	SKIPPED	
Completed	TimeZoneJob Update Application Job	sem_vg71 Jan 05, 2022 8:25:47 PM IST	Once Jan 05, 2022 8:25:32 PM	630652 View...	1	1	0	0	
Enabled	disabledJob Update Application Job	sem_vg71 Jan 04, 2022 6:38:57 PM IST	Once Jan 12, 2022 2:00:00 AM	630453 View...	2	0	0	0	
Completed	job1 Update Application Job	sem_vg71 Jan 04, 2022 11:24:53 AM IST	Once Jan 04, 2022 11:24:53 AM	630529 View...	0	0	0	0	

Job status shows various statuses for deployment jobs.

Configuration Assessment for Mobile Devices

You can perform the configuration evaluation against best practices for the Android and iOS platforms. Currently, most of the configuration details are collected in SEM. However, you have to go to individual assets and verify the status of that particular configuration.

The configuration assessment shows the assets and their misconfigurations, which help you take necessary action on such devices. It also ensures that the assets do not undergo any attack or vulnerability due to misconfigurations.

This feature is available in the VMDR Mobile Device bundle.

Policy Actions

Qualys SEM provides some default out-of-the-box policies for Android and iOS platforms.

Every policy has one or more controls assigned to it. Controls define what evaluation should be performed on an asset. Based on the evaluations performed on the assets, the pass or fail status for the assets is displayed.

These policies are associated with every asset that is enrolled in SEM. Based on the platform selected (iOS or Android), these policies are automatically evaluated with every asset enrollment. Once a policy is enabled for an asset, you can view the compliance posture in the Monitor tab.

Supported policies are:

- iOS Best Practices
- Android Best Practices

Navigate to the Policy tab to view all the policies supported by Qualys SEM.

You can perform the following actions on a Policy:

- Create a policy: create customized policies for Android and iOS platforms for required controls and associate them with assets to evaluate them later.
- View a policy: view details of a policy anytime.
- Edit a policy: edit a policy to update any details, assets, or controls information.
- Deactivate a policy: deactivate an active policy.
- Delete a policy: delete an existing policy.
- Evaluate a policy: evaluate an existing active policy.
- Activate a policy: activate an inactive policy.

For more information and detailed steps, refer to the **Policy Actions** section in the Online Help.

Monitor Controls

Every policy has one or more controls assigned to it. The controls define what evaluation should be performed on an asset. The controls are validated by evaluating the assets, and then the pass or fail status of the assets is displayed. SEM supports system-defined controls. The **Policy > Controls** sub-tab lists all controls and their details, such as control name, platform, the criticality of the control and so on.

Secure Enterprise Mobility					
DASHBOARD INVENTORY VULNERABILITIES MONITOR POLICY USERS REPORTS CONFIGURATIONS					
Policy					
Policy Controls					
Search for Controls...					
1 - 24 of 24					
ID	CONTROL NAME	PLATFORM	CREATED BY	MODIFIED BY	CRITICALITY
20287	Status of the USB Support Associated Policy: 1 System Defined	Android	System Jan 11, 2021 5:30:00 AM IST	System Jan 03, 2022 5:30:00 AM IST	Urgent
20286	Status of the Auto Sync Data Associated Policy: 1 System Defined	Android	System Jan 11, 2021 5:30:00 AM IST	System Jan 03, 2022 5:30:00 AM IST	Serious
20278	Status of the 'Use Location' setting Associated Policy: 1 System Defined	Android	System Jan 11, 2021 5:30:00 AM IST	System Dec 27, 2021 5:30:00 AM IST	Urgent
20284	Ensure the 'Mock Location' is set L... Associated Policy: 1 System Defined	Android	System Jan 11, 2021 5:30:00 AM IST	System Dec 24, 2021 5:30:00 AM IST	Critical
20283	Ensure 'Wi-Fi Sharing' is set to Dis... Associated Policy: 1 System Defined	Android	System Jan 11, 2021 5:30:00 AM IST	System Dec 14, 2021 5:30:00 AM IST	Critical

Click on any control to view details specific to that control.

