

Working with Apple's Automated Device Enrollment (ADE)



ADE only works with devices purchased from Apple authorized sources or added via Configurator to ABM/ASM. For information on approved devices in ADE, see the following reference:

<https://help.apple.com/deployment/business/>

The features of ADE include:

- Zero-touch configuration - supported Apple devices, including iPhone, iPad, [Apple Vision Pro](#), and Mac, can receive preassigned applications, profiles, and settings during activation.
- Automatic enrollment and management - devices can automatically enroll with the FileWave MDM server and receive management profiles without hands-on work by IT.
- Supervision and enforced management - ADE can provide additional management control and prevent removal of management when Apple supports those capabilities for the platform and enrollment.
- Streamlined Setup Assistant - devices can skip supported setup steps and receive their assigned configuration during activation.

ADE Workflow Overview

1. IT signs up for ADE account (or accounts)
2. Institution purchases devices via an authorized seller
3. IT doesn't see devices in the online ADE list until the shipping confirmation arrives from Apple (prior to that, Apple doesn't know what serial numbers are going to be shipped)
4. IT assigns the devices from the online ADE list to the FileWave MDM server by serial number (You can also assign defaults in ASM & ABM)
5. Wait for the ADE list and the FileWave MDM list to synchronize (24hr default sync, or triggered manually in the DEP UI)
6. IT assigns ADE profiles to the serial numbers of the devices prior to arrival ([Automatically Assign ADE profiles](#))
7. Devices arrive and, at first boot, are auto-enrolled and configured as managed devices (macOS computers will auto-enroll if connected to the Internet for push notification and the MDM server for enrollment.)



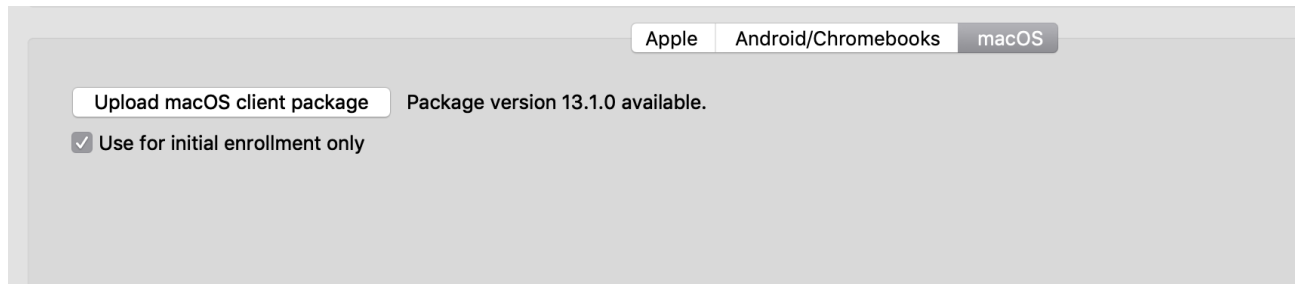
For more information see: <https://support.apple.com/en-us/HT204142>

Configuring ADE with FileWave

This process is covered in [VPP and ADE preferences](#)

FileWave Client for macOS ADE

FileWave Server 16.4.0 and later: Build the signed macOS enrollment package in FileWave Central > Preferences > Mobile > macOS. Select Show settings, configure the package, and use Build macOS client package. Earlier supported FileWave Server versions continue to use custom.filewave.com until the Server is upgraded to 16.4.



"Use for initial enrollment only" is highly recommended. This means that FileWave will only attempt to install the PKG the first time a device enrolls. If it is unchecked, and you upload a new PKG, FileWave will send this out via an APN immediately. This could cause existing devices to lose their configuration (like boosters)

Understanding devices and profiles for ADE

Once you have registered your FileWave Server with the ADE system, you can begin setting up your devices for automatic enrollment and management. You will be able to view a list of your devices along with certain characteristics of those devices, such as model number, color of the device, asset tag information, and serial number.

You will also be able to apply a "profile" to the device.

