

# Integrating with Apple School Manager to Support Apple's Education Features Using the Casper Suite

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# Introduction

## What's in This Guide

This guide provides step-by-step instructions for integrating with Apple School Manager to support Shared iPad and Apple's Classroom app using the Casper Suite v9.92 or later.

**Note:** If your environment does not integrate with Apple School Manager but you still plan to use Apple's Classroom app and Shared iPad, see the [Supporting Apple's Classroom App and Shared iPad Using the Casper Suite](#) technical paper for instructions on how to manually set up your environment to support Apple's education features.

## Additional Resources

- [Classroom Help](#)  
Access the Classroom Help documentation.
- [Apple School Manager Help](#)  
Access the Apple School Manager Help documentation.
- [Casper Suite Administrator's Guide](#)  
Find more instructions related to classroom management, user management, and app distribution with the Casper Suite.

# Overview

This guide provides a complete workflow for integrating with Apple School Manager to support Apple's Classroom app and Shared iPad with the Casper Suite.

This involves the following steps:

1. (Optional) Prepare to enable user images
2. Enable Apple Education Support
3. Integrate with Apple School Manager
4. Distribute Apple's Classroom app to teacher iPads
5. Support Shared iPad for Apple's Classroom app
6. Import and configure classes for Apple's Classroom app

# Prepare to Enable User Images

As a part of Apple Education Support, user images can be displayed in the Classroom app and on the login screen for Shared iPads, as well as in the inventory information for each user. In order to use user images, you need to set up a distribution point with an enabled web service, and establish a secure connection between the JSS and the distribution point.

When you enable user images, you are required to specify a URL for the distribution point that your images are hosted on. To ensure that your URL points to the correct location for each user's image, it is recommended that you use a variable in the URL and name the image files so that they function with the variable you choose. For example, if the distribution point URL is `https://www.mycompany.com/$USERNAME.png`, the username in the JSS for each user will be inserted into the URL in place of the `$USERNAME` variable. If you name each image file using the username in the JSS for each user, the correct image will be displayed for each user.

You can use the following variables in the distribution point URL for user images:

- `$USERNAME`
- `$FULLNAME`
- `$REALNAME`
- `$EMAIL`
- `$PHONE`
- `$POSITION`
- `$EXTENSIONATTRIBUTE_<#>`

## Requirements

To ensure optimal display of user images, you need image files that are in PNG format and are 256x256 pixels.

## Setting Up a Web Server with a Distribution Point for Hosting User Images

1. Download a server certificate from the JSS using a certificate signing request.
2. Set up the web server with a distribution point. For information about setting up a web server with a distribution point, see the following documentation:
  - For Internet Information Services (IIS):  
<http://www.iis.net/learn/get-started/planning-for-security/build-a-custom-iis-server#Building>
  - For Server app:  
<https://help.apple.com/serverapp/mac/getstarted/5.1/#/apdaa4c15f56>

- For Apache:  
<https://help.ubuntu.com/lts/serverguide/httpd.html>
- 3. Ensure that web services are enabled for your web server.  
**Note:** It is recommended that you disable HTTP access and directory index browsing on the web server to ensure that the image files on the server are secure.
- 4. Rename your image files so that they function with the variable you plan to use in the distribution point URL when you enable user images, and save your images on the distribution point.