Control Details: Status of the USB Support


VIEW MORE

Summary

Policies

Remediations

Summary



Status of the USB Support

Criticality Urgent

Identification

ID	Platform	Type	Associated Policies
20287	Android	System Generated	1
Created On		Modified On	
Jan 11, 2021 5:30:00 AM IST		Jan 03, 2022 5:30:00 AM IST	

Specification

Status of the USB Support

Expected Criteria

This setting indicates the value of the USBSupport attribute present on the mobile device.

USBSupport	Supported Version
Enabled	<div><div></div> 2 +</div>

Rationale

USB Support enables the transfer of data and software from one device to another. This software can include malware. When USB mass storage is enabled on a mobile device, it becomes a potential vector for malware and unauthorized data exfiltration. Prohibiting USB mass storage mode mitigates this risk. It is recommended to disable the USB support if not required.

Reference

-

Re-evaluate Controls

You can re-evaluate a control by selecting the **Quick Actions** menu next to the control name and clicking **Re-evaluate**.

The screenshot shows the 'Monitor' section of the Secure Enterprise Mobility application. The top navigation bar includes links for DASHBOARD, INVENTORY, VULNERABILITIES, MONITOR (active), POLICY, USERS, REPORTS, and CONFIGURATIONS. The left sidebar displays summary statistics: 202 Total Evaluations, 75 Total Failed Evaluations, 0 Controls Failed with High Criticality, 47 Controls Failed (Last 15 Days), and 2 Controls Reopened (Last 15 Days). The main table lists controls with columns for RESULT, ID, CONTROL NAME, PLATFORM, EVALUATED, ASSET, and CRITICALITY. A 'Quick Actions' menu is open for the control 'Status of the Auto Sync Data', showing options: View Control, Re-evaluate (highlighted with a red box), and Show all failures for this control.

RESULT	ID	CONTROL NAME	PLATFORM	EVALUATED	ASSET	CRITICALITY
Passed	20270	Ensure device firmware is up to date Policy: Android Best Practices	Android	Last: Jan 09, 2022 First: Jan 03, 2022	PiyushSonawane_Androi... Employee - Owned	Urgent
Passed	20279	Ensure the mobile device is encrypted Policy: Android Best Practices	Android	Last: Jan 09, 2022 First: Jan 03, 2022	PiyushSonawane_Androi... Employee - Owned	Critical
Passed	20273	Ensure the device is not rooted Policy: Android Best Practices	Android	Last: Jan 09, 2022 First: Jan 03, 2022	PiyushSonawane_Androi... Employee - Owned	Urgent
Passed	20270	Ensure device firmware is up to date Policy: Android Best Practices	Android	Last: Jan 07, 2022 First: Jan 04, 2022	Jim_Android_Xiaomi Corporate - Owned	Urgent
Failed	18936	Status of the Auto Sync Data Policy: Android Best Practices	Android	Last: Jan 07, 2022 First: Jan 04, 2022	Jim_Android_Xiaomi Corporate - Owned	Urgent
Failed	20451	Ensure 'Screen Lock' is enabled Policy: Android Best Practices	Android	Last: Jan 07, 2022 First: Jan 04, 2022	Jim_Android_Xiaomi Corporate - Owned	Critical
Passed	20287	Status of the Auto Sync Data Policy: Android Best Practices	Android	Last: Jan 07, 2022 First: Jan 04, 2022	Jim_Android_Xiaomi Corporate - Owned	Urgent
Failed	20286	Status of the Auto Sync Data Policy: Android Best Practices	Android	Last: Jan 07, 2022 First: Jan 04, 2022	Jim_Android_Xiaomi Corporate - Owned	Serious

After the re-evaluation, the control's status is updated across the application.

Click the **Details** link (below the Result status) to view the control evaluation details for an asset.