The "profile" in ADE is not the same as a management profile. Instead of a property list (plist), the ADE profile is a set of data formatted in JSON (JavaScript Object Notation) format. The profile is applied through Apple when the device is initialized. It will contain settings that you configure including:

- The MDM server URL
- MDM options, such as supervision and management profiles
- MDM server certificate(s)
- Pairing certificates
- Device setup assistant options

The process for setting up your devices is done through the /Assistants/ADE Association Management... pane:

DEP Associations												
Devices	All	Accounts	All	Auto-assignment	All			Profiles				
Serial Number	Model Name	Description	Excluded f	Color	Asset Tag	Profile Status	Oper ID	Name	Total num			
DMPRJY5EG5W0	iPad Air 2	IPAD AIR 2 WI-FI 64GB GOLD-USA	true	GOLD		assigned	iOS 5	Location and Use iOS	0			
DMPRJDSSG5VY	iPad Air 2	IPAD AIR 2 WI-FI 64GB SILVER-USA	true	SILVER		assigned	iOS 4	Generic All	0			
							3	Default macOS	2			
							2	Default iOS	0			
						Edit Assignment Rules	Apply Assignment Rules					
								Edit	Duplicate			
Associations												
Serial Number	Profile Name	Server Name	Profile Assignment Time	Profile Push Time	Device Assignment Time	Device Assigner Email						
DMPRJY5EG5W0	Default macOS	preview.filewave.com	4/10/19 8:41 AM		2/25/19 10:38 AM	us_edu+asm@filewave.com						
DMPRJDSSG5VY	Default macOS	preview.filewave.com	4/10/19 8:41 AM		3/25/19 10:38 PM	us_edu+asm@filewave.com						
						Last successful synchronization with DEP Web Service: 4/25/19 12:00 AM						
						Synchronize						

Configuring ADE profiles

i FileWave 16.4 and later: macOS ADE profiles include Managed Migration Assistant controls for Mac-to-Mac migration during Setup Assistant. See [ADE Profiles](#) for the supported control areas, validation boundary, and related DDM workflow.

You create ADE profiles within the ADE Associations pane by clicking on the + button in the profile section of the window.

The screenshot shows the 'DEP Associations' window. At the top, there are filters for 'Devices' (All), 'Accounts' (All), and 'Auto-assignment' (All). Below these are two main tables. The first table, 'Profiles', has columns: Serial Number, Model Name, Description, Excluded from DEP, Color, Asset Tag, Profile Status, Open ID, Name, and Total number of devices. It lists two profiles: 'Location and Use iOS' (ID 5) and 'Generic All' (ID 4). Below this table is a section with buttons 'Edit Assignment Rules', 'Apply Assignment Rules', and a '+' button (circled in red). Below the '+' button is another table, 'Associations', with columns: Serial Number, Profile Name, Server Name, Profile Assignment Time, Profile Push Time, Device Assignment Time, and Device Assigner Email. It lists two associations for 'Default macOS' profile. At the bottom, there is a status bar showing 'Last successful synchronization with DEP Web Service: 4/25/19 12:00 AM' and a 'Synchronize' button.

Serial Number	Model Name	Description	Excluded from DEP	Color	Asset Tag	Profile Status	Open ID	Name	Total number of devices
DMPRJY5EG5W0	iPad Air 2	IPAD AIR 2 WI-FI 64GB GOLD-USA	true	GOLD		assigned	iOS 5	Location and Use iOS	0
DMPRJDS5G5VY	iPad Air 2	IPAD AIR 2 WI-FI 64GB SILVER-USA	true	SILVER		assigned	iOS 4	Generic All	0
							3	Default macOS	2
							2	Default iOS	0