## Establishing Trust Between the JSS and the Web Server

1. Download the CA certificate from the JSS and import the certificate to your web server.
  - a. Log in to the JSS.
  - b. In the top-right corner of the page, click **Settings**.
  - c. Click **Mobile Device Management**.  
On a smartphone or iPod touch, this option is in the pop-up menu.
  - d. Click **Apple Education Support**  .
  - e. Click **Download** to download the CA certificate.
  - f. Save the certificate in the location dictated by your web server.
2. Enable client authorization. For information about enabling client authorization, see the following documentation:
  - For Internet Information Services (IIS):  
[https://technet.microsoft.com/en-us/library/cc753983\(v=ws.10\).aspx](https://technet.microsoft.com/en-us/library/cc753983(v=ws.10).aspx)
  - For Server app:  
[http://httpd.apache.org/docs/current/ssl/ssl\\_howto.html#accesscontrol](http://httpd.apache.org/docs/current/ssl/ssl_howto.html#accesscontrol)  
**Note:** For information on working with Apache in OS X Server, see Apple's [Work with Apache](#) documentation.
  - For Apache:  
[http://httpd.apache.org/docs/current/ssl/ssl\\_howto.html#accesscontrol](http://httpd.apache.org/docs/current/ssl/ssl_howto.html#accesscontrol)
3. (Optional) Deploy a server certificate to devices via a configuration profile if needed to establish trust between the devices and the web server.

You are now ready to enable user images as a part of Apple Education Support. For instructions on how to enable user images, see [Enable Apple Education Support](#).

# Enable Apple Education Support

The Apple Education Support settings allow you to enable support for Shared iPad and Apple's Classroom app.

When you enable Apple Education Support, you allow iPads to be enrolled with the JSS as Shared iPad using a mobile device PreStage enrollment. In addition, you allow classes in the JSS to be configured for use with Apple's Classroom app.

You can also enable user images as a part of Apple Education Support. When you enable user images, you allow a user image or student photo to be displayed in the Classroom app and on the login screen for Shared iPads, as well as in the inventory information for each user. (For step-by-step instructions on preparing to use user images, see [Prepare to Enable User Images](#).)

## Requirements

To enable Apple Education Support in the JSS, you need the following:

- The JSS v9.9 or later
- Supervised iPads with iOS 9.3 or later
- A valid push certificate in the JSS. (For more information, see the "Push Certificates" section of the *Casper Suite Administrator's Guide*.)

## Enabling Apple Education Support

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 Education Support**  .
5. Click **Edit**.
6. Select the **Enable Apple Education Support** checkbox.
7. (Optional) To enable user images, do the following:
  - a. Select the **Enable User Images** checkbox.
  - b. Enter the distribution point URL for user images. The URL should include a variable to reference each user's image. (For more information and a list of variables that can be used in the distribution point URL, see [Prepare to Enable User Images](#).)

- c. If you have not already downloaded the CA certificate (.pem), click **Download** to download the certificate, and then save the certificate in the appropriate location dictated by your web server vendor.
  - d. (Optional) If needed to establish trust between the JSS and the distribution point, upload an additional certificate (.p12 or .pem) from your web server to the JSS.
8. Click **Save**.

# Integrate with Apple School Manager

Integrating the JSS with Apple School Manager allows you to import students, teachers, and classes from Apple School Manager. This automatically creates new users and classes in the JSS for use with Apple's Classroom app.

To integrate the JSS with Apple School Manager, you associate a Device Enrollment Program (DEP) instance with the Apple School Manager instance and configure the following settings:

- Apple School Manager Sync Time
- Matching Criteria for Importing Users from Apple School Manager

For more information about Apple School Manager, see the [Apple School Manager Help](#) documentation.

## Apple School Manager Sync Time

Configuring an Apple School Manager Sync Time allows imported user and class information to be updated automatically if there is updated information available in Apple School Manager. You can choose to sync never, daily, once a week, every other week, or once a month. The default sync time is "Never".

Information is only synced from Apple School Manager to the JSS, not from the JSS to Apple School Manager.

When the configured sync time is reached, inventory information in the Roster category is updated for the imported users associated with a class. Class information, such as the display name, is also updated.

**Important:** Any information that is manually entered in the Roster category of user inventory information is replaced with information from Apple School Manager at the sync time.

If a student or teacher is added to a class in Apple School Manager after a class has been imported, the user is imported to the JSS and matched with existing users at the configured sync time based on the criteria for matching imported users from Apple School Manager. If there is no match, the imported user is added to the JSS as a new user in the Users tab. (For more information, see [Matching Criteria for Importing Users from Apple School Manager](#).)

