

Deploying iOS Devices with Apple Configurator and the Casper Suite

Technical Paper
Casper Suite v9.3 or Later
9 May 2014



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Introduction

What's in This Guide

This guide provides step-by-step instructions on how to use Apple Configurator and the Casper Suite to deploy iOS devices.

Additional Resources

For more information on mobile device management with the Casper Suite, including enrollment, configuration, security management, and distribution, see the *Casper Suite Administrator's Guide*, available at:

<http://www.jamfsoftware.com/product-documentation/administrators-guides>

For more information on Apple Configurator, see the following Apple articles:

- Apple Configurator: Using Volume Purchase Program (VPP) Redemption Codes
<http://support.apple.com/kb/HT5188>
- Apple Configurator Help
<http://help.apple.com/configurator/mac/>

Overview

This guide explains how to deploy iOS devices using Apple Configurator and the Casper Suite. There are two methods for deploying devices:

- **Method 1: Using an enrollment URL**—This deployment method allows you to enroll mobile devices with the JAMF Software Server (JSS) using Apple Configurator and an enrollment URL. This method involves enabling the enrollment settings in the JSS, and then connecting the devices to a computer via USB to enroll them using Apple Configurator and an enrollment URL.

Device supervision is optional with this method.

- **Method 2: Using enrollment profiles**—This deployment method allows you to connect devices to a computer and enroll them with the JSS by installing profiles on the devices using Apple Configurator. You can also set up Apple Configurator to restore a backup on a device as it is being enrolled.

Deploying devices using this method results in supervised devices.

Once devices are enrolled, they can be managed remotely using the Casper Suite.

Note: Supervision prevents devices from being synced with iTunes on another computer or being used with Apple Configurator on another computer. For more information on supervision, see Apple's documentation at:

<http://help.apple.com/configurator/mac/1.5/#cadee170260>

Requirements

Method 1: Using an Enrollment URL

To deploy iOS devices using an enrollment URL following the instructions in this guide, you need:

- The JSS v9.3 or later
- iPads, iPhones, or iPod touch devices with iOS 7.1 or later, or Apple TV devices with iOS 7 or later
- A computer with:
 - OS X v10.8.4 or later
 - iTunes 11.1 or later
 - Apple Configurator 1.5 or later

For instructions on how to deploy iOS devices using an enrollment URL, see [Method 1: Using an Enrollment URL](#).

Method 2: Using Enrollment Profiles

To deploy iOS devices using an enrollment profile following the instructions in this guide, you need:

- The JSS v9.3 or later
- iPads, iPhones, or iPod touch devices with iOS 6 or later, or Apple TV devices with iOS 7 or later
- A computer with:
 - OS X v10.8.4 or later
 - iTunes 11.1 or later
 - Apple Configurator 1.4.2 or later

For instructions on how to deploy iOS devices using an enrollment profile, see [Method 2: Using Enrollment Profiles](#).

For instructions on how to enroll Apple TV devices with the JSS using an enrollment profile, see the following Knowledge Base article:

[Enrolling Apple TV Devices Using Apple Configurator](#)

Method 1: Using an Enrollment URL

Preparing for Enrollment

Before you can enroll devices with the JSS using Apple Configurator and an enrollment URL, you need to do the following:

1. Enable the Apple Configurator Enrollment settings and download the anchor certificate using the JSS.
2. (Optional) Create or import a configuration profile to Apple Configurator.
3. (Optional) Add apps to Apple Configurator.
4. Add the enrollment URL and the anchor certificate to Apple Configurator.

Step 1: Enable the Apple Configurator Enrollment Settings

Use the JSS to enable Apple Configurator enrollment and download the anchor certificate. You can then add the anchor certificate to Apple Configurator.

1. Log in to the JSS with a web browser.
2. In the top-right corner of the page, click **Settings** .
3. Click **Mobile Device Management**.
On a smartphone or iPod touch, this option is in the pop-up menu.
4. Click **Apple Configurator Enrollment** .
5. Click **Edit**.
6. Select the **Allow Apple Configurator enrollment** checkbox.

7. If you are using the JSS's built-in CA, click **Download** next to the certificate to download the anchor certificate. This certificate is needed to connect Apple Configurator to the JSS that devices trust at enrollment.

Note: The anchor certificate is only displayed if the SSL certificate you are using is signed by the JSS's built-in CA. If the SSL certificate you are using is signed by an external CA (your organization's CA or a trusted third-party CA), the anchor certificate is not displayed in the JSS. See [Step 4: Add the Anchor Certificate and Enrollment URL to Apple Configurator](#) for complete instructions.



