

Administering FileVault on macOS 10.14 or Later with Jamf Pro

Technical Paper
Jamf Pro 10.7.1 or Later
5 November 2020



© copyright 2002-2020 Jamf. All rights reserved.

Jamf has made all efforts to ensure that this guide is accurate.

Jamf
100 Washington Ave S Suite 1100
Minneapolis, MN 55401-2155
(612) 605-6625

Jamf, the Jamf Logo, JAMF SOFTWARE®, and the JAMF SOFTWARE Logo® are registered or common law trademarks of JAMF SOFTWARE, LLC in the U.S. and other countries.

Apple, FileVault, Keychain, macOS, and OS X are registered trademarks of Apple Inc., in the United States and other countries.

All other product and service names mentioned herein are either registered trademarks or trademarks of their respective companies.

Jamf would like to acknowledge Rich Trouton for contributing content to this technical paper.

Contents

4 Introduction

- 4 What's in This Guide
- 4 Important Concepts
- 4 Additional Resources

5 Overview

6 General Requirements

7 Activating FileVault Disk Encryption Using a Configuration Profile

8 Choosing a Recovery Key

9 Creating and Exporting an Institutional Recovery Key

- 9 Creating and Exporting an Institutional Recovery Key with the Private Key
- 10 Creating and Exporting an Institutional Recovery Key without the Private Key

12 Creating a Disk Encryption Configuration

14 Deploying the Disk Encryption Configuration

19 Creating Smart Computer Groups for FileVault

- 19 Creating a Smart Group for FileVault Eligible Computers that are Not Yet Encrypted
- 21 Creating Smart Groups of Computers with a Partition in a Specific Encryption State
- 23 Creating a Smart Group of Computers that are Not Eligible for FileVault Encryption
- 24 Creating a Smart Group of Computers with an Invalid Individual Recovery Key
- 25 Creating a Smart Group of Computers for Which a Specified User is Enabled for FileVault

26 Viewing FileVault Information for a Computer

- 26 Viewing FileVault Disk Encryption Information for a Computer
- 27 Viewing the FileVault Recovery Key for a Computer

28 Issuing a New FileVault Recovery Key

- 28 Requirements
- 28 Issuing a New FileVault Recovery Key to Computers

Introduction

What's in This Guide

This guide provides step-by-step instructions for administering FileVault on macOS 10.14 or later with Jamf Pro.

Important Concepts

Administrators using this guide should be familiar with the following Jamf Pro-related concepts:

- Deployment
- Smart computer groups

Additional Resources

For more information on related topics, see the [*Jamf Pro Administrator's Guide*](#).

Overview

This paper provides a complete workflow for administering FileVault on computers with macOS 10.14 or later.

FileVault disk encryption can be activated using a configuration profile or by performing the following steps:

1. Choose a recovery key.
2. (Optional) Create and export an institutional recovery key.
3. Create a disk encryption configuration.
4. Deploy the disk encryption configuration.

After activating FileVault disk encryption on computers, you can create smart computer groups to use as the basis for performing the following tasks:

- View FileVault information for a computer.
- Issue a new FileVault recovery key to computers.

Note: On FileVault encrypted computers with macOS 10.15 or later, you must enter the password or the recovery key of the FileVault enabled user to access the recovery partition.

General Requirements


Performing the administrative tasks in this paper requires the following:

- Jamf Pro 10.7.1 or later
- An administrator computer with macOS 10.11 or later
- Target computers with macOS 10.14 or later with a “Recovery HD” partition

Note: There are additional requirements for specific procedures covered in this guide.

Activating FileVault Disk Encryption Using a Configuration Profile

You can activate FileVault disk encryption using a configuration profile. Disk encryption configuration will deploy at next user logout.