If you have not yet imported users and classes from Apple School Manager when the configured sync time is reached, information is synced at the time configured and stored in the JSS database for the user or class until they are imported. (For more information, see [Import and Configure Classes for Apple's Classroom App](#).)

# Matching Criteria for Importing Users from Apple School Manager

When you integrate the JSS with Apple School Manager, you choose JSS user criteria to match with Apple School Manager user criteria. Users that are imported to the JSS are matched to existing users in the JSS based on the selected user criteria.

The following table displays the criteria you can use:

JSS User Criteria	Apple School Manager User Criteria
Email (JSS)	Managed Apple ID
Username (JSS)	Source System Identifier
User Extension Attributes*	

\*It is recommended that you match "Source System Identifier" from Apple School Manager with the student ID number in the JSS. One way to do this is to create a user extension attribute that collects the student ID number in the JSS. (For more information on how to create a user extension attribute, see the "User Extension Attributes" section in the *Casper Suite Administrator's Guide*.)

The default criteria selection matches "Email (JSS)" with "Managed Apple ID" from Apple School Manager.

## Requirements

To integrate with Apple School Manager, you need the following:

- The JSS v9.92 or later
- The JSS integrated with DEP. (For more information, see the "Integrating with the Device Enrollment Program" section of the *Casper Suite Administrator's Guide*.)

## Configuring an Instance of Apple School Manager

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 Education Support** .
5. Click **Edit**.
6. Click the **Apple School Manager** tab.

7. Select the **Enable Apple School Manager Integration** checkbox.
8. Click **Add**.
9. Enter a display name for the Apple School Manager instance.
10. Choose a DEP instance from the **Device Enrollment Program Instance** pop-up menu.
11. (Optional) To select a time that the JSS should sync with Apple School Manager, choose a time interval from the **Apple School Manager Sync Time** pop-up menu, and then configure the days and time to sync.  
The time zone that is displayed is the time zone that is configured in System Preferences.  
**Note:** It is recommended that you choose to sync with Apple School Manager at a time other than when you choose to flush logs or back up your database.
12. Choose criteria to use for matching the students and teachers associated with an imported class from Apple School Manager with existing users in the JSS using the **Matching Criteria for Importing Users** options:
  - a. Select JSS or Apple School Manager user criteria from the **User Criteria** pop-up menu on the left.
  - b. Choose an operator from the **Operator** pop-up menu.
  - c. Select JSS or Apple School Manager user criteria from the **User Criteria** pop-up menu on the right.

User Criteria	Operator	User Criteria
Email (JSS)	equals	Managed Apple ID

13. Click **Save**.

When you import a class, the user information from Apple School Manager is matched to existing user information in the JSS based on the selected criteria.

The JSS updates user and class information from Apple School Manager at the time configured.

# Distribute Apple's Classroom App

Use the Casper Suite to distribute Apple's Classroom app to the teacher iPads in your environment. For information and complete instructions on distributing App Store apps with the Casper Suite, see the "App Store Apps" section in the *Casper Suite Administrator's Guide*.

For more information about the requirements for Apple's Classroom app, as well as teacher and student minimum device requirements, see Apple's [Classroom Help](#) documentation.

# Support Shared iPad for Apple's Classroom App

To use Shared iPad in your environment, you need to enable Shared iPad in a mobile device PreStage enrollment and then enroll iPads with the JSS using the PreStage. Only iPads that are associated with the PreStage enrollment and meet Shared iPad requirements can be enrolled with the JSS as Shared iPad.

When you enable Shared iPad in a PreStage enrollment, you can select the maximum number of user accounts that can be stored with Shared iPad. This allows you to limit the number of locally stored user accounts on the iPad. (For more information about Mobile Device PreStage enrollments, see the "Mobile Device PreStage Enrollments" section in the *Casper Suite Administrator's Guide*.)

After you enroll iPads with the JSS as Shared iPad, you can create a mobile device group for Shared iPad in your environment. This allows you to add a smart or static mobile device group when you create a class in the JSS for use with Apple's Classroom app.

**Note:** If your environment does not use Shared iPad, you can still configure classes to be used with Apple's Classroom app.

