Simplifying Device Enrollment and Content Distribution Using the Device Enrollment Program, the Volume Purchase Program, and the Casper Suite

Technical Paper
Casper Suite v9.4 and Later
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Introduction

Target Audience

This guide is designed for IT administrators who are using Apple's Device Enrollment Program and Apple's Volume Purchase Program (VPP) in the United States.

> *Note:* Although IT administrators can use VPP outside of the United States, this guide is intended for use in the United States due to the limited availability of the Device Enrollment Program.

What's in This Guide

This guide provides a step-by-step workflow for automating and customizing the enrollment of new, institutionally owned devices using Apple's Device Enrollment Program, and then assigning apps and eBooks to users and revoking and reassigning apps obtained through Apple's VPP.

Important Concepts

Before using the instructions in this guide, make sure you are familiar with the following Casper Suite-related concepts:

- Scope
- Smart and static computer and mobile device groups
- Simple and advanced computer and mobile device searches
- Computer and mobile device enrollment

Additional Resources

For more information about the applications, concepts, and processes mentioned in this guide, see the following documentation:

- *Casper Suite Administrator's Guide*

  http://www.jamfsoftware.com/resources/product-documentation/
- *Volume Purchase Program for Business*

  http://images.apple.com/business/docs/vpp_business_guide_en_Oct2013.pdf
- *Volume Purchase Program for Education*

  http://images.apple.com/education/docs/vpp_education_guide_en_Oct2013.pdf

Overview

In the past, computer and mobile device enrollment was a tedious process, and it was a struggle to manage apps and eBooks in a cost effective way. Now, in conjunction with Apple's Device Enrollment Program and VPP, the Casper Suite allows you to preconfigure the device enrollment process, customize the user setup experience, and distribute content to devices without even taking the devices out of the box before you hand them to users.

By preconfiguring the device enrollment process and customizing the user setup experience, you decide what steps users will take when they set up their devices. You can also assign content to users so that the content becomes available as soon as the users register with VPP. Additionally, when you assign apps to users, your organization retains ownership of the apps so that you can revoke and reassign them to new users at any time.

There are a several steps involved in enrolling devices and distributing content with the Device Enrollment Program, VPP, and the Casper Suite:

1. Assign users to devices. This allows you to track which user is assigned to each device so that you can prompt users to register with VPP and then assign the desired content to them.

2. Integrate with the Device Enrollment Program. This allows the Jamf Software Server (JSS) to use the Device Enrollment Program so that you can preconfigure the device enrollment process and customize the user setup experience.

3. Prepare devices for enrollment and customize the user setup experience. This allows you to preconfigure device enrollment and customize the user setup experience by creating a PreStage enrollment. As a result, devices are silently enrolled with the JSS when the user turns on their device for the first time and completes the Setup Assistant.

4. Integrate with VPP. This integrates the JSS with your VPP account so that you can invite users to register with VPP and assign content to them.

5. Invite users to register with VPP. This allows users to register with VPP so that the content that is assigned to users will become available on their devices when it is distributed to them.

6. Assign content to users. This allows you to specify the content that you want to assign to each user so that it can be distributed quickly. Content is assigned to users using a VPP Assignment in the JSS.

7. Distribute content. This makes the apps and eBooks assigned to each user available on their devices or available to install from Self Service.

8. Revoke apps. This allows you to revoke apps from users and reassign them to new users.

Requirements

To enroll devices and distribute content to devices using the instructions in this guide, you need:

- The JSS v9.4 or later
- A service token (.vpptoken) from Apple's VPP store
- A server token file (.p7m) from Apple
- A push certificate in the JSS
- Mobile devices running iOS 7.0.4 or later and/or computers running OS X v10.9 or later
- An LDAP server set up in the JSS

Assigning Users to Devices

To use the Device Enrollment Program and VPP, you must first migrate your users so that you have full use of the **Users** tab, and then assign users to devices. This allows you to track the user assigned to each device. You can then prompt users to register with VPP and assign the desired content to them. (For more information about migration, see the Migrating Users Knowledge Base article.)