1. Log in to Jamf Pro.
2. Click **Computers** at the top of the page.
3. Click **Configuration Profiles**.
4. Click **New**  .
5. Use the General payload to configure basic settings, which includes the distribution method. This configuration profile payload can only be applied at the Computer Level. Only payloads and settings that apply to the selected level are displayed for the profile.
6. Use the Security & Privacy payload to configure FileVault settings.
 - a. Click the **FileVault** tab.
 - b. Select the **Require FileVault 2** checkbox.
 - c. Select **Use institutional recovery key**, **Create personal recovery key**, or both.
 - d. (Optional) If you are using an institutional key, select the certificate that contains the public key from institutional recovery keychain. You can use the Certificate payload to upload an institutional recovery key to Jamf Pro.

Note: You cannot use an institutional recovery key with the private key.

- e. (Optional) If you are using a personal recovery key on macOS 10.14 or later, select **Enable Escrow Personal Recovery Key** to enable the device to encrypt the personal recovery key with the provided certificate and report it to Jamf Pro.
7. (Optional) Use the rest of the payloads to configure the settings you want to apply.
 8. Click the **Scope** tab and configure the scope of the profile.
 9. (Optional) If you chose to distribute the profile in Self Service, click the **Self Service** tab to configure Self Service settings for the profile.
 10. Click **Save**.

Choosing a Recovery Key

The first step to administering FileVault disk encryption is to choose the type of recovery key that you want to use to recover encrypted data.

There are two types of recovery keys:

- **Personal (also known as “Individual”)**—Uses a unique alphanumeric recovery key for each computer. The personal recovery key is generated on the computer and sent back to Jamf Pro for storage when the encryption takes place. Personal recovery keys can function as a passphrase and unlock or decrypt the encrypted disk.
- **Institutional**—Uses a shared recovery key containing a private and public key pair. If used, you must create the recovery key with Keychain Access and upload only the public key to Jamf Pro for storage.

You can choose to use both recovery keys (personal and institutional) together in Jamf Pro. Institutional recovery keys can be used across multiple computers to unlock or decrypt the encrypted disk. Keeping the institutional recovery key in a highly secure location is recommended .

If you plan to use an institutional recovery key, you must first create an institutional recovery key using Keychain Access. For instructions, see [Creating and Exporting an Institutional Recovery Key](#).

Creating and Exporting an Institutional Recovery Key

To use an institutional recovery key, you must first create and export a recovery key using Keychain Access.

You can export the recovery key with or without the private key. Exporting with the private key allows you to store it in Jamf Pro. If you export without the private key, you must store it in a secure location so you can access it when needed.

Note : You cannot use an institutional recovery key with a private key to activate FileVault Disk Encryption using a configuration profile in Jamf Pro. You must create and deploy the disk encryption configuration using a policy in Jamf Pro.

Creating and Exporting an Institutional Recovery Key with the Private Key

1. On an administrator computer, open Terminal and execute the following command:

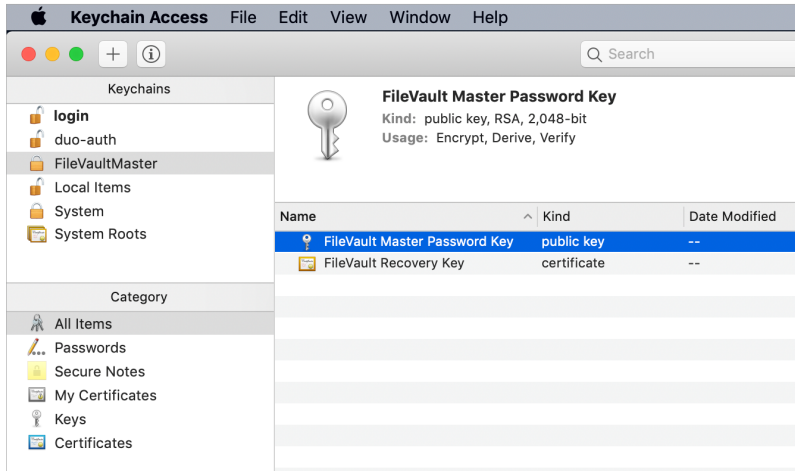
```
sudo security create-filevaultmaster-keychain /Library/Keychains/  
FileVaultMaster.keychain
```