- For instructions on creating a class, see the "Classes" section in the *Casper Suite Administrator's Guide*.
- For a list of requirements to use Apple's Classroom app, see Apple's [Classroom Help](#) documentation.

## Requirements

To enable Shared iPad during enrollment with the JSS, you need the following:

- The JSS v9.9 or later
- Supervised iPads with iOS 9.3 or later
- Apple Education Support enabled in the JSS. (For more information, see the [Enable Apple Education Support](#) section.)
- The JSS integrated with the Device Enrollment Program (DEP). (For more information, see "Integrating with the Device Enrollment Program" in the *Casper Suite Administrator's Guide*.)

## Enabling Shared iPad During Enrollment

1. Log in to the JSS with a web browser.
2. Click **Mobile Devices** at the top of the page.  
On a smartphone or iPod touch, this option is in the pop-up menu.
3. Click **PreStage Enrollments**.

4. Do one of the following:
  - If you are creating a new PreStage enrollment, click **New**.  
See the “Mobile Device PreStage Enrollments” section of the *Casper Suite Administrator’s Guide* for further instruction on creating a new PreStage enrollment.
  - If you are editing an existing PreStage enrollment, click the PreStage enrollment you want to edit, and then click **Edit**.
5. Use the General payload to enable Shared iPad.
  - a. Select **Supervise Devices**.
  - b. Select **Enable Shared iPad**.
  - c. Select the maximum number of users accounts that can be stored with Shared iPad from the **Number of users** pop-up menu.  
**Note:** The maximum number of user accounts is 10 by default.
6. Click the **Scope** tab and configure the scope of the PreStage enrollment by selecting the checkbox next to each iPad that you want to add to the scope.  
The mobile devices listed on the **Scope** tab are the mobile devices that are associated with DEP via the server token file (.p7m) you downloaded from the Apple Deployment Programs website.
7. Click **Save**.

iPads that are associated with the PreStage enrollment and meet Shared iPad requirements are enrolled with the JSS as Shared iPad.

## Creating a Mobile Device Group

After you enroll iPads with the JSS as Shared iPad, you need to create smart or static mobile device groups that contain the iPads. For more information, see “Smart Mobile Device Groups” or “Static Mobile Device Groups” in the *Casper Suite Administrator’s Guide*.

# Import and Configure Classes for Apple's Classroom App

Before you can use Apple's Classroom app in your environment, you need to import classes from Apple School Manager and configure them in the JSS. An assistant in the JSS guides you through the process of importing classes from Apple School Manager. This automatically creates classes in the JSS and populates the display name of the class, Students payload, and Teachers payload with the information imported to the JSS.

When you import a class, you also import the students and teachers associated with the class. This allows you to automatically create new users in the JSS from the students and teachers in Apple School Manager or append information to existing users in the JSS.

You can select from the following options when importing students and teachers from Apple School Manager:

- **Match to an existing user in the JSS**—Imported users are matched to existing users in the JSS based on the criteria selected when integrating the JSS with Apple School Manager. (For more information, see [Integrate with Apple School Manager](#).) The JSS displays potential existing users in the JSS that match the specified criteria. When you select an existing user in the JSS to match the imported user to, the following information is populated in the Roster category of the user's inventory information:
  - Full name from Roster
  - Manager Apple ID
  - Passcode requirement

If this information existed in the JSS prior to matching the imported user with the existing user, the information is updated.

- **Create a new user in the JSS**—If you choose to create a new user, the imported user is automatically added to the JSS in the Users tab and inventory information is entered in the Roster category for the user.

**Match Imported Users**

Matching criteria used for importing: Email (JSS) equals Managed Apple ID

Apple School Manager		JSS		
Name	Managed Apple ID	ID	User to link	Email (JSS)
Samantha Johnson	samanthajohnson@appleid.jamfsoftware.com	ASMSTUDENT04	<input checked="" type="radio"/> Samantha Johnson <input type="radio"/> Create new user	samanthajohnson@appleid.jamfsoftware.com

Back Cancel Next

After a class is imported, if a sync time is configured for the Apple School Manager instance, class information is updated automatically based on the scheduled frequency and time. (For more information about configuring the Apple School Manager Sync Time, see [Integrate with Apple School Manager](#).)

