



ZENworks 2017Update 3 Mobile Management Reference

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About This Guide

This *Mobile Management Reference* includes information to help you successfully use the Mobile Management feature within ZENworks Configuration Management.

The information in this guide is organized as follows:

- ◆ Chapter 1, “Supported Devices for Mobile Management,” on page 11
- ◆ Chapter 2, “ZENworks Mobile Management Workflow Configuration Tasklist,” on page 13
- ◆ Chapter 3, “Overview,” on page 15
- ◆ Chapter 4, “Configuring User Sources,” on page 17
- ◆ Chapter 5, “Configuring an MDM Server,” on page 21
- ◆ Chapter 6, “Enabling Push Notifications,” on page 31
- ◆ Chapter 7, “Securing a Device,” on page 43
- ◆ Chapter 8, “Provisioning Applications,” on page 69
- ◆ Chapter 9, “Subscribing to Apple VPP,” on page 79
- ◆ Chapter 10, “Configuring Email Access,” on page 91
- ◆ Chapter 11, “Integrating with Apple Device Enrollment Program,” on page 97
- ◆ Chapter 12, “Integrating ZENworks with Android Enterprise,” on page 109
- ◆ Chapter 13, “Managing Intune Apps,” on page 139
- ◆ Chapter 14, “Enrolling a Device,” on page 151
- ◆ Chapter 15, “Managing a Device,” on page 187
- ◆ Appendix A, “Troubleshooting,” on page 207
- ◆ Appendix B, “Best Practices,” on page 223

Audience

This guide is intended for ZENworks administrators and end users.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comments feature at the bottom of each page of the online documentation.

Additional Documentation

ZENworks 2017 is supported by other documentation (in both PDF and HTML formats) that you can use to learn about and implement the product. For additional documentation, see the [Online Documentation](#) site.

1 Supported Devices for Mobile Management

Mobile Management capabilities are supported on the following devices:

Device	Functionality
Android version 4.4 and newer	<ul style="list-style-type: none">◆ Security Policy Enforcement
Android 5.0 or newer (for Android enterprise enrollment)	<ul style="list-style-type: none">◆ Device Control Policy Enforcement◆ Email synchronization for Exchange ActiveSync accounts◆ Device Management: Refresh Device, Send Message, Lock Device, Unlock Device, locating the device and Unenroll (Full Wipe and Selective Wipe)◆ Remote configuration and installation of apps through bundles◆ Enrollment as work profile mode, work-managed device mode, or basic mode.

The ZENworks Agent app installed on Android devices enables in managing these devices.

Device	Functionality
iOS version 9.3 and newer	<ul style="list-style-type: none"> ◆ Security Policy Enforcement ◆ Device Control Policy Enforcement ◆ Remote configuration and email synchronization of Exchange ActiveSync accounts ◆ Installation of Apps through bundles ◆ Installation of Configuration Profile ◆ Managing Intune Apps (enrollment is not required to use this feature) ◆ Subscription to Apple Volume Purchase Program ◆ Enrollment through the Apple Device Enrollment Program, Apple Configurator, or by installing the MDM profile on the device. ◆ Enrollment using Apple Configurator ◆ Device Management: Refresh Device, Send Message, Lock Device, Unlock Device, enabling lost mode, locating the device, reboot/shutdown of the device, enabling activation lock bypass and Unenroll (Full Wipe and Selective Wipe)
Devices using Exchange ActiveSync version 12.0 and newer	<p data-bbox="870 957 1430 1010">The MDM profile installed on iOS devices enables in managing iOS devices.</p> <ul style="list-style-type: none"> ◆ Email synchronization for Exchange ActiveSync accounts ◆ Security Policy Enforcement ◆ Device Control Policy Enforcement ◆ Device Management: Unenroll Device (Full Wipe) ◆ ActiveSync enrollment for the following device platform is also included: <ul style="list-style-type: none"> ◆ Windows version 8 and newer
Apple TV (Experimental)	<p data-bbox="870 1409 1438 1493">The following features are supported on Apple TV on an experimental basis and should be used for evaluation purposes only:</p> <ul style="list-style-type: none"> ◆ Enrollment of Apple TV devices using the Apple Device Enrollment Program ◆ Assignment of iOS profile bundles to Apple TV devices. <p data-bbox="870 1682 1438 1797">We do not support deployment of these features in a production environment. Technical support will not be provided for any issues reported on these features.</p>

2 ZENworks Mobile Management Workflow Configuration Tasklist

To use the Mobile Management feature, refer to the following workflow in the order of the listed tasks:

Task	Details
<input type="checkbox"/> Review concepts essential to understand the Mobile Management feature.	For information, see “Overview” on page 15.
<input type="checkbox"/> Configure a user source in the ZENworks Management Zone.	For instructions, see “Configuring User Sources” on page 17.
<input type="checkbox"/> Configure an MDM Server to enable communication with mobile devices.	For instructions, see “Configuring an MDM Server” on page 21.
<input type="checkbox"/> Enable push notifications on Android and iOS devices.	For instructions, see “Enabling Push Notifications” on page 31.
<input type="checkbox"/> (Optional) Configure a proxy server for all mobile management related communication.	For instructions, see “Configuring an MDM Server” on page 21.
<input type="checkbox"/> Create and assign device control and mobile security policies to secure the mobile devices.	For instructions, see “Securing a Device” on page 43.
<input type="checkbox"/> Provision and manage apps or configuration profiles on iOS devices.	For instructions, see “Provisioning Applications” on page 69.
<input type="checkbox"/> Subscribe to the Apple Volume Purchase Program.	For instructions, see “Subscribing to Apple VPP” on page 79.
<input type="checkbox"/> Add Device Enrollment Program (DEP) role to the MDM Server to enable enrollment of device using Apple’s DEP.	For instructions, see “Integrating with Apple Device Enrollment Program” on page 97.
<input type="checkbox"/> Use Android Enterprise to manage Android devices in the work profile and work-managed device mode.	For instructions, see “Integrating ZENworks with Android Enterprise” on page 109.
<input type="checkbox"/> Configure and manage email access on mobile devices by configuring an ActiveSync Server and by creating and assigning a Mobile Email Policy.	For instructions, see “Configuring Email Access” on page 91.
<input type="checkbox"/> Create and assign an enrollment policy.	For instructions, see “Enrolling a Device” on page 151.

Task	Details
<p><input type="checkbox"/> Enroll devices using:</p> <p>iOS</p> <ul style="list-style-type: none"> ◆ Apple Device Enrollment Program ◆ Apple Configurator ◆ ZENworks User Portal <p>Android</p> <ul style="list-style-type: none"> ◆ Basic mode (uses the Device Admin API): Download ZENworks app directly from Google Playstore or through the ZENworks User Portal. ◆ Work Profile: Download ZENworks app directly from Google Playstore or through the ZENworks User Portal. ◆ Work-managed device mode: Through the ZENworks Agent App. 	<p>For instructions, see “Enrolling a Device” on page 151.</p>
<p><input type="checkbox"/> Manage and maintain mobile devices in the ZENworks Management Zone.</p>	<p>For instructions, see “Managing a Device” on page 187.</p>

3 Overview

Mobile device management helps you to secure and manage any corporate or employee-owned mobile devices that are being used in the workplace. Mobile management in ZENworks uses the capabilities of ZENworks Configuration Management, which is the same management console and system infrastructure that has been managing laptops, desktops and servers over the years. By leveraging the features of ZENworks, you can perform multiple management operations on mobile devices:



- ♦ **Enroll (register) mobile devices** to your ZENworks Management Zone. Users can enroll their devices as:
 - ♦ **Fully Managed:** Android and iOS devices are supported. Full management of an Android device is enabled using the ZENworks Agent App that is installed on the device. Full management of an iOS device is enabled using the MDM profile that is installed on the device.
 - ♦ **Email Only:** Devices with native Exchange ActiveSync capabilities are supported, that is, iOS, Android, and Windows devices.
- ♦ **Manage Android devices using Android enterprise** that lets you securely manage corporate data by enrolling devices in the work profile or work-managed device mode.
- ♦ **Enforce security and mobile control policies** on Fully Managed (Android and iOS devices) and Email-only (that include Windows devices) devices. With a security policy, you can set password restrictions, inactivity timeout, and enforce encryption on the device. With a device control policy, you can control the use of applications such as the device camera, voice assistant, web browser, and other applications installed on the device.
- ♦ **Synchronize email** from ActiveSync servers on Fully Managed (Android, iOS) and Email-only devices (that include Windows devices). You can also remotely configure the default email client on iOS devices.
- ♦ **Install Apps** on Fully Managed iOS and Android devices. For iOS devices, you can distribute free App Store Apps or Enterprise apps using the bundles workflow in ZENworks.
- ♦ **Distribute and manage Apple VPP apps** on Fully Managed iOS devices purchased with your organization's Volume Purchase Program (VPP) account, by using the existing Bundles and Subscription workflow in ZENworks.
- ♦ **Secure apps that use the Intune SDK** without the users having to enroll their devices ZENworks Management Zone.
- ♦ **Distribute Configuration Profiles** to Fully Managed iOS devices to manage certain features on the device such as access to VPN.
- ♦ **Utilize Apple Device Enrollment Program (DEP) and Apple Configurator** to streamline deployment of multiple corporate owned iOS devices.

3.1 Using the Mobile Management Getting Started Page

ZENworks Control Center (ZCC) includes a **Getting Started with Mobile Management** page that guides you through the tasks that you need to complete in order to enroll and manage mobile devices in your zone.


To access the **Getting Started with Mobile Management** page:

- 1 In ZCC, click **Mobile Management** (in the left navigation pane).

Each configuration task on this page includes an icon with a  or  mark indicating its completion status and one or more links to the page where you complete the task.

You can refer to the following sections within this guide to understand the procedure to complete each configuration task:

- ◆ **User Sources:** [“Configuring User Sources” on page 17](#)
- ◆ **Enrollment Policy:** [“Enrolling a Device” on page 151](#)
- ◆ **MDM Servers:** [“Configuring an MDM Server” on page 21](#)
- ◆ **Android Devices:** [“Enabling Push Notifications” on page 31](#)
- ◆ **Apple Devices:** [“Enabling Push Notifications” on page 31](#)

Additionally, you can click the  icon appearing against each task or the **Help** link provided at the top right corner of each page for information on the task.

- 2 Complete the **Configuration** tasks that are required to enroll the devices to the zone. Subsequently, you can complete the tasks listed in the **What's Next** section to manage these devices.

You can refer to the following sections within this guide to understand the procedure to complete each task:

- ◆ **ActiveSync Servers:** [“Connecting to a New ActiveSync Server” on page 91](#)
- ◆ **Email Policy:** [“Creating a Mobile Email Policy” on page 93](#)
- ◆ **Apple VPP Subscription:** [“Provisioning Applications” on page 69](#)
- ◆ **Apple DEP Configuration:** [“Enrolling a Device” on page 151](#)
- ◆ **Mobile Security and Control:** [“Securing a Device” on page 43](#)
- ◆ **Deploy Mobile Applications:** [“Provisioning Applications” on page 69](#)
- ◆ **Android Enterprise:** [“Integrating ZENworks with Android Enterprise” on page 109.](#)

Prior to using the Mobile Management feature, ensure that the following requirement is met:

- ◆ **Install and Configure ZENworks:** The Mobile Management feature is integrated with ZENworks Configuration Management. To install and configure ZENworks Configuration Management, see [ZENworks Server Installation Guide](#).

4 Configuring User Sources

User-based management is an important facet of mobile management in ZENworks. A device that is enrolled (registered) to the ZENworks zone must have a user associated with it. Therefore, for users to enroll their mobile devices, a user source must be configured in ZENworks and this user source must be configured to support mobile device enrollment. A user source is an LDAP directory that contains the user accounts of users to whom you want to distribute ZENworks content, in order to manage their devices. While configuring a user source you must define the enrollment options, which will be applied while enrolling the device, for example; you can enroll a device with or without providing the registration domain.

This chapter explains how a user source that you have already configured in ZENworks can be enabled mobile device enrollment. For more information on adding a user source, see [ZENworks User Source and Authentication Reference](#).

- [Section 4.1, “Enabling a User Source for Mobile Device Enrollment,” on page 17](#)
- [Section 4.2, “Configuring the Attribute for ActiveSync Server Authentication,” on page 18](#)

4.1 Enabling a User Source for Mobile Device Enrollment

4.1.1 Procedure

- 1 In ZENworks Control Center, click **Users** (in the left navigation pane) to display the list of User Sources.
- 2 Next to the user source, click **Details** to display its property pages.
- 3 In the Summary tab, do one of the following:

Allow simple enrollment: Simple enrollment removes the domain requirement and enables users to enroll devices by providing only their user name.

Simple enrollment is allowed for only one user source. To allow simple enrollment, next to the **Simple Enrollment** field click **Yes**. After you enable simple enrollment for one user source, it is not available for any other user source. Also, if you change this setting from one user source to another, then you might have to re-configure the email accounts, as it might not work properly.

NOTE: If you are configuring a user source for the first time, then simple enrollment will be enabled by default.

Domain Alias: If you do not use simple enrollment, you must add at least one registration domain. To add a domain, click **Edit**, specify the domain name and then click **OK**.

NOTE: The domain name is pre-populated as soon as you add a user source.

You can decide what to use as your domain name. For example, you can use your organization’s name, your organization’s domain name, or your ActiveSync server domain name (if applicable). Since users need to supply the domain name on their mobile devices, it is recommended that

you make it as easy as possible for them to remember and type. The following are valid domain name examples: `mycompany`, `mycompany.com`. You should avoid using `ZENworks_Default` as the domain name.

If you have multiple user sources, you cannot use the same domain name in more than one user source. Domain names must be unique across user sources. Also, if you change this setting from one user source to another, then the email accounts on mobile devices enrolled using the earlier user source might not work properly. For fully managed iOS devices, re-apply the Mobile Email Policy to automatically re-configure the email account. For fully managed Android devices, re-apply the Mobile Email Policy after which the email settings are sent to the device for the user to manually re-configure the email account.

NOTE: If a configured user source is deleted and the same user source is configured again, then all those mobile devices that were enrolled using the earlier user source, would have to be re-enrolled to the ZENworks Management Zone. However, before re-enrolling these devices ensure that the respective device objects are deleted from ZCC.

4.2 Configuring the Attribute for ActiveSync Server Authentication

While configuring an email account on a device by using a Mobile Email Policy, the user is automatically authenticated to the ActiveSync Server that is configured in the zone. ZENworks initially obtains the user credentials (such as the user's Email ID) from the associated user source (LDAP directory configured in the zone) and using these credentials the user is authenticated to the ActiveSync Server to which the user belongs. The user is logged in to the email account, if the credentials provided in the user source match with the ones configured in the ActiveSync Server. However, the user credentials with which the user logs into the ActiveSync Server to retrieve emails might be different from the credentials that he/she uses to login to the LDAP directory. In such cases, you can define the LDAP attribute that ZENworks must query and use as the user name while retrieving emails from the ActiveSync Server.

For example: consider that the configured LDAP directory is the NetIQ eDirectory and the email application is GroupWise. The default attribute that is used to authenticate a user to GroupWise is the **Mail** attribute. The preferred email address of a user published in the NetIQ eDirectory is in the format *first name.last name@domain.com*, due to which authentication to GroupWise might fail. In this scenario, you can edit the **ActiveSync Logon Attribute** and select **UniqueID**, which can be the user name of the GroupWise user.

The default attribute is **Mail** but you can modify this attribute. You can define attributes for a specific user or for a user folder. These attributes differ based on the LDAP directory configured in the zone.

To edit the attribute:

- 1 Navigate to **Users** on the left pane in ZCC.
- 2 Click a User Source Folder or drill down to a specific user. Click **Details** next to the User Source Folder or the User.
- 3 Click **Edit** next to the **ActiveSync Server Logon Attribute**.

The various attributes that can be defined are:

- ◆ **NetIQ eDirectory:** If the NetIQ eDirectory is configured in the zone, then you can define the following attributes to authenticate to the ActiveSync Server:
 - ◆ **CN:** The common name of the user.
 - ◆ **Mail:** The email address of the user.
 - ◆ **UniqueID:** The unique user identifier.
 - ◆ **Other:** Specify the custom attribute defined in the configured LDAP directory.
- ◆ **Active Directory:** If Active Directory is configured in the zone, then you can define the following attributes to authenticate to the ActiveSync Server:
 - ◆ **UserPrincipalName:** An Internet-style login name for a user based on the Internet standard RFC 822.
 - ◆ **sAMAccountName:** The logon name used to support clients and servers running earlier versions of the operating system, such as Windows NT 4.0, Windows 95, Windows 98, and LAN Manager.
 - ◆ **Mail:** The email address of the user.
 - ◆ **Other:** Specify the custom attribute defined in the configured LDAP directory.

For either of these LDAP directories, you can also select **Inherited**, to inherit the attribute defined at the user folder level.

If you modify these settings and if the assigned Mobile Email Policy does not use the ZENworks Server as the proxy server, then you need to republish or reassign the Mobile Email Policy. The modified settings are automatically applied on the email accounts configured with Mobile Email Policies that use the ZENworks Server as the proxy server.

5 Configuring an MDM Server

An MDM Server is a ZENworks Primary Server with an *MDM* role, that acts as a gateway server and is the sole access point for managing mobile devices. To ensure that the ZENworks Server and the enrolled mobile devices can communicate with each other at all times, an MDM role must be assigned to at least one Primary Server in the zone. Apart from allowing devices to contact ZENworks, MDM Servers allow ZENworks to establish outbound connections to perform activities such as contact the push notification server to send relevant notifications to devices and manage VPP subscriptions. If the outbound connection is initiated from ZENworks Control Center (ZCC) whose ZENworks Server does not have outbound access, then this server will route these requests through one of the MDM Servers.

NOTE: If there are multiple MDM Servers in the zone, all these would be used for outbound connections, but inbound connections will be limited to those servers to which devices have enrolled.

Typically, MDM Servers must reside in the DMZ thereby allowing mobile devices to make inbound connections even when they are outside the firewall. Like other external-facing servers, the ZENworks MDM Server faces the Internet from within the DMZ. This lets the enterprise firewall protect the MDM Server from external attacks.

- ◆ [Section 5.1, “Firewall Configuration,” on page 21](#)
- ◆ [Section 5.2, “Firewall Configuration,” on page 22](#)
- ◆ [Section 5.3, “Adding an MDM Server,” on page 26](#)
- ◆ [Section 5.4, “Testing the Outbound Capability of MDM Servers,” on page 26](#)
- ◆ [Section 5.5, “Securing MDM Servers,” on page 27](#)
- ◆ [Section 5.6, “MDM Servers and APNs Configuration,” on page 28](#)
- ◆ [Section 5.7, “Removing MDM Servers,” on page 28](#)
- ◆ [Section 5.8, “Configuring a Default DNS Name,” on page 29](#)
- ◆ [Section 5.9, “Configuring a Proxy Server,” on page 29](#)

5.1 Firewall Configuration

Typically, MDM Servers must reside in the DMZ thereby allowing mobile devices to make inbound connections even when they are outside the firewall. Like other external-facing servers, the ZENworks MDM Server faces the Internet from within the DMZ. This lets the enterprise firewall protect the MDM Server from external attacks.

5.2 Firewall Configuration

Typically, MDM Servers must reside in the DMZ thereby allowing mobile devices to make inbound connections even when they are outside the firewall. Like other external-facing servers, the ZENworks MDM Server faces the Internet from within the DMZ. This lets the enterprise firewall protect the MDM Server from external attacks.

5.2.1 Firewall Ports

To enable both internal and external access to the MDM server, certain firewall ports must be open. The ZENworks MDM Server accepts most inbound connections using HTTPS on port 443.

Apple Push Notification service: Both the MDM server and the iOS clients communicate with each other using the Apple Push Notification service (APNs). For outbound connections, the MDM server uses ports 2195 and 2196 to Apple’s 17.0.0.0/8 block. Port 5223 must be open in the firewall to enable mobile devices to connect to the APNs server, so that the APNs can send messages to these mobile devices that are within your network.

Firebase Cloud Messaging: Both the MDM server and the Android clients communicate with each other using the Firebase Cloud Messaging (FCM) service. For outbound connections, open port 443 to connect to the FCM service from the MDM Server as well as the Android clients. For mobile devices that are within your network, to receive messages, FCM typically uses port 5228, but it sometimes uses 5229 and 5230.

A detailed list of the ports to be enabled for each ZENworks feature is provided in the next section.

5.2.2 Endpoint URLs

The MDM Server and the end-user devices must be able to reach certain endpoints to access apps and services. The endpoint URLs are listed below:

Apple

Feature	URL	Port	Additional Information
Server Connections			
Apple Push Notification Service See Enabling Push Notifications for iOS Devices	gateway.push.apple.com:2195 feedback.push.apple.com:2196	TCP 2195/2196	Used for validating the APNS certificate. This is not an http connection but an SSL Socket connection. gateway.push.apple.com:2195 is used for sending remote notifications. feedback.push.apple.com:2196 is used to receive feedback.
	https://api.push.apple.com/	TCP 443	

Feature	URL	Port	Additional Information
Apple Device Enrollment Program See Integrating ZENworks with Android Enterprise	https://mdmenrollment.apple.com/session	HTTP/HTTPS 80 or 443	
Apple Volume Purchase Program See Subscribing to Apple VPP	https://vpp.itunes.apple.com/WebObjects/MZFinance.woa/wa/VPPServiceConfigSrv	HTTP/HTTPS 80 or 443	This is a static URL based on which the dynamic URLs to perform specific VPP operations can be retrieved.
iOS App Store App Bundle See Provisioning Applications	*.apple.com *.mzstatic.com itun.es appsto.re macappsto.re apps.itunes.com apps.itunes-nocookie.com	TCP 443	App Store apps

Device Connections

Apple Push Notification Service See Enabling Push Notifications for iOS Devices	courier.push.apple.com(17.0.0.0/8)	TCP 5223 and 443	
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Android

Feature	URL	Port	Additional Information
Server Connections			
Firebase Cloud Messaging See Enabling Push Notifications	https://fcm.googleapis.com/fcm	TCP Port 443, 5228-5230	

Feature	URL	Port	Additional Information
Android Enterprise See “Integrating ZENworks with Android Enterprise” on page 109	https:// www.googleapis.com	TCP 443	Used to invoke the Google EMM API in the ZENloader and ZENserver services.
	play.google.com www.google.com	TCP 443	Google Play Store Play Enterprise re-enroll
	fonts.googleapis.com *.gstatic.com	TCP 443	Google fonts User Generated Content (e.g. app icons in the store)
	accounts.google.com accounts.google.com.*	TCP 443	Account Authentication Country-specific account auth domains
	crl.pki.goog ocsp.pki.goog	TCP 443	Certificate Validation
	apis.google.com ajax.googleapis.com	TCP 443	GCM, other Google web services, and iFrame JS
	clients1.google.com payments.google.com google.com	TCP 443	App approval
	notifications.google.com	TCP 443	Desktop/Mobile Notifications
Device Connections			
Firebase Cloud Messaging See Enabling Push Notifications	fcm.googleapis.com fcm-xmpp.googleapis.com	TCP/443,5228-5230	Firebase Cloud Messaging (Find My Device, EMM Console -DPC communication, like pushing configs)
	fcm-xmpp.googleapis.com	TCP/5235,5236	When using persistent bidirectional XMPP connection to FCM server.

Feature	URL	Port	Additional Information
Android Enterprise See Integrating ZENworks with Android Enterprise	play.google.com	TCP 443	Google Play and updates
	android.com	TCP,UDP/5228-5230	gstatic.com,googleusercontent.com - contains User Generated Content (e.g. app icons in the store).
	google-analytics.com		
	googleusercontent.com		
	*gstatic.com		
	*gvt1.com		
*.ggpht.com		*gvt1.com, *.ggpht, dl.google.com, dl-ssl.google.com, android.clients.google.com- Download apps and updates, Play Store APIs	
dl.google.com		gvt2.com and gvt3.com are used for Play connectivity monitoring for diagnostics.	
dl-ssl.google.com			
android.clients.google.com			
*gvt2.com			
*gvt3.com			
	*.googleapis.com	TCP 443	EMM/Google APIs/PlayStore APIs
	accounts.google.com	TCP 443	Authentication
	accounts.google.[country]		For accounts.google.[country], use your local top-level domain for [country]. For example, for Australia use accounts.google.com.au, and for United Kingdom use accounts.google.co.uk.
	pki.google.com	TCP 443	Certificate Revocation list checks for Google-issued certificates
	clients1.google.com		
	clients2.google.com	TCP 443	Domains shared by various Google backend services such as crash reporting, Chrome Bookmark Sync, time sync (tlsdate), and many others.
	clients3.google.com		
	clients4.google.com		
	clients5.google.com		
	clients6.google.com		
	omahaproxy.appspot.com	TCP 443	Chrome updates.

5.3 Adding an MDM Server

Adding an MDM Server indicates that an MDM role is assigned to one of the Primary Servers. One or more Primary Servers can be added as MDM Servers. The number of MDM Servers would depend on the scalability needs and configuration. Before adding an MDM Server ensure that the following prerequisites are met:

- ♦ All MDM Servers must have inbound and outbound connectivity. Inbound connectivity means that an MDM Server must be able to receive requests from outside the organization's firewall (in this case the mobile devices). Outbound connectivity means that an MDM Server must successfully be able to make connections outside the organization's firewall. ZENworks will not verify this while adding an MDM Server or during any operation involving the MDM Server.
- ♦ You also need to ensure that all Primary Servers in your zone have the ZENworks 2017 version or newer deployed on it.

The Apple Push Notification service (APNs) and Firebase Cloud Messaging (FCM) can be configured only if an MDM role is assigned to one or more Primary Servers.

5.3.1 Procedure

- 1 On the Getting Started with Mobile Management page, click **Add MDM Server**. Alternatively, from the left hand side navigation pane of ZCC, navigate to **Configuration > Infrastructure Management > MDM Servers**.
- 2 Click **Add**.
- 3 Select one or more Primary Servers that need to be configured with the MDM role and click **OK**.


5.4 Testing the Outbound Capability of MDM Servers

After adding an MDM Server, you can test its outbound connectivity by clicking **Test Certificate** while configuring the Apple Push Notifications service (APNs) or by clicking **Test API Key** while configuring Firebase Cloud Messaging (FCM). If the configuration is valid, both these options will test the connection to the APNs and GCM servers from each of the MDM Servers. If the connectivity fails from one or more MDM Servers, the failed servers would be listed. You can perform these actions in the respective push notifications configuration sections of ZCC. For details, see [Enabling Push Notifications](#).


NOTE: If any ZCC operation involving an MDM Server fails, check the `zcc.log`, `services-messages.log`, and the `loader-messages.log`.

5.5 Securing MDM Servers


Since MDM Servers are exposed to the Internet at all times, it becomes important to secure access to the services on these servers. The services are categorized into Administration, Endpoint, and the ZENworks Setup page. ZENworks allows you to control access to each of these categories by clicking any of the following icons appearing against a configured MDM server:


- ♦ **Administration Access:** Click  to allow or deny specific IP addresses from accessing Administration functions such as ZCC, ZMAN and so on.

NOTE: You need to ensure that administration access is not denied for all or else ZCC will remain inaccessible, except from the MDM server in which the access was allowed or denied. Ensure that all Primary Servers in your zone are allowed access so that the internal operations between these servers are not restricted. However, these filters are not applicable for an Appliance web console.

- ♦ **Endpoint Access:** Click  to allow or deny certain IP addresses from accessing endpoint functions such as the ZENworks User Portal, the ZENworks Agent app and so on.

NOTE: Ensure that all Primary Servers in your zone are allowed access so that the internal operations between the ZENworks Servers will not be restricted.

- ♦ **Tools Access:** Click  to allow or deny certain IP addresses from accessing tools and downloads through the ZENworks Setup URL.

For each of these categories, you can configure filters by clicking . By default, access is allowed for all devices. For each filter, you need to specify the following:

- ♦ Specific IP address, comma separated IP addresses, or an IP range. Each IP address can be specified in CIDR format or the regular format.
- ♦ **Allow** or **Deny** access to the specified IP address
- ♦ A short description about the specified set of IP addresses.

Filters are evaluated in the order in which they are listed. If the same IP address appears in multiple filters, then the type of access specified in the first filter is given precedence over the type of access specified in the second filter. For example: The IP address 10.0.0.1 specified in the first filter is denied administration access. However, if the same IP address, appearing as a part of an IP range (10.0.0.0 - 10.255.255.255) that is specified in the second filter, is allowed administration access, then precedence is given to the first filter and IP address 10.0.0.1 will be denied administration access. You can also look up an IP address to identify whether access is allowed or denied for it, by specifying it in the **Test access for an IP** field. This action is also performed based on the order in which the filters are listed.

After configuring the access controls for one server, you can replicate the same access control configuration in another server. To do this, you need to select the MDM Server for which the access controls are already configured. Subsequently, click **Copy Access Controls**. In the Copy Access Controls window, select the access controls that you want to copy and **Add** the server to which these access controls need to be copied.

NOTE: Configuring access controls for an MDM Server that is an Appliance does not secure the Appliance Administration Console. To secure it, you need to specify access restrictions in the Appliance Administration Console itself. For details, see [ZENworks Appliance Deployment and Administration Reference](#).

If a device's IP address is denied access but the device is still able to contact the ZENworks Server, then you need to check whether the device is communicating with ZENworks using the proxy server. In this case, you need to deny access to the proxy server's IP address, if you are sure that no other devices are using this proxy server.

5.6 MDM Servers and APNs Configuration

The Apple Push Notification service (APNs) configuration consists of the APNs keystore, which contains the Apple-signed certificate that is required to send push notifications to iOS devices. The APNs keystore is first created on one of the MDM Servers when the first APNs Certificate Signing Request (CSR) is created. When you import the Apple-signed certificate, it is first imported to this keystore and then replicated to the other MDM Servers in the zone, if any. Whenever a new certificate is imported, it would be imported into one of the MDM Servers and is subsequently replicated to other MDM servers in the zone. If MDM Servers are added or removed after APNs is configured or if the APNs configuration has changed, the latest configuration will be replicated on all the MDM Servers in your zone.

When the last MDM Server in the zone is removed, then the APNs configuration will be deleted entirely.

5.7 Removing MDM Servers

If you want to remove a Primary Server that is designated as the MDM Server in your zone, then you must first remove the MDM role from this Primary Server. To remove the role, you need to:

- 1 Click **Configuration** on the left hand side navigation pane in ZCC.
- 2 Click **Infrastructure Management > MDM Servers**.
- 3 Select one or more MDM Servers and click **Remove**.

NOTE: If you have removed an MDM role from a server in the zone, then you can add it back only after 30 minutes from the time the role was removed.

Since mobile devices contact the MDM Server to which they are enrolled and if mobile devices are enrolled to a server that you have chosen to remove from the zone, then you will have to re-enroll these mobile devices to the zone using another MDM Server. Before re-enrollment, ensure that you delete the corresponding device objects in ZCC. However, if you are upgrading or replacing the MDM Server with another server, then the enrolled devices will automatically reconcile with the replaced server. Also, if you delete all the MDM Servers, then the push notifications configuration (APNs and GCM) will be automatically deleted.

5.8 Configuring a Default DNS Name

If an MDM Server can be contacted using multiple DNS names, then you can specify the default DNS name that mobile devices will use to communicate with the MDM Server. To set the default DNS name, select the Primary Server that has the MDM role assigned and navigate to **Settings > Infrastructure Management > Default DNS Name**. You can select the default DNS name from the drop-down list displayed on this page.

ZENworks detects all the network interfaces that are attached to the MDM Server with the corresponding DNS names. The drop-down lists the DNS names along with the Additional DNS Names configured for the Primary Server.

If the default DNS name is modified, then you might have to remind the Primary Server certificate so that the newly configured DNS name is also part of the server certificate that mobile devices will use while enrolling to the zone.

IMPORTANT: Before a certificate remind, ensure that you include all the DNS names in the **Additional DNS Name** settings in ZCC (**Configuration > Management Zone Settings > Infrastructure Management > Additional DNS Names**).

Also, if mobile devices are enrolled to this Primary Server, re-enroll these devices if the previously configured DNS name is not reachable anymore. You might have to re-publish any assigned Mobile Email Policies so that the new DNS name setting takes effect.

5.9 Configuring a Proxy Server

You can define an HTTP Proxy Server to enable MDM Servers to connect to the Internet through the proxy server. These proxy servers can be used by the MDM Servers to contact the APNs Server, FCM Server, and managed mobile devices. To configure a proxy server, navigate to **Configuration > Management Zone Settings > Infrastructure Management > HTTP Proxy Settings > HTTP Proxy Settings for MDM Servers**.

- ◆ **Proxy Host:** Specify the IP address of the Proxy Server.

NOTE: As Apple currently supports only IPv4 addresses, you need to specify an IPv4 address as the Proxy Host. However, when Apple extends its support to include IPv6 addresses in the future, then you can specify IPv6 addresses as the Proxy Host.

- ◆ **Port:** Specify the port number on which the Proxy Server is listening.
- ◆ **Proxy Server requires authentication:** Select this option if the Proxy Server requires authentication information from the server. On selecting this option, you can specify the credentials to authenticate to the Proxy Server.
- ◆ **Test URL:** Specify the URL of a web application or a web server and click **Test Proxy** to verify the connection of the specified Proxy Server. The Test URL should be specified in the following format, for example: `https://www.microfocus.com`.

NOTE: Proxy Server details are cached in the ZENworks Server memory. If you modify the Proxy Server details, then it will take at least 15 minutes for these changes to become effective on all servers.

6 Enabling Push Notifications

Push notifications can be sent to Android Devices and Apple Devices to enable communication between the ZENworks Server and the ZENworks Agent app (for Android devices) or the ZENworks Server and the MDM profile (for iOS devices) installed on the device.

- ♦ [Section 6.1, “Enabling Push Notifications for Android Devices,” on page 31](#)
- ♦ [Section 6.2, “Enabling Push Notifications for iOS Devices,” on page 40](#)

6.1 Enabling Push Notifications for Android Devices

Firebase Cloud Messaging (FCM) is the new version of Google Cloud Messaging (GCM) that enables a ZENworks MDM Server to send data to an Android device. The data might be a send-to-sync message that informs the device that there is new ZENworks data to be retrieved from the ZENworks MDM Server, or it might be a message with payload that pushes data directly to the device. The ZENworks MDM Server communicates with the FCM service, which then pushes the notification to the device. After receiving the push notification, the device contacts the ZENworks MDM Server directly to provide the requested information or to receive the changes.

To connect to the FCM service, you need to create a Firebase project in the Firebase console and obtain a .JSON file (that contains the Project Number) and a Server Key. The .JSON file and the Server Key are then used to configure ZENworks’ access to the FCM service.

For existing users of the GCM project, we strongly recommend that you migrate to the FCM service in order to benefit from its new features. However, if you do not want to migrate to the FCM service, then ZENworks will continue using the existing GCM configuration to communicate with enrolled mobile devices. If you want to view the existing GCM configuration details, then navigate to [Configuration > Management Zone Settings > Push Notifications > Google Cloud Messaging \(Obsolete\)](#). This page lets you only view the GCM configuration details and you will be unable to edit any of the configuration details.

If you want to create a new FCM project, then refer to [Create a Firebase Project](#).

If you have already created a GCM project and want to migrate to the FCM service, then refer [Importing a GCM Project to Firebase](#). This ensures that the Project Number specified in the GCM project and the FCM project are the same. If the Project Number does not match, then communication between ZENworks and already enrolled mobile devices will be discontinued.

IMPORTANT: As of April 10, 2018, Google has deprecated GCM. Therefore, it is mandatory to migrate to the FCM service.

6.1.1 Prerequisites

- ♦ **MDM Server:** An MDM role is assigned to a Primary Server. For more information, see [Configuring an MDM Server](#).

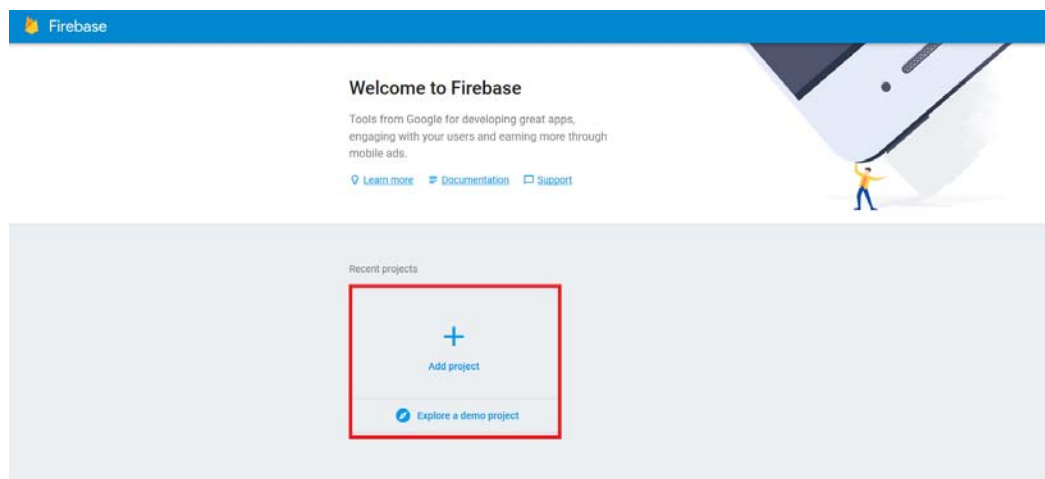
6.1.2 Create a Firebase Project

Follow these steps, if you want to create a Firebase project. However, if you have already created a GCM project and want to import the project to FCM, then go to [Importing a GCM Project to Firebase](#).

- 1 On the Getting Started with Mobile Management page, navigate to the **Android Devices** section, click **Configure FCM** to display the Firebase Cloud Messaging page. Alternatively, from the left hand side navigation pane of ZCC, navigate to **Configuration > Push Notification > Firebase Cloud Messaging**.
- 2 Click **Firebase Developers Console**, which will direct you to the Firebase console at <https://console.firebase.google.com>.
- 3 Sign in using your Google account credentials.

As a best practice, we recommend that this should be a Google account created specifically for managing your corporate Google services and not a personal Google account.

- 4 Click **Add Project**.



- 5 Specify a **Project Name** and click **Create Project**.

Add a project ✕

Project name + iOS + </>

My awesome project ▼ **Tip:** Projects span apps across platforms ?

Project ID ?

my-awesome-project-id

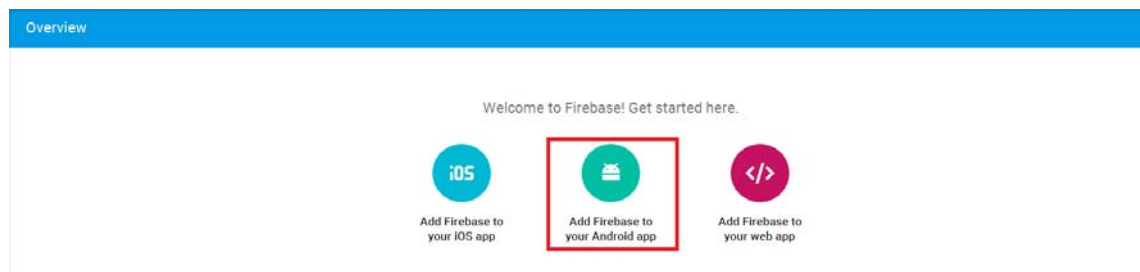
Country/region ?

United States ▼

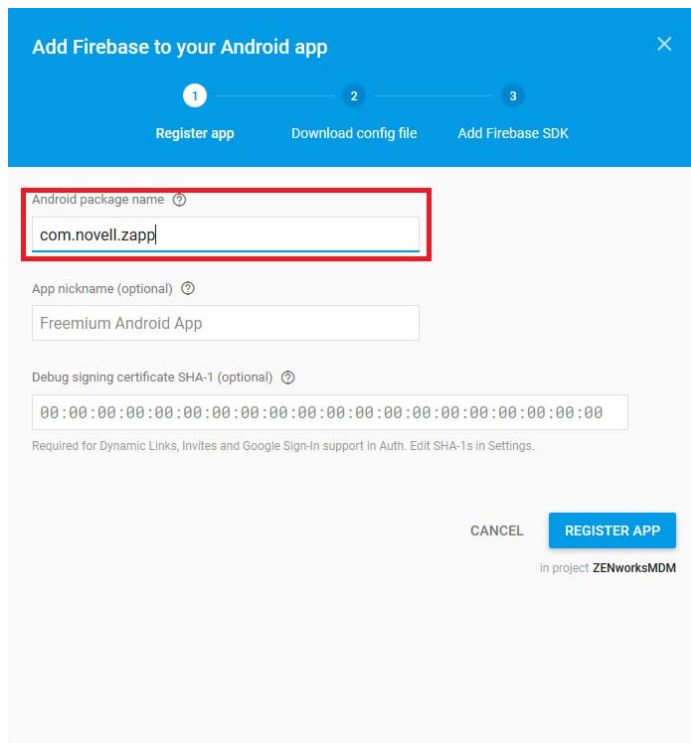
By default, your Analytics data will enhance other Firebase features and Google products. You can control how your analytics data is shared in your settings at any time. [Learn more](#)

CANCEL CREATE PROJECT

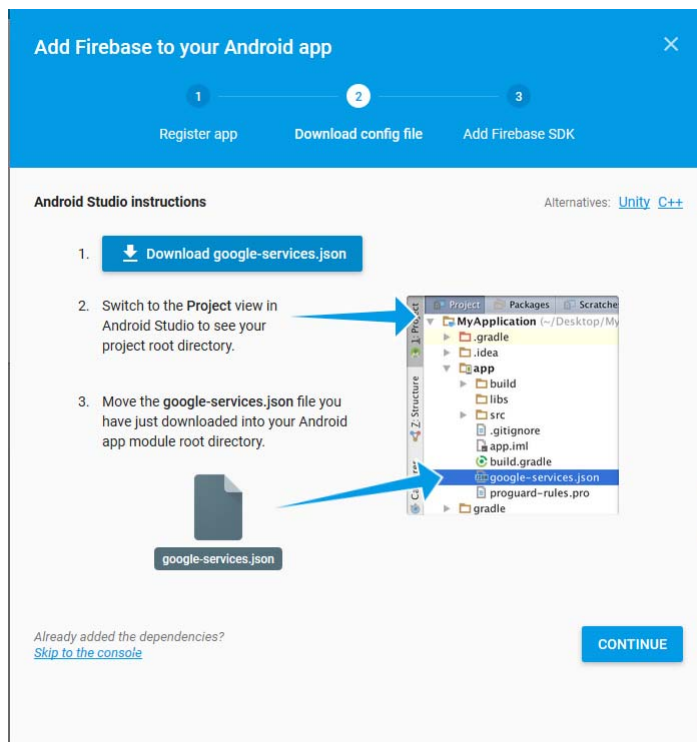
6 Select **Add Firebase to your Android App** in the **Overview** page.



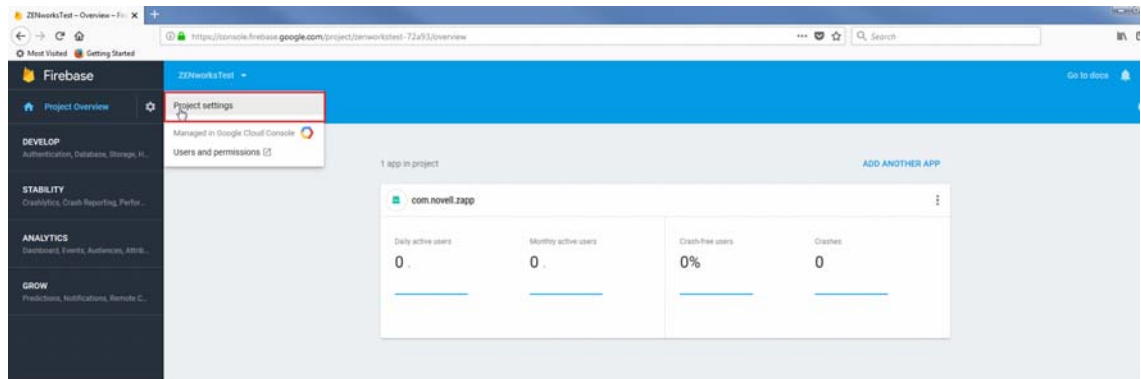
7 Specify the **Android Package Name** for the ZENworks Agent App, that is, **com.novell.zapp**. Click **Register App**.



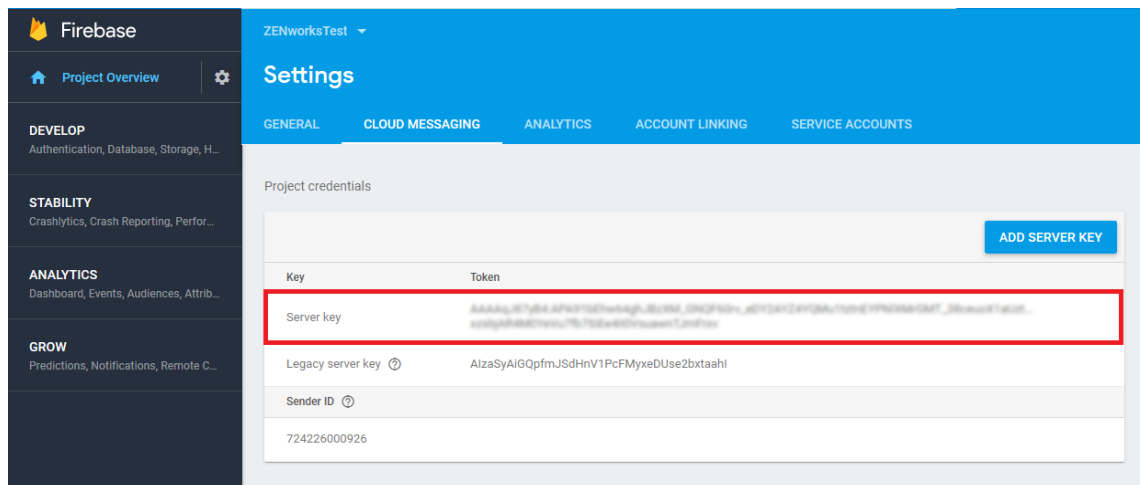
- 8 Click **Download google-services.json** to download the .JSON file in your preferred location. Click **Continue** and then click **Finish**.



- 9 Click  appearing next to **Project Overview** and select **Project Settings**.



10 Select the **Cloud Messaging** tab. You can now view the **Server Key**. Note down this **Server Key**.



11 Exit the Firebase Console, then continue with [Step 12](#).

12 In ZCC, on the Firebase Cloud Messaging page configure ZENworks with the .JSON file and Server Key:

12a Click the **Enable Firebase Cloud Messaging** check box to turn on the option.

12b Specify the following fields with the information you generated in the Firebase Developers Console:

- ◆ **Project JSON file:** Upload the .JSON file that you have downloaded from the Firebase Console
- ◆ **Server Key:** Specify the Server Key for your Firebase project.
- ◆ **Key activation date:** Specify the key's activation date.
- ◆ **Google User ID:** Specify the Google account ID used to log in to the Firebase Developers Console and create or import the Firebase project.

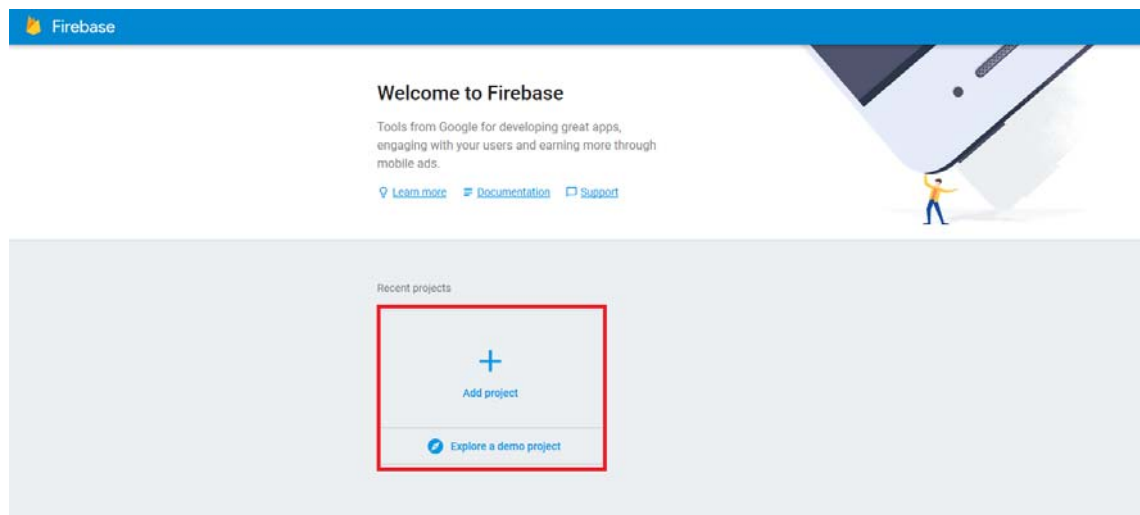
12c Click **Test Server Key** to validate that the information is entered correctly and the key is active. This option will test the connection to the FCM service from each of the MDM Servers configured in the zone. If the connectivity fails from one or more MDM Servers, then the failed servers are listed.

12d Click **OK** to save your Firebase Cloud Messaging configuration.

6.1.3 Importing a GCM Project to Firebase

If you have already created a GCM project, then refer to the following steps to import the GCM project to FCM:

- 1 On the Getting Started with Mobile Management page, navigate to the **Android Devices** section, click **Configure FCM**. The Google Cloud Messaging page is displayed. Click **Configure FCM**, which will re-direct you to the Firebase Cloud Messaging page.
- 2 Click **Firebase Developers Console**, which will direct you to the Firebase console at <https://console.firebase.google.com>.
- 3 Sign in using your Google account credentials that was used to create the existing GCM project.
- 4 Click **Add Project**.



- 5 Click the **Project Name** drop-down menu and select the GCM project that you want to import. Click **Add Firebase**.

If you have already performed steps 4 and 5, then continue with step 6.

Add a project ✕

Project name
ZENworksMDMImport ▼ + iOS + </>
Tip: Projects span apps across platforms ?

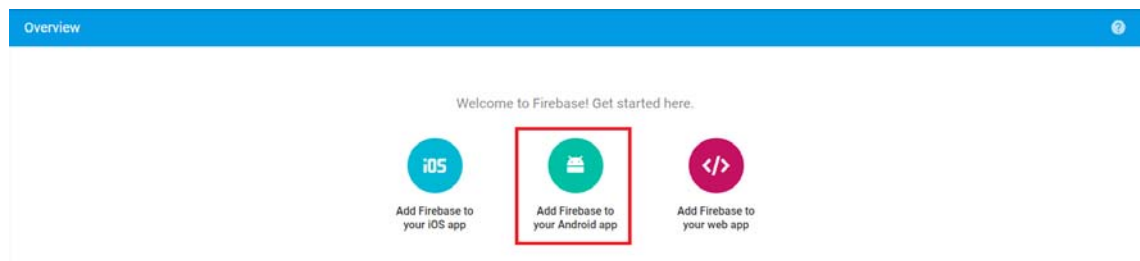
Project ID ?
glossy-surge-161804

Country/region ?
United States ▼

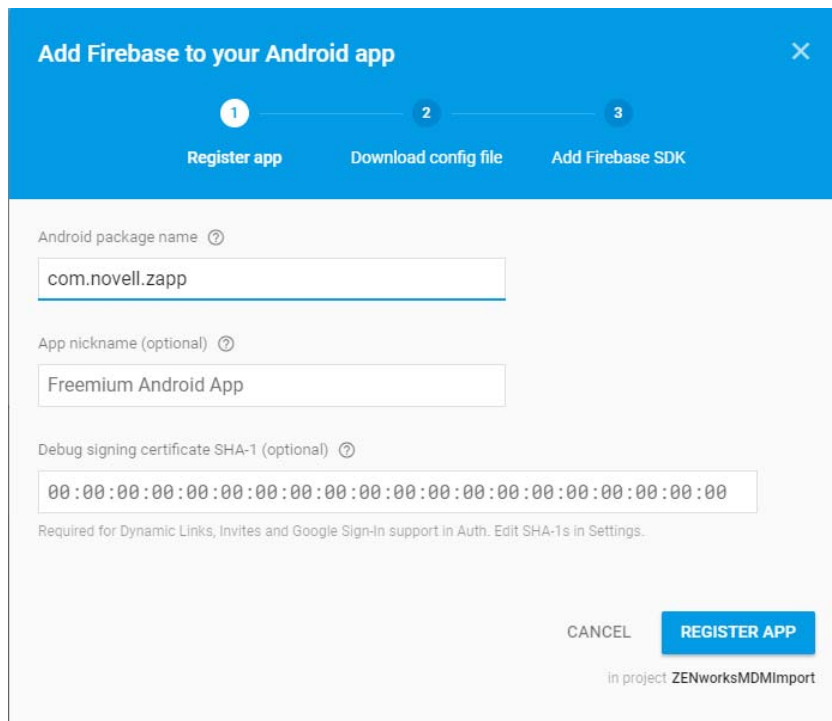
By default, your Analytics data will enhance other Firebase features and Google products. You can control how your analytics data is shared in your settings at any time. [Learn more](#)

CANCEL **ADD FIREBASE**

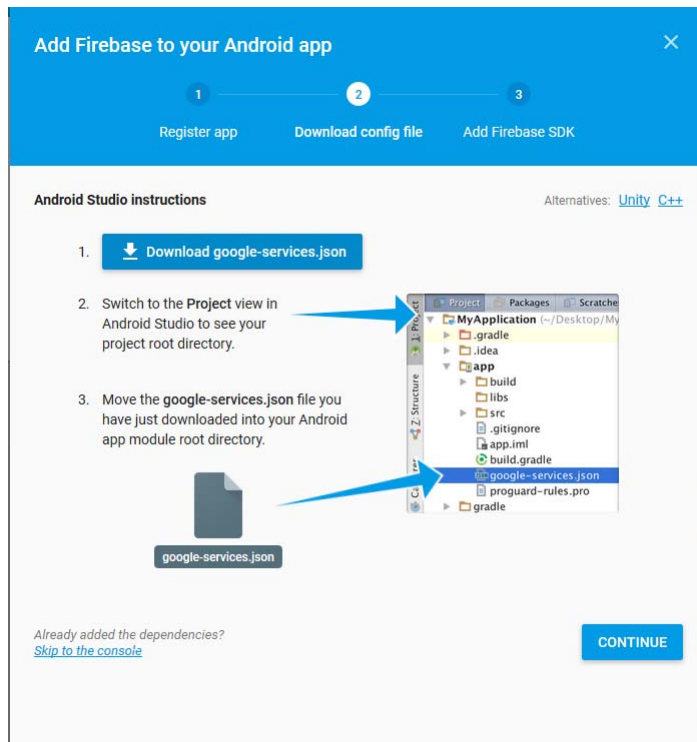
6 Select Add Firebase to your Android App in the Overview page.