2. When prompted, enter a password for the new keychain when prompted.
3. To unlock the keychain, open Terminal and execute the following command:

```
security unlock-keychain /Library/Keychains/FileVaultMaster.keychain
```

4. Perform a backup of the keychain and save it in a secure location.
5. Open Keychain Access.
6. From the menu bar, choose "Add Keychain" from the **File** pop-up menu. Then, add the `FileVaultMaster.keychain` file located in `/Library/Keychains/`.
7. Select **FileVaultMaster** under the Keychains heading in the sidebar, and then select **All Items** under the Category heading.

8. Verify that a private key is associated with the certificate.



9. Select the certificate and the private key.
10. From the menu bar, choose "Export Items" from the **File** pop-up menu. Then, save the items as a .p12 file.
The .p12 file is a bundle that contains both the FileVault Recovery Key and the private key.
11. Create and verify a password to secure the file, and then click **OK**.
You will be prompted to enter this password when uploading the recovery key to Jamf Pro.
12. Quit Keychain Access.
13. Store the keychain (FileVaultMaster.keychain) in a secure location so you can use it to access encrypted data at a later time. Without the keychain, you will not be able to decrypt the computer.

The FileVault Recovery Key and the private key are saved as a .p12 file in the location you specified.

Creating and Exporting an Institutional Recovery Key without the Private Key

1. On an administrator computer, open Terminal and execute the following command:

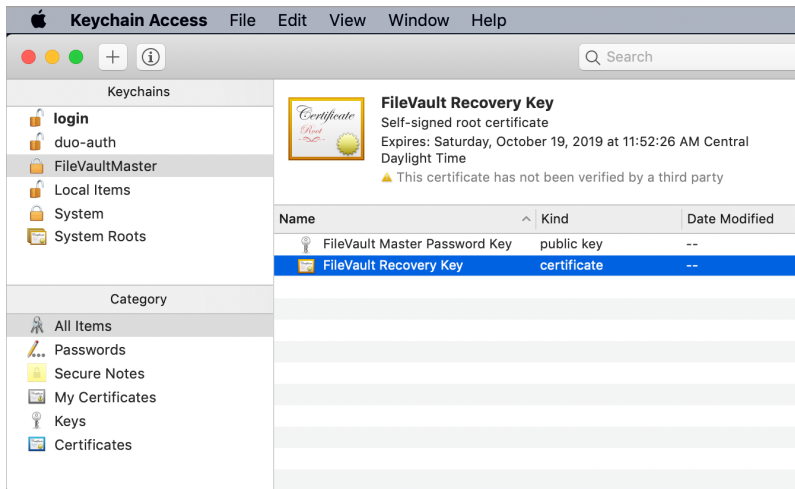
```
sudo security create-filevaultmaster-keychain /Library/Keychains/  
FileVaultMaster.keychain
```

2. Enter a password for the new keychain when prompted.
A keychain (FileVaultMaster.keychain) is created in the following location:
/Library/Keychains/

3. Unlock the keychain by opening Terminal and executing:

```
security unlock-keychain /Library/Keychains/FileVaultMaster.keychain
```

4. Open Keychain Access.
5. From the menu bar, choose "Add Keychain" from the **File** pop-up menu. Then, add the `FileVaultMaster.keychain` file located in `/Library/Keychains/`.
6. Select **FileVaultMaster** under the Keychains heading in the sidebar, and then select **All Items** under the Category heading.
7. Select the certificate. Do not select the private key associated with the certificate.



8. From the menu bar, choose "Export Items" from the **File** pop-up menu. Then, save the recovery key as a .pem file or .cer file.
You will need to upload this file to Jamf Pro when creating the disk encryption configuration.
9. Quit Keychain Access.
10. Store the keychain (`FileVaultMaster.keychain`) in a secure location so you can use it to access encrypted data at a later time.




