VMware AirWatch macOS Platform Guide

Deploying and Managing macOS Devices

AirWatch v9.1

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Revision Table

The following table displays revisions to this guide since the release of AirWatch v9.1.

Date	Reason
April 2017	Initial upload.

Table of Contents

Chapter 1:
Overview

What's New for macOS Sierra

This guide includes the latest features and functionality that correspond with the release of AirWatch Console AirWatch v9.1. The list below describes these features and the sections and pages on which they appear.

- Custom Commands - Deploy a custom XML command to managed tvOS devices. Custom commands allow more granular control over devices in your fleet. See Configure and Deploy a Custom Command to a Managed Device on page 80.

Introduction to the macOS Platform

AirWatch provides complete management solutions for macOS devices. AirWatch's Mobile Device Management (MDM) solution enables enterprises to manage Corporate-Dedicated, Corporate-Shared or Employee Owned (BYOD) macOS devices throughout the entire device lifecycle.

AirWatch supports macOS versions 10.7 (Lion) and higher, and all devices running those operating system versions.

This guide shows administrators how to enroll devices or allow end users to enroll themselves, create profiles to manage compliance, configure the AirWatch Agent, manage applications, manage devices through the AirWatch Console and on the Self-Service Portal, integrate with macOS tools like File Vault 2, and enable Product Provisioning.

AirWatch macOS Management Prerequisites

Before reading this guide, AirWatch recommends having the following materials ready:

- **Active Environment** – This is your active AirWatch environment and access to the AirWatch Console.
- **Appropriate Admin Permissions** – This type of permission allows you to create profiles, policies and manage devices within the AirWatch Console.
- **Enrollment URL** – This is the web address entered into Safari to begin the enrollment procedure. This location is specific to your company's enrollment environment. For example, this enrollment URL will follow the format of https://<companyspecificdeviceservicesurl>/enroll.
- **Group ID** – This is a unique identifier for the organization group where the device is enrolled that defines all configurations the device receives.
- **Credentials** – This a username and password combination used to identify and authenticate the user account to which the device belongs. This can be AD/LDAP user credentials.
- **Apple ID for Volume Purchase Program (VPP)** – An Apple ID is needed for User-Based Licenses when using the Volume Purchase Program with a macOS deployment.
- **Apple Push Notification service (APNs) Certificate** – This is a certificate issued to your organization to authorize use of Apple's cloud messaging services.

Supported Devices

AirWatch currently supports devices running macOS 10.7 Lion and higher, including:

- MacBook
- MacBook Pro
- MacBook Air
- iMac
- Mac mini
- Mac Pro

Chapter 2:
macOS Device Enrollment

macOS Enrollment Overview

Each device in your organization's deployment must be enrolled in your organization's environment before it can communicate with AirWatch and access internal content and features. macOS devices enroll using MDM functionality built into the native OS in conjunction with AirWatch functionality.

Enrollment Methods

There are three ways to initiate enrollment for macOS devices:

- Allow end users to enroll a device using the AirWatch Agent.
- Sideload devices with an MDM profile.
- Utilize Apple's Device Enrollment Program.

End-User Enrollment Using the AirWatch Agent

The agent-based enrollment process secures a connection between macOS devices and your AirWatch environment through the AirWatch Agent app. The AirWatch Agent application facilitates the enrollment, and then allows for real-time management and access to device information. Agent-based enrollment is best suited for deployments where users have an available Apple ID, which they will need to download the AirWatch Agent from the App Store.

For more information, see:

- AirWatch macOS Agent on page 69
- Enroll with macOS Agent on page 11

Admin Enrollment Using a Sideloaded Staging Profile

Device Staging on the AirWatch Admin Console allows a single administrator to outfit devices for other users on their behalf, which can be particularly useful for IT administrators provisioning a fleet of devices. Admins can sideload a staging profile for a single user devices and multi-user devices.

Single-User Staging

Single-user staging allows an admin to stage devices for a single user, such as a company-issued laptop. LDAP binding is required when staging devices for single users.

For more information, see Stage macOS Devices for Single User Enrollment on page 12.

Multi-User Staging

Multi-user device staging allows an administrator to provision devices intended to be used by more than one user, such as a customer service kiosk computer. Multi-user staging allows the device to dynamically change its assigned user as the different network users log into that device.

For more information, see Configure Multi-User Staging for macOS Devices on page 14.

Bulk Device Enrollment

Depending on your deployment type and device ownership model, you may want to enroll devices in bulk. AirWatch provides bulk enrollment capabilities for macOS devices using the Apple Device Enrollment Program (DEP).

Bulk Enrollment with Apple Device Enrollment Program

Deploying a bulk enrollment through the Apple Device Enrollment Program (DEP) allows you to install a non-removable MDM profile on a device, which prevents end users from being able to remove the profile from their devices. You can also provision devices in Supervised mode to access additional security and configuration settings.

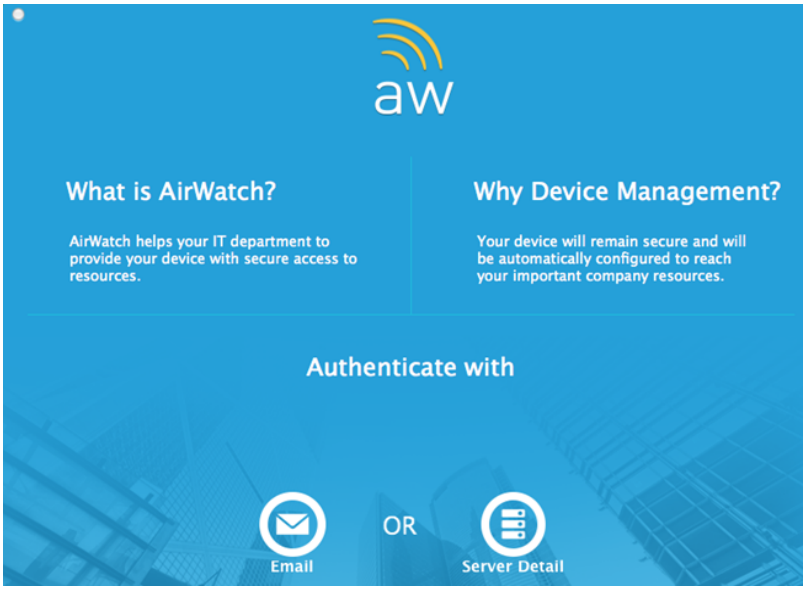
For more information, see Apple Device Enrollment Program on page 15.

Enroll with macOS Agent

The agent-based enrollment process secures a connection between macOS devices and your AirWatch environment. Install the AirWatch Agent application to facilitate enrollment and enable real-time management and access to relevant device information.

AirWatch recommends that you download the AirWatch Agent from **awagent.com**. As soon as the Agent is installed, the device begins prompting the user for enrollment authentication.

1. Navigate to **awagent.com** and begin downloading the AirWatch Agent application.
2. Open the .dmg file and follow the prompts to install the application. An AirWatch authentication window appears.



3. Enter the credentials as required.
4. Select **Single User** or **Multi User** to determine if the device is shared or not, if required.
5. Follow the prompts to finish enrolling. Once the process is completed, the device immediately begins receiving all profiles assigned by the administrator.
6. Quit the installer when ready. You may be notified at this time if your user account is not allowed or blocked because your account is blacklisted and not approved for enrollment.

For additional information, see Using the AirWatch Agent for macOS.

AirWatch Mac Agent Download

AirWatch recommends that you download the AirWatch Agent from **awagent.com**. However, you can also download the AirWatch Agent for macOS devices at any time by logging into either AirWatch Console or Self-Service Portal (SSP).

Download options:

- **AirWatch Admin Console** – Navigate to **Groups & Settings > All Settings > Devices & Users > Apple > Apple macOS > Agent Application** and select **Download Agent**.
- **Self-Service Portal** – Log into the SSP and select **Download Agent** from the top action menu.

After you complete the enrollment process, the AirWatch Mac Agent .dmg file is automatically sent to the device. Open the file and select **Install AirWatch Agent**. Follow the prompts to complete Agent installation and activation. Once the Agent is installed, the icon  appears at the top of the display indicating it is active and no additional end-user interaction is necessary.

Require the Agent for Web-based Enrollment on macOS Devices

If you are utilizing web-based enrollment, enable the AirWatch Agent to be downloaded before or after enrollment through the AirWatch Console. For web enrollment using the AirWatch Console v7.3 and higher, make sure that the **Require Agent Enrollment for macOS** check box is selected.

Navigate to **Groups & Settings > All Settings > Devices & Users > General > Enrollment**. Select the check box if needed.

1. From the AirWatch Console Dashboard, navigate to **Devices > Device Settings > Apple > Apple macOS > Agent Application**.
2. Select the **Download Mac Agent Post Enrollment** check box for web-based enrollment.
3. Select **Save**.
4. Navigate to **awagent.com** to download the AirWatch Agent and begin the enrollment process.

Stage macOS Devices for Single User Enrollment

Single-User Device Staging on the AirWatch Admin Console allows a single administrator to outfit devices for other users on their behalf, which can be particularly useful for IT administrators provisioning a fleet of devices.

Important: LDAP binding is required when staging devices. To create this payload, see Binding a Device to the Directory Service in this guide.

1. Navigate to **Accounts > Users > List View** and select **Edit** for the user account for which you want to enable device staging.
2. In the **Add / Edit User** page, select the **Advanced** tab.
   a. Scroll down to the **Staging** section.
   b. Select **Enable Device Staging**.
   c. Select the staging settings that will apply to this staging user.

3. **Single User Devices** stages devices for a single user. This user is the next Network User to log into the device. Toggle the type of single user device staging mode to either **Standard** or **Advanced**. Standard staging requires an end user to enter login information after staging, while Advanced means the staging user can enroll the device on behalf of another user.
4. Ensure **Multi User Devices** is set to **Disabled**.
5. Enroll the device using one of the two following methods.
   - Enroll using the AirWatch Agent by entering a server URL and Group ID.
   - Open the device's Internet browser, navigate to the enrollment URL, and enter the proper Group ID.
6. Enter your staging user's credentials during enrollment. If necessary, specify that you are staging for **Single User Devices**. You will only have to do this if multi-user device staging is also enabled for the staging user.
7. Complete enrollment for either Advanced or Standard staging.
   - If you are performing Advanced staging, you are prompted to enter the username of the end-user device owner who is going to use the device. Proceed with enrollment by installing the Mobile Device Management (MDM) profile and accepting all prompts and messages.
   - If you are performing Standard staging, then when the end user completes the enrollment, they will be prompted to enter their own credentials in the login window.

The device is now staged and ready for use by the new user.

Configure a Sideloading Enrollment Profile for macOS Devices

Obtain the MDM profile to prepare to sideload devices.

Do this by using Apple Configurator functionality to generate an enrollment profile for the desired organization group. Then, enroll devices using the MDM profile for standard or advanced staging. Last, download the AirWatch Agent to complete enrollment and authenticate devices.

To configure an enrollment profile:

1. Configure a **Staging** user account in the AirWatch Console, if you have not already. This can be a **Basic** user account you manually create or a **Directory** user account that is enabled with staging. If configuring Multi-user staging for macOS devices, then choose a **Directory** user account.

   > For more information on creating users, see the **VMware AirWatch Mobile Device Management Guide**.

2. Navigate to **Devices > Device Settings > Devices & Users > Apple > Apple Configurator**.
3. Select **Enabled** for **Automated Enrollment**. You may need to **Override** the current organization group to do this.
4. Choose **macOS** as the **Platform**.
5. Select the **Staging Mode** drop-down menu.
   - **Single user device** – Stage the device for one user.
   - **Multi-user device** – Stage the device for multiple users.

6. Choose the **Default Staging User**.
    - Only staging users are available as Default Enrollment User options. Later, when staging is completed, the user's device details are updated in the AirWatch Console and the device is associated with that end user.
7. Select **Save and Copy URL > OK** to save the .mobileconfig file that includes the name of the organization group.
8. Select **Export** to export the .mobileconfig file. This profile is needed when staging devices.
9. Navigate to **Groups & Settings ▸ All Settings ▸ Devices & Users ▸ Apple ▸ Apple macOS ▸ Agent Application** and select **Download Agent Download** to install the AirWatch Agent.
10. Enroll using a local account and install the AirWatch Agent. At this time, all profiles are pushed to the device.
11. Distribute the device to the end user. The end user must log in from the device's Login Window to complete the staging process.

Configure Multi-User Staging for macOS Devices

Multi-user device/shared device staging allows an IT administrator to provision devices intended to be used by more than one user. Multi-User staging allows the device to dynamically change its assigned user as the different network users log into that device.

1. Navigate to **Accounts > Users > List View** and select **Edit** for the user account for which you want to enable device staging.
2. In the **Add / Edit User** page, select the **Advanced** tab.
    a. Scroll down to the **Staging** section.
    b. Select **Enable Device Staging**.
    c. Select the staging settings that will apply to this staging user.
3. **Single User Devices** stages devices for a single user. Toggle the type of single user device staging mode to either **Standard** or **Advanced**. Standard staging requires an end user to enter login information after staging, while Advanced means the staging user can enroll the device on behalf of another user.
4. Ensure **Multi User Devices** is set to **Enabled**.
5. Enroll the device using one of the two following methods.
    - Enroll using the AirWatch Agent by entering a server URL and Group ID.
    - Open the device's Internet browser, navigate to the enrollment URL, and enter the proper Group ID.
6. Enter your staging user's credentials during enrollment. If necessary, specify that you are staging for **Single User Devices**. You will only have to do this if multi-user device staging is also enabled for the staging user.
7. Complete enrollment for either Advanced or Standard staging.
    - If you are performing Advanced staging, you are prompted to enter the username of the end-user device owner who is going to use the device. Proceed with enrollment by installing the Mobile Device Management (MDM) profile and accepting all prompts and messages.

- If you are performing Standard staging, then when the end user completes the enrollment, they will be prompted to enter their own credentials in the login window.

The device is now staged and ready for use by the new users.

Apple Device Enrollment Program

Devices can also be staged through Apple's Device Enrollment Program (DEP). Apple DEP is a streamlined staging method that is best for corporate-owned devices.