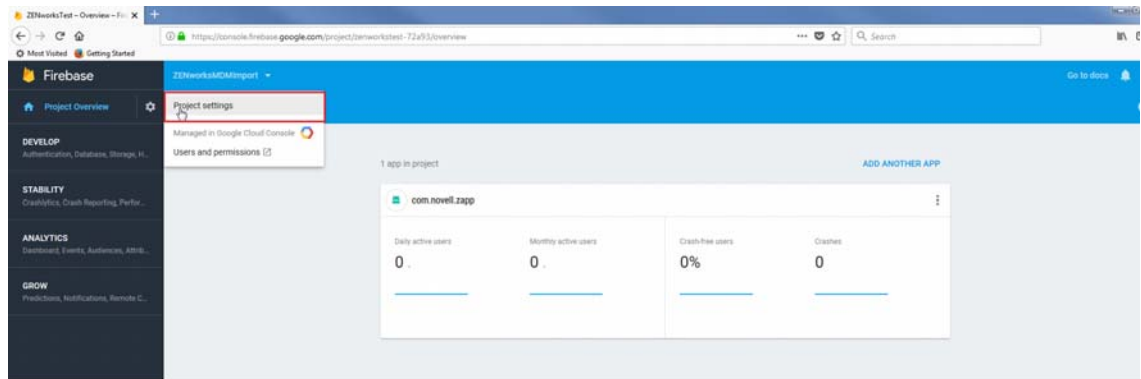
7 Specify the Android Package Name for the ZENworks Agent App, that is, `com.novell.zapp`. Click Register App.



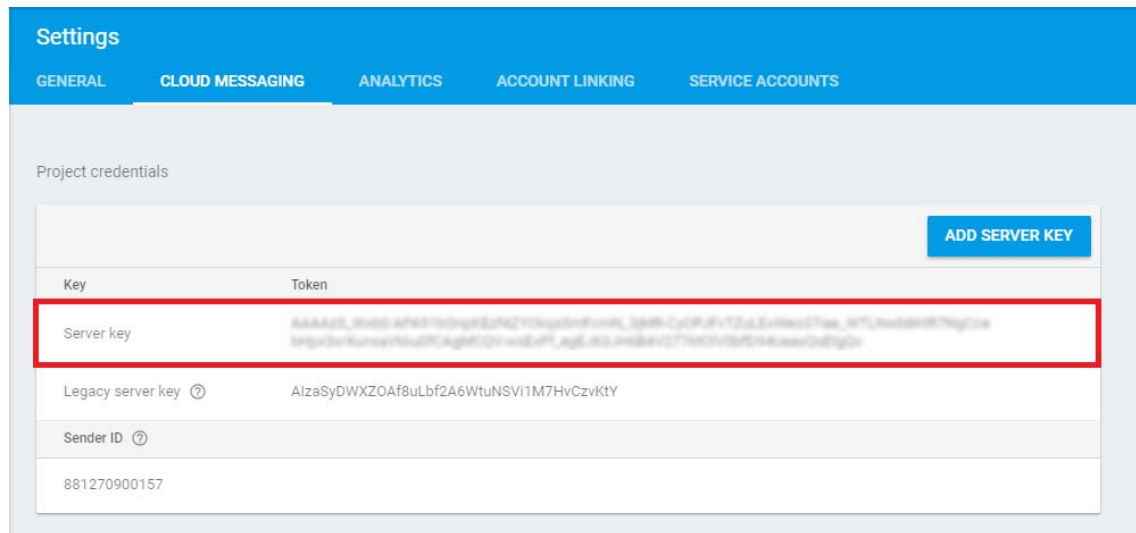
- 8 Click **Download google-services.json** to download the .JSON file in your preferred location. Click **Continue** and then click **Finish**.



- 9 Click  appearing next to **Project Overview** and click **Project Settings**.



10 Select the **Cloud Messaging** tab. You can now view the **Server Key**. Note down this **Server Key**.



11 Exit the Firebase Developers Console, then continue with [Step 12](#).

12 In ZCC, on the Firebase Cloud Message page configure ZENworks with the .JSON file and Server Key:

12a Click the **Enable Firebase Cloud Messaging** check box to turn on the option.

12b Fill in the following fields with the information you generated in the Google Developers Console:

- ♦ **Project JSON file:** Upload the .JSON file that you have downloaded from the Firebase Console
- ♦ **Server Key:** Specify the Server Key for your Firebase project.
- ♦ **Key activation date:** Specify the key's activation date.
- ♦ **Google User ID:** Specify the Google account ID used to log in to the Firebase Developers Console and create or import the Firebase project.

12c Click **Test Server Key** to validate that the information is entered correctly and the key is active. This option will test the connection to the FCM service from each of the MDM Servers configured in the zone. If the connectivity fails from one or more MDM Servers, then the failed servers are listed.

12d Click **OK** to save your Firebase Cloud Messaging configuration.

6.2 Enabling Push Notifications for iOS Devices

Apple Push Notification service (APNs) enables a ZENworks MDM Server to notify an iOS device when the server requires information from the device or has changes for the device. The ZENworks MDM Server communicates with the Apple Push Notification service, which then pushes the notification to the device. After receiving the push notification, the device contacts the ZENworks MDM Server directly to provide the requested information or to receive the changes.

6.2.1 Prerequisites

- ♦ **An APNS Certificate:** In order to use the Apple Push Notification service, an Apple Push Notification service certificate is required. The APNs certificate allows the ZENworks MDM Servers and iOS devices to authenticate securely to the service. Apple Push Notification service certificates are issued by Apple. The following sections help you create the Certificate Signing Request (CSR), submit the request to Apple, and import the Apple-issued APNs certificate into your ZENworks system.
- ♦ **MDM Server:** An MDM role is assigned to a Primary Server and appropriate ports are opened in the firewall. For more information, see [Configuring an MDM Server](#).

6.2.2 Creating and Importing an APNs Certificate


- 1 On the Getting Started with Mobile Management page, navigate to the **Apple Devices** section, click **Configure APNs**. Alternatively, from the left hand side navigation pane of ZCC, navigate to **Configuration > Push Notification > Apple Push Notification**.
- 2 Create a Certificate Signing Request:
 - 2a Click **Create a Certificate Request**.
 - 2b Specify the following certificate details:
 - Organization Apple ID:** Valid Apple ID in email format (for example, user1@mycompany.com). Best practice dictates that this should be an Apple ID created specifically for managing your corporate Apple Push Notification service certificate and not an Apple ID used for a general developer account or a personal account.
 - Organization Unit:** Name of the organizational unit (division, department, or so forth) to which you belong. For example, *IT, IS Department, Technical Services Group, or Business Services*.
 - Organization Name:** Name of your organization.
 - City or Locality/State/Country:** Location information for your organization.
 - 2c Provide the credentials (user name and password) of your Micro Focus Customer Center account.

The Certificate Signing Request must be signed by Micro Focus as an approved Mobile Device Management (MDM) vendor. Your Micro Focus Customer Center credentials enable Micro Focus to sign the request.
 - 2d Click **Submit for Signing**.
 - 2e After the Certificate Signing Request file is signed by Micro Focus, save the signed Certificate Signing Request (CSR) file to a location of your choice.

- 3 Submit the Certificate Request to Apple and download the APNs Certificate:
 - 3a Click **Apple Push Certificates Portal**.
 - 3b Sign in with your Apple ID and password.
 - 3c Follow the prompts to upload your CSR file and create an APNs certificate.
 - 3d Download the APNs certificate.
- 4 Import the APNs Certificate in ZCC:
 - 4a Click **Import APNs Certificate**.
 - 4b Browse and select the APNs certificate file, then click **OK**.

The APNs certificate is imported to your system and the certificate's subject, expiration date, and key length are displayed.
 - 4c To check that the certificate is valid and that your ZENworks system can communicate with the Apple Push Notification service, click **Test Certificate**. This option will test the connection to APNs from each of the MDM Servers configured in the zone. If the connectivity fails from one or more MDM Servers, then the failed servers are listed.

6.2.3 Renewing an Expired APNs Certificate

- 1 On the Getting Started with Mobile Management page, navigate to the **Apple Devices** section, click **Configure APNs**. Alternatively, from the left hand side navigation pane of ZCC, navigate to **Configuration > Push Notification > Apple Push Notification**.
- 2 Ensure that the existing Certificate Signing Request is available. To create a CSR, follow the steps described in [Step 2](#).
- 3 Click **Apple Push Certificates Portal**.
- 4 Sign in with your Apple ID and password.
- 5 Click **Renew** against the certificate that you want to renew. You can identify the certificate based on its **Subject**, which can be viewed by clicking , and the **Expiration** date.
- 6 Follow the prompts to upload the CSR and download the renewed APNs certificate.
- 7 In ZCC, import the APNs certificate by following the steps described in [Step 4](#).

IMPORTANT: If the APNs certificate has expired, ensure that you do not revoke or create a new certificate, or else you will have to re-enroll all mobile devices that were initially enrolled using the earlier certificate.

7 Securing a Device

To secure all mobile devices in your ZENworks Management Zone, you can configure policies that consist of a set of rules to control a range of hardware and software configuration settings on your mobile devices. The various policies present within the Mobile Management feature that help secure a mobile device, are as follows:

- ♦ **Mobile Device Control Policy:** enables you to allow or restrict users from accessing the various features of a mobile device. For example, through this policy you can restrict access to applications such as the device's camera, the device's web browser, and voice assistant.
- ♦ **Mobile Security Policy:** configures the password restrictions, encryption settings, and device inactivity settings.

The settings in these policies have been extended to secure devices enrolled in the work profile and work-managed device modes. For more information on Android enterprise, see [Integrating ZENworks with Android Enterprise](#).

- ♦ [Section 7.1, "Creating a Mobile Device Control Policy," on page 43](#)
- ♦ [Section 7.2, "Editing Mobile Device Control Policy Settings," on page 44](#)
- ♦ [Section 7.3, "Assigning a Mobile Device Control Policy," on page 62](#)
- ♦ [Section 7.4, "Creating a Mobile Security Policy," on page 62](#)
- ♦ [Section 7.5, "Editing Mobile Security Policy Settings," on page 64](#)
- ♦ [Section 7.6, "Assigning a Mobile Security Policy," on page 68](#)

7.1 Creating a Mobile Device Control Policy

7.1.1 Procedure

- 1 On the Getting Started with Mobile Management page, navigate to the **Mobile Security and Control** section and click **Create New Policies**. Alternatively, from the left hand side navigation pane of ZCC, navigate to **Policies > New > Policy**.
- 2 On the Select Platform page, select **Mobile** and click **Next**.
- 3 On the Select Policy Category page, select **General Mobile Policies** and then click **Next**.
- 4 On the Select Policy Type page, select **Mobile Device Control Policy** and then click **Next**.
- 5 On the Define Details page, specify a name for the policy, select the folder in which to place the policy, then click **Next**.

- 6 On the **Configure Mobile Device Control Settings** page, assign different security levels to corporate-owned devices and personally-owned devices, and click **Next**:
 - ◆ **None:** Inherits the setting value from other Mobile Device Control policies assigned higher in the policy hierarchy. For example, if you assign this policy to a device, the setting value is inherited from any Mobile Device Control policy assigned to groups and folders of which the device is a member. If a setting value is not inherited from another Mobile Device Control policy, the device's default value is used.
 - ◆ **Low:** No restrictions are enforced on the device. However, some settings are assigned a default value and for the remaining settings no value is assigned.
 - ◆ **Moderate:** A few restrictions are imposed. For example, in the case of iOS devices, in-app purchases are disabled, background data fetch while roaming is disabled, access to documents from managed sources in unmanaged destinations and vice versa are disabled.
 - ◆ **Strict:** Some restrictions are enforced on the device. For example, in the case of iOS devices, backup of data to iCloud is prevented, display of notification on the Lock screen is disabled, submission of diagnostic reports to Apple is disabled.
 - ◆ **High:** This level is similar to strict security level however with higher restrictions. For example, in the case of iOS devices, disables voice assistant Siri, removes the device camera, and disables pop-up tabs in Safari.
- 7 On the **Summary** page, you can perform the following actions:
 - ◆ **Create as Sandbox:** Creates a Sandbox-only version of the policy. A Sandbox version of a policy enables you to test it on your device before actually deploying it
 - ◆ **Define Additional Properties:** Enables you to edit the default device control settings configured in the policy. For more information, see [Editing Mobile Device Control Policy Settings](#).

Click **Finish** to complete creating the policy.

7.2 Editing Mobile Device Control Policy Settings

Based on the security level selected while creating the Mobile Device Control Policy, the settings that are predefined by ZENworks can be viewed or edited by performing the steps elaborated in this section. The Mobile Device Control policy settings can be configured for iOS, Android, and ActiveSync devices. However, these settings vary based on the platform. Also, you can configure these settings for a personal or a corporate owned device.

7.2.1 Procedure

- 1 In ZENworks Control Center, navigate to the **Policies** section.
- 2 Click the Mobile Device Control policy for which the content needs to be configured.
- 3 Click the **Details** tab and edit the settings.

Corporate/Personal: The settings in the **Corporate** column are applied to devices whose ownership is defined as Corporate. The settings in the **Personal** column are applied to devices whose ownership is defined as Personal. The settings use the following values:

- ◆ **Yes:** Enables the setting.
- ◆ **No:** Disables the setting.

- ◆ **Inherit:** Inherits the setting value from other Mobile Device Control policies assigned higher in the policy hierarchy. For example, if you assign this policy to a device, the setting value is inherited from any Mobile Device Control policy assigned to groups and folders of which the device is a member. If there is no value to inherit, then ZENworks does not set the restriction.
- ◆ **Not Set (--):** Indicates that a value is not set by ZENworks.
- ◆ **Supervised Only:** Indicates that a setting is applicable for iOS Supervised devices only. Supervised mode gives you additional control over the device.

NOTE: The settings that are applicable for supervised devices only, are subject to change.

4 Click **Apply**.

5 Click **Publish** to display the Publish Option page. In this page you can publish the modified policy as a new version of the same policy or as a new policy.

Apple

The settings that can be enabled or disabled for iOS devices are as follows:

Tab	Settings	Description	Applicable from
Device	Allow camera	Determines whether to enable or disable the device camera. If set to No , the camera icon is removed from the home screen on the device.	
	Allow FaceTime	Determines whether to enable or disable FaceTime. This setting is enabled if the Allow camera setting is configured as Yes or Inherit .	
	Allow global background fetch while roaming	Determines whether the latest app data should be fetched from the network for apps running in the background, while the device is roaming.	
	Allow Handoff	Determines whether a user is allowed to resume an existing task or is allowed to access content from any device which is logged into the same iCloud account.	

Tab	Settings	Description	Applicable from
	Allow Siri	Determines whether Apple's voice assistant should be enabled.	
	Allow Siri while device is locked	Determines whether the user can access Siri while the device is locked. This setting is enabled if the Allow Siri setting is set to Yes or Inherit . Also, this option is ignored if a passcode is not set on the device.	iOS 5.1+
	Enable Siri profanity filter	Determines whether the Profanity Filter option in Siri should be enabled. Applicable for supervised devices only. This setting is enabled if the Allow Siri setting is set to Yes or Inherit .	
	Show user-generated content in Siri	Determines whether Siri can obtain content from sources that allow user-generated content, such as Wikipedia. This setting is enabled if the Allow Siri setting is set to Yes or Inherit . Applicable for supervised devices only.	iOS 7.0+
	Allow iMessage	Determines whether the user can use the iMessage feature on devices. Applicable for supervised devices only.	iOS 6.0+
	Allow AirDrop	Determines whether the user can share documents, media, and so on, using AirDrop. Applicable for supervised devices only.	iOS 7.0+
	Allow iBooks Store	Determines whether the user can download content from iBooks Store. Applicable for supervised devices only.	iOS 6.0+

Tab	Settings	Description	Applicable from
	Allow automatic updates to certificate trust settings	Determines whether automatic updates to certificate trust settings should be enabled.	
	Allow documents from managed sources in unmanaged destinations	Determines whether a document can be opened in an unmanaged app or account if the document was created or downloaded from a managed app or account.	iOS 7.0+
	Allow documents from unmanaged sources in managed destinations	Determines whether a document can be opened in a managed app or account if the document was created or downloaded from an unmanaged app or account.	iOS 7.0+
	Allow screenshots	Determines whether the user can capture images of the device's display screen. If disabled, this setting will prevent the classroom app from observing remote screens.	iOS 9.0+
	Allow screen observation by Classroom	Determines whether remote screen observation by the Classroom app is enabled. This setting will be enabled, only if the Allow screenshots setting is enabled.	iOS 9.3+
	Allow account modification	Determines whether the user is allowed to modify account settings, such as adding or removing mail account, modifying iCloud settings and so on. Applicable for supervised devices only.	iOS 7.0+
	Allow erase All content And settings	Determines whether the user can erase all the content and settings on the device. Applicable for supervised devices only.	

Tab	Settings	Description	Applicable from
	Allow device name modification	Determines whether the user can modify the name of the device. Applicable for supervised devices only.	iOS 9.0+
	Allow Bluetooth setting modification	Determines whether the user can modify the bluetooth settings on the device. Applicable for supervised devices only.	iOS 10+
	Allow host pairing	Determines whether an iOS device can pair with other devices. If No is selected, then these devices can only pair with their supervision host or with hosts having a Supervising Host Certificate. If a Supervision Host Certificate is not configured, all pairing is disabled.	iOS 7.0+
	Allow restrictions modification	Determines whether the user can modify restrictions on the device. Applicable for supervised devices only.	
	Allow Find My Friends setting modification	Determines whether the user can modify the Find my Friend settings on the device. Applicable for supervised devices only.	iOS 7+
	Allow Wallpaper modification	Determines whether the user can modify the wallpaper settings on the device. Applicable for supervised devices only.	iOS 9.0+
	Allow notifications modification	Determines whether the user can modify the Notification settings on the device. Applicable for supervised devices only.	iOS 9.3+
	Allow sending diagnostic and usage data to Apple	Determines whether automatic submission of diagnostic and usage reports to Apple should be enabled.	iOS 6.0+

Tab	Settings	Description	Applicable from
	Allow diagnostics settings modification	Determines whether the user can modify the Diagnostic settings and app analytics settings in the Diagnostic and Usage screen on the device. Applicable for supervised devices only.	iOS 9.3.2+
	Allow users to accept untrusted TLS certificate	Determines whether the user can accept Transport Layer Security (TLS) certificates that cannot be verified.	iOS 5.0+
	Force encrypted backup	Determines whether the device backup process should be encrypted.	
	Force limited ad tracking	Determines whether advertisers' tracking of a user's activities across apps should be limited. If set to Yes , then ad tracking is not eliminated but reduced to some extent.	iOS 7.0+
	Request passcode for incoming AirPlay requests	Determines whether a pairing passcode restriction should be enforced for all incoming AirPlay requests coming from another device to a managed device.	Apple TV 6.1 to tvOS 10.1
	Request passcode for outgoing AirPlay requests	Determines whether a pairing passcode restriction should be enforced for all outgoing AirPlay requests sent from a managed device to another device	iOS 7.1+
	Treat Airdrop as unmanaged destination	Determines whether Airdrop should be considered as an unmanaged drop target. If set to Yes , then the user will be unable to share managed data through Airdrop.	iOS 9.0+

Tab	Settings	Description	Applicable from
	Allow Spotlight Internet results	Determines whether the users can use Spotlight Search to find content directly from the Internet. Applicable for supervised devices only.	iOS and macOS 10.11+
	Allow definition lookup	Determines whether the user can lookup definitions using the in-built iOS dictionary. This feature is applicable on devices with iOS version 8.1.3 or newer and OS X 10.11.2 or newer. Applicable for supervised devices only.	iOS 8.1.3+ and macOS 10.11.2+
	Allow Dictation	Determines whether or not the user can enable the dictation option present in the keyboard. This feature is applicable on devices with iOS versions 11.0 or newer versions.	iOS 10.3+
	Allow Wi-Fi whitelisting	Determines whether or not the user can connect to the Wi-Fi service that is setup using the configuration profile. This feature is applicable on devices with iOS version 10.3 or newer.	iOS 10.3+
	Allow VPN creation	Determines whether or not the user can configure a VPN connection using their devices. This feature is available with iOS version 11.0 or newer versions.	iOS 11.0+
Apps	Allow installation of apps	Determines whether the user can install apps.	

Tab	Settings	Description	Applicable from
	Allow app installation from App Store	Determines whether the user can install apps from the Apple App Store. This field is enabled if the Allow Installation of Apps field is enabled. Applicable for supervised devices only. If disabled, the App Store icon is removed from the Home screen.	
	Allow automatic app downloads	Determines whether the user can automatically download apps purchased on other devices. This field is enabled if the Allow Installation of Apps field is enabled. Applicable for supervised devices only.	iOS 9.0+
	Allow removing apps	Determines whether the user can remove apps from the device. Applicable for supervised devices only.	
	Allow in-app purchases	Determines whether the user can make in-app purchases.	
	Allow cellular data app settings modifications	Determines whether the user can modify cellular data settings for specific apps. Applicable for supervised devices only.	iOS 7.0+

Tab	Settings	Description	Applicable from
	Allow enterprise app trust	<p>Determines whether custom apps can be provisioned using universal provisioning profiles. If set to false removes the Trust Enterprise Developer button in Settings-> General-> Profiles & Device Management.</p> <p>This restriction applies to free developer accounts but it does not apply to enterprise app developers who are trusted because their apps were pushed via MDM, nor does it revoke previously granted trust.</p>	iOS 9.0+
	Allow backup of enterprise books	Determines whether the user can back up books distributed by the organization to iCloud or iTunes.	
	Allow in-app purchase	Determines whether the user can make in-app purchases.	
	Allow managed apps to store data in iCloud	Determines whether managed app data should sync with iCloud.	
	Allow notes and highlights sync for enterprise books	Determines whether metadata, which includes notes and highlights of books that are distributed by the user's organization, should be synced with iCloud.	
	Allow News	Determines whether the user can access News apps. Applicable for supervised devices only.	iOS 9.0+
	Allow System App Removal	Determines whether or not the user can remove system apps from the device.	iOS 11.0+

Tab	Settings	Description	Applicable from
Apple Watch	Force Apple Watch wrist detection	Determines whether an Apple Watch should display the time and the latest alerts when the user's wrist is raised.	iOS 8.2+
	Allow pairing with Apple Watch	Determines whether the user can pair with an Apple Watch. Applicable for supervised devices only.	iOS 9.0+
iTunes	Allow iTunes	Determines whether the user can access the iTunes music store app. If disabled, the icon will be removed from the Home screen.	
	Require iTunes Store password for each purchases	Determines whether or not the user needs to enter the password for each purchase on the iTunes Store.	iOS 5.0+
iCloud	Allow My Photo Stream	Determines whether a copy of any photo taken on the managed iOS device should be synced with the user's other iOS devices.	iOS 6.0+
	Allow iCloud Keychain	Determines whether Keychain data such as accounts, passwords, and credit card information, should be synced with iCloud.	iOS 7.0+ and macOS 10.12+
	Allow iCloud Photo Library	Determines whether photos on iCloud can be accessed on the managed device. If disabled, any photos that are not fully downloaded from the Photo Library to the device, will be removed from local storage.	iOS 9.0+ and macOS 10.12+
	Allow iCloud Photo Sharing	Determines whether the user can publish and share photos with other iOS users through the iCloud website.	

Tab	Settings	Description	Applicable from
	Allow iCloud backup	Determines whether data can be backed up or restored on iCloud.	iOS 5.0+
	Allow iCloud document sync	Determines whether the user can synchronize documents and key-values to the iCloud storage space.	iOS 5.0+ and macOS 10.11+
Safari	Allow use of Safari	Determines whether the user is allowed to use the Safari web browser on the device. If set to No , then the Safari icon is removed from the Home screen of the device.	

Tab	Settings	Description	Applicable from
	Accept cookies	<p data-bbox="870 218 1146 365">Determines the cookie policy that should be enabled in the Safari web browser. The accepted values are:</p> <ul data-bbox="894 407 1146 1352" style="list-style-type: none"> <li data-bbox="894 407 1146 554">◆ Block all websites, third parties, and advertisers from storing cookies on the device. <li data-bbox="894 575 1146 722">◆ Allow all websites, third parties, and advertisers to store cookies on the device. <li data-bbox="894 743 1146 995">◆ Allow cookies to be stored from only those websites that the user is currently visiting and not from third parties that embed content in the website. <li data-bbox="894 1016 1146 1352">◆ Allow cookies to be stored from only those websites that the user visits. With this option you can prevent websites that have embedded content in other websites that you visit from storing cookies. 	
	Allow pop-ups	<p data-bbox="870 1535 1146 1745">Determines whether pop-ups should be blocked in the Safari web browser. This setting is enabled, if Allow use of Safari is configured as Yes or Inherit.</p>	

Tab	Settings	Description	Applicable from
	Enable autoFill	Determines whether Safari should remember the data entered by users on web entry forms. This setting is enabled, if Allow use of Safari is configured as Yes or Inherit .	
	Enable JavaScript	Determines whether JavaScript should be enabled in the Safari web browser. This setting is enabled, if Allow use of Safari is configured as Yes or Inherit .	
	Force fraud warning	Determines whether Safari should warn users about refraining from visiting websites that are fraudulent. This setting is enabled, if Allow use of Safari is configured as Yes or Inherit .	

Tab	Settings	Description	Applicable from
Lock Screen	Allow passbook notifications in lock screen	Determines whether notifications on the passbook app can be displayed on the lock screen. The passbook app allows users to store their coupons, tickets, and so on.	iOS 6.0+
	Allow voice dialing while device is locked	Determines whether voice dialing should be enabled while the device is locked.	
	Show Control Center in lock screen	Determines whether Control Center can be accessed from the Lock screen. The Control Center gives the user quick access to the apps and controls on the device.	iOS 7.0+
	Show Notification Center in lock screen	Determines whether users can view past notifications on the lock screen. If enabled, the users can still view notifications on the lock screen, when they arrive.	iOS 7.0+
	Show Today View in lock screen	Determines whether the Today View in Notification Center should be displayed on Lock screen.	iOS 7.0+
Media Content	Allow bookstore erotica	Determines the user is permitted to download media that is tagged as erotica from the iBooks store.	iOS and tvOS 11.3+
	Allow explicit content	Determines whether the user can access explicit music or video content purchased from the iTunes Store. Explicit content is marked by the content providers when sold in the iTunes Store. Applicable for supervised devices only.	iOS and tvOS 11.3+

Tab	Settings	Description	Applicable from
	Ratings region	Determines the region that needs to be selected to populate the allowed ratings for media content defined for that region.	iOS and tvOS 11.3+
	Apps	Determines the maximum allowed rating for apps. These values are populated based on the selected Ratings region . If a rating is enabled, items that do not conform to the rating restrictions cannot be downloaded or installed on the device.	iOS 5.0+ and tvOS 11.3+
	Movies	Determines the maximum allowed rating for movies. The values in this field are populated based on the selected Ratings region . If a rating is enabled, items that do not conform to the rating restrictions cannot be downloaded on the device.	iOS and tvOS 11.3+
	TV Shows	Determines the maximum allowed rating for TV shows. The values in this field are populated based on the selected Ratings region . If a rating is enabled, items that do not conform to the rating restrictions cannot be downloaded on the device.	iOS and tvOS 11.3+
Security	Allow Touch ID to unlock device	Determines whether the user can unlock the device by using fingerprint.	iOS 7+ and macOS 10.12.4+

Tab	Settings	Description	Applicable from
	Allow passcode modification	Determines whether the user can modify the passcode on the device. If disabled, the user will not be able to add, change or remove the passcode. Applicable for supervised devices only. This restriction is ignored in shared iPads.	iOS 9.0+
	Allow Touch ID fingerprint modification	Determines whether the user can modify the Touch ID fingerprints. This field will be enabled if the Allow passcode modification option is enabled. Applicable for supervised devices only.	
Gaming	Allow Game Center	Determines whether the user can access the Game Center. If disabled, the Game Center icon is removed from the Home screen. Applicable for supervised devices only.	iOS 6.0+
	Allow multiplayer Gaming	Determines whether games with more than one player is enabled. This field will be enabled if the Allow Game Center option is enabled.	
	Allow adding Game Center friends	Determines whether game center friends can be added. This field will be enabled if the Allow Game Center option is enabled.	
Keyboard	Allow predictive keyboard	Determines whether the user can use predictive keyboard on the device. Applicable for supervised devices only.	iOS 8.1.3+
	Allow keyboard shortcuts	Determines whether the user can use shortcuts from external keyboards. Applicable for supervised devices only.	iOS 9.0+

Tab	Settings	Description	Applicable from
	Allow auto correction	Determines whether users can use the auto correct option and select appropriate words. Applicable for supervised devices only.	iOS 8.1.3+
	Allow spell check	Determines whether spell check is allowed on a user's device. Applicable for supervised devices only.	iOS 8.1.3+
Music	Allow Music service	Determines whether Music Service is enabled on the device. If No is selected, then the Music Service is disabled and set to the classic mode. Applicable for supervised devices only.	iOS 9.3+ and macOS 10.12+
	Allow Radio	Determines whether the user can access iTunes Radio. Applicable for supervised devices only.	iOS 9.0+
	Allow Podcasts	Determines whether the user can access iTunes Podcasts. Applicable for supervised devices only.	iOS 8.0+
AirPrint	Allow AirPrint	Determines whether or not a user can connect to the AirPrint feature to print documents or pictures wirelessly using any AirPrint enabled printer. This feature is applicable on devices with iOS version 11.0 or newer.	iOS 11.0+
	Allow AirPrint Credentials Storage	Determines whether or not AirPrint credentials can be stored in Keychain. This feature is applicable on devices with iOS version 11.0 or newer versions.	iOS 11.0+

Tab	Settings	Description	Applicable from
	Force AirPrint Trusted TLS Requirement	Determines whether or not devices can connect to AirPrint enabled devices only using the trusted TLS certificates.	iOS 11.0+
	Allow AirPrint iBeacon Discovery	Determines whether or not devices can discover the printer beacons. Using these i Beacons, printers can broadcast connection information, and devices can discover it to reduce setup time. This feature is applicable on devices with iOS version 11.0 or newer versions.	iOS 11.0+

NOTE: The settings that are applicable for only supervised devices are subject to change.

Android

The settings that can be enabled or disabled for Android devices are as follows:

Settings	Description	Applicable from
Allow camera	Determines whether the device camera should be enabled. If disabled on devices enrolled in the work profile mode, the camera can still be accessed from the device's personal space.	Android 5.0+

ActiveSync

These settings can be applied on devices that are enrolled as:

- ◆ ActiveSync Only devices
- ◆ Fully Managed devices, that is, iOS and ActiveSync (iOS MDM + ActiveSync) or Android and ActiveSync (Android App + ActiveSync).

If a setting is applicable for both Android and ActiveSync, or iOS and Activesync, then the stricter restriction of the two is applied. For example: the mode in which a device is enrolled is iOS MDM + ActiveSync. If **Allow Camera** is enabled as a part of the iOS settings and if **Allow Camera** is disabled as a part of the ActiveSync settings, then the camera icon is removed from the device, as disabling of the camera is a strict setting.

Settings	Description
Allow Bluetooth	Determines whether bluetooth connections are allowed to and from the device. You also have the option of allowing only a hands free configuration on the device.
Allow browser	Determines whether the user is allowed to use the default web browser on the device.
Allow camera	Determines whether the device camera should be enabled.
Allow infrared	Determines whether infrared connections are allowed to and from the device.
Allow text messaging	Determines whether the user can send or receive text messages on the device.
Allow storage card	Determines whether the device can access a removable storage card.

7.3 Assigning a Mobile Device Control Policy

Most mobile policies can be assigned to users or devices. User-assigned policies apply to all devices enrolled by the user. Device-assigned policies apply only to the explicitly assigned device.

In addition to assigning policies directly to users and devices, you can assign policies to user groups, user folders, device groups, and device folders. Each member of the group or folder receives the assignment.

For more information on assigning this policy, see [Procedure](#).

7.4 Creating a Mobile Security Policy

7.4.1 Procedure

- 1 On the Getting Started with Mobile Management page, navigate to the **Mobile Security and Control** section and click **Create New Policies**. Alternatively, from the left hand side navigation pane of ZCC, navigate to **Policies > New > Policies**.
- 2 On the Select Platform page, select **Mobile** and then click **Next**.
- 3 On the Select Policy Category page, select **General Mobile Policies** and then click **Next**.
- 4 On the Select Policy Type page, select **Mobile Security Policy** and then click **Next**.

- 5 On the Define Details page, specify a name for the policy, select the folder in which to place the policy, then click **Next**.
- 6 On the **Select Security Levels** page you can assign different security levels to corporate-owned devices and personally-owned devices. There are five security levels. Each security level provides pre-configured defaults for the password, encryption, and device inactivity settings. After the policy is created, you can edit the policy to customize individual settings, if needed.

Select from the following security levels and click **Next**:

- ♦ **None:** All settings are inherited from other Mobile Security policies applied to the device. If no other policies are applied to the device, the device's default settings are used.

The None security level is useful for creating exceptions for devices. For example, you might have a corporate Mobile Security policy that applies a Moderate security level to all devices. However, you have a few devices on which you want to enforce storage card encryption, which is not enforced by the Moderate security level. You create a policy with the None security level, edit the policy to turn on storage card encryption, and then assign the policy to the appropriate devices.

The None security level is also useful for overriding a few default settings on devices. For example, you might want to retain all of the default settings of the device with the exception that you want to enable the Require Encryption setting. In this scenario, you need to create a policy with the None security level, edit the policy to turn on device encryption, and then assign the policy to the appropriate devices. The devices will retain all default settings except for the device encryption setting enforced through the policy.

- ♦ **Low:** Enforces a password on the device. The password can be a simple password with a minimum of 4 characters.
- ♦ **Moderate:** Enforces a password and inactivity lockout. The password must be an alphanumeric password with a minimum of 6 characters. A 30 day password expiration is enforced, and the last 5 passwords cannot be reused. After 5 minutes of inactivity, the device is locked; after 10 failed attempts to unlock the device, it is wiped.
- ♦ **Strict:** Enforces a password, encryption, and inactivity lockout. The password must be a complex password with a minimum of 8 characters. A 30 day password expiration is enforced, and the last 7 passwords cannot be reused. The device and its storage card are encrypted. After 1 minute of inactivity, the device is locked; after 7 failed attempts to unlock the device, it is wiped.
- ♦ **High:** Same as the Strict security level with higher restrictions for each complex password setting. The password must be a strong complex password with a minimum of 8 characters. A 30 day password expiration is enforced, and the last 10 passwords cannot be reused. The device and its storage card are encrypted. After 1 minute of inactivity, the device is locked; after 5 failed attempts to unlock the device, it is wiped.

- 7 On the **Summary** page.

- ♦ **Create as Sandbox:** Creates a Sandbox-only version of the policy. A Sandbox version of a policy enables you to test it on your device before actually deploying it
- ♦ **Define Additional Properties:** Enables you to edit the default security settings configured in the policy. For more information, see [Editing Mobile Security Policy Settings](#).

Click **Finish** to complete the policy.

7.5 Editing Mobile Security Policy Settings

Based on the security level selected while creating a Mobile Security policy, the settings as predefined by ZENworks can be viewed or edited by performing the steps elaborated in this section.




7.5.1 Procedure

- 1 In ZENworks Control Center, navigate to the **Policies** section.
- 2 Click the Mobile Security Policy whose content you want to edit.
- 3 Click the **Details** tab, and edit the settings.

Corporate/Personal: The settings in the **Corporate** column are applied to devices whose ownership is defined as Corporate. The settings in the **Personal** column are applied to devices whose ownership is defined as Personal. The settings use the following values:





- ◆ **Yes:** Enables the setting.
- ◆ **No:** Disables the setting.
- ◆ **Inherit:** Inherits the setting value from other Mobile Security policies assigned higher in the policy hierarchy. For example, if you assign this policy to a device, the setting value is inherited from any Mobile Security policy assigned to groups and folders of which the device is a member. If a setting value is not inherited from another Mobile Security policy, the device's default value is used.
- ◆ **Numeric value:** Configures the setting with the numeric value provided by you.














Platform Support: The platform columns show support for a setting. The platforms are:














- ◆  Android
- ◆  iOS
- ◆  ActiveSync

Password: The Password settings are listed in increasing order of complexity (strictness). If more than one setting applies to a device, the more complex (strict) setting is enforced. Using the example values provided in the table below, the following settings would be applied:

- ◆ **Android:** The **Require numeric complex password** setting for Android 5.0 and higher.
- ◆ **iOS:** The **Require simple password** setting.
- ◆ **ActiveSync:** The **Require simple password** setting.




Setting	Description	Example	Platform Support
Require password	Requires a password to unlock the device.	Yes	  
Require biometric weak password	Requires at least low-security biometric recognition technology that can recognize the identity of an individual to about a 3 digit PIN (false detection is less than 1 in 1,000).	No	

Setting	Description	Example	Platform Support
Require simple password	Allows the password to include repeating characters such as (0000) or sequential characters such as (abcd). This setting behaves differently on Android and iOS devices. For Android devices, the strictest rule gets applied. However, for iOS devices, the rule that is applied is cumulative of all the set rules.	Yes	 iOS 
Minimum password length	Specifies the minimum number of characters required for the password.	8	 iOS 
Require numeric password	Requires the password to contain numbers. Other characters (letters and symbols) are optional.	No	
Require numeric complex password	Requires the password to contain numbers, with no repeating numbers (4444) or sequential numbers (1234). Other characters (letters and symbols) are optional.	Yes	
Require alphabetic password	Requires the password to contain letters (or symbols). Other characters (numbers) are optional.	No	
Require alphanumeric password	Requires the password to contain letters (or symbols) and numbers.	No	 iOS 
Require complex password	Requires the password to contain letters, numbers, and symbols.	Inherit	 iOS 
Minimum complex character types	Applies only if Require complex password is set to Yes or Inherit . Specifies the minimum number of character types the complex password must contain. Character types are defined as: <ul style="list-style-type: none"> ◆ Lowercase alphabetical characters ◆ Uppercase alphabetical characters ◆ Numbers ◆ Non-alphanumeric characters 	2	
Minimum complex characters required	Applies only if Require complex password is set to Yes or Inherit . Specifies the minimum number of characters required for the complex password.	2	 iOS









Setting	Description	Example	Platform Support
Minimum letters required	<p>Applies only if Require complex password is set to Yes or Inherit.</p> <p>Specifies the minimum number of letters that must be included in the complex password.</p>	1	
Minimum numbers required	<p>Applies only if Require complex password is set to Yes or Inherit.</p> <p>Specifies the minimum number of numbers that must be included in the complex password.</p>	1	
Minimum lowercase letters required	<p>Applies only if Require complex password is set to Yes or Inherit.</p> <p>Specifies the minimum number of lowercase letters (abcd) that must be included in the complex password.</p>	1	
Minimum uppercase letters required	<p>Applies only if Require complex password is set to Yes or Inherit.</p> <p>Specifies the minimum number of uppercase letters (ABCD) that must be included in the complex password.</p>	1	
Minimum nonletters required	<p>Applies only if Require complex password is set to Yes or Inherit.</p> <p>Specifies the minimum number of numbers or symbols that must be included in the complex password.</p>	2	
Require password expiration	Requires the password to expire within a specified number of days.	Yes	 iOS 
Password expiration (days)	<p>Applies only if Require device password expiration is set to Yes.</p> <p>Specifies the number of days after which the password expires and must be changed. For example, if set to 30, the password expires after 30 days and must be changed.</p>	30	 iOS 
Require password history	Requires a history of used passwords to be stored in order to prevent immediate reuse of passwords.	Yes	 iOS 
Number of passwords stored	<p>Applies only if Require device password history is set to Yes.</p> <p>Specifies the number of passwords stored in the history. For example, if set to 5, the last 5 passwords cannot be reused.</p>	3	 iOS 

NOTE: In this policy, even when you specify the minimum password length as a value that is less than 6, an iOS device (version 11 or newer), to which this policy is assigned, prompts for a password length of minimum 6 characters. However, the device accepts a password length that is less than 6 characters, as specified in the policy.

Encryption: Not all Encryption settings apply to all device platforms. In addition, the setting support can vary from version to version within a platform.

Setting	Description	Platform Support
Require encryption on the device	Requires content stored on the device to be encrypted.	 
Require encryption on the storage card	Requires content on the storage card to be encrypted.	

Device Inactivity: Not all Device Inactivity settings apply to all device platforms. In addition, setting support can vary from version to version within a platform.

Setting	Description	Platform Support
Require inactivity lock	Requires the device to be locked after it has been inactive for a specified period of time.	 iOS 
Maximum inactivity timeout (minutes)	Applies only if Require inactivity lock is set to Yes .	 iOS 
	Specifies the maximum number of minutes the user can set for the inactivity lock. For example, if set to 5, the user can set the inactivity timeout up to 5 minutes.	
Wipe device on failed number of unlock attempts	Wipes the device data after a specified number of failed attempts to unlock the device.	 iOS 
Maximum number of unlock attempts	Applies only if Wipe device on failed number of unlock attempts is set to Yes .	 iOS 
	Specifies the number of failed attempts to unlock the device that is allowed before the device data is wiped. For example, if set to 10, the device is wiped after the 10th failed attempt.	
Configure time period after which passcode is required	Enables you to define when a passcode is required after a period of inactivity.	iOS
Display the passcode screen on unlock	Displays the passcode at the specified time period, after a period of inactivity. For example, if set to After 5 minutes , the passcode is displayed after 5 minutes of inactivity.	iOS

- 4 Click **Apply**.
- 5 Click **Publish** to display the Publish Option page. In this page you can publish the modified policy as a new version of the same policy or as a new policy.

For more information on the Profile Security tab, see [Securing the Device](#).

7.6 Assigning a Mobile Security Policy

Most mobile policies can be assigned to users or devices. User-assigned policies apply to all devices that the user enrolls. Device-assigned policies apply only to the assigned device.

In addition to assigning policies directly to users and devices, you can assign policies to user groups, user folders, device groups, and device folders. Each member of the group or folder receives the assignment.

7.6.1 Procedure

- 1 To assign the policy to users, from the **Policies** list, select the check box in front of the policy, then click **Action > Assign to User**. to assign the policy to devices from the **Policies** list, select the check box in front of the policy, then click **Action > Assign to Device**.
- 2 In the Select Object dialog box, browse for and select the users or devices to whom you want to assign the policy, click **OK** to add them to the list and then click **Next**.
- 3 If the policy is assigned to a device, then the Policy Conflict Resolution page is displayed. In this page, you can set the precedence for device-associated policies and user-associated policies for resolving conflicts that arise when policies of the same type are associated to both devices and users. Define any of the following and click **Next**:
 - ◆ **User Precedence:** The user-associated policy will override the device-associated policy. Select this option to apply policies that are associated to the users first, and then to the devices.
 - ◆ **Device Precedence:** The device-associated policy will override the user-associated policy. Select this option to apply policies that are associated to the devices first, and then to the users.
 - ◆ **Device Only:** Select this option to apply policies that are associated to devices alone.
 - ◆ **User Only:** Select this option to apply policies that are associated to users alone.
- 4 Review the summary page and click **Finish** to complete the assignment.

For more information on the existing Policies section of ZENworks, see [ZENworks Configuration Policies Reference](#).

8

Provisioning Applications

A bundle consists of all the configuration settings and installation instructions required to deploy and manage applications or profiles on a device. Based on the device platform, ZENworks lets you provision the following types of apps or configuration information, using the existing Bundles feature in ZENworks:

iOS

- ♦ **App Store App:** Allows you to distribute apps available in the Apple App Store. For more information, see [Distributing iOS App Store Apps](#).
- ♦ **iOS Profile:** Allows you to distribute configuration information to iOS devices. This configuration information allows you to manage certain features such as Wi-Fi settings, VPN settings, and to restrict certain device features. For more information, see [Distributing an iOS Profile](#).
- ♦ **VPP Apps:** Allows you to distribute bundles related to apps purchased using the Apple Volume Purchase Program. These bundles are automatically created as soon as an Apple VPP subscription is created. For more information, see [Subscribing to Apple VPP](#).

Android

- ♦ **Android Bundle:** Allows you to distribute work apps that are approved in managed Google Play using Android enterprise management. These bundles are automatically created after enrolling your organization with Google and approving the apps in managed Google Play. For more information, see [Distributing Work Apps to Users](#).
- ♦ [Section 8.1, “Distributing iOS App Store Apps,” on page 69](#)
- ♦ [Section 8.2, “Distributing an iOS Profile,” on page 71](#)
- ♦ [Section 8.3, “Assigning Bundles,” on page 74](#)
- ♦ [Section 8.4, “Specifying App Configuration Parameters,” on page 76](#)
- ♦ [Section 8.5, “Installing a Bundle using Quick Task,” on page 77](#)

8.1 Distributing iOS App Store Apps

To distribute apps from the Apple App Store, you need to create an App Store App bundle and assign these bundles to users or devices. On distributing the bundle to the device, the device will connect with the Apple store and install the app on the device.

8.1.1 Prerequisites

- ♦ Ensure that the device has an iTunes account in place, so that the iOS devices to which these bundles are distributed, can receive and install the apps.
- ♦ Creating an iOS bundle involves choosing the app to be installed from the Apple App Store. For this, you need to use ZCC of an MDM Server or any other server that has outbound connectivity.

8.1.2 Procedure

- 1 On the Getting Started with Mobile Management page, navigate to the **Deploy Mobile Applications** section and click **Create New Bundles**. Alternatively, from the left hand side navigation pane of ZCC, click **Bundles > New > Bundle**.
- 2 On the Select Bundle Type page, click **iOS Bundle**.
- 3 On the Select Bundle Category page, click **App Store App**.
- 4 On the Define Details page, specify a name for the bundle, select the folder in which to place the bundle, then click **Next**.
- 5 On the Search iOS App page:
 - 5a Specify the following information to search for an app from the Apple store:
 - ♦ **Search for:** You can search the app by specifying the app name, publisher name, or App description.
 - ♦ **Region:** Select the country. The app is displayed only if it is available in the specified country.
 - ♦ **Compatibility:** Select a device such as iPhone, iPad, or All Devices. Apps that are compatible with these devices are displayed in the search results.

NOTE: You can search and create bundles only for apps that have no cost associated with it.

- 5b Click **Search** to view the search result.
- 5c (Optional) Click **Reset** to clear the search and search result.
- 5d Specify a filter to further narrow down the app results in the search results. The search result displays the following:
 - ♦ **Bundle Name:** The application name. Mouse over the icon to view the app description.
 - ♦ **Publisher:** The app publisher name.
 - ♦ **Cost:** The cost associated with the app.
 - ♦ **Size:** Size of the app (KB, MB, or GB).
 - ♦ **Devices:** Displays whether the app is compatible on iPhone, iPad or both.

NOTE: Sorting is supported on the Name, Publisher, Cost, and Size columns.

- 5e Select an app. Click **Next**.
- 6 On the Bundle Details page, the following details are displayed. View or specify the relevant details and click **Next**.
 - ♦ **Name:** Displays the default name of the app. You can edit the app name.
 - ♦ **Folder:** Displays the default folder in which the bundle will be created. You can edit the folder location by clicking the search icon.
 - ♦ **Description:** Specify a description for the new bundle. Alternatively, you can select **Use App Description** to populate the default description of the app as displayed in the App Store.
 - ♦ **App Details:** The App Details page displays additional information on the chosen app:
 - ♦ **Publisher:** The name of the entity that has published the app.

- ♦ **Size:** The size of the app.
- ♦ **Categories:** The App Store categories in which the app is included. For example: Games, Education, Business.
- ♦ **iTunes Store ID:** The App Store ID which is linked to the App Store. Click the ID to view the app in the iTunes Store.
- ♦ **Cost:** The cost associated with the app.
- ♦ **App Region:** The country associated with the app.
- ♦ **Device Compatibility:** The supported devices that can run the app.
- ♦ **OS version compatibility:** The supported operating system versions of iOS.
- ♦ **Supported Languages:** The supported languages for the app.

7 On the **App Settings** page, you can configure additional settings for the app:

- ♦ **Allow ZENworks to take ownership of the app, if the app is already installed on the device:** If the app is already installed on the device, this option allows ZENworks to manage the app on the device. If this option is selected, then the ownership will be retained by ZENworks even if it is unchecked in the subsequent versions of the bundle.
- ♦ **Retain app on the device if the bundle is deleted or unassigned, or if the device is removed from the zone:** Retains the app on the device if the bundle is deleted, unassigned, blocked, or disabled, or if the device is removed from the zone. Subsequently, ZENworks will no longer manage the app on the device.
- ♦ **Prevent backup of app data to iCloud:** Prevents the app data from getting synced with iCloud. You will not be able to retrieve the app data if the device has unenrolled from the ZENworks Management Zone.
- ♦ **Create Sandbox:** Creates a Sandbox-only version of the bundle. A Sandbox version of a bundle enables you to test it on your device before actually deploying it.

8 Click **Finish** to complete the activity.

You can continue to assign this bundle to an iOS device. For more information, see [Assigning Bundles](#).

8.2 Distributing an iOS Profile

iOS profiles are XML files consisting of payloads that will enable you to deploy configuration settings and restrictions to iOS devices. These XML files are exported from Apple Configurator and each individual configuration setting, such as the Wi-Fi configuration setting, VPN configuration setting, and certificate information, are called payloads. Using an iOS profile, you can deploy these configuration settings or restrictions, which are not available in ZENWorks, to the devices. While creating an iOS profile bundle, the XML file that is obtained from Apple Configurator is uploaded in ZENworks. When you assign this bundle to a device, on deployment of the iOS profile bundle, the encrypted version of the profile is installed on the device, thereby restricting users from changing the setting.