The FileVault Recovery Key is saved as a .cer file or a .pem file in the location you specified.

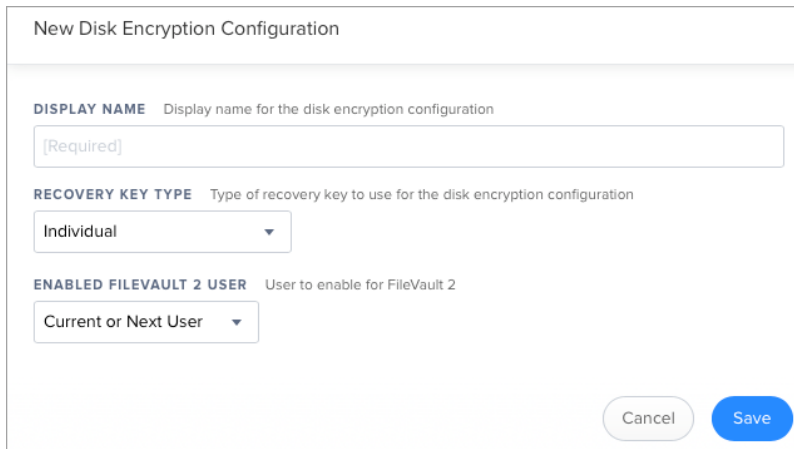
Creating a Disk Encryption Configuration

Creating a disk encryption configuration in Jamf Pro is the first step to activating FileVault on computers.

Disk encryption configurations allow you to configure the following information:

- The type of recovery key to use for recovering encrypted data
- The user for which to enable FileVault

1. Log in to Jamf Pro.
2. In the top-right corner of the page, click **Settings** .
3. Click **Computer Management**.
4. In the “Computer Management” section, click **Disk Encryption Configurations** .
5. Click **New** .
6. Enter a name for the disk encryption configuration in the **Display Name** field.



New Disk Encryption Configuration

DISPLAY NAME Display name for the disk encryption configuration

[Required]

RECOVERY KEY TYPE Type of recovery key to use for the disk encryption configuration

Individual

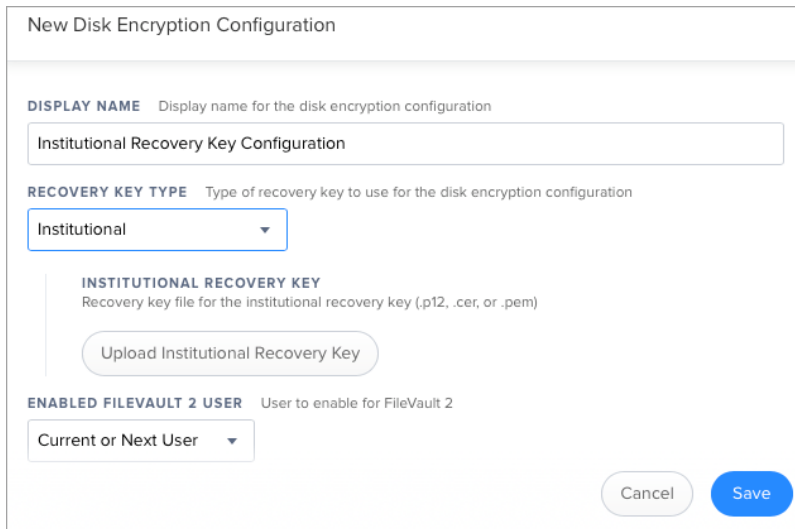
ENABLED FILEVAULT 2 USER User to enable for FileVault 2

Current or Next User

Cancel Save

7. Choose a type of recovery key from the **Recovery Key Type** pop-up menu.

8. If you chose an "Institutional" or "Individual and Institutional" recovery key, click **Upload Institutional Recovery Key** and upload the recovery key to Jamf Pro.
The recovery key must be a .p12 or .cer file.
If you upload a .p12 file, you are prompted to enter the password that you created when exporting the key from Keychain Access.