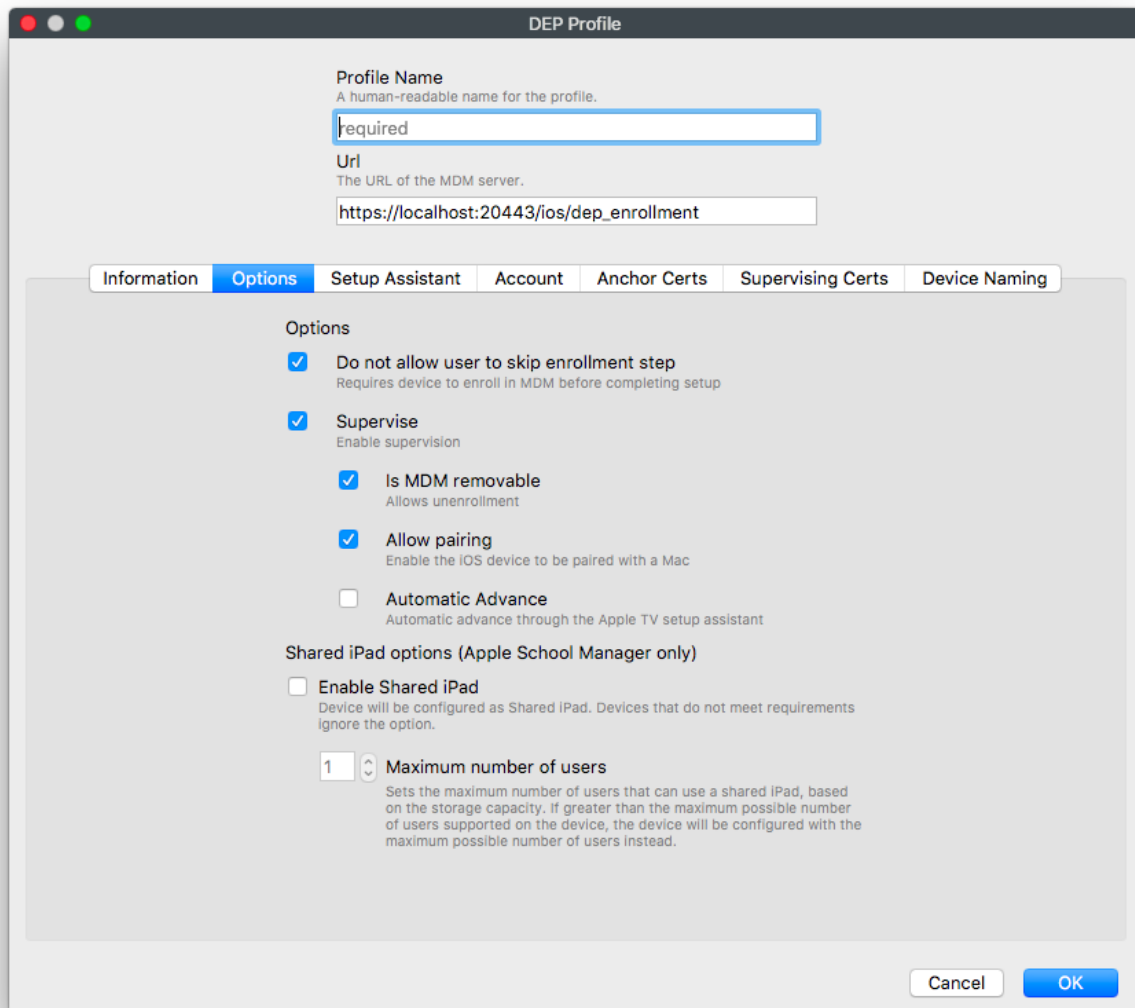
Serial Number	Profile Name	Server Name	Profile Assignment Time	Profile Push Time	Device Assignment Time	Device Assigner Email
DMPRJY5EG5W0	Default macOS	preview.filewave.com	4/10/19 8:41 AM		2/25/19 10:38 AM	us_edu+asm@filewave.com
DMPRJDS5G5VY	Default macOS	preview.filewave.com	4/10/19 8:41 AM		3/25/19 10:38 PM	us_edu+asm@filewave.com

Here is a view of the ADE Profile creation window:

Information

This information will be set in the MDM profile once installed on the MDM device.

Options



These settings are for the key behaviors of the registered device:

- Do not allow user to skip enrollment step - the device must become enrolled in order to complete setup
- Supervise (iOS only) - the device will have supervision enabled
 - Is MDM removable - if unchecked, the MDM profile is locked to the device and cannot be removed by the user through the UI
 - Allow pairing - if checked, the user can pair the device with their own iTunes account to synchronize personal content
 - Automatic Advance - if checked, the Apple TV will automatically advance through setup assistant (If you use the remote on the Apple TV this option will be canceled)
- Enable Shared iPad - Device will be configured as a Shared iPad. Devices that do not meet requirements ignore the option.
 - Maximum number of users - Sets the maximum number of users that can use a shared iPad, based on the storage capacity. If greater than the maximum possible number of users supported on the device, the device will be configured with the maximum possible number of users instead.