Creation and assignment of iOS profile bundles is supported on an experimental basis for Apple TV devices. You can configure and deploy iOS profiles, such as the app lock configuration profile, to Apple TV devices, to lock down the device to a particular app. An example of the app lock configuration file is as follows:

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/
DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
<dict>
  <key>PayloadContent</key>
  <array>
    <dict>
      <key>IsRemovable</key>
      <true/>
      <key>Label</key>
      <string>test</string>
      <key>PayloadDescription</key>
      <string>Configures App lock</string>
      <key>PayloadDisplayName</key>
      <string>App Lock</string>
      <key>PayloadIdentifier</key>
      <string>com.apple.webClip.managed.1F3066B4-1D92-4CE4-891F-
C3E5D0153400</string>
      <key>PayloadType</key>
      <string>com.apple.app.lock</string>
      <key>PayloadUUID</key>
      <string>E4242F0A-7872-4425-BF11-E1A269E9836D</string>
      <key>PayloadVersion</key>
      <real>1</real>
    <key>App</key>
    <dict>
      <key>Identifier</key>
      <string>com.google.ios.youtube</string>
    </dict>
  </dict>
</array>
  <key>PayloadDisplayName</key>
  <string>App Lock</string>
  <key>PayloadIdentifier</key>

```



```
<string>xyz.blr.com.</string>
<key>PayloadRemovalDisallowed</key>
<false/>
<key>PayloadType</key>
<string>Configuration</string>
<key>PayloadUUID</key>
<string>59C3C2*****</string>
<key>PayloadVersion</key>
<integer>1</integer>
</dict>
</plist>
```

8.2.1 Prerequisites

- An XML file with the configuration settings should be exported from Apple Configurator.

8.2.2 Procedure

- 1 On the Getting Started with Mobile Management page, navigate to the **Deploy Mobile Applications** section and click **Create Bundles**. Alternatively, from the left hand side navigation pane of ZCC, click **Bundles > New > Bundle**.
- 2 On the Select Bundle Type page, click **iOS Bundle**.
- 3 On the Select Bundle Category page, click **iOS Profile**.
- 4 On the Define Details page, specify a name for the bundle, select the folder in which to place the bundle, then click **Next**.
- 5 In the Import Profile page, browse and upload the configuration profile that you have exported from Apple Configurator. For more information on creating and importing iOS profiles, refer to the Apple Configurator documentation.
ZENworks validates certain important fields, such as the Identifier, UUID, and the version, which are unique to each profile.
- 6 Click **Create Sandbox**, if you want to create a Sandbox only version of the bundle.
- 7 Click **Finish** to complete the activity.

You can continue to assign this bundle to an iOS device. For more information, see [Assigning Bundles](#).

To download the XML file that you just uploaded, navigate to **Bundles > <click the iOS profile bundle> > Details**. You can also edit the profile or upload a new profile using the **Details** tab. For the modified or the new setting to take effect on all the devices, you need to republish the iOS profile bundle. On republishing the bundle, the existing profile installed on the device is overwritten with the modified or new setting.

If you delete an iOS profile bundle, as soon as the device syncs with the server, the profile is removed from the device.

Also, if you deploy an iOS profile with a specific setting and if the same setting is applied using ZENworks but with conflicting values, then the setting that is applied will be based on the device's operating system rules. For example, if you have uploaded an iOS profile that disables the device camera and if the device camera is enabled in the assigned Mobile Device Control Policy, then the setting that is applied will be based on the precedence set by iOS. To avoid such discrepancies, it is advisable that you apply a specific setting either through an iOS profile or through another feature in ZENworks.

8.3 Assigning Bundles

8.3.1 Assigning iOS Bundles

This procedure is applicable for App Store App, iOS Enterprise, and iOS Profile bundles.

- 1 In ZENworks Control Center, click **Bundles** (in the left navigation pane).
- 2 To assign the bundle to users, from the **Bundles** list, select the check box in front of the bundle, then click **Action > Assign to User**. To assign the bundle to devices, select the check box in front of the bundle, then click **Action > Assign to Device**.
- 3 In the **Select Object** dialog box, browse and select the users or devices to whom you want to assign the bundle, click **OK** to add them to the list, then click **Next**.
- 4 On the App Installation Schedule page, specify a schedule based on which the ZENworks Server triggers a notification to install the app on the device. You can select from one of the following schedules and click **Next**:

Now: indicates that a notification to install the app is sent to the device immediately. On selecting this schedule, you can select any of the following options:

NOTE: This is applicable for device assignments only.

Option	Steps
Quick Task Notification Options	<p>Select one of the following:</p> <ul style="list-style-type: none"> ◆ Notify all the devices immediately: Select this option to send the quick task notification to all the devices, immediately. ◆ Notify all the devices within _ mins: Select this option to send the quick task notification to all the devices within the specified time. The minimum time that can be set is 1 min. By default, the notification time is set to 10 minutes. You can choose to specify the notification time according to your requirements.
Quick Task Expiry Option	<p>Select one of the following:</p> <ul style="list-style-type: none"> ◆ Never Expires: Select this option if you never want the quick task to expire. ◆ Expires after _ mins of the quick task creation: Select this option to specify in minutes, the time at which the quick task should expire after it is created. By default, the expiry time is set to 20 minutes. You can choose to specify the expiration time according to your requirement.

Event: Select when the app should be installed on the device. Based on this selection, the app will be installed on the device:

- ◆ **Next Refresh:** Indicates that a notification to install the app will be sent on the subsequent refresh of the device. On refresh, a dialog box is displayed on the device to either accept or decline the request to install the app. This is a one time notification and will not be re-sent by the ZENworks Server if the user declines to install the app.
 - ◆ **Every Refresh:** Indicates that a notification to install the app will be sent to the device each time a refresh action is performed on the device. On refresh, a dialog box is displayed on the device to either accept or decline the request to install the app on the device. If the user declines the request to install the app on the device, then the ZENworks Server will continue sending these notifications till the user accepts the request. Also, if the user has uninstalled the bundle, this notification will be re-sent to the device when it syncs with the ZENworks Server.
- 5 If a bundle is assigned to a device, then on the Bundle Conflict Resolution page, set the priority between device-associated bundles and user associated bundles to resolve conflicts that arise when the same bundle is associated with devices and users. Select any one of the following and click **Next**
- ◆ **User Precedence:** The user-associated bundle will override the device-associated bundle. Select this option to apply bundles that are associated to the users first, and then to the devices.
 - ◆ **Device Precedence:** The device-associated bundle will override the user-associated bundle. Select this option to apply bundles that are associated to the devices first, and then to the users.
- 6 Click **Finish** to complete creating the policy.

When the device to which the bundle is assigned syncs with the ZENworks Server, then a notification to install the app is sent to the device. Based on the user's response, the app is installed on the device. In the subsequent refresh, the status of the bundle is marked as **Success** or **Failure**.

NOTE: Before a bundle is sent to the device, to ensure that the right bundle is assigned to the device, precomputed effective assignments are calculated. For details, see [Infrastructure Management Settings](#) in the [ZENworks Management Zone Settings Reference](#).

Also, during bundle installation, ZENworks sends the iTunes ID of the app to the device. The device then downloads the app from the Apple App Store using this iTunes ID.

8.4 Specifying App Configuration Parameters

As a part of the setup process, many apps require users to specify their email addresses, the port and other configuration settings. The app configuration parameters feature helps in providing the configuration information for apps that support this feature. ZENworks lets you pre-configure this information that become effective as soon as the app is installed on the device. The users are not required to specify these values manually. For each app, the configuration parameters are published in the specific app documentation.

ZENworks also supports app configuration of Micro Focus' in-house apps, such as Micro Focus Filr, Novell Messenger, and Micro Focus iPrint. For each of these apps, you can obtain their configuration parameters by clicking the following links:

- ◆ **Micro Focus Filr:** see [Key-Value pairs](#) in the [Maintenance Best Practices Guide](#).
- ◆ **Micro Focus iPrint:** see [Key-Value pairs](#) in the [Micro Focus iPrint Appliance 3 Administration Guide](#).

8.4.1 Procedure

To navigate to the **App Configuration Parameters** page, select **Bundles**, select a bundle and click the **Details** tab.

You can pre-configure apps by selecting either one of the following options:

- ◆ **Key-value pairs:** Click **Add** and specify the **Key** and its corresponding **Value**. You can specify the value as a string, integer, or as a boolean value. You can also specify built-in variables or custom variables as the **Value**. The following built-in system variables can be used:
 - ◆ **\${LoginName}:** Retrieves the user login name in the configured user source.
 - ◆ **\${Email}:** Retrieves the first email address associated with the user from the user source.
 - ◆ **\${ActiveSyncLogonName}:** Retrieves the ActiveSync logon attribute from the user source. This attribute is used to authenticate to the ActiveSync Server, while configuring an email account on the device.

To specify custom variables, you first need to define these variables by navigating to **Configuration > Device Management > System Variables**. For more information, see [Using System Variables](#).

- ♦ **Configuration File:** Click **Upload** to browse and import a configuration file that contains the configuration information of the app. You can also directly specify the file parameters or edit the parameters of the uploaded file in the displayed text box. The configuration file can be obtained from the app vendor.

You need to ensure that a valid configuration file is imported. A sample format of the configuration file is provided below:

```
<key>Configuration</key>
<dict>
  <key>username</key>
  <string>username@example.com</string>
  <key>server</key>
  <string>exampleserver.com</string>
</dict>
```

Built-in or custom variables can also be added as string values within this configuration file. The built-in variables applicable while defining key-value pairs can be applied in the configuration file as well. For example:

```
<key>com.ibm.mobile.connections.user</key>
<string>${LoginName}</string>
```

The application configuration will be pushed to the device when the application is distributed.

You can also restore the default values set by the app developers for any of the parameters. To do this, select a parameter and click **Default** on the top panel. The app configuration will be pushed to the device when the app is distributed.

8.5 Installing a Bundle using Quick Task

The **Install Bundle** quick task lets you immediately install a bundle to one or more devices.

8.5.1 Procedure

- 1 In ZENworks Control Center, click **Devices** > **Mobile Devices** to display your enrolled mobile devices.
- 2 Select the check box in front of the mobile device, click **Quick Tasks** > **Install Bundle** to display the Install Bundle dialog box.
- 3 Browse to the folder location in which the bundle you want to install resides. You can also include additional devices by clicking **Add**. Click **Ok** to display the quick task options.
- 4 Retain the default options and click **Start** to send the message.
- 5 Click **Hide** to close the quick task.

9 Subscribing to Apple VPP

The Apple Volume Purchase Program (VPP) allows organizations to purchase apps in volume to distribute to their managed devices. After registering with the Apple VPP and on purchasing apps, ZENworks enables distribution of these purchased apps to the devices or to the users who have enrolled their devices. Using ZENworks, administrators can easily distribute, reclaim, and reassign iOS apps using the existing Bundles workflow. Your organization might possess multiple VPP accounts. ZENworks can distribute licenses from multiple such VPP accounts.

ZENworks lets you purchase and distribute VPP apps using the Apple Deployment Programs account and Apple Business Manager. In Apple Deployment Programs all licenses are linked to the email ID of the VPP purchaser and it uses an account-based token (hereafter referred to as legacy token within this document). Whereas, in Apple Business Manager all licenses are linked to a location and it uses a location-based token. ZENworks lets you associate a location-based token to an existing subscription and ensures that all existing bundle assignments work seamlessly with Apple Business Manager.

If you have already enrolled in the Apple Deployment Programs account and want to upgrade to Apple Business Manager, then before migrating, it is recommended that you review the best practices for migration by referring to both the [Apple Support](#) documentation (for general information on the migration process) and the [Migrating to Apple Business Manager](#) section (for information on migrating to a location-based token in ZENworks) within this guide. This will ensure that Apple Business Manager works seamlessly with ZENworks and the existing bundle assignments are not affected.

IMPORTANT: If you are purchasing VPP apps using Apple School Manager, ensure that the Content Manager role is assigned to your Apple School Manager account. For more information, see the [Apple School Manager Help](#).

- ◆ [Section 9.1, “Linking ZENworks to the Apple VPP Account,” on page 80](#)
- ◆ [Section 9.2, “Creating VPP Bundles,” on page 82](#)
- ◆ [Section 9.3, “Distributing VPP Bundles,” on page 83](#)
- ◆ [Section 9.4, “Viewing Apps Catalog,” on page 84](#)
- ◆ [Section 9.5, “Updating License Summary,” on page 86](#)
- ◆ [Section 9.6, “Renewing the VPP Token,” on page 87](#)
- ◆ [Section 9.7, “Revoking App Licenses,” on page 87](#)
- ◆ [Section 9.8, “Viewing or Editing Apple VPP Subscription,” on page 88](#)
- ◆ [Section 9.9, “Deleting a Subscription,” on page 89](#)

9.1 Linking ZENworks to the Apple VPP Account

To help ZENworks distribute the apps purchased through the Apple VPP, you need to create an Apple VPP Subscription in ZCC. This will enable you to link your ZENworks Server to the VPP account to retrieve all apps purchased through this VPP account.

NOTE: Before creating an Apple VPP Subscription, ensure that an MDM role is assigned to at least one of the ZENworks Primary Servers. For details, see [Configuring an MDM Server](#).

While creating a subscription, you can also define a schedule based on which bundles for these purchased apps will be automatically created by ZENworks.

9.1.1 Prerequisites

You can enroll in either of the following programs

- ♦ **Apple Deployment Programs account:** Navigate to deploy.apple.com and create your program agent account. For more information, see the [Apple Documentation](#).
- ♦ **Apple Business Manager:** Navigate to business.apple.com to create your Apple Business Manager account. For more information, see the [Apple Documentation](#).

9.1.2 Procedure

- 1 On the Getting Started with Mobile Management page, navigate to **Apple VPP Subscription** and click **New VPP Subscription**. Alternatively, click **Subscribe and Share > New > Subscription**.
- 2 Select **Apple VPP Subscription** and click **Next**.
- 3 Fill in the fields:
 - Subscription Name:** Specify a unique name for the subscription.
 - Folder:** Browse to the folder in which the subscription will be created. By default, the subscription will be created in the `/Subscriptions` folder.
 - Description:** Provide a short description for the subscription. This description is displayed on the subscription's Summary page. Click **Next**.
- 4 On the Configure Apple Volume Purchase Program page, perform the following:
 - 4a **Download the Apple Volume Purchase Program Token:** You can download and link either of the following tokens:
 - ♦ For account-based tokens, click Apple **Volume Purchase Program Enrollment Web Portal** to sign in to the Apple VPP portal using the Apple Deployment Programs account. Download the VPP token from the Account Summary page of the Apple VPP portal.
 - ♦ For location-based tokens, click Apple **Business Manager Web portal** and sign in using your VPP account credentials. Download the specific location-based VPP token by navigating to Settings > Apps and Books section.
 - 4b **Link ZENworks to the Volume Purchase Program server:** Browse and upload the VPP token. The following information that is associated with the token is retrieved:
 - ♦ **Organization:** The name of the organization that has subscribed for the Apple VPP.

- ♦ **Country Code:** The country code associated with the Apple VPP token.
- ♦ **Apple ID:** The Apple ID associated with the Apple VPP token.
- ♦ **Email:** The email address associated with the Apple VPP token.
- ♦ **Location ID:** The unique code associated with the location-based token. This is applicable only for Apple Business Manager accounts.
- ♦ **Location Name:** The name of the location associated with the location-based token. This is applicable only for Apple Business Manager accounts.
- ♦ **Token Expiry:** The expiry date of the Apple VPP token.

After the token is successfully uploaded and linked to ZENworks, any existing licenses associated with the token are reset and the associated users, if any, are also retired. If the token is already in use by another MDM solution, then ZENworks will notify with an appropriate message, after which you can click **Claim Management** to link the token with ZENworks.

If the token was previously used by a subscription (that is deleted but its bundles are retained) within the ZENworks zone, then the new subscription will reflect the licenses already consumed. This is achieved by reconciling the VPP account of the new subscription with the one of the deleted subscription.

Click **Next**.

- 5 For each app purchased through the Apple VPP, ZENworks retrieves the app details from Apple and creates iOS bundles, which can then be distributed to users or devices. On the Bundle Creation Settings page, click the browse icon to select a folder location where you want the iOS bundles to reside. Within this folder location, another folder with the name of the subscription is created, within which bundles will reside.

You can also configure additional app settings for these bundles:

- ♦ **Allow ZENworks to take ownership of the app, if the app is already installed on the device:** If the app is already installed on the device, this option allows ZENworks to now manage the app. This option is checked by default for all VPP bundles and cannot be modified.
- ♦ **Retain app on the device after unenrolling the device from the ZENworks Management Zone:** Retains the app on the device if the bundle is unassigned or deleted, or if the device is removed from the zone. This option is unchecked by default for all VPP bundles and cannot be modified.
- ♦ **Prevent backup of app data to iCloud:** Prevents the backup data of apps from getting synced with iCloud. You will not be able to retrieve the app data if the device has unenrolled from the zone.
- ♦ **Create Bundle as Sandbox:** Creates a Sandbox-only version of the bundle. A Sandbox version of a bundle enables you to test it on your device before actually deploying it. This option is selected by default for all VPP bundles.

Click **Next**.

- 6 From the **Schedule Type** drop-down list, choose one of the schedule types. Based on the specified schedule, ZENworks retrieves the latest apps associated with the VPP account. Subsequently, bundles are created for only those apps for which bundles are yet to be created. Irrespective of the **Schedule Type** selected, ZENworks syncs with Apple on a daily basis, to retrieve the latest apps. However, bundles are not created as a part of this sync. For details, see [Updating License Summary](#).

You can also select the [Launch the Apple Volume Purchase Program Summary page immediately after saving](#) checkbox, which will re-direct you to the Apple VPP License Summary page. Click **Finish** to complete creating the subscription.

After creating the subscription, you can view its status in the **Subscribe and Share** section of ZCC. **Claim in Progress** and **Claim Failed** statuses indicate that the process to claim management of the VPP account from another MDM solution is either in progress or has failed. If the claim fails, ZENworks will retry until the claim is successful. However, if for any reason the status remains as **Claim Failed** for a substantial period of time, then it is recommended that you delete the subscription along with its bundles and create a new subscription. Until the claim is successful, you will be unable to perform actions such as creating bundles, with this subscription.

IMPORTANT: Any replicated content objects, such as bundles that are associated with Apple VPP Subscriptions should not be shared across multiple zones.

9.2 Creating VPP Bundles

ZENworks creates VPP bundles based on the **Schedule Type** selected while creating the Apple VPP Subscription. However, if you have not specified a schedule or if you want to create bundles immediately, then you can perform any of the following actions:

- ◆ Click **Run Now** by navigating to **Subscribe and Share > <Select a Subscription> > Quick Tasks > Run Now** or by navigating to the Summary page of the Apple VPP Subscription. This action initiates a sync between Apple and ZENworks to retrieve the latest apps. Subsequently, bundles are created for these apps. For details, see [Viewing or Editing Apple VPP Subscription](#).
- ◆ Click **Create Bundle** on the Apple VPP License Summary page for specific apps. For details, see [Viewing Apps Catalog](#).

NOTE: ZENworks supports distribution of iOS apps only. Also, the assigned app installs on a device only if it is compatible on it. For example: an iOS app that is not compatible with iPhones will not be installed on them.

If the app metadata changes after a bundle is created in ZCC, then the bundle does not reflect the updated metadata. However, if this app is assigned to a device, then the latest version of the app is installed on the device.

Bundle Creation Failure Scenarios

If at any point in time bundle creation fails, then check the logs for details on this failure. Bundle creation might fail due to one of the following reasons:

- ◆ The Apple Server is busy and not responding.
- ◆ Apple is unable to provide the latest app metadata as Apple might have discontinued support for the app.
- ◆ Apple has extended VPP support to a new country, which is not supported by ZENworks. Contact the Micro Focus tech support team to include this country in ZENworks.

9.3 Distributing VPP Bundles

You can distribute apps purchased through the Apple Volume Purchase Program (VPP), by assigning VPP bundles to either the devices or to the users who have enrolled their devices to the zone.

- ◆ [Distribute Bundles to Users](#)
- ◆ [Distribute Bundles to Devices](#)

When a bundle is assigned to a user or a device and the associated device syncs with the ZENworks Server, the app license is **Consumed** from Apple. Subsequently, the user is prompted to confirm the app installation. Based on the user's response, the app is **Installed** on the device. The license consumption and installation count is updated on the Apple VPP License Summary page. For details, see [Viewing Apps Catalog](#).

NOTE: If a bundle is assigned to multiple devices, device groups or folders, or multiple users, user groups or folders, then the app licenses are distributed based on the order in which the devices sync with the ZENworks Server.

Distribute Bundles to Users

VPP Bundles can be distributed to users, user groups, or user folders.

If a VPP bundle is assigned to a user for the first time, then as soon as the first device associated with the user syncs with the ZENworks Server, an invitation is sent to the user to join the Apple VPP.

To accept the invitation, users need to sign in on their devices with their personal Apple ID. The Apple ID is registered with the Apple VPP, but remains private and is unknown to ZENworks. As soon as the users agree to the invitation and accept the iTunes Store terms and conditions, they are associated with ZENworks. In the next sync, the app license is consumed from Apple and a message is sent to the device prompting the user to confirm whether to install the app or not. Based on the user's response, the app is installed on the device.

NOTE: When the user associates with the Apple VPP, these invites are not re-sent to the user for subsequent assignments.

The Apple ID with which the user has associated for the Apple VPP, should be used across all the user's devices to enable successful installation of VPP apps. Also, it is important that the Apple ID does not change, so that all bundle assignments are successful and all assigned apps are retained on the device. If the user logs into the iTunes account using a different Apple ID, then the apps distributed to the user are revoked.

NOTE: The terms Apple ID and iTunes ID are used interchangeably in ZENworks.

Distribute Bundles to Devices

VPP bundles can be distributed to devices, device groups, or device folders.

VPP bundles can be distributed to only those iOS devices that are running on iOS versions 9.0 or newer.

When a bundle is assigned to the device and the device syncs with the ZENworks Server, the server consumes app license for the device from Apple. If the license consumption is successful, the user is prompted to install the app on the device.

Procedure to Assign Bundles

To assign a bundle, in ZENworks Control Center, click **Bundles** (in the left navigation pane). Select the relevant folder within which the VPP bundles reside.

For more information on assigning bundles, see [Assigning Bundles](#).

Bundle Distribution Failure Scenarios

If at any point in time bundle assignment or distribution fails, then you need to check the bundle **Deployment Status** to identify the reason for failure. Bundle distribution might fail due to the following reasons:



- ◆ A VPP bundle is assigned to a device with iOS version prior to 9.0. Apple supports device assignments on iOS versions 9.0 or newer.
- ◆ A VPP bundle is assigned to a user and the invite to associate with the Apple VPP is not accepted by the user.
- ◆ A VPP bundle is assigned to a user and the Apple ID on the user's device is different from the Apple ID that the user has used to associate with the Apple VPP.
- ◆ The app is not compatible with the device.
- ◆ Deficit in the number of licenses.
- ◆ The Apple VPP subscription is disabled or deleted.
- ◆ The VPP token ownership has changed and is being used by another MDM solution.
- ◆ Apple is unable to validate the iTunes Store ID of the specific app.
- ◆ The app has discontinued in the iTunes Store.


9.4 Viewing Apps Catalog

The Apps Catalog page in ZCC provides a single view of all the approved Android and iOS apps. To view the Apps Catalog page, click the **Mobile Management** panel and click the **Apps Catalog** tab. This page displays the app details, which include license information and consumption. You can also create bundles for any purchased apps in this page. For more information on Android apps, see [Viewing Approved Apps in ZENworks](#).

- ◆ **Create Bundles:** You can create bundles by selecting one or more apps (for each app an individual iOS bundle is created) by clicking **Action** > **Create Bundle**. If a bundle for the same app already exists, then for the newly created bundle, the VPP subscription name is suffixed with the name of the app. For subsequent bundles of the same app, a random GUID number is suffixed.

NOTE: If the sync between ZENworks and Apple is initiated immediately after purchasing an app, then the **Purchased** license count might not display the correct number. Therefore, ensure that you verify the **Purchased** license count before assigning bundles or else distribution of these bundles might fail.

- ◆ **Export as CSV:** You can export all app information displayed on this page as a CSV file. Click **Export** > **As CSV** to create a .ZIP folder. This .ZIP folder contains two files; a **Summary** file which will display all the app information that is already displayed on the summary page and a **Details** file with detailed information such as to which users or on which devices the app has been installed.
- ◆ **Edit Permissions** Applicable for Android apps only.
- ◆ **Filter:** You can filter the data displayed on this page by specifying either the **App Name**, **Publisher**, or the **Subscription Name** in the **Search** field. You can also filter the data to view apps that have bundles or no bundles associated with it. For this, click  and select the appropriate option.
- ◆ **Show/Hide Columns** To arrange the columns on the summary page, click  and select the columns that need to be displayed on the summary page. The columns available for display are as follows:
 - ◆ **App:** Displays the name of the app purchased using the VPP account. You will be unable to hide this column.
 - ◆ **Publisher:** Displays the name of the app publisher.
 - ◆ **Cost:** Displays the cost of the app.
 - ◆ **Subscription Name:** Displays the name of the subscription.
 - ◆ **Purchased:** Displays the number of app licenses purchased using the VPP account.
 - ◆ **Available:** Displays the number of unused licenses that are available for consumption.
 - ◆ **Consumed:** Displays the number of user or device licenses that are consumed from Apple. This indicates that the device has synced with the ZENworks Server and the app is sent to the device but might not necessarily mean that the app is installed on the device.
 - ◆ **User License Installed:** Displays the number of devices on which an app, having a user license, is installed. For example: if a specific app is assigned to a user having three devices associated with him/her and if the app is installed on only two devices, then the **User License Installed** count will be 2. You can view the devices on which the app is installed by viewing the **Details** file, which is generated if you select the **Export** option.
 - ◆ **User License Consumed:** Displays the number of user licenses that are consumed from Apple. This indicates that the device associated with the user has synced with the ZENworks Server and the app is sent to the device but might not necessarily mean that the user has installed the app on the device.
 - ◆ **Device License Installed:** Displays the number of devices on which an app, having a device license, is installed. If the user rejects the installation of an app on the device, then this count will not be incremented. You can view the devices on which the app is installed by viewing the **Details** file, which is generated if you select the **Export** option.
 - ◆ **Device License Consumed:** Displays the number of device licenses that are consumed from Apple. This indicates that the device has synced with the ZENworks Server and the app is sent to the device but might not necessarily mean that the app is installed on the device.
 - ◆ **Total Apps Installed:** Displays the sum of the user licenses installed and device licenses installed.
 - ◆ **App Size:** Displays the size of the app.
 - ◆ **iTunes ID:** Displays the iTunes Store ID of the associated app.
 - ◆ **Total Bundles:** Displays the number of bundles created for the specific app.

- ◆ **Update View:** Click  to initiate a sync between the ZENworks Server and Apple to update this page with the latest apps.

This option also revokes unused app licenses in the following scenarios:

- ◆ Mobile device management on the device is disabled.
- ◆ The device is in a **Retired** or **Wipe Pending** state. In case of a device assignment, all apps assigned to the device are to be revoked. In case of a user assignment, if the device is the last device associated with the user, then the app licenses are to be revoked from the user.
- ◆ User does not exist anymore.


Unused app licenses are revoked when the device syncs with the ZENworks Server. Also, every two hours ZENworks automatically revokes unused licenses from devices that cannot sync with the ZENworks Server. However, if you do not want to wait for the device to sync or for ZENworks to


automatically revoke licenses, then clicking  helps in revoking licenses instantaneously.

9.5 Updating License Summary

- ◆ **Updating Apps:** Based on the schedule selected while creating the Apple VPP Subscription, ZENworks syncs with Apple to retrieve the latest apps. However, irrespective of the schedule selected, ZENworks automatically syncs with Apple on a daily basis to retrieve the latest apps. Bundles are not created for any newly purchased apps during this sync.


You can also initiate this sync immediately by performing either of the following:

- ◆ Click **Run Now** by navigating to **Subscribe and Share** > **<Select a Subscription>** > **Quick Tasks** > **Run Now** or by navigating to the Summary page of the Apple VPP Subscription. This option also creates bundles for any newly purchased apps. For details, see [Viewing or Editing Apple VPP Subscription](#).
- ◆ Click  on the Apple VPP License Summary page. For details, see [Viewing Apps Catalog](#).
- ◆ **Updating Distributed Licenses:** If an app license is assigned to a device or a user, then the license consumed and installed count is updated when the associated devices syncs with the ZENworks Server. Subsequently, the app is installed on the device.
- ◆ **Revoking Licenses:** Unused app licenses are revoked when the device syncs with the ZENworks

Server. To revoke licenses from devices that cannot sync with the ZENworks Server, click  on the Apple VPP License Summary page. This option can be used to revoke licenses in the following scenarios:

- ◆ Mobile device management on the device is disabled.
- ◆ The device is in a **Retired** or **Wipe Pending** state. In case of a device assignment, all apps assigned to the device are revoked. In case of a user assignment, if the device is the last device associated with the user, then the app licenses are revoked from the user.

- ◆ Bundle assignment is removed.
- ◆ User does not exist anymore.

Alternatively, ZENworks periodically (every two hours) revokes unused licenses from devices that cannot sync with the ZENworks Server. However, if you do not want to wait for the device to sync or for the periodic schedule to revoke licenses, then clicking  helps in revoking licenses instantaneously.


If any of these tasks fail, then the relevant error messages are displayed when you visit the Volume Purchase Program License Summary page.

9.6 Renewing the VPP Token

The validity of a VPP token is one year from the time the token is downloaded using the Apple VPP account. As soon as you upload the token while creating a new subscription in the ZENworks Management Zone, the expiry date of the token is displayed. You can also view the expiry date of token by visiting the Summary page of the Apple VPP Subscription. To renew this token, download the token again from the Apple VPP portal and upload it in the Summary page of the Apple VPP Subscription. For details, see [Viewing or Editing Apple VPP Subscription](#).


9.7 Revoking App Licenses

To revoke unused app licenses assigned to a user or a device, you can **Block** the bundle assignment, **Remove** the bundle assignment, or **Disable** the bundle. When any one of these actions is performed and the device syncs with the ZENworks Server, an uninstall command is sent to the device and the app license is revoked. For details on the **Block**, **Remove** and **Disable** options, see [Bundle Tasks](#) in [ZENworks Software Distribution Reference](#).

If the device cannot sync with the ZENworks Server, then you can click  on the Apple VPP License Summary page. This option can be used to revoke licenses in the following scenarios:

- ◆ Mobile device management on the device is disabled.
- ◆ The device is in a **Retired** or **Wipe Pending** state. In case of a device assignment, all apps assigned to the device are to be revoked. In case of a user assignment, if the device is the last device associated with the user, then the app licenses are to be revoked from the user.
- ◆ Bundle assignment is removed.
- ◆ User does not exist anymore.

As stated earlier, unused app licenses are revoked when the device syncs with the ZENworks Server. Also, every two hours ZENworks automatically revokes unused licenses from devices that cannot sync with the ZENworks Server. However, if you do not want to wait for the device to sync or for

ZENworks to automatically revoke licenses, then clicking  helps in revoking licenses instantaneously.

9.8 Viewing or Editing Apple VPP Subscription

You can view or edit the contents of an Apple VPP Subscription. While editing a subscription you can perform tasks such as, renew the linked VPP token or initiate a sync between the ZENworks Server and the Apple Server.

9.8.1 Procedure

- 1 In ZENworks Control Center, navigate to the **Subscribe and Share** section.
- 2 Click the Apple VPP Subscription, for which the content needs to be edited.
- 3 You can edit or view the Apple VPP Subscription in the Summary tab:

General: This panel lets you add information to describe the subscription, enable or disable the subscription, and to view the subscription log details.

- ◆ **Name:** Displays the name of the subscription.
- ◆ **Type:** Displays the type of subscription.
- ◆ **Created By:** Displays who created the subscription.
- ◆ **GUID:** Displays the subscription's GUID (Global Unique Identifier), which is a randomly generated string that provides a unique identifier for the subscription.
- ◆ **Description:** Displays the subscription's description if it was provided when the subscription was created. Click **Edit** to change the description.
- ◆ **Enabled:** Displays **Yes** if the subscription is enabled, or displays **No** if the subscription is disabled. Click the link next to the field to enable or disable the subscription.
- ◆ **Subscription Logs:** Displays messages associated with the last run of the subscription. Click the **View Log** link to view the subscription logs in the Subscription Log Details dialog box.

VPP Token Details: The VPP Token Details panel lets you view information retrieved from the linked Apple VPP token. You can also test the linked token or renew the token.

- ◆ **Organization:** Displays the name of the organization that has subscribed for the Apple VPP.
- ◆ **Country Code:** Displays the country code of the organization that has subscribed for the Apple VPP.
- ◆ **Apple ID:** Displays the Apple ID associated with the Apple VPP token.
- ◆ **Email ID:** Displays the email address associated with the Apple VPP token.
- ◆ **Token Expiry:** Displays the expiry date of the Apple VPP token. You can validate the token by clicking **Test**. If the token has expired, click **Renew** to upload the renewed token.

NOTE: If the existing token or the renewed token is managed by another MDM solution, then an appropriate message will be displayed and you will be unable to use the subscription. You need to delete this subscription and create a new subscription. If you want to continue using the same token in the new subscription, you need to claim management of the token.

Bundle Details: The Bundle Details panel lets you edit information related to iOS bundles configured for the subscription.

- ◆ **ZENworks Bundle Location:** Displays the folder location in which you want the iOS bundle to reside. Within this folder location, another folder with the name of the subscription is created, within which bundles will reside. To change the folder, browse and select a different folder.
- ◆ **Bundle Settings:** Displays the app settings configured while creating the subscription.
 - ◆ **Allow ZENworks to take ownership of the app, if the app is already installed on the device:** If the app is already installed on the device, this option allows ZENworks to now manage the app. This option is checked by default for all VPP bundles and cannot be modified.
 - ◆ **Retain app on the device after unenrolling the device from the ZENworks Management Zone:** Retains the app on the device if the bundle is unassigned or deleted, or if the device is removed from the zone. This option is unchecked by default and cannot be modified.
 - ◆ **Prevent backup of app data to iCloud:** Prevents the backup data from getting synced with iCloud. You will not be able to retrieve the app data if the device has unenrolled from the zone.
 - ◆ **Create Bundle as Sandbox:** Creates a Sandbox-only version of the bundle. A Sandbox version of a bundle enables you to test it on your device before actually deploying it.

Schedule: The Schedule panel displays details of the bundle creation schedule.

- ◆ **Status:** Displays the bundle creation schedule status. Click **Run Now** to initiate a sync between ZENworks and Apple to retrieve the latest apps and to create bundles for these apps. You can view the **Subscription Logs** for any messages that might have been logged while initiating this sync.
- ◆ **Last Run:** Displays the date on which the bundle creation event was last run.
- ◆ **Bundle Creation Schedule:** Displays the schedule that you set while creating the Apple VPP Subscription. You can select a different schedule type from the drop-down list or edit the existing schedule.

9.9 Deleting a Subscription

To delete a subscription or a subscription folder:

- 1 In ZENworks Control Center, click the **Subscriptions** tab.
- 2 In the Subscriptions list, select the check box next to the subscription that you want to delete.
- 3 Click **Delete**. The Delete Subscriptions dialog box is displayed.
- 4 If you want to delete the bundles created by the subscription, select the **Delete the replicated objects created by the subscriptions** check box.
- 5 Click **OK**.

NOTE: If you want to delete the subscription successfully, including all its bundles, then you need to have the relevant Bundle rights assigned to you. For details, see [Bundle Rights](#) in the [ZENworks Administrator Accounts and Rights Reference](#) guide.

If a token that was previously linked to a deleted subscription (but the bundles are retained), is now linked to a new subscription, then the VPP account of the new subscription reconciles with the one of the deleted subscription. The new subscription will reflect the licenses that are already consumed.

10 Configuring Email Access

ZENworks can act as a gateway to relay incoming and outgoing email traffic to devices from the Microsoft Exchange or the GroupWise Mobile Server, by using the ActiveSync protocol. This requires you to connect your ZENworks Server to the Email Servers (that uses Exchange ActiveSync version 12.1 or newer) through which your mobile device users receive their email. These email servers will hereon be referred to as an *ActiveSync Server*. ZENworks supports both the Microsoft Exchange and GroupWise Mobility Servers.

After configuring the required ActiveSync Servers, to enable ZENworks to synchronize and manage the corporate email accounts on the enrolled device, you need to create and assign a Mobile Email Policy.

NOTE: For users of the GroupWise mailing system where users are defined in the NetIQ eDirectory, ZENworks uses only those email addresses that are specified in the *username@domain.com* format. Also, LDAP Authentication should be enabled in your GroupWise system. For more information, see the [GroupWise Online Documentation](#).

- ◆ [Section 10.1, “Connecting to a New ActiveSync Server,” on page 91](#)
- ◆ [Section 10.2, “Linking a User Source to an ActiveSync Server,” on page 93](#)
- ◆ [Section 10.3, “Creating a Mobile Email Policy,” on page 93](#)
- ◆ [Section 10.4, “Assigning a Mobile Email Policy,” on page 95](#)

10.1 Connecting to a New ActiveSync Server

10.1.1 Prerequisites

A backend Exchange Server should be configured with user mailboxes.

10.1.2 Procedure

- 1 On the Getting Started with Mobile Management page, navigate to the **ActiveSync Servers** section and click **New ActiveSync Server**. Alternatively, from the left hand side navigation pane of ZCC, click **Configuration > ActiveSync** tab.
- 2 In the ActiveSync Servers panel, click **New** to display the New ActiveSync Server dialog box.
- 3 Fill in the following fields:
 - ◆ **Server:** Specify a display name for the ActiveSync Server. This can be any name you want for display purposes. It does not have to match the actual server name.
 - ◆ **Address:** Specify the hostname or IP address of the ActiveSync Server.
 - ◆ **Domain:** Specify the registration domain that is associated with the ActiveSync Server.

- ♦ **Port:** Specify the listening port for the ActiveSync Server. The standard non-SSL port is 80 and the standard SSL port is 443.
- ♦ **Use SSL:** Select this option to enforce a secure connection with the ActiveSync Server.
- ♦ **Link to User Source:** Select the ZENworks user source (LDAP directory) with which you want the ActiveSync Server to be associated.

When a user enrolls a device using the domain name, the user is authenticated via the user source and directed to the ActiveSync Server.

If multiple ActiveSync Servers are linked to the same user source, you can specify the order in which the servers are contacted. You can re-order the user sources by navigating to **Users > <User Source> Details > Mobile Management > Linked ActiveSync Servers**.

4 Test user authentication to the ActiveSync Server:

4a Click **Test Authentication**.

4b Specify the credentials for an active account on the ActiveSync Server.

NOTE: The user name is required. You can specify the user name in the following two formats:

- ♦ domain\user name (example.com\testuser1)
 - ♦ email ID format (testuser1@example.com)
-

4c Click **Test**.

4d If the test is successful, click **Close**.

If the test fails, specify the user name and password again, or try a different user name and password. If the test fails again, verify that the server address and port are correct, then retry the test.

IMPORTANT: For email based authentication, the email address should be present in the configured user source for successful ActiveSync enrollment on the device. For users of the GroupWise email system, you need to publish these email addresses to eDirectory. For details, you can refer to the GroupWise Documentation.

5 Save the ActiveSync server connection:

5a Click **Create Server**.

5b If you are prompted to accept the ActiveSync Server's certificate (because a secure connection is being used), click **Accept**.

If you are unsure of the certificate, you can click **View Certificate** to review it. If you choose to reject the certificate, you are returned to the Create ActiveSync Server dialog box.

You can delete or edit the parameters of the ActiveSync Server. To edit the parameters of the ActiveSync server, click an ActiveSync Server and modify the parameters. If the ActiveSync Server that you want to modify is already configured with a Mobile Email Policy, then you have to republish or reassign the policy after modifying the server details.

You can delete a configured ActiveSync Server by selecting the server and clicking **Delete**. To delete an ActiveSync server that is configured with an Mobile Email policy, you have to change the ActiveSync Server in the Mobile Email Policy and then delete the ActiveSync Server.

10.2 Linking a User Source to an ActiveSync Server

The Linked ActiveSync Servers panel lets you link the user source to one or more ActiveSync Servers. When a user in the user source enrolls a device, the linked ActiveSync Servers are used to provide the user's email on the device.

10.2.1 Procedure

- 1 In ZENworks Control Center, click **Users** (in the left navigation pane) to display the User Sources list.
- 2 Click **Details** next to the user source to display its property pages.
- 3 Click the **Mobile Management** tab.
- 4 In the **Linked ActiveSync Servers** panel, click **Add**, select an ActiveSync Server from the list and click **OK**.

10.3 Creating a Mobile Email Policy

You need to create a Mobile Email Policy to manage the corporate email account of devices within your zone. With this policy you can grant permissions to configure an email account, maintain email synchronization settings, restrict or allow users to move between email accounts and other third party applications. To enable ZENworks to manage all corporate emails sent and received on the enrolled mobile device, you need to allow the ZENworks Server to act as a proxy server for the ActiveSync Server, in the assigned Mobile Email Policy. This will route all email traffic through the ZENworks Server.

However, this policy also gives you the option to send or receive emails on these devices directly from an ActiveSync Server for a specific set of users. The configuration of an email account differs as per the mode in which the device is enrolled. For more information on the various enrollment modes, see [“Enrolling a Device” on page 151](#)

- ♦ **iOS device enrolled as a fully managed device:** If a Mobile Email Policy is assigned to a fully managed iOS device, then an email account of the device's in-built email client is automatically configured on the device based on these settings. If the assigned Mobile Email Policy does not use ZENworks as the proxy server, the device can send or receive corporate emails. However, the email account will not be managed by ZENworks.
- ♦ **Android devices:** If a Mobile Email Policy is assigned to a fully managed Android device, then an email is sent with the account settings (through the SMTP server) to the user who has enrolled the device. Subsequently, this user needs to manually configure the email account on the device based on these settings. If the assigned Mobile Email Policy does not use ZENworks as the proxy server, the device can send or receive corporate emails. However, the email account will not be managed by ZENworks.
- ♦ **ActiveSync Only devices:** To enable ZENworks to manage the corporate email account on a device enrolled as an ActiveSync Only device, the assigned Mobile Email Policy should have the ZENworks Server acting as a proxy for the ActiveSync Server. If the assigned Mobile Email Policy does not use the ZENworks Server as the proxy server or if no Mobile Email Policy is assigned to a device, then the user will be unable to send or receive corporate emails on the device.

10.3.1 Procedure

- 1 On the Getting Started with Mobile Management page, navigate to the **Email Policy** section and click **New Email Policy**. Alternatively, from the left hand side navigation pane of ZCC, navigate to **Policies > New > Policy**.
- 2 On the Select Platform page, select **Mobile**, then click **Next**.
- 3 On the Select Policy Category page, select **General Mobile Policies**, then click **Next**.
- 4 On the Select Policy Type page, select **Mobile Email Policy**, then click **Next**.
- 5 On the Define Details page, specify a name for the policy, select the folder in which to place the policy, then click **Next**.
- 6 On the **Automatic Email App Configuration** page, the settings in the **Corporate** column are applied to devices whose ownership is defined as Corporate. The settings in the **Personal** column are applied to devices whose ownership is defined as Personal. Set the following values and click **Next**.
 - ♦ **Account Name:** Specify the email account name that will appear on the email account configured on the device.
 - ♦ **Period to sync email:** Syncs emails to the device as per the number of days set in this field. Set an appropriate value to indicate the period of time for email messages to be displayed on the device.
 - ♦ **Allow messages to be moved to other email accounts:** Enables the user to move emails between email accounts. Also, it allows the user to reply or forward email messages from another email account rather than from the original email account.
 - ♦ **Allow recent addresses to be synced:** Enables recent addresses to be synced to the email account configured on the device.
 - ♦ **Use account in third party applications:** Enables the user to send emails from a third party application.
 - ♦ **Platform Support:** The platform columns show support for a setting. A green dot ● indicates that the platform supports the setting. These settings are currently supported for iOS (iOS 8 or higher) devices only.
 - ♦ **Do not use ZENworks Server as Proxy Server:** You can ignore this option if you want to use the ZENworks Server as the proxy server to send or receive mails on the device. However, if you want to directly connect to a configured ActiveSync Server to relay emails to your device, then select this option. If this option is selected, from the **ActiveSync Server** drop-down list, select a specific ActiveSync Server from the list of configured ActiveSync Servers in ZCC. If an ActiveSync Server is not already configured in ZCC, then this feature will be disabled.
- 7 On the **Summary** page, you can perform the following actions:
 - ♦ **Create as Sandbox:** Creates a Sandbox-only version of the policy. A Sandbox version of a policy enables you to test it on your device before actually deploying it
 - ♦ **Define Additional Properties:** Enables you to edit the default settings configured in the policy.

Click **Finish** to complete creating the policy.

10.4 Assigning a Mobile Email Policy

Most mobile policies can be assigned to users or devices. User-assigned policies apply to all devices that the user enrolls. Device-assigned policies apply only to the assigned device.

In addition to assigning policies directly to users and devices, you can assign policies to user groups, user folders, device groups, and device folders. Each member of the group or folder receives the assignment.

NOTE: If a Mobile Email Policy is not assigned to a user or a device that has just enrolled to the ZENworks Management Zone or if the Mobile Email policy is unassigned from an already enrolled device, then the user receives an email stating that corporate emails cannot be sent or received on the device. You can edit the contents of this email in ZENworks Control Center by navigating to [Configuration > Management Zone Setting > Event and Messaging > Email Notifications](#). Click the relevant email and edit its contents.

10.4.1 Procedure

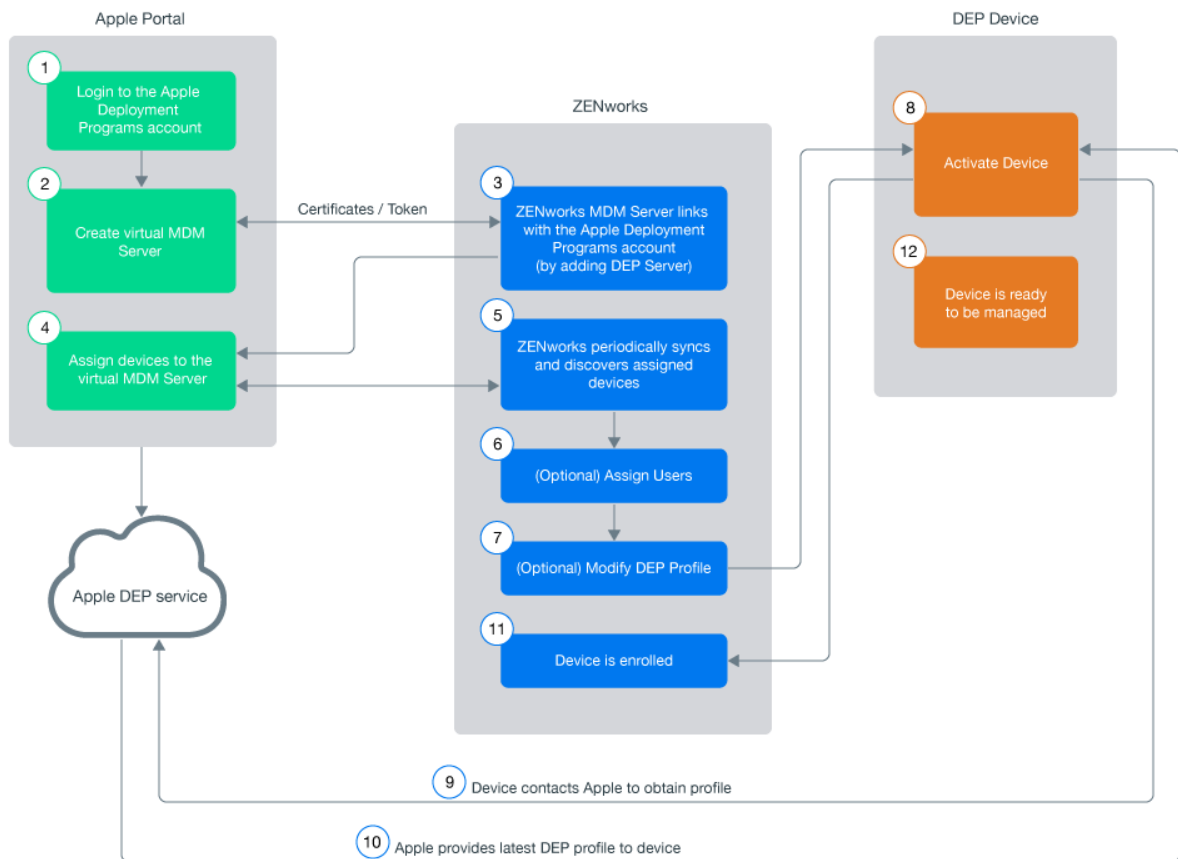
- 1 On the Getting Started with Mobile Management page, click **Assign Policy**. To assign the policy to users, from the **Policies** list, select the check box in front of the policy and then click **Action > Assign to User**. To assign the policy to devices, from the **Policies** list, select the check box in front of the policy and then click **Action > Assign to Device** to assign the policy to devices.
- 2 In the Select Object dialog box, browse for and select the users or devices to whom you want to assign the policy, click **OK** to add them to the list, then click **Next**.
- 3 If the policy is assigned to a device, then Policy Conflict Resolution page is displayed. In this page you can set the precedence for device-associated policies and user-associated policies for resolving conflicts that arise when policies of the same type are associated to both devices and users. Define any of the following and click **Next**:
 - ♦ **User Precedence:** User-associated policy will override the device-associated policy. Select this option to apply policies that are associated to the users first, and then to the devices.
 - ♦ **Device Precedence:** Device-associated policy will override the user-associated policy. Select this option to apply policies that are associated to the devices first, and then to the users.
 - ♦ **Device Only:** Select this option to apply policies that are associated to devices alone.
 - ♦ **User Only:** Select this option to apply policies that are associated to users alone.
- 4 Review the summary page and click **Finish** to complete the assignment.

11 Integrating with Apple Device Enrollment Program

The Device Enrollment Program (DEP) is part of the Apple Deployment Programs and provides administrators with a streamlined way to deploy multiple corporate owned iOS devices. Upon device activation, over-the-air configuration of the device is immediate and enrollment with the MDM server is automatic. There is no need for IT administrators to physically access each device to complete the setup. The benefits of this program are:

- ◆ Zero-touch enrollment of devices to the MDM Server
- ◆ Wireless supervision of devices
- ◆ Enforce MDM Enrollment of devices
- ◆ Lock MDM Profiles on the devices
- ◆ Streamlined setup process



The procedure to enroll devices to the Apple Device Enrollment Program (DEP) using ZENworks is summarized in the following workflow. However, as a prerequisite, you need to first set up a DEP account and associate your sales information with it. For more information on setting up a DEP account, see the [Apple Support Documentation](#).



NOTE: With the iOS 11.x release, you can associate any iOS 11.x device to an existing DEP account (even if these devices are not purchased directly from Apple or an Apple reseller) using the Apple Configurator tool. For more information on associating these devices using the Apple Configurator tool, see [Enrolling existing devices to the Apple Device Enrollment Program for simplified provisioning with ZENworks](#).

NOTE: Enrollment of Apple TV devices using the Apple Device Enrollment Program is currently supported on an experimental basis. The enrollment of these devices are the same as enrolling an DEP enabled iOS device.

To know more about the Apple Deployment Program, you can also watch the following videos to know more about the Apple Deployment Program:

 http://www.youtube.com/watch?v=2eEtCwwK_R0  http://www.youtube.com/watch?v=K_Qvk1j9HaE

IMPORTANT: If you are enrolling devices using Apple School Manager, ensure that the Device Manager role is assigned to your Apple School Manager account. For more information, see the [Apple School Manager Help](#).

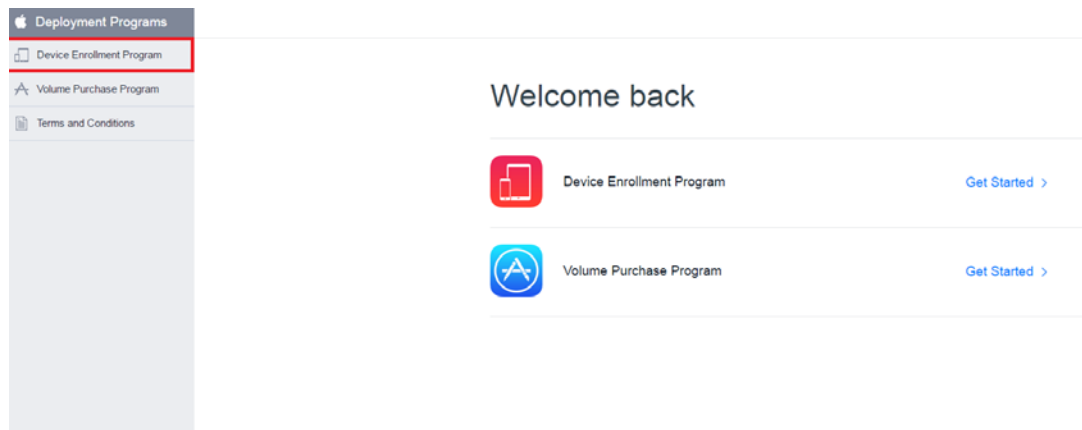
11.1 Linking ZENworks to Apple Deployment Programs Account

A DEP Server links the ZENworks MDM Server to the virtual MDM Server that you need to create in the DEP portal.

A ZENworks MDM Server can be linked to multiple virtual MDM Servers. However, a virtual MDM Server that is already linked with a ZENworks MDM Server, cannot be linked to another ZENworks MDM Server. The devices assigned to these virtual MDM Servers will enroll to the associated ZENworks MDM Server.

To add a DEP Server:

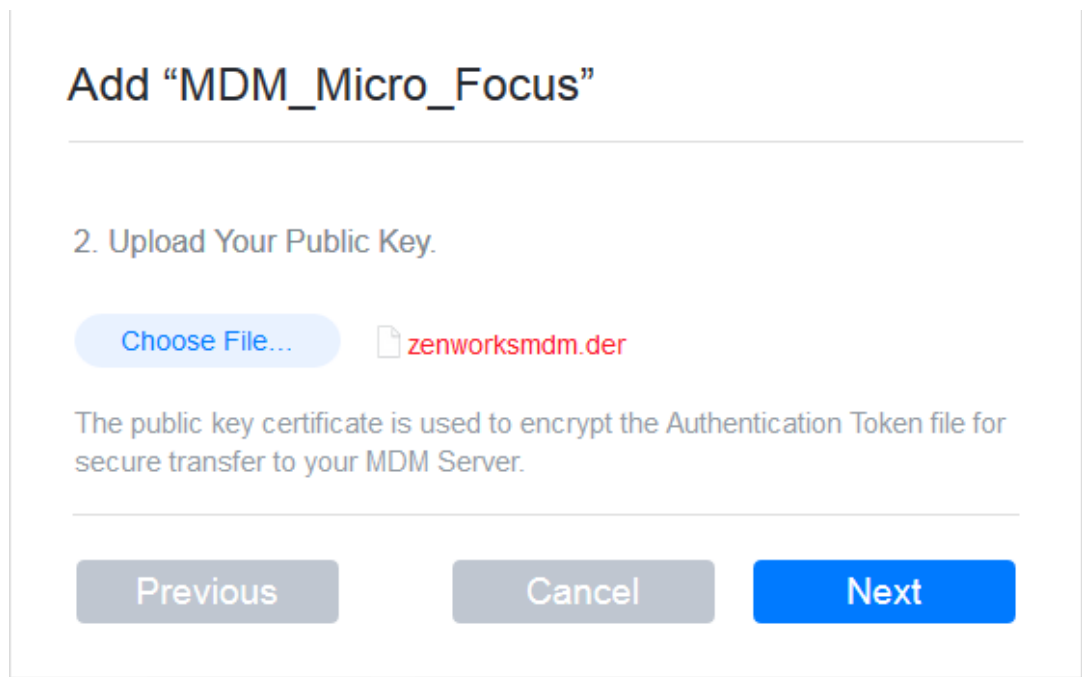
- 1 On the Getting Started with Mobile Management page, click **Add DEP Server**. Alternatively, navigate to **Configuration > Management Zone Settings > Discovery and Deployment > Apple Device Enrollment Program**.
- 2 Click **Add** to link a ZENworks MDM Server to your deployment program account.
- 3 Click the Browse icon, select an MDM Server and click **Download** to download and save the Public Key certificate of the selected MDM Server.
- 4 Click Deployment Program Web Portal and sign in using your DEP account credentials. On this portal:
 - 4a Select **Device Enrollment Program** on the Welcome screen or on the left pane of the page.



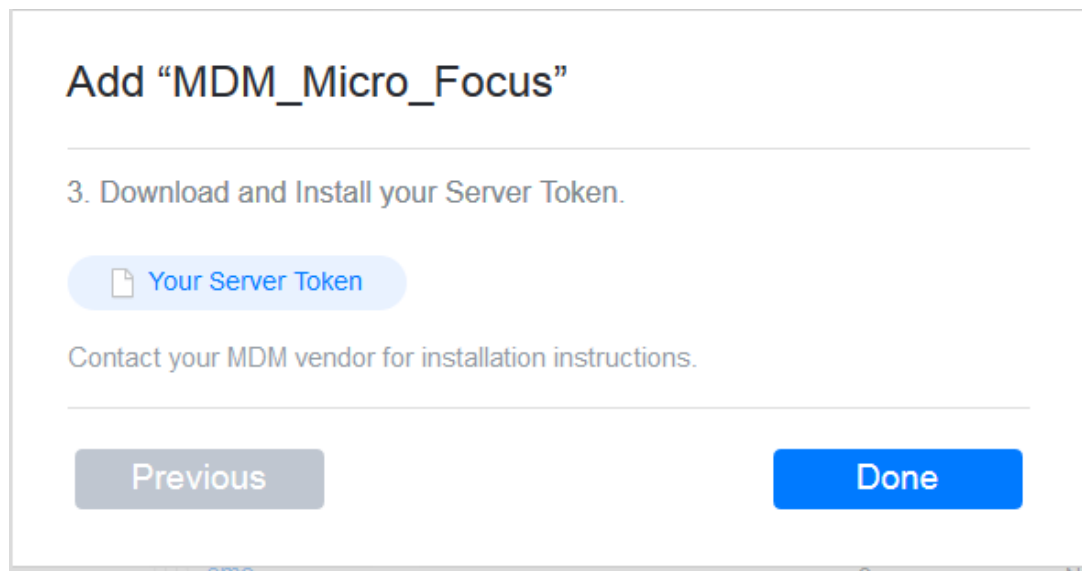
4b Click **Add MDM Server** to create a virtual MDM Server, on the Manage Servers page.

The image shows a form titled 'Add MDM Server'. Below the title is a horizontal line. The first step is labeled '1. MDM Server Name.' and features a text input field containing the text 'Organization MDM Server'. Below the input field is the instruction 'Enter a name to refer to this server, department or location.' There is a checkbox labeled 'Automatically Assign New Devices' with a question mark icon to its right. At the bottom of the form are two buttons: a grey 'Cancel' button and a blue 'Next' button.

- 4c** Specify a name for the virtual MDM Server. You can also choose to automatically assign newly purchased devices to this virtual MDM Server.
- 4d** Upload the Public Key certificate of the ZENworks MDM Server that you had saved in [Step 3](#). Click **Next**.



- 4e Click **Your Server Token**, download the token issued by Apple and click **Done**.



NOTE: You have now successfully created a virtual MDM Server. You have the choice of assigning devices to this virtual MDM Server before or after creating the DEP Server in ZCC. If you have chosen to **Automatically Assign New Devices** to this virtual MDM Server, then any newly purchased devices are automatically assigned to this server. To assign devices to the virtual server, see [Assigning Devices](#).

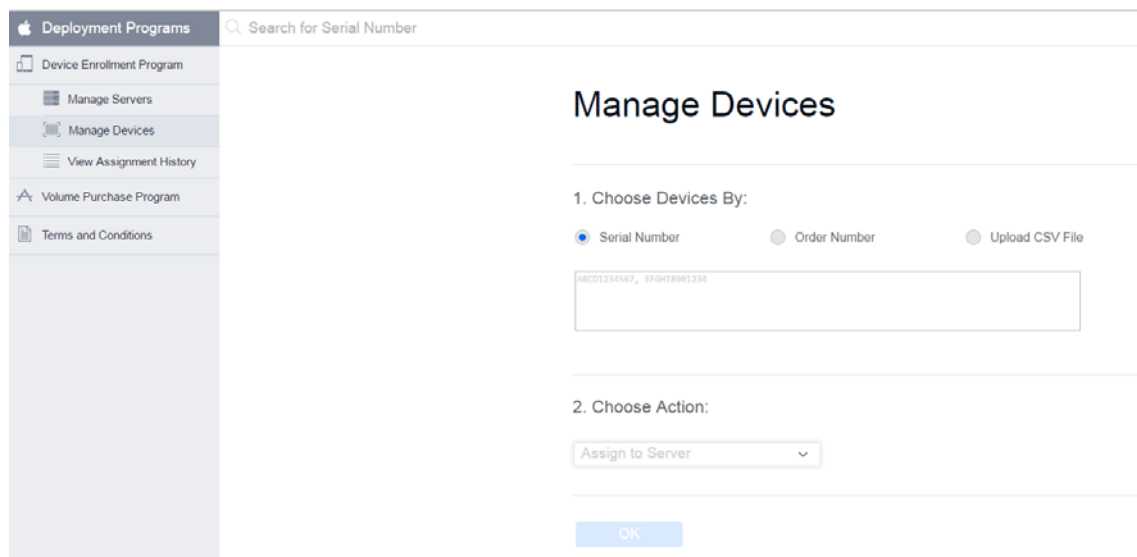
- 5 In ZCC, click **Upload** to upload the DEP token issued by Apple to the selected ZENworks MDM Server. This token enables the ZENworks MDM Server to securely connect with the Apple DEP web service.
- 6 Click **Add DEP Server**. You have now created a DEP Server in ZCC.

11.2 Assigning Devices

You need to create at least one virtual MDM Server in the Apple portal before you begin assigning devices.

- 1 Sign-in to the Deployment Program Web Portal and click **Device Enrollment Program > Manage Devices** on the left pane of the page.
- 2 You can assign devices based on:
 - ♦ **Serial Number:** Specify each serial number separated by a comma.
 - ♦ **Order Number:** the quantity and type of devices are displayed.
 - ♦ **Upload CSV File:** Upload a comma-separated value (CSV) file that contains a list of device serial numbers.

NOTE: Apple TV devices can be assigned using a serial number.



The screenshot shows the 'Manage Devices' interface in the Apple Deployment Programs web portal. On the left is a navigation sidebar with options: Device Enrollment Program, Manage Servers, Manage Devices (selected), View Assignment History, Volume Purchase Program, and Terms and Conditions. The main content area has a search bar for serial numbers and a title 'Manage Devices'. Below the title, there are two sections: '1. Choose Devices By:' with radio buttons for 'Serial Number' (selected), 'Order Number', and 'Upload CSV File'; and '2. Choose Action:' with a dropdown menu showing 'Assign to Server'. A text input field contains the serial numbers 'ABC1234567, SPGH78901234'. At the bottom is an 'OK' button.

- 3 Select the virtual MDM Server to which you want to assign the devices, in the **Choose Action** drop down menu.
- 4 Click **OK**.

While creating this virtual MDM Server, if you have chosen to **Automatically Assign New Devices**, then you do not have re-visit the portal to assign any newly purchased devices.

NOTE: Only those devices that are assigned to the virtual MDM Server in the Apple portal are identified as DEP devices in ZCC. If a DEP enabled device is enrolled to ZENworks (using ZENworks User Portal) but is not assigned to the virtual MDM Server in the Apple portal, this device will not be identified as a DEP device.

11.2.1 Syncing Devices

After a DEP Server is configured in ZCC, ZENworks syncs with the Apple DEP web service and discovers assigned devices and populates the devices in ZCC. Subsequently, ZENworks initiates a periodic sync on a daily basis to update the latest device assignments. To perform this sync immediately, you can also click **Sync All** on the Apple Device Enrollment Program page (**Configuration > Management Zone Settings > Discovery and Deployment > Apple Device Enrollment Program**). To view the discovered devices in ZCC, see [Viewing DEP Devices](#).

11.3 Viewing DEP Devices

To view the discovered devices, navigate to **Devices > Discovered > Apple DEP Devices**.

On clicking a device, the following tabs are displayed:

- ◆ [Summary](#)
- ◆ [Settings](#)

11.3.1 Summary

This page provides a summary of the device's general information.

- ◆ **Device Details**
 - ◆ **Serial Number:** Serial number of the device.
 - ◆ **Model:** Model of the device.
 - ◆ **Description:** Short description of the device.
 - ◆ **Color:** Color of the device model.
 - ◆ **Asset Tag:** Asset tag that is used by the organization to monitor a device.
 - ◆ **Device Assigned Date:** Date on which the device was assigned to the virtual MDM Server in the Apple portal.