The image shows a "New Disk Encryption Configuration" dialog box. It has a title bar with the text "New Disk Encryption Configuration". Below the title bar, there are three main sections. The first section is labeled "DISPLAY NAME" with a subtitle "Display name for the disk encryption configuration". It contains a text input field with the text "Institutional Recovery Key Configuration". The second section is labeled "RECOVERY KEY TYPE" with a subtitle "Type of recovery key to use for the disk encryption configuration". It contains a dropdown menu with "Institutional" selected. Below this is a section labeled "INSTITUTIONAL RECOVERY KEY" with a subtitle "Recovery key file for the institutional recovery key (.p12, .cer, or .pem)". It contains a button labeled "Upload Institutional Recovery Key". The third section is labeled "ENABLED FILEVAULT 2 USER" with a subtitle "User to enable for FileVault 2". It contains a dropdown menu with "Current or Next User" selected. At the bottom right of the dialog box are two buttons: "Cancel" and "Save".

9. Choose "Current or Next User" or "Management Account" from the **Enabled FileVault 2 User** pop-up menu.
- **Management Account**—Makes the management account on the computer the enabled FileVault user.
 - **Current or Next User**—Makes the user that is logged in to the computer when the encryption takes place the enabled FileVault user. If no user is logged in, the next user to log in becomes the enabled FileVault user.
10. Click **Save**.

Important: On macOS 10.13.2 or later, you cannot select the management account on a computer as the enabled FileVault user due to the lack of a secure token.


Deploying the Disk Encryption Configuration

The event that activates FileVault depends on the enabled FileVault user specified in the disk encryption configuration and whether the computer is APFS enabled. If the enabled user is "Management Account", and the computer is APFS enabled, FileVault is activated on a computer at the next login without needing to reboot. If the computer is HFS+ formatted, with the "Management Account" enabled user, FileVault is activated on a computer the next time the computer restarts. If the enabled user is "Current or Next User", you can modify when FileVault is activated on a computer. Options include the following:

- The next time the computer restarts.
- The next time the current user logs out.
- The next login or after multiple user logins, ranging from two to six logins.

Note: If the restart is done via a built-in policy, FileVault will not be activated.

Deploying the disk encryption configuration involves the following steps:

1. Log in to Jamf Pro.
2. Click **Computers** at the top of the page.
3. Click **Policies**.
4. Click **New**  .

5. In the General payload, enter a display name for the policy. For example, “FileVault Disk Encryption”.

The screenshot shows the 'New Policy' configuration window. The 'General' tab is active. On the left sidebar, various payload categories are listed: General, Packages (0 Packages), Software Updates (Not Configured), Scripts (0 Scripts), Printers (0 Printers), Disk Encryption (Not Configured), Dock Items (0 Dock Items), Local Accounts (0 Accounts), Management Accounts (Not Configured), Directory Bindings (0 Bindings), and EPI Password (Not Configured). The main area shows the 'General' configuration for the policy. It includes a 'DISPLAY NAME' field with a '[Required]' label, an 'ENABLED' checkbox which is checked, a 'CATEGORY' dropdown menu currently set to 'None', and a 'Trigger' section with several options: 'Startup' (When a computer starts up...), 'Login' (When a user logs in...), 'Logout' (When a user logs out...), 'Network State Change' (When a computer's network state changes...), 'Enrollment Complete' (Immediately after a computer completes the enrollment process), 'Recurring Check-in' (At the recurring check-in frequency...), and 'Custom' (At a custom interval...). At the bottom right, there are 'Cancel' and 'Save' buttons.

6. Select a trigger.
7. Choose “Ongoing” from the **Execution Frequency** pop-up menu.
8. Select the Disk Encryption payload and click **Configure**.
9. Choose “Apply Disk Encryption Configuration” from the **Action** pop-up menu.
10. Choose the disk encryption configuration from the **Disk Encryption Configuration** pop-up menu.