Setup Assistant

The screenshot shows the 'DEP Profile' window with the 'Setup Assistant' tab selected. The 'Profile Name' field contains 'required' and the 'Url' field contains 'https://preview.filewave.com:20443/ios/dep_enrollment'. Below the tabs, the 'Setup Assistant Options' section allows choosing which options to show in the assistant, with 'All' selected. The options are categorized by platform: macOS, iOS, tvOS, and iOS and macOS. Each category has a list of setup items with checkboxes. At the bottom, there is a 'Setup Assistant Configuration (tvOS only)' section with 'Language' and 'Region' dropdown menus. 'Cancel' and 'OK' buttons are at the bottom right.

Profile Name
A human-readable name for the profile.
required

Url
The URL of the MDM server.
https://preview.filewave.com:20443/ios/dep_enrollment

Information Options **Setup Assistant** Account Anchor Certs Supervising Certs Device Naming Activation Lock Settings

Setup Assistant Options
Choose which options to show in the assistant
All None

macOS

- ☒ All your files in iCloud
- ☒ iCloud Diagnostics
- ☒ Choose your Look
- ☒ FileVault
- ☒ Registration

iOS

- ☒ Passcode Lock
- ☒ Move from Android
- ☒ Apple Watch
- ☒ Screen Time
- ☒ Keep Your Device Up to Date
- ☒ iMessage & FaceTime
- ☒ Home Button
- ☒ Display Zoom
- ☒ New Feature Highlights
- ☒ Keyboard Selection
- ☒ Add Cellular Plan

tvOS

- ☒ Set Up Your Apple TV
- ☒ Sign In to Your TV Provider
- ☒ Where is the Apple TV?
- ☒ One Home Screen For Every Apple TV
- ☒ See the World

iOS and macOS

- ☒ Touch ID
- ☒ Set Up as New or Restore
- ☒ Apple Pay
- ☒ True Tone Display

iOS, tvOS and macOS

- ☒ Privacy
- ☒ Location Services
- ☒ Siri
- ☒ Apple ID
- ☒ Terms and Conditions
- ☒ App Analytics

Setup Assistant Configuration (tvOS only)

Language: optional (e.g. en, fr, ja, eng)

Region: optional (e.g. US, GB, AU)

Cancel OK

- Skip setup items - this allows the FileWave administrator the ability to configure which portions of the setup assistant are made available to the end user when they configure the device. If none of the items are allowed, then the device must be pre-configured using MDM profiles with all of the appropriate settings to ensure functionality.

Account (requires client running macOS v10.11+)

A feature in ADE is the ability to create a local administrator account in advance of a user being guided through creating their own local account. If you configure this pane with a local administrator account, then the user will be allowed to create a local account of their own; but it will be a non-admin user. The local admin account can be somewhat hidden (the home directory will still be in /Users/ but it will not show up in the Users and Groups System Preference pane).

The image shows a macOS window titled "DEP Profile". At the top, there are two text input fields: "Profile Name" with a placeholder "required" and a description "A human-readable name for the profile.", and "Url" with a placeholder "https://preview.filewave.com:20443/ios/dep_enrollment" and a description "The URL of the MDM server.". Below these is a tab bar with "Information", "Options", "Setup Assistant", "Account" (selected), "Anchor Certs", "Supervising Certs", "Device Naming", and "Activation Lock Settings". The "Account" tab contains two sections: "macOS Account Setup Assistant Options" with a checked checkbox "Prompt user to create an account of type:" and two radio buttons "Standard" and "Administrator" (selected); and "Managed macOS Administrator Account" with an unchecked checkbox "Create managed macOS Administrator Account", four text input fields for "Full Name" (placeholder "optional"), "Account Name" (placeholder "required"), "Password" (placeholder "required"), and "Verify" (placeholder "required"), and a checked checkbox "Show administrator account in Users & Groups". At the bottom right are "Cancel" and "OK" buttons.