 - ◆ **Device Assigned By:** Administrator who has assigned the device to the virtual MDM Server in the Apple portal.
 - ◆ **Deployment Status:** Enrollment status of the device. If the device is enrolled in ZENworks then the status is displayed as **Managed**. If the device is discovered by ZENworks but not enrolled to the ZENworks MDM Server, then the status is displayed as **Discovered**.
- ◆ **Server Details**
 - ◆ **MDM Server:** ZENworks MDM Server to which the device will be enrolled.
 - ◆ **DEP Server:** DEP Server to which the device is associated.
- ◆ **User and Organization Details**
 - ◆ **Assigned User:** User to whom the device is assigned. Only this user can enroll the device through DEP. To edit this field, you need to have *Modify Apple DEP Device Rights* assigned to you. This option is applicable for DEP enrollment only.
 - ◆ **Organization Name:** Name of the organization associated with the linked deployment program account.

- ♦ **Organization Phone Number:** Phone number of the organization associated with the linked deployment program account.
- ♦ **Organization Address:** Address of the organization associated with the linked deployment program account.
- ♦ **DEP Profile Details**
 - ♦ **Assignment Status:** DEP profile assignment status. The various statuses are:
 - ♦ **Assigned:** DEP Profile assignment on the device is successful.
 - ♦ **In Progress:** DEP Profile assignment is in progress.
 - ♦ **Failed:** DEP Profile assignment to the device has failed.
 - ♦ **Blocked:** Device is blocked due to errors reported after three attempts to assign the profile. You need to contact Apple to resolve any issues with the device. Subsequently, to unblock the device you need to do the following:
 - ♦ Delete the device from the virtual MDM Server.
 - ♦ Click **Sync All** on the Apple Device Enrollment Program page in ZCC, to remove the device from ZCC.
 - ♦ Assign the device back to the virtual MDM Server. Click **Sync All** or wait for the periodic sync initiated by ZENworks, to populate the device in ZCC.
 - ♦ **Device not accessible:** Device is either disowned or is re-assigned to another virtual MDM Server.
 - ♦ **Assignment Time:** The time at which the profile was assigned to the device in the Apple portal.
 - ♦ **Last Push Time:** The time at which the profile was last pushed to the device by Apple during device enrollment.

11.3.2 Settings

This page lets you modify the DEP profile. For more information see, [Managing the DEP Profile](#).

11.4 Managing the DEP Profile

The settings that govern the enrollment process of a DEP enabled device is known as the DEP Profile. The DEP profile in ZCC is segregated as follows:

- ♦ **General and Skip Item Settings:** Lets you modify the initial setup process of the device. For more information, see [Editing General and Skip Item Settings](#).
- ♦ **Host Certificates:** Lets you configure the certificate of the host device to allow pairing of devices. For more information, see [Uploading a Host Certificate for Pairing](#).

On installing ZENworks Configuration Management (ZCM), a DEP profile with default values is assigned to the **Apple DEP Devices** folder (**Devices > Discovered**). Subsequently, the discovered DEP devices that appear within this folder inherit the default profile. ZENworks lets you modify this DEP profile as per the needs of the organization. The profile can be modified at the folder level or for a specific device. The modified DEP profile will be applied on only those devices that are to be newly enrolled or are reset to their factory settings.

The updated profile is assigned to the devices in the Apple portal. Before the users begin enrolling their devices, ensure that the modified DEP profile is successfully assigned to the device in the Apple portal. View the **Assignment Status** of the device by navigating to **Devices > Discovered > Apple DEP Devices**.

The modified DEP profile is received by the device when the device is activated. Ensure that you do not modify the settings while the users are enrolling their devices. If the incorrect settings are assigned to the device, then a factory reset is required.

To edit the DEP profile at **Apple DEP Devices** folder level,

- ◆ Navigate to **Devices > Discovered**. Click **Settings** next to the **Apple DEP Devices** folder.

To edit the DEP profile for a specific device:

- ◆ Navigate to **Devices > Discovered > Apple DEP Devices > <Select a Device> > Settings**. To override the DEP Profile settings configured at the folder level and to configure new settings, click **Override**. Click **Revert**, to use the inherited settings.

11.4.1 Editing General and Skip Item Settings

General Settings: The general profile settings are as follows:

- ◆ **Allow pairing of devices with a host computer:** Enables the user to pair a device. If set to **Yes** then the device can pair with any device. If set to **No**, then the device can pair with only those host devices that have their certificate configured in the DEP Profile.
- ◆ **Set device as supervised:** Enables supervision of devices.
- ◆ **Allow user to remove the MDM profile from the device:** Enables the user to remove the configured MDM profile. This setting is enabled if the device is set as Supervised.

NOTE: If the device is not Supervised, then the user has the option to remove the MDM profile. If the device is Supervised, it is recommended that you do not enable this setting, as devices cannot be managed if the MDM profile is removed.

- ◆ **Allow user to skip applying the MDM profile on the device:** Enables the user to skip enrollment of the device with the MDM Server.
- ◆ **Specify the support phone number displayed during enrollment:** Displays the defined customer support phone number.
- ◆ **Specify the support email address displayed during enrollment:** Displays the defined customer support email address.
- ◆ **Specify the department name displayed during enrollment:** Displays the defined department or location name.

NOTE: The defined phone number, email address, or department name, might not be displayed on some iOS devices.

Skip Item Settings: If selected, the following screens related to initial configuration settings are skipped:

- ◆ The **Passcode** screen, which enables the user to create a passcode.

NOTE: If this screen is skipped, then Touch ID and Apple Pay cannot be specified.

- ♦ The **Location Services** screen, which helps in determining the user's current location.
- ♦ The **Restore apps and data** options screen, which enables the user to restore data from backup.
- ♦ The **Move from Android** options screen, which enables the user to migrate data from an Android device. This option will be disabled, if **Restore apps and data** is selected.
- ♦ The **Apple ID** screen, which enables the user to specify the Apple ID.
- ♦ The **Terms and Conditions** screen. If this option is selected, these Terms and Conditions are automatically accepted by the device.
- ♦ The **Touch ID** screen, which enables the user to use biometrics to unlock the device or authenticate to apps.

NOTE: Applicable for iPhone 5s, 6, 6+, iPad Air 2, and iPad Mini 3 only.

- ♦ The **Apple Pay** setup screen, which enables the user to make digital payments.

NOTE: Applicable for iPhone 6, 6+, iPad Air 2, and iPad Mini 3 only.

- ♦ The **Display Zoom** screen, which enables the user to use the standard or zoomed view of the device display.

NOTE: Applicable for iPhone 6 and 6+ only.

- ♦ The **Siri** screen, which enables the user to setup Siri.
- ♦ The **Diagnostics** screen, which enables the user to send diagnostic data to Apple.
- ♦ The **Display Tone** options screen, which enables the user to adjust the white balance on the device display.

NOTE: Applicable for devices that use the True Tone display feature such as iPad Pro.

- ♦ The **Home Button Sensitivity** options, which enables the user to specify how the Home button should be used.

NOTE: Applicable for devices that use the 3D touch-enabled Home button, such as iPhone 7.

- ♦ The **Keyboard** screen, which enables the user to specify the keyboard settings.

NOTE: Applicable on iOS versions 11.0 and later versions.

- ♦ The **Onboarding** screen, which contains onboarding informational screens.

NOTE: Applicable on iOS versions 11.0 and later versions.

- ♦ The **Watch Migration** screen, which enables the user to migrate Apple Watch from the previous iPhone to the current device.

NOTE: Applicable on iOS versions 11.0 and later versions.

- ♦ The **Screensaver** screen, which enables users to use aerial screensavers on Apple TV.

NOTE: Applicable for tvOS only.

- ◆ The **Touch to Setup** screen, which enables users to set up Apple TV using an iOS device.

NOTE: Applicable for tvOS only.

- ◆ The **Home Screen Sync** screen, which enables users to set up Apple TV's home screen layout.

NOTE: Applicable for tvOS only.

- ◆ The **TV Provider Sign in** screen, which enables users to sign-in to the TV provider.

NOTE: Applicable for tvOS only.

11.4.2 Uploading a Host Certificate for Pairing

The **Allow pairing of devices with a host computer** option appearing in the [Editing General and Skip Item Settings](#), lets iOS devices pair with host devices through the feature called host pairing. If this option is set to **Yes** then the device can pair with any host device. However, if this option is set to **No**, then the device can pair with host devices that have their certificates configured in the DEP profile. This certificate should be configured in the DEP profile for the device to continue pairing with the host device.

To upload the certificate at folder level,

- ◆ Navigate to **Devices > Discovered**. Click **Settings** next to the **Apple DEP Devices** folder. Click **Host Certificates**.

To upload the certificate for a specific device:

- ◆ Navigate to **Devices > Discovered > Apple DEP Devices > <Select a Device> > Settings > Host Certificates**.

On the **Host Certificates** page, click **Add** and upload the certificate obtained using Apple Configurator. The certificate files should be in any one of the following formats:

- ◆ .CER
- ◆ .CRT
- ◆ .DER
- ◆ .PEM

11.5 Assigning Users

A DEP device can be assigned to a specific user, which will restrict other users from enrolling the device using Apple DEP. However, the same device can be enrolled through the ZENworks User Portal using another user's credentials. To ensure that the assigned user enrolls using Apple DEP (not using the ZENworks User Portal), disable the **Allow user to skip applying the MDM profile on the device** option appearing in the [Editing General and Skip Item Settings](#).

To assign a user:

- 1 Navigate to **Devices > Discovered > Apple DEP Devices**.
- 2 Select a DEP device.
- 3 On the summary page, click **Edit** next to the **Assigned User** field and specify the user to whom the device should be assigned.

11.6 Enrolling a DEP Device

Enrolling a DEP device is simple for an end user, as you can enable the user to skip most of the device activation prompts by modifying the DEP profile. For more information, see [Enrolling an iOS DEP Device](#).

11.7 Renewing a DEP Token

A token can be renewed in any of the following scenarios:

- ♦ Token has expired
- ♦ A certificate remind has taken place.

To renew a token:

- 1 Navigate to **Configuration > Management Zone Settings > Discovery and Deployment > Apple Device Enrollment Program**.
- 2 Select a DEP Server and click **Renew Token**.

NOTE: The **Renew Token** option can be applied on only one DEP Server at a time. If multiple DEP Servers are selected, then this option will be disabled.

- 3 Click **Download** to download and save the Public Key certificate of the selected MDM Server.
- 4 Click **Deployment Program Web Portal** and sign in using your Deployment Program account credentials. On this portal:
 - 4a Navigate to **Device Enrollment Program** on the left pane of the page.
 - 4b On the **Manage Servers** page, select an MDM Server whose token you would like to renew.
 - 4c Click **Replace Key** and upload the Public Key certificate of the ZENworks MDM Server that you had saved in [Step 3](#). Click **Next**.
 - 4d Click **Generate New Token** and download the token issued by Apple and click **Next**.

- 5 In ZCC, click **Upload** to upload the DEP token issued by Apple to the selected ZENworks MDM Server. This token enables the MDM Server to securely connect with the Apple DEP web service.
- 6 Click **Renew**.

11.8 Removing a DEP Server

On removing the DEP Server from the ZENworks Management Zone, the DEP Profile from the associated devices are automatically unassigned. The **Discovered** devices are removed from the zone but the **Managed** devices will continue to be managed by the ZENworks MDM Server.

To remove the DEP Server from your ZENworks Management Zone:

- 1 Navigate to **Configuration > Management Zone Settings > Discovery and Deployment > Apple Device Enrollment Program**.
- 2 Select a DEP Server and click **Remove**. You can remove only one DEP Server at a time.

NOTE: Before removing the DEP Server in ZCC, if you delete the virtual MDM Server in the Apple portal, then the associated DEP Server is not automatically deleted by ZENworks. As a best practice, we recommend that you remove the DEP Server in ZCC and then proceed to remove the virtual MDM Server.

11.9 Re-assigning Devices

You can re-assign devices to another virtual MDM Server (assuming that a DEP Server in ZCC already links ZENworks with this virtual MDM Server). After re-assignment, ZENworks deletes and creates a new discovered device object. If a device is re-assigned:

- ♦ The **Assigned User** of this device (if any) is reset.
- ♦ The modified DEP Profile (if any) assigned to the device is reset and the new device object inherits the settings applied to the Apple DEP Devices folder.

12 Integrating ZENworks with Android Enterprise

Android in the enterprise is a program for mobile devices running on the Google Android operating system that enables IT admins to manage and secure mobile business applications on users' devices. ZENworks currently supports the work profile mode and the work-managed device mode.

- ♦ The work profile mode, also known as the Profile Owner mode, creates dedicated containers on devices for corporate apps and data, thereby enabling the organization to manage only the corporate data without compromising on the security of the users' personal data. This mode is intended for the BYOD scenario, where the user gets to bring their own devices to the workplace.
- ♦ The work-managed device mode, also known as the Device Owner mode, enables administrators to manage the entire device, thereby restricting the device to corporate use only. This mode is mainly intended for corporate-owned devices.

By integrating ZENworks with Android Enterprise, you can:

- ♦ Have complete control over the corporate data on a device.
- ♦ Apply separate passwords to the work profile and the personal space using the Mobile Security Policy.
- ♦ Control data leakage and prevent app installations from unknown sources using the Mobile Device Control Policy.
- ♦ Remotely wipe corporate data or factory reset the device (based on the mode of enrollment) using the Unenroll quick task.
- ♦ Distribute and manage corporate apps through managed Google Play by using the existing Bundles feature.
- ♦ Restrict access to corporate data if the device is found to be non-compliant by using the Mobile Compliance Policy
- ♦ Edit the app runtime permissions and remotely configure apps on devices.

12.1 Android Enterprise Workflow Tasklist

To use Android enterprise with ZENworks, perform the following tasks in the order listed below. However, before you perform these tasks ensure that you configure the basic tasks, that are required to configure the Mobile Management feature of ZENworks, such as configuration of a user source, MDM server, and the FCM push notification service. For more information on these features, see [Using the Mobile Management Getting Started Page](#).

Task	Details
<input type="checkbox"/> Register your organization to Android Enterprise	For information, see “Enrolling the Organization to Android Enterprise” on page 110 .

Task	Details
<input type="checkbox"/> Create and assign an Android Enterprise Enrollment Policy	For instructions, see “Creating and Assigning Android Enterprise Enrollment Policy” on page 112.
<input type="checkbox"/> Invite users to enroll devices	For instructions, see “Inviting Users to Enroll Devices” on page 112.
<input type="checkbox"/> Enroll devices in the work profile mode and work-managed device mode	For instructions, see “Enrolling Devices” on page 111.
<input type="checkbox"/> Configure and distribute work apps to devices	For instructions, see “Distributing Work Apps to Users” on page 126.
<input type="checkbox"/> Secure the work profile by applying device and password restrictions	For instructions, see “Securing the Device” on page 131.
<input type="checkbox"/> Monitor compliance of devices to the assigned Mobile Security Policy.	For instructions, see “Monitoring Device Compliance” on page 134.

12.2 Enrolling the Organization to Android Enterprise

To get started with Android enterprise, you need to first create an Android Enterprise Subscription in ZCC to enroll your organization to the program.

Prerequisites

Before creating subscription, ensure that following prerequisites are met:

- ◆ You should have a Google ID, preferably a corporate ID, for example: yourid@gmail.com or yourid@companyname.com)
- ◆ At least one MDM server should be configured
- ◆ User source should be configured
- ◆ Firebase Cloud Messaging (FCM) should be configured
- ◆ You should have Novell Customer Center credentials (you need to have an active ZENworks maintenance entitlement)

Procedure

To create the Android Enterprise Subscription:

1. In ZENworks Control Center, click **Subscribe and Share**.
2. In the Subscriptions panel, click **New** and select **Subscription**.
3. Select **Android Enterprise Subscription**, and click **Next**.

Alternatively, click **Mobile Management** in the left pane and click **Create Enterprise Subscription** displayed in the **Android Enterprise** section.

4. In the **Define Details** page, perform the following:
 - a. **Subscription Name:** Specify a name for the subscription.

- b. **Folder:** Type the name or browse and select the ZENworks Control Center folder where you want the subscription to reside.
 - c. **Description:** Provide a short description for the subscription.
5. In the **Configure Android Enterprise** page, specify the Novell Customer Center (NCC) credentials, and click **Enroll**.

NOTE: Ensure that you have disabled the pop-up blocker for the ZCC page.

You will be re-directed to a sign-up UI page hosted by Google Play.

- a. In the Google sign-up page, click **SIGN IN**.
 - b. Specify the corporate email ID or Google ID and password. Click **Next**.
 - c. Click **GET STARTED**.
 - d. Follow the prompts to complete the registration process.
 - e. Click **COMPLETE REGISTRATION** after which you will be redirected back to ZCC.
6. In ZCC, click **Next**.
7. In the **Select User Context** page, select user contexts that you want to associate with the Android enterprise management, and then click **Next**. Users that are part of the selected user context will be allowed to enroll their devices in the work profile or work-managed device modes, using this subscription. However, you also need to ensure that an Android Profile Enrollment Policy is assigned to these users. For more information, see [Enrolling Devices](#).
8. In the **Select Languages** page, select the languages in which the app details should be fetched from Google. The retrieved details will be used to display app details in the Apps Catalog page and information within a bundle such as permissions and managed configurations.

NOTE: Selecting multiple languages might result in delays while retrieving app details.

9. In the **Select Bundles Folder** page, select a folder where the Android app associated with this subscription should be saved, and then click **Finish**.

Select the **Create bundle as Sandbox** checkbox if you want to create this bundle as the sandbox version.

Select the **Open the Apps Catalog page after creating the subscription** checkbox if you like to open the Apps Catalog page after clicking the **Finish** button.

12.3 Enrolling Devices

12.3.1 Prerequisites

Before enrolling the devices in the work profile mode, you need to ensure the following:

Mandatory Settings

- ♦ Create an Android Enterprise Subscription. For more information, see [Enrolling the Organization to Android Enterprise](#)
- ♦ Create and assign a Mobile Enrollment Policy. For more information, see [Creating a Mobile Enrollment Policy](#).

- ♦ Create and assign an Android Enterprise Enrollment Policy.
- ♦ Ensure that the Android version is 5.0 or newer (for the work profile mode) or 6.0 or newer (for work-managed device mode).

Optional Settings

- ♦ Invite users to enroll their devices.

12.3.2 Creating and Assigning Android Enterprise Enrollment Policy

While assigning this policy, you need to ensure that it is assigned to the same set of users who are part of the user context associated with the Android Enterprise Subscription. To create an Android Enterprise Enrollment Policy:

- 1 Click **Policies** in the left hand pane in ZCC.
- 2 Click **New > Policy**.
- 3 Select **Mobile** and click **Next**.
- 4 Select **Android** and click **Next**.
- 5 Retain the default selection, **Android Enterprise Enrollment Policy**, and click **Next**.
- 6 Specify a policy name, a policy folder and a short description of the policy. Click **Next**.
- 7 Review the summary page and click **Finish**.

To assign this policy to relevant users:

- 1 In the **Policies** panel, select the policy you want to assign.
- 2 Click **Action > Assign to User**.
- 3 Follow the prompts to assign the policy.

When you complete the wizard, the assigned users are added to the policy's Relationships page. You can click the policy to view the assignments.

12.3.3 Inviting Users to Enroll Devices

You can send an invite email to users to have them enroll their devices to ZENworks in the work profile mode. Before sending this invite, ensure that an SMTP server is configured in the zone. To do this:

- 1 Click **Users** in the left hand pane in ZCC.
- 2 Select a user folder or a specific user. The invite email cannot be sent to a user group.
- 3 Click **Action > Invite User**.

You can preview the email notification in different languages by selecting the appropriate language from the **Preview Language** drop down. However, the email will be sent in the language set in the Mobile Enrollment Policy, which should be assigned to the selected users. For more information, see [Creating a Mobile Enrollment Policy](#).

The contents of the pre-configured email can be customized to suit your requirements. You can edit the content by navigating to **Configuration > Event and Messaging > Email Notifications > Invite Users**. For more information, see [Managing Email Notifications](#).

Before clicking the **Send** button, you can also select the **MDM Server** to which the users should enroll their devices. This MDM Server will be resolved to the macro variable `$HOSTNAME$` present in the pre-configured email. All macro variables will be resolved when the email is sent to the user.

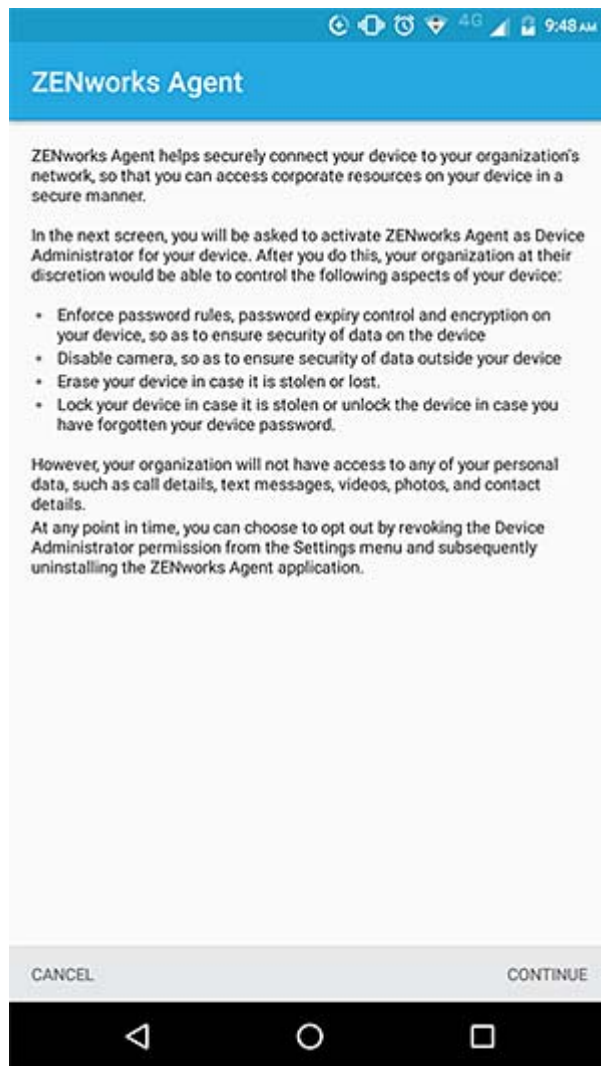
12.3.4 Enrolling devices in the work profile mode

The scenario elaborated in this section is meant for users who are enrolling their devices to ZENworks for the first time. For users who have already enrolled their devices in the basic mode (Android App only) and want to enroll in the work profile mode, see [Work Profile Enrollment for Existing Users](#).

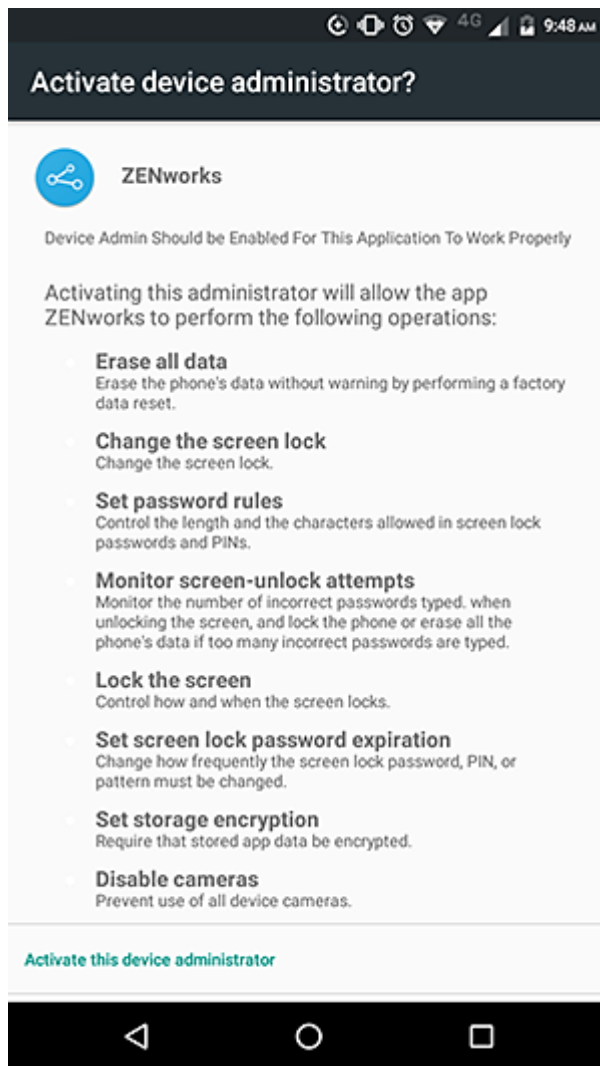
IMPORTANT: Work profile enrollment fails if the device is connected over a Virtual Private Network (VPN).

Procedure

- 1 The user installs the ZENworks Agent App from Google Play Store. Alternatively, the user can follow the procedure mentioned in the invite letter to download the ZENworks Agent app.
- 2 After installation, the user clicks **Open**. A brief description of the ZENworks Agent is displayed. The user clicks **Continue**.

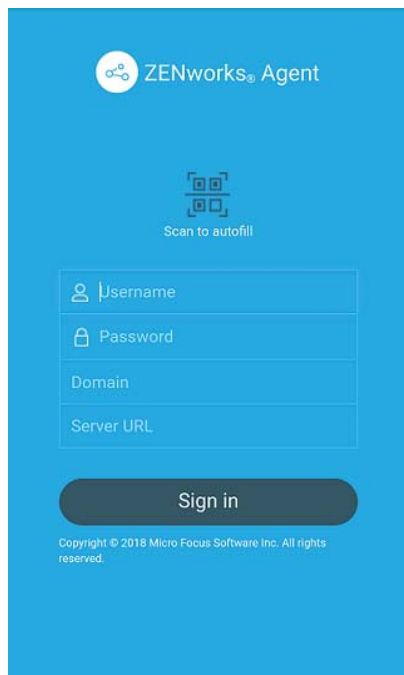


3 The user clicks **Activate this Device Administrator** to enable device management using the app.

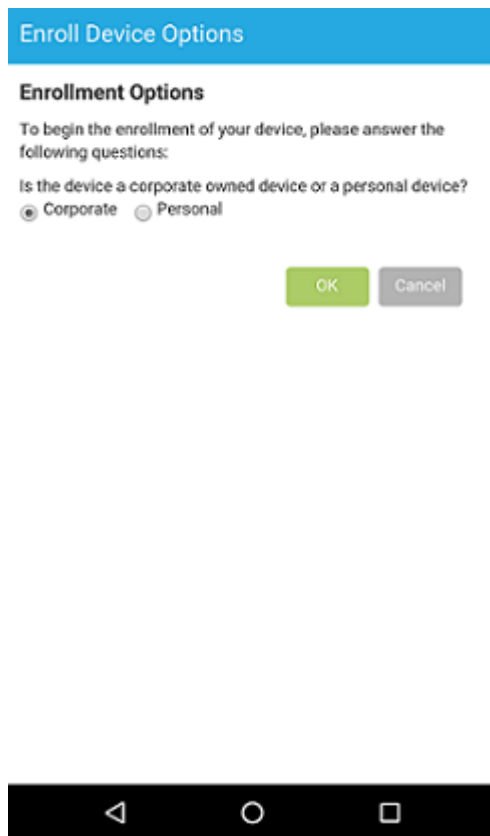


4 The user logs into the app by specifying the following:

Username, Password, Domain, Server URL: Specify the username, password, and registration domain (if **Allow Simple Enrollment** is disabled for the user) along with the server URL of the ZENworks MDM Server.

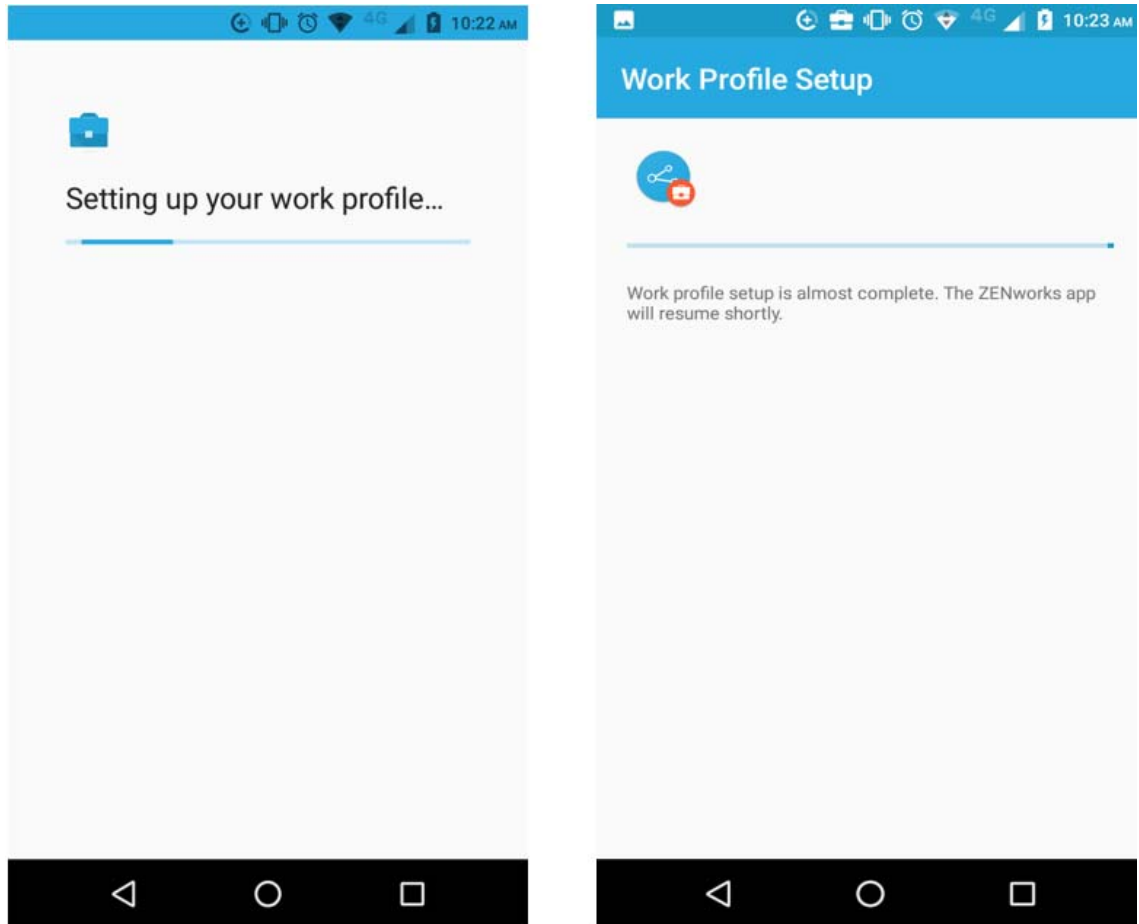


- 5 If you configured the Mobile Enrollment policy to allow the user to specify the device ownership (corporate or personal), the user is prompted for that information. Tap **OK**.

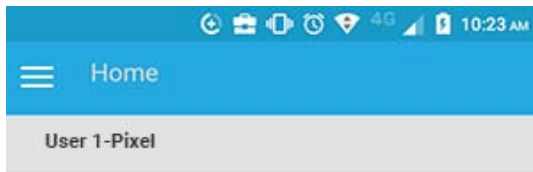


Follow the prompts appearing in the remaining screens and the device will automatically set up a work profile and enroll to ZENworks. The following screens are displayed during work profile setup.

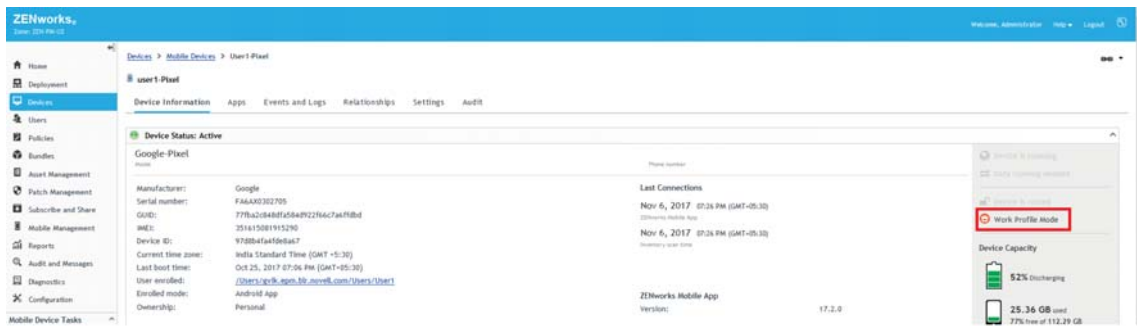
NOTE: Ensure that you do not interrupt the work profile setup process.



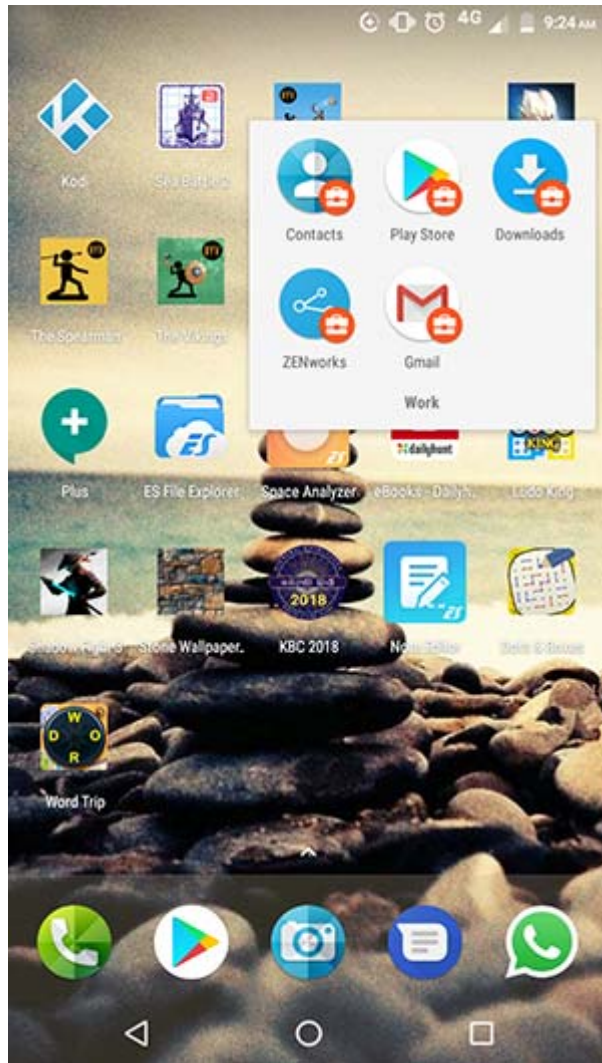
- 6 The ZENworks Agent App Home screen is displayed that shows the device as enrolled and active.



- The device information can now be viewed in ZCC. Click **Devices > Mobile Devices** (or navigate to the folder as configured in the Mobile Enrollment Policy) from the left hand navigation pane in ZCC. Click the appropriate device and view its details in the **Summary** page. The enrollment mode is displayed as **Android App** and **Work Profile Mode** is also enabled.



- 8 After your device is enrolled, a Badge icon attached to the ZENworks Agent App icon and other system apps will help differentiate work apps from personal apps.



Using managed configurations, you can remotely configure the corporate email account within the work profile of a device using apps such as Gmail. Therefore, it is recommended that you do not assign a Mobile Email Policy to devices that are to be enrolled in the work profile mode. Also, the ActiveSync account should directly communicate with the configured ActiveSync server rather than using ZENworks as the proxy.

Ensure that you approve the ZENworks Agent app, installed within the work profile, in managed Google Play and assign it to all the users. This ensures that the user is notified of any updates made to the ZENworks Agent app and these updates are applied automatically.

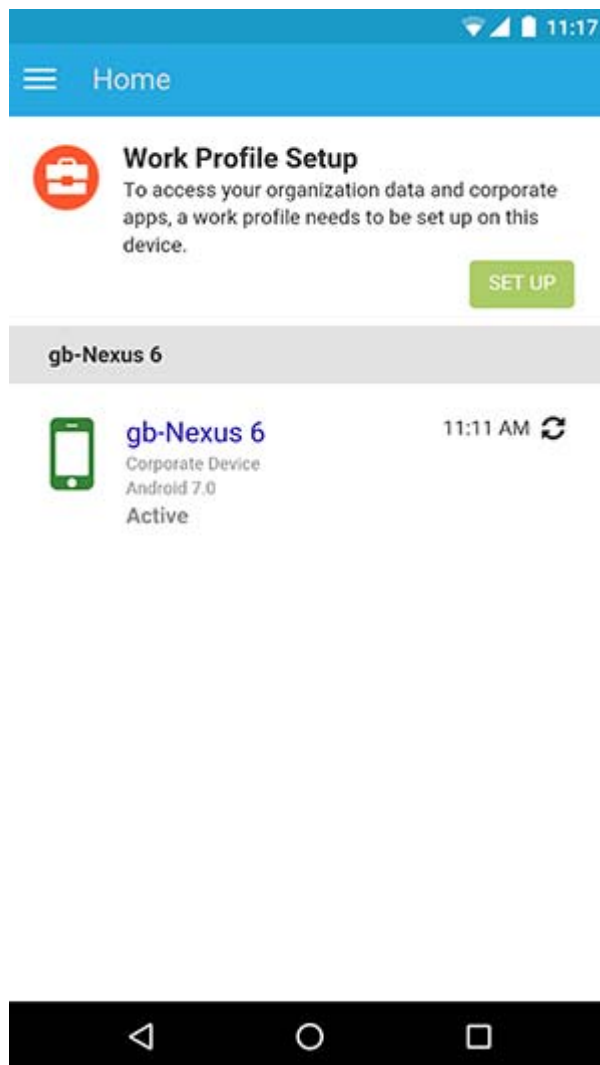
Work Profile Enrollment for Existing Users

For users who have already enrolled to ZENworks using the basic mode of enrollment (Android App only) and now want to be enrolled in the work profile mode, assign the Android Profile Enrollment Policy to these users.

NOTE: If you have already configured an ActiveSync account, then it is recommended that you remove this account. With managed configurations, you can remotely configure the corporate email account within the work profile of a device using apps such as Gmail. The ActiveSync account should directly communicate with the configured ActiveSync server rather than using ZENworks as the proxy.

For users who have already enrolled in the basic mode, it is recommended that you enable the **Allow Manual Reconciliation by User** setting in the assigned Mobile Enrollment Policy, till all the users are enrolled in the work profile mode. This will allow users to manually reconcile their devices to the existing device objects present in ZCC, if required,

After assigning the Android Enterprise Enrollment Policy, the users receive a notification on their devices to set up a work profile when they open the ZENworks Agent app.



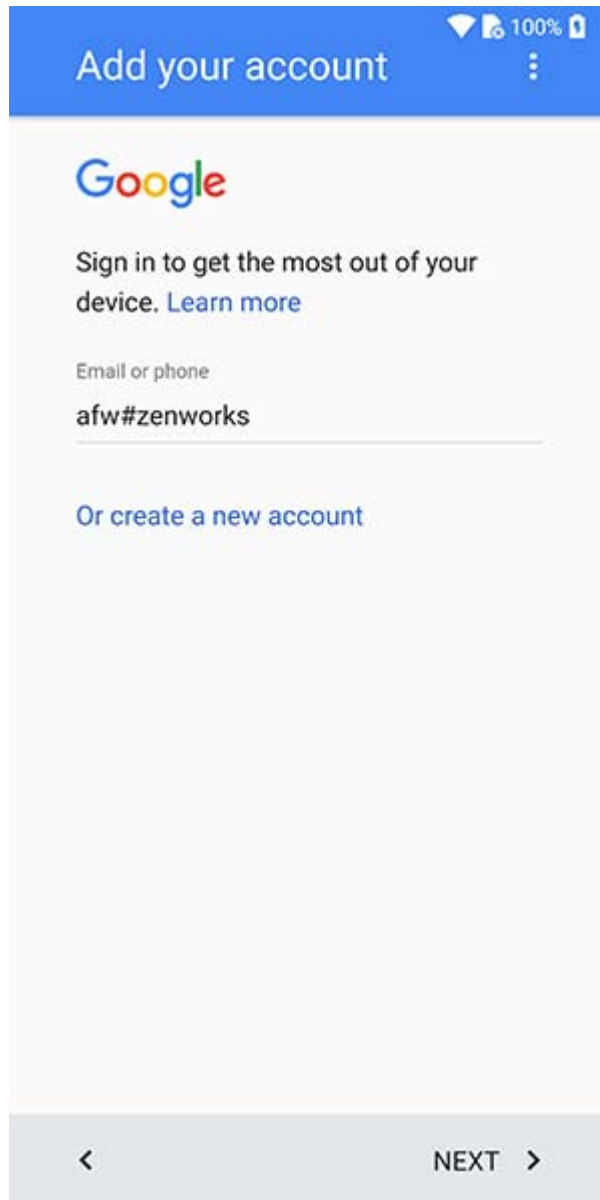
The user clicks **Set Up** and follows the prompts to set up the work profile. The device will automatically set up the work profile. You can view **Work Profile Mode** enabled in the device's information page in ZCC (**Devices > Mobile Devices ><Click the device> > Summary**).

12.3.5 Enrolling devices in the work-managed device mode

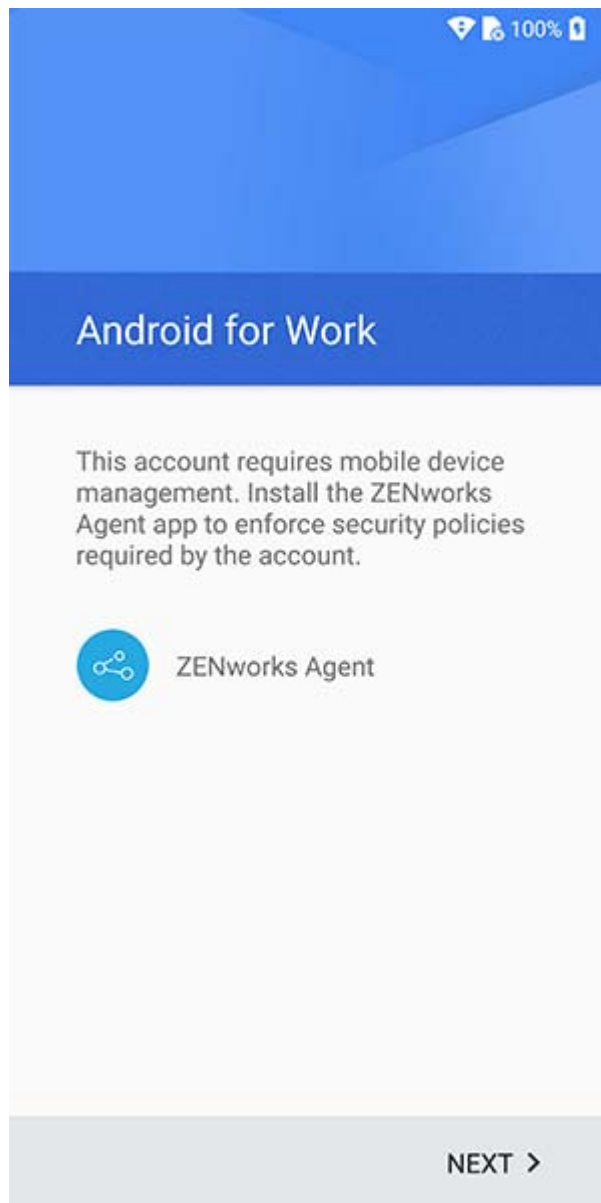
To enroll an Android device as a work-managed device, the user needs to start up the device. For an existing user or if the user has already turned the device on and completed device setup, a factory reset of the device will be required.

Procedure

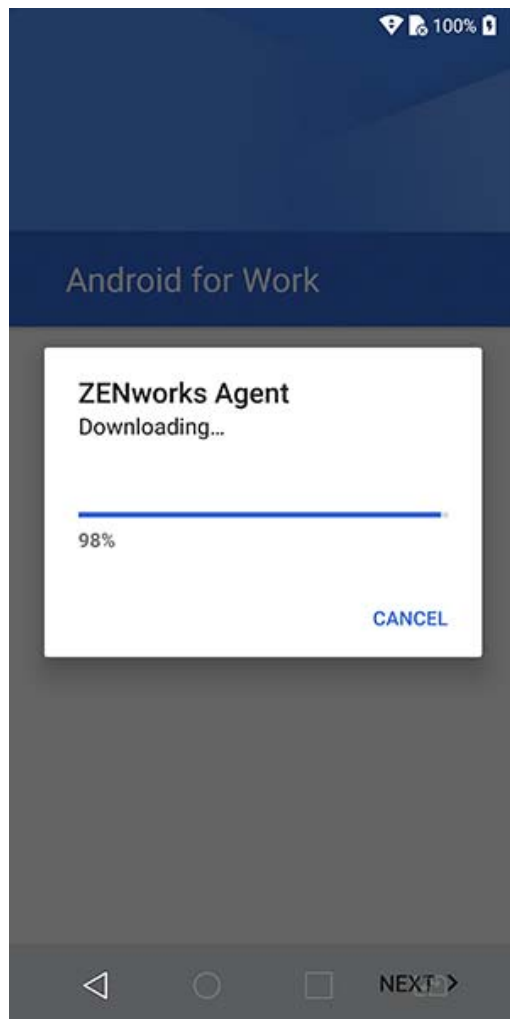
- 1 Follow the initial setup screens such as language setup and Wi-Fi configuration.
- 2 Specify the AFW identifier (afw#zenworks) in the Email field in the Add your Account setup screen.



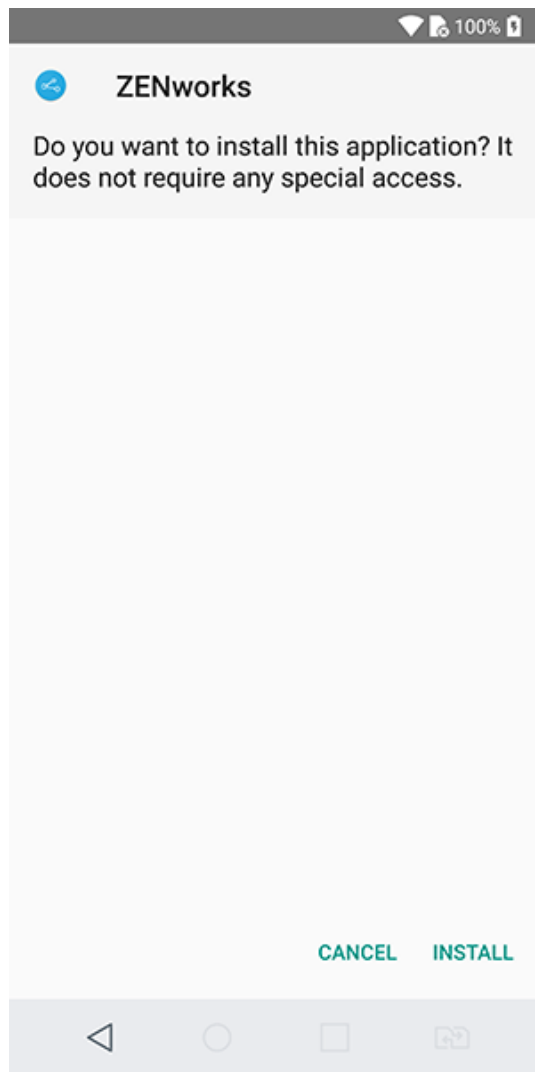
- 3 Click **Next** in the Android for Work page to proceed with the ZENworks App installation.



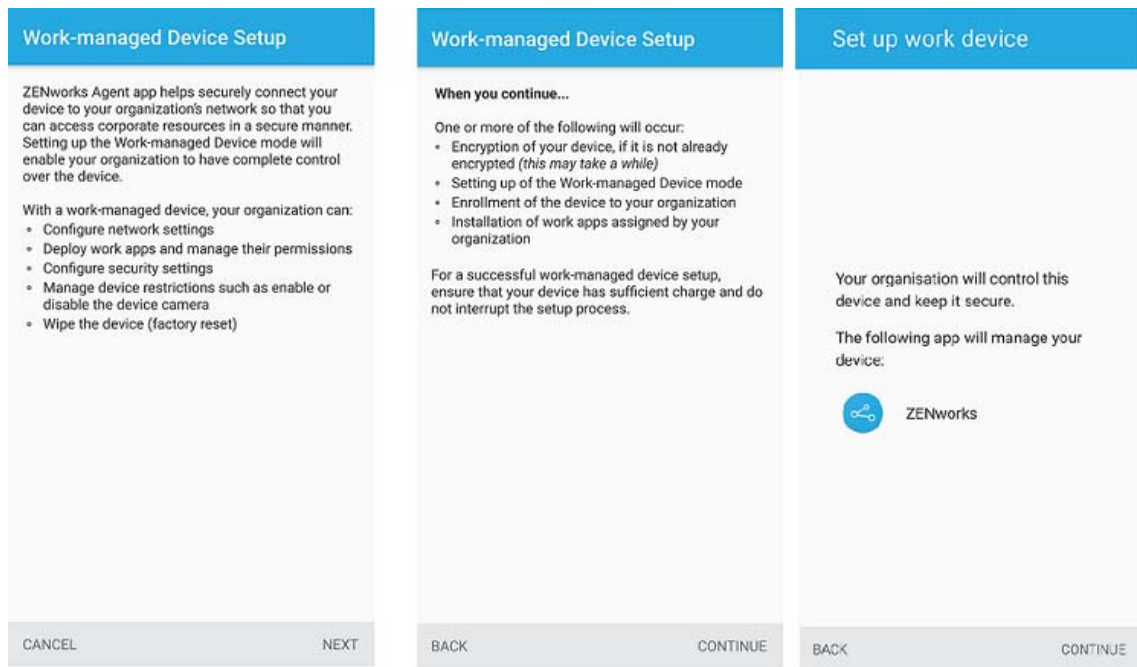
The ZENworks agent app will be automatically downloaded on the device.



- 4 Click **Install** to install the app on the device and follow the prompts to complete setting up the device.



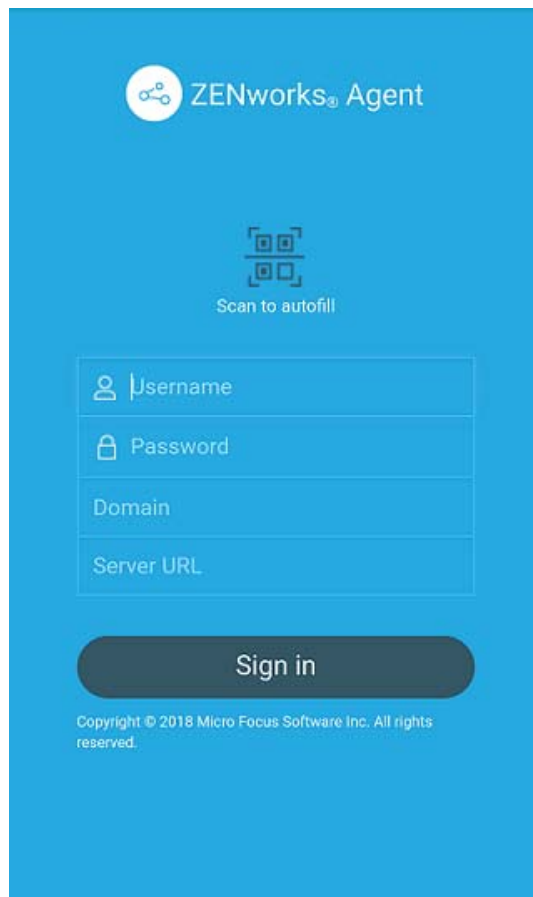
- 5 Follow the prompts appearing in the remaining screens to set up a work-managed device. The following screens are displayed:



6 The device is now setup but is yet to be enrolled as a work-managed device. The user needs to login to the app with the following details:

Username, Password, Domain, Server URL: Specify the username, password, and registration domain (if **Allow Simple Enrollment** is disabled for the user) along with the server URL of the ZENworks MDM Server.

NOTE: If instead of the login screen, the device's home screen is displayed, then open the ZENworks Agent App from the Applications Menu on your device.



The work-managed device is automatically setup on the device.

- 7 The device information can now be viewed in ZCC. Click **Devices > Mobile Devices** (or navigate to the folder as configured in the Mobile Enrollment Policy) from the left hand navigation pane in ZCC. Click the appropriate device and view its details in the **Summary** page. The enrollment mode is displayed as **Android App** and **Work-managed Device Mode** is also enabled.

You can now distribute work apps, such as Gmail, to the device. Unlike in the work profile mode, a badge icon will not be attached to work apps distributed to work-managed devices.

12.4 Distributing Work Apps to Users

ZENworks distributes work apps to users through managed Google Play, which is Android's app management platform for enterprise users. Subsequently, all app licenses are managed by ZENworks through managed Google Play.

12.4.1 Approving Apps in Google Play

After creating an Android Enterprise Subscription in ZCC, visit [managed Google Play](#) to approve apps for distribution.

The type of apps that are made available for distribution are:

- ♦ **Public Apps**: Available to the general public in Google Play.




- ♦ **Private Apps:** : Customized apps developed for specific enterprise customers. These apps are of two types; Google-hosted private apps and Self-hosted private apps. For more information, see <https://developers.google.com/android/work/distribute>.

For more information on approving apps, see the [managed Google Play Help Center](#).



As soon as the apps are approved in managed Google Play, ZENworks identifies these apps and populates them in ZCC. Simultaneously, bundles are created for these apps within the Android Enterprise Subscription folder, thereby enabling you to distribute the apps to users. You can view these apps in the Apps Catalog page.

12.4.2 Viewing Approved Apps in ZENworks

The Apps Catalog page in ZCC provides a single view of all the approved Android and iOS apps. To view the Apps Catalog page, click the **Mobile Management** panel and click the **Apps Catalog** tab. This page displays the app details, which includes license information and consumption. Using this page, you can also perform the following tasks:

- ♦ **Create Bundles:** As soon as an Android Enterprise Subscription is configured, bundles for any approved apps are automatically created in ZENworks. However, you can create additional bundles by selecting an app or multiple apps (for each app an individual Android bundle is created) and clicking **Action > Create Bundle**. If a bundle for the same app already exists, then for the newly created bundle, the Android Enterprise Subscription name is suffixed to the name of the app. For subsequent bundles of the same app, a random GUID number is suffixed to the name of the app.
- ♦ **Edit Permissions:** You can edit the default Runtime Permissions for specific apps by selecting an app and clicking **Action > Edit Permissions**. For more information, see [Editing App Permissions](#).
- ♦ **Export as CSV:** You can export all the app information displayed on this page as a CSV file. Click **Export > As CSV**. A .ZIP folder is created. This .ZIP folder contains two files; a **Summary** file which will display all the app information that is already displayed in the summary page and a **Details** file which displays information such as on which users' devices the app is installed.
- ♦ **Search/Filter:** You can filter the data displayed on this page by specifying either the **App Name**, **Publisher**, or the **Android enterprise** account in the search field. You can further filter the data to view apps based on the platform or based on the bundles associated with the apps. For this, click  and select the appropriate option.
- ♦ **Show/Hide Columns** To manage the columns in this page, click  and select the columns that need to be displayed on the page. The columns available for display are as follows:
 - ♦ **App:** Displays the name of the app. You cannot hide this column. The following icons might appear against these apps that indicate the following:
 - ♦ : Indicates that the app is unapproved by the admin in the Google work store, removed by Google, unpublished by the app developer, or revoked due to permission changes. You will not be able to create bundles for these apps. All existing bundle


assignments will be retained and you need to remove these assignments manually, if required. Permissions for unapproved apps cannot be edited in ZCC. Also, any new bundle assignments will not be processed.

- ◆ : Indicates that the app contains permissions or configurations that require your attention. To update the permissions, select the app and click **Action > Edit Permissions**. To edit the configuration parameters, click the bundle count and navigate to the **Details** tab of the required bundle.
- ◆ **Publisher**: Displays the name of the app publisher.
- ◆ **Cost**: Displays the cost associated with the app.
- ◆ **Platform**: Displays the app platform.
- ◆ **Subscription Name**: Displays the name of the Android Enterprise Subscription.
- ◆ **Purchased**: Displays the number of Android app licenses approved.
- ◆ **Consumed**: Displays the number of app licenses that are consumed from Google Play. This indicates that the device has synced with the ZENworks Server and the app is sent to the device but might not necessarily mean that the app is installed on the device.
- ◆ **Available**: Displays the number of unused licenses that are available for consumption.
- ◆ **User Licenses Installed**: Displays the number of devices on which an app, having a user license, is installed. For example: if a specific app is assigned to a user having three devices associated and if the app is installed on only two devices, then the **User License Installed** count will be 2. You can select the **Export** option and view the **Details** file to identify the devices on which the app is installed.
- ◆ **User Licenses Consumed**: Displays the number of user licenses that are consumed from Google Play. This indicates that the device associated with the user has synced with the ZENworks Server and the app is sent to the device but might not necessarily mean that the app is installed on the device.
- ◆ **Device Licenses Installed**: This is not applicable for Android apps.
- ◆ **Device Licenses Consumed**: This is not applicable for Android apps.
- ◆ **Total Apps Installed**: Displays the user licenses installed.
- ◆ **App Size**: This is not applicable for Android apps.
- ◆ **iTunes ID**: This is not applicable for Android apps.
- ◆ **Total Bundles**: Displays the number of bundles created for the specific app. You can click the number to view the bundles. To view these bundles you need to have the relevant Bundle Rights assigned to you.
- ◆ **Update View**: Click  to initiate:
 - ◆ a sync between the ZENworks Server and the Google server to update the license information.


This option also revokes unused app licenses in the following scenarios:

- ◆ Mobile device management on the device is disabled.

- ◆ Device enrolled as **Managed Device Only** is unenrolled from the zone. In case of a user assignment, if the device is the last device associated with the user, then the app licenses are revoked from the user.
- ◆ User does not exist anymore. For Android enterprise apps, this check is performed only during the LDAP server refresh.


Unused app licenses are revoked when the device syncs with the ZENworks Server. Also, during specific intervals ZENworks automatically revokes unused licenses from devices that cannot sync with the ZENworks Server. However, if you do not want to wait for the device to sync or for ZENworks to automatically revoke licenses, then click  to revoke licenses immediately.

12.4.3 Editing App Permissions

ZENworks lets you edit the default runtime permissions of the approved work apps in the Apps Catalog page. Runtime permissions are a set of dangerous permissions as defined by Google. You can edit permissions for apps against which the  icon is displayed. This icon indicates that either the runtime permissions or managed configurations require your attention.

To edit the permissions, in the Apps Catalog page, select the app and click **Action > Edit Permissions**. The **Edit Permissions** dialog lists all the permissions used by the app. You can edit the **Runtime State** against each runtime permission. Any customized permissions created by the app developer that does not have a name associated with it, is displayed as a Custom Permission and its value cannot be edited. You can set the following values for the **Runtime State**:


- ◆ **Denied:** Automatically denies the permission and the user cannot edit the permission on the device.
- ◆ **Granted:** Automatically grants the permission and the user cannot edit the permission on the device.
- ◆ **Default:** Users can manage the permission through the device UI.

If the permissions are not edited in this dialog box, then the permissions as set in the assigned Mobile Device Control Policy will apply. After applying your changes, it will reflect on the device as soon as it syncs with the server. In the future, if the app developer updates the permissions, then these updates will be indicated by the  icon.

12.4.4 Managing App Configurations

As a part of the setup process, any work app requires users to specify their email addresses, the port and other configuration settings. Administrators can remotely specify settings for approved apps that are deployed to a work profile. This ensures that the settings are applied automatically as soon as the user launches the app, therefore the user is not required to take any action. To edit an app configuration parameter.

1. Click **Mobile Management > Apps Catalog**.
2. Identify the app against which the  icon is displayed. This icon indicates that either app permissions or managed configuration parameters require your attention.

3. Click the bundle appearing besides this app. Alternatively, you can directly navigate to the Bundles panel by clicking **Bundles** from the left hand navigation pane. The  icon will also appear against the relevant bundles to indicate that the configuration parameters require your attention.
4. After clicking a bundle, navigate to the **Details** tab.
5. Select a parameter and click **Edit**. The following are displayed in the **Edit App Configuration Parameter** dialog box.
 - ◆ A **Title** and a **Key** are displayed.
 - ◆ The **Type** of value that needs to be specified is displayed. The supported value types include boolean, string, integer with a value from MIN_VALUE (-2147483648) to MAX_VALUE (2147483647), choice, multi-select list and bundle array. For the bundle array type, to edit a parameter within a bundle, you need to click the bundle array appearing in the **App Configuration Parameters** section and drill-down to its parameters. You can also click **Add** to configure multiple bundles within a bundle array that will include the same parameters as the existing bundle.

NOTE: The Bundles and bundle arrays feature used within Managed App Configurations is specific to Google and are not related to the Bundles feature in ZENworks. Also, this feature is only supported on Android M (6.0) or later versions. On versions older than Android 6.0, these properties are silently dropped on the devices.

Also, if the configuration parameters of an app is not in accordance with Google's guidelines, then these parameters will not be displayed by ZENworks. For more information, see [Table 1: Restriction entry types and usage](#).

-
- ◆ A short description of the parameter is displayed as provided by the app developer.
 - ◆ Specify the corresponding value for the key. You can also specify custom or built-in system variables such as:
 - ◆ `#{LoginName}`: Retrieves the user login name in the configured user source.
 - ◆ `#{Email}`: Retrieves the first email address associated with the user from the user source.
 - ◆ `#{ActiveSyncLogonName}`: Retrieves the ActiveSync logon attribute from the user source. This attribute is used to authenticate to the ActiveSync Server while configuring an email account on the device.

NOTE: If an incorrect built-in or custom variable is specified, then the bundle will not deploy to the device.

You can also restore the default values set by the app developers for any of the parameters. To do this, select a parameter and click **Default** on the top panel. The app configuration will be pushed to the device when the app is distributed.

12.4.5 Assigning Android Bundles to Users

Android enterprise bundles can be assigned to only users. ZENworks lets you distribute these apps in two ways:

- ♦ Silently install apps on users' devices. This can be performed for mandatory apps.
- ♦ Make the app available in Google Play Store on the users' devices.

To assign apps to users:

- 1 Navigate to an Android bundle from the **Apps Catalog** page. Alternatively, click **Bundles** in the left hand pane in ZCC.
- 2 Select the bundle and click **Action > Assign to User**.
- 3 Select the users to whom this bundle needs to be assigned, in the **Select Objects** page. Click **OK**.
- 4 Select the schedule based on which the app is installed on the device and click **Next**. The options are:
 - ♦ **Next Refresh:** Indicates that a notification to install the app is sent to the device on the subsequent refresh of the device. On refresh, the app will be either installed on the device or made available in Google Play Store on the user's device, which is determined by the selection made in the subsequent checkbox. This is a onetime notification and will not be re-sent by the ZENworks server if the user uninstalls the app
 - ♦ **Allow users to install from the managed Google Play store:** Select this checkbox if you want the app to be made available in Google Play store on the device. Users can install the app whenever needed. If this box is left unchecked, then the app silently installs on the device.
 - ♦ **Every Refresh:** Indicates that a notification to install the app is sent to the device each time a refresh action is performed on the device. On refresh, the app will be installed on the device. If the user uninstalls the app, then again on the next refresh to the ZENworks server, this app will be installed on the device
- 5 Review the summary page and click **Finish**.

All apps are distributed to the devices through managed Google Play. As soon as a licensed app is distributed to the device, managed Google Play updates the app's license count and sends the information to ZENworks. The updated license count is displayed in the Apps Catalog page. Similarly, when a licensed app is unassigned from a device, managed Google Play revokes the app license and the license information is also updated in the Apps Catalog page in ZENworks.

12.5 Securing the Device

The settings in the existing Mobile Security Policy and Mobile Device Control Policy have been extended to secure devices enrolled in the work profile and work-managed device mode.

12.5.1 Applying Profile Password and Inactivity Restrictions

Using the Mobile Security Policy, you can configure password restrictions and inactivity settings for devices enrolled in the work profile and work-managed device mode. For more information on creating and assigning a Mobile Security Policy, see [Mobile Management Reference](#).

These settings are applicable for Android 7.0 devices or later. To configure these settings:

- 1 Click **Policies** from the left hand pane in ZCC.
- 2 Click the Mobile Security Policy that you have created.
- 3 Click the **Details** tab.

Alternatively, select **Define Additional Properties** while creating the Mobile Security Policy.

Securing the work profile

Click **Profile Security** to set the password and other settings on devices enrolled in the work profile mode. To enable the **Profile Security** settings, select **Yes** from the **Secure Work Profile** drop-down list, based on the ownership type with which the devices are enrolled (Corporate or Personal).

NOTE: If you have assigned the profile security password settings to a device and the *Use one lock* feature is enabled on the same device (under *Settings > Security*), then the password setting with a stricter restriction is applied both on the device as well as the work profile. For example, if the configured work profile password is more complex than the configured device password, then the work profile password is used to unlock the device as well.

Setting Password Restrictions

The Password settings are listed in increasing order of complexity (strictness). If more than one setting applies to a device, the more complex (strict) setting is enforced. For more information on the device password settings, see [Editing Mobile Security Policy Settings](#).

Setting Inactivity Restrictions

Setting	Description
Require inactivity lock	Confirms that the device should be locked if the work profile has been inactive for a specified period of time.
	Applies only if Require inactivity lock is set to Yes .
Maximum inactivity timeout (minutes)	Specifies the maximum number of minutes the user can set for the inactivity lock. For example, if set to 5, the user can set the inactivity timeout up to 5 minutes.
Wipe profile on failed number of unlock attempts	Wipes the work profile after the specified number of failed attempts to unlock the device.

Setting	Description
Maximum number of unlock attempts	<p>Applies only if Wipe profile on failed number of unlock attempts is set to Yes.</p> <p>Specifies the number of failed attempts to unlock the work managed app that is allowed before the work profile is wiped. For example, if set to 10, the profile is removed after the 10th failed attempt.</p>

Securing a work-managed device

The settings in the **Device Password**, **Encryption** and **Device Inactivity** tabs can be applied to a work-managed device. For more information on each of these settings, see [Editing Mobile Security Policy Settings](#).

12.5.2 Applying Device Restrictions

Using the Mobile Device Control Policy, you can apply restrictions on devices enrolled in the work-managed device and work profile mode. To create and assign this policy, see [Creating a Mobile Device Control Policy](#). The check mark in the **Work Profile** and **Work Managed** columns indicate that the setting is applicable for either of the modes or both. To apply restrictions:

- 1 Click **Policies** from the left hand pane in ZCC.
- 2 Click the Mobile Device Control Policy that you have created.
- 3 Click the **Details** tab.
- 4 Click **Android**.

Android

The settings that can be enabled or disabled for Android devices are as follows:

	Settings	Description	Applicable from
Devices	Allow camera	Determines whether the device camera should be enabled. If disabled on devices enrolled in the work profile mode, the camera can still be accessed from the device's personal space.	Android 5.0+
	Allow install from unknown sources	Determines whether or not the user can install apps from outside the managed Google Play Store.	Android 5.0+
	Allow debugging features	Determines whether or not debugging of the device can be enabled.	Android 5.0+
	Allow screenshots	Determines whether the user can capture images of the device's display screen.	Android 5.0+

	Settings	Description	Applicable from
Apps	Allow Copy and Paste	Determines whether the user can copy and paste data between the work profile and the personal space on the device.	Android 7.0+
	Runtime permissions	Select the default response for any runtime permissions requested by apps. For more information, see the Android Developer Documentation (https://developer.android.com/training/permissions/requesting.html) . You can select any one of the following values: <ul style="list-style-type: none"> ◆ Prompt: Allows the user to grant or deny permissions to the apps. ◆ Auto Grant: Automatically grant permissions to the apps. ◆ Auto Deny: Automatically denies permission to the apps. 	Android 6.0+
	Allow adding accounts	Determines whether the user can add or remove accounts to access work apps. However, this setting should be used with caution, as by enabling it users can also add their personal accounts to access work apps, which might make it difficult to contain corporate data within the workspace.	Android 5.0+

12.6 Monitoring Device Compliance

To ensure that devices are compliant with the assigned rules and policies, you can create and assign a Mobile Compliance Policy to the Android devices enrolled in the work profile and work-managed device mode. The Mobile Compliance Policy contains a pre-defined event based on which the compliance of a device is monitored. Using the Compliance Dashboard you can view the compliance status of the devices.

12.6.1 Creating and Assigning a Mobile Compliance Policy

To create a Mobile Compliance Policy:

- 1 Click **Policies** in the left hand pane in ZCC.
- 2 Click **New > Policies** and click **Next**.
- 3 Click **Mobile** and click **Next**.
- 4 Click **General Mobile Policies** and click **Next**.
- 5 Click **Mobile Compliance Policy** and click **Next**.
- 6 Specify a policy name, policy folder and a short description.

7 Click the pre-defined event **Non-compliance with Security Policy** to configure the audit, restrict, and remediate settings for non-compliant devices. This event is applicable for devices that do not comply with the assigned Mobile Security Policy. Configure the following:

- ◆ **Audit:** You can enable auditing for this event for devices that become non-compliant with the assigned Mobile Security Policy.
- ◆ **Restrict:** You can enforce the following restrictions on non-compliant devices that will be applied after the specified number of days defined in the **Restrict After** field.
 - ◆ **Restrict Work Apps** on Android devices.
- ◆ **Remediate:** You can enforce remediation actions, that is, **Remove work profile** or **Factory reset the work-managed device**, on non-compliant devices that will be applied after the specified number of days defined in the **Remediate After** field. The device will be unenrolled from ZENworks and retired.

For example: if the number of days specified in the **Restrict After** field (appearing in the **Restrict** tab) is 1 and in the **Remediate After** field (appearing in the **Remediate** tab) is 2 for a device that was reported as non-compliant on January 1st, then the device will be allowed 1 day (24 hours) to become compliant again, failing which device restrictions will be applied on January 2nd. If the device does not become compliant even after 2 days (48 hours) of being non-compliant, the device remediation actions will be applied on January 3rd. The remediation actions will be applied irrespective of whether restrictions are applied on the device or not.

NOTE: The restriction and remediation actions are applied only when the device syncs with the ZENworks server.

You can also configure the event logging and notification settings for each of the **Audit**, **Restrict**, and **Remediate** settings:

- ◆ **Event Logging:** To view the audit logs navigate to **Audit and Messages > Events > Agent Events > Mobile > Compliance**
 - ◆ **Event Classification:** Based on the nature of the event, classify the event as **Critical**, **Major** or **Informational**.
 - ◆ **Days to Keep:** Specify the number of days to keep the audit log before purging it.
- ◆ **Event Notification:** You can notify the user of device non-compliance by sending a message to the user's device. On enabling, you can configure a custom message, which will be sent to the device.

8 Review the summary page and click **Finish**.

12.6.2 Viewing the Compliance Dashboard

The compliance dashboard provides a single view of the compliance status of the devices in the zone.

For more information on the Compliance Dashboard feature, see [Dashboard](#).

12.7 Unenroll from Android Enterprise

The organization can unenroll from Android Enterprise Management by deleting the Android Enterprise Subscription from ZCC.

You can also remotely remove the work profile from devices or factory reset a work-managed device.

12.7.1 Unenrolling the Organization