The anchor certificate (.pem) downloads immediately.

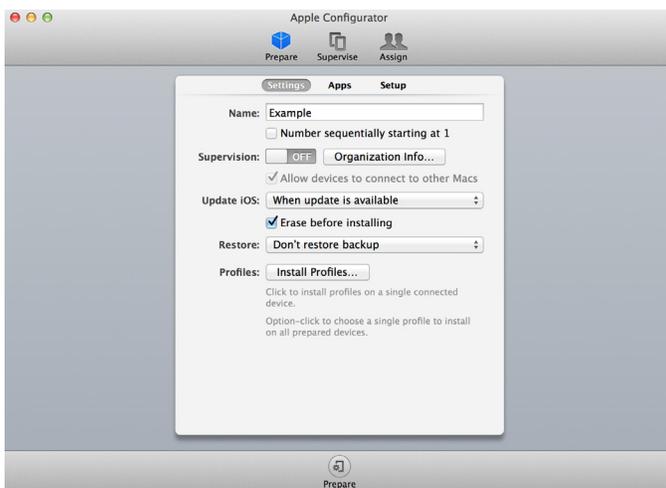
8. Click **Save**.

Note: When the anchor certificate is imported to Apple Configurator, it displays in the Anchor Certificates list with a name that identifies it as the CA certificate profile.

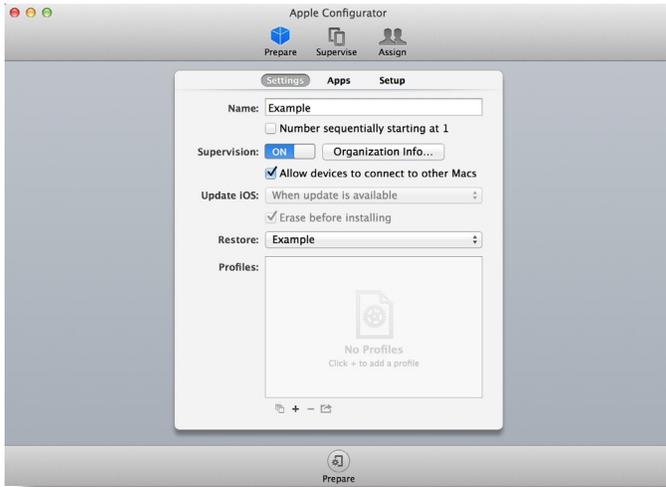
Step 2: (Optional) Create a Wi-Fi Configuration Profile

To enroll devices with the JSS, the devices must have access to a wireless network connection. One way to do this is to use Apple Configurator to create a configuration profile with a Wi-Fi payload that you can install on devices when you enroll them.

1. Open Apple Configurator.
2. Click **Prepare** in the toolbar.
3. Click the **Settings** tab.



- (Optional) Turn the **Supervision** switch on.



- Click **Create Profile (+)** below the Profiles list and choose **Create New Profile**.
- Enter a name for the profile.



- Select the **Wi-Fi** payload and click **Configure**.
- Configure the payload as needed.



For detailed information about the settings in the Wi-Fi payload, see the following documentation from Apple:

<http://help.apple.com/configurator/mac/1.5/#cadb9e6ff>

9. Click **Save**.

If you want to distribute other configuration profiles as devices are enrolled, create or import a configuration profile by following the instructions at:

<http://help.apple.com/configurator/mac/1.5/#cadb9e668>

You can also use the Casper Suite to distribute configuration profiles once the devices are enrolled. For more information, see the *Casper Suite Administrator's Guide*.

Step 3: (Optional) Add Apps to Apple Configurator

If you want to install apps as devices are enrolled, add the apps to Apple Configurator by following the instructions at:

<http://help.apple.com/configurator/mac/#cadf4ed4b2>

To install apps during enrollment, the apps must be free or you must have VPP redemption codes for them.

You can also use the Casper Suite to distribute apps once the devices are enrolled. For more information, see the *Casper Suite Administrator's Guide*.

Step 4: Add the Anchor Certificate and Enrollment URL to Apple Configurator

Add the anchor certificate and the enrollment URL to Apple Configurator so that you can enroll mobile devices.