Secure Enterprise Mobility TRIAL DASHBOARD INVENTORY VULNERABILITIES MONITOR POLICY USERS REPORTS CONFIGURATIONS									
Monitor									
203 Total Evaluations		74 Total Failed Evaluations		0 Controls Failed with High Criticality		37 Controls Failed		2 Controls Reopened	
PLATFORM		Actions (0)		Asset Controls		Group By		1 - 50 of 203	
Android 171		Result		CID		Control Name		Platform	
iOS 32		Passed		20282		Ensure the Bluetooth is set to 'Disabled'		Evaluated	
POLICY		Details				Policy: Android Best Practices		Asset	
Android Best Pra... 171		Failed		20285		Status of the Screen Reader setting		Last: Jan 12, 2022	
iOS Best Practices 32		Details				Policy: Android Best Practices		First: Jan 04, 2022	
CONTROL RESULT		Passed		20284		Ensure the 'Mock Location' is set to 'Di...		Jim_Android_Xiaomi	
Passed 129		Details				Policy: Android Best Practices		Corporate - Owned	
Failed 74		Failed		20281		Ensure 'USB Debugging' is set to 'Disab...		Last: Jan 12, 2022	
CRITICALITY		Details				Policy: Android Best Practices		First: Jan 04, 2022	
Critical 97		Passed		20279		Ensure the mobile device is encrypted		Jim_Android_Xiaomi	
Urgent 88		Details				Policy: Android Best Practices		Corporate - Owned	
Medium 9		Failed		20278		Status of the 'Use Location' setting		Last: Jan 12, 2022	
Serious 9		Details				Policy: Android Best Practices		First: Jan 04, 2022	
		Passed						Jim_Android_Xiaomi	
								Corporate - Owned	

Monitor Assets

In the **Monitor** tab, you can monitor your compliance posture in real-time for each asset. Go to the **Monitor** > **Assets** sub-tab to view details such as asset, model, and evaluation status at a quick glance.

Once the asset is on-boarded, then based on the platform, the best practices policies are automatically assigned to the assets and evaluated. After the evaluation, you can view the overall evaluation result in the **Monitor** tab.

The controls are validated, and the **Controls** sub-tab displays the pass or fail status.

From the **Controls** sub-tab, you can drill down to view details of each control and their pass or fail status. Click on the **CID** to view further specifications of the control. A CID is a unique ID assigned by Qualys to each control.

Use **Group By** drop-down menu to view results for a specific selection.

Secure Enterprise Mobility

DASHBOARDINVENTORYVULNERABILITIESMONITORPOLICYUSERSREPORTSCONFIGURATIONS

Monitor

44

Total Evaluations

Control

Search...

70

Total Failed Evaluations

30

Controls Failed with High...

15

Last 15 Days

Controls Failed

25

Last 15 Days

Control Reopened

PLATFORM

Android44

iOS60

POLICY

Android Best Practices44

iOS Best Practices60

CONTROL RESULT

Passed34

Failed70

CONTROL CRITICALITY

High104

Actions (0)

AssetsControls

Group By:

Control

Criticality

Operating System

Result

Policy

1 - 9 of 9

RESULT	CID	CONTROL NAME	EVALUATED	ASSET	CRITICALITY
Failed	70001	Status of USB Debugging Policy: Android Best Practices	Last: Apr 21, 2020 First: Apr 21, 2020	USPOD02_Android_Smasung Corporate: Owned	High
Failed	70002	Ensure 'Screen Lock' is s Policy: iOS Best Practices	Last: Apr 21, 2020 First: Apr 21, 2020	USPOD02_iOS_Apple_adm1... Corporate: Owned	High
Failed	70003	Ensure 'Developer Options'... Policy: Android Best Practices	Last: Apr 21, 2020 First: Apr 21, 2020	USPOD02_Android_Smasung Corporate: Owned	High
Failed	70004	Ensure device is not jailbrk... Policy: iOS Best Practices	Last: Apr 21, 2020 First: Apr 21, 2020	USPOD02_iOS_Apple_adm... Corporate: Owned	High