If this pane is configured with only the local account setup, the user setting up the device will be guided through setting up a local administrator account of their own.

The image shows a smaller window titled "Options & Setup" with a tab bar containing "Options & Setup", "Account" (selected), "Anchor Certs", "Supervising Certs", and "Device Naming". The "Account" tab shows a checked checkbox "Local Account Setup" and an unchecked checkbox "Create primary account as a standard user".

Note: Disallowing "Local Account Setup" During ADE enrollment may prevent your machines from completing their enrollment steps unless the local administrator account logs in on the machine.

Anchor Certs & Supervising Certs

The "Certs" tabs are for adding the necessary certificates to the device to allow trusted connections and specialized pairing permissions. The FileWave MDM server certificate is automatically added to the Anchor Certs list.

Options & Setup Account **Anchor Certs** Supervising Certs Device Naming

Anchor certificates
If provided, these certificates are used as trusted anchor certificates when evaluating the trust of the connection to the MDM server url. Otherwise, the built-in root certificates are used.

Organization Name	Common Name	Locality Name	Organizational Unit	Country Name	State or Province	Effective Date	Expiration Date
FW_Denver	tenshi.filewa...	DEN	tenshi	US	CO	10/5/15 4:51 ...	10/2/...

Options & Setup Account Anchor Certs **Supervising Certs** Device Naming

Supervising host certificates
If provided, the device will continue to pair with a host possessing one of these certificates even when "Allow pairing" is not checked.

Organization Name	Common Name	Locality Name	Organizational Unit	Country Name	State or Province	Effective Date	Expiration Date
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Device Naming

The devices being enrolled can have a rule-based name applied. In a 1:1 deployment with users authenticating with LDAP credentials, the device name can reflect an institutionally-derived naming convention punctuated by the user's name. This function is limited to supervised iOS devices running iOS 9+ and macOS computers running 10.11+.

Naming Policies

New Devices:

Re-enrolled Devices (Same Auth Username):

Re-enrolled Devices (New Auth Username):

This policy only renames the device - it does not change its FileWave client name.

Name Template

Template:

Use any inventory, custom, or LDAP attribute to include their values. [See full list](#)

i See: [ADE Naming](#) for more information

Activation Lock

Apple provides an anti-theft feature called Activation Lock. When wiped and activated again, the device is locked and will require an Apple ID credential to be unlocked. FileWave can ease the process by escrowing a bypass code which can be used to bypass iCloud credentials. The code can either be entered manually or automatically, typically just before refreshing the device.

Activation Lock can be against:

- a normal Apple ID - end user has to log in with iCloud on the device and enable Find My Phone
- a ADE (ASM or ABM) account ; in this case, the corresponding Apple ID is the Apple ID managing the ADE server.

In both cases, FileWave can escrow the key and use it to unlock the device during refresh. You can configure Activation Lock:

- for each ADE device, at the ADE profile level
- globally, for all non ADE devices

For ADE devices:

- No lock AKA Disabled

The image shows a macOS-style window titled "DEP Profile". It has a tabbed interface with the following tabs: "Information", "Options", "Setup Assistant", "Account", "Anchor Certs", "Supervising Certs", "Device Naming", and "Activation Lock Settings". The "Activation Lock Settings" tab is currently selected. Inside this tab, there is a section titled "Activation Lock Configuration:" with a dropdown menu set to "Disabled". Below this, a small text note reads: "Application Lock is not enabled ; enabling 'Find My iPhone' is not allowed." At the top of the window, there are two text fields: "Profile Name" with the value "required" and "Url" with the value "https://preview.filewave.com:20443/ios/dep_enrollment". At the bottom right, there are "Cancel" and "OK" buttons.

DEP Profile

Profile Name
A human-readable name for the profile.
required

Url
The URL of the MDM server.
https://preview.filewave.com:20443/ios/dep_enrollment

Information Options Setup Assistant Account Anchor Certs Supervising Certs Device Naming **Activation Lock Settings**

Activation Lock Configuration: Disabled

Application Lock is not enabled ; enabling "Find My iPhone" is not allowed.