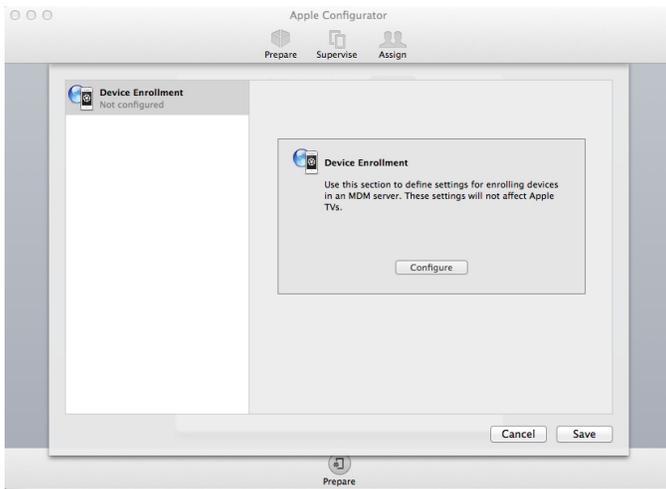
Note: Before you can add the anchor certificate to Apple Configurator, you need to add the certificate to Keychain Access.

1. Open Apple Configurator.
2. Click **Prepare** in the toolbar.

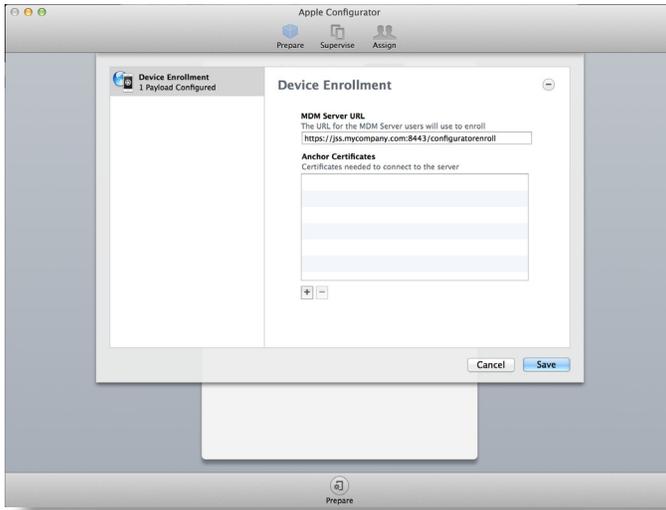
3. Click the **Setup** tab.



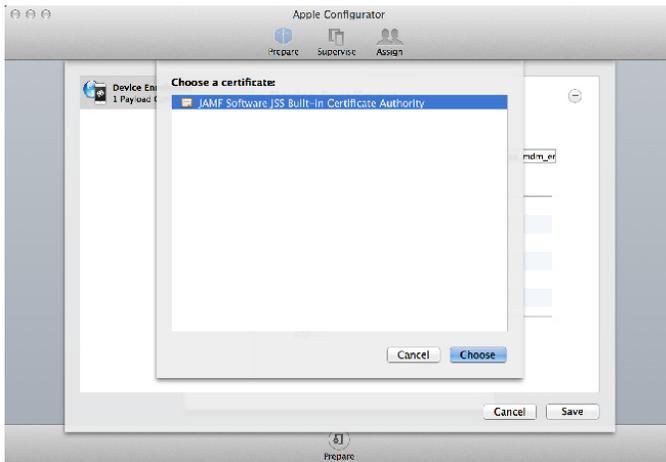
4. (Optional) To customize the user experience of the Setup Assistant, select which steps you want users to skip in the Setup Assistant.
5. Click **Configure Settings** below the Settings list.
6. Select the Device Enrollment payload and click **Configure**.



7. Enter the enrollment URL in the **MDM Server URL** field. This is the full URL for the JSS followed by `"/configatorenroll"`. For example:
`https://jss.mycompany.com:8443/configatorenroll`

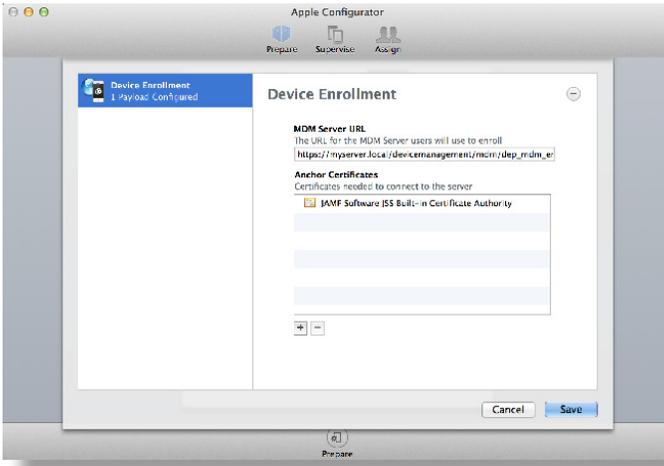


8. Click **Add anchor certificate (+)** below the Anchor Certificates list.
9. Select the anchor certificate (.pem) you previously downloaded from the JSS, and click **Choose**.