DEP on macOS enables you to:

- Apply standard staging to devices.
- Configure Setup Assistant panes to skip during installation.
- Enforce enrollment for all end users.
- Customize and streamline the enrollment process to meet your organization's needs.
- Hold a device in the Awaiting Configuration state when it reaches the Setup Assistant screen.
- Create a local Hidden Admin account and allow end users to skip the Account Creation screen.

For more information, see the **VMware AirWatch Guide for Apple Device Enrollment** available on **AirWatch Resources**.

For additional Apple information, see the Apple Deployment Programs' Device Enrollment Program Guide or contact your Apple Representative.

Custom Bootstrap Packages for Device Enrollment

In a typical device enrollment, the AirWatch Agent must be installed on a device before any other installer packages can be executed. The Bootstrap Package allows installer packages to deploy to a device immediately after the device is enrolled.

Bootstrap Packages

Bootstrap Packages use the Apple MDM command `InstallApplication`, which allows an MDM to natively install .pkg files to an enrolled device. Historically, the AirWatch Agent handles the download and installation of application files. Bootstrap Packages allow .pkg files to install immediately after enrollment whether or not the AirWatch Agent is installed.

You may want to use alternative tools for device and application management in addition to the AirWatch Agent. Bootstrap package enrollment comprises an enrollment flow paired with a bootstrap package that installs the alternative tooling and configures the device before the end user begins using the device.

Bootstrap Package Use Cases

Bootstrap Packages may be useful in the following circumstances. This list is not exhaustive.

- You want to create a custom-branded end-user experience, such as launching a window as soon as enrollment completes, to inform the user about the installation process and instruct them to wait to use the device until

provisioning and installation complete.

- Your deployment does not include the AirWatch Agent, but you still have critical software to deploy to devices.
- You want to use Munki for Application Management, and need the Munki client to install immediately after enrollment so the user can begin installing apps, rather than going through the AirWatch Agent and App Catalog.
- Your deployment only uses MDM for certificate management and software management, and uses Chef or Puppet for configuration management. In this configuration, Chef or Puppet must be installed as soon as enrollment completes to finish configuring the device.

Bootstrap Package Creation

Bootstrap packages are deployed to the device as soon as enrollment completes. Bootstrap packages deployed from the Console will not deploy to existing enrolled devices unless the devices are specifically queued using the Assigned Devices list for the package.

You must create packages before you deploy them. There are several tools available that can create a package for use in the Bootstrap Package functionality. Created packages must meet two criteria:

- The package must be signed with an appropriate certificate (such as a TLS/SSL certificate with signing usage). Only the package needs to be signed, not the app, since the Apple Gatekeeper does not check apps installed through MDM.
- The package must be a distribution package (product archive), not a flat component package.

When you have created a bootstrap package, you must deploy the package to your devices. For more information, see Deploy a Bootstrap Package on page 16.

Deploy a Bootstrap Package

Bootstrap packages allow you to make your end users' devices usable sooner after the device enrolls than a traditional enrollment. Once you have created a bootstrap package, you must deploy the package to your devices.

You must create bootstrap packages before you deploy them. There are several tools available that can create a package for use in the Bootstrap Package functionality. For more information, see Custom Bootstrap Packages for Device Enrollment on page 15.

To deploy a bootstrap package:

1. Navigate to **Apps & Books > Internal > Add Application**.
2. Upload a .pkg file that meets these requirements:
   - Package must be signed with an appropriate certificate.
   - Package must be a distribution package.

   For more information about the bootstrap package requirements, see Custom Bootstrap Packages for Device Enrollment on page 15.
3. Select **Continue** and modify the items in the **Details** tab and the **Images** tab if necessary.
4. Select **Save & Assign**, and then select **Add Assignment** to configure the **App Delivery Method**.

   By default, the **App Delivery Method** is set to **Auto**. In this configuration, the assigned bootstrap package will only install on newly-enrolled devices.

To install the bootstrap package on enrolled devices, select **On Demand**. On-Demand package deployments require you to manually push the package to devices.

To manually deploy a bootstrap package to enrolled devices, navigate to **Applications > Internal Apps > List View**. Select the package you want to assign to open the **Application Details**. Use the **Devices** tab to select devices to push the package to.

Chapter 3:
macOS Device Profiles

macOS Device Profiles Overview

Profiles are the primary means to manage devices. Configure profiles so your macOS devices remain secure and configured to your preferred settings.

Overview

You can think of profiles as the settings and rules that, when combined with compliance policies, help you enforce corporate rules and procedures. They contain the settings, configurations, and restrictions that you want to enforce on devices.

A profile consists of the general profile settings and a specific payload. Profiles work best when they contain only a single payload.

macOS profiles apply to a device at either the user level or the device level. When creating macOS profiles, you select the level the profile applies to. Some profiles can only be applied to the user level or device level.

Device Access

Some device profiles configure the settings for accessing a macOS device. Use these profiles to ensure that access to a device is limited only to authorized users.

Some examples of device access profiles include:

- Secure a device with a Passcode profile. For more information, see Configure a Passcode Policy Profile (macOS) on page 21
- Configure Apple's Gatekeeper functionality, which secures application downloads and controls specific settings related to user passwords. For more information, see Configure a Security and Privacy Settings Profile (macOS) on page 39.
- Configure accessibility options to accommodate end users' needs. For more information, see Configure an Accessibility Profile (macOS) on page 45.

Device Security

Ensure that your macOS devices remain secure through device profiles. These profiles configure the native macOS security features or configure corporate security settings on a device through AirWatch.

Some examples of device security profiles include:

- Use a Wi-Fi profile to connect enrolled devices to your corporate Wi-Fi without sending the network credentials to users. For more information, see Configure a Network Access Profile (macOS) on page 22.
- Implement digital certificates to protect corporate assets. For more information, see Configure a SCEP/Credentials Profile (macOS) on page 30
- Ensure access to internal resources for your devices with the VPN profile. For more information, see Configure a VPN Profile (macOS) on page 23 and Configure a VPN On Demand Profile (macOS) on page 24.

Device Configuration

Configure the various settings of your macOS devices with the configuration profiles. These profiles configure the device settings to meet your business needs.

Some examples of device configuration profiles include:

- Set up access to Microsoft Outlook and corporate files with an Exchange Web Services profile. For more information, see Configure an Exchange Web Services Profile (macOS) on page 26.
- Integrate VMware Fusion with VMware AirWatch MDM capabilities to allow for management of both the host device and corporate applications in a virtual machine scenario. For more information, see Configure a VMware Fusion Profile (macOS) on page 51.
- Ensure that the devices remain up to date with the macOS Updates profile. For more information, see Configure a Software Update Server Profile (macOS) on page 34.

Configure a Passcode Policy Profile (macOS)

Device passcode profiles secure macOS devices and their content. Choose strict options for high-profile employees, and more flexible options for other devices or for those part of a BYOD program.

If multiple profiles enforce separate policies on a single device, the most restrictive policy is enforced. If your password policy is being managed by your directory for network users logging into the devices, AirWatch does not recommend a passcode policy.

To create a passcode profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Passcode** payload.

4. Configure Passcode settings:

Setting	Description
Require passcode on device	Enable mandatory passcode protection.
Allow simple value	Allow the end user to apply a simple numeric passcode.
Require Alphanumeric Value	Restrict the end user from using spaces or non-alphanumeric characters in their passcode.
Minimum Passcode Length	Select the minimum number of characters required in the passcode.
Maximum Passcode Age (days)	Select the maximum number of days the passcode can be active.
Auto-lock (min)	Select the amount of time the device can be idle before the screen is locked automatically.
Passcode History	Enter the number of passwords to store in order to prevent end users from recycling passwords.
Maximum Number of Failed Attempts	Select the number of failed attempts allowed. If the end user enters an incorrect passcode for the set number of times, the device locks.
Delay after failed login attempts	Enter the length of the delay in minutes before allowing another chance to login again after the end user has reached the maximum number of failed passcode attempts.

5. Select **Save & Publish** when you are finished to push the profile to devices.

Note: End users are only prompted to change their password if the AirWatch Agent is installed and the **Enforce Passcode** check box is selected in the Agent settings in the AirWatch Console. For more information about configuring the Agent, see AirWatch Mac Agent in this guide.

Configure a Network Access Profile (macOS)

A network profile allows devices connect to corporate networks, even if they are hidden, encrypted, or password protected. This can be useful for end users who travel and use their own unique wireless network or to end users in an office setting where they need to automatically connect their devices to a wireless on-site.

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Network** payload.
4. Choose to configure **Wi-Fi** or **Ethernet** settings.

Setting	Description
Network Interface	Choose to connect to connect to network using Wi-Fi or Ethernet.
Service Set Identifier	Enter the name of the network to which the device connects.
Hidden network	This allows a connection to network that is not open or broadcasting.
Auto-Join	This determines whether the device automatically connects to the network.
Security Type	Choose the method for connection encryption to the wireless network.
Use as login window configuration	Allow the user to authenticate to the network at login. This option appears when **WiFi** and **Security Type** is **Enterprise** This option also appears when **Ethernet** is selected.
Protocols	Choose protocols for network access. • This option appears when **WiFi** and **Security Type** is any of the **Enterprise** choices. This option also appears when **Ethernet** is selected.
Password	Enter the password required to join the **Wi-Fi** network.

5. Configure **Authentication** settings that vary by protocol including but not limited to:

Setting	Description
Use as Login Window Configuration	For **Device Profiles** only. Select this if any enterprise protocols were selected for the network. Allow authentication with the target machine's directory credentials.
Username	Enter the username for the account.
User Per-Connection Password	Request the password during the connection and send with authentication
Password	Enter the password for the connection.
Identity Certificate	Select the certificate for authentication.
Inner identity	Select the inner identification method.
Outer identity	Select the external authentication method.

6. Enter the name(s) of server certificates.
7. Select **Allow Trust Exceptions** to enable the end user to make trust decisions.
8. Select **Save & Publish** when you are finished to push the profile to devices.

Configure a VPN Profile (macOS)

Virtual private networks (VPNs) provide devices with a secure and encrypted tunnel to access internal resources. VPN profiles enable each device to function as if it were connected through the on-site network.

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.

3. Select the **VPN** payload.

4. Configure **Connection** settings, including:

Settings	Description
Connection Name	Enter the name of the connection name to be displayed on the device.
Connection Type	Use the drop-down menu to select the network connection method.
Server	Enter the hostname or IP address of the server to which to connect.
Account	Enter the name of the VPN account.
Send All Traffic	Select this check box to force all traffic through the specified network.
Per App VPN	For macOS v10.9 devices, use Per-App VPN to choose what apps should connect to what networks.
Connect Automatically	Select this check box to allow the VPN to connect automatically to chosen Safari Domains.
Enable Safari Domains	Enable this setting to set specific domains or hosts that open the secure VPN connection in the Safari browser. **Add** domains as needed. If you configure a VMware Tunnel Per-App Tunnel network traffic rule for the Safari app for macOS, AirWatch disables this setting. The network traffic rules override any configured Safari Domain rules.
App Mapping	Enable this setting to allow specific applications to open a secure VPN connection. **Add** app bundle ID(s) for applications allowed to open a secure VPN connection

5. Configure **Authentication** information including:

Setting	Description
User Authentication	Select the radio button to indicate how to authenticate end users through the VPN.
Shared Secret	Enter the Shared Secret key to be provided to authorize end users for VPN access.

6. Select either **Manual** or **Automatic** proxy and the appropriate settings.

7. Select **Save & Publish** when you are finished to push the profile to devices.

Configure a VPN On Demand Profile (macOS)

VPN on demand is the process of automatically establishing a VPN connection for specific domains. For increased security and ease of use, VPN on demand uses certificates for authentication instead of simple passcodes.

To distribute certificates through the AirWatch Console during configuration and set up of VPN on demand:

1. Ensure your certificate authority and certificate templates in AirWatch are properly configured for certificate distribution.
2. Make your third-party VPN application of choice available to end users by pushing it to devices or recommending it in your enterprise App Catalog.
3. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
4. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
5. Select the **VPN** payload and configure settings as outlined above.
6. Specify the **Connection Info** for a connection type that supports certificate authentication: **IPSec (Cisco)**, **F5 SSL**, or **Custom SSL**.
   - **Server** – Enter the hostname or IP address of the server for connection.
   - **Account** – Enter the name of the VPN account.
7. **Authentication** – Select a certificate to authenticate the device.
8. **Identity Certificate** – Select the appropriate credentials.
9. Check the **Enable VPN On Demand** box. **Add** the **Domains**, and choose the **On-Demand Action.**
   - **Always Establish** – Initiates a VPN connection regardless of whether the page can be accessed directly or not.
   - **Never Establish** – Does not initiate a VPN connection for addresses that match the specified the domain. However, if the VPN is already active, it may be used.
   - **Establish if Needed** – Initiates a VPN connection only if the specified page cannot be reached directly.

   Important: For wildcard characters, do not use the asterisk (*) symbol. Instead, use a dot in front of the domain. For example, .air-watch.com.
10. Select **Save and Publish**. After the profile installs on a user's device, a VPN connection prompt will automatically display whenever the user navigates to a site that requires it, such as SharePoint.

Configure an Email Profile (macOS)

Configure an email profile for macOS devices to configure email settings on the device.

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select **User Profile**, since email settings can only apply to a single user.
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.

3. Select the **Email** payload.
4. Configure **Email** settings, including:

Settings	Description
Account Description	Enter a brief description of the email account.
Account Type	Use the drop-down menu to select either IMAP or POP.
Path Prefix	Enter the name of the root folder for the email account (IMAP only).
User Display Name	Enter the name of the end user.
Email Address	Enter the address for the email account.
Incoming Mail	
Host Name	Enter the name of the email server.
Port	Enter the number of the port assigned to incoming mail traffic.
Username	Enter the username for the email account.
Authentication Type	Use the drop-down menu to select how the email account holder is authenticated.
Password	Enter the password required to authenticate the end user.
Use SSL	Select this check box to enable Secure Socket Layer usage for incoming email traffic.
Outgoing Mail	
Host Name	Enter the name of the email server.
Port	Enter the number of the port assigned to incoming mail traffic.
Username	Enter the username for the email account.
Authentication Type	Use the drop-down menu to select how the email account holder is authenticated.
Outgoing Password Same As Incoming	Select this to auto-populate the password field.
Password	Enter the password required to authenticate the end user. Select **Show Characters** if you want users to see characters as they type.
Use SSL	Select this check box to enable Secure Socket Layer usage for incoming email traffic.