11. Choose an event from the **Require FileVault 2** pop-up menu to specify when users must enable disk encryption.

New Policy

Options Scope Self Service User Interaction

Disk Encryption
unknown

Dock Items
0 Dock Items

Local Accounts
0 Accounts

Management Accounts
Not Configured

Directory Bindings
0 Bindings

EFI Password
Not Configured

Restart Options
Configured

Disk Encryption

ACTION Action to take on computers

Apply Disk Encryption Configuration

DISK ENCRYPTION CONFIGURATION
Disk encryption configuration to use to enable FileVault 2

REQUIRE FILEVAULT 2
Require users to enable FileVault 2 based on one of the following events

At next login

Cancel Save

12. If “Management Account” is selected as the enabled FileVault user in the disk encryption configuration, do the following:
 - a. Select the Restart Options payload and configure restart settings for the computer.

Note: Select "Restart" from the appropriate pop-up menu to include a restart prompt. Select "Restart immediately" to restart without prompting. "Restart" option does not work if set to encrypt at logout.

- b. (Optional) In Jamf Pro 10.8 or later, you can select **Perform authenticated restart on computers with FileVault 2 enabled** to allow computers with macOS 10.8.2 or later that are FileVault enabled to be restarted without requiring an unlock the next time the computer starts. This affects future reboots, but does not apply to the setup of the original encryption policy.
 - c. (Optional) Click the **User Interaction** tab and customize the restart message displayed to users.

New Policy

Options Scope Self Service **User Interaction**

START MESSAGE Message to display before the policy runs

☐ **Allow Deferral**
Allow users to defer the policy. A deferral limit must be specified for this to work

COMPLETE MESSAGE Message to display when the policy is complete

RESTART MESSAGE Message to display before computers restart

This computer will restart in 5 minutes. Please save anything you are working on and log out by choosing Log Out from the bottom of the Apple menu.

Cancel Save

13. Click the **Scope** tab and configure the scope of the policy.

New Policy

Options Scope Self Service User Interaction

Targets Limitations Exclusions

TARGET COMPUTERS
Computers to deploy the policy to
Specific Computers ▼

TARGET USERS
Users to deploy the policy to
Specific Users ▼

Selected Deployment Targets + Add

TARGET	TYPE
No Targets	

Cancel Save

Note: It is recommended that the scope of this policy includes a smart group with computers that are FileVault eligible, but are not yet encrypted. For information on how to create this smart group, see [Creating Smart Computer Groups for FileVault](#).

14. Click **Save**.

The policy runs on computers in the scope the next time they check in with Jamf Pro and match the selected trigger in the General payload.

Creating Smart Computer Groups for FileVault



You can use Jamf Pro to create smart computer groups that can be used as the scope of FileVault tasks. FileVault smart computer groups can be based on the following criteria:


- Computers that are eligible to be FileVault encrypted but are not yet encrypted
- Computers that are FileVault encrypted
- Computers that are in a specific FileVault partition encryption state
- Computers that are not eligible to be FileVault encrypted
- Computers with an invalid personal (also known as "individual") recovery key
- Computers on which a specified user is enabled for FileVault

After creating a smart computer group, you can view its memberships.

Note: You can create smart computer groups based on additional FileVault criteria that are not covered in this guide. For information on all FileVault smart group criteria, see the [Smart Group and Advanced Search Criteria for FileVault 2 and Legacy FileVault](#) Knowledge Base article.

Creating a Smart Group for FileVault Eligible Computers that are Not Yet Encrypted

1. Log in to Jamf Pro.
2. Click **Computers** at the top of the page.
3. Click **Smart Computer Groups**.
4. Click **New** .
5. On the Computer Group pane, enter a display name for the group.
6. To enable email notifications, select the **Send email notification on membership change** checkbox.
7. Click the **Criteria** tab.
8. Click **Add** .
9. Click **Show Advanced Criteria**, and then click **Choose** for "FileVault 2 Eligibility". When the criteria is displayed, make sure the operator is set to "is".