Assigning a User to a Computer or Mobile Device

1. Log in to the JSS with a web browser.

2. Click **Computers** or **Mobile Devices** at the top of the page.

3. Perform a simple or advanced search.

4. Click the computer or mobile device you want to assign a user to.

5. Select the **User and Location** category and click **Edit**.

6. Do one of the following:

    ▪   To assign an existing user, enter the user's partial or full username in the **Username** field and click the **Search** 🔍 icon. Click **Choose** across from the user you want to assign, and then click **Save**.

        The **Full Name**, **Email Address**, **Phone Number**, and **Position** fields are populated automatically.

    ▪   To assign and create a new user, enter information about the user and click **Save**.

Integrating with the Device Enrollment Program

Integrating with the Device Enrollment Program allows the JSS to work together with Apple's Device Enrollment program. This allows you to preconfigure the device enrollment process and customize the user setup experience without needing to remove the devices from their original wrapping.

To integrate with the Device Enrollment Program, you need to upload the server token file (.p7m) you received from Apple. (For information, see the Integrating with Apple's Device Enrollment Program Knowledge Base article.) This process creates one instance of the program in the JSS. To meet the needs of your organization, you can repeat the process to create multiple instances of the program.

Configuring an Instance of the Device Enrollment Program

1. Log in to the JSS with a web browser.

2. In the top-right corner of the page, click **Settings** ⚙ .

3. Click **Global Management**.

   On a smartphone or iPod touch, this option is in the pop-up menu.

4. Click **Device Enrollment Program** .

5. Click **New** + .

6. Enter a display name for the instance of the program.

7. Click **Upload Server Token File** to upload the server token file you downloaded from Apple. This creates one instance of the program in the JSS.

   The information contained in the server token file is displayed.

8. Click **Save**.

9. To configure another instance of the program, repeat steps 5-8.

Preparing for Device Enrollment and Customizing the User Setup Experience

A PreStage enrollment allows you to store device enrollment settings and customize the user setup experience. As a result, the amount of time and interaction it takes to prepare devices for use is reduced, and devices are silently enrolled with the JSS when users complete the Setup Assistant. Before you can use a PreStage enrollment, you need to create it in the JSS.

Although using a PreStage enrollment to add a mobile device to the JSS manages the device, using a PreStage enrollment to add an OS X computer to the JSS does not manage the device.

After OS X computers are added to the JSS using a PreStage enrollment, they can be managed using one of the following methods:

- Remote Enrollment Using Recon
- QuickAdd Packages Created Using Recon
- User-Initiated Enrollment for Computers

Configuring a Mobile Device PreStage Enrollment

1. Log in to the JSS with a web browser.

2. Click **Mobile Devices** at the top of the page.

3. Click **PreStage Enrollments**.

   On a smartphone or iPod touch, this option is in the pop-up menu.

4. Click **New** ➕ .

5. Use the General payload to configure basic settings for the PreStage enrollment and customize the user setup experience.

   To customize the user setup experience, select which steps you want to skip in the Setup Assistant. If you choose to skip steps, the user can enable these settings after the device is configured unless otherwise restricted.

6. Click the **Scope** tab and configure the scope of the PreStage enrollment by selecting the checkbox next to each mobile device you want to add to the scope.

   Note: The mobile devices listed on the **Scope** tab are the mobile devices that are associated with the Device Enrollment Program via the server token file (.p7m) you downloaded from Apple's Volume Services Portal.

7. Click **Save**.

Configuring a Computer PreStage Enrollment

1. Log in to the JSS with a web browser.

2. Click **Computers** at the top of the page.

3. Click **PreStage Enrollments**.

    On a smartphone or iPod touch, this option is in the pop-up menu.

4. Click **New** [+] .

5. Use the General payload to configure basic settings for the PreStage enrollment and customize the user setup experience.

    To customize the user setup experience, select which steps you want to skip in the Setup Assistant. If you choose to skip steps, the user can enable these settings after the computer is configured unless otherwise restricted.

6. Click the **Scope** tab and configure the scope of the PreStage enrollment by selecting the checkbox next to each computer you want to add to the scope.

    > *Note:* The computers listed on the **Scope** tab are the computers that are associated with the Device Enrollment Program via the server token file (.p7m) you downloaded from Apple's Volume Services Portal.