5. Select **Save & Publish** when you are finished to push the profile to devices.

Configure an Exchange Web Services Profile (macOS)

An Exchange Web Services profile allows the end user to access corporate email infrastructures and Microsoft Outlook accounts from the device.

Note: This payload is fully supported on macOS v.10.9 and higher, however, macOS will only configure Contacts when this is installed on v10.7 and v10.8.

To create an Exchange Web Services profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select **User Profile**, since email settings can only apply to a single user.
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Exchange Web Services** payload.
4. Configure **Exchange Web Services** settings including:

Setting	Description
Email Client	Configure the native mail client or Microsoft Outlook on the device. Outlook requires AirWatch Agent v.1.1.0+ to be installed on the device.
Account Name	Enter the name for the EWS account.
Exchange Host	Enter the name of the Exchange host. This option appears when **Microsoft Outlook** is selected.
Exchange Port	Enter the port number for the Exchange Host. This option appears when **Microsoft Outlook** is selected.
Use SSL	Select to enable Secure Socket Layer usage for communication. This option appears when **Microsoft Outlook** is selected.
Delete all user data when profile is removed	Select to erase all user information, mail, settings, and accounts in Outlook, whether the user is managed or unmanaged. This option appears when **Microsoft Outlook** is selected. **Caution:** Do not make this selection if deploying to a personal computer. This forces Outlook to quit and deletes all information from the computer's Microsoft User Data folder.
Login Information	
Username	Enter the username for the email account.
Email Address	Enter the email address for the email account.
Full Name	Enter the first and last name associated with the account. This option appears when **Microsoft Outlook** is selected.
Password	Enter the password required to authenticate the end user.
Payload Certificate	Select the certificate upload for EAS use. This option appears when **Native Mail Client** is selected.
Domain	Enter the domain for the email account. This option appears when **Microsoft Outlook** is selected.

5. Configure more options for **Native Mail Client**:

Setting	Description
Internal Exchange Host	The name of the secure server for EAS use. This option and following appear when **Native Mail Client** is selected.
Port	Enter the number of the port assigned for communication with the internal Exchange host.
Internal Server Path	The location of the secure server for EAS use.
Use SSL For Internal Exchange Host	Select this check box to enable Secure Socket Layer (SSL) usage for communication with the Internal Exchange Host.
External Exchange Host	The name of the external server for EAS use.
Port	Enter the number of the port assigned for communication with the External Exchange Host.
External Server Path	The location of the external server for EAS use.
Use SSL For External Exchange Host	Select this check box to enable Secure Socket Layer (SSL) usage for communication with the External Exchange Host.

6. Configure **Directory Services** for **Microsoft Outlook.**

Settings	Description
Directory Server	Enter the location of the secure server.
Directory Server Port	Enter the port number of the secure server.
Search Base	Enter the search base of the secure server.
Directory Server Requires SSL	Select this check box if the directory server requires Secure Socket Layer (SSL).

7. Select **Save & Publish** when you are finished to push the profile to devices.

Configure an LDAP Profile (macOS)

An LDAP profile allows end users to access and integrate with your corporate LDAPv3 directory information.

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select **User Profile**, since these settings can only apply to a single user.
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **LDAP** payload.

4. Configure LDAP settings:

Setting	Description
Account Description	Enter a brief description of the LDAP account.
Account Hostname	Enter/view the name of the server for Active Directory use.
Account Username	Enter the username for the Active Directory account.
Account Password	Enter the password for the Active Directory account.
Use SSL	Select this check box to enable Secure Socket Layer usage.
Search Settings	Select **Add** and enter settings for Active Directory searches executed from the device.

5. Select **Save & Publish** when you are finished to push the profile to devices.

Configure a CalDAV or CardDAV Profile (macOS)

Configure a CalDAV or CardDAV profile to allow end users to sync corporate calendar items and contacts. To create these profiles:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select **User Profile**, since email settings can only apply to a single user.
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **CalDAV or CardDAV** payload.
4. Configure CalDAV or CardDAV settings, including:

Setting	Description
Account Description	Enter a brief description of the account.
Account Hostname	Enter/view the name of the server for CalDAV use.
Port	Enter the number of the port assigned for communication with the CalDAV server.
Principal URL	Enter the web location of the CalDAV server.
Account Username	Enter the username for the Active Directory account.
Account Password	Enter the password for the Active Directory account.
Use SSL	Select this check box to enable Secure Socket Layer usage.

5. Select **Save & Publish** when you are finished to push the profile to devices.

Configure a Web Clips Profile

Web Clips are web bookmarks that you can push to devices that display as icons and point to commonly used or recommended web resources.

To deploy a Web Clip:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select **Apple macOS**, and then select **User Profile.**
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Web Clips** payload.
4. Configure Web Clip settings, including:

Setting	Description
Label	Enter the text displayed beneath the Web Clip icon on an end user's device. For example: "AirWatch Self-Service Portal."
URL	Enter the URL the Web Clip that will display. Below are some examples for AirWatch pages: • For the SSP, use: **https://<AirWatchEnvironment>/mydevice/**. • For the app catalog, use: **https://<Environment>/Catalog/ViewCatalog/{SecureDeviceUdid}/{DevicePlatform}**. • For the book catalog, use: **https://<Environment>/Catalog/BookCatalog?uid={DeviceUid}**
Icon	Select this option to upload as the Web Clip icon. Upload a custom icon using a .gif, .jpg, or .png format, for the application. For best results, provide a square image no larger than 400 pixels on each side and less than 1 MB in size when uncompressed. The graphic is automatically scaled and cropped to fit, and converted to .png format if necessary. Web Clip icons are 104 x 104 pixels for devices with a Retina display or 57 x 57 pixels for all other devices.
Show in App Catalog	Select this option to list the application in your app catalog.

5. Select **Save & Publish** when you are finished to push the profile to devices.

Configure a SCEP/Credentials Profile (macOS)

Even if you protect your corporate email with Wi-Fi and VPN with strong passcodes and other restrictions, your infrastructure still remains vulnerable to brute force and dictionary attacks or employee error. For greater security, you can implement digital certificates to protect corporate assets.

To do this, you must first define a certificate authority. Then configure a **Credentials** payload alongside your **Exchange Web Service**, **Wi-Fi** or **VPN** payload. Each of these payloads has settings for associating the certificate authority defined in the Credentials payload.

To push certificates down to devices, you need to configure a **Credentials** or **SCEP** payload as part of the profiles you created for EAS, Wi-Fi and VPN settings. Use the following instructions to create a credentials payload:

1. Navigate to **Devices > Profiles & Resources > Profiles > Add > Add Profile**. Select Apple macOS, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select either the **Exchange Web Services**, **Wi-Fi** or **VPN** payload to configure. Configure the payload you selected.
4. Select the **Credentials** (or **SCEP**) payload and **Upload** a certificate or select **Defined Certificate Authority** from the Credential Source drop-down and select the **Certificate Authority** and **Certificate Template** from their respective drop-downs.
5. Navigate back to the previous payload for Exchange Web Services, Wi-Fi or VPN. Specify the Identity Certificate in the payload:
   - **Exchange Web Service** – Select the **Payload Certificate** under Login Information.
   - **Wi-Fi**– Select a compatible **Security Type** (WEP Enterprise, WPA/WPA2 Enterprise or Any (Enterprise)) and select the **Identity Certificate** under Authentication.
   - **VPN** – Select a compatible **Connection Type** (for example, CISCO AnyConnect, F5 SSL) and select **Certificate** from the Machine/User Authentication drop-down. Select the **Identity Certificate**.
6. Return to the Credentials payload and choose the following allowances:
   - **Allow access to all applications** – Select whether to allow or prevent applications to access the certificate in the Keychain.
   - **Allow export from the Keychain** – Select whether to allow or prevent users from exporting the private key from the installed certificate.
7. Select **Save and Publish**.

Configure a Dock Profile (macOS)

Configure a Dock profile to manage the look and feel of the dock and the applications that will display on it. Configuring Dock settings from the Console allows for additional control of the users' devices by determining whether or not the users can adjust their own settings later.

To create a Dock profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Dock** payload.
4. Configure **Size & Position** settings, including;

Setting	Description
Dock Size	Use the scale to determine the desired size for the Dock.
Allow user to adjust Dock Size	Allow or prevent users from modifying their own Dock Size settings on their devices.
Magnification	Use the scale to determine the desired magnification for the Dock.
Allow user to adjust Magnification	Allow or prevent users from modifying their own Magnification settings on their devices.
Position	Use the drop-down menu to select the position of the Dock on the screen.
Allow user to adjust Dock Position	Allow or prevent users from modifying their own Dock Position settings on their devices.

5. Configure **Items** settings, including;

Setting	Description
Dock Applications	Select **Add** to specify applications to appear on the Dock.
Dock Items	Select **Add** to specify files and folders to appear on the Dock.
Add Other Folders	Configure folder for My Applications, Documents, and Network Home in the Dock
Allow user to adjust Dock Applications and Items	Allow or prevent users from modifying their own Dock Applications settings on their devices.

6. Configure **Options** settings, including;

Setting	Description
Minimize Using	Select either **Genie** or **Scale** animation for minimizing the Dock.
Allow user to adjust Minimize effect	Allow user to adjust Minimize effect
Minimize Window Into Application Icon	Select this to create an icon to represent an open window in the Dock when the window is minimized.
Allow user to adjust Minimize into Application icon	Allow or prevent users from modifying their own Minimize windows settings on their devices.
Animate Opening Application	Enable animation when launching an application from the Dock.
Allow user to adjust Animate Opening Application	Allow or prevent users from modifying their own animation settings on their devices.

7. Select **Save & Publish** when you are finished to push the profile to devices

Configure a Restrictions Profile (macOS)

Use restrictions to secure native functionality on Mac devices, protect corporate information and enforce data-loss prevention. Restriction profiles limit how employees can use their Mac devices and provide the control needed to effectively lock down a device if necessary.

To create a restrictions profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Restrictions** payload.
4. Configure **Preferences** restrictions:

Setting	Description
Restrict System Preferences panes	Select to see all restrictions options.
Enable selected items	Select to restrict functionality. Then, make restriction selections below.
Disable selected items	Select to allow the preferences. Then, make the selections below.

5. Configure **Application** restrictions:

Setting	Description
Game Center	Select options to restrict or allow the use of Game Center.
Safari	Restrict or allow the use of AutoFill when using Safari to prevent autofilling web forms or storing login information or iCloud Keychain details.
App Store	Restrict or allow the use of the App Store, app store adoption, and use of passwords to install updates. When the **Restrict App Store to Software Updates** is enabled, this prevents third-party app updates from the App Store
Apple Music	Select **Allow Music Service** to permit users to stream music from Apple Music to their devices.
Launch Restrictions	Choose to restrict applications from launching. Use the **Add** buttons to specify allowed applications, allowed folders and disallowed folders.

6. Configure **Widgets** restrictions:

Setting	Description
Allow only configured widgets	Select to allow widgets. Click the **Add** button to specify allowed device widgets.

7. Configure **Media** restrictions:

Setting	Description
Network Access	Allow or restrict network access for AirDrop.
Hard Disk Media Access	Determine what media formats are allowed, require authentication and read-only access for the end user. You can also force to **auto-eject media** at log out.

8. Configure **Sharing** restrictions:

Setting	Description
Restrict which sharing services are enabled	Select which Sharing services, such as AirDrop, Facebook, and Twitter, are enabled on the device. You can also select the **Automatically enable new sharing services** check box as a restriction.

9. Configure **Functionality** restrictions:

Setting	Description
Lock desktop picture	Select to prevent changing the desktop picture.
Desktop picture path	Enter the path for the desktop picture. Leaving the path blank will lock the current desktop picture and prevent it from being changed.
Camera	Restrict or allow the use of the built-in camera. When this is restricted all applications, whether native or enterprise, are unable to access the camera.
iCloud	Restrict or allow the use of iCloud functions. • Allow iCloud documents and data • Allow use of iCloud password for local accounts • Allow backup to My Mac iCloud service • Allow iCloud Bookmark sync • Allow iCloud Mail services • Allow iCloud Calendar services • Allow iCloud Reminder services • Allow iCloud Address Book services • Allow iCloud Notes services • Allow iCloud Keychain sync
Spotlight	Restrict or allow the use of Spotlight suggestions when using Spotlight for searching.

10. Select **Save & Publish** to push the profile to devices. The addition or removal of some **Restrictions** profile payloads may not take effect until the target application or utility is restarted on the device.

Configure a Software Update Server Profile (macOS)

A software update server profile allows you to specify the update server that will be tied to the device for all versioning and update control.

Use this to connect to a macOS server with the AirWatch Agent and configure schedules that actively check and perform updates much more frequently that the system does. If needed, connect to a corporate server to perform updates.

Either way, this profile provides a simple solution for managing software updates, restart options and notification updates for end users

To create a software update server profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select **Device Profile**, since this profile is only applicable to the entire device.
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Software Update** payload.
4. Configure Software Update settings:

Setting	Description
Update Source	Choose a server to configure communication with the client computers' .plist. If choosing **Corporate SUS**, enter the hostname of the server (for example, **http://server.net:8088/index.sucatalog**.)
Install macOS updates	Select how and when to check for and control updates. • **Install Updates Automatically:** downloads and installs all updates; sends notifications to the end user. • **Download Updates in Background:** downloads the updates; sends notifications; the end user installs updates when ready. • **Check for updates only:** checks for updates and sends notifications to the end user; the user downloads and installs the updates. • **Don't Automatically Check for Updates:** turns off the ability to update software; monitors .plist settings to match profile only.
Choose Updates	Choose updates to send to the computer. • **Choose All:** sends all updates including Apple updates. • **Recommended only:** sends only security updates.
Allow installation of macOS beta releases	Select this check box to allow beta releases on the server. This option may be best for testing environments only. This does not require the AirWatch Agent.
Install app updates	Select to allow app updates.
Notify the user updates are installing	Send the end user notifications about receiving updates on the device.