**Note:** If a student or teacher is added to a class in Apple School Manager after the class has been imported, the user is imported to the JSS and matched with existing users at the configured sync time based on the criteria for matching imported users from Apple School Manager. If there is no match, the imported user is added to the JSS as a new user in the Users tab. (For more information, see [Matching Criteria for Importing Users from Apple School Manager](#).)

## Requirements

To configure a class in the JSS by importing class information from Apple School Manager, you need the following:

- The JSS v9.92 or later
- Supervised iPads with iOS 9.3 or later
- The JSS integrated with Apple School Manager. (For more information, see [Integrate with Apple School Manager](#).)
- Apple Education Support enabled in the JSS. (For more information, see [Enable Apple Education Support](#).)
- A JSS user account with the "Users" and "Classes" privileges
- Teachers assigned to iPads in the JSS. (For more information, see the "User Assignments" section in the *Casper Suite Administrator's Guide*.)

In addition, you must ensure that teacher and student iPads meet the minimum device requirements for use with Apple's Classroom app. For more information, see [Classroom Requirements](#) in Apple's Classroom Help documentation.

**Note:** To distribute App Store apps and apply app usage restrictions to Shared iPad in a class, device-assignable apps must be added to the JSS and distributed to iPads using device-based VPP assignments. For more information, see "VPP Managed Distribution for Mobile Devices" and "App Store Apps" in the *Casper Suite Administrator's Guide*.

## Importing and Configuring a Class

1. Log in to the JSS with a web browser.
2. Click **Mobile Devices** at the top of the page.
3. Click **Classes**.  
On a smartphone or iPod touch, this option is in the pop-up menu.

4. Click **Import**  and do the following:

a. Follow the onscreen instructions to import class information.

If you import users from Apple School Manager that match current users in the JSS, you can choose to match the imported user with the current user, or create a new user in the JSS with the information imported from Apple School Manager.

**Note:** If you have site access only, classes are imported to your site only.

b. Click **Done**.

Class information is imported to the JSS, and user information is applied in the Users tab. (For more information about importing user information, see the "Importing Users to the JSS from Apple School Manager" section of the *Casper Suite Administrator's Guide*.)

**Note:** If you import a class that adds teachers to a class, the teachers must be assigned to an iPad in the JSS. (For more information, see the "User Assignments" section in the *Casper Suite Administrator's Guide*.)

5. Click the class you imported, and then click **Edit**.

6. Add mobile device groups to the class using the Mobile Device Groups payload.

7. (Optional) Use the App Usage Restrictions payload to restrict which apps are available to users on Shared iPad.

8. (Optional) Use the Home Screen Layout payload to configure the layout of the Dock and the pages on the iPad.

9. Click **Save**.

The class configuration is applied to student and teacher iPads when the iPads check in with the JSS.

Teachers can log in to Apple's Classroom app on their iPads to control student iPads. For more information, see [Start Your Class](#) in Apple's Classroom Help documentation.

## Removing a Student from Shared iPad

It is recommended that you remove students from Shared iPad if they are no longer using the iPad for the class.

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

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

3. Perform a simple or advanced mobile device search.

For more information, see "Simple Mobile Device Searches" or "Advanced Mobile Device Searches" in the *Casper Suite Administrator's Guide*.

4. Click the iPad you want to remove a student from.

If you performed a simple search for an item other than mobile devices, you must click **Expand** next to an item to view the mobile devices related to that item.

5. Click the **Shared iPad Users** category.

A list of Shared iPad users is displayed.

6. Click **Remove** next to the student you want to remove.
7. Do one of the following:
  - Click **Remove** to remove the student from the iPad. The removal action does not complete if user information is syncing.
  - Click **Force Remove** to remove the student from the iPad immediately.