7. Click **Save**.

    OS X computers are not managed at this point. To manage OS X computers, use one of the following methods:

    *   Remote Enrollment (for information, see "Remote Enrollment Using Recon" in the *Casper Suite Administrator's Guide.*)

    *   QuickAdd Packages (for information, see "QuickAdd Packages Created Using Recon" in the *Casper Suite Administrator's Guide.*)

    *   User-Initiated Enrollment (For information, see "User-Initiated Enrollment for Computers" in the *Casper Suite Administrator's Guide.*)

Integrating with VPP

Integrating the JSS with Apple's VPP allows you to invite users to register with VPP, assign apps and eBooks, and revoke and reassign apps to users. Adding one or more VPP accounts to the JSS integrates the JSS with VPP.

When you add a VPP account to the JSS, you upload the service token that you obtained from Apple, and specify the country associated with the VPP account. You can also specify other information about the account, such as the contact person and Apple ID.

Adding a VPP Account

1. Log in to the JSS with a web browser.

2. In the top-right corner of the page, click **Settings** .

3. Click **Global Management**.
   On a smartphone or iPod touch, this option is in the pop-up menu.

4. Click **VPP Accounts** .

5. Click **New** .

6. Enter a display name for the account.

7. Click **Upload Service Token** and upload the service token (.vpptoken) for the account.

8. Choose the country that is associated with the account.

9. (Optional) Enter additional information about the account, including the contact person and Apple ID.

10. Click **Save**.

Inviting Users to Register with VPP

Before you can assign content purchased through VPP to users, the users must be registered with VPP. You can invite users to register by sending a VPP invitation that prompts them to access a registration page where they are guided through the steps for registering. Once users are registered with VPP, they can receive the content that is assigned to them.

Sending a VPP Invitation

1. Log in to the JSS with a web browser.

2. Click **Users** at the top of the page.

3. Click **VPP Invitations**.
    On a smartphone or iPod touch, this option is in the pop-up menu.

4. Click **New** + .

5. Enter a display name for the invitation.

6. Select the VPP account to register users with.

7. Choose "Prompt users on their computers and mobile devices" from the **Method** pop-up menu.

    Note: The invitation is automatically added to the site that the VPP account belongs to.

8. Click the **Scope** tab and configure the scope of the invitation.

9. Click **Save**.

    A VPP invitation is immediately sent to the users you specified.

    You can view the status of the invitation in the list of invitations.

Assigning Content to Users

VPP assignments allow you to assign content purchased through VPP to users. This allows you to specify the content that you want to assign to each user so that it can be quickly distributed.

When you create a VPP assignment in the JSS, you choose a VPP account, and all content purchased for VPP-managed distribution using the account is automatically available. Then you specify the content that you want to assign, and the users you want to assign it to (called "scope").

Creating a VPP Assignment

1. Log in to the JSS with a web browser.

2. Click **Users** at the top of the page.

3. Click **VPP Assignments**.

   On a smartphone or iPod touch, this option is in the pop-up menu.

4. Click **New** [+] .

5. Use the General payload to configure basic settings for the VPP assignment, including the VPP account.

   Note: The assignment is automatically added to the site that the VPP account belongs to.

6. Select the Apps payload and then select the checkbox for each app you want to assign.

7. Select the eBooks payload and then select the checkbox for each eBook you want to assign.

8. Click the **Scope** tab and configure the scope of the assignment.

9. Click **Save**.

Distributing Content

To make content available to users, you distribute it to devices. When content is distributed to users, it becomes available on their devices immediately after they register with VPP. If users have Automatic Downloads turned on for their devices, apps are silently installed on their devices. If users do not have Automatic Downloads turned on, users will be prompted to install the app. eBooks only become available in Self Service.

Note: Mac App Store apps can be distributed to users by making the apps available in Self Service.

Distributing an App to a Mobile Device

1. Log in to the JSS with a web browser.

2. Click **Mobile Devices** at the top of the page.

3. Click **Apps**.

   On a smartphone or iPod touch, this option is in the pop-up menu.

4. Click **New** + .

5. Select **App Store app** and click **Next**.

6. Browse the App Store, and do the following:

   a Enter the name of the app.

   b Choose an App Store country, and click **Next**.

   c Click **Add** for the app you want to add.