Setting	Description
Schedule	Schedule updates with the AirWatch Agent • **Configure Update Interval**: choose how often to check for updates in two-hour increments. • **Update a Specific Time**: choose specific days and times to check for updates. Choose times to control updates when there are concerns about use during peak business hours or band-width utilization
Force Restart (if required)	Automatically restart the computer if required to complete the software update. • **Grace Period** – Choose to defer a reboot for a certain period of time. After this time expires, the computer automatically reboots. • **Allow user to defer** – Enable the user to choose to defer re-starting the computer for a certain period of time. ◦ **Defer time** – Chose how often to prompt the user to re-start the computer after deferment. After each allowed deferment, a message appears prompting the user to re-start the computer. ◦ **Max number of defers** – Choose how many times the user can defer from re-starting the computer before it is automatically re-started to complete the update process.

5. Determine options if updates are installed automatically.
   - **Force Restart (if required)** – Automatically restart the computer if required to complete the software update.
   - **Grace Period** – Choose to defer a reboot for a certain period of time. After this time expires, the computer automatically reboots.
   - **Allow user to defer** – Enable the user to choose to defer re-starting the computer for a certain period of time.
     - **Defer time** – Chose how often to prompt the user to re-start the computer after deferment. After each allowed deferment, a message appears prompting the user to re-start the computer.
     - **Max number of defers** – Choose how many times the user can defer from re-starting the computer before it is automatically re-started to complete the update process.
6. Select **Save & Publish** when you are finished to push the profile to devices.

Configure a Parental Controls Profile (macOS)

A parental control profile manages settings that limit profanity, blacklist or whitelist specific URLs, time allowances and curfews.

To create a parental controls profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).

2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.

3. Select the **Parental Controls** payload.

4. Configure **Content Filter** settings , including:

Setting	Description
Enable use of Dictation	Select this check box to allow user access to Dictation feature
Hide Profanity in Dictionary and Dictation	Select this check box to remove profane terminology.
Limit Access To Websites By	Select this check box to enable web restrictions. Then, select the applicable radio button for your desired restriction and add blacklisted and whitelisted URLs as needed.

5. Configure **Time Limits** settings:

Setting	Description
Enforce Limit	Select this check box to enable time limit restrictions.
Allowances	Select the applicable check boxes to set allowed device usage to either weekdays or weekends and use the drop-down menus to specify time limits for daily device usage.
Curfews	Select the applicable check boxes to prevent the end user from accessing the device during weekdays or weekends and use the drop-down menus to set specific time frames when device usage is not allowed.

6. Select **Save & Publish** when you are finished to push the profile to devices.

Configure a Directory Profile (macOS)

By binding a device to the directory service, the device will comply with any domain policies and password security settings. You may bind a single device to multiple directories by sending multiple directory service profiles.

To create a directory profile for your devices:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select **Device Profile**, since this profile is only applicable to the entire device.

2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.

3. Select the **Directory** payload. Then, choose the **Directory Type**, Open Directory or Active Directory.

Note: If multiple profiles enforce separate policies on a single device, the most restrictive policy is enforced. If your password policy is being managed by your directory for network users logging into the devices, AirWatch does not recommend a passcode policy.

4. Choose **Authentication** settings including:

Setting	Description
Directory Type	Choose **Active Directory** or **Open Directory or LDAP** from the drop-down menu
Server Hostname	Enter the directory server name.
Username and Password	Enter the credentials of the administrator used to authenticate and bind the device to the server. Administrator credentials should not include the domain. Use "administrator" only, do not use "domain\administrator."
Client ID	Enter the identifier associated with the device in the directory. Enter the Client ID in a format that is allowed by the directory you're attempting to bind. AirWatch recommends using {SerialNumber}. Other lookup values (device asset number, etc.) may not generate computer names that comply with Netbios Naming Conventions.

5. Choose **User Experience** settings for Active Directory Accounts:

Setting	Description
Configure a mobile account at login	Select this option to create a mobile account. When this option is selected, the users' data is stored locally and they are automatically logged into a mobile account.
Require confirmation	Send a confirmation message to the end user.
Use UNC path	Select to determine the UNC specified in the Active Directory when mounting the network home.
Mount	Choose either the **AFP** or **SMB** protocols.
Default user shell	Specify the default shell for the user after logging into the computer.

6. Select the **Mappings** tab to specify an attribute to be used for equivalent acronym (GID). By default these are derived from the domain server.

7. Select **Administrative** tab and configure settings including:

Setting	Description
Group Names	Specify groups to determine who has local administrative privileges on the computer.
Preferred domain server	Enter the name of the domain server.
Namespace	Select the primary account naming convention based on **forest** or **domain**.
Packet signing	Choose how to ensure data is secure.

Setting	Description
Packet Encryption	Choose to encrypt data.
Password trust interval	Set to determine how often the computer trust is updated.
Restricts DDNS	Add interfaces to specify updates. Use the format: en0, en1, en2 etc.

8. Select **Save & Publish** to push the profile to the device.

Configure a Security and Privacy Settings Profile (macOS)

The security and privacy settings profile lets you configure Apple's Gatekeeper functionality settings, which are used for secure application downloads. Gatekeeper also controls specific settings related to user passwords.

To create a security and privacy profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Security and Privacy** payload.
4. Choose locations from which apps may be downloaded.
5. Configure Security and Privacy settings:

Setting	Description
Gatekeeper	Choose to restrict which types of applications may be downloaded. Or, select **Do not allow user to override Gatekeeper setting** to prevent the user from modifying settings to Gatekeeper.
Security	Set security options to allow users to change password (macOS 10.9+), require password after sleep or screen saver begins, and allow user to set lock message (macOS 10.9+). Select a **Grace Period** to determine when a password should be entered if **Require password after sleep or screensaver begins** is selected.
Privacy	Set to automatically send diagnostic and usage data to Apple.

6. Select **Save & Publish** when you are finished to push the profile to devices.

Configure a Full Disk Encryption Profile (macOS)

Configure encryption on macOS 10.8 with the AirWatch Agent and this profile.

If you are using macOS 10.9 +, configure disk encryption by simply pushing this profile, whether or not the AirWatch Agent is installed. Other AirWatch enhancements with 10.9 + include role-based access for recovery keys and the ability to audit who views recovery keys and when.

To configure a disk encryption profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select **Device Profile**, since this profile is only applicable to the entire device.
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Disk Encryption** payload.
4. Configure Disk Encryption settings, including:

Setting	Description
OS Version	Select the appropriate OS version.
Enforce Disk Encryption	Select this check box to enable disk encryption on the device.
Recovery Key Type	Choose the type of recovery key required to decrypt the disk.
File Vault Enterprise Certificate	If configuring **Corporate** or **Personal and Corporate**, choose a certificate for disk encryption that was uploaded through the Credentials payload. For detailed information on using certificates with the Disk Encryption profile, see Full Disk Encryption with FileVault in this guide.
Store Recovery Key in AirWatch	Select this check box to retain the recovery key on the AirWatch server. If not selected, choose a **Recovery Key Redirection URL** and **Recovery Key Encryption Certificate** to store the recovery key elsewhere. For more information on recovery keys, see the configuration profile reference guide in the Apple Developer portal.
Require Reboot	Select this check box to force the device to reboot and finish disk encryption. (Agent only) **Note:** If not selected on 10.8 computers, end users are still prompted, but not forced, to reboot the device to complete the encryption process. If not selected on 10.9 + computers, users are not prompted for disk encryption until they log out of the user account.
Require user to unlock the disk after hibernation	Select this to require a password to unlock the disk after hibernation and restore the state of the disk when it was last saved. AirWatch recommends this for encryption.

5. Select **Save & Publish** when you are finished to push the profile to devices.

Important: Disk encryption will fail and error out if no CoreStorage logical volume groups are found. This can be determined by running command `diskutil cs list` on an unencrypted device without File Vault 2. If no CoreStorage Volumes are found, the drive needs to be re-formatted using File Vault 2.

Configure a Login Items Profile (macOS)

A Login Items profile enables you to control the behavior of the users' devices when they launch.

To create a Login Items profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Login Items** payload.
4. Configure Login Items settings, including:

Setting	Description
Applications	Specify which applications to launch at login. Enter the full path of the application, for example, /Applications/Contacts.app.
Files and Folders	Specify which files and folders to launch at login. Enter the full path of the file or folder.
Authenticated Network Mounts	Specify which network mounts to authenticate with the user's login name and password. Use Active Directory (AD) credentials for user login. Enter the full mount path and volume, including protocol, for example, smb://server.example.com/volume.
Network Mounts	Specify which volumes to mount at login. Use AD credentials for user login. Enter the full mount path and volume including protocol, for example, smb://server.example.com/volume.
Add network home SharePoint	Select this to enable network home SharePoint configuration on the device.
User may press shift to prevent items from opening	Select this to allow the user to hold shift upon login to prevent items from opening.

5. Select **Save & Publish** when you are finished to push the profile to devices.

Configure a Login Window Profile (macOS)

Configure the Login Window profile to control the look and feel of the login window, including options for logging in, and directory user access to the device.

To configure the Login Window profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select **Device Profile**, since this profile is only applicable to the entire device.
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Login Window** payload.

4. Configure **Login Window** settings using the tabs, including:

Tab	Description
Window	• Show additional information in the menu bar, including host name, macOS version, and IP address when the menu bar is selected. • Enter custom banner message. • Show local user, mobile accounts, network accounts, device admins and "other" information. • Show device power options, including Shut Down, Restart and Sleep.
Options	• Show password hint and set amount of retries before hint is shown, if available. • Enable automatic login, console access, Fast User Switching • Log out users, enable computer admin to refresh or disable management. • Set computer name to computer record name, enable external accounts, allow guest user. • Set screen saver to start and set actual screen saver.
Access	• Allow or deny specific user accounts from accessing device. • Allow local-only users to log-in; use available workgroup settings and nesting • Combine available work group settings and always show work group dialog during login **Note:** This only works with Directory Users, not local users on the device. The device must be bound to the same directory that AirWatch is pulling users from.)
Scripts	• Set EnableMCXLoginScripts to TRUE. • Set MCXScriptTrust to match the binding settings used to connect the client computer to the directory domain.

5. Select **Save & Publish** when you are finished to push the profile to devices.

Configure an Energy Saver Profile (macOS)

An Energy Saver profile enforces the settings for when the computer should sleep and configure wake options.

To create an Energy Saver profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select **Device Profile**, since this profile is only applicable to the entire device.
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Energy Saver** payload.

4. Configure Energy Saver settings, including:

Setting	Description
Desktop	• **Sleep Options** – Set the length of time for the computer or display to go to sleep. • **Wake Options** – Set when the computer will wake depending on Ethernet network administrator access, pressing the power button and automatically after a power failure.
Laptop	Laptop power options are identical to desktop power options. Configure specific configurations when the laptop is using battery power or when connected to a power adapter.
Schedule	Set the computer to start up or go to sleep at specific times. Also set unique schedules depending on weekday, specific day and any day.

5. Select **Save & Publish** when you are finished to push the profile to devices. If you push a laptop profile to a desktop device, or vice versa, the profile is ignored by the receiving device.

Configure a Time Machine Profile (macOS)

By creating a Time Machine profile you can specify a backup server location used to mount and backup the device.

To create a Time Machine profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select **Device Profile**, since this profile is only applicable to the entire device.
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Time Machine** payload.
4. Configure **Time Machine** settings, including:

Setting	Description
Backup all volumes	Secure all volumes associated with the device. By default, only the startup volume is backed up.
Backup system files and folders	Secure all system files and folders, which are skipped by default.
Enable automatic backup	Back up the system automatically at determined intervals.
Enable local snapshots (10.8+)	Configure local backup snapshots when device is not connected to the network.
Backup size limit	Set a maximum size allowed to backup the system. Enter 0 (zero) to set unlimited.
Paths to backup	Choose specific filepaths to backup, in addition to the default startup volume.
Paths to skip	Choose specific filepaths to skip during backup from the startup volume.

5. Select **Save & Publish** when you are finished to push the profile to devices.

Once the profile is pushed to the device, the login user's network credentials are used to configure the system keychain for the backup volume defined in the profile. The backup volume will not mount using a local account because network credentials are required at login to authenticate the drive. After the system keychain is configured the first time, all backups from that computer will be associated with the original user's backup volume.

Configure a Finder Profile (macOS)

A Finder profile controls general settings related to what end users can see on their devices and the actions they are allowed to perform.

To create a Finder profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Finder** payload.
4. Configure settings on the **Preferences**, including:

Setting	Description
Use Regular Finder/Use Simple Finder	Allow user to access either Regular Finder or Simple Finder as a default.
Hard Disk	Show the device's Hard Disk icon on the Desktop.
External Disk	Show any connected external disk icons on the Desktop.
CDs, DVDs, and iPods	Show any inserted media icons on the Desktop.
Connected Server	Show any connected servers icons on the Desktop.
Show warning before emptying the Trash	Present user with prompt before emptying the Trash.

5. Configure settings on the **Commands**, including:

Setting	Description
Connect to server	Allow users to open a dialog box and find servers on a network.
Eject	Allow users to eject removable media and mountable volumes.
Burn Disc	Allow users to write permanent information to a CD or DVD.
Go to Folder	Allow users to open files or folders by typing the path name.
Restart	Allow users to access the restart command from the Apple Menu.
Shut Down	Allow users to access the shutdown command from the Apple Menu.

6. Select **Save & Publish** when you are finished to push the profile to devices.

Configure an Accessibility Profile (macOS)

Configure accessibility options for end users by creating an Accessibility profile.

To create an Accessibility profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Accessibility** payload.
4. Configure options for **Seeing**, including:

Setting	Description
Zoom Options	Enable zoom function using scroll wheel and keyboard, set max/min zoom, smooth images and show preview rectangle when zoomed out.
Display Options	Invert colors, use grayscale, enhance contrast and set cursor size to normal, medium, large or extra large.
Voiceover Options	Enable voiceover for the device.

5. Configure options for **Hearing**, including:

Setting	Description
Flash the screen when an alert occurs	Enable flashing for alerts.
Play stereo audio as mono	Allow stereo to play as mono

6. Configure options for **Interaction**, including:

Setting	Description
Sticky Keys	Enable Sticky Keys, beep when a modifier is set and display pressed keys on screen.
Slow Keys	Enable Slow Keys, use click key sounds and set key acceptance delay.
Mouse Keys	Enable Mouse Keys, set initial delay and max speed, and ignore device's built-in trackpad

7. Select **Save & Publish** when you are finished to push the profile to devices.

Configure a Printer Configuration Profile (macOS)

By creating a Printer configuration profile you can tell devices which default printer to use and set printer access and footer options.