Dashboards and Reports

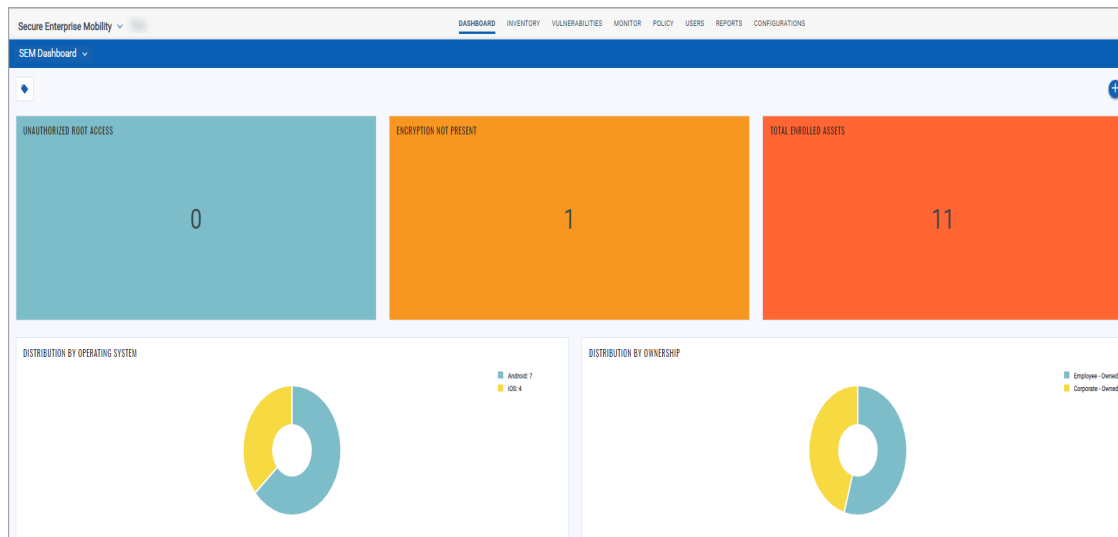
This section helps you monitor and analyze various dashboards and reports for the mobile assets. Once device enrollment is complete, you can configure various dashboards to view mobile asset's data and their details.

Dashboards

Dashboard gives you a quick one-page summary of your overall security posture, based on your mobile asset's most recent vulnerability scan results.

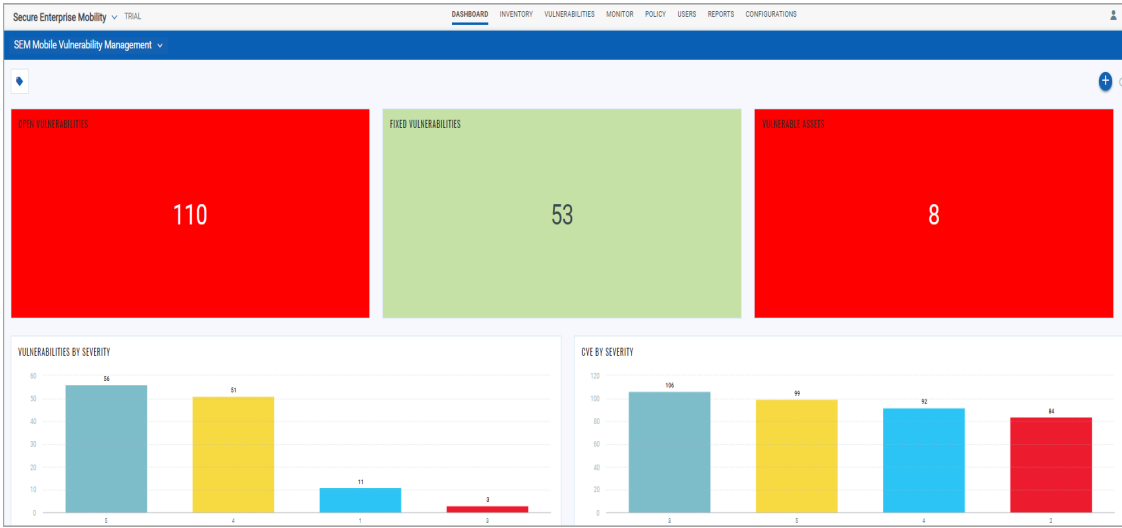
Get Started with SEM Dashboard

Go to **Dashboard** to see a complete and continuously updated view of all your mobile assets in one place within the SEM application.



You can create a new dashboard, and edit or delete existing dashboards. You can include various widgets on your dashboard.

Select the **SEM Mobile Vulnerability Management** template.



VM dashboard template provides complete visibility of mobile vulnerabilities.

Reports

This section helps you to view Audit Log reports. An audit log report is the logs of the actions performed on the SEM portal.

Go to the **Reports** tab to analyze various audit logs in audit log reports related to device enrollment and user configurations.