Note: If your SSL certificate is signed by your organizational CA, you need to select the certificate and then add it to Apple Configurator. If your SSL certificate is signed by a trusted third-party CA, you do not need to add an anchor certificate to Apple Configurator.

The anchor certificate displays in the Anchor Certificates list with a name that identifies it as the CA certificate profile.



Enrolling Devices

To enroll devices with the JSS using Apple Configurator and an enrollment URL, you need to set up Apple Configurator to install any desired settings, profiles and apps, and the anchor certificate and MDM Server URL (enrollment URL). Then you can connect one or more devices to the computer and install the specified components.

1. Open Apple Configurator.
2. Click **Prepare** in the toolbar.
3. Click the **Settings** tab.



4. If desired, enter a name for the device in the **Name** field.
If you are enrolling more than one device, select the **Number sequentially starting at 1** checkbox. Sequential numbers are appended to the device names.

- (Optional) Turn the **Supervision** switch on.

Warning: When you prepare a device with supervision turned on, Apple Configurator performs a software restore on the device.



- (Optional) If you created or imported configuration profiles and want to distribute them at enrollment, select the checkbox next to the configuration profile that you want to install. If you created a Wi-Fi configuration profile, select the checkbox next to the profile.
- (Optional) If you added apps and want to install them at enrollment, click the **Apps** tab and select the checkbox next to each app that you want to install.
- Click **Prepare** at the bottom of the window.
- If prompted, click **Apply**.
- Connect devices to the computer to install the specified components and apply the configured settings.
- When Apple Configurator finishes preparing the device(s), click the **Stop** button at the bottom of the window.

After Apple Configurator finishes applying the changes, the devices are enrolled with the JSS.

Method 2: Using Enrollment Profiles

Preparing for Enrollment

Before you can enroll devices with the JSS using Apple Configurator and an enrollment profile, you need to do the following:

1. (Optional) Create a device backup using Apple Configurator.
2. Create a Wi-Fi configuration profile using Apple Configurator.
3. Create and download an enrollment profile and Trust Profile using the JSS.
4. Import the enrollment profile and Trust Profile to Apple Configurator.
5. (Optional) Add apps to Apple Configurator.

Step 1: (Optional) Create a Device Backup

You can create a device backup that can be restored on devices when you enroll them. This allows you to bypass the initial device setup process.

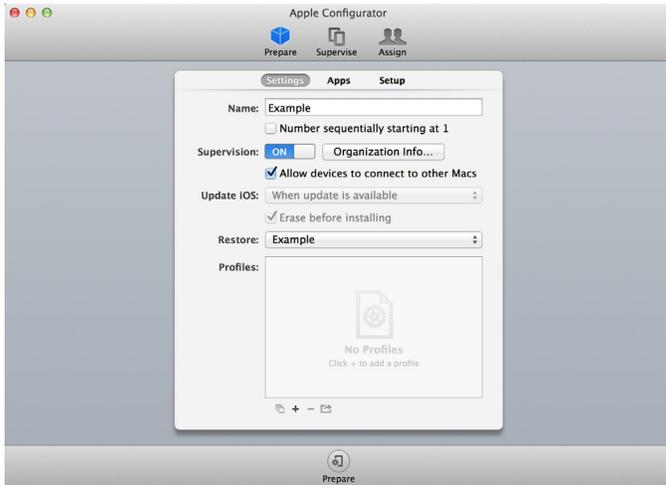
1. Open Apple Configurator.
2. Click **Prepare** in the toolbar.
3. Click the **Settings** tab.



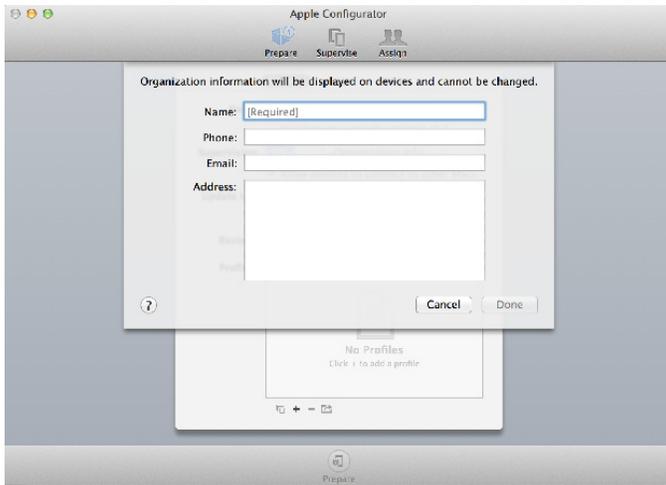
4. Connect the device that you want to create a backup of to a USB port on the computer.