Cancel OK

Use iCloud

DEP Profile

Profile Name

A human-readable name for the profile.

required

Url

The URL of the MDM server.

https://preview.filewave.com:20443/ios/dep_enrollment

Information

Options

Setup Assistant

Account

Anchor Certs

Supervising Certs

Device Naming

Activation Lock Settings

Activation Lock Configuration:

iCloud

☐ Allow Activation Lock only if Bypass Code is available

The device will be locked against logged-in iCloud Apple ID if "Find My iPhone" is enabled.
A Bypass Code may be escrowed and can be used to disable Activation Lock.

Cancel

OK

Use your AMS/ABM account

The image shows a macOS-style window titled "DEP Profile". It has a tabbed interface with the following tabs: Information, Options, Setup Assistant, Account, Anchor Certs, Supervising Certs, Device Naming, and Activation Lock Settings. The "Activation Lock Settings" tab is selected. In this tab, there is a section for "Profile Name" with a text field containing "required" and a description: "A human-readable name for the profile." Below that is a section for "Url" with a text field containing "https://preview.filewave.com:20443/ios/dep_enrollment" and a description: "The URL of the MDM server." Further down, there is a section for "Activation Lock Configuration:" with a dropdown menu set to "ASM/ABM (Organization)". Below this dropdown is a note: "Device is locked against DEP-server manager Apple ID. A Bypass Code will be escrowed and can be used to disable Activation Lock. This requires Apple School Manager or Apple Business Manager." At the bottom of this section is a "Lost Message:" label followed by a text field containing "Contact Support". Below the text field is another note: "Lost message is transmitted to Apple and may be displayed on lost devices. Please refer to Apple's documentation." At the bottom right of the window are "Cancel" and "OK" buttons.

DEP Profile

Profile Name
A human-readable name for the profile.
required

Url
The URL of the MDM server.
https://preview.filewave.com:20443/ios/dep_enrollment

Information Options Setup Assistant Account Anchor Certs Supervising Certs Device Naming **Activation Lock Settings**

Activation Lock Configuration: ASM/ABM (Organization) ▾

Device is locked against DEP-server manager Apple ID.
A Bypass Code will be escrowed and can be used to disable Activation Lock.
This requires Apple School Manager or Apple Business Manager.

Lost Message: Contact Support

Lost message is transmitted to Apple and may be displayed on lost devices. Please refer to Apple's documentation.

Cancel OK

Associations

Associating a ADE profile to a device (or set of devices) is done using the same drag & drop functions used in the other FileWave associations panes. You can drag a profile on top of a device, or select a set of devices and drag them on top of a profile. The associations will appear in the lower section of the ADE Associations window. The device will have the associated profile applied upon activation.

Serial Number	Model Name	Description	Color	Asset Tag	Profile Status	Operating System	Device Family	Profile Name	Total number of devices	Used In LeRoy FW Server
F9FNCH2TF...	iPad Mini Wi...	IPAD MINI W...	SPACE GRAY		assigned	iOS	iPad	leroy_dep_profile	2	2
DLXNM594...	iPad Mini Wi...	IPAD MINI 3 ...	SPACE GRAY		empty	iOS	iPad			
C07PR03AG...	Mac Mini	MAC MINI/1....	SILVER		pushed	OSX	Mac			

Serial Number	Profile Name	Server Name	Profile Assigner	Profile Push Time	Device Assignment Time	Device Assignment
F9FNCH2TF...	leroy_dep_profile	LeRoy FW Server	7/13/16 10:3...	5/27/16 3:54 PM		usa_vpp
C07PR03AG...	leroy_dep_profile	LeRoy FW Server	7/19/16 12:0...	7/19/16 12:0...	7/13/16 10:15 AM	usa_vpp

i To automate see: [Automatically Assign ADE profiles](#)

End Result of ADE associations

The end result of associating ADE profiles to devices is that upon activation, the device will automatically become a FileWave Client with specific setup settings. You can have device [Placeholders](#) prepositioned in your FileWave Clients view, assigned to Groups, with Filesets ready to activate as soon as the device checks in.

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