Secure Enterprise Mobility | DASHBOARD | INVENTORY | VULNERABILITIES | MONITOR | POLICY | USERS | **REPORTS** | CONFIGURATIONS

Reports

Audit Log | Assets

Search for Logs... | Last 7 Days

1 - 50 of 60

ENTITY	OPERATION	PORTAL USED	PERFORMED ON	USER
Users	Add - userTag	Web Portal IP: 192.168.1.1	Jan 06, 2022 12:51:52 PM IST	[User]
Devices	Force De-enroll Device - Sumit_Android_Xiaomi Reason: test	Web Portal IP: 192.168.1.1	Jan 06, 2022 12:22:02 PM IST	[User]
Devices	Force De-enroll Device - Sumit_Android_samsung Reason: test	Web Portal IP: 192.168.1.1	Jan 06, 2022 12:19:39 PM IST	[User]
Security Tokens	Show Key Reason: test	Web Portal IP: 192.168.1.1	Jan 06, 2022 12:18:46 PM IST	[User]

PORTAL USED

Portal	Count
Web Portal	37
Enrollment Portal	23

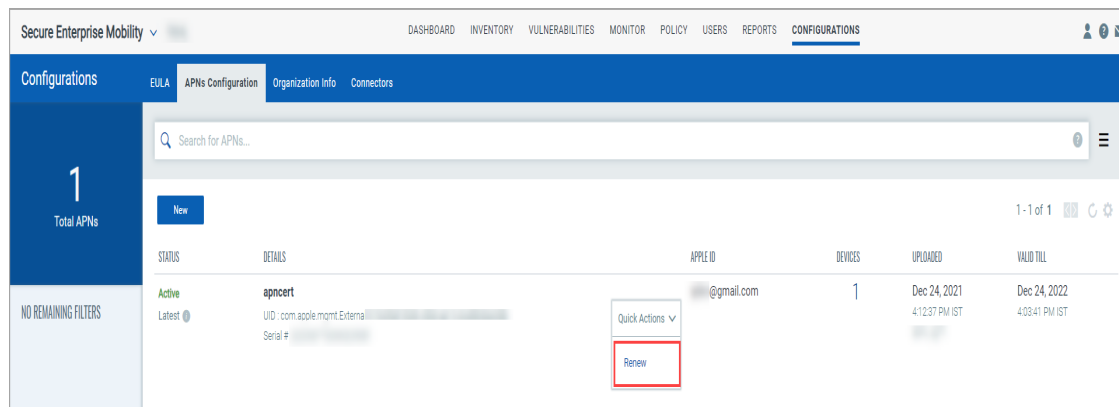
Appendix

Renew APNs Certificate

The validity of the APNs certificate is 365 days, so the administrator must renew the certificate after every 365 days. The Qualys SEM Portal notifies the administrator when the certificate expires via email. The administrator must renew this certificate before the certificate expires. If the certificate expires, the administrator might be unable to manage the Apple devices in their organization, resulting in the administrator having to manually de-enroll and then re-enroll all Apple devices in the system again.

Steps to renew APNs certificate:

- 1) Navigate to **Configurations > APNs Configuration** and click **Renew**.



2) Download the **Certificate Signing Request** (CSR) file and click **Next**. You may skip this step if you have already downloaded the CSR.

The screenshot shows the 'Download Request File' step of the 'Renew APNs Certificate' process in Qualys Express. The left sidebar indicates 'STEPS 1/3' with steps: 1. Download Request File (active), 2. Create Certificate, and 3. Upload Certificate. The main content area has the title 'Download Request File' and a sub-header 'Certificate Signing Request'. It explains that a CSR is needed to create the APNs Certificate from the Apple Push Certificate portal. A 'Download CSR' button is present. At the bottom are 'Cancel' and 'Next' buttons.

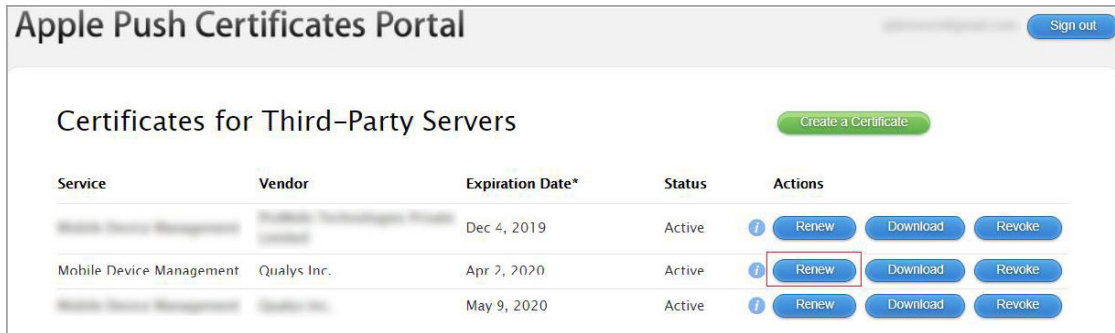
3) Click the **Goto Apple Portal** link to go to Apple Push Certificate Portal (<https://identity.apple.com/pushcert/>)