To create a Printer configuration profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Printing** payload.
4. Select **Add Printer**. An **Add Printer** window appears.
5. Configure the **Printer** settings including:

Setting	Description
Name	Enter the name of the printer to add.
Printer address	Enter the printer address.
Location	Specify the friendly location name.
Model/Driver	Choose the printer type. • Set model/driver to **Custom** if the printer does not support generic drivers for macOS devices. If using Custom Driver, the driver text must be the exact name, which can be found by locating the configured printer on the computer and copying the Kind listed under the printer description.
Lock printer settings	Force the user to enter an Admin password to access the printer settings.
Advanced	Unlock the PPD file location and enter it.
Default Printer	Select a printer to be the default printer.
Access	
Allow user to modify printer list	Enable end users to modify printers on the device
Allow printers to connect directly to the device	Enable printers to connect automatically. If checked, you can also require admin passcode.
Only show managed printers	Allow end users to view a list of managed printers available to the device.
Footer	
Print page footer	Select this to auto-populate the footer with user information and time of print.

Setting	Description
Include MAC Address	Add a MAC address to show the location of the pages that print and specify the font name and size of the footer.
Font Name	Specify the font name.
Font Size	Specify the size of the footer.

6. Select **Save & Publish** when you are finished to push the profile to devices.

Configure a Messages Profile (macOS)

You can create a Messages profile to pre-configure end-user laptops to use a Jabber or AOL Instant Messenger (AIM) account. Accounts can be authenticated through SSL certificates or Kerberos. The ability to use Messages applies to User Profiles only.

To create a Messages Profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select (**User Profile**) to apply enrollment to the user's device.
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Messages** payload.
4. Configure **Messages** settings for Jabber , including:

Setting	Description
Account Type	Allow user to access either a **Jabber** or **AIM** account.
Account Description	Configure a brief description of the profile that indicates its purpose. This option appears if **AIM** is selected.
Account Name	Enter the name of the account.
User Name	Enter the user name for this account. Use lookup values (for example, {EnrollmentUser} to pull data from the AirWatch Console.
Password	Optionally enter the password required to authenticate the account. Leave it blank to prompt end users to enter their account password.
Host Name	Enter the name of the account server.
Port	Enter the number of the port assigned to the account.
Use SSL	Select this check box to enable Secure Socket Layer (SSL) usage for authentication.
Use Kerberos v5	Select this check box to enable Kerberos v5 usage for authentication.

5. Select **Save & Publish** when you are finished to push the profile to devices.

Configure a Proxy Profile (macOS)

Direct traffic through a designated proxy server for Wi-Fi connections. Choose from multiple proxy connections to properly route traffic depending on your organizations needs and add proxy exceptions as needed.

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select whether this profile will apply only to the enrollment user on the device (**User Profile**), or to the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Proxies** payload from the list.
4. Choose **Network Proxies** for systems running macOS 10.11, or choose **Global HTTP Proxy** for legacy support on systems running macOS 10.9 and 10.10.

   - For **Network Proxy** settings, choose:

Setting	Description
Auto Proxy Configuration	Choose this and enter the **Proxy PAC File URL** to automatically configure the device to PAC file settings.
Web Proxy (HTTP)	Choose to enable this and enter the **Host Name** and optionally enter the **Port** used to communicate with the proxy. This tells the device to use this proxy for any HTTP traffic.
Secure Web Proxy (HTTPS)	Choose to enable this and enter the **Host Name** and optionally enter the **Port** used to communicate with the proxy. This tells the device to use this proxy for any HTTPS traffic.
FTP Proxy	Choose to enable this and enter the **Host Name** and optionally enter the **Port** used to communicate with the proxy. This tells the device to use this proxy for any FTP traffic.
SOCKS Proxy	Choose to enable this and enter the **Host Name** and optionally enter the **Port** used to communicate with the proxy. This proxy establishes a TCP traffic connection to a device.
Streaming Proxy	Choose to enable this and enter the **Host Name** and optionally enter the **Port** used to communicate with the proxy. This proxy is configured using a RTSP if needed for applications such as AirPlay.
Gopher Proxy	Choose to enable this and enter the **Host Name** and optionally enter the **Port** used to communicate with the proxy. Gopher proxy enables Gopher-based content.

   - For **Global HTTP Proxy** settings, choose:

Setting	Description
Proxy Type	Select the type of proxy. Select **Manual** for proxies that require authentication, or **Auto** to specify a Proxy PAC URL.
Proxy PAC File URL	Only required if the proxy type is **Auto**. This option appears when **Auto** is selected.
Proxy Server	Enter the URL of the Proxy Server. This is required if you selected Manual as the proxy type. This option appears when **Manual** is selected.

Setting	Description
Proxy Server Port	Enter the port used to communicate with the proxy. This is required if you selected Manual as the proxy type. This option appears when **Manual** is selected.
Proxy Username/Password	If the proxy requires credentials, you can use look-up values to define the authentication method. This is required if you selected Manual as the proxy type. This option appears when **Manual** is selected.

5. Enter **Proxy Exceptions** as needed.
6. Enable or disable **Passive FTP Mode (PASV)**.
7. Select **Save & Publish** when you are finished to push the profile to devices.

Configure a Mobility Profile (macOS)

Mobility profiles allow configuration of portable home directories for network accounts, so users can log into the network even when they are not connected to the network. With a mobility profile, you can also set home and preference sync settings to optionally sync the home folder with a central server.

To create a Mobility profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select **Apple macOS**, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Mobility** payload.
4. Using the **Account Creation** tab, set up the mobile account profile. When this account is set up, a local copy of the user's network home folder is created for use when they are not connected to the network.

Setting	Description
Configure Mobile account	Select to configure the account for the user to log into the network.
Require Confirmation	Select to send a confirmation message to the end user.
Show "Don't ask me again"	Select to allow end users to skip the confirmation message after the initial prompt to create the mobile account.
Configure Home Using	Choose settings to either **Network home and default sync settings** or **Local home template** from the drop-down navigation menu.

Setting	Description
Home folder location	Choose either the **on startup volume folder**, at **path** and enter the **path** location on the user's computer where the home folder will reside, or set the location that the **user chooses.**
Encrypt Contents with FileVault	Select to encrypt contents with FileVault. If you choose to enable Encryption, select the following settings: • Select the **Require computer master password** check box to require a master password. • Select **Restrict Size** to restrict the size of the network home quota. Determine a **Fixed Size** with **megabytes** or a **Percentage of the home network quota** and the **Size** of the percentage.
Delete mobile accounts	Select to determine how and when to delete the account. • Select the **Delete mobile accounts** check box to configure options for deleting the account. • Choose **After** and select how many hours, days or weeks to delete the account after it expires. Setting the value to 0 causes the account to be deleted as soon as the computer is able to delete it. • Select **Delete only after successful sync** to delete the device after it syncs with the central server.

5. Choose the **Rules** tab to configure sync options:

Setting	Description
Preference Sync	Enable syncing for user preferences. Choose when, what folders to sync and items that do not need to be synced. • Select **Merge with User Settings** check box to add or append the user's sync settings. If this is not selected, the user's settings will be wiped when the new settings are applied.
Home Sync	Enable syncing for desktop preferences. Choose when, what folders to sync and items that do not need to synced and may be skipped. • Select **Merge with User Settings** check box to add or append the user's sync settings. If this is not selected, the user's settings will be wiped when the new settings are applied.
Options	Determine how to sync, how often, and allow syncing status to show in Apple Menu bar.

6. Select **Save & Publish** to push the profile to the device.

Configure a Managed Domains Profile (macOS)

Managed domains are another way AirWatch enhances Apple's "open in" security feature on macOS computers. Use the "open in" feature and manage email domains to protect corporate data by helping end users verify which emails are sent

to corporate accounts.

To configure a Managed Domains profile:

1. Navigate to **Devices > Profiles & Resources > Profiles > Add > Add Profile**. Select **Apple macOS**, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Managed Domains** payload from the list.
4. Enter **Managed Emails Domains** to specify which email addresses are corporate domains. For example: **mdm.company.com**. Emails sent to other domains are highlighted in the email application to indicate that the address is not part of the corporate domain.
5. Select **Save & Publish**.

Configure a VMware Fusion Profile (macOS)

Integrating VMware Fusion with AirWatch's MDM capabilities allows businesses to add flexibility to corporate device management with Bring Your Own Laptop (BYOL) solutions.

Push the VMware Fusion profile from the AirWatch Console to allow for management of both the host device and corporate applications. After the VMware Fusion application is installed, these profile settings allow you to manage the application, including applying volume licenses, configuring UI defaults, and other advanced deployment settings. As needed, administrators can quickly remove the VM application when the laptop is unenrolled.

Important: The application cannot be installed until the profile settings are pushed to the device. Even if the VMware Fusion app is available in the app catalog, the VM Fusion profile must be configured to complete integration.

1. Administrators must upload the VMware Fusion application to the AirWatch Console. For more information about application management, see the **Mobile Application Management (MAM) Guide**.
2. Navigate to **Devices > Profiles & Resources > Profiles > Add > Add Profile > Apple macOS > Device Profile.**
3. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
4. Select the **VMware Fusion** payload.
5. Configure the VMware Fusion settings.

Setting	Description
Volume License	Enter the volume license key for the VMware Fusion software.

Setting	Description
UI Defaults	
Prompt EULA	Select this check box to ask end users to agree to the terms of an End User License Agreement at installation.
Prompt Antivirus Check	Select this check box to ask end users to perform an anti-virus check at installation
Prompt Registration	Select this check box to ask end users to register the software at installation.
Prompt Data Collection	Select this check box to ask end users to agree to data collection at installation.
Show License Key Views	Select this check box to view the license key applied to the application.
Software Update	Choose how the application will be updated from the drop-down menu.
Locations	
App Directory	Choose to change the default location of the VMware Fusion application.
VM Directory	Choose to change the default location of the virtual machine.
Support	
Support URL	Enter the company URL that directs end users to a website for help. By default this will point to standard Fusion help.
Update	Enter the company server name that will send Fusion updates. By default this will point to standard VMware's software server.

6. Configure **Advanced** settings if needed. The only reason to have an explicit entry in this section is to change the name or location of any specific application or virtual machine by entering its name as it is the (including its **.app** extension) as a key and the absolute path to the destination app as its value.
7. Select **Save & Publish** to push this profile to devices.

Configure a Web Content Filter Profile (macOS)

This payload allows you to configure settings and authentication with third-party web content filters.

1. Navigate to **Devices > Profiles & Resources > Profiles > Add > Add Profile**. Select **Apple macOS**, and then select whether this profile will apply to only the enrollment user on the device (**User Profile)**, or the entire device (**Device Profile**)
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Content Filter** payload.
4. In the **Filter Type**, see that **Plug-in** is enabled.

5. Complete the required **Content Filter** information including:

Setting	Description
Filter Name	Enter the name of the filter that displays in the app and on the device.
Identifier	Enter the bundle ID of the identifier of the plug-in that provides filtering service.
Service Address	Enter the hostname, IP address or URL for service.
Organization	Choose the organization string that is passed to the 3rd party plug-in.
Filter WebKit Traffic	Select this check box to choose whether to filter WebKit traffic.
Filter Socket Traffic	Select this check box to choose whether to filter Socket traffic. **Note:** Either WebKit or Socket traffic needs to be enabled in order for the payload to work.

6. Configure the **Authentication** information including:

Setting	Description
User Name	Use look-up values to pull directly from the user account record. Ensure your AirWatch user accounts have an email address and email username defined.
Password	Enter the password for this account.
Payload Certificate	Choose the authentication certificate.

7. Add **Custom Data** which includes keys required by the third-party filtering service. This information goes into the vendor config dictionary.
8. Select **Save & Publish**.

Configure an AirPlay Whitelist Profile (macOS)

Configuring the AirPlay payload allows you whitelist a specific set of devices to receive broadcast privileges according to a device ID. Additionally, if the display access to a device is password-protected, you can pre-enter the password to create a successful connection without revealing the PIN to unauthorized parties.

Note: AirPlay whitelisting currently only pertains to macOS Yosemite devices.

1. Navigate to **Devices > Profiles & Resources > Profiles > Add > Add Profile**. Select **Apple macOS**, and then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.

3. Select the **AirPlay Mirroring** payload tab.
4. Select **Add** under Whitelisted AirPlay Destinations.
5. Enter the destinations and device information, including:

Setting	Description
Destination Name	This is the name of the destination display. The name must match the device name and is case-sensitive. The device name can be found on the device.
Allowed Destination Device ID	This is the device ID for the destination display. Device IDs include the BonjourID.)
Password	This is the password that shows on the user's device when attempting to mirror to the destination. This password is only required if a password is required to mirror to the device.

6. Click **Save & Publish** when you are done configuring AirPlay settings.

Configure an AirPrint Profile (macOS)

Configure an AirPrint payload for an Apple device to enable computers to automatically detect an AirPrint printer even if the device is on a different subnet than the AirPrint printer.

To configure the AirPrint payload:

1. Navigate to **Devices > Profiles > List View > Add** and then **Add** the appropriate platform. If you select Apple macOS, then select whether this profile will apply to only the enrollment user on the device (**User Profile**), or the entire device (**Device Profile**).
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **AirPrint** payload tab.

Setting	Description
IP address	Enter the IP address (XXX.XXX.XXX.XXX).
Resource Path	Enter the Resource Path associated with the AirPrint printer (ipp/printer or printers/Canon_ MG5300_series).

4. Select **Save & Publish**.

Configure an Xsan Storage Profile (macOS)

Apple's Xsan, or storage access network, allows Macs with Thunderbolt to Fibre Channel capabilities to quickly access shared block storage. Configure a payload to manage Xsan directly from the AirWatch Console.

To configure Xsan:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select (**User Profile**) to apply enrollment to the user's device.
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Xsan** payload.
4. Configure **Connection Info** for Xsan including:

Setting	Description
XSAN name	Enter the name of the storage system.
Authentication Secret	Enter the authentication key for the server.
File System Name Servers	Enter the Hostname or IP address of the file system name servers. Use the **+** button to add additional file system servers as needed.