7. Use the **General** pane to configure basic settings for the app, including the display name.

8. Choose "Install Automatically/Prompt Users to Install" from the **Distribution Method** pop-up menu.

9. Click the **Scope** tab and configure the scope of the app.

10. Click **Save**.

    The app is distributed the next time mobile devices in the scope contact the JSS.

Distributing a Mac App Store App to a Computer

1. Log in to the JSS with a web browser.

2. Click **Computers** at the top of the page.

3. Click **Mac App Store Apps**.
    On a smartphone or iPod touch, this option is in the pop-up menu.

4. Click **New** [**+**] .

5. Do the following:
    a   Enter the name of the app
    b   Choose an App Store country, and click **Next**.
    c   Click **Add** for the app you want to add.

6. Use the **General** pane to configure settings for the app.

7. Click the **Scope** tab and configure the scope of the app.

8. Click the **Self Service** tab and configure the way the app is displayed in Self Service.

9. Click **Save**.

    The app is available in Self Service when users are logged in to Self Service and the next time computers in the scope contact the JSS.

Distributing an eBook

1. Log in to the JSS with a web browser.

2. Click **Users** at the top of the page.

    Note: If you have not migrated users yet, click **Mobile Devices** at the top of the page.

3. Click **eBooks**.

    On a smartphone or iPod touch, this option is in the pop-up menu.

4. Click **New** ➕ .

5. Select **eBook available in the iBookstore** and click **Next**.

6. Browse the iBookstore, and do the following:

    a   Enter the name of the eBook.

    b   Choose an iBookstore country, and click **Next**.

    c   Click **Add** for the eBook you want to add.

    > *Note:* iBooks files (.ibooks) may need to be added manually.

7. Use the General pane to configure distribution settings for the eBook, including the display name.

8. Click the **Scope** tab and configure the scope of the eBook.

    If you have migrated users, you can add computers, users, and mobile devices as targets to the scope. If you have not migrated users yet, you can only add mobile devices as targets to the scope.

9. Click **Save**.

    The eBook is available in Self Service for users to install the next time the app is launched.

The User Experience

When users turn on their devices for the first time, they are required to choose a language and connect their device to Wi-Fi. Users then complete the Setup Assistant using the device enrollment and user setup experience settings that you preconfigured using a PreStage enrollment.

After devices are enrolled with the JSS and setup is complete, the user is prompted to register with VPP, which causes the content that you assigned to them to become available on their devices. Mac App Store apps and eBooks only become available in Self Service.

If users have Automatic Downloads turned on for their devices, apps are silently installed on their devices. If users do not have Automatic Downloads turned on, users will be prompted to install the app.

Revoking Apps

Revoking apps and reassigning them to other users saves your organization money by reducing the need to pay for new apps. To revoke one or more specific apps from users, you remove the app(s) from the VPP assignment. To revoke all the apps in a VPP assignment from one or more users, you remove the user(s) from the scope of the VPP assignment. Apps that have been revoked can be reassigned to other users when needed.

Users are notified on their device when an app is no longer assigned to them. The app may or may not be removed from their device. If an app is not removed from the user's device, it can be removed by an administrator.

> *Note:* All app data is deleted when an app is revoked and/or removed from a device. Before revoking an app, remind users to get any important data out of the app.

Revoking a Single App from Users

1. Log in to the JSS with a web browser.

2. Click **Users** at the top of the page.

3. Click **VPP Assignments**.
   On a smartphone or iPod touch, this option is in the pop-up menu.

4. Click the VPP assignment you want to revoke.

5. Select the Apps payload and remove apps from the assignment as needed.

6. Click the **Scope** tab and remove users from the scope as needed.

7. Click **Save**.

   Users are notified that the apps are no longer assigned to them.

Revoking All Apps from Users

For each VPP account, you can revoke all apps that have been assigned to users.

1. Log in to the JSS with a web browser.

2. In the top-right corner of the page, click **Settings** ⚙ .

3. Click **Global Management**.
    On a smartphone or iPod touch, this option is in the pop-up menu.

4. Click **VPP Accounts** .

5. Click the VPP account for which you want to revoke all apps.

6. Click **Revoke All** and then click **OK** to confirm.

    Users are notified that the apps are no longer assigned to them.