10. Click **Browse** , and then click **Choose** for “Eligible”.



New Smart Computer Group

Computer Group Criteria

AND/OR	CRITERIA	OPERATOR	VALUE			
	FileVault 2 Eligibility	is	Eligible	***		Delete

+ Add

Cancel Save

11. Click **Add**  .
12. Click **Show Advanced Criteria**, and then click **Choose** for “FileVault 2 Partition Encryption State”. When the criteria is displayed, make sure the operator is set to “is”.
13. Click **Browse** , and then click **Choose** for “Not Encrypted”.

New Smart Computer Group

Computer Group Criteria

AND/OR	CRITERIA	OPERATOR	VALUE			
	FileVault 2 Eligibility	is	Eligible	***		Delete
and	FileVault 2 Partition Encryption State	is	Not Encrypted	***		Delete

+ Add

Cancel Save

14. Choose “and” from the **And/Or** pop-up menu to specify the relationship between the criteria.
15. Click **Save**.



Group memberships are updated each time computers check in with Jamf Pro and meet or fail to meet the specified criteria.


To view the group’s membership, click **View**.

Creating Smart Groups of Computers with a Partition in a Specific Encryption State

You can create a smart group of computers with a partition that is in any of the following encryption states:

- Decrypted
- Decrypting
- Encrypted
- Encrypting
- Ineligible
- Not Encrypted
- Unknown

1. Log in to Jamf Pro.
2. Click **Computers** at the top of the page.
3. Click **Smart Computer Groups**.
4. Click **New**  .
5. On the Computer Group pane, enter a display name for the group.
6. To enable email notifications, select the **Send email notification on membership change** checkbox.
7. Click the **Criteria** tab.
8. Click **Add**  .
9. Click **Show Advanced Criteria**, and then click **Choose** for “FileVault 2 Partition Encryption State”. When the criteria is displayed, make sure the operator is set to “is”.

10. Click **Browse** , and then click **Choose** for the encryption state you want to base the group on.

New Smart Computer Group

Computer Group Criteria

AND/OR	CRITERIA	OPERATOR	VALUE		
<div>▼</div>	FileVault 2 Partition Encryption State	is <div>▼</div>	<div></div>	<div>...</div>	<div>▼</div> <div>Delete</div>
					<div>+ Add</div>
					<div>Cancel</div> <div>Save</div>




11. Click **Save**.

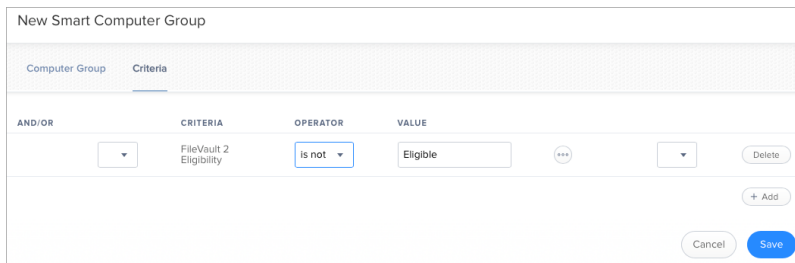
Group memberships are updated each time computers check in with Jamf Pro and meet or fail to meet the specified criteria.





To view the group's membership, click **View**.



Creating a Smart Group of Computers that are Not Eligible for FileVault Encryption



You can create a smart group of computers that are not eligible for FileVault Encryption.

1. Log in to Jamf Pro.
2. Click **Computers** at the top of the page.
3. Click **Smart Computer Groups**.
4. Click **New** .
5. On the Computer Group pane, enter a display name for the group.
6. To enable email notifications, select the **Send email notification on membership change** checkbox.
7. Click the **Criteria** tab.
8. Click **Add** .
9. Click **Show Advanced Criteria**, and then click **Choose** for “FileVault 2 Eligibility”.
10. Choose “is not” from the **Operator** pop-up menu.
11. Click **Browse** , and then click **Choose** for “Eligible”.