- 5. If desired, enter a name for the device.
- 6. Turn the **Supervision** switch on.

Warning: When you prepare a device with supervision turned on, Apple Configurator performs a software restore on the device.

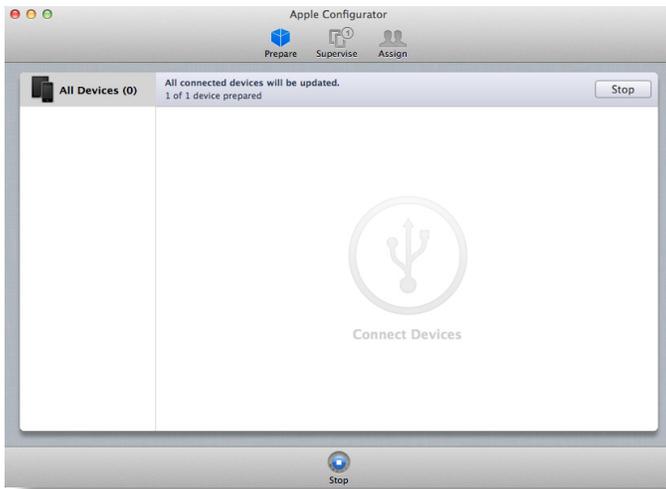


- 7. Click **Prepare** at the bottom of the window.
- 8. (Optional) If prompted, enter organization information for the device and then click **Done**.

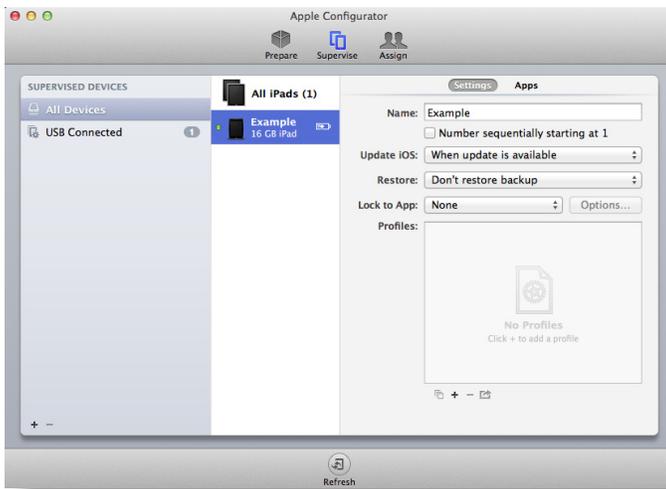


- 9. Click **Apply**.

- When Apple Configurator finishes preparing the device, click the **Stop** button at the bottom of the window.
Do not disconnect the device.



- On the device, use the Setup Assistant to complete the setup process, configuring settings as needed.
- In Apple Configurator, click **Supervise** in the toolbar and select the connected device in the list of devices.



- From the menu bar, choose **Devices > Back Up**.
- Enter a name for the backup and then click **Create Backup**.

A backup of the device is created. The backup is available in the **Restore** pop-up menu when **Prepare** is selected in the toolbar if supervision is turned on. It is also available from the **Restore** pop-up menu when **Supervise** is selected in the toolbar.

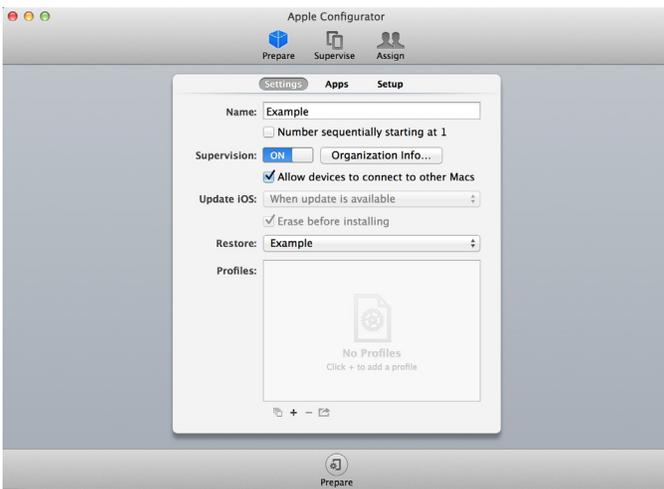
Step 2: Create a Wi-Fi Configuration Profile

To enroll devices with the JSS, they must have access to a wireless network connection. Use Apple Configurator to create a configuration profile with a Wi-Fi payload that you can install on devices when you enroll them.