5. Select **Save & Publish** when you are finished to push the profile to devices.

Configure a Firewall Profile (macOS)

Push a firewall profile with the AirWatch Agent v2.2+ for macOS to filter unauthorized connections to your enterprise network. Using the native firewall combined with the AirWatch Agent, you can monitor firewall settings and revert settings if unauthorized changes occur. Also, use the firewall to control incoming connections and protect computers against probing requests.

To create a firewall profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select **Device Profile**, since this profile is only applicable to the entire device.
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Select the **Firewall** payload.
4. Select **Enable** to allow firewall protection.
5. Configure the following firewall settings:

Setting	Description
Block all incoming connections	Select this to block all incoming connections from sharing services, except for connections required for basic Internet services.

Setting	Description
Automatically allow signed software to receive incoming connections	Select this to automatically allow only software signed by a developer and approved by Apple to provide services accessed from their network.
Enable stealth mode	Select this to prevent the computer from responding to or acknowledging requests made from test applications.

6. Select **Save & Publish** to push the profile to the device. All AirWatch Agent functionality continues including Push Notifications even if **Block incoming connections** is selected.

Configure a Firmware Password Profile (macOS)

Enforce a firmware password to increase security at the hardware level when allowing macOS v10.10+ to start up using an external drive, partition, or using Recovery Mode. The AirWatch Agent v2.2+ for macOS is required with this profile that provides enhanced security and allows you to determine when end users need to enter firmware passwords.

Important: If a firmware password is already set on the computer, then profile installation will fail.

To create a firmware password:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select **Device Profile**, since this profile is only applicable to the entire device.
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Configure the **Firmware Password**:

Setting	Description
Firmware Password	Enter the password for the device.
Mode	Select the **Mode** when end users are required to enter the password: • **Command Mode** – Require the password when attempting to boot to another drive or partition. After the end user enters the password, the computer begins using Command Mode. Then, the Mac Agent prompts the end user to re-start the computer. • **Full Mode** – Require the password every time the computer starts up. After the end user enters the password, the Mac Agent prompts the end user to re-start the computer. When the computer re-starts, it begins using Full Mode. Once the profile is configured, it cannot be removed remotely.

4. Select **Save & Publish** to push the profile to the device.

Configure a Custom Attributes Profile (macOS)

Write a command or script and report it as a custom attribute using the AirWatch Agent for Mac v.2.3 and higher. Choose when to execute the command or script on hourly intervals or during an event.

Custom Attributes can also be used in Assignment Rules for Products. For more information about Products, see the VMware AirWatch Product Provisioning for macOS Guide.

To create a Custom Attributes profile:

1. Navigate to **Devices > Profiles & Resources > Profiles** and select **Add**. Select Apple macOS, and then select **Device Profile**, since this profile is only applicable to the entire device.
2. Enter the **Attribute Name**.
3. Enter the **Script/Command** to run. Expand the text box as needed.
4. Choose an **Execution Interval** to allow for scheduling to report either in hours or as an event occurs.
5. Use the **+** and **-** buttons at the bottom of the payload to create multiple scripts.
6. Select **Save & Publish** when you are finished to push the profile to devices.

> **Note:** Custom Attribute values cannot return the following special characters: **/ \ " * : ; < > ? |**. If a script returns a value which contains these characters, the value is not reported on the console. Trim these characters from the script's output.

Configure a Custom Settings Profile (macOS)

The **Custom Settings** payload can be used when Apple releases new functionality or features that AirWatch does not currently support through its native payloads. If you do not want to wait for the newest release of AirWatch to be able to control these settings, you can use the **Custom Settings** payload and XML code to manually enable or disable certain settings.

You can create a "test" organization group to avoid affecting users before you are ready to save and publish the new settings. Also, any device not upgraded to the latest macOS version ignores the enhancements you create. Since the code is now customized, test the profile devices with older macOS versions to verify expected behavior.

1. Navigate to **Devices > Profiles & Resources > Profiles > Add > Add Profile**. Select **Apple Mac > macOS**.
2. Configure the profile's **General** settings.

   These settings determine how the profile is deployed and who receives it. For more information on General settings, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.
3. Configure the appropriate payload (for example, Restrictions or Passcode).
4. **Save**, but do not publish, your profile.
5. Select the profile using the radio button next to the profile name. Menu buttons appear about the Profile Details.
6. Select **View XML** from the actions menu for the row of the profile you want to customize.

7. Find and copy the section of text starting with <dict> ... </dict> that you configured previously. See Restrictions or Passcode as an example. The section contains a configuration type identifying its purpose, such as Restrictions.
8. Navigate back to **Custom Settings** profile and paste the XML you copied in the text box. The XML code you paste should contain the complete block of code, from <dict> to </dict>.
9. Remove the original payload you configured by selecting the base payload section, for example, Restrictions, Passcode and selecting the minus [-] button. You can now enhance the profile by adding custom XML code for the new functionality.

Chapter 4:
Full Disk Encryption with FileVault

Disk Encryption for macOS Overview

Enforce an encryption policy on macOS computers to protect data on the hard drive and escrowing recovery keys stored in AirWatch so the keys can be recovered at later time. With FileVault2, AirWatch builds on native capabilities to encrypt the drive and provides functionality within the AirWatch Agent to force the user to complete the encryption process.

Once the decision is made to encrypt your managed devices, you have options that allow you to choose the best recovery model for your deployment. These include recovery keys for Personal use, Corporate use, or a combination of both.

Corporate and Personal Recovery for macOS Devices

Corporate and Personal recovery is useful if the user will benefit from viewing and keeping a Personal Recovery Key, but the company will need a quick way to decrypt the device using a Corporate (Institutional) Recovery Key when necessary.

To encrypt a device using both Corporate and Personal Recovery Keys:

1. Configure a new **Disk Encryption** profile
2. Choose **Personal & Corporate** as the recovery type and configure the recovery key settings as needed.
3. Configure a FileVault Master Keychain. For more information on creating a FileVault Master Keychain, please refer to the section below.
4. Upload the FileVaultMaster.cer to the Disk Encryption profile to encrypt the assigned computers with your Corporate Recovery Key.

Once FileVault is enabled on the device, the Personal Recovery Key will be reported to the server.

Corporate Recovery for macOS Devices

Corporate recovery is beneficial because the network administrator can decrypt any device using a single Corporate Recovery Key, saving time by not needing to enter a unique Personal Recovery Key for each computer.

Generally, corporate recovery is reserved for Corporate Owned, Line-of-Business devices where the user does not have the ability to decrypt the device if they forget the login password.

To encrypt a device using a Corporate Recovery Key:

1. Configure a new **Disk Encryption** profile
2. Choose **Corporate** as the recovery type and configure the recovery key settings as needed.
3. Configure a FileVault Master Keychain. For more information on creating a FileVault Master Keychain, please refer to the section below.
4. Upload the FileVaultMaster.cer to the Disk Encryption profile to encrypt the assigned computers with your Corporate Recovery Key.

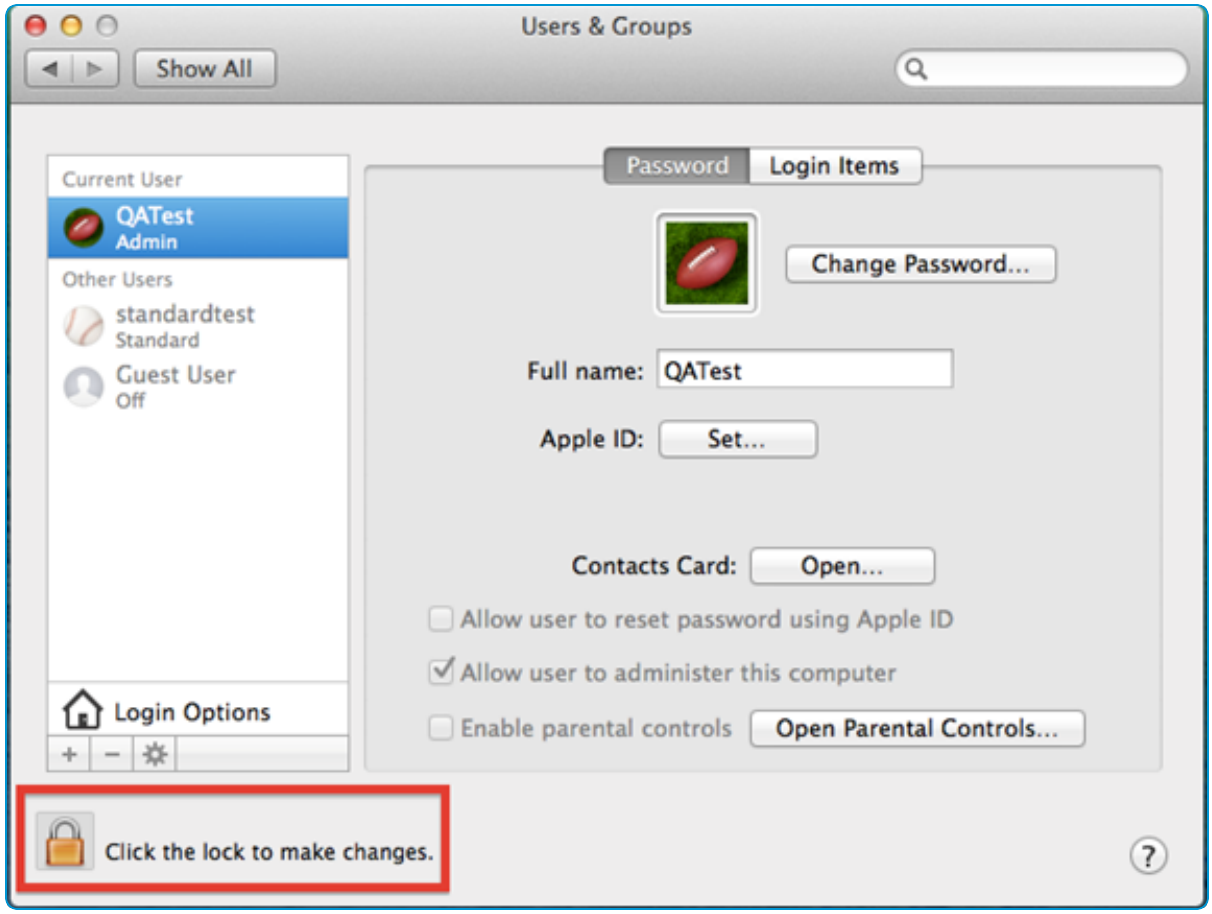
Once FileVault is enabled on the device, the Corporate Recovery Key will be reported to the server.

Configure a FileVault Corporate (Institutional) Recovery Key for macOS Devices

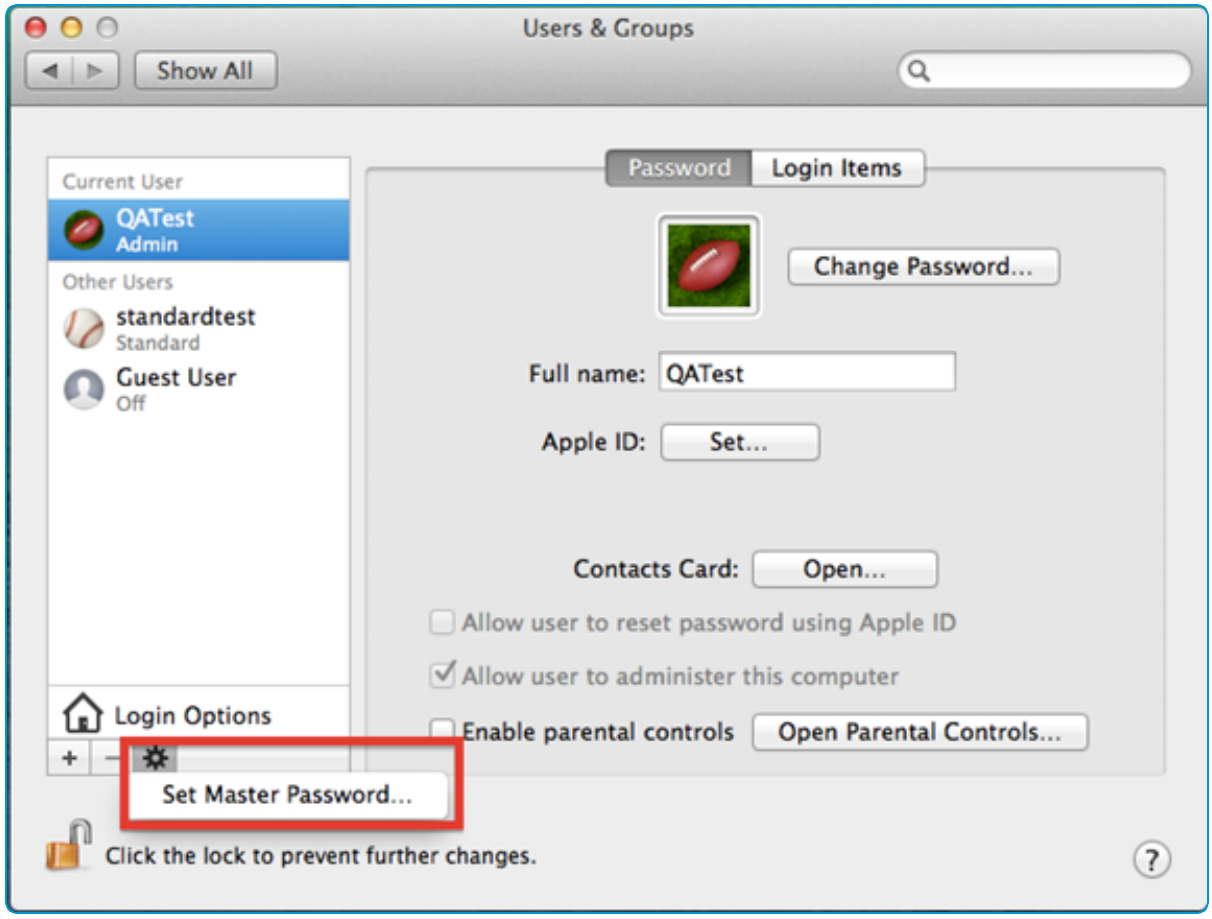
If you forget your corporate password for FileVault, you can use a Recovery Key to regain access.