To unenroll from Android enterprise management, you should delete the Android Enterprise Subscription from ZENworks Control Center.

Before deleting the Android Enterprise Subscription, administrators should be aware of the following:

- ◆ NCC credentials are required to delete the subscription.
- ◆ By deleting the Android Enterprise Subscription, your enterprise will be unenrolled from managed Google Play. However, data associated with this subscription will be deleted only after 30 days. Within the next 30 days, if you create a new Android Enterprise Subscription using the same email ID, ZENworks might be able to recognize the enterprise details and restore the subscription data.
- ◆ The user context associated with the deleted subscription, cannot be associated with the new subscription. You can select an alternate user context. If you still want to use the same user context then either wait for 30 days or run the `zman subscription-clear-ae` command.
- ◆ You can also delete the organization from managed Google Play. The subscription and its data will be deleted from ZENworks only after 24 hours. To delete the organization from managed Google Play:
 1. Navigate to [Managed Google Play](#) and log in using the credentials that you had used to create the Android Enterprise Subscription.
 2. On the left hand panel, click **Admin Settings**.
 3. In the Organization Information panel, click the hamburger menu and click **Delete Organization**.
 4. Confirm your action in the Delete Organization pop-up.

To delete the Android Enterprise Subscription:

- 1 In ZCC, click Subscribe and Share.
- 2 In the Subscription panel, select the subscription, and click Delete.
- 3 In the Delete Subscription pop-up, specify the NCC credentials, and then click OK.


NOTE: To delete the data associated with unenrolled subscription, run the `zman sca` command. All data including bundles, apps, users and other data associated with unenrolled subscription will be deleted from ZENworks.

12.7.2 Unenrolling a Device

Using the existing **Unenroll** quick task in ZCC, you can remotely wipe the work profile while leaving the personal data intact or factory reset a work-managed device.

- 1 In ZENworks Control Center, click **Devices** > **Mobile Devices** to display your enrolled mobile devices.
- 2 Select the check box in front of the mobile device, click **Quick Tasks** > **Unenroll Device** to display the Unenroll dialog box.
- 3 Select any one of the following data removal option:
 - ♦ **Selectively wipe the devices, by removing only corporate data and email:** Removes only the work profile on the device as well as the ActiveSync account (if configured within the work profile).
 - ♦ **Fully wipe the devices, resetting them to factory settings:** Factory resets a device enrolled in the work-managed device mode.
- 4 Select **Delete the devices from the zone** or select **Retire the devices (devices remain in the zone)**. Enter a reason for unenrolling the device, then click **Next** to display the quick task options.
- 5 Leave the quick task options set to the defaults and click **Start** to send the task to the device.
- 6 Click **Hide** to close the quick task after the quick task is initiated.

NOTE: If the device is offline and the **Delete** option is selected, then the status of the device changes to **Wipe Pending**. Subsequently, the device will be deleted when it is online. However, if **Retire** is selected, then the device status changes to **Retired** irrespective of whether the device is online or offline.

- 7 Click  in the upper-right corner of the **Devices** list to refresh the list.

If the **Delete the devices from the zone** option was selected, then the device is no longer listed. However, if the **Retire the devices** option was selected, then the device will be listed with the status as retired.

13 Managing Intune Apps

Mobile Application Management or MAM enables administrators to manage only specific apps on users' devices without having to manage the entire device. Leveraging on these capabilities, ZENworks enables you to secure apps built using the Intune Software Development Kit (for example, Office 365 apps). To secure these apps, ZENworks lets you create an app protection policy that can be enforced on both managed and unmanaged devices. Using the app protection policy, you can enforce restrictions such as disabling the option to copy and paste content from Intune apps and mandating the need of a PIN to access an Intune app.

The topics covered in this chapter are as follows:

- ♦ [Section 13.1, "Prerequisites," on page 139](#)
- ♦ [Section 13.2, "Configuring Microsoft Graph API," on page 140](#)
- ♦ [Section 13.3, "Creating the App Protection Policy," on page 142](#)
- ♦ [Section 13.4, "Editing the App Protection Policy Settings," on page 143](#)
- ♦ [Section 13.5, "Assigning the App Protection Policy," on page 148](#)
- ♦ [Section 13.6, "Disabling or Enabling the App Protection Policy," on page 148](#)
- ♦ [Section 13.7, "Viewing and Wiping Intune Protected Apps," on page 149](#)

13.1 Prerequisites

Before proceeding with the configuration, ensure that you have the following in place:

Intune

- ♦ The Azure administrator and end users should have an Microsoft Enterprise mobility + Security license.
- ♦ The Azure administrator should have an Intune Service Administrator role or a Privileged Role administrator linked to the Azure account. For more information, see the [Microsoft Documentation](#).

ZENworks

- ♦ Enable the following admin rights in ZENworks:
 - ♦ **Configure Intune App Management** under Zone Rights.
 - ♦ **Modify Settings** under Zone Rights.
 - ♦ **Modify** under User Rights.
- ♦ Ensure that the ZENworks server that will be used to configure Microsoft Graph API and manage Intune apps, has outbound connectivity to contact the Azure portal.
- ♦ Ensure that you always allow pop-ups for the ZCC page from which Microsoft Graph API is being configured.

- ◆ Ensure that the local Active Directory user context (to which this configuration will be associated) is synced with Azure Active Directory (AD). You also need to ensure that the following attributes present in the local user source are synced with the Azure AD:
 - ◆ *objectsid*
 - ◆ *userprincipalname*

13.2 Configuring Microsoft Graph API

To enable ZENworks to apply the protection policies, you need to first configure Microsoft Graph API, which acts as a gateway to Microsoft Azure services. Microsoft exposes Azure services through REST endpoints. Using this REST endpoint, ZENworks can send requests to Azure to perform specific operations related to Intune App Management.

To configure Microsoft Graph API in ZENworks, you need to navigate to **Configuration > Management Zone Settings > Intune App Management**. On the **Intune App Management** page, you need to perform the following tasks to configure Microsoft Graph API:

- ◆ **Registering an application:** Register your app to obtain an application ID along with other relevant data required to authenticate to Azure Active Directory. A registered application is unique to a tenant. By registering an app, ZENworks can authenticate to Azure Active Directory to obtain an access token required to manage Intune apps related to your tenant. For more information on tenant, see the [Microsoft Documentation](#).
- ◆ **Generating an access token:** Generate an access token using the details obtained while registering your app. Using this token, ZENworks can make REST calls with Microsoft Graph, which in turn validates the entity (in this case ZENworks) and ensures that ZENworks has the relevant permissions to perform the requested operations.
- ◆ **Associating users:** Associate the user contexts (that contains one or more user groups) within ZENworks that should be a part of this configuration. ZENworks can apply protection policies to only those user groups that are part of the associated user context.

NOTE: When you choose to manage Intune Apps using ZENworks, it is recommended to use only ZENworks to perform any further management operations. Any edits made to the Intune App Protection policy directly in the Azure portal, will not be synced back to ZENworks. Also, these modifications might be overwritten, when the policy is re-published in ZENworks.

13.2.1 Application Registration

To register your application with the Microsoft App Registration Portal:

1. Navigate to **Configuration > Management Zone Settings > Intune App Management**
2. Click **Copy URL** to copy the callback URL of the ZENworks server with which Microsoft Graph API is being configured. You need to specify this URL in the Microsoft portal.
3. Click the [Microsoft Application Registration portal link](#) to register your app.
4. Sign in to the registration portal using your Microsoft account.
5. Click **Add an app** on the top right hand corner on the page.
6. Specify the application name (example: ZENworks) and click **Create Application**. The properties of your app are displayed.

7. Click **Add Platform** and select **Web**.
8. Paste the callback URL that you had copied earlier, in the **Redirect URLs** field.
9. Copy the application ID, which is the unique identifier for your app. This Application ID is required to generate an access token in ZCC.
10. In the Application Secrets section, click **Generate New Password**. Copy the password, which will be used to generate an access token in ZCC.
11. Click **Save**.

13.2.2 Access Token

1. In ZCC, navigate to **Configuration > Management Zone Settings > Intune App Management**
2. Click **Generate Token**.
3. Specify the **Application ID** and the **Application Password** that you had copied from the Microsoft Application Registration portal. Click **OK**.

You will be navigated to the Microsoft portal where you need to sign in using the same credentials that were used to register the app. After signing-in, accept the requested permissions. After generating the token, you will be redirected to ZCC and the token details will be populated.

After the token is generated, you can perform the following tasks, whenever required.

- ♦ **Test token:** You need to perform this task if you want to validate the token and ensure that it is active.
- ♦ **Renew Token:** You need to perform this task when any of the Intune app management related operations fail due to token expiry.

NOTE: If the tenant ID in the renewed token is different from the tenant ID used in the existing configuration, then all the associated policies in ZENworks will become ineffective. However, the policy will be retained both in ZENworks and Azure. You can continue to create new policies using the new tenant ID. However, if you want to remove the existing policies in ZENworks and in Azure, then you need to remove the Microsoft Graph API configuration and re-configure it by generating the token with the new tenant ID.

- ♦ **Remove Configuration:** If you remove this configuration, the associated user contexts and all existing app protection policies are removed from ZENworks and Azure.

13.2.3 User Association

You can associate one or more user contexts with this configuration. You need to ensure that these selected user contexts are synced with Azure Active Directory. The Intune app management operations can only be performed on the user groups present in the selected user context:

1. Click **Add**.
2. Select the user context and then click **OK**.

After configuring Microsoft Graph API, click **OK** to save the updated configuration.

13.3 Creating the App Protection Policy

The iOS Intune App Protection policy lets you apply protection settings on Intune apps that are installed on only iOS devices. After creating this policy, ZENworks establishes a connection with Azure and creates the policy with the same settings in the Azure portal. Subsequently, any changes made to the policy in ZCC will be replicated in Azure.

NOTE: With an iOS Intune App Protection policy, you cannot:

- ◆ Create a Sandbox version of the policy
 - ◆ Add the policy within a policy group.
 - ◆ Assign the policy to individual users. This policy can be assigned to only user groups. This is a Microsoft limitation.
-

It is recommended that you use ZCC to create and edit this protection policy. Any edits made to the policy directly in the Azure portal will not be synced back to ZENworks.

To create this policy:

- 1 Click **Policies** in the left hand pane in ZCC.
- 2 On the **Select Platform** page, select **Mobile** and click **Next**.
- 3 On the **Select Policy Category** page, select **iOS** and click **Next**.
- 4 On the **Select Policy Type** page, retain the default selection **iOS Intune App Protection Policy** and click **Next**.
- 5 On the **Define Details** page, specify the Policy Name, the folder in which the policy should reside, and short description of the policy.
- 6 On Microsoft Intune Apps page, select the apps on which the restrictions should be applied. You can also click **Add** to include a custom app. A custom app is an in-house app that is not published on the Azure app portal. While adding a custom app, you need to specify the name of the app and its package ID. Click **Next**.
- 7 On the App Protection Settings page, assign a security level. Based on the security level selected, the pre-defined values for each setting is populated. However, these values can be customized to suit your requirement:
 - ◆ **Low:** A few restrictions are enforced on the device. Some of the values pre-configured with this security level are:
 - ◆ The default value for **Recheck the access requirements after offline grace period** is 12 hours.
 - ◆ The default value for **Offline interval before app data is wiped** is 90 days.
 - ◆ The default value for **Restrict web content to display in managed browser** is No.
 - ◆ **Moderate:** Some restrictions are enforced on the device. Some of the values pre-configured with this security level are:
 - ◆ The default value for **Recheck the access requirements after offline grace period** is 6 hours.
 - ◆ The default value for **Offline interval before app data is wiped** is 30 days.
 - ◆ The default value for **Restrict web content to display in managed browser** is Yes.

- ♦ **High:** Most restrictions are enforced on the device. Some of the values pre-configured with this security level are:
 - ♦ The default value for **Recheck the access requirements after offline grace period** is 1 hour.
 - ♦ The default value for **Offline interval before app data is wiped** is 7 days.
 - ♦ The default value for **Allow simple PIN** is No.
 - ♦ The default value to **Disable contact sync** is Yes.
- 8 On the Summary page, review the information. You can also click **Define Additional Properties**, if you want to edit the values of the settings. Click **Finish**.

On clicking Finish, ZENworks calls the Azure REST APIs and creates the same policy in Azure. At times, policy creation might fail in Azure. You can identify the reason for failure by navigating to the summary page of policy in ZCC (click the policy in the **Policies** panel in ZCC) and checking the message logs. For more information on the possible reasons for failure, see [Intune App Management](#).

13.4 Editing the App Protection Policy Settings

Based on the security level selected while creating the iOS Intune App Protection Policy, the settings that are predefined by ZENworks can be viewed or edited by performing the steps elaborated in this section. As this policy, does not support creation of a Sandbox version, when you edit any of the settings within this policy, the policy needs to be published as a new version. For more information, see [Publishing the App Protection Policy](#).

13.4.1 Procedure

- 1 In ZENworks Control Center, navigate to the **Policies** section.
- 2 Click the iOS App Protection Policy for which the content needs to be configured.
- 3 Click the **Details** tab and edit the settings.

NOTE: If you had selected **Define Additional Properties** while creating this policy, after clicking the **Finish** button you will be directly navigated to the **Details** tab.

Apps

You can edit the list of apps that you had selected in the policy. You can also click **Add** to include custom apps to this list.

Settings

There are two categories of iOS Intune App Protection Policy settings: **Data Relocation** settings and **App Access** settings.

Data Relocation

Setting Name	Description
Prevent iTunes and iCloud backups	If you select Yes app data will not be backed up to iCloud or iTunes.
Allow app to receive data from other apps	Select one of the following options to specify from which app, data can be received: <ul style="list-style-type: none">♦ All apps: Allow data to be received from all apps.♦ Policy managed apps: Allow data to be received from other policy-managed apps.♦ None: Do not allow data to be received from any app.
Allow app to transfer data to other apps	Select one of the following options to specify to which app, data can be transferred. <ul style="list-style-type: none">♦ All apps: Allow data to be transferred to all apps.♦ Policy managed apps: Allow data to be transferred to other policy-managed apps.♦ None: Do not allow data to be transferred to any app.
Prevent "Save As"	If you select Yes the Save As option on the app will be disabled.
Select the storage services to which the corporate data can be saved	This field will be enabled if the Prevent "Save As" option is enabled. You can select specific storage services to which the app data can be saved, such as Sharepoint, Onedrive or the local storage. Use CTRL + Click to select multiple values in the field.
Restrict cut, copy, and paste with other apps:	Select from any one of the following options to restrict or allow cut, copy, or paste operations: <ul style="list-style-type: none">♦ Any app: Allow cut, copy, and paste actions between this app and any app.♦ Policy managed apps: Allow cut, copy, and paste actions between this app and any other policy-managed app.♦ Policy managed with paste in: Allow cut, copy, and paste actions between this app and any other policy-managed app. Allow data from any app to be pasted into this app.♦ Blocked: Do not allow cut, copy, and paste actions between this app and any other app.
Restrict web content to display in the Managed Browser	Select Yes to restrict the opening of web links displayed in the app to the Managed Browser app.

Setting Name	Description
Encrypt app data	<p>Select from one of the following options to decide when the app data should be encrypted:</p> <ul style="list-style-type: none"> ◆ Use device settings: App data is encrypted based on the default settings on the device. ◆ After device restart App data is encrypted when the device is restarted, until the device is unlocked for the first time. ◆ When device is locked and there are open files: App data is encrypted while the device is locked, except for data in the files that are currently open in the app. ◆ When device is locked: App data is encrypted when the device is locked. <p>When a PIN is required, the data is encrypted according to the settings in this policy. If a device PIN is not set and if these encryption settings are enabled, then the user will be prompted to set a PIN.</p>
Disable contact sync	Select Yes to prevent the app from saving data to the native Contacts app on the device.
Disable printing	Select Yes to prevent the app from printing protected data.

App Access

Setting Name	Description
Require PIN for access	Select Yes to create a PIN for this app. The user will be prompted to setup a PIN the first time they run the app. The following fields will also be enabled: <ul style="list-style-type: none">◆ PIN Type◆ Number of attempts before PIN reset◆ Allow simple PIN◆ PIN length◆ Allow fingerprint instead of PIN◆ Allow facial recognition instead of PIN◆ Disable app PIN when device PIN is managed
PIN Type	Select the type of PIN to be set, that is, a numeric PIN or a passcode type PIN.
Number of attempts before PIN reset	Specify the number of times the users can attempt to enter the PIN before they must reset it. You can specify only a positive whole number.
Allow simple PIN	Select Yes to allow users to specify a simple PIN sequence such as 1111 and 1234. NOTE: If a Passcode type PIN is configured, and Allow simple PIN is set to Yes , you need to specify at least 1 letter or at least 1 special character. If Passcode type PIN is configured, and Allow simple PIN is set to No , you need to specify at least 1 number, 1 letter and 1 special character.
PIN length	Specify the number of digits in the PIN sequence. You can only specify a positive whole number.
Allow fingerprint instead of PIN	Select Yes to allow the user to use fingerprint identifications instead of a PIN to access the app. This is applicable only on iOS 8.0 or newer versions.
Allow facial recognition instead of PIN	Select Yes to allow the user to use facial recognition instead of a PIN to access the app. This is applicable only on iOS 11.0 or newer versions.
Disable app PIN when device PIN is managed	Select Yes to disable the app PIN when a device lock is detected on an enrolled device.
Require corporate credentials for access	Select Yes to require the user to use their corporate credentials instead of entering a PIN for app access.
Block managed apps from running on jailbroken or rooted devices	Select Yes to prevent this app from running on jailbroken or rooted devices.

Setting Name	Description
Offline interval before app data is wiped (days)	If a device is running offline, specify the number of days after which the app will require the user to connect to the network and re-authenticate. If the user successfully authenticates, they can continue to access their data and the offline interval will reset. If the user fails to authenticate, the app will perform a selective wipe of the users account and data.
Recheck the access requirements after timeout (minutes)	Specify the time (in minutes) after which the access requirements are rechecked.
Recheck the access requirements after offline grace period (minutes)	Specify the time (in minutes) that the app can run offline, after which the access requirements are rechecked.
Require minimum iOS operating system	Select Yes if a minimum iOS operating system is required to use the app. The user's access to the app will be blocked if the minimum OS requirement is not met. You can specify the value in the iOS operating system field.
Require minimum iOS operating system (Warning only)	Select Yes if a minimum iOS operating system is required to use the app. The user will receive a notification if the minimum OS requirement is not met, which can be dismissed. You can specify the value in the iOS operating system field.
Require minimum app version	Select Yes if a minimum app version is required to use the app. The user's access to the app will be blocked if the minimum app version requirement is not met. You can specify the value in the App version field.
Require minimum app version (Warning only)	Select Yes if a minimum app version is required to use the app. The user will receive a notification if the minimum app version requirement is not met, which can be dismissed. You can specify the value in the app version field.
Require minimum Intune app protection policy SDK version	Select Yes if a minimum Intune app protection policy SDK version is required to access the app. The user is blocked from access if the app's Intune app protection policy SDK version does not meet the requirement.

- 4 Click **Publish** to display the Publish Option page. In this page you can publish the modified policy as a new version of the same policy or as a new policy.

13.4.2 Publishing the App Protection Policy

Unlike other policies in ZCC, you cannot create a Sandbox version of the iOS Intune App Protection policy. When you edit the settings of the latest version of the policy, you can only publish the policy as a new version. To edit the older version of a policy:

1. Click **Policies** in the left hand pane in ZCC.

2. Click an iOS App Protection Policy.
3. From the **Displayed Version** drop-down menu select a version of the policy that you want to edit.
4. Click **Publish** and publish the policy to its latest version.
5. Edit the settings of the policy and click **Publish** to apply the latest changes.

Consider a scenario, where version 0 is selected of the two published versions (version 0 and version 1) of the policy. After selecting version 0, click **Publish** to publish the policy to its latest version, that is Version 2. You can now edit the settings of the policy and publish the policy again as Version 3.

13.5 Assigning the App Protection Policy

As mandated by Microsoft, the iOS Intune App Protection policy can be assigned to only user groups. This policy cannot be assigned to individual users or to devices. You also need to ensure that the selected user group is part of the same user context associated while configuring Microsoft Graph API. For more information, see [User Association](#). When the policy is assigned, ZENworks calls the Azure REST APIs and the same policy assignment is replicated in Azure, after which the protection settings are enforced on the users' devices. The user group in Azure is identified based on the *OnPremisesSecurityIdentifier* value, which is matched with the *objectsid* attribute value of the user group selected in ZENworks.

After assigning the policy, it is recommended that you review the policy message logs to identify any errors that might have occurred while replicating the policy assignment in Azure. To view the policy logs, navigate to the summary page of the policy (click the policy in the **Policies** panel) and view the message logs to identify the reason for failure, if any. For more information on the possible reasons for failure, see [Intune App Management](#).

13.5.1 Procedure

- 1 To assign the policy to the user group, from the **Policies** list, select the check box in front of the policy, then click **Action > Assign to User**.
- 2 In the Select Object dialog box, browse for and select the user group to whom you want to assign the policy, click **OK** to add them to the list and then click **Next**.
- 3 Review the summary page and click **Finish** to complete the assignment.

13.6 Disabling or Enabling the App Protection Policy

By default the iOS Intune App Protection policy is enabled during creation. When the policy that is enforced on users' devices is disabled, the user assignment is retained in the ZENworks Database but removed in the Azure portal. Subsequently, the policy is removed from the devices. Also, you will not be able to enforce a disabled policy to a user's device.

To disable a policy:

1. Click the **Policies** tab.
2. Select the checkbox next to the policy that you want to enable.
3. Click **Action > Disable Policies**.

When a disabled policy is enabled, the user assignment of the policy in ZENworks is restored. To enable the disabled policy:

1. Click the **Policies** tab.
2. Select the checkbox next to the policy that you want to enable.
3. Click **Action > Enable Policies**.

13.7 Viewing and Wiping Intune Protected Apps

In the Intune App Protection panel, you can view the devices belonging to a specific user who has logged into the Intune apps installed on the device. The panel displays the user's devices if the user is logged into at least one Intune app regardless of whether an app protection policy is applied to the app or not. You can also remove app data from the logged-in apps by initiating a wipe. The information displayed in this panel is directly obtained from Azure.

To view the Intune App Protection panel:

1. In ZENworks Control Center, click the **Users** section in the left hand panel.
2. Navigate to the user whose Intune apps you want to view or wipe and click the user to open the **Details** page.
3. Click the link to view the list of devices that belong to the user, in the **Intune App Protection** panel. The user should be directly associated with the user context linked with the Microsoft Graph API configuration. If the user of another user context is only referenced from the associated user context, then the Intune App Protection information will not be populated for the user.

The information displayed in this panel is obtained from Azure. ZENworks uses the *userprincipalname* object attribute to map the user in the local user source with that in Azure AD.

To wipe the protected app data, you can select one or more devices and click **Action > Wipe App Data**. On clicking **Wipe App Data**, and on confirming the Wipe action, ZENworks initiates a request with Azure to wipe the app data. Hence, the time taken to wipe the data from the app is dependent on when the app syncs with Azure. On performing wipe, corporate data is removed from all the logged-in apps and the user is logged off from the apps.

The **Intune App Protection** panel displays the following information:

- ♦ **Device Name:** The name of the device that belongs to the user.
- ♦ **Platform:** The device platform, that is, iOS or Android.
- ♦ **Operating System Version:** The version of the operating system on the device.
- ♦ **Logged-in Apps:** Displays the number of apps that the user is logged into. The count includes both protected as well as unprotected apps. Protected apps are those on which an app protection policy is applied. Whereas, unprotected apps are those on which an app protection policy is not applied.

You can also view the status of the wipe action and other information for each logged-in app, by clicking the link appearing against each device in the **Logged-in apps** column. On clicking the link, the following information is displayed:

- ♦ **App Name:** Name of the app.

- ◆ **Intended Policies:** Names of the app protection policies assigned to the app. These include policies that are already enforced and are yet to be enforced on the app.
- ◆ **Applied Policies:** Names of the app protection policies enforced on the app when it last synced with Azure.

NOTE: Policies that are created directly in Azure and those configured using ZENworks are displayed in the intended or applied policies section. Policies that are configured in ZENworks are displayed with a link that will redirect you to the policy's summary page in ZENworks.

- ◆ **Status:** The status of the app are displayed, which are out of sync, synced, not synced, wipe pending and unprotected. The **Unprotected** status indicates that the app is not included in the assigned app protection policy.
- ◆ **Last Sync:** The date and time that the logged-in app last synced with Azure.

14 Enrolling a Device

ZENworks supports enrollment through:

- ♦ **Apple Device Enrollment Program:** Applicable for DEP enabled iOS devices.
- ♦ **Apple Configurator:** Applicable for iOS devices
- ♦ **ZENworks User Portal:** Applicable for iOS and Android devices, and other devices with ActiveSync capabilities (including Windows devices).

Before enrolling (registering) a device to the ZENworks Management Zone, you need to understand the different ways in which ZENworks can manage a device. This will help you in evaluating the manner in which the device needs to be managed, thereby enabling you to select the right enrollment options. These enrollment options can be configured in the Mobile Device Enrollment policy that needs to be assigned to the users before their devices are enrolled.

IMPORTANT: Before enrolling the devices, you need to ensure that the ZENworks 2017 release version is deployed on all the Primary Servers within your management zone.

NOTE: For more information to enroll devices in the work profile or work-managed device modes as a part of Android in the enterprise, see [Enrolling Devices](#). For more information on unenrolling devices, see [Unenrolling a Device](#).

- ♦ [Section 14.1, “Types of Enrollment,” on page 151](#)
- ♦ [Section 14.2, “Modes of Enrollment,” on page 152](#)
- ♦ [Section 14.3, “Creating a Mobile Enrollment Policy,” on page 154](#)
- ♦ [Section 14.4, “Editing Mobile Enrollment Policy,” on page 156](#)
- ♦ [Section 14.5, “Assigning a Mobile Enrollment Policy,” on page 156](#)
- ♦ [Section 14.6, “Inviting Users to Enroll Devices,” on page 156](#)
- ♦ [Section 14.7, “Enrolling an iOS DEP Device,” on page 157](#)
- ♦ [Section 14.8, “Enrolling an iOS Device through Apple Configurator,” on page 158](#)
- ♦ [Section 14.9, “Enrolling devices using the ZENworks User Portal,” on page 162](#)
- ♦ [Section 14.10, “Allowing Manual Reconciliation by User,” on page 184](#)

14.1 Types of Enrollment

ZENworks lets you enroll your devices in either of the following ways:

- ♦ **Managed Device:** Enables ZENworks to fully manage a device by performing various device management operations such as apply policies to the device, deploy applications on the device, synchronize email for Exchange ActiveSync accounts, and capture device information (inventory). Only iOS or Android devices can be enrolled as fully managed devices. Full

management of an Android device is performed through the ZENworks Agent App that is hosted on the Google Play Store. Full management of an iOS device is performed through the device's in-built MDM client.

To enable ZENworks to manage the Exchange ActiveSync capabilities on these devices, you need to ensure that a Mobile Email Policy is assigned to these devices or users. This policy should use the ZENworks Server as the proxy server between the configured ActiveSync Server and the enrolled device.

In the assigned Mobile Email Policy, you also have the option to directly relay mails from the configured ActiveSync Server, however in this case, ZENworks will not manage the corporate email account configured on the device. For more information on configuring email access, see [Configuring Email Access](#).

Devices enrolled in the work profile or work-managed device mode as a part of Android in the enterprise, are also enrolled as fully managed devices.

- ◆ **Email Only (ActiveSync Only):** Enables ZENworks to manage only the corporate email account on the device. Also, certain policies that are enforceable through the ActiveSync protocol can be applied. Mobile devices are enrolled to the ZENworks MDM Server using the ActiveSync email clients present on the devices. Android, iOS, and Windows devices can be enrolled as Email Only devices. Devices enrolled as Email Only devices can be managed in the following ways:
 - ◆ **Server Only Mode:** In this case, the device will be unable to send or receive emails. ZENworks can only apply certain policies that are enforceable through the ActiveSync protocol, such as the Mobile Device Control Policy and Mobile Security Policy, and can remotely wipe the devices. This might occur due to any one of the following reasons:
 - ◆ A Mobile Email Policy is not assigned to the device.
 - ◆ The assigned Mobile Email Policy does not use ZENworks as the proxy server between the configured ActiveSync Server and the device. The policy directly connects to the configured ActiveSync Server.
 - ◆ The ActiveSync server is not linked to the associated user source.
 - ◆ The ActiveSync server is not valid for the user.
 - ◆ **Proxy Mode:** In this case, corporate emails on the device will be managed by ZENworks. Also, ZENworks can apply certain policies that are enforceable through the ActiveSync protocol, such as the Mobile Device Control Policy and Mobile Security Policy, and can remotely wipe the devices. In a proxy mode, a Mobile Email Policy, with the ZENworks Server acting as the proxy server, is assigned to the device or the user.

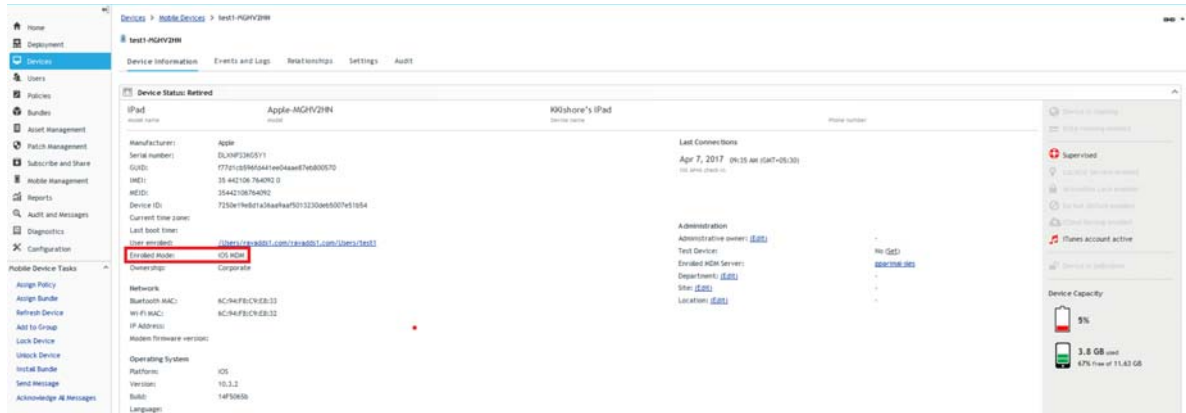
For more information on configuring an ActiveSync Server and a Mobile Email Policy, see [Configuring Email Access](#).

14.2 Modes of Enrollment

As soon as you enroll your device, the mode in which the device is enrolled is displayed on the Device Information page. To access this page:

- 1 Navigate to the **Devices** section in ZCC.
- 2 Click **Mobile Devices**.
- 3 Click the relevant device.

The Device Information page displays the enrolled mode of the device.



For more information on this page, see [Viewing Device Information](#).

The various enrollment modes are as follows:

- ◆ **Android App:** Indicates that as a part of full management of an Android device, the ZENworks Agent app enrollment is complete, but the corporate email account on the device is not managed by ZENworks due to any one of the following reasons:
 - ◆ A Mobile Email Policy is not assigned to the device.
 - ◆ The assigned Mobile Email Policy does not use ZENworks as the proxy server between the configured ActiveSync Server and the device. The policy directly connects to the configured ActiveSync Server.
 - ◆ The ActiveSync server is not linked to the associated user source.
 - ◆ The ActiveSync server is not valid for the user.
 - ◆ The ActiveSync account is created within the work profile for devices enrolled in the work profile mode.
- ◆ **Android App + ActiveSync:** Indicates that as a part of full management of an Android device, the ZENworks Agent app enrollment is complete and the corporate email account configured on the device is managed by ZENworks that acts as a proxy server for the configured ActiveSync Server.
- ◆ **iOS MDM:** Indicates that as a part of full management of an iOS device, the device is enrolled via the MDM client but the corporate email account on the device is not managed by ZENworks due to any one of the following reasons:
 - ◆ A Mobile Email Policy is not assigned to the device.
 - ◆ The assigned Mobile Email Policy does not use ZENworks as the proxy server between the configured ActiveSync Server and the device. The policy directly connects to the configured ActiveSync Server.
 - ◆ The ActiveSync server is not linked to the associated user source.
 - ◆ The ActiveSync server is not valid for the user.
- ◆ **iOS MDM + ActiveSync:** Indicates that as a part of full management of an iOS device, the device is enrolled via the MDM client and the corporate email account configured on the device is managed by ZENworks that acts as a proxy server for the configured ActiveSync Server.

- ♦ **ActiveSync:** Indicates that as a part of Email Only enrollment, ZENworks manages only the corporate email account on the device and certain policies that are enforceable through the ActiveSync protocol, such as the Mobile Device Control Policy and Mobile Security Policy, can be applied on this device.
- ♦ **Unknown:** Indicates that the device is in a retired state.

14.3 Creating a Mobile Enrollment Policy

For devices to be enrolled (registered) in your ZENworks Management Zone, you must create a Mobile Device Enrollment policy and assign it to users who will enroll devices. Mobile Enrollment policy decides which user can enroll devices, what devices the user can enroll, the mode to be used for device enrollment, and the location and naming of the device. Depending on the diversity of needs in your organization, you can create a single Mobile Enrollment policy for all users or you can create multiple policies for users with different needs.

14.3.1 Procedure

- 1 On the Getting Started with Mobile Management page, navigate to the **Enrollment Policy** section, click **New Enrollment Policy** to display the Create New Policy wizard. Alternatively, from the left hand side navigation pane of ZCC, navigate to **Policies > New > Policies**.
- 2 On the Select Platform page, select **Mobile** and then click **Next**.
- 3 On the Select Policy Category page, select **General Mobile Policies** and then click **Next**.
- 4 On the Select Policy Type page, select **Mobile Enrollment Policy** and then click **Next**.
- 5 On the Define Details page, specify a name for the policy, select the folder in which to place the policy and then click **Next**.

- 6 On the Configure Device Ownership page:

6a You can select the ownership type for the device, such as **Corporate** or **Personal**. The ownership is categorized based on the enrollment methods:

- ♦ Apple Device Enrollment Program
- ♦ Apple Configurator
- ♦ ZENworks User Portal

You can also enable the **Allow the device user to select ownership type** option to allow users who are enrolling their devices select the appropriate ownership type of the device, while the user self-enrolls using the ZENworks User Portal.

Mobile policies enable you to provide two groups of settings, one group that is applied to corporate-owned devices and a second group that is applied to personally-owned devices.

For example, the Mobile Security policy lets you configure different password, encryption, and lockout settings for corporate-owned devices versus personally-owned devices.

6b Click **Next**.

- 7 On the Configure Device Management page:

7a The default settings allow the user to choose the management level (**Managed Device** or **Email Only**) during enrollment.

NOTE: This option is applicable for enrollment using the ZENworks End User Portal.

The device management options are explained below:

- ◆ **Yes, allow users to enroll their devices as fully managed devices:** Enables users to enroll their devices as a **Managed Device** only.
 - ◆ **Do not show option for ActiveSync - only enrollment:** Removes the ActiveSync Only (Email Only) enrollment option, forcing devices to enroll as fully managed devices.
- ◆ **No, allow users to enroll their devices as ActiveSync -only:** Removes the fully managed option, forcing devices to enroll as ActiveSync Only (Email Only) devices.

7b Click **Next**.

- 8** On the Configure Mobile Enrollment Rules page, note the folder and naming settings for the default **All Devices** rule in the list, then click **Next**.

Enrollment rules determine the enrolling device's display name and folder placement in ZENworks Control Center.

The predefined **All Devices** rule allows all devices to enroll, uses the device model and user's name for the device name, and places the device in the **Mobile Devices** folder. If the default rule does not meet your needs, you can modify or remove the **All Devices** rule and add additional rules as needed. For example, you can create a rule to place all Android devices in one folder and all iOS devices in another.

- 9** On the Configure the Un-enrollment Settings page you can configure the un-enrollment settings, which will take effect when users un-enroll their devices from the ZENworks Server or the management zone. Select any one of the following for a corporate-owned device or a personally-owned device and click **Next**:
- ◆ **Retire Device:** The device is retained in the zone, however the status is set as retired. When the device is retired, ZENworks does not manage the device anymore, but the device data and history is retained.
 - ◆ **Delete Device:** The device is removed from the zone.

NOTE: These settings are not applied when the user removes the work profile from Android devices enrolled in the work profile mode.

- 10** On the **Summary** page, you can perform the following actions:
- ◆ **Create as Sandbox:** Creates a Sandbox-only version of the policy. A Sandbox version of a policy enables you to test it on your device before actually deploying it
 - ◆ **Define Additional Properties:** Enables you to edit the default settings configured in the policy.

Click **Finish** to complete creating the policy.

14.4 Editing Mobile Enrollment Policy

If **Define Additional Properties** is selected at the time of policy creation, then you will be re-directed to the edit page. Alternatively, navigate to **Policies** and select the Mobile Enrollment Policy you want to edit. You can edit any of the configured settings within the Mobile Enrollment Policy. Additionally, the Mobile Enrollment Policy lets you configure the following:

- ◆ Select **Allow Manual Reconciliation by User** by navigating to **Details > Advanced Setting**. This feature allows the end user to manually reconcile their devices to an existing device object during enrollment. For more information, see [Allowing Manual Reconciliation by User](#).
- ◆ Select **Email Notification Language** by navigating to **Details > Advanced Setting**. This denotes the language in which email notifications need to be sent to the user. To edit these email notifications, see [Managing Email Notifications](#).

If you change the enrollment policy settings after mobile devices are enrolled to the zone, then the updated enrollment policy settings are not applied to the already enrolled devices. However, if the un-enrollment settings are modified after the user enrolls the device, then only the updated un-enrollment settings are applied to the user's device. Also, un-enrollment is not applicable for those devices that are enrolled as Email Only (ActiveSync only) devices.

14.5 Assigning a Mobile Enrollment Policy

Mobile Enrollment policy should be assigned to only users.

14.5.1 Procedure

- 1 On the Getting Started with Mobile Management page, navigate to the **Enrollment Policy** section, click **Assign Policy** to display the Assign Policy wizard, then click **Add**. Alternatively, from the left hand side pane in ZCC, navigate to **Policies**. Select a policy and click **Action > Assign to User**.
- 2 In the Select Object dialog box, browse and select the users to whom you want to assign the policy, click **OK** to add them to the **Users to be Assigned** list, then click **Next**.
- 3 On the Select Object dialog box, browse for and select the policy to be assigned to a user, click **OK** to add them to the **Policies to be Assigned** list, then click **Next**.
- 4 Review the summary page and click **Finish** to complete the assignment.

14.6 Inviting Users to Enroll Devices

You can send an invite letter to users to have them enroll their devices to ZENworks. To do this:

- 1 Click **Users** in the left hand pane in ZCC.
- 2 Select a user folder or a specific user.
- 3 Click **Action > Invite User**.

You can preview the email notification in different languages by selecting the appropriate language from the **Preview Language** drop down. However, the email will be sent in the language set in the Mobile Enrollment Policy, which should be assigned to the selected users.

The contents of the pre-configured email can be customized to suit your requirements. You can edit the content by navigating to **Configuration > Event and Messaging > Email Notifications > Invite Users**. For more information, see [Managing Email Notifications](#).

Before clicking the **Send** button, you can also select the **MDM Server** to which the users should enroll their devices. This MDM Server will be resolved to the macro variable `$HOSTNAME$` present in the pre-configured email. All macro variables will be resolved when the email is sent to the user

NOTE: Ensure that an SMTP server is configured, which will enable you to send the email notification.

14.7 Enrolling an iOS DEP Device

Enrolling a DEP device is simple for an end user, as you can enable the user to skip most of the device activation prompts by modifying the DEP Profile. Before enrolling a DEP device, ensure that you meet the following prerequisites:

14.7.1 Prerequisites

- ◆ Add a DEP Server in ZCC that links the ZENworks MDM Server and the virtual MDM Server in the Apple portal.
- ◆ Assign devices to the virtual MDM Server in the Apple portal. These devices are then discovered by ZENworks and populated in ZCC.
- ◆ (Optional) Assign users to the device, if you want only this user to be associated with the device during DEP enrollment.
- ◆ (Optional) Modify the DEP profile settings to enhance the enrollment process.
- ◆ (Conditional) If you modify the DEP profile, ensure that modified DEP profile is successfully assigned to the Apple Portal.

To learn more about each of the items listed above see, [Integrating with Apple Device Enrollment Program](#).

Additionally:

- ◆ Assign a Mobile Enrollment Policy. For more information, see [Creating a Mobile Enrollment Policy](#).
- ◆ (Conditional) If you are re-enrolling a device that was retired by another user, then ensure that the earlier device object is deleted in ZCC.
- ◆ (Optional) Assign a Mobile Email Policy to configure the email account on the device. For more information, see [Creating a Mobile Email Policy](#).

NOTE: Enrollment of Apple TV devices is supported on an experimental basis. The procedure to enroll these devices is the same as enrolling an iOS device. After enrollment, the device objects for Apple TV devices are displayed as iOS.

14.7.2 Procedure

Follow the setup prompts to enroll the device. After the user configures the Wi-Fi settings, log-in to the device with the user credentials. If the device is assigned to a specific user, then the credentials of only this user should be specified or else enrollment will fail.

After the device enrolls, you can view the **Deployment Status** of the device in ZCC, which should have changed from **Discovered** to **Managed**. You can view this status on the device's summary page. For more information, see [Viewing Device Information](#). The enrolled device object is also created within the **Mobile Devices** folder (**Devices > Mobile Devices**) or in the appropriate folder as defined in the Mobile Enrollment Policy.

NOTE: Before re-enrolling a device, if the ownership (corporate or personal) is modified in the Mobile Enrollment Policy, the modified ownership is not applied on the re-enrolled device. The ownership defined during the initial phase of enrollment is considered.

A device that was enrolled using the ZENworks User Portal is being re-enrolled through Apple DEP using another user's credentials, then ensure that the earlier device object is deleted in ZCC.

14.8 Enrolling an iOS Device through Apple Configurator

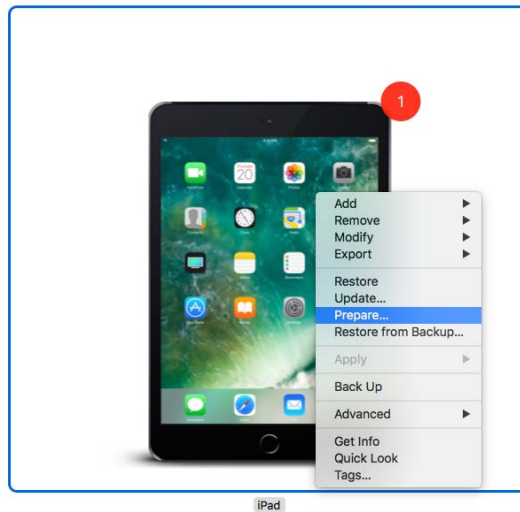
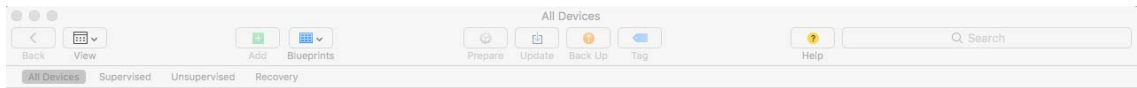
Apple Configurator is a Mac OS X tool, that assists administrators in the deployment of iOS devices in business or education settings. Apple Configurator makes reassigning devices quick and simple, allowing the next user to start with a clean slate of content.

14.8.1 Prerequisites

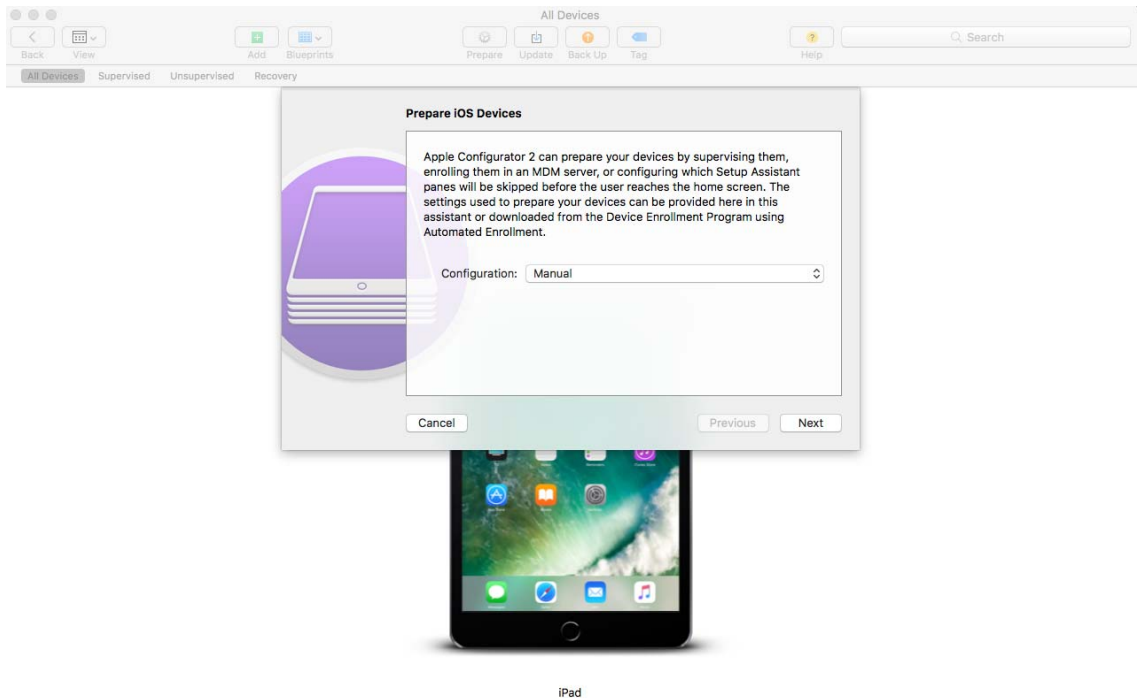
- ♦ Assign a Mobile Enrollment Policy. For more information, see [Creating a Mobile Enrollment Policy](#).
- ♦ Copy the Apple Enrollment URL, which specifies the MDM Server to which the device will enroll. To obtain this, in ZCC navigate to **Configuration > Infrastructure Management > MDM Servers**. Select a MDM Server and click **Apple Enrollment URL**.
- ♦ (Optional) Assign a Mobile Email Policy to configure the email account on the device. For more information, see [Creating a Mobile Email Policy](#).

14.8.2 Procedure

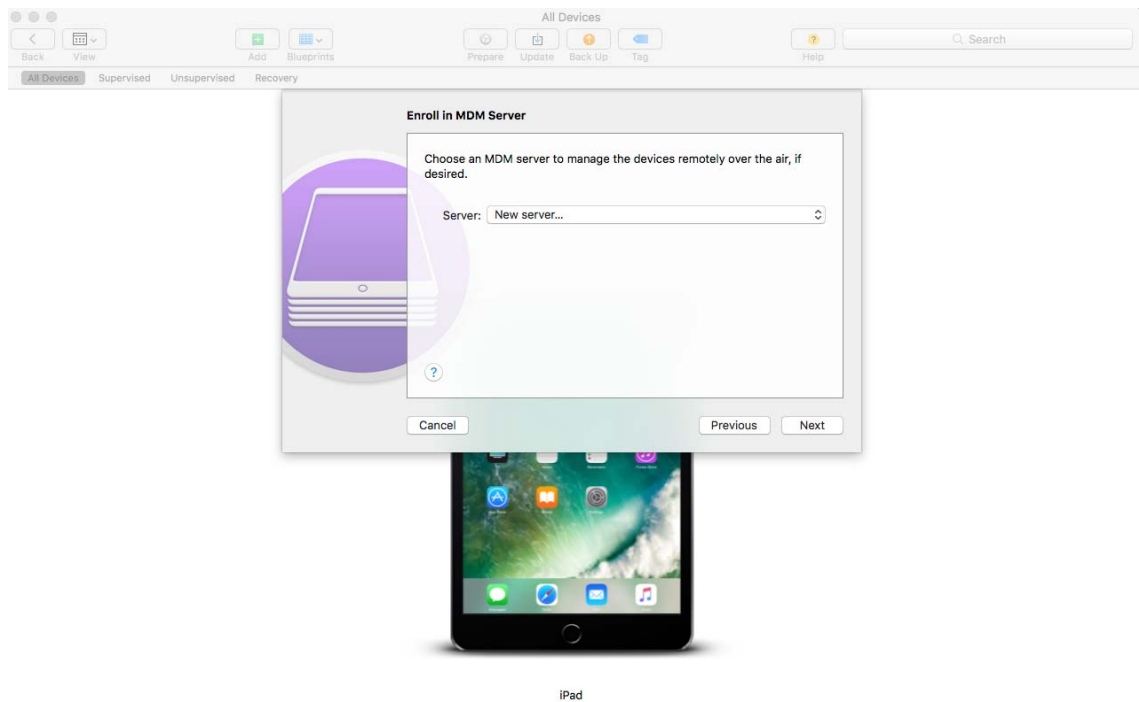
- 1 Connect the device through the USB port to the Mac.
- 2 Right-click and select **Prepare** or select **Prepare** from the top menu bar in the Apple Configurator.



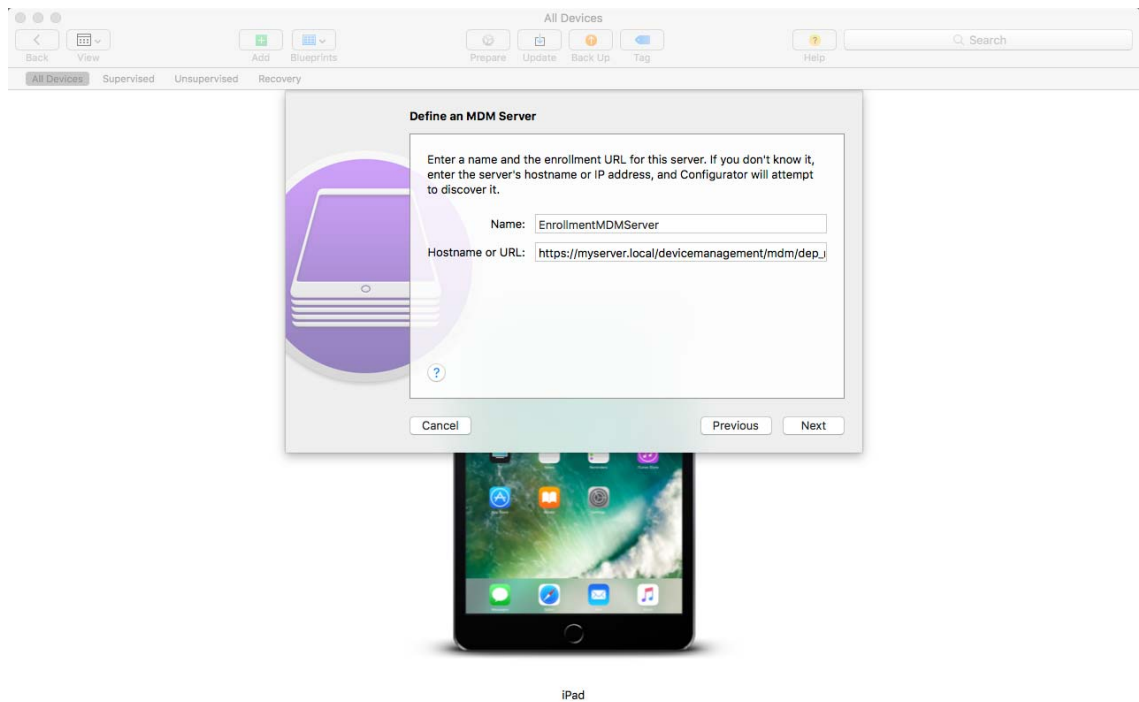
3 Select **Manual** in the **Configuration** drop down menu. Click **Next**.



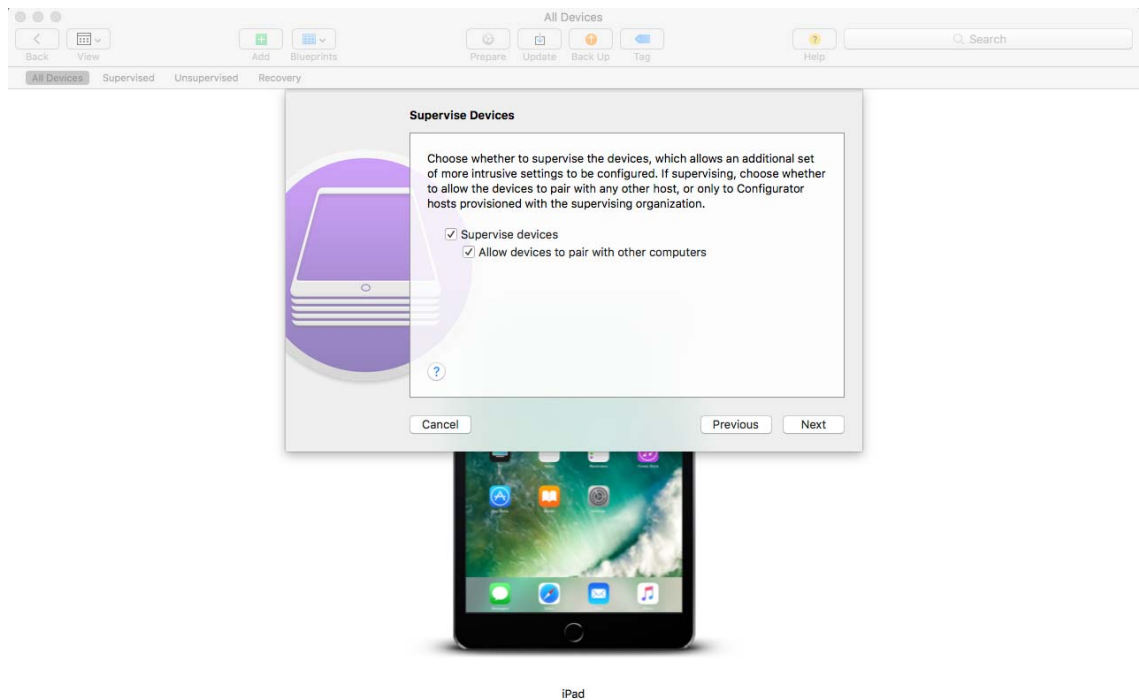
4 Select the MDM Server to which you want the device to enroll. If you do not have the MDM Server saved in the drop-down menu, then select **New Server**.



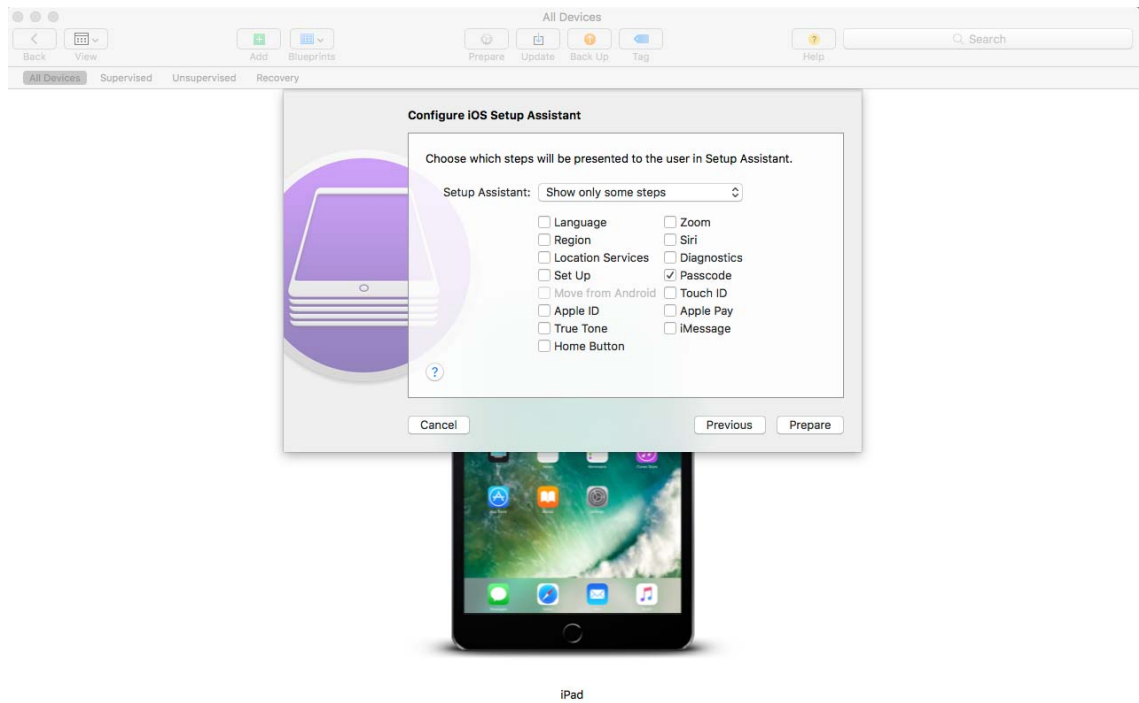
- 5 Specify a name for the server and paste the Apple Enrollment URL copied from ZCC. To obtain this, in ZCC navigate to **Configuration > Infrastructure Management > MDM Servers**. Select a MDM Server and click **Apple Enrollment URL**. Copy the URL and paste it in the Define an MDM Server page in the Apple Configurator. This MDM Server will be saved for future use.



- 6 Select **Supervise devices**, if you want to set the device as supervised. The check box to **Allow devices to pair with other computers** is automatically enabled.



- 7 Select the organization that will supervise these devices.
- 8 Select the appropriate option from the **Setup Assistant** drop-down menu, if you want to skip certain setup steps during enrollment of the device. Check the setup items that should be presented during device enrollment.



- 9 Click **Prepare** to prepare the connected device.

After the preparation stage, the iOS device will reset to its factory settings. After the device is reset, follow the prompts that will be displayed on the iOS device as configured in the [Configure iOS Setup Assistant](#) page in the Apple Configurator. After entering the Wi-Fi password, the user will be prompted for the user credentials.

After the device enrolls, the device object is created within the Mobile Devices folder ([Devices > Mobile Devices](#)) or in the appropriate folder as defined in the Mobile Enrollment Policy.

14.9 Enrolling devices using the ZENworks User Portal

This enrollment is preferable for BYOD devices. The following devices can be enrolled using the ZENworks User Portal:

- ♦ Android Devices
- ♦ iOS Devices
- ♦ Windows Devices (devices with Exchange ActiveSync capabilities).

14.9.1 Prerequisites

Before enrolling a mobile device as a fully managed device or an email only device, you need to ensure that the following prerequisites are met:

- ♦ ZENworks supports devices running on Android version 4.1 and newer, and devices on running iOS version 8 and newer. Also, ZENworks supports devices running on ActiveSync 12.1 and newer.
- ♦ A user source is configured and enabled for mobile device enrollment. For details, see [“Configuring User Sources” on page 17](#)
- ♦ An enrollment policy is created and assigned to the user. For details, see [“Creating a Mobile Enrollment Policy” on page 154](#).
- ♦ An MDM role is assigned to a Primary Server. For details, see [“Configuring an MDM Server” on page 21](#)
- ♦ Push notifications for either Android or iOS devices are enabled. For details, see [“Enabling Push Notifications” on page 31](#)
- ♦ To enable ZENworks to synchronize emails for Exchange ActiveSync accounts, an ActiveSync server should be configured. Also, create and assign a Mobile Email Policy with the ZENworks Server configured as the proxy server for the ActiveSync Server. This will enable ZENworks to manage the corporate emails sent and received on the device. For details, see [“Configuring Email Access” on page 91](#).