1. Open Apple Configurator.
2. Click **Prepare** in the toolbar.
3. Click the **Settings** tab.



4. Turn the **Supervision** switch on.



5. Click **Create Profile (+)** below the Profiles list and choose **Create New Profile**.
6. Enter a name for the profile.



7. Select the **Wi-Fi** payload and click **Configure**.
8. Configure the payload as needed.



For detailed information about the settings in the Wi-Fi payload, see the following documentation from Apple:

<http://help.apple.com/configurator/mac/1.5/#caddbf9e6ff>

9. Click **Save**.

Step 3: Create and Download an Enrollment Profile and Trust Profile

Use the JSS to create an enrollment profile. When you create an enrollment profile for use with Apple Configurator, the JSS automatically creates an associated Trust Profile. You can then download both profiles from the JSS so that you can import them to Apple Configurator in the next step.

1. Log in to the JSS with a web browser.
2. Click **Mobile Devices** at the top of the page.

3. Click **Enrollment Profiles**.
On a smartphone or iPod touch, this option is in the pop-up menu.
4. Click **New**  .
5. Use the General pane to configure basic settings for the enrollment profile, including a display name. The display name that you enter is used as the filename for the enrollment profile.
Ensure that the **Create profile for use with iPCU** checkbox is not selected.

The screenshot shows the 'General' tab of the enrollment profile configuration. It includes the following fields and options:

- Display Name:** A text field with a '(Required)' label.
- Site:** A dropdown menu with 'None' selected.
- Display removal notification in inventory:** A checked checkbox with the label 'Display a notification in inventory when the profile is removed from a mobile device'.
- Description:** A text area.
- Create profile for use with iPCU:** An unchecked checkbox with a detailed description: 'Create the enrollment profile for use with Apple's iPhone Configuration Utility. This option should only be used if you plan to use iPCU to install the profile on mobile devices with iOS 6 or earlier'.

Buttons for 'Cancel' and 'Save' are located at the bottom right.

6. (Optional) Click the **User and Location Information** tab and specify user and location information for the devices.

The screenshot shows the 'User and Location Information' tab. It includes the following fields:

- Username:** Text field
- Full Name:** Text field
- Email Address:** Text field
- Phone Number:** Text field
- Department:** Dropdown menu with 'None' selected.
- Building:** Dropdown menu with 'None' selected.
- Room:** Text field
- Position:** Text field

Buttons for 'Cancel' and 'Save' are located at the bottom right.

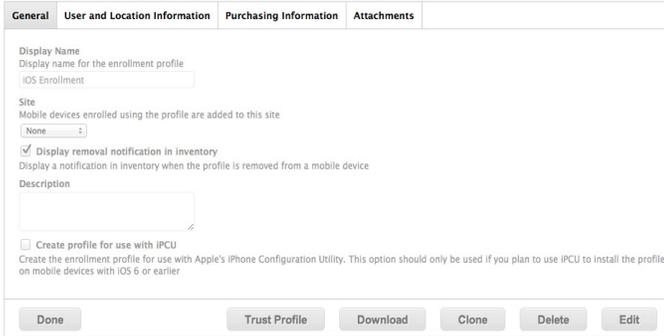
7. (Optional) Click the **Purchasing Information** tab and specify purchasing information for the devices.

The screenshot shows the 'Purchasing Information' tab. It includes the following fields and options:

- Purchased or Leased:** Radio buttons for 'Purchased' (selected) and 'Leased'.
- Purchase Order Number:** Text field
- Purchase Order Date:** Date picker
- Vendor:** Text field
- Warranty Expiration Date:** Date picker
- AppleCare ID:** Text field
- Lease Expiration Date:** Date picker
- Purchase Price:** Text field
- Life Expectancy:** Text field
- Purchasing Account:** Text field
- Purchasing Contact:** Text field

Buttons for 'Cancel' and 'Save' are located at the bottom right.