The screenshot shows the 'Create Certificate' step of the 'Renew APNs Certificate' process in Qualys Express. The left sidebar indicates 'STEPS 2/3' with steps: 1. Download Request File, 2. Create Certificate (active), and 3. Upload Certificate. The main content area has the title 'Create Certificate'. It contains two input fields: 'Name' (with the value 'my_apns') and 'Apple ID' (with a blurred value). A note next to the Apple ID field states: 'Apple ID Note: It can be any Apple ID and need not be an Apple Developer Account.' Below these fields is a section titled 'Get your APNs certificate in 3 easy steps' with a list of steps: 'Sign in to the Apple Portal', 'Renew the currently uploaded certificate. For renewal upload the certificate signing request', and 'Download the renewed certificate'. A link 'Learn More' is provided. To the right of this list is a 'Goto Apple Portal' link with an external icon. At the bottom are 'Cancel', 'Previous', and 'Next' buttons.

4) Login to Apple Push Certificate Portal using the same Apple ID and password that you used to create the APNs certificate. Locate the APNs certificate you want to use, and then click **Renew**.

Note: If multiple certificates are listed, please ensure that you have selected the correct APNs certificate that you would like to renew.

You may compare the Serial # or expiration date for the APNs certificate that you selected to confirm that you are using the right certificate or compare the UID of the certificate.



Apple Push Certificates Portal

Certificates for Third-Party Servers

Create a Certificate

Service	Vendor	Expiration Date*	Status	Actions
Mobile Device Management	Qualys Technology (Palo Alto)	Dec 4, 2019	Active	Renew Download Revoke
Mobile Device Management	Qualys Inc.	Apr 2, 2020	Active	Renew Download Revoke
Mobile Device Management	Qualys Inc.	May 9, 2020	Active	Renew Download Revoke

5) Browse to locate the certificate file and then click **Upload**.



Apple Push Certificates Portal

Create a New Push Certificate

Upload your Certificate Signing Request signed by your third-party server vendor to create a new push certificate.

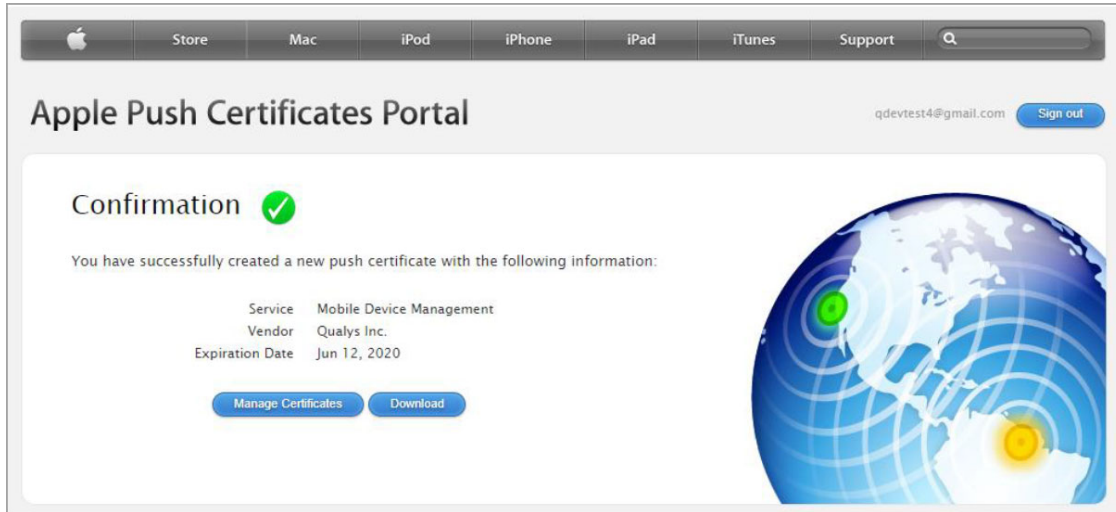
[Browse...](#)