To create a FileVault Corporate Recovery Key:

1. On a macOS computer (10.8+), navigate to **System Preferences > Users & Groups**.
2. Unlock your preferences by choosing the lock and typing your admin password.



3. Choose **Set a Master Password**.



4. Choose a password that will be used to secure the new FileVaultMaster.keychain that will be used to store your Corporate Recovery Key.
5. Navigate to **Library > Keychains** to find the FileVaultMaster.keychain and FileVaultMaster.cer files.
6. Save the FileVaultMaster.keychain in a safe place. You will need this later to decrypt devices at a later time.

The FileVaultMaster.cer can now be uploaded into the AirWatch Disk Encryption profile for distribution to devices.

Personal Recovery for macOS Devices

Enabling **Personal** as the recovery type will allow the user of the device to use a recovery key to decrypt their device. Additionally, that key can be reported to the AirWatch Console to allow administrators to use the key to decrypt the device if necessary.

Use Personal keys rather than Enterprise keys because AirWatch can audit access to these keys, since they are escrowed in the AirWatch Console. Also, Personal keys are beneficial because they are unique to each device. This means that the compromise of one key on one device does not compromise the security of other devices.

Once this profile is deployed to the device, the user will see a prompt from the AirWatch Agent taking them through the process of encrypting the disk. If configured, users may also be shown the recovery key to give them the option of saving it for later use. After a reboot, the device will begin the encryption process in the background and the user can continue their daily tasks normally without fear of interruption.

Enable Personal Recovery Encryption for a macOS Device

Personal recovery is useful if the user will benefit from viewing and keeping a Personal Recovery Key to decrypt.

To encrypt a device using a Personal Recovery Key:

1. Configure a new **Disk Encryption** profile.
2. Choose **Personal** as the recovery type and configure the recovery key settings as needed.

Once FileVault is enabled on the device, the Personal Recovery Key will be reported to an AirWatch server or another designated server.

Recover an Encrypted Disk Using a Personal Recovery Key

If you forget your personal password for FileVault, you can use a Recovery Key to regain access.

To create a FileVault Personal Recovery Key:

1. Boot into recovery-mode (**CMD+R** at boot), a different partition or connect the disk to another Mac.
2. Open the terminal and run the command below:

```
diskutil cs list
```

This will produce a list of the Logical CoreStorage Volumes.

3. Find the Logical Volume (usually last on the list) and copy the UUID – it is in the format of XXXXXXXX-XXXX-XXXX-XXXXXXXXXXXX. This will be used to specify which volume will be unlocked and decrypted.

4. Ensure you have the Personal Recovery Key available and run the command below. Replace "UUID" with the UUID retrieved in step 3. You will be prompted to enter the Passphrase. This is where you will input the Personal Recovery Key.

```
diskutil cs unlockVolume UUID
```

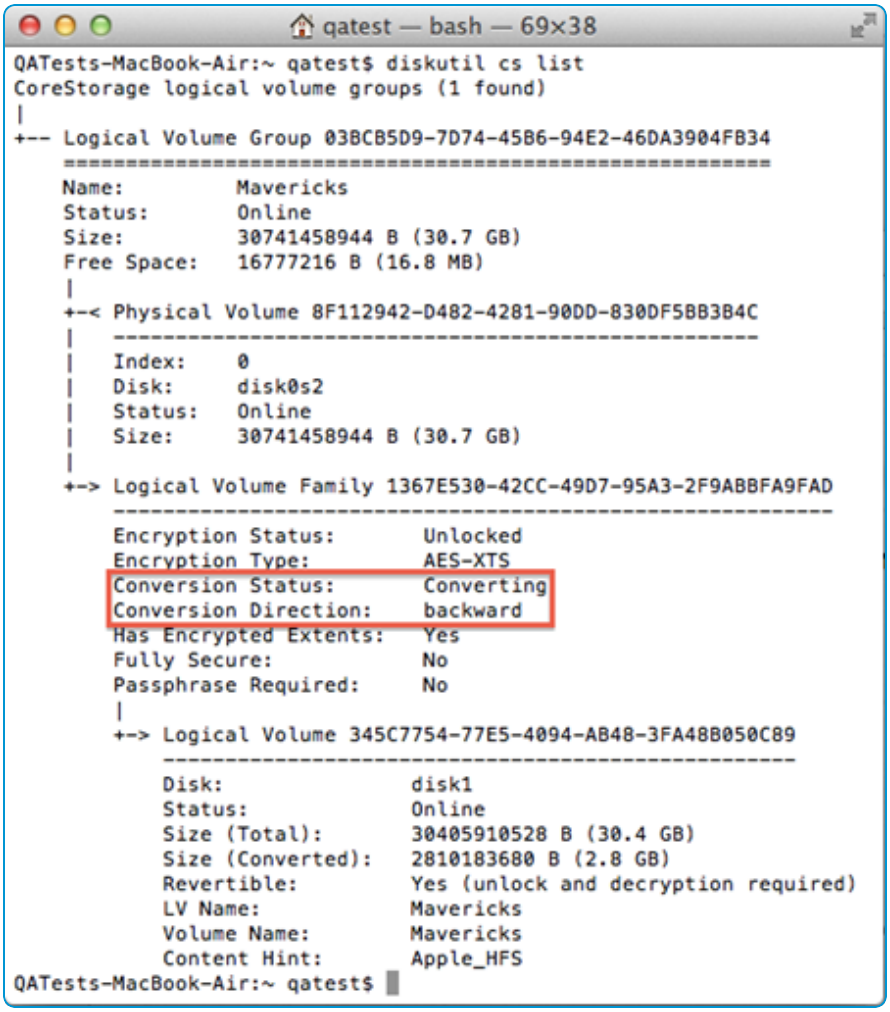
You will now see a response showing that the volume is unlocked and mounted. At this time, you may recover any necessary files.

5. Now that the volume is unlocked, you can begin the decryption process by using the command below and replacing "UUID" with the UUID retrieved in step 3. You will be prompted to enter the Passphrase. This is where you will enter the Personal Recovery Key.

```
diskutil cs revert UUID
```

To monitor the decryption status, use the command below. The status is located in the Logical Volume Family information.

```
diskutil cs list
```



Chapter 5:
Compliance Policies

Compliance Policy Overview

The compliance engine is an automated tool by AirWatch that ensures all devices abide by your policies. These policies may include basic security settings such as requiring a passcode and having a minimum device lock period. For certain platforms, you may also decide to set and enforce certain precautions. These precautions include setting password strength, blacklisting certain apps, and requiring device check-in intervals to ensure that devices are safe and in-contact with AirWatch.

Once devices are determined to be out of compliance, the compliance engine warns users to address compliance errors to prevent disciplinary action on the device. For example, the compliance engine can trigger a message to notify the user that their device is out of compliance. If corrections are not made in the amount of time specified, the device loses access to certain content and functions that you define. The available compliance policies and actions vary by platform.

For more information about compliance policies, including which policies and actions are supported for a particular platform, refer to the **VMware AirWatch Mobile Device Management Guide**, available on AirWatch Resources.

Chapter 6:
Apps for macOS Laptops

AirWatch macOS Agent

Once installed on a macOS device, the AirWatch Mac Agent provides quick access to MDM settings and features you can use to manage your devices.

With the AirWatch Agent, you can perform key device actions:

- Sync Now - Sync the device with the AirWatch Console.
- Enrollment, Connection and Sync status
- Preferences
- Uninstall Agent
- About AirWatch Agent

The top line of the menu bar animates when actions are executed, including when products are executed, when the **Sync Now** option is initiated, when data is transmitting, when the disk is encrypting or decrypting, and when the Passcode policy needs updating.

The AirWatch Agent Preferences includes settings and information broken out into four tabs:

- **Status** – Snapshot of device and AirWatch information.
  - **Enrollment Overview** – Current enrollment status, Server URL and option to verify enrollment.
  - **Device Information** – Computer name, model, version, serial number, encryption status, processor, memory, graphics and UUID.
  - **Connectivity Status** – Internet connection status, network information and option to test connectivity.
  - **Diagnostics** – Send data to the MDM server, sync with the MDM server, view agent logs, and send logs to AirWatch Administrator.
- **Settings** – View MDM-related restrictions. Select the lock icon to make any changes. Changes to restrictions and check-in intervals require the Admin passcode to unlock the settings. Upgrade notifications can be changed even if the Settings are locked.
- **Messages** – View and edit notifications and messages in the Message Center.
- **Activity** – Select **View Log File** to view real-time Activity logs, and **Send Log** to AirWatch Administrator.

Configuring Settings for the AirWatch Mac Agent

The AirWatch Mac Agent enhances your ability to monitor and control your device by providing detailed device information to AirWatch. You can configure settings specific to the AirWatch Agent and its impact on the installed device through the AirWatch Console.

To configure the Agent settings:

1. From the AirWatch Console Dashboard, navigate to **Devices > Device Settings > Apple > Apple macOS > Agent Settings**.
2. Click the **Override** radio button to enable setting modification, if necessary.
3. Configure the Agent settings:

Setting	Description
	General
Check-in Interval	Enter the time interval for device check-in.
Data Sample Interval	Enter the time interval for sample data to be collected prior to transmission.
Data Transmit Interval	Enter the time interval for the device to automatically transmit data to AirWatch.
Administrative Passcode	Enter a passcode to be applied to the app that the end user must enter to access Agent settings.
Enable Agent Uninstall	Select this check box to allow un-installation from the AirWatch Agent's main menu.
	Location
Collect Location Data	Select this check box to enable AirWatch to collect GPS information from the device when available. If **Collect Location Data** is enabled, the end user receives a prompt to enable location services for **airwatchd**. The alert persists until the user enables location services.
	Password Enforcement
Enforce Passcode	Select this check box to enforce passcode policy adherence on the device.
	AirWatch Cloud Messaging
Use AWCM	Select this check box to enable AWCM communication to the AirWatch Agent and device.
	Agent Updates
Enable Automatic Updates	Select this check box to enable automatic updates to the AirWatch Agent when a new version is available. • **Upgrade Silently** – Select this check box to run silent updates without interruption. If this check box is not selected, users will receive a prompt to begin the upgrade process.

Setting	Description
	Remote Management
Mode	Select the Mode to define how the remote management applet and the device communicate over the network: • **Off** – Communication happens directly between the applet and the device. This mode is used when the computer that has the applet and the device you want to remotely manage are on the same network or virtual network. • **WebSocket** – Communication flows from the device to the applet. There is no direct connection available between the applet and the device. The applet and the device both proactively establish connections with the tunnel server. Use this when the device and the tunnel server are on different networks and the device can connect to the tunnel server on a public IP. An example of WebSocket connection would be a device out in the field and the applet and tunnel are located in a central location.
Enable Encryption	Encrypt the data using AES 128 bit encryption.
Passphrase	Enter a passphrase for the encryption.
Seek Permission	Enable Seek Permission if you want to prompt the end user to accept/decline the remote management request from the admin. • Enter a **Seek Permission Message** that the end user will see when a remote request is sent. • Enter the **Yes Caption** message for the accept button the end user will see on the Seek Permission request. • Enter the **No Caption** message for the decline button the end user will see on the Seek Permission request.
Advanced	Open this menu to choose additional configuration options.
Remote Management Port	Enter the Remote Management Port used to communicate between the applet and the device.
Max Sessions	Enter the Max Sessions allowed through Remote Management.
Number of Retries	The number of retries allowed before communication attempts stop. This setting is available when **WebSocket** is selected as the **Mode**.
Retry Frequency (Seconds)	The amount of time between attempts to communicate. This setting is available when **WebSocket** is selected as the **Mode**.
Heart Beat Interval (Seconds)	The amount of time (in seconds) that passes between status updates are sent from the device. This setting is available when **WebSocket** is selected as the **Mode**.

Setting	Description
Connection Loss Retry Frequency (Seconds)	The amount of time (in seconds) that passes between attempts to reestablish connection. This setting is available when **WebSocket** is selected as the **Mode**.

4. Click **Save**.

Content Locker Sync for macOS Devices

VMware Content Locker Sync is an application that lets your end users sync personal content between VMware Content Locker on their devices, their Self-Service Portal (SSP), and their PC or Mac computers. End users download the application from the SSP and install it on their PC or Mac. From there, they can add files to a folder they designate on their computer, which is then synced with their SSP for viewing on other computers and their VMware Content Locker application on mobile devices.

For more information on enabling, using, and managing content with VMware Content Locker Sync, please refer to the **VMware AirWatch Mobile Content Management Guide**, available on AirWatch Resources.

AirWatch App Catalog for macOS Devices

Deploy an App Catalog to your end users so that they can access all your enterprise applications that you manage in the AirWatch Console. Your end users can find and access applications based on the settings you establish in the AirWatch Console.

For more information about providing self-service capability for App and Web App installations and the added the ability to manage enterprise applications for macOS, including installation and removal, see the **Mobile Application Management** Guide.

Chapter 7:
Additional macOS Configurations

Kiosks for macOS Devices

AirWatch offers the ability to utilize devices in your mobile fleet as kiosks. Kiosks limit your users to a single website browsing and to specific applications. For example, a retail establishment can deploy devices in device kiosk mode for use in store, utilizing corporate applications for in-store functionality like querying inventory and checking product pricing as well as custom branding to enhance the kiosk functionality.

A kiosk is configured from individual profiles. To build a kiosk, create profiles in the AirWatch Console, and then let the device handle the configuration of a kiosk profile. Use device kiosks to remotely configure allowed applications, desktop wallpapers, allow widgets, specify websites and create other restrictions.

Build a Device Kiosk for a macOS Device

Finder and Dock profile configuration is required in order to lock the file system and manage system commands. Configure these profiles in the AirWatch Console.

- Configure the **Dock** profile.
    - Allow specific applications and items to show on the Dock. By default, user adjustments are disabled, but you can enable these adjustments as needed. Do not select any check boxes that would allow the user to make changes to the settings. Also, do not allow these settings to merge with the user dock. If you choose to override the Dock, it will not be reverted to its original state when the profile is removed or upon an enterprise wipe.
- Configure the **Finder** profile.
    - Restrict access to the file system and commands using the Simple Finder and then choose commands to limit on the computer such as **Shut Down**. De-select the commands to make them unavailable to the user.