8. Click **Save**.
9. Click **Download**.



The enrollment profile downloads immediately as a .mobileconfig file. On OS X v10.7 or later, you may be prompted to install the profile. Click **Cancel** to decline.

10. Click **Trust Profile**.

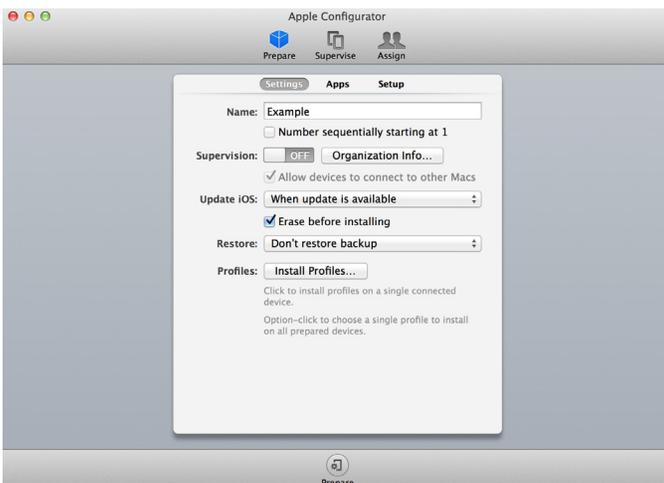
The Trust Profile downloads immediately with the filename Trust Profile .mobileconfig. On OS X v10.7 or later, you may be prompted to install the profile. Click **Cancel** to decline.

Step 4: Import the Enrollment Profile and Trust Profile to Apple Configurator

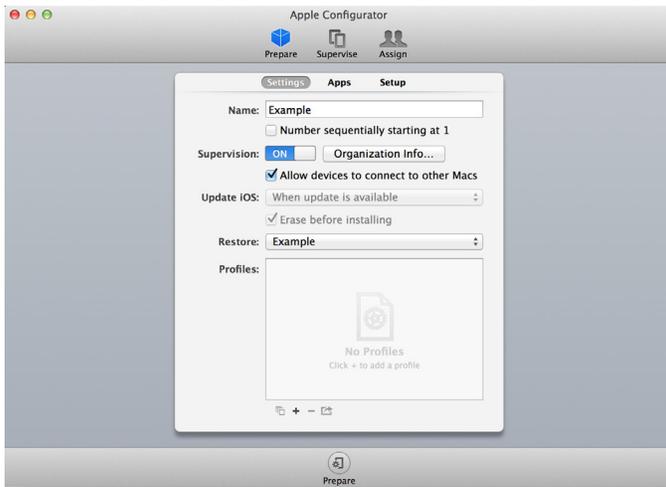
Import the enrollment profile and Trust Profile to Apple Configurator so that you can install the profiles on devices.

Important: To ensure that devices have access to a wireless network connection during enrollment, you must create the Wi-Fi configuration profile before importing the enrollment profile. See [Step 2: Create a Wi-Fi Configuration Profile](#) for complete instructions.

1. Open Apple Configurator.
2. Click **Prepare** in the toolbar.
3. Click the **Settings** tab.



4. Turn the **Supervision** switch on.



5. Click **Create Profile (+)** below the Profiles list and choose **Import Profile**.
6. Select the Trust Profile (Trust Profile.mobileconfig) you previously downloaded from the JSS, and click **Open**.
The Trust Profile displays in the Profiles list with a name that identifies it as the CA certificate profile.
7. Click **Create Profile (+)** again and choose **Import Profile**.
8. Select the enrollment profile (.mobileconfig) you previously downloaded from the JSS, and click **Open**.

Step 5: (Optional) Add Apps to Apple Configurator

If you want to install apps as devices are enrolled, add the apps to Apple Configurator by following the instructions at:

<http://help.apple.com/configurator/mac/#cadf4ed4b2>

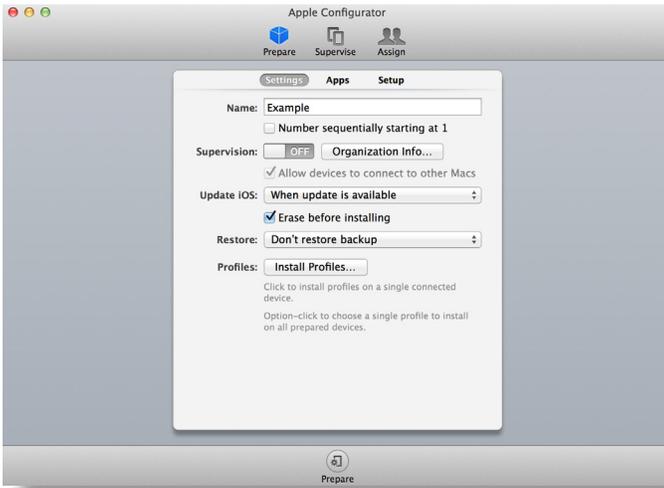
To install apps during enrollment, the apps must be free or you must have VPP redemption codes for them.