[Cancel](#) [Upload](#)

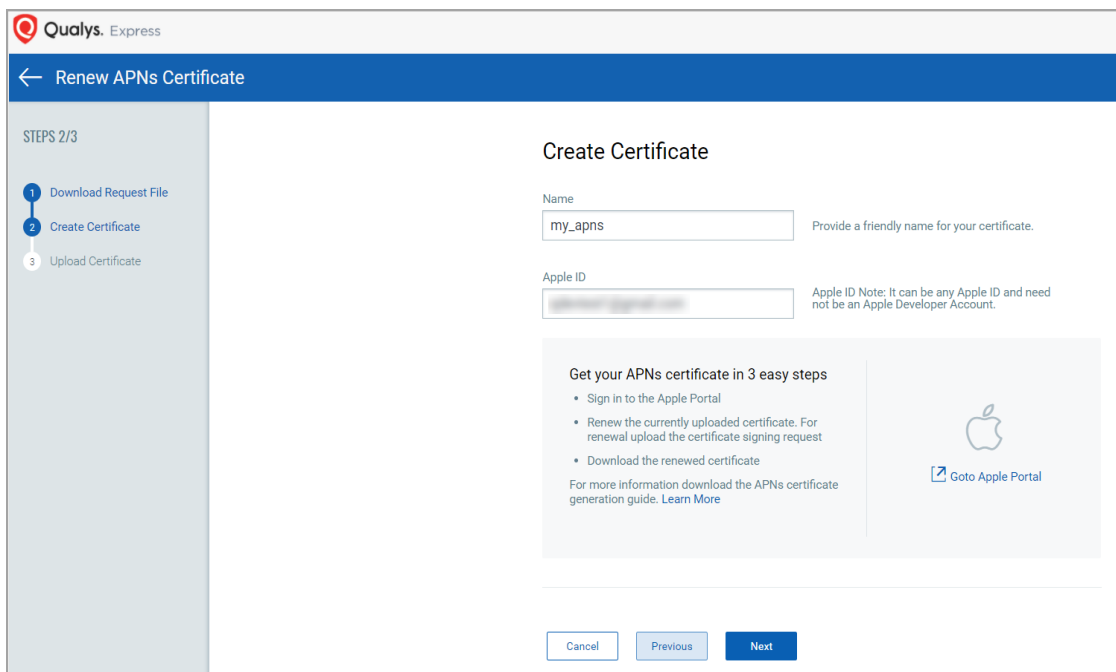
Shop the [Apple Online Store](#) (1-800-MY-APPLE), visit an [Apple Retail Store](#), or find a [reseller](#).

[Apple Info](#) [Site Map](#) [Hot News](#) [RSS Feeds](#) [Contact Us](#)

6) In the confirmation window, download the PEM file to a known location.



7) Now, go back to your Renew APNs Certificate wizard in the Qualys portal. The existing APNs Name and the Apple ID appears in the Create Certificate tab.



8) Upload the certificate file (.pem) that you downloaded from the Apple portal.

The screenshot shows the 'Renew APNs Certificate' page in the Qualys Express interface. The page has a blue header with the Qualys Express logo and a back arrow. A sidebar on the left lists the steps: 1. Download Request File, 2. Create Certificate, and 3. Upload Certificate (which is the current step). The main content area is titled 'Upload Certificate' and includes the instruction 'Upload APNs certificate you downloaded from Apple push certificate portal.' Below this, there is a dashed box containing the text 'Upload the certificate file (.pem) that you downloaded from the Apple Portal' and a cloud icon with the text 'Drop file here to attach or browse'. A file named 'MDM_Qualys Inc._Certificate.pem' is shown as uploaded, with a timestamp of '17/Dec/2020 11:58 AM' and a size of '2 KB'. At the bottom of the page, there are three buttons: 'Cancel', 'Previous', and 'Save'.

9) Enter the Qualys Portal password and Click **Save**. This APNs certificate is now listed in the APNs Configuration tab, and you can continue managing your Apple devices using this certificate.