Additional macOS Profiles for Kiosk Mode

To use Kiosk mode effectively, enable additional profiles in the AirWatch Console.

Safari browsing

- Configure profiles to control web browsing. Create a content filter within the **Parental Controls** profile and a list of allowed websites. These sites show up as Bookmarks in the Safari browser.
- Optionally, use the **Global HTTP Proxy** profile to limit network access.

Restrictions

- Customize a **Restrictions** profile to match your control Preferences, widgets and more.
- Apply Media restrictions to prevent mounting of external drives. This prohibits USB or external storage devices from connecting and transferring files. Additionally, disable AirDrop functionality.
- Apply Desktop restrictions to lock wallpaper on the desktop and allow for the configuration of default wallpaper.

Time Limits and Schedules

- Create a device curfew in the **Parental Controls** profile to limit use to operating hours.

Accessibility

- Accommodate all users by configuring settings for enhanced vision, hearing, and keyboard and mouse interactions to further improve the usability of the kiosk.

Mirror Screens with Apple AirPlay on macOS Devices

Apple AirPlay allows administrators to mirror screens from a macOS computer or tvOS on the same subnet. If an end user needs assistance, simply send an AirPlay request to share your screen with an end user's computer running macOS Yosemite or higher.

Adding an AirPlay destination:

1. Navigate to **Devices > List View** and select the device. The device summary screen appears.
2. Select **More > Support > Start AirPlay** in the administrative menu bar. An **AirPlay** window appears.
3. Select **Add a Destination** to start adding destinations to view. An **Add New AirPlay Destination** window appears.
4. Configure the destination information including:
   - **Destination Name** – Friendly name for the device.
   - **Destination Address** – MAC address of the device to view.
   - **Password** – Password for the destination.
   - **Scan Time** – Length of time that the device may search for the destination. The default value is 30 seconds.
   - Select the **Set as Default** check box to make the current destination the default destination. The next time AirPlay is used, the default destination appears as the **Destination Name**. It does not have to be entered again.
5. Select **Save and Start** to send the AirPlay request to the device.
   - This destination is saved for the next request in the **Destination Name** drop-down menu.
6. To **Stop AirPlay** on devices, navigate back to the AirWatch Console. Go to **Devices > List View > Select the Device > Support > More > Stop AirPlay.**

Editing an AirPlay destination:

1. Navigate to **Devices > List View > Select Device > Support > More > AirPlay.** An **AirPlay** window appears.
2. Choose the **Device Destination** to edit from the drop-down menu.
3. Select **Edit** to start editing the destination settings. An **Edit AirPlay Destination** window appears.
4. Select **Save and Start** to send the AirPlay request to the device.

Custom Fonts for macOS Devices

Available to macOS Yosemite and devices running iOS 7 and higher, the AirWatch Console provides a means to upload fonts and install them onto devices. Installing specific fonts allows users to view and read text that is not supported by

standard means.

Compatible font file types include .ttf or .otf. There is no limit to the number of fonts you are can install on devices and you can remove a font at any time.

Manage Fonts on macOS Devices

To install and deploy fonts

1. Navigate to **Devices > Device Settings > Apple > Install Fonts**.
2. Drag and drop a supported font file type (.ttf or .otf) onto the screen.
3. Locate the font file and select **Save** to send the font to all devices enrolled in the current organization group.

To delete or view the font file

- Click on the button to delete a font.
- Click on the button to view and export the XML file.

Product Provisioning for macOS Devices

Product provisioning allows you to create, through AirWatch, products containing profiles, applications, and files/actions (depending on the platform you use). These products follow a set of rules, schedules, and dependencies as guidelines for ensuring your devices remain up to date with the content they need.

Product provisioning also encompasses the use of relay servers. These servers are FTP(S) servers designed to work as a go-between for devices and the AirWatch Console. Create these servers for each store or warehouse to store product content for distribution to your devices.

For more information on using product provisioning with macOS devices, see the **Product Provisioning for macOS Guide** available on AirWatch Resources.

Chapter 8:
macOS Device Management

macOS Device Management Overview

After your devices are enrolled and configured, manage the devices using the AirWatch Console. The management tools and functions enable you to keep an eye on your devices and remotely perform administrative functions.

You can manage all your devices from the VMware AirWatch Dashboard. The Dashboard is a searchable, customizable view that you can use to filter and find specific devices. This feature makes it easier to perform administrative functions on a particular set of devices. The Device List View displays all the devices currently enrolled in your AirWatch environment and their status. The Device Details page provides device-specific information such as profiles, apps, AirWatch Agent version and which version of any applicable OEM service currently installed on the device. You can also perform remote actions on the device from the Device Details page that are platform-specific.

Device Dashboard

As devices are enrolled, you can manage them from the AirWatch **Device Dashboard**. The **Device Dashboard** provides a high-level view of your entire fleet and allows you to act on individual devices quickly.

You can view graphical representations of relevant device information for your fleet, such as device ownership type, compliance statistics, and platform and OS breakdowns. You can access each set of devices in the presented categories by selecting any of the available data views from the **Device Dashboard**.

From the **List View**, you can take administrative action: send messages, lock devices, delete devices, and change groups associated with the device.

Device List View

Select **Devices > List View** to see a full listing of all devices.

The **Last Seen** column displays an indicator showing the number of minutes elapsed since the device has checked-in.

Select a device in the **General Info** column at any time to open the details page for that device.

Sort by columns and configure information filters to review device activity based on specific information. For example, sort by the **Compliance Status** column to view only devices that are currently out-of-compliance and target only those devices. Search all devices for a friendly name or user name to isolate one device or user.

Customize Device List View Layout

Display the full listing of visible columns in the **Device List** view by selecting the **Layout** button and choose the **Custom** option. This view enables you to display or hide Device List columns per your preferences.

There is also an option to apply your customized column view to all administrators. For instance, you can hide 'Asset Number' from the **Device List**.

Once all your customizations are complete, select the **Accept** button to save your column preferences and apply this new column view. You may return to the **Layout** button settings at any time to tweak your column display preferences.

Search in Device List View

You can search for a single device for quick access to its information and take remote action on the device.

To run a search, navigate to **Devices > List View**, select the **Search List** bar and enter a user name, device friendly name, or other device-identifying element. This action initiates a search across all devices, using your search parameter.

Device Details Page for macOS Devices

Use the Device Details page to track detailed device information and quickly access user and device management actions. You can access the Device Details page by either selecting a device's Friendly Name from the Device Search page, from one of the available Dashboards or by using any of the available search tools with the AirWatch Console.

Use the Device Details menu tabs to access specific device information.

Tab	Description
Summary	View general statistics on: platform/model/OS, compliance, AirWatch Cloud Messaging, enrollment, last seen, firewall, firmware, time machine, contact information, groups, serial number, UDID, asset number, power status, storage capacity, physical memory and virtual memory, and warranty information. If Apple's Global Service Exchange information is accessible, select the warranty link to see when the status was last updated.
Profiles	View all MDM profiles currently installed on a device.
Apps	View all apps currently installed or pending installation on the device.
Location	View current location or location history of a device.
User	Access details about the user of a device as well as the status of the other devices enrolled to this user.

Additional menu tabs are available by selecting **More** from the main Device Details tab.

Tab	Description
Network	View current network (Cellular, Wi-Fi, Bluetooth) status of a device.
Security	View current security status of a device based on security settings.
Restrictions	View the restrictions that currently apply to the device.
Notes	View and add notes regarding the device. For example, note the shipping status or if the device is in repair and out of commission.
Certificates	Identify device certificates by name and issuant. This tab also provides information about certificate expiration.
Products	View complete history and status of all packages provisioned to the device and any provisioning errors.
Terms of Use	View a list of End User License Agreements (EULAs) which have been accepted during device enrollment.

- **Alerts** – View all alerts associated with the device.
- **Shared Device Log** – View the history of the shared device including past check-ins and check-outs and status.
- **Status History** – View history of device in relation to enrollment status.
- **Targeted Logging** – View the logs for the Console, Catalog, Device Services, Device Management, and Self Service Portal. A link is provided enabling you to configure targeted logging (**All Settings > Admin > Diagnostics > Logging**).
- **Troubleshooting** – View **Event Log** and **Commands** logging information. This page features export and search functions, enabling you to perform targets searches and analysis.

- **Event Log** – View detailed debug information and server check-ins, including a **Filter** by **Event Group Type**, **Date Range**, **Severity**, **Module**, and **Category**.

  In the **Event Log** listing, the **Event Data** column may display hypertext links that open a separate screen with even more detail surrounding the specific event. This information enables you to perform advanced troubleshooting such as determining why a profile fails to install.

- **Commands** – View detailed listing of pending, queued, and completed commands sent to the device. Includes a **Filter** enabling you to filter commands by **Category**, **Status**, and specific **Command**.

- **Attachments** – Use this storage space on the server for screenshots, documents, and links for troubleshooting and other purposes without taking up space on the device itself.

Configure and Deploy a Custom Command to a Managed Device

AirWatch enables administrators to deploy a custom XML command to managed Apple devices. Custom commands allow more granular control over your devices.

Use custom commands to support device actions that the AirWatch Console does not currently support. Do not use custom commands to send commands that exist in the AirWatch Console as Device Actions. Samples of XML code you can deploy as custom commands are available in the AirWatch Knowledge Base at https://support.air-watch.com/kb.

Important: Improperly formed or unsupported commands can impact the usability and performance of managed devices. Test the command on a single device before issuing custom commands in bulk.

To create and deploy a custom command:

1. In the AirWatch Console, navigate to **Devices > List View**.
2. Select one or more iOS, macOS, or tvOS devices using the check boxes in the left column.
3. Select the **More Actions** drop-down and select **Custom Commands**. The Custom Commands dialogue box opens.
4. Enter the XML code for the action you want to deploy.

   Browse XML code for Custom Commands on the AirWatch Knowledge Base at https://support.air-watch.com/kb.
5. Select **Send** to deploy the command to devices.

If the Custom Command does not run successfully, delete the command by navigating to **Devices > List View**. Select the device to which you assigned the custom command. In the Device **Details View**, select **More > Troubleshooting > Commands**. Select the Command you want to remove, and then select **Delete**. The Delete option is only available for Custom Commands with a Pending status.

Chapter 9:
Shared Devices

Shared Devices Overview

Issuing a device to every employee in certain organizations can be expensive. AirWatch MDM lets you share a mobile device among end users in two ways: using a single fixed configuration for all end users, or using a unique configuration setting for individual end users.

Shared Device/Multi-User Device functionality ensures that security and authentication are in place for every unique end user. And if applicable, shared devices allow only specific end users to access sensitive information.

When administering shared devices, you must first provision the devices with applicable settings and restrictions before deploying them to end users. Once deployed, AirWatch uses a simple login/logout process for shared devices in which end users simply enter their directory services or dedicated credentials to log in. The end-user role determines their level of access to corporate resources such as content, features, and applications. This role ensures the automatic configuration of features and resources that are available after the user logs in.

The login/logout functions are self-contained within the AirWatch Agent. Self-containment ensures that the enrollment status is never affected, and that AirWatch can manage the device whether it is in use or not.

Shared Devices Capabilities

There are basic capabilities surrounding the functionality and security of devices that are shared across multiple users. These capabilities offer compelling reasons to consider shared devices as a cost-effective solution to making the most of enterprise mobility.

- **Functionality**
  - Personalize each end-user experience without losing corporate settings.
  - Logging in a device automatically configures it with corporate access and specific settings, applications, and content based on the end-user role and organization group (OG).
  - Allow for a log in/log out process that is self-contained in the AirWatch Agent.
  - After the end user logs out of the device, the configuration settings of that session are wiped. The device is then ready for login by another end user.
- **Security**
  - Provision devices with the shared device settings before providing devices to end users.
  - Log in and log out devices without affecting an enrollment in AirWatch.
  - Authenticate end users during a login with directory services or dedicated AirWatch credentials.
  - Manage devices even when a device is not logged in.

Platforms that Support Shared Devices

The following devices support shared device/multi-user device functionality.

- Android 2.3+,
- iOS devices with AirWatch Agent v4.2+,
- MacOS devices with AirWatch Agent v2.1+.

Define the Shared Device Hierarchy

When you first log in to AirWatch, you see a single organization group (OG) that has been created for you using the name of your organization. This group serves as your top-level OG. Below this top-level group you can create subgroups to build out your company hierarchical structure.

1. Navigate to **Groups & Settings > Groups > Organization Groups > Organization Group Details**. Here, you can see an OG representing your company.
2. Ensure the **Organization Group Details** displayed are accurate, and then use the available settings to make any modifications, if necessary. If you make changes, select **Save**.
3. Select **Add Child Organization Group**.
4. Enter the following information for the first OG underneath the top-level OG.

Setting	Description
Name	Enter a name for the child organization group (OG) to be displayed. Use alphanumeric characters only. Do not use odd characters.
Group ID	Enter an identifier for the OG for the end users to use during the device login. Group IDs are used during the enrollment of group devices to the appropriate OG. Ensure that users sharing devices receive the **Group ID** as it may be required for the device to log in depending on your Shared Device configuration.
Type	Select the preconfigured OG type that reflects the category for the child OG.
Country	Select the country where the OG is based.
Locale	Select the language classification for the selected country.
Customer Industry	This setting is only available when **Type** is Customer. Select from the list of Customer Industries.

5. Select **Save**.

Log In and log out of Shared macOS Devices

Multiple users can log in to and out of a macOS shared device, activating the automatic push of device profiles.

Log in to a macOS device

Using assigned Network credentials, log in to a macOS device that has been staged and you automatically receive the profiles assigned to your account in AirWatch.

Log out of a macOS device

The standard macOS log-out procedure also logs the device out of your assigned AirWatch user profile.

Accessing Other Documents

While reading this documentation you may encounter references to documents that are not included here.

The quickest and easiest way to find a particular document is to navigate to https://my.air-watch.com/help/9.1/en/Content/Release_Notes/Doc_List_PDFs.htm and search for the document you need. Each release-specific document has a link to its PDF copy on AirWatch Resources.

Alternatively, you can navigate to AirWatch Resources on myAirWatch (resources.air-watch.com) and search. When searching for documentation on Resources, be sure to select your AirWatch version. You can use the filters to sort by PDF file type and AirWatch v9.1.