You can also use the Casper Suite to distribute apps once the devices are enrolled. For more information, see the *Casper Suite Administrator's Guide*.

Enrolling Devices

To enroll devices with the JSS using Apple Configurator, you need to set up Apple Configurator to install the Wi-Fi configuration profile, the enrollment profile, the Trust Profile, any desired apps, and any other configuration profiles. Then you can connect one or more devices to the computer and install the specified components.

1. Open Apple Configurator.
2. Click **Prepare** in the toolbar.
3. Click the **Settings** tab.



4. If desired, enter a name for the device in the **Name** field.
If you are enrolling more than one device, select the **Number sequentially starting at 1** checkbox. Sequential numbers are appended to the device names.

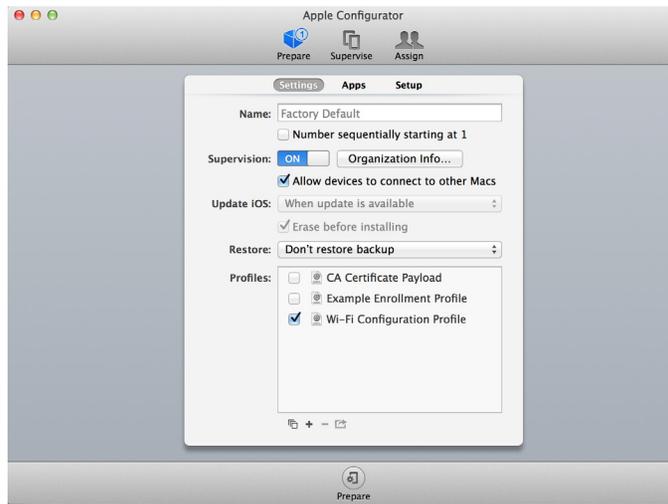
5. Turn the **Supervision** switch on.

Warning: When you prepare a device with supervision turned on, Apple Configurator performs a software restore on the device.



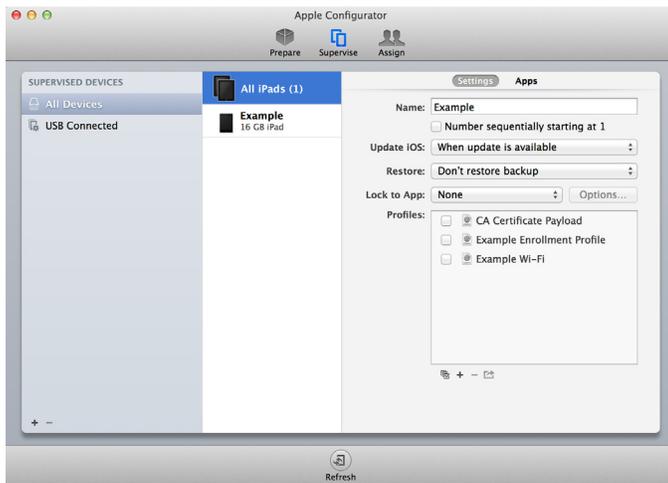
Note: The enrollment profile and Trust Profile that you imported to Apple Configurator and any configuration profiles that you created are displayed in the Profiles list.

6. If you want to restore a backup on devices, choose the backup from the **Restore** pop-up menu.
7. In the Profiles list, select the checkbox next to the Wi-Fi configuration profile that you want to install.



8. (Optional) If you want to install apps, click the **Apps** tab and select the checkbox next to each app that you want to install.
9. Click **Prepare** at the bottom of the window.

10. If prompted, click **Apply**.
11. Connect devices to the computer to install the specified components and apply the configured settings.
12. When Apple Configurator finishes preparing the device(s), click the **Stop** button at the bottom of the window.
Do not disconnect the device(s).
13. Click **Supervise** in the toolbar.
14. In the Profiles list, select the checkboxes next to the enrollment profile and the Trust Profile (CA Certificate) that you imported.



15. Click **Apply** at the bottom of the window.

After Apple Configurator finishes applying the changes, the devices are enrolled with the JSS.