- ♦ Enrollment of iOS devices using the Safari browser running in the private mode is supported only on iOS versions 11 or later.

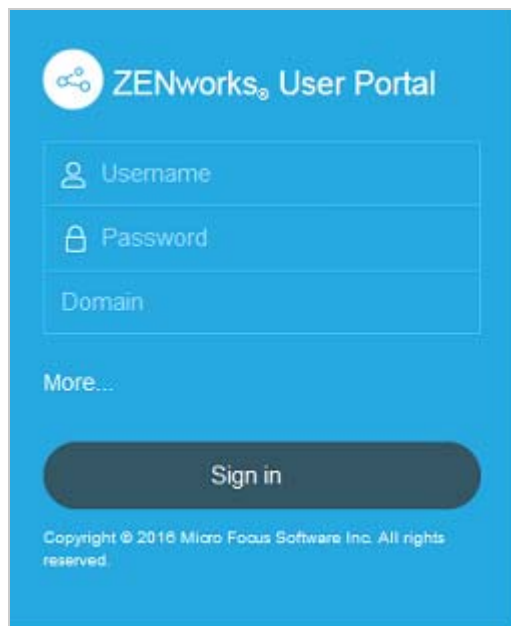
14.9.2 Procedure: Enrolling an Android Device

This scenario shows you how to enroll an Android device as a fully managed device in your ZENworks Management Zone. This enrollment type uses the Device Admin API to manage devices. However, since in the future releases this API will be deprecated by Google, we recommend that you enroll your devices in the work profile or work-managed device mode. For more information on these modes, see [Integrating ZENworks with Android Enterprise](#).

- 1 In the Google Chrome browser on the Android device, enter `ZENworks_server_address/zenworks-eup`, where `ZENworks_server_address` is the DNS name or IP address of the ZENworks MDM Server.

NOTE: You must use Google Chrome. The built-in Internet browser is not supported.

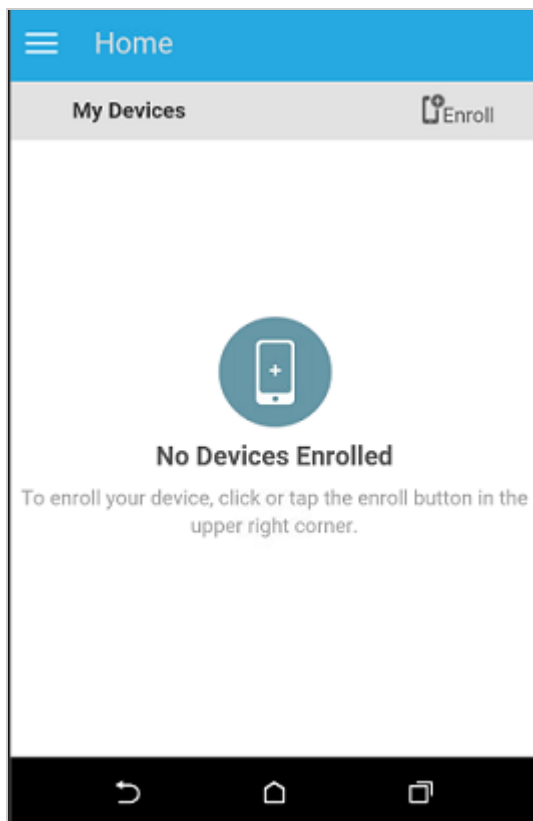
The login screen for the ZENworks User Portal is displayed. You use the user portal to enroll devices to the zone.



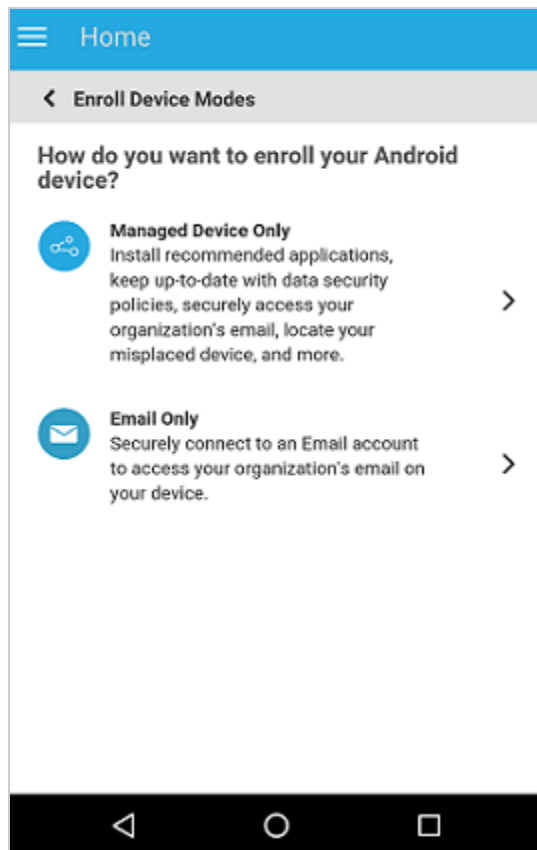
All devices associated with the user, are displayed in the ZENworks User Portal.

- 2 Enter the user's user name and password. If **Allow Simple Enrollment** option is selected for the user source to which the user belongs, then the registration domain need not be specified or else specify the registration domain. For information, see [Section 4.1, "Enabling a User Source for Mobile Device Enrollment,"](#) on page 17. Tap **Sign In**.

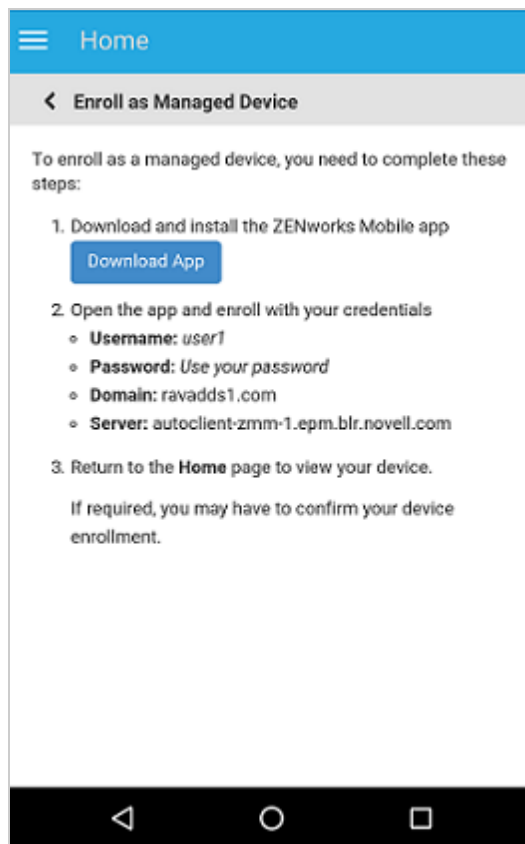
NOTE: If the **Allow Simple Enrollment** option is not enabled or the registration domain name is not configured, then you can specify the configured user source name in the **Domain** field while enrolling a device.



- 3 Tap **Enroll** in the upper-right corner to display the enrollment options for the device.
- The enrollment options are determined by the Mobile Enrollment policy assigned to the user. For details, see [“Creating a Mobile Enrollment Policy” on page 154](#).

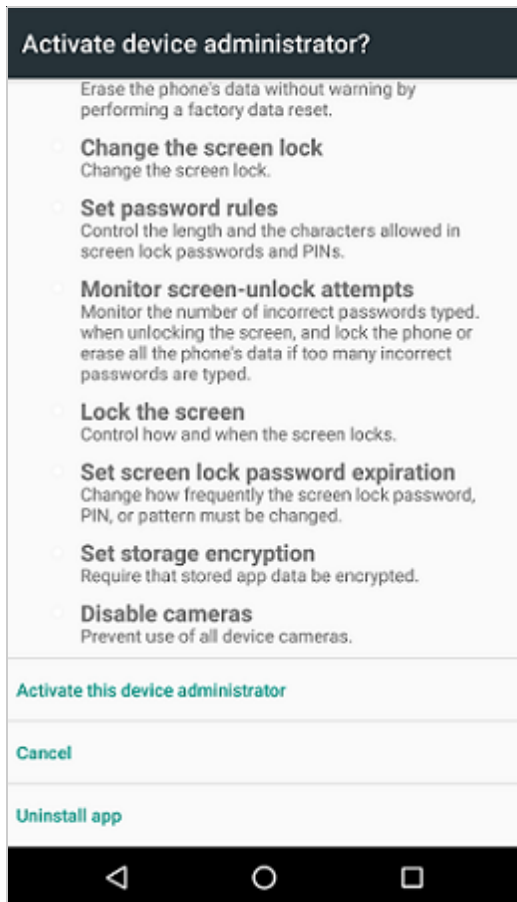


- 4 Tap **Managed Device Only**.



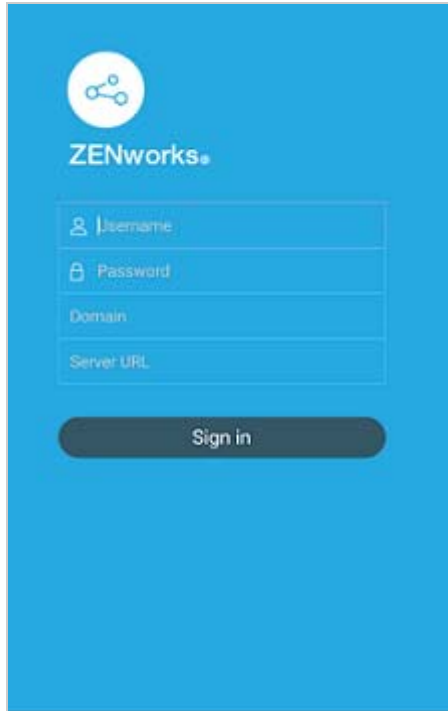
- 5 Tap **Download App**. The user will be directed to the Google Play Store, where the user needs to click **Install** to install the ZENworks Agent app. After installation, click **Open**.

- 6 Click **Activate this Device Administrator** to enable you to manage the device by performing the operations listed in this screen.



NOTE: For Android Marshmallow and subsequent versions, ensure that the user accepts the `READ_WRITE_PHONE` permission and `WRITE_EXTERNAL_STORAGE` permission after downloading and launching the app. Contrary to the statement mentioned in the dialog box, the `READ_WRITE_PHONE` permission does not make any calls and does not collect phone logs. This permission is required to identify the device's information such as the serial number and IMEI number. The `WRITE_EXTERNAL_STORAGE` permission is required to access the device storage to create logs that can be used for troubleshooting.

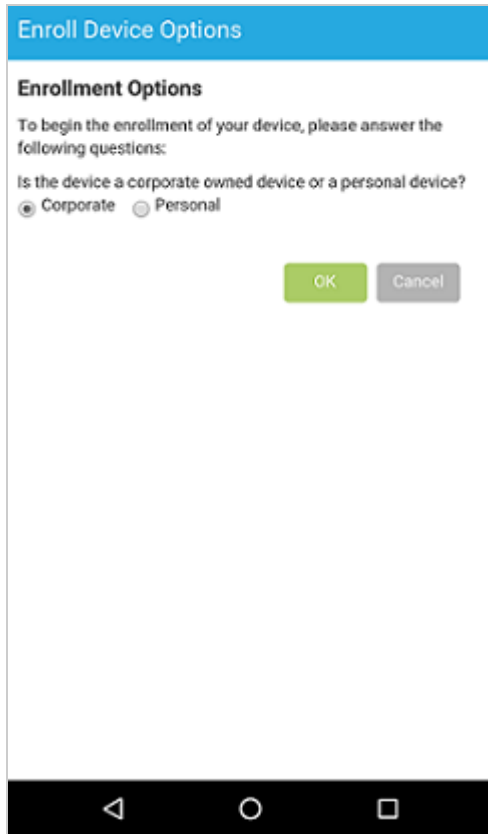
7 The ZENworks Agent app login screen is displayed.



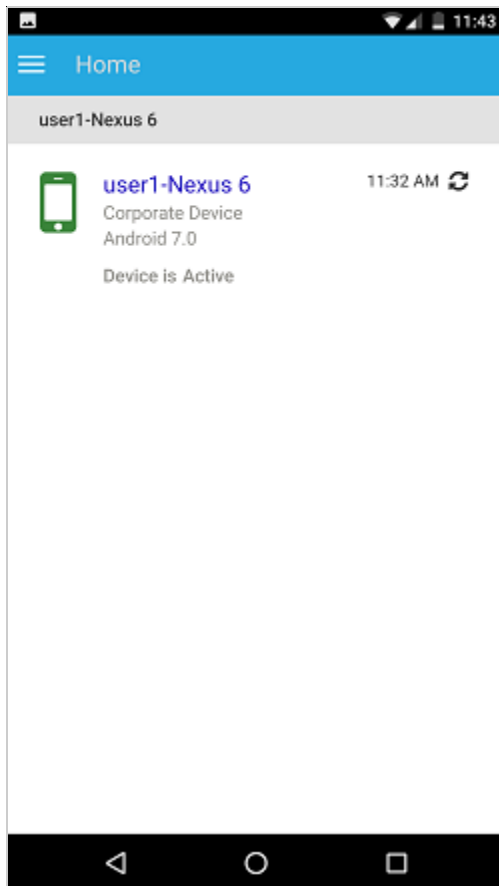
8 Fill in the fields, then tap **Sign In**.

- ◆ **User name, Password, Domain, Server URL:** Use the same user name, password, and registration domain (if required) that you had initially used to log in to the ZENworks User Portal along with the server URL of the ZENworks MDM Server. You can obtain this information from the ZENworks User Portal as displayed in [Step 4](#).

If you configured your Mobile Enrollment policy to allow the user to specify the device ownership (corporate or personal), you are prompted for that information. Tap **OK**. The device will be automatically enrolled to the zone.



- 9 The ZENworks Agent App Home screen is displayed, showing that the device is enrolled and active.



After the device is enrolled to the ZENworks Management Zone, you can view the device information in ZCC. To view the device information, from the left hand side navigation pane in ZCC, click **Devices** > **Mobile Devices** (or navigate to the folder as configured in the Mobile Enrollment Policy) and select the appropriate device. The enrollment mode will be displayed as **Android App**.

- 10 After ZENworks Agent app enrollment, based on the assigned Mobile Email Policy, an email is sent to the user with the corporate email account settings. This email can be accessed from the email client's web application or from any other device. With this information, the user needs to manually configure the email account on the device to send or receive corporate emails. You need to configure an SMTP server, to enable ZENworks to send these email notifications. For more information on configuring an SMTP server, see [Event and Messaging Settings](#) in the [ZENworks Management Zone Settings Reference](#) guide.
- 11 After configuring the corporate email account, the device will enroll and automatically reconcile to the device object that was initially created when the ZENworks Agent app enrollment was completed. The enrollment mode changes to **Android App + ActiveSync** on the Device Information page in ZCC. For more information, see ["Viewing Device Information" on page 188](#).

NOTE: After configuring an ActiveSync account, if the device is unable to auto reconcile to the device object that was created after ZENworks Agent app enrollment and if **Allow Manual Reconciliation by User** is checked in the assigned Device Enrollment Policy, the user will be prompted to manually reconcile the device. For details, see [Allowing Manual Reconciliation by User](#).

If a Mobile Email Policy is unassigned from the device that is enrolled to the ZENworks Management Zone, then the user receives an email stating that corporate emails cannot be sent or received on the device. You can edit the contents of this email in ZCC by navigating to **Configuration > Management Zone Settings > Event and Messaging > Email Notifications**. Click the relevant email and edit its contents.

14.9.3 Procedure: Enrolling an iOS Device

This scenario shows you how to enroll an iOS device as a fully managed device in your ZENworks Management Zone.

- 1 In the Safari browser on the iOS device, enter `ZENworks_server_address/zenworks-eup`, where `ZENworks_server_address` is the DNS name or IP address of the ZENworks MDM Server.

NOTE: Ensure that the Safari browser is not running in the private mode if the iOS version of the device is less than 11.

iOS devices 10.3 and later versions no longer use SHA-1 signed certificates. You need to move to SHA-256 certificates to ensure that the device enrolls to ZENworks successfully. For more information, see [Apple Support \(https://support.apple.com/en-us/HT207459\)](https://support.apple.com/en-us/HT207459).

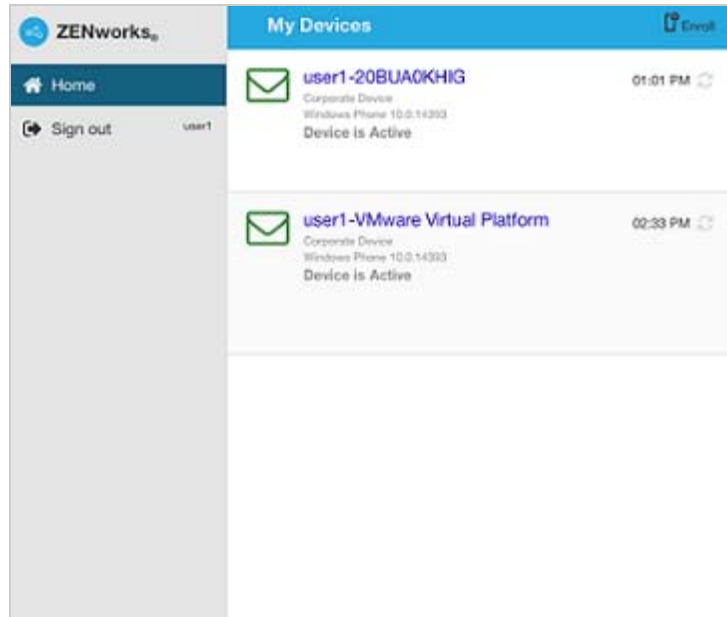
The login screen for the ZENworks User Portal is displayed. You use the ZENworks User Portal to enroll devices to the zone.



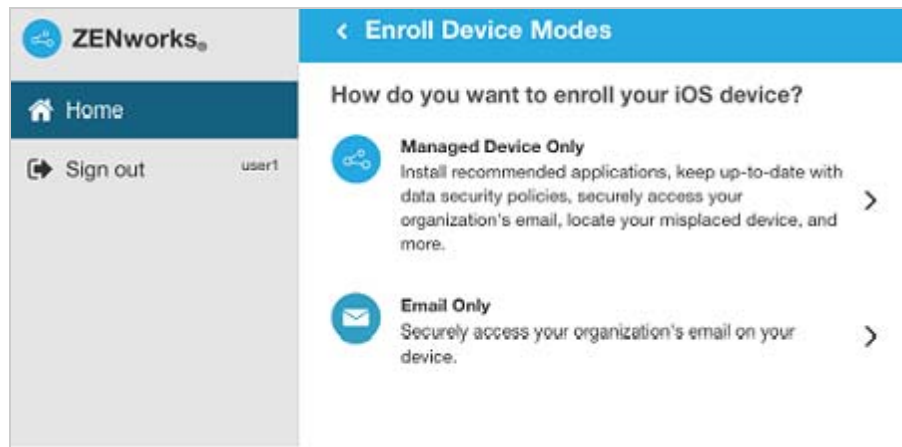
- 2 Enter the user's user name and password. If **Allow Simple Enrollment** option is selected for the user source to which the user belongs, then the registration domain need not be specified or else specify the registration domain. For information, see [Section 4.1, "Enabling a User Source for Mobile Device Enrollment,"](#) on page 17. Tap **Sign In**.

NOTE: If the **Allow Simple Enrollment** option is not enabled or the registration domain name is not configured, then you can specify the configured user source name in the **Domain** field while enrolling a device.

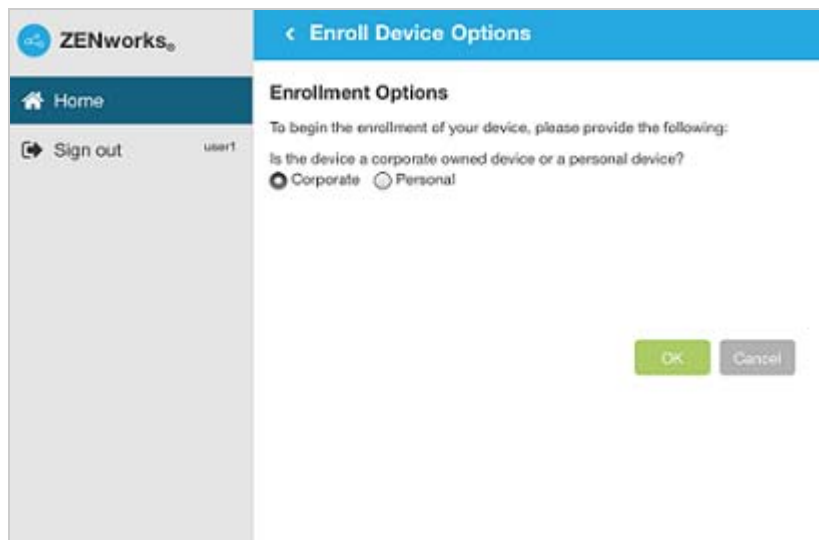
All devices associated with the user, are displayed in the ZENworks User Portal.



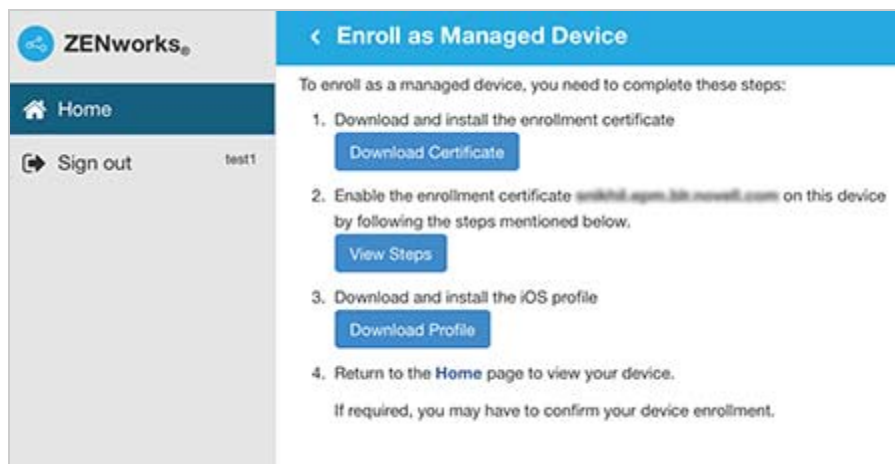
- 3 Tap **Enroll** in the upper-right corner to display the enrollment options for the device. The enrollment options are determined by the user’s Mobile Enrollment policy. For details, see [“Creating a Mobile Enrollment Policy” on page 154.](#)



- 4 Tap **Managed Device Only** to display the **Enroll Device Options** screen. If you have configured your Mobile Device Enrollment policy to allow the user to specify the device ownership (corporate or personal), you are prompted for that information. Select the appropriate device ownership option and click **OK**.

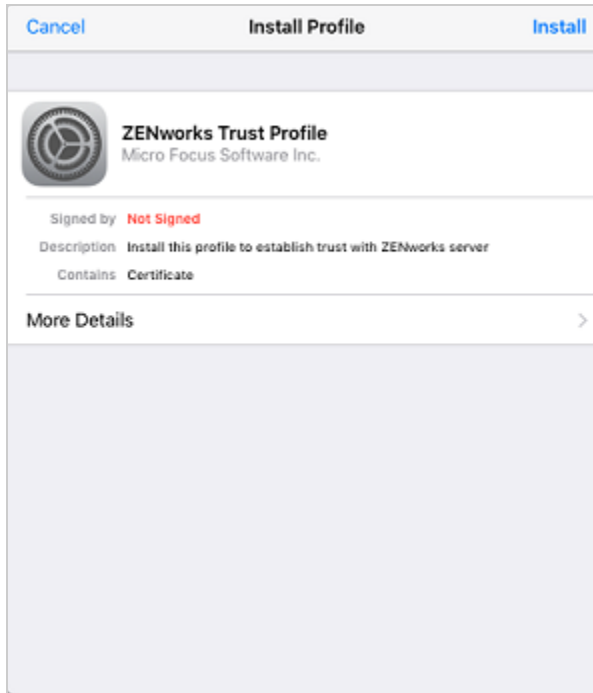


5 Tap **Download Certificate** to display the **Install Profile** screen.



- 6 Tap **Install** and follow the prompts to install the certificate and return to the Enroll as Managed Device screen.

The ZENworks Trust Profile contains the certificate required for secure communication between the device and the ZENworks Primary Server.

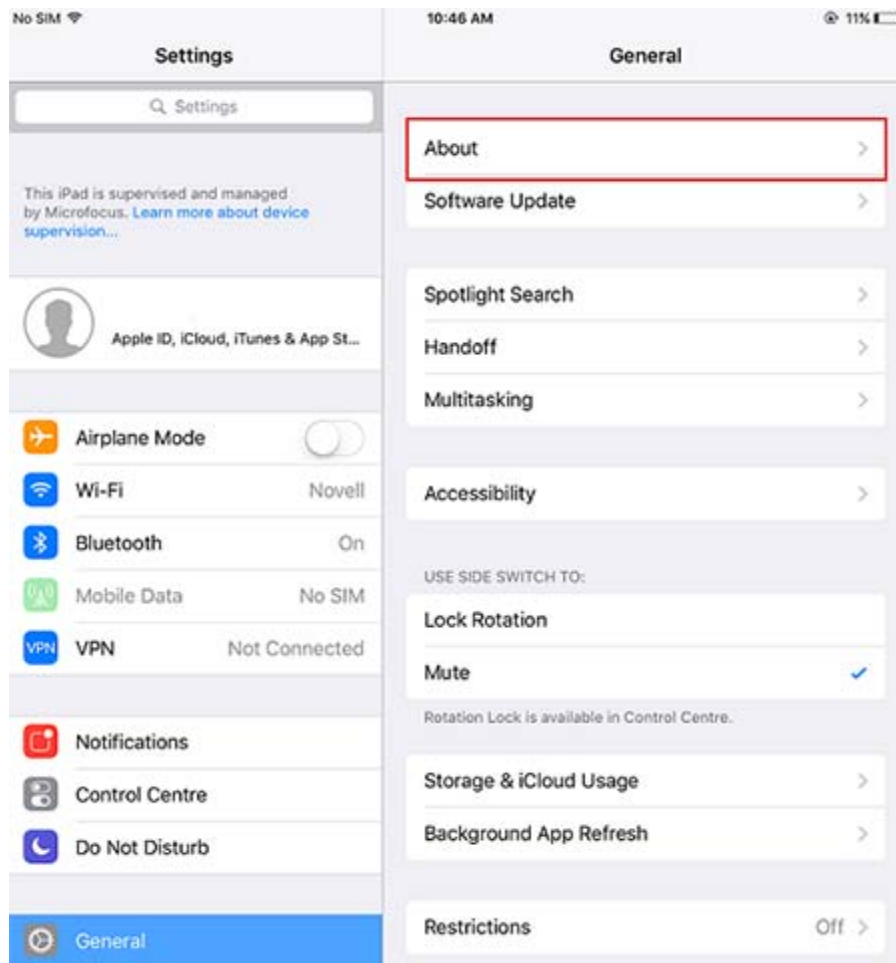


- 7 (Conditional) Enable the enrollment certificate on the device. This step will appear on devices running on iOS versions 10.3 or newer. To enable the certificate:

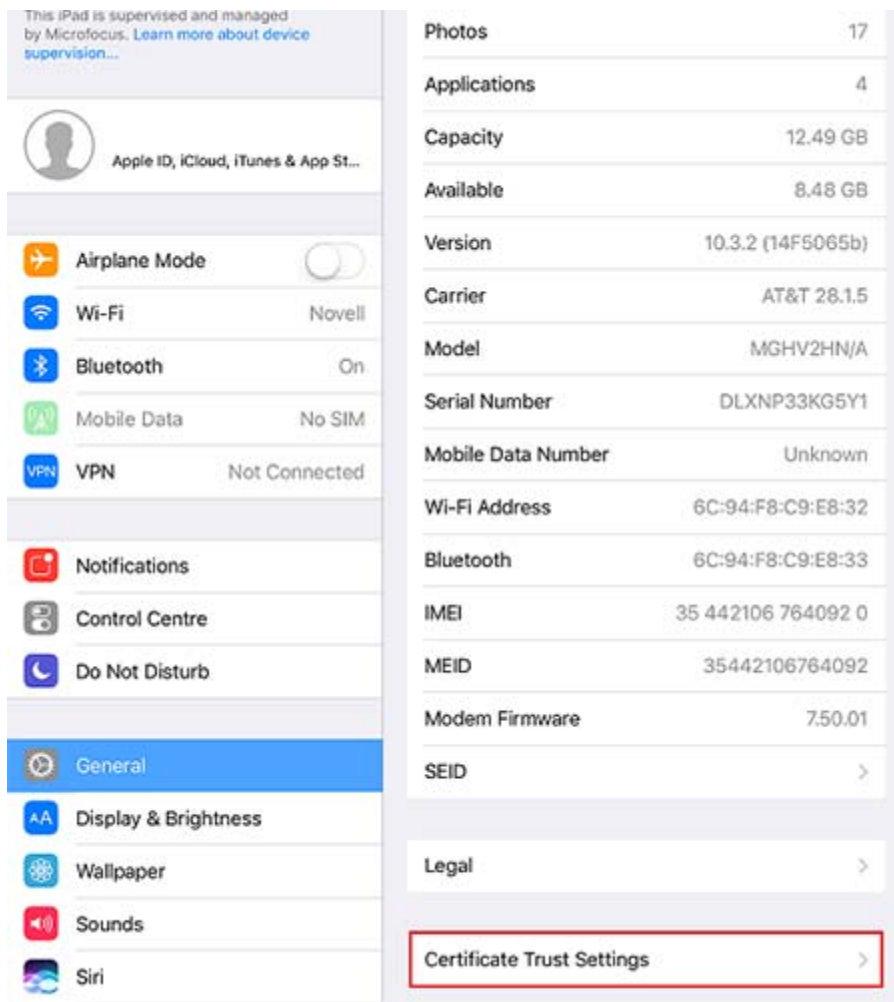
- 7a Navigate to the **Settings** menu on the device and click **General**.



7b Click About.



7c Click Certificate Trust Settings.

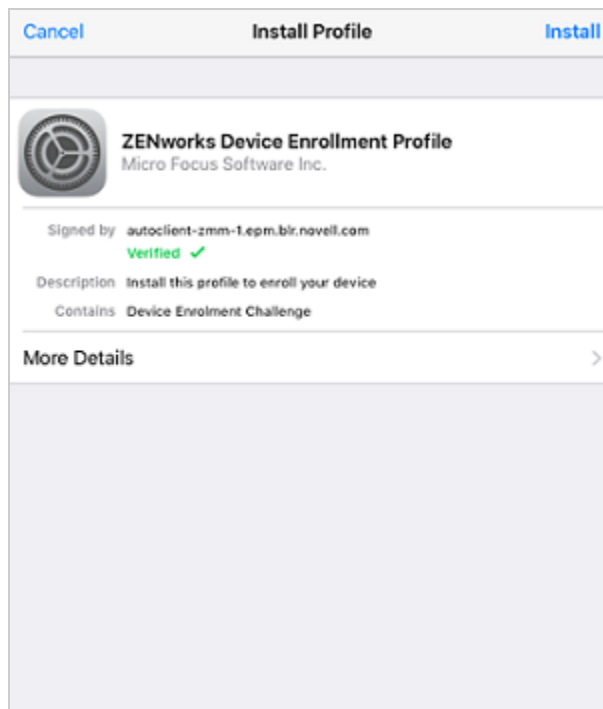


7d Enable the root certificate displayed on the screen.



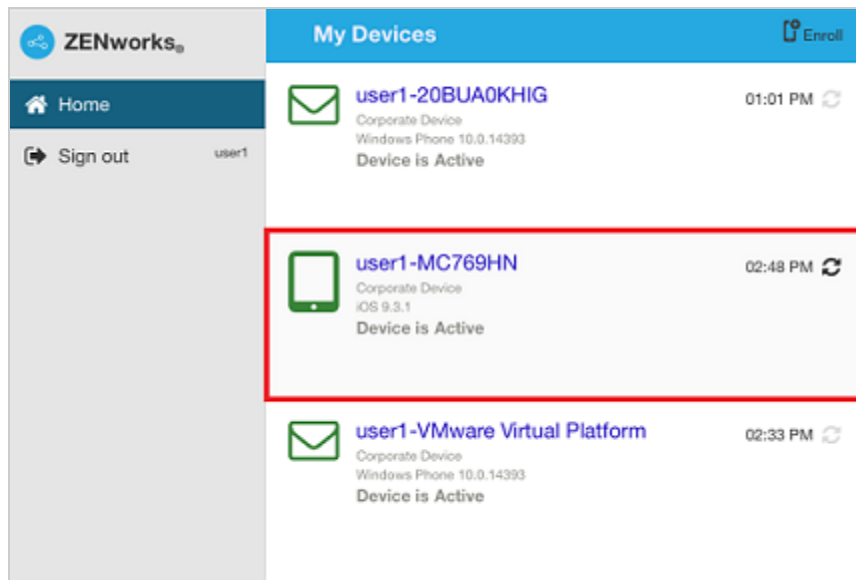
8 Tap **Download Profile** in the Enroll as Managed Device screen, to display the profile install screen. Tap **Install** and follow the prompts to install the profile and return to the Enroll as Managed Device screen.

The ZENworks Device Enrollment Profile contains the MDM profile required for ZENworks to manage the device.



- 9 Tap **Home** to return to the Home page. The device is displayed in the My Devices list with the status as **Enrollment in Progress**. You need to refresh the browser to update the status to **Device is Active**.

NOTE: If the device remains in **Enrollment in Progress** state for a considerable amount of time, then in the ZENworks User Portal, tap the refresh icon appearing against the device.



At this point in time, you can view the enrollment mode on the Device Information page in ZCC. To view the device information, from the left hand side navigation pane in ZCC, click **Devices > Mobile Devices** (or navigate to the folder as configured in the Mobile Enrollment Policy) and select the appropriate device. The enrollment will be displayed as **iOS MDM**.

- 10 An email account is automatically set up on the device based on the Mobile Email Policy assigned to the user or the device.

NOTE: If an Exchange ActiveSync account was manually configured on the iOS device before it was enrolled, then it should be deleted as an email account will be automatically configured on the iOS device if a Mobile Email policy is assigned.

After the device is enrolled to the ZENworks Management Zone, the enrollment mode of the device is displayed as **iOS MDM + ActiveSync** on the Device Information page in ZCC.

14.9.4 Procedure: Enrolling an Email-only Device

This scenario shows you how to enroll a device as an Email Only device in your ZENworks Management Zone. This scenario details the procedure to enroll an iOS device as an Email Only Device.

- 1 In a browser on the device, enter `ZENworks_server_address/zenworks-eup`, where `ZENworks_server_address` is the DNS name or IP address of the ZENworks MDM Server.

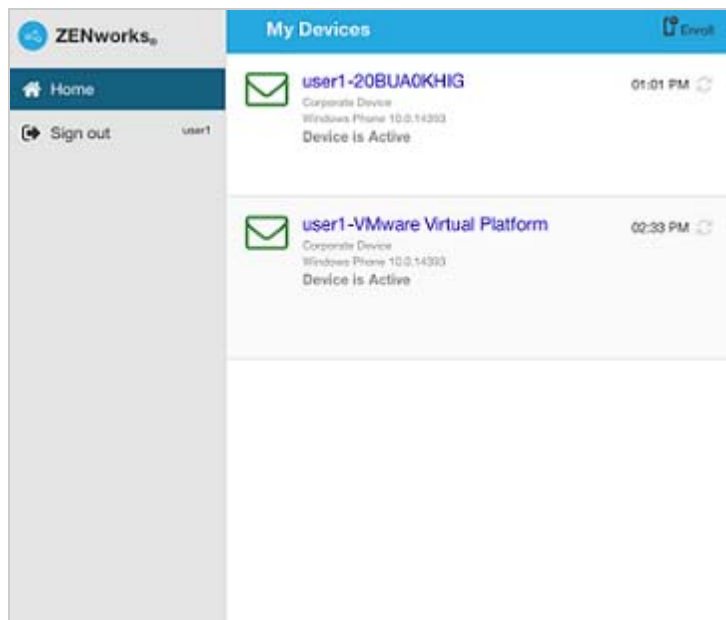
The login screen for the ZENworks User Portal is displayed. You use the ZENworks User Portal to enroll the device.



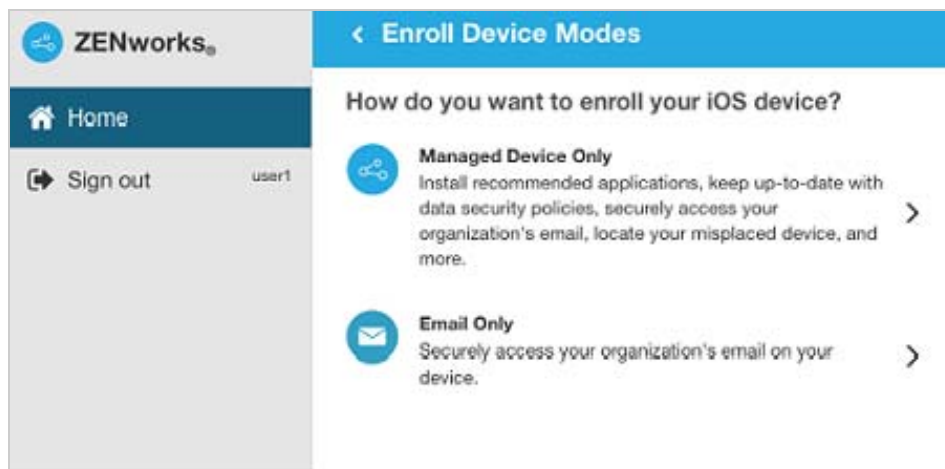
- 2 Enter the user's user name and password. If **Allow Simple Enrollment** option is selected for the user source to which the user belongs, then the registration domain need not be specified or else specify the registration domain. For information, see [Section 4.1, "Enabling a User Source for Mobile Device Enrollment,"](#) on page 17. Tap **Sign In**.

NOTE: If the **Allow Simple Enrollment** option is not enabled or the registration domain name is not configured, then you can specify the configured user source name in the **Domain** field while enrolling a device.

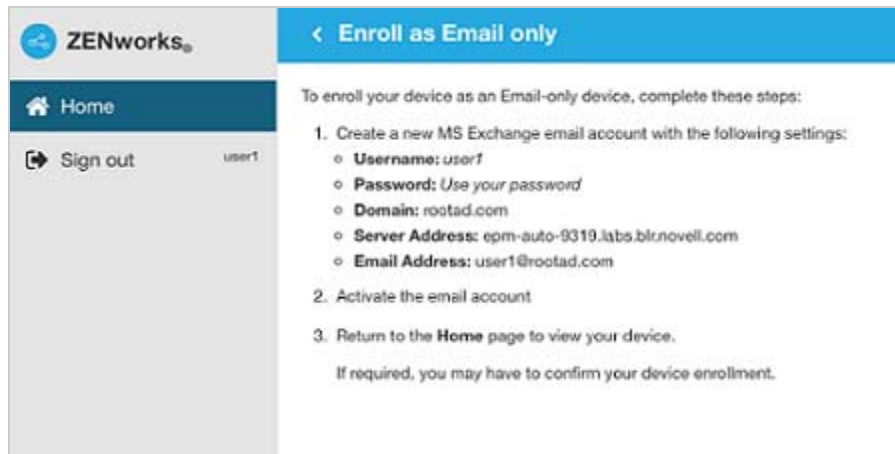
All devices associated with the user, are displayed in the ZENworks User Portal.



- 3 Tap **Enroll** on the upper-right corner, to display the enrollment options for the device. The enrollment options are determined by the user's Mobile Enrollment policy. For details, see ["Creating a Mobile Enrollment Policy"](#) on page 154.



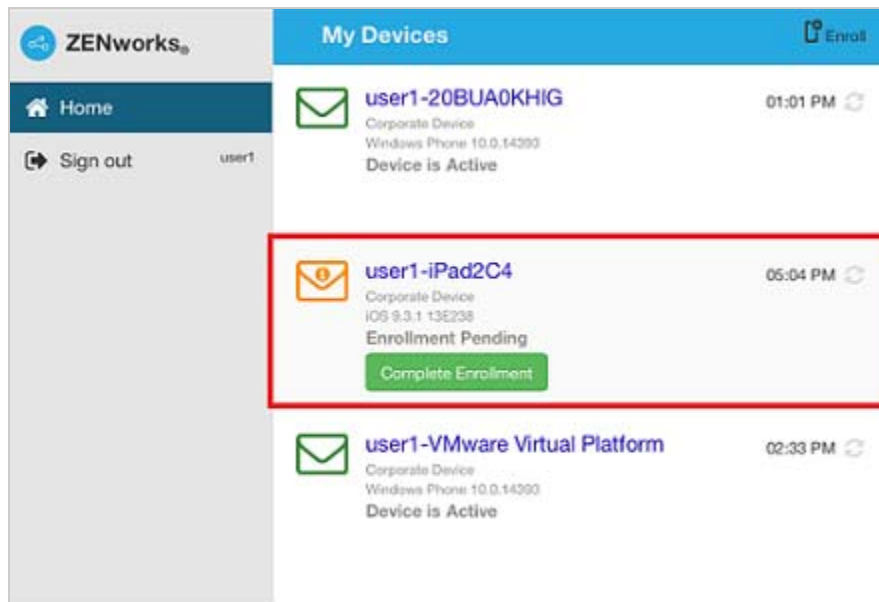
- 4 Tap **Email Only** to display the **Enroll as Email Only** screen. Use the displayed information to create an email account for the user.



- 5 After the user configures the email account, an email is sent to the user stating that the enrollment process needs to be completed. You can edit the contents of this email in ZCC, by navigating to **Configuration > Management Zone Settings > Event and Messaging > Email Notifications**. Click the relevant email and edit its contents.

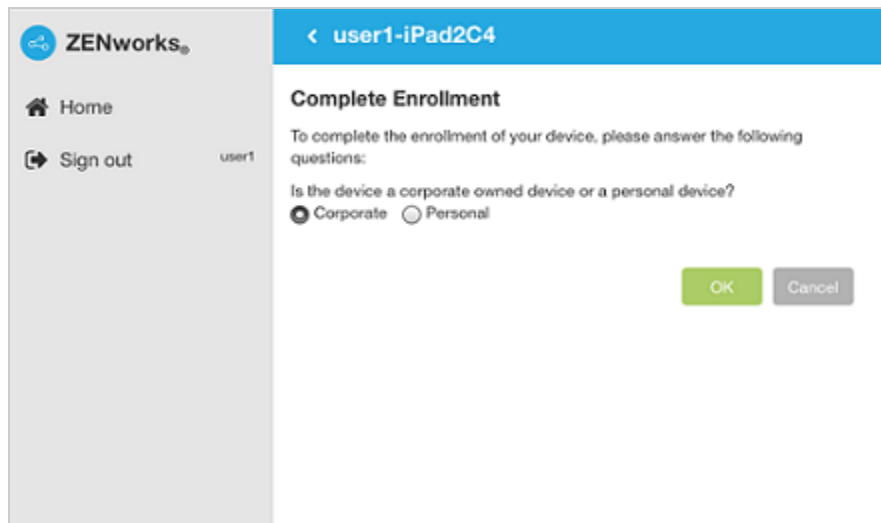
To complete the enrollment process, click the link to the ZENworks End User Portal provided in the email or visit the ZENworks End User Portal as described in [Step 1](#).

- 6 On the ZENworks User Portal, the device is displayed in the My Devices list. At this point, the device has been added to the ZENworks Management Zone but is pending enrollment.

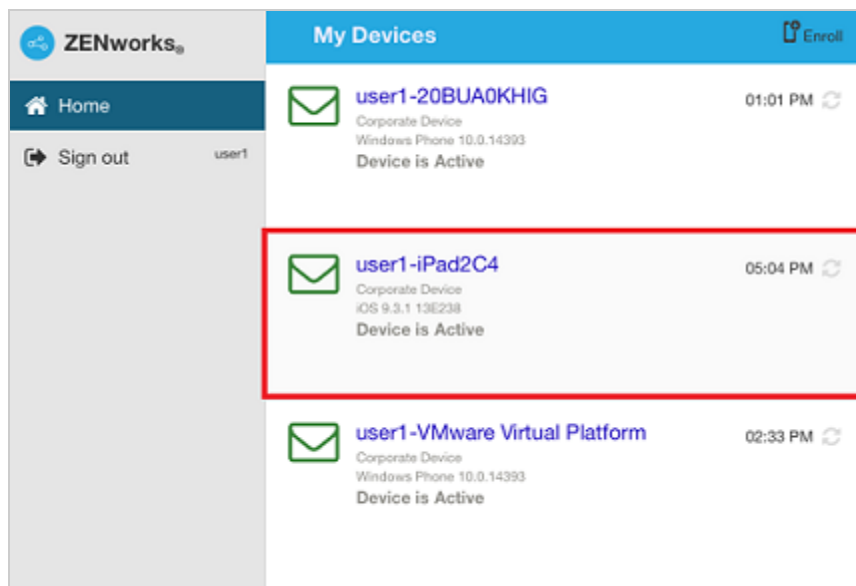


7 On the device, tap **Complete Enrollment**.

If you configured your Mobile Enrollment policy to allow the user to specify the device ownership (corporate or personal), you are prompted for that information. On the device, provide the required enrollment information, then tap **OK**.



8 The My Devices list is updated to show that the device is enrolled and active.



9 Verify that the device is receiving emails, by sending an email to the user from another account.

NOTE: If a Mobile Email policy is not assigned to the enrolled Email Only device or is unassigned from the already enrolled Email Only device, then an email is sent to the device stating that the user will be unable to send or receive corporate emails. You can edit the contents of this email in ZENworks Control Center by navigating to **Configuration > Management Zone Settings > Event and Messaging > Email Notifications**. Click the relevant email and edit the contents.

Also, if a Mobile Email policy is not assigned to the device enrolled as an Email Only device, the device can still be managed by the ZENworks Control Center wherein you can apply policies applicable for Email Only devices.

- 10 After the device is enrolled to the ZENworks Management Zone, the enrollment mode of the device is displayed as **ActiveSync** on the Device Information page in ZCC. To view the device information, from the left hand side navigation pane in ZCC, click **Devices > Mobile Devices** (or navigate to the folder as configured in the Mobile Enrollment Policy) and select the appropriate device.

14.10 Allowing Manual Reconciliation by User

When users attempt to enroll their devices, which they have previously enrolled, using the same enrollment mode or a different enrollment mode, ZENworks will update the existing device object in the management zone through reconciliation. However, for certain devices auto reconciliation might fail due to the following reasons:

- ◆ ZENworks is unable to access the IMEI number of certain non-cellular Android devices.
- ◆ ZENworks is unable to access the IMEI number of certain Android devices, as the IMEI number is masked.
- ◆ The ActiveSync ID of iOS devices change if they are reset to factory settings before re-enrolling.

Taking these scenarios into account, you can select the **Allow manual reconciliation by user** option while editing the Mobile Enrollment Policy.

If this feature is turned on and ZENworks is unable to reconcile with the existing device object, then a page is displayed that lets the user manually reconcile to the existing device object.

If the feature is turned off and ZENworks is unable to reconcile with the existing device object, then the device is automatically enrolled as a new device.

To enable this option:

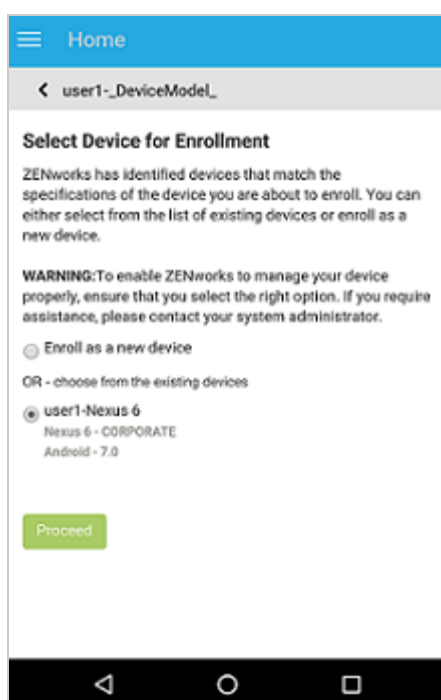
- 1 Navigate to the **Policies** section in ZCC.
- 2 Click the relevant Mobile Enrollment Policy.
- 3 Click the **Details** tab.
- 4 Click **Advanced Settings**.
- 5 Click **Allow Manual Reconciliation by User**.
- 6 Click **Apply**.
- 7 Publish as a new policy or as a new version of the policy.

IMPORTANT: During manual reconciliation, it is important that the user selects the right option. If an incorrect option is selected, then ZENworks will be unable to manage the device properly. If the user has reconciled to an incorrect device object, then both the devices will have to be unenrolled from the ZENworks Management Zone.

Consider the following scenarios:

For Android Devices: A user has downloaded the ZENworks Agent app and completed the enrollment procedure as elaborated from [Step 1](#) to [Step 9](#) for a non-cellular Android device. Subsequently, a device object is created in the ZENworks Management Zone. Later, to enable ZENworks to manage corporate emails on the device, the user configures an ActiveSync account on the same device. After configuring the ActiveSync account, since the IMEI number of this device is not available, ZENworks will be unable to reconcile the device with the existing device object that was created during the ZENworks Agent app enrollment.

In such a scenario, if **Allow Manual Reconciliation by User** is allowed in the Mobile Enrollment policy and if reconciliation fails, ZENworks sends a mail to the user to complete the enrollment process. When the user re-visits the ZENworks User Portal to complete ActiveSync enrollment, the user needs to select the appropriate device ownership type. Subsequently, the ZENworks User Portal will list all active Android devices associated with the user that are enrolled to the ZENworks Management Zone. The user can select the appropriate device to manually reconcile it to the existing device object. The user also has the option to select **Enroll as New Device**. Click **Proceed**.

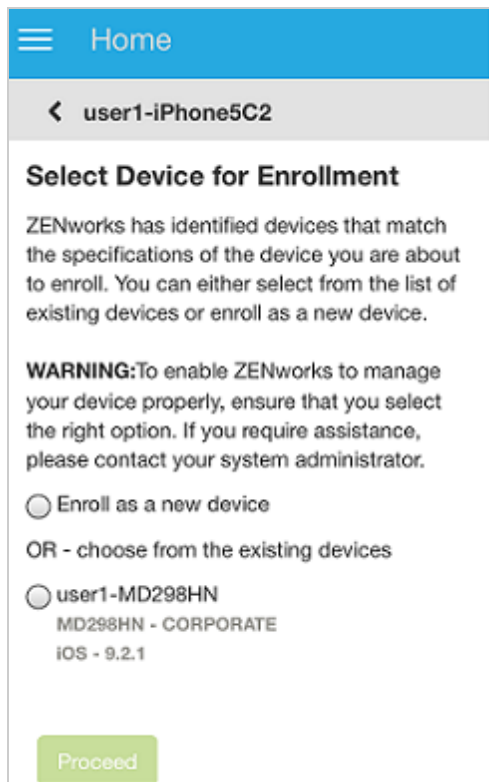


NOTE: If for any reason, platform related information of the device could not be obtained by ZENworks, then the ZENworks User Portal will initially list all the platforms before listing all devices for manual reconciliation. The user needs to select the relevant platform of the device before proceeding further. This page will be displayed regardless of whether the **Allow manual reconciliation by user** option is selected or not.

In a scenario, wherein an Android device is already enrolled via the ActiveSync mode and the user is about to re-enroll the same device by downloading the ZENworks App, then as a part of manual reconciliation, the ZENworks App will display all active Android devices that are enrolled as Email Only (ActiveSync Only) devices and are associated with the same user.

For iOS devices: An iOS device that was initially enrolled via Email Only mode is fully wiped and retired. You have now unretired the device for the user to re-enroll the device back to the zone using the same enrollment mode. Since the ActiveSync IDs of the re-enrolled device changes, auto reconciliation fails.

In such a scenario, enable **Allow Manual Reconciliation by User** in the Mobile Enrollment Policy. When the user re-visits the ZENworks User Portal page to complete ActiveSync Only enrollment of the unretired device (see [Procedure: Enrolling an Email-only Device](#)) and after selecting the device ownership type, the ZENworks User Portal will list all active iOS devices associated with the user that are enrolled to the ZENworks Management Zone. The user can select the appropriate device to manually reconcile the device to the existing device object. The user also has the option to select **Enroll as New Device**. Click **Proceed**.










15 Managing a Device


The following scenarios show you how to use the device management features available in ZENworks Control Center.


- ◆ [Status Messages \(page 187\)](#)
- ◆ [Viewing Device Information \(page 188\)](#)
- ◆ [Viewing Apps Information \(page 189\)](#)
- ◆ [Organizing Devices into Dynamic Mobile Device Groups \(page 191\)](#)
- ◆ [Managing Email Notifications \(page 191\)](#)
- ◆ [Refreshing a Device \(page 192\)](#)
- ◆ [Locking and Unlocking a Device \(page 195\)](#)
- ◆ [Sending a Message to a Device \(page 196\)](#)
- ◆ [Initiating an Inventory Scan Quick Task \(page 196\)](#)
- ◆ [Collecting Mobile Device Inventory \(page 196\)](#)
- ◆ [Activation Lock \(page 199\)](#)
- ◆ [Enabling Lost Mode \(page 202\)](#)
- ◆ [Locating a Device \(page 203\)](#)
- ◆ [Reboot or Shutdown iOS Devices \(page 205\)](#)
- ◆ [Unenrolling a Device \(page 205\)](#)

15.1 Status Messages

Status messages give a quick indication of the status of the device. To view these messages, click **Devices** on the left navigation pane of ZENworks Control Center and click **Mobile Devices** (or navigate to the folder as configured in your Mobile Enrollment policy). The status icons that appear beside a device are as follows:

- ◆  - No warning or error messages;
- ◆  - Warning messages;
- ◆  - Error messages;
- ◆  - No warning or error messages, bundle or policy assignment has failed.
- ◆  - Warning messages, bundle or policy assignment has failed.
- ◆  - Error messages; bundle or policy assignment has failed.
- ◆  - Retired device; inventory information is retained, but no policies or bundles are applied

 - Wipe Pending; unenroll device action is initiated from the ZENworks Management Zone and is waiting for response from the user's device.

 - Enrollment Pending; device object has been created in the ZENworks Management Zone and is waiting for enrollment to be completed on the device.

You can get more information about the warning and error messages by clicking the device and viewing the **Message Log** by navigating to the **Events and Logs** tab. You can get more information about bundle and policy status by clicking the device name and viewing the bundle or policy information on the device's Relationship page.

15.2 Viewing Device Information

After a device is enrolled to the ZENworks Management Zone, you can view the details of your enrolled device. To view this page:

- 1 Navigate to the **Devices** section in ZCC.
- 2 Click **Mobile Devices**.
- 3 Click the relevant device.

The Device Information page displays the following details:

- ♦ **General Information, Network, Operating System, and Cellular:** Provides general information about the device, its hardware, operating system, network configuration, and cellular network information.
- ♦ **Last Connections:** Shows when the device was last connected with the ZENworks system. If ZENworks also manages the device's ActiveSync connection, the date and time of the last ActiveSync connection is also displayed.
- ♦ **ZENworks Mobile App:** Displays the version of the ZENworks Agent App that is installed on the device. This is applicable for Android devices only.
- ♦ **ActiveSync:** Displays the ActiveSync Server version, the ActiveSync ID, and the User Agent that identifies the email client on the device.
- ♦ **Administration:** Displays information about the administrative owner and indicates if the device is a test device. If the device is not a test device, you can click **Set** to set the device as a test device. If the device is a test device, you can click **Reset** to reset the device to a non-test device. This section also provides additional information on whether the device is a DEP device, the department to which the device belongs, the site, the MDM Server to which the device is enrolled, and the location of the device. Click **Edit** to change the information in any of the fields.

NOTE: ZENworks will identify a device as a DEP device, only if this device is assigned to the relevant virtual MDM Server in the Apple portal. If a DEP enabled device is enrolled to ZENworks (using ZENworks User Portal) but is not assigned to the virtual MDM Server in the Apple portal, this device will not be identified as a DEP device.

- ♦ **Device is Roaming:** Indicates if the device is connecting through a network other than its home carrier network, as indicated by the **Home carrier network** field in the **Network** section. The "roaming" network is identified in the **Current carrier network** field, which is also displayed in the **Network** section.
- ♦ **Data Roaming Enabled:** Indicates if the device is allowed to use data while roaming.

- ♦ **Device is Rooted (Android Only):** Indicates if the device is configured for root access. This is applicable for Android devices only.
- ♦ **Work Profile Mode (Android Only)** Indicates if the Android device is enrolled in the work profile mode.
- ♦ **Device Capacity:** Provides information about the device's battery, internal storage, external storage, and RAM.
- ♦ **Supervised (iOS only)** Indicates that the device is in a supervised mode allowing extra restrictions to be imposed.
- ♦ **Find My iPhone Enabled (iOS only)** Indicates that the device allows certain apps to determine the users' approximate location. When enabled, this feature helps users in locating their devices and protecting them, if the devices are lost or stolen.
- ♦ **Activation Lock Enabled (iOS only)** Indicates that unauthorized access to a user's device is restricted.
- ♦ **Do Not Disturb enabled (iOS only)** Indicates that notifications, alerts, and calls on a user's device are silenced while it is locked.
- ♦ **iCloud Backup enabled (iOS only)** Indicates that the device information is backed up on a daily basis to iCloud.
- ♦ **iTunes Account Active (iOS only)** Indicates that the iTunes account associated with the device is active.
- ♦ **Device is Jailbroken (iOS only)** Indicates that the software restrictions imposed by Apple are removed.



15.3 Viewing Apps Information

The apps information on a device can be viewed in the Apps page. The Apps page lists all the apps which are inventoried and assigned for a device.

To view the Apps page:

- 1 In ZCC, click **Devices**.
- 2 In the Devices page, click **Mobile Devices**.
- 3 In the Mobile Devices page, select a device and click **Apps**.

Following are some of the tasks that you can perform in the Apps page.

Task	Description
Export	You can export all the app information displayed in this page as a CSV file. Click Export > As CSV, which creates a ZIP folder. This ZIP folder contains a CSV file, which contains all the app information that are displayed in the Apps page.
Search/Filter	You can filter the data displayed in this page by specifying either the App Name, Publisher, Bundle or the Package Name in the search field. You can further filter the data based on the App Type. To filter the data, click  and select the appropriate option.
Show/Hide Columns	To arrange the columns in the summary page, click  and select the columns that need to be displayed in the summary page.

Following are the columns available for display:

- ◆ **Name:** Displays name of the app.
- ◆ **Version:** Displays version of the app.
- ◆ **Publisher:** Displays the name of the app publisher.
- ◆ **Package Name:** Displays the package name that is associated with the app.
- ◆ **cost:** Displays the cost associated with the app. The app can be free, free with in-app purchases or paid.
- ◆ **App Size:** Displays the size of the app in MBs.
- ◆ **App Store ID:** Displays the app store ID. This is displayed only for iOS devices.
- ◆ **Region:** Displays the name of the geographical location from where the app was installed.
- ◆ **App Type:** Displays the type of app. The app type can be any one of the following:
 - ◆ **System:** Apps that are either a part of the operating system or installed on the device by the device manufacturer. System apps are displayed only for Android devices.
 - ◆ **Managed:** Apps that are managed through ZENworks. A managed app is one that was deployed through ZENworks to a device.
 - ◆ **Non-managed:** Apps that are installed by the user that are not managed through ZENworks. A non-managed app is an app that was installed on the device before enrolling with ZENworks, or an app that was downloaded directly from the device without being deployed through ZENworks.
- ◆ **Installation Status:** Displays the installation status of the app. The status can either be **installed** or **not installed**. The status is not installed when the app is assigned, but not installed on the device.
- ◆ **Trusted App:** Displays whether the app is trusted or not. If the app is not installed from Google Play Store (Android) or App Store (iOS), then it is considered as a not trusted app.

- ♦ **App Store Type:** Displays whether the app is downloaded from Google Play (Android) or App Store (iOS).
- ♦ **Apple VPP App:** Displays Yes if the app is managed by the Apple Volume Purchase Program (VPP).
- ♦ **Enterprise App:** Displays Yes if the app is distributed through Self-hosted private apps or Google-hosted private apps.
- ♦ **Bundle Name:** Displays the name of the bundle through which the app was installed on the device. If the app was installed through one bundle, then the bundle name link is displayed. If multiple bundles were assigned for the same app, the View Bundles link is displayed instead of the bundle name link. Click the link to access the bundles page that displays the list of bundles.

15.4 Organizing Devices into Dynamic Mobile Device Groups

Using ZENworks Control Center, you can manage devices by performing tasks directly on individual device objects. However, to optimize management of a large number of devices, ZENworks lets you organize devices into dynamic groups; you can then perform tasks on these groups to manage its devices. With a dynamic group, you define criteria that a device must meet to be a member of the group, and then devices that meet the criteria are automatically added.

- 1 In ZENworks Control Center, click the **Devices** tab.
- 2 Click the **Mobile Devices** folder.
- 3 Click **New > Dynamic Mobile Device Group** to launch the Create New Group Wizard.
- 4 On the Basic Information page, type a name for the new group in the **Group Name** field, then click **Next**.
- 5 On the Define Filter for Group Members page, select the group on which the filters are to be applied and then define the criteria that a device must meet to become a member of the group, then click **Next**.

For example: you can add a filter to specify that the mobile device platform should be Android and you can add another filter to specify the owner of the Android device.

- 6 On the Summary page, click **Finish** to create the group.

ZCC automatically refreshes the group members based on the settings configured in **Configuration > Device Management > Dynamic Group Refresh Schedule**. However, you can manually update the dynamic group by selecting the group and navigating to **Group > Actions > Update Group Membership**.

15.5 Managing Email Notifications

Email notifications are pre-configured mails that ZENworks sends to notify users about specific activities. Currently, the following email notifications are sent to the user:

- ♦ **Invite Users:** This email notification is an invite for users to enroll their mobile devices to ZENworks. The default message contains information on the steps that the user needs to perform to enroll the device, based on the device operating system. However, you can modify

this message to suit your requirements. To send this email notification to specific users, you need to navigate to the **Users** section in ZCC, select a user folder or a user, and click **Action** > **Invite Users**.

- ◆ **Device pending enrollment:** Notification is sent when the device is registered to the ZENworks Management Zone but the enrollment process is not complete. The user needs to complete the enrollment process by logging in to the ZENworks end-user portal. When this notification is sent to the device, the term <HOSTNAME> in the default message, will be replaced with the server address to which the device is registered.
- ◆ **Email account not provisioned:** Notification is sent when the user is unable to send or receive organizational emails on the device due to one of the following reasons:
 - ◆ Mobile Email Policy is not yet assigned to a device that has enrolled to the ZENworks Management Zone.
 - ◆ Mobile Email Policy is unassigned from a device that is enrolled to the ZENworks Management Zone.
- ◆ **Device Located:** This notification is sent to users when their devices are located using the Geolocation feature in ZENworks. For more information on the Geolocation feature, see [Locating a Device](#).

To edit the content within each of these notifications, navigate to **Configuration** > **Management Zone Settings** > **Event and Messaging** > **Email Notifications**.

ZENworks lets you send these email notifications in multiple languages. You need to specify the language in which the email notification is to be sent, in the Mobile Enrollment Policy. For more information, see [Editing Mobile Enrollment Policy](#).

To edit the email messages in these languages, click any of these notifications, select the language from the drop-down menu, and edit the contents of the email in that language. The **Custom** option will display the notification content that was created in the previous release. Also, if a particular language is not listed in the drop-down menu, then you can select **Custom** and edit the email message.

15.6 Refreshing a Device

A device refresh can be initiated in the following ways:

- ◆ **Scheduled Refresh**
- ◆ **Manually Triggered Refresh**
 - ◆ Quick Task Refresh initiated by the Administrator.
 - ◆ ZENworks User Portal or ZENworks Agent App refresh initiated by the end user.

15.6.1 Initiating a Scheduled Refresh

The Device Refresh schedule lets you define how often a device contacts the ZENworks Server to update information such as policies and bundles.

During a scheduled device refresh, data from the ZENworks Server cache is read and delivered to the device. Therefore, if an action is assigned to a device you need to wait until the server cache is updated with the assignment, which is determined by the value specified in **Assignment Optimization Settings**. For more information on **Assignment Optimization Settings**, see [Infrastructure Management Settings](#) in [ZENworks Management Zone Settings Reference](#).

For example: If a bundle is assigned to a device and the **Refresh Device** quick task is executed immediately, then the bundle might not deploy on the device. If you want to install the bundle immediately, you can instead execute the **Install Bundle** quick task.

This schedule can be defined at three levels:

Management Zone: The schedule is inherited by all device folders and devices. To configure this setting, navigate to **Configuration > Management Zone Settings > Device Management > Device Refresh and Removal Schedule**.

Device Folder: The schedule is inherited by all devices contained within the folder or its subfolders. Overrides the Management Zone refresh schedule. To configure this setting, navigate to **Devices > <Folder (Details)> > Settings > Device Management > Device Refresh and Removal Schedule**.

Device: The schedule applies only to the device for which it is configured. Overrides the refresh schedules set at the Management Zone and folder levels. To configure this setting, navigate to **Devices > <Select a Device> > Settings > Device Management > Device Refresh and Removal Schedule**

NOTE: If you are configuring this setting at a Device Folder or at Device level, then you need to click **Override** or else the default setting will apply.

Timed Refresh

This option ensures that for multiple devices that have the same refresh schedule, the ZENworks Server does not initiate their refresh at the same time. The default value is 120 minutes and the minimum value that you need to set is 60 minutes. For example, if you have 1000 devices with the same refresh schedule, you might overburden your ZENworks Server. By selecting this option, the server waits a randomly generated amount of time before initiating the refresh on these devices.

To define the refresh schedule fill in the following fields:

- 1 Fill in the following fields to define the schedule:

Days, Hours, Minutes: Specifies the maximum amount of time within which the mobile devices should refresh. For example, to set the refresh time as 8.5 hours, you would specify 0 Days, 8 Hours, 30 Minutes.

- 2 Click **Apply** to save the settings.

15.6.2 Manually Triggered Refresh


If you do not want to specify a refresh schedule, then select **Manual Refresh** on the Device Refresh and Removal Schedule page (**Configuration > Device Management > Device Refresh and Removal Schedule**). This option lets users manually initiate a refresh. Manual refresh can be initiated by:

- ◆ Using the Refresh Device quick task.
- ◆ Using the Refresh icon on the ZENworks Agent App or the ZENworks User Portal.

During a device refresh initiated manually, ZENworks bypasses the server cache and it retrieves the latest updates and send these updates to the devices.

Refresh Device Quick Task

You can initiate a device refresh through a ZENworks Control Center quick task. The quick task sends a synchronization request to the device. When the device connects to the ZENworks Primary Server, it uploads updated device information and receives configuration changes (for example, policy changes) that have not already been sent to the device. This quick task is applicable for Android and iOS devices that are enrolled as fully managed devices in the management zone.

- 1 In ZENworks Control Center, click **Devices > Mobile Devices** to display your enrolled mobile devices.
- 2 Select the check box in front of the Android or iOS device you want to refresh, click **Quick Tasks > Refresh Device** to display the Refresh Device quick task.
- 3 Retain the default values of the quick task options and click **Start** to initiate the device refresh.
- 4 Click **Hide** to close the quick task, after the quick task is initiated.
- 5 Click  in the upper-right corner of the **Devices** list to refresh the list.
The device's Last Contact time is updated to show the refresh time.
- 6 (Optional) Click the device to show its properties, then review the Device Information page for any updated device information. For more information, see [“Viewing Device Information” on page 188](#).

Refresh Device on the User Portal or the ZENworks App

Click the Refresh icon on the ZENworks User Portal for iOS devices or the ZENworks Agent app for Android Devices. When a refresh is initiated from the device, the device connects to the ZENworks server, it uploads updated device information and receives configuration changes (for example, policy changes) that have not already been sent to the device.

15.7 Locking and Unlocking a Device

15.7.1 Locking a Device

You can remotely lock a lost or a stolen device from ZENworks Control Center by using the **Lock Device** quick task. If passcode restriction is already enabled on the device, then the user can unlock the device by only entering the set passcode. This quick task is applicable for Android and iOS devices that are enrolled as fully managed devices in the management zone.

- 1 In ZENworks Control Center, click **Devices > Mobile Devices** to display your enrolled mobile devices.
- 2 Select the check box in front of the Android or iOS device, click **Quick Tasks > Lock Device** to display the Lock Device quick task.
- 3 Specify a reason for locking the device. Additionally, for iOS devices, you can specify a call back phone number that can be called back when the device is found, along with a message. The call back phone number and the message are displayed on the lock screen of the device on which a passcode is enabled.
- 4 Click **Next** to display the quick task options.
- 5 Retain the default values of the quick task options and click **Start**.
- 6 Click **Hide** to close the quick task after the quick task is initiated.

15.7.2 Unlocking a Device

The Unlock Device quick task removes the passcode restriction on devices. This task can be performed on only a single device at any given point in time. For Android devices, you need to specify the reason for unlocking the device along with the new passcode. The new passcode will be set immediately after the previous passcode is cleared on the device. For iOS devices, you only need to specify the reason for unlocking the device. This quick task is applicable for Android and iOS devices that are enrolled as fully managed devices in the management zone.

- 1 In ZENworks Control Center, click **Devices > Mobile Devices** to display your enrolled mobile devices.
- 2 Select the check box in front of the Android or iOS device, click **Quick Tasks > Unlock Device** to display the Unlock Device quick task.
- 3 For Android devices, specify the reason for unlocking the device along with the new passcode. The new passcode will be set immediately after the previous passcode is cleared on the device. In the case of an iOS device, you only need to specify the reason for unlocking the device.
- 4 Click **Next** to display the quick task options.
- 5 Retain the default values of the quick task options and click **Start**.
- 6 Click **Hide** to close the quick task after the quick task is initiated.

NOTE: The **Unlock** quick task is not applicable for Android devices enrolled in the work profile mode.

15.8 Sending a Message to a Device

You can send a message from ZENworks Control Center to an Android device that is enrolled as a fully managed device. The message consists of a subject and a body (140 character limit). It shows up as a notification on the device, if notifications are turned on for the ZENworks Agent app.

15.8.1 Procedure

- 1 In ZENworks Control Center, click **Devices** > **Mobile Devices** to display your enrolled mobile devices.
- 2 Select the check box in front of the Android device you want to refresh, click **Quick Tasks** > **Send Message** to display the Send Message dialog box.
- 3 Provide a subject and message, then click **Next** to display the quick task options.
- 4 Leave the quick task options set to the defaults and click **Start** to send the message.
- 5 Click **Hide** to close the quick task, after the quick task is initiated.
- 6 On the Android device, open the Notification area to view the message.

15.9 Initiating an Inventory Scan Quick Task

You can schedule an Inventory Scan to collect the device inventory details by navigating to the Mobile Device Inventory page. For more information, see [Collecting Mobile Device Inventory](#). If you selected the **No Schedule** option in the **Mobile Device Inventory** page, then you can manually trigger the Inventory Scan quick task. On initiating the quick task, hardware and managed apps information is collected by default. Non-managed apps and system app information is collected based on your selection in the **Apps Inventory** section in the **Mobile Device Inventory** page.

15.9.1 Procedure

- 1 In ZENworks Control Center, click **Devices** > **Mobile Devices** to display your enrolled mobile devices.
- 2 Select the check box in front of the device, click **Quick Tasks** > **Inventory Scan** to display the Inventory Scan dialog box.
- 3 Leave the quick task options set to the defaults and click **Start** to initiate the quick task.
- 4 Click **Hide** to close the quick task, after the quick task is initiated.
- 5 On the device, open the Notification area to view the message.

15.10 Collecting Mobile Device Inventory

An inventory scan of your mobile devices provides you with a detailed report of each device's hardware and software information.

The following table lists software and hardware information that is collected from mobile devices:

Table 15-1 Mobile Inventory details

Data	Inventoried Information
Software	<p>Operating System details, system apps, managed and non-managed app details.</p> <ul style="list-style-type: none"> ◆ Managed Apps: Information related to apps that are installed through ZENworks. This information is collected by default. ◆ Non-managed Apps: Information related to apps that are installed using an app store or any other source besides ZENworks. ◆ System Apps: Information related to built-in apps. This information is collected for Android devices only. <p>App details such as app name, app version, publisher name, package name and app size are collected.</p>
Hardware	<p>System information such as device serial number, MAC address, LAN adapter, RAM, memory modules, free space and total disk space details are collected. This information is collected by default.</p>

Hardware and managed apps related information is collected by default.

15.10.1 Mobile Inventory Scan

By default, mobile inventory details are collected once in 24 hours. However, you can configure this schedule in ZCC. The scan settings can be configured at three levels:

- ◆ **Management Zone:** The settings are inherited by all the device folders and devices. To enable inventory scan at the Management Zone level, click [Configuration > Management Zone Settings > Inventory > Mobile Device Inventory](#).
- ◆ **Device Folder:** The settings are inherited by all the devices contained within the folder and the subfolders. Override the management zone settings. To configure the device folder level settings, click [Devices > <Device Folder> \(Details\) > Settings > Inventory > Mobile Device Inventory](#). Click [Override Settings](#) to enable you to configure the setting for the folder.
- ◆ **Device:** The settings apply only to the device for which they are configured. Overrides the Management Zone and Device Folder level settings. To configure the device level settings, click [Devices > <Click a device> Settings > Inventory > Mobile Device Inventory](#). Click [Override Settings](#) to enable you to configure the setting for the device.

To begin collecting these inventory details, navigate to the Mobile Device Inventory page and click [Enable Inventory Scan](#). If this option is disabled, then you also cannot initiate the Inventory Scan quick task.

Select either one of the following scheduling options:

- ◆ **No Schedule:** This indicates that the inventory scan will not be performed unless an Inventory Scan quick task is initiated. For more information, see [Initiating an Inventory Scan Quick Task](#).

- ♦ **Recurring Schedule:** Specify the schedule in days or hours to indicate how often the inventory scan should be run on the device. If **Hours** is selected, then you need to specify any value between 1 and 24. If **Days** is selected, then you need to specify any value between 1 and 30. The inventory information will be populated in ZCC only when the device syncs with the ZENworks server.

Consider a scenario, where the inventory collection and device refresh is scheduled for every 3 and 2 hours, respectively. The first device refresh is performed at 12:00 PM based on which the inventory details are collected. The subsequent refreshes occur at 2:00 PM and 4:00 PM. Since the inventory scan is scheduled for every 3 hours, the inventory information will be collected during the device refresh that occurs at 4:00 PM as 3 hours would have elapsed from the time the first refresh (12:00 PM) had occurred.

In the **Apps Inventory** section, select the type of inventory information you want to collect, that is, non-managed apps or system apps. Managed apps and hardware information is collected by default and cannot be disabled.

If in the previous releases you had configured the inventory scan schedule in the properties file, then from the current release onwards, re-configure the inventory collection details using this page as the properties file will no longer be effective.

15.10.2 Viewing Mobile Inventory

Mobile inventory details can be viewed in the Apps page or in the Reports page.

For more information, see [Section 15.3, “Viewing Apps Information,” on page 189](#) and [Using Reports in the ZENworks Asset Inventory Reference](#).

Like servers and workstations, you can view standard or create a custom report.

- ♦ [“Viewing Standard Reports for Mobile Devices” on page 198](#)
- ♦ [“Creating Custom Reports for Mobile Devices” on page 199](#)

IMPORTANT: While creating custom report of type Software applications for mobile devices, ensure that you select Mobile Applications in the Focus section.

Viewing Standard Reports for Mobile Devices

Viewing an inventory report for a mobile device is similar to viewing an inventory report for a Workstation or a Servers. The existing standard reports are modified to display mobile device information along with servers and workstation reports.

The standard report includes mobile device details retrieved from mobile devices in a zone.

To view a standard reports:

1. In ZCC, click **Reports**,
2. In the Inventory Standards Reports panel, click any Group folder, and then click the required report.

For more information, see [Using Inventory Standard Reports](#) in the [ZENworks Asset Inventory Reference](#)

Creating Custom Reports for Mobile Devices

In ZCC, you can create a custom report to collect mobile application data.

To create a custom report of type Software Application focusing on Mobile Application:

- 1 In ZCC, click **Reports**.
- 2 Select or create an Inventory Custom Reports folder.
- 3 In the folder, click New.
- 4 In the Custom Report Definition page, perform the following and click **Continue**:
 - ◆ Specify the name for the report
 - ◆ In the Type section, select Software Applications.
 - ◆ In the Focus section, select Mobile Applications.
- 5 Fill in the following fields:
 - ◆ **Name:** Specify the name of the report.
 - ◆ **Folder:** Select a folder where you want to save the report.
 - ◆ **Description:** Specify a description for your report.
 - ◆ **Type:** This field is display only. It shows the report type you selected.
 - ◆ **Columns:** From the list on the left, select what data you want to include in your report. Use the arrow icons to move the selected data to the list on the right. Use Ctrl+click to select more than one option at a time. Use the up and down icons to arrange how you want the data displayed.

Some of the newly added columns for mobile devices include Application Package Name, Application Platform, Application ID, Application Type, Story Type, Application Size (MB) and Enterprise Application.
 - ◆ **Criteria:** Select your filter criteria in the Field, Operator, and Value fields. Use the + icons to add filters; click the - icon to delete a filter. Click OR or AND to toggle back and forth between the two operators.
 - ◆ **Summary Criteria:** Select your summary filter criteria in the Field, Operator, and Value fields. Use the + icons to add filters; click the - icon to delete a filter. Click OR or AND to toggle back and forth between the two operators.
- 6 Click Save.

For more information, see [Using Inventory Custom Reports](#) in the [ZENworks Asset Inventory Reference](#).

15.11 Activation Lock

Activation Lock is a security feature on Apple devices that runs on iOS 7 or later versions. Using this feature you can prevent the reactivation of lost or stolen devices.

Activation Lock is enabled automatically when you turn on the Find My Device feature on a device. To enable Find My Device, log into iCloud account on device.

If you sign out of the iCloud account on your device, Find My Device and Activation Lock will be disabled.

If Find My Device is enabled on a device, iCloud credentials are required to:

- ◆ Erase the device
- ◆ Reactivate the device
- ◆ Turn off the Find My Device feature

In a corporate environment, if Activation Lock is enabled on a corporate-owned fully managed iOS supervised device, iCloud credentials are required to reset the device and assign it to another user. If iCloud credentials of the user are not available, then administrators can use the Activation Lock Bypass feature to bypass the Activation Lock on the device.

15.11.1 Activation Lock Bypass Code

Activation lock bypass code is a 16 digit alpha-numeric series, which can be used to bypass the activation lock on an iOS device. The bypass code lets you to bypass Activation Lock from supervised devices without the user's iCloud credentials.

15.11.2 Enabling Activation Lock Bypass

Prior to enabling Activation Lock Bypass on an iOS device, ensure that the device is supervised and enrolled via MDM.

To enable Activation Lock Bypass:

- 1 In ZENworks Control Center, click **Configuration**.
- 2 In the Management Zone Settings panel, click **Device Management**, and then click **iOS Device Settings**.
- 3 In the iOS Device Settings page, select the **Enable Activation Lock Bypass** checkbox, and then click **Apply**.

NOTE: By default, Activation Lock Bypass will be enabled on all devices in the Management Zone.

Retrieving the Activation Lock Bypass Code

When an iOS supervised device is enrolled to a zone, the Activation Lock Bypass code is automatically retrieved from the device. The retrieved bypass code is encrypted and stored in the ZENworks database.

NOTE

- ◆ After enrolling the device to a ZENworks zone, the activation lock bypass code is automatically deleted from the device.
 - ◆ Whenever a device is reset, a new Activation Lock Bypass code is generated. Hence, it is recommended that you reset the device before enrolling the device to a zone.
-

For issues related to the Activation Lock Bypass code, see [Appendix A, "Troubleshooting," on page 207](#).

Disabling Activation Lock Bypass

To disable Activation Lock Bypass, uncheck the **Enable Activation Lock Bypass** checkbox in the iOS device Settings page.

NOTE: You can reactivate the device using the Activation Lock Bypass code only if the Activation Lock Bypass feature is enabled on the device. Hence, it is recommended that you always enable the setting in ZCC.

15.11.3 Viewing the Activation Lock Bypass Code in ZCC

After enrolling a device to a zone, perform the following steps to view the Activation Lock Bypass code:

- 1 In ZENworks Control Center, click **Devices**.
- 2 In the Devices page, click **Mobile Devices**, and then select the device for which you want to view the bypass code.
- 3 In the Device Information page, under the Administration section, click **Show**, adjacent to Activation Lock Bypass Code.

The 16 digit Activation Lock Bypass code for the selected device is displayed.

NOTE: Administrators with *View Activation Lock Bypass Code* rights can view the bypass code.

Exporting the Activation Lock Bypass Code

The Activation Lock Bypass codes in the zone can be exported by running the `zman malbetf` command. The command exports the Activation Lock Bypass codes of all supervised iOS devices in the zone to a ZIP file.

NOTE: Only super admins have rights to execute the command.

For more information, see the [ZENworks Command Line Utilities Reference](#).

15.11.4 Activating the Device Using the Activation Lock Bypass Code

If Activation Lock is enabled on the device, iCloud credentials are required to reset the device. To reactivate the device, you should provide the iCloud credentials that was used to enable the activation lock. If iCloud credentials are not available, then the Activation Lock Bypass code can be used to reactivate the device.

To reactivate the device using the Activation Lock Bypass code:

1. Either unenroll the device from ZCC by selecting **Fully wipe the devices, resetting them to factory setting** or reset the device by using Apple Configurator.

For more information, see [Section 15.15, “Unenrolling a Device,” on page 205](#).

2. When prompted for Apple ID and password, leave the Apple ID field empty and enter the 16 digit bypass code in the password field without specifying the dashes.

NOTE: You can reactivate the device using the Activation Lock Bypass code only if Activation Lock Bypass is enabled on the device.

15.12 Enabling Lost Mode

When a corporate device is lost or stolen, to secure information on the device, you can enable lost mode on it, which will lock down the entire device. This feature is supported on supervised iOS devices (version 9.3 and newer devices) that are enrolled as fully managed devices. The difference between the Lock Device quick task and Lost Mode quick task is that when Lock Device is enabled, the users can themselves unlock their phones using the passcode set for the phone, whereas when Lost Mode is enabled, the devices cannot be used until the ZENworks administrator unlocks the devices.

The Lost Mode can be disabled on the device by initiating the **Disable Lost Mode** quick task in ZCC, which will unlock the device. Alternatively, you can also use Apple Configurator to reset the device.

Further, when Lost Mode is enabled on the device, you can use the Geolocation feature in ZENworks to identify the location of an iOS device. The location can be identified even if the location services is disabled on the device. For more information, see [Locating a Device](#).

NOTE: Lost mode can also be enabled by the end user through iCloud. If Lost Mode is enabled through iCloud, the user can unlock the device by using the password specified while enabling lost mode. However, if Lost Mode is enabled using ZENworks, then only the administrator can unlock the device.

On 10.x devices, both the iCloud Lost Mode and ZENworks Lost Mode can co-exist for the same device. If both the lost modes are enabled for the same device, then the message provided while enabling ZENworks lost mode is displayed on the device. When one of the lost modes is disabled, then the other lost mode takes control of the device.

For example, **if iCloud Lost Mode was applied initially and then the ZENworks Lost Mode is enabled on the same device:** ZENworks Lost Mode takes precedence and the message configured while enabling ZENworks Lost Mode is displayed on the device. When you disable ZENworks Lost Mode, the device returns to the iCloud Lost Mode state and the message configured while enabling iCloud Lost Mode is displayed on the device.

However, if on a 9.x device, Lost Mode is enabled using both iCloud and ZENworks, then based on which Lost Mode is set first, the related Lost Mode will apply:

- ♦ **iCloud Lost Mode was applied initially and then the ZENworks Lost Mode:** The device responds with an error and ZENworks Lost Mode is not enabled on the device.
- ♦ **ZENworks Lost Mode was applied initially and then iCloud Lost Mode was set by the end user:** In this case, the Lost Mode set by ZENworks will be overridden. The end user can unlock the device using the password set while enabling Lost Mode in iCloud. You will also not be able to identify the location of the device using ZENworks. When the iCloud lost mode is disabled, the device returns to the Lost Mode state set by ZENworks.

If the user restarts an iOS device, which is set in Lost Mode, iCloud Keychain is encrypted and locked and the device cannot connect to the Wi-Fi network. Hence, the ZENworks server will not be able to contact the device when the **Disable Lost Mode** quick task is executed. In this case, you can factory reset the device by using Apple Configurator, which will lead to data loss. If you do not want to

remove the data from the device, then you can refer to a few forums that have indicated that some users were successful in clearing the passcode set on the device by using Ethernet connectivity to connect to an iOS device.

15.12.1 Procedure

- 1 In ZENworks Control Center, click **Devices** > **Mobile Devices** to display your enrolled mobile devices.
- 2 Select the iOS device, click **Quick Tasks** > **Enable Lost Mode** to display the Enable Lost Mode dialog box.
- 3 Specify the following information that will be displayed on the lock screen of the device as soon as the Lost Mode is enabled:

- ◆ **Recovery message:** Information on how to return the device.
- ◆ **Phone number:** The call back phone number of the device owner.

NOTE: Both fields are mandatory. However, to proceed you can specify a value in any one of the fields.

- ◆ **Footnote:** Additional information required to be displayed on the device.
- 4 Click **Next** to display the quick task options.
 - 5 Use the appropriate quick task options and click **Start** to lock the device.
 - 6 Click **Hide** to close the quick task, after the quick task is initiated.

When the quick task is applied successfully on the device, the device's information page in ZCC will clearly indicate that lost mode is enabled.

15.13 Locating a Device

Use the Geolocation feature in ZENworks to identify the current geographic location of an enrolled mobile device. It is recommended that this feature be used on a need-only basis and not to continuously monitor the device location. While identifying the device location, only the last known location of the device is retrieved and populated by ZENworks.

15.13.1 Prerequisites

For ZENworks to determine the device location successfully, ensure that the following prerequisites are met:

- ◆ This feature is applicable for iOS supervised devices and Android devices that are enrolled as fully managed devices.
- ◆ For an Android device, turn on the device's location services. To enable the device's location services:
 - ◆ Navigate to the Settings app on the device.
 - ◆ Tap Location.
 - ◆ Enable Location.

NOTE: For a device enrolled in the work-profile mode, even if the location is turned on at the device level, the user can turn it off at the work profile level (applicable on Android 7.0 and newer versions). In such cases, ZENworks will not be able to determine the location of the device.

- ◆ For an Android device, ensure that the Location permission for the ZENworks Agent app is turned on. For the basic mode of enrollment (devices that are not enrolled in the work profile or work-managed mode), this permission should be granted by the end-user at the time of app installation. If the app is upgraded to the 17.3.0.0. version, then this permission needs to be manually enabled by the end user by navigating to the Settings menu on the device. If the device is enrolled in the work profile or work-managed mode of enrollment, then this permission is automatically granted and cannot be modified by the end user.
- ◆ For an Android device, the location mode selected by the end-user will enable ZENworks to accurately identify the location of the device. When the **Device only** mode is set as the location mode, then the device might not be able to report its current location. The Device only mode works better when the user is outdoors. To ensure that the device is able to report its current location, it is recommended that the end user sets the location mode as **High Accuracy**.
- ◆ For an Android device, ensure that the device is not in Doze mode.
- ◆ For an iOS device, enable Lost Mode. You can initiate the **Enable Lost Mode** quick task on the device. For more information, see [Enabling Lost Mode](#). You do not need to have an iCloud account to locate iOS devices using ZENworks. Even if Lost Mode is enabled through iCloud, ZENworks will be able to identify the location of the device (applicable only on iOS 10.x or later versions). However, if iCloud Lost Mode is enabled on iOS 9.x devices, you will not be able to identify the location of the device using ZENworks.
- ◆ Associate the Geolocation right to your admin account. To enable this right:
 1. Click **Configuration**.
 2. Click **Administrators**.
 3. Click **New** appearing under the **Roles** panel.
 4. Click **Add** appearing under the **Rights** section.
 5. Select **Device Rights**.
 6. Retain the default selection **Allow** appearing next to the **Geolocation** right.

15.13.2 Procedure

- 1 In ZENworks Control Center, navigate to the **Devices** tab.
- 2 Click a device that you want to locate.
- 3 Click the **Geolocation** tab.
- 4 Click **Locate Now**.

On clicking **Locate Now** a quick task is sent to the device and only the last known location of the device is identified and populated in ZENworks. The location details such as the address, the longitude and latitude along with the time stamp are displayed. You can also click **View on map** to view the location on Google Maps.

If the device does not respond within a minute of the quick task initiation, then the operation is timed out. Subsequently, whenever a new location request is sent to the device, the previous location details stored by ZENworks are overwritten with the latest location details.

15.13.3 Notifying Users of Device Location

To ensure that end users are aware that their administrator has obtained the current location of their devices, notifications are sent to the user as email notifications (applicable for iOS and Android devices) and device notifications (applicable only for Android devices), which are sent after the devices are located successfully. Also, while the device location is in the process of being identified, an additional notification is sent to Android 8.0 or newer devices, informing the users that their administrator is attempting to locate their devices.

You can customize the contents of the email notification by navigating to [Configuration > Management Zone Settings > Event and Messaging > Email Notifications > Device Located](#). For more information, see [Managing Email Notifications](#).

15.14 Reboot or Shutdown iOS Devices

Using the quick task feature in ZENworks you can reboot (restart) or shutdown iOS devices. This feature is applicable for iOS versions 10.3 or newer versions. To perform this quick task:

- 1 In ZENworks Control Center, click [Devices > Mobile Devices](#) to display your enrolled mobile devices.
- 2 Select the iOS device, click [Quick Tasks > Reboot/Shutdown](#).
- 3 Select Reboot or Shutdown in the Reboot and Shutdown Settings section. The remaining settings in this dialog box are not applicable for iOS devices.
- 4 Click [Next](#) to display the quick task options.
- 5 Leave the quick task options set to the defaults and click [Start](#) to send the message.
- 6 Click [Hide](#) to close the quick task, after the quick task is initiated.

15.15 Unenrolling a Device

While unenrolling a device, you can choose to delete the device from the ZENworks Management Zone or to retire the device (remains in the zone but is inactive). You can also choose to fully wipe the data and reset the device to its factory settings or selectively wipe the data on the device (corporate data and email only).

For more information on unenrolling a work profile or work-managed device, see [Integrating ZENworks with Android Enterprise](#).

NOTE: The Selective Wipe action is not performed on devices enrolled as ActiveSync Only devices. For a fully managed iOS device, this option removes the fully managed profile along with the remotely configured ActiveSync profile. However, if the ActiveSync profile was manually configured, then this option retains it. For Android devices, the [Selective Wipe](#) option removes the app and retains the ActiveSync configuration.

Therefore, if you want to delete or retire a device that is enrolled as [iOS MDM + ActiveSync](#) or [Android App + ActiveSync](#), then you need to perform a full wipe of the device.


During unenrollment, if VPP apps are installed on the device, then these apps are automatically uninstalled from the device. However, for App Store Apps (distributed using iOS App Store App bundles) the apps are uninstalled based on the configured app settings (**Retain App on Unenrollment**).

15.15.1 Procedure

- 1 In ZENworks Control Center, click **Devices** > **Mobile Devices** to display your enrolled mobile devices.
- 2 Select the check box in front of the mobile device, click **Quick Tasks** > **Unenroll Device** to display the Unenroll dialog box.
- 3 Select the data removal option for the device, that is, **Selectively Wipe the devices, by removing only corporate data and email** or **Fully wipe the devices, resetting them to factory setting**. Select **Delete the devices from the zone** or select **Retire the devices (devices remain in the zone)**. Enter a reason for unenrolling the device, then click **Next** to display the quick task options.
- 4 Leave the quick task options set to the defaults and click **Start** to send the task to the device.
- 5 Click **Hide** to close the quick task after the quick task is initiated.

The quick task will not complete if the ZENworks Primary Server is unable to contact the device. In this case, you can close the quick task, refresh the **Devices** list, select the mobile device, and click **Delete** to remove the device from the management zone.

NOTE: If the device is offline and the **Delete** option is selected, then the status of the device changes to **Wipe Pending**. Subsequently, the device will be deleted when it is online. However, if **Retire** is selected, then the device status changes to **Retired** irrespective of whether the device is online or offline.

- 6 Click  in the upper-right corner of the **Devices** list to refresh the list.

If the **Delete the devices from the zone** option was selected, then the device is no longer listed. However, if the **Retire the devices** option was selected, then the device will be listed with the status as retired.

NOTE: If a device is in **Retired** or **Wipe Pending** status and if an iOS bundle created through an Apple VPP subscription is assigned to the device, then the app will be uninstalled and the license will be revoked. However, if the VPP related iOS bundle is assigned to the user, then the app will be uninstalled and the license revoked, if the device is the only device associated with the user.

If a device is in **Retired** or **Wipe Pending** state, then to remove this device from the ZENworks system, select the device and click **Delete**.

A Troubleshooting

This section provides solutions to the problems you might encounter while using the Mobile Management feature.

If any of the ZCC operations fail, then you can check the following logs for additional details:

- ♦ **loader-messages.log:** which can be accessed from the following locations:
 - ♦ On a Windows Server: %ZENWORKS_HOME%\logs\loader-messages.log
 - ♦ On Linux Server: /var/opt/novell/log/zenworks/loader-messages.log
- ♦ **services-messages.log:** which can be accessed from the following locations:
 - ♦ On a Windows Server: %ZENWORKS_HOME%\logs\services-messages.log
 - ♦ On Linux Server: /var/opt/novell/log/zenworks/services-messages.log
- ♦ **zcc.log:** which can be accessed from the following locations:
 - ♦ On a Windows Server: %ZENWORKS_HOME%\logs\zcc.log
 - ♦ On Linux Server: /var/opt/novell/log/zenworks/zcc.log

NOTE: References to %ZENWORKS_HOME% indicates the following default path that can be changed during installation: C: \Program Files\Novell\ZENworks.

- ♦ [Section A.1, “Intune App Management,” on page 207](#)
- ♦ [Section A.2, “Apple DEP,” on page 209](#)
- ♦ [Section A.3, “MDM Servers,” on page 210](#)
- ♦ [Section A.4, “Push Notifications,” on page 211](#)
- ♦ [Section A.5, “ActiveSync,” on page 212](#)
- ♦ [Section A.6, “Enrollment,” on page 214](#)
- ♦ [Section A.7, “Quick Tasks,” on page 215](#)
- ♦ [Section A.8, “Apple Volume Purchase Program,” on page 215](#)
- ♦ [Section A.9, “Policies,” on page 216](#)
- ♦ [Section A.10, “Bundles,” on page 217](#)
- ♦ [Section A.11, “Android Enterprise,” on page 217](#)
- ♦ [Section A.12, “ZENworks Agent App,” on page 219](#)
- ♦ [Section A.13, “Miscellaneous,” on page 220](#)

A.1 Intune App Management

Microsoft Graph API Configuration fails

Explanation: Microsoft Graph API configuration in ZENworks fails.

Possible Cause: Some of the reasons for failure are:

- ◆ ZENworks Server using which Microsoft Graph API is configured does not have outbound connectivity to contact the Azure portal.
- ◆ Pop-up blocker is not disabled on the browser using which Microsoft Graph API is configured. Disable the pop-up blocker and try again.

iOS Intune App Protection Policy creation fails in ZENworks.

Explanation: iOS Intune App Protection policy creation fails in ZENworks.

Possible Cause: Some of the reasons for failure are:

- ◆ ZENworks Server using which Microsoft Graph API is configured does not have outbound connectivity to contact the Azure portal.
- ◆ The access token is either invalid or has expired. You need to renew the token, in ZCC, by navigating to **Configuration > Management Zone Settings > Intune App Management > Renew Token**. After renewing the token, you need to start creating the policy again.
- ◆ The Microsoft Graph API is either not configured or is deleted from ZENworks. To configure it, navigate to **Configuration > Management Zone Settings > Intune App Management**. After configuring the account, you need to start creating the policy again.

The creation or modification of iOS App Protection policy succeeds in ZENworks but fails in Azure

Explanation: iOS Intune App Protection Policy is created or modified (such as copying or renaming the policy) successfully in ZENworks but the creation or modification of the same policy fails in the Azure portal.

Possible Cause: Some of the reasons for failure are:

- ◆ ZENworks Server is facing some network connectivity issues.
- ◆ The access token is either invalid or has expired. You need to renew the token, in ZCC, navigate to **Configuration > Management Zone Settings > Intune App Management > Renew Token**.
- ◆ The Microsoft Graph API is either not configured or is deleted from ZENworks. To configure it, navigate to **Configuration > Management Zone Settings > Intune App Management**.

Action: After resolving the issue, you need to undo the operation in ZCC and retry. For example: If copying of the policy succeeds in ZENworks but not in Azure, you need to resolve the issue, delete the copy of the policy created in ZENworks and then copy the policy again.

The deletion of iOS App Protection policy succeeds in ZENworks but fails in Azure

Explanation: iOS Intune App Protection Policy is deleted (such as copying or renaming the policy) successfully in ZENworks but the deletion of the same policy fails in the Azure portal.

Possible Cause: Some of the reasons for failure are:

- ◆ ZENworks Server using which is facing some network connectivity issues.
- ◆ The access token is either invalid or has expired.
- ◆ Microsoft Graph API account was already removed from ZENworks.

Action: Visit the Azure portal to manually delete the iOS Intune App Protection Policy.

Token renewal fails if the process is initiated from another ZENworks Server

Explanation: When there are multiple Primary Servers in the zone and the redirect (callback) URL of a particular ZENworks server is specified in the Microsoft portal while configuring Microsoft Graph API, then token renewal fails if the process is initiated using a different ZENworks server and not the server whose callback URL is specified in the Microsoft App Registration portal.

Action: Modify the redirect URL in the [Microsoft App Registration portal](#) to the redirect URL of the ZENworks server using which you want to renew the token.

A.2 Apple DEP

DEP Server creation fails if certain mandatory information is missing in the uploaded token

Explanation: While uploading a token, if certain mandatory information such as the Server GUID or the Virtual MDM Server name is missing in the token, then the DEP server creation fails. This might occur if the Device Manager role is not added to your Apple account.

Action: Ensure that you add the Device Manager role to your Apple account and regenerate the token in the DEP portal. If this role is already linked to your account, then contact the customer support team.

DEP enrollment fails if the user initially skips applying the MDM Profile on the device

Explanation: While enrolling a device through Apple DEP, if the user initially skips DEP enrollment (if [Allow user to skip applying the MDM profile on the device](#) is enabled in the assigned DEP profile) and returns to the previous page to allow DEP enrollment, then the enrollment fails.

Action: To enroll the device, reset the device to its factory settings.

DEP enrollment does not proceed further after specifying assigned user credentials

Explanation: During DEP enrollment, if the device is assigned to a specific user and the user specifies their login credentials, DEP enrollment might not proceed to the next screen.

Action: Ensure that the user credentials entered are correct.

DEP enrollment fails while re-enrolling a retired device

Explanation: A device that was retired by another user is now being re-enrolled via Apple DEP. However, DEP enrollment fails after the new user enters his/her credentials.

Action: Ensure that you delete the device object of the retired device in ZCC, before you proceed with re-enrollment.

A.3 MDM Servers

While configuring access controls to secure an MDM Server, Administration access is denied for all

Explanation: While configuring access controls to secure an MDM Server, Administration access is denied for all and ZCC remains inaccessible except from the server in which the access was allowed or denied.

Action: Change the configuration by accessing ZCC from the MDM Server in which the access was denied. You can access ZCC in the following ways:

- ◆ Enter the Server IP.
- ◆ Enter `https://localhost` (applicable for IPv4 addresses only)
- ◆ Enter the loopback address.

If you are still unable to access ZCC, then delete the configuration file `access-filters.json` from the directory available at `%ZENWORKS_HOME%/share/tomcat/conf`. Restart the MDM server. Administration access will be allowed for all. You need to navigate back to ZCC and re-configure the access controls.

After configuring access controls to secure an MDM Server, an IP address of a device that is denied access is still able to contact the ZENworks Server

Explanation: While securing an MDM Server, a specific IP address of a device is denied access to the server. However, this device is still able to contact the MDM Server.

Action: Enable the Tomcat valve logging to check the logs. For more information, see [Tomcat Valve Logging](#).

Also, check whether the device is communicating with the ZENworks Server using a proxy server. If so, you need to deny access to the IP address of the proxy server, if other devices are not using this proxy server.

Mobile devices are unable to contact the ZENworks Server

Explanation: Mobile devices are unable to communicate with the MDM Server.

Action: Verify that the Primary Server, to which the device is enrolled, still has the MDM Server Role. Since mobile devices contact the MDM Server to which they are enrolled and if mobile devices are enrolled to a server that you have chosen to remove from the zone, then you will have to re-enroll these mobile devices to the zone using another MDM Server. Before re-enrollment, ensure that you delete the corresponding device objects in ZCC. However, if you are upgrading or replacing the MDM Server with another server, then the enrolled devices will automatically reconcile with the replaced server.

NOTE: Also, if you delete all the MDM Servers in the zone, then the Push Notifications configuration (APNs and GCM) will be automatically deleted.

APNs keystore fails to replicate on a newly added MDM Server in the zone

Explanation: When a new MDM Server is added in the zone, the APNs keystore is replicated on this server by retrieving the keystore from one of the existing MDM Servers. This will ensure that the newly added MDM Server also has the capability to communicate with the APNs server. However, if the existing MDM Server is not connected to the network, the APNs keystore fails to replicate on the new MDM Server.

Action: When you add a new MDM Server to the zone, ensure that all the MDM Servers are online. After you ensure that the existing MDM Servers are online, remove the MDM role from the newly added MDM Server and re-assign it to the same server.

A.4 Push Notifications

APNs certificate import fails

Explanation: While configuring the Apple Push Notification service in ZENworks, APNs certificate import fails.

Action: Check the ZCC.log or the service-messages.log of the MDM Servers. If the failure is due some issue with the APNs Keystore, try restarting the server and then import the certificate. If `CertificateNotYetValidException` is displayed

as the reason for failure, then this indicates that the MDM Server time is ahead of the certificate creation time. You need to wait for a while and then try importing the certificate.

Push notifications to enrolled devices will not work as expected, if the APNs certificate has expired and a new certificate is imported

Explanation: When the existing APNs certificate has expired and you create a new certificate in the Apple Push Certificates portal and import it to ZENworks, then the push notifications to mobile devices, which were enrolled using the earlier certificate, will not work as expected.

Action: Re-enroll the devices. As a best practice, if the APNs certificate has expired, it is recommended that you **Renew** the certificate in the Apple Push Certificates portal instead of creating a new certificate. For details, see [Renewing an Expired APNs Certificate](#).

While migrating from Google Cloud Messaging (GCM) to Firebase Cloud Messaging (FCM), an error is displayed if the Project Number does not match with that of the existing GCM project

Explanation: While migrating from GCM to FCM, the following error message is displayed on uploading the .JSON file: “The Project Number included in this .JSON file does not match with the Project Number specified in the existing GCM project. Ensure that the .JSON file includes the correct Project Number”.

Action: While migrating the GCM project to FCM, use the same login credentials that was used to create the GCM project.

If you are unable to obtain these credentials, then execute the `zman sgd` command to remove the existing GCM values from the ZENworks database. Restart the ZENworks services and then proceed to upload the .JSON file to configure the new FCM project.

A.5 ActiveSync

If a device enrolled as an ActiveSync Only device is fully wiped and deleted, then re-enrollment of the same device fails

Explanation: If a device that is enrolled as an ActiveSync Only device is fully wiped and deleted using the **Unenroll** quick task, then you will be unable to re-enroll the same device to the ZENworks Management Zone.

Action: In the database, the `TobeDeleted` value for the device object in the `zZENObject` table, should be updated to 1.

Email accounts might not work properly on some mobile devices if an ActiveSync server is added after the devices are enrolled

Explanation: If a device is already enrolled to the ZENworks Management Zone and an ActiveSync server is configured later, then the email accounts on some of these devices might not receive emails.

Action: For Android devices:

- ◆ You might be prompted to re-enter your account password. If this does not work, either initiate a Refresh action on the email account configured on the device or initiate a Refresh action from the Settings menu on the device.

For Windows devices:

- ◆ Delete and re-create the email account on the device.

NOTE: For iOS devices, the email client might display an error message a couple of times, after which you will start receiving emails on the device.

As a best practice, it is advisable to configure an ActiveSync server before a device is enrolled to the ZENworks Management Zone.

Email accounts cannot be re-configured, if remote wipe is initiated on the ActiveSync Server.

Explanation: If a remote wipe is initiated directly from the ActiveSync Server, then the email account configured on the device will stop receiving emails. However, the device object is retained in ZENworks Control Center. Whenever the user tries to re-create the email account, the data on the device is wiped.

Action: As a best practice, it is advisable to fully wipe and retire the device. Subsequently, you can click **Delete** to remove the device from the zone.

During email account configuration, user authentication to ActiveSync Server fails

Explanation: While configuring an email account on a device using a Mobile Email Policy, the user credentials are obtained from the configured user source and in turn authenticated with the ActiveSync Server. The user is logged in to the email account, if the credentials provided in the user source match with the ones configured in the ActiveSync Server. However, the user credentials with which the user logs into the ActiveSync Server to retrieve emails might be different from the credentials that he/she uses to login to the LDAP directory, due to which the email account fails to send or receive emails.

Action: Select the ActiveSync Server login attribute in the User Source to ensure that the user credentials considered for authentication are the same. For more information, see [Configuring the Attribute for ActiveSync Server Authentication](#).

Email accounts on some devices might stop functioning and an authentication error is displayed

Explanation: On a few devices, the configured ActiveSync accounts might stop functioning and an **Authentication Error** notification is displayed. In some cases, this notification recurs even if the user has specified the account credentials and in some cases the device does not respond on clicking this notification.

Action: Delete and re-create the email account on the device.

A.6 Enrollment

Status of a newly enrolled iOS device is displayed as Pending Enrollment in ZENworks User Portal, until the browser is refreshed

Explanation: The status of a newly enrolled iOS device is displayed as **Pending Enrollment** in the ZENworks User Portal even though the device object has moved from the **Pending Enrollment** folder to **Devices > Mobile Devices** folder in ZCC. Tapping the Home icon or the Sync Now icon in the ZENworks User Portal does not update the status of the enrolled device.

Action: Refresh the ZENworks User Portal browser to view the updated status of the device as **Active**.

If the time on an Android device lags behind the time on the ZENworks Server, then device enrollment will be unsuccessful

Explanation: The time on an Android device lags behind the time on the ZENworks Server. During device enrollment, when the user logs into the ZENworks mobile app, the enrollment process does not advance to the next stage.

Action: Ensure that the time on the device and the ZENworks Server is the same and then try re-enrolling the device.

Re-enrollment of a device might fail with a Constraint Violation exception

Explanation: When a device object, which is associated with a device that has unenrolled from the zone, is deleted from ZCC, then re-enrollment of the same device might fail and a Constraint Violation exception is displayed in services-messages.log. Constraint violation exception indicates that the device object from the previous enrollment is not deleted from the database.

Action: After deleting the device object, you need to wait for the loader process to remove the device object details from the database. This process might take around 10 to 15 minutes, after which you can try re-enrolling the device again. If the error persists even after multiple attempts to re-enroll the device, then contact Customer Care.

A.7 Quick Tasks

Quick task to unlock device might fail on Android N and later versions

Explanation: The Unlock Device quick task fails on Android N or newer devices enrolled in the basic mode that already have a password set. This is due to Device Admin API restrictions imposed by Android.

Action: None. It is recommended that the user migrates from the basic mode of enrollment to the work profile or work-managed mode of enrollment, to ensure that this quick task works seamlessly.

If the time on the ZENworks Server lags behind the actual enrollment time of a mobile device, then any quick task that is sent to this device within this time period is not processed and its status will remain as **Initiated**

Explanation: When a mobile device is enrolled to the zone and the ZENworks Server time lags behind the enrollment time of this device, then any quick task that is sent during this time period, is not processed and the status of the quick task remains as **Initiated**.

Action: You need to wait until the ZENworks Server time is equal to or exceeds the device enrollment time, before sending a push notification, such as quick tasks, to the device.

A.8 Apple Volume Purchase Program

For an Apple School Manager Account, bundle creation for associated apps that are linked to a specific location might fail in ZCC.

Explanation: When VPP purchases, made in Apple School Manager, are linked to a location and a non-location specific server token is uploaded in ZCC, then bundle creation for these apps fails.

Action: To support location based assets, VPP in Apple School Manager uses location tokens. Therefore, the server token that you upload in ZCC should be linked to the same location as that of the purchased apps. To download the server token for a specific location, in the Apple School Manager portal, navigate to **Settings > Apps and books > My Server Tokens** and click download against the location of the token that you want to download. For more information on Apple School Manager, see the [Apple Documentation](#). For more information on how to upload a server token in ZCC, see [Linking ZENworks to the Apple VPP Account](#).

Purchased license count is not updated, if sync to retrieve latest VPP apps is initiated immediately after purchasing an app

Explanation: If a sync between the ZENworks Server and the Apple Server is initiated immediately after purchasing an app using the Apple VPP account credentials, then the purchased license count might not be updated with these latest app purchases. Subsequently, bundle assignments might fail.

Action: Ensure that you verify the purchased license count for that specific app in the Apps Catalog page, before assigning that app to a device or a user. Wait for the next sync or re-initiate the sync to update the purchased license count.

While uploading or renewing a VPP token, an appropriate error message is displayed and the subscription renders as unusable.

Explanation: If the existing token or the renewed token is managed by another MDM solution, then an appropriate message is displayed and the subscription renders as unusable.

Action: Delete this subscription and create a new subscription. To continue using the same token, you need to claim management of the token.

A.9 Policies

EUP session becomes inactive when a Mobile Security or Device Control Policy is applied on iOS devices

Explanation: A Mobile Security Policy or a Mobile Device Control Policy, with modifications to the Safari browser settings, is assigned to an iOS Device. When a device refresh is initiated in the End User Portal (EUP) on a Safari browser, as soon as the policies are effective on the device, the EUP session is logged out.

Action: None. Log in to the EUP session again.

Mobile Security policies might not apply automatically on a few Android devices

Explanation: Mobile Security policies assigned to devices might not apply automatically on a few Android devices.

Action: Initiate a Refresh action on these devices.

Windows mobile devices do not accept alphanumeric or complex characters even if they are enabled in the assigned Mobile Security policy

Explanation: When a Mobile Security policy, which has alphanumeric or complex characters enabled as a part of the Password settings, is assigned to a Windows device, the device keeps prompting for Personal Identification Number (PIN) and does not accept alphanumeric or complex characters.

Action: None. This is a Microsoft limitation.

Simple passwords are accepted by a few Android devices even if the setting is disabled in the assigned Mobile Security policy

Explanation: When a Mobile Security policy, in which the simple password setting is disabled, is assigned to Android devices, a few of the Android devices might still accept a simple password.

Action: None.

Max Grace Period and Max Inactivity Timeout restriction settings might display incorrect values on the device

Explanation: The **display the passcode screen on unlock** (max grace period) and **maximum inactivity timeout** values specified in the mobile security policy that is assigned to an iOS device, might display incorrect values when viewed on the device. However, this does not affect the behavior of the device lock feature as the values specified while defining the mobile security policy in ZENworks Control Center (ZCC) are applied.

Action: None

A.10 Bundles

Variable specified while configuring bundle app parameters, appears as is when the app is pushed to the device

Explanation: Both built-in as well as custom variables can be specified as key value pairs or in the configuration file while configuring specific app parameters. However, these variables appear as is when the application is pushed to the device. This might happen if an incorrect variable is specified.

Action: Ensure that you have provided the correct variable or the specified variable is defined in ZCC.

A.11 Android Enterprise

Work-managed device enrollment fails

Explanation: Work-managed device enrollment fails.

Possible Cause: Some of the reasons for failure are:

- ♦ The Google Play Store on the device is not the latest version and requires an update.

- ♦ The Android Enterprise subscription in ZCC is not associated with the user whose device has failed to enroll.
- ♦ The Android Enterprise policy is not assigned to the user whose device has failed to enroll.

Unable to access GroupWise emails on enrolled devices using the Gmail app that was remotely configured in ZENworks

Explanation: The GroupWise email account configured in the Gmail app might not be accessible, if the app was remotely configured using the Managed Configuration feature in ZENworks.

Action: Ensure that you specify the email address of the user (or the `$(Email)` variable) in the username field while remotely configuring the Gmail app in ZENworks. This is a GroupWise limitation.

Unable to associate user context with the Android Enterprise Subscription

Explanation: When you are creating an Android Enterprise Subscription an error occurs while associating a user context.

This might be because of any of the following reasons:

Scenario 1: The selected user context might already be associated with a subscription that is already unenrolled. The data associated with unenrolled subscription will be deleted only after 30 days.

Action: After unenrolling the Android Enterprise Subscription, delete the subscription data. To delete the subscription data run the `zman sca` command.

Scenario 2: Both Parent and child user are associated to the same Android Enterprise Subscription.

Action: Both parent and child user context cannot be associated with the same subscription. Depending on your requirement, you can remove either child or parent user context.

An error **Work profile can't be created because you've reached the maximum number of users on your device. Remove at least one user and try again** is displayed on certain devices while trying to setup the work profile again.

Explanation: When the work profile setup on a device is initially interrupted and ZENworks tries to setup the work profile again after a device reboot, then the error **Work profile can't be created because you've reached the maximum number of users on your device. Remove at least one user and try again** might be displayed.

Action: Remove the work profile that might have been setup initially by navigating to **Settings > Accounts > Remove work profile**, reboot the device and retry work profile setup. If the problem persists, remove any additional users from the device and retry work profile setup.

When a device becomes compliant and restrictions are removed, app shortcuts on the home screen might not be restored

Explanation: When an Android device becomes non-compliant, work apps are restricted and app shortcuts in the home screen are hidden. However, when the device becomes compliant, the work apps are enabled but the shortcuts in home screen are not restored.

Action: None

Work profile enrollment fails on certain Android 5.0 devices

Explanation: An Android 5.0 or 5.0.x device fails to enroll in the work profile mode, even if an Android Enrollment Policy is assigned.

Action: None. The device might not be Android enterprise capable.

Certain work apps crash when the user logs in to those specific apps

Explanation: When a user tries to log in to an app within the work profile, the app crashes or does not respond. This might happen if the app requires the user to add another account, which is by default disabled by ZENworks.

Action: Navigate to the **Mobile Device Control Policy** assigned to the user, select Android and enable the **Allow Adding of Account** Setting. This setting will enable users to add accounts within the work profile. However, this setting should be used with caution, as by enabling it users can also add their personal Google accounts and download personal apps within the work profile, which might make it difficult to contain corporate data within the profile workspace.

As a best practice, it is recommended that you pre-configure the app and deploy it using the Managed Configurations feature in ZENworks.

A.12 ZENworks Agent App

When the ZENworks Agent app contacts the server to obtain the new certificate after the CA remind activation date, the status of the system update is momentarily displayed as failed

Explanation: The ZENworks app installed on an Android device, which was offline during the period from CA remind initiation to activation, contacts the server only after the certificate activation date, then a message is displayed requesting the user to accept the new certificate. After the user accepts the request, the **Update Assigned** status for this device is momentarily displayed as **Failed** and changes to **Successful** after the next refresh.

Action: None

The ZENworks Agent App shortcut crashes when the app is updated

Explanation: When the latest ZENworks update is applied on the ZENworks Agent app, then on clicking the app shortcut in the home screen, it crashes with the error **App not installed**. However, the updated app is installed correctly.

Action: Remove and add the app shortcut again. You can also open the app from the launcher.

On opening the ZENworks Agent App, an error **Device is no longer enrolled with server. Please reinstall the app and enroll the device again is displayed.**

Explanation: On opening the ZENworks Agent app on a device that is enrolled to ZENworks, the following error is displayed **Device is no longer enrolled with server. please reinstall the app and enroll the device again.**

Action: You need to perform the following:

1. Check whether the device object is present in ZCC or not.
2. If the device object is not present in ZCC, then uninstall and re-install the ZENworks Agent app. Re-enroll the device to ZENworks.
3. If the problem persists, disable Device Administrator for the app, clear the app data and open the ZENworks Agent app again. To clear the app data, perform the following steps:

NOTE: A Moto E4 Plus device with Android version 7.1.1 was considered to provide the following navigation path, which may vary based on the Android version or the device manufacturer.

- a. Navigate to **Settings > Security > Device Administrator**. Deselect ZENworks checkbox and follow the prompts to complete deactivating Device Administrator.
- b. Navigate back to the **Settings** menu, click **Apps > ZENworks > Storage > Clear Data**. Follow the prompts to complete clearing the app data.
- c. Open the ZENworks Agent app.

A.13 Miscellaneous

Enrolled mobile devices might not work as expected, if a user source is deleted and the same user source is re-configured.

Explanation: If a configured user source is deleted and the same user source is configured again, then you will be unable to manage mobile devices enrolled using the earlier user source.

Action: Re-enroll the devices. As a best practice, ensure that you delete the device objects of these devices that are already present in ZCC and then re-enroll these devices.

Activation lock bypass code cannot be retrieved from an iOS supervised device

Source: ZENworks 2017 Update 2

Explanation: For some iOS supervised devices even if the Activation lock bypass setting is enabled in ZCC, the activation lock bypass code cannot be retrieved from the device.

Action: Reset and re-enroll the device.

B Best Practices

In this section you will learn the best practices for managing mobile devices using ZENworks Configuration Management.

- ♦ [Section B.1, “Migrating to Apple Business Manager,” on page 223](#)

B.1 Migrating to Apple Business Manager

B.1.1 Best Practices

This section is applicable for VPP purchasers who have already upgraded or are planning to upgrade to Apple Business Manager from the Apple Deployment Programs account. This section details the best practices to migrate to a location-based token in ZENworks.

If you want to migrate an existing VPP subscription (that uses a legacy token) to a location-based token (provided by Apple Business Manager) and associate all the existing bundle assignments to this new location-based token, then as a best practice it is recommended that you renew the subscription to the location-based token. This ensures that all existing bundle assignments work seamlessly with the new location-based token. However, you can renew the subscription only if the VPP account (associated with the subscription) is mapped to a unique location. As recommended by Apple, it is advisable to migrate one VPP purchaser to one location in Apple Business Manager, which makes a location unique. This ensures that all the licenses (assigned or unassigned) are automatically migrated to the Apps and Books section of Apple Business Manager.

For example: if you have an existing subscription XYZ in your ZENworks zone, then in Apple Business Manager, you can migrate the account of this subscription to location XYZ.

If in ZENworks, instead of renewing the subscription, you create a new subscription using the location-based token while retaining the existing subscription, then it might lead to duplication and VPP licenses might be reset.

Procedure to migrate to location-based token in ZENworks

Before migrating to a location-based token in ZENworks, ensure that you have migrated the existing VPP account to the unique location. For more information, see the [Apple Support](#) documentation.

1. Login to [Apple Business Manager](#) using your VPP account credentials.
2. Navigate to Settings > Apps and Books.
3. Download the token of a specific unique location (example: location XYZ).
4. Navigate back to ZCC.
5. Click the existing subscription (example: subscription XYZ).
6. Click **Renew Token** and select the location-based token that you had just downloaded.

IMPORTANT: After migrating all the VPP accounts to Apple Business Manager, ensure that you use only location-based tokens to manage VPP licenses in ZENworks and not a combination of both account-based and location-based tokens. If both account-based and location-based tokens are used to create subscriptions in the zone, then you might face license-related issues, such as resetting of assigned licenses and it can also result in duplicate subscriptions in the zone that might lead to confusion.

B.1.2 Troubleshooting Scenarios

When assigned licenses do not transfer:

If the location in Apple Business Manager is not a unique location, then only the unassigned licenses are transferred to this location. A location is considered as non-unique if:

- ♦ A location already has licenses in it before the VPP purchaser migrates to that location.
- ♦ The location's token is downloaded before the first VPP purchaser migrates to that location.
- ♦ A new content manager is created in the location after another user opts into Apps and Books.
- ♦ Multiple VPP purchasers migrate to the same location.

For example: in Apple Business Manager, you have migrated subscription XYZ to a location that is non-unique, then only the unassigned licenses (available licenses) will migrate to the new location-based account. The assigned licenses (consumed) will still be associated with the legacy account. In this case, in ZENworks, all bundle assignments related to the existing subscription (that uses the legacy account) should be unassigned and transferred to the non-unique location. Thereafter, you need to create a new subscription in ZENworks to distribute the transferred licenses.

Procedure to migrate to location-based token in ZENworks if the location is non-unique

1. In ZENworks, unassign all the bundles assignments associated with the subscription to which the legacy token is associated. Thereafter, refresh all devices and verify that all licenses are revoked and the **Consumed License** count for all apps is 0.

or

Delete the associated subscription and ensure that you select the **Delete the replicated objects created by the subscription(s)** checkbox. Re-create the subscription in ZENworks using the same legacy token, which will reset all licenses.

2. Delete the subscription (existing or the new subscription created by linking the same legacy token) and ensure that you select the **Delete the replicated objects created by the subscription(s)** checkbox.
3. In Apple Business Manager, navigate to Settings > Apps and Books. Transfer the unassigned licenses to the specific location.
4. Download the token for that specific location.
5. In ZENworks, create a new Apple VPP subscription and upload the newly downloaded location-based token.

When the new subscription is created, ZENworks syncs with Apple and all licenses transferred to this location will be identified and populated as available licenses in ZENworks. You can now create bundles and assign these licenses to specific devices or users.

When there are multiple subscriptions in the zone:

If there are multiple subscriptions in the zone, then based on the scenario, you can refer to the relevant procedure to migrate to location-based tokens:

- ◆ Each associated subscription account is migrated to non-unique locations, then for each account follow the steps documented in [Procedure to migrate to location-based token in ZENworks if the location is non-unique](#).
- ◆ All associated subscription accounts are migrated to a single non-unique location, then for each account follow the steps documented in [Procedure to migrate to location-based token in ZENworks if the location is non-unique](#). However, instead of creating multiple subscriptions for each account, create only one subscription and map the location token with this subscription.
- ◆ If the first account is migrated to a unique location and all other accounts are migrated to non-unique locations, then for the first account follow the steps documented in [Procedure to migrate to location-based token in ZENworks](#) and for the remaining accounts follow the steps documented in [Procedure to migrate to location-based token in ZENworks if the location is non-unique](#).
- ◆ If the first account is migrated to a unique location and subsequently the second account is migrated to the same location, then for the first account follow the steps documented [Procedure to migrate to location-based token in ZENworks](#) and for the second account follow the steps documented in [Procedure to migrate to location-based token in ZENworks if the location is non-unique](#). However, you do not need to create a new subscription with the second account. The renewed subscription can be utilized to distribute licenses.