AND/OR	CRITERIA	OPERATOR	VALUE	
	FileVault 2 Eligibility	is not 	Eligible	
				




12. Click **Save**.

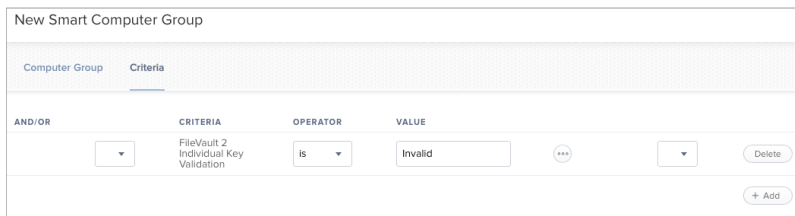
Group memberships are updated each time computers check in with Jamf Pro and meet or fail to meet the specified criteria.







To view the group’s membership, click **View**.

Creating a Smart Group of Computers with an Invalid Individual Recovery Key

You can create a smart computer group to validate that the personal (also known as "individual") recovery key on computers matches the key stored in Jamf Pro.

1. Log in to Jamf Pro.
2. Click **Computers** at the top of the page.
3. Click **Smart Computer Groups**.
4. Click **New**  .
5. On the Computer Group pane, enter a display name for the group.
6. To enable email notifications, select the **Send email notification on membership change** checkbox.
7. Click the **Criteria** tab.
8. Click **Add**  .
9. Click **Show Advanced Criteria** and then click **Choose** for "FileVault 2 Individual Key Validation". When the criteria is displayed, make sure the operator is set to "is".
10. Click **Browse**  , and then click **Choose** for "Invalid".



New Smart Computer Group				
Computer Group		Criteria		
AND/OR	CRITERIA	OPERATOR	VALUE	
	FileVault 2 Individual Key Validation	is 	Invalid	  
				




11. Click **Save**.

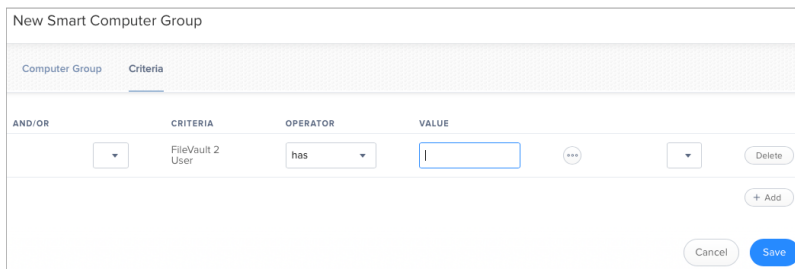
Group memberships are updated each time computers submit inventory with Jamf Pro and meet or fail to meet the specified criteria.

To view the group's membership, click **View**.




Creating a Smart Group of Computers for Which a Specified User is Enabled for FileVault



You can create a smart computer group to identify the computers for which a specified user is enabled for FileVault.



1. Log in to Jamf Pro.
2. Click **Computers** at the top of the page.
3. Click **Smart Computer Groups**.
4. Click **New**  .
5. On the Computer Group pane, enter a display name for the group.
6. To enable email notifications, select the **Send email notification on membership change** checkbox.
7. Click the **Criteria** tab.
8. Click **Add**  .
9. Click **Show Advanced Criteria**, and then click **Choose** for “FileVault 2 User”.
When the criteria is displayed, make sure the operator is set to “has”.
10. Enter a username, or click **Browse**  , and then click **Choose** for a FileVault 2-enabled user.



The screenshot shows the 'New Smart Computer Group' dialog box with the 'Criteria' tab selected. The dialog has a header 'New Smart Computer Group' and two tabs: 'Computer Group' and 'Criteria'. Below the tabs is a table with columns: 'AND/OR', 'CRITERIA', 'OPERATOR', and 'VALUE'. The 'AND/OR' column has a dropdown arrow. The 'CRITERIA' column contains 'FileVault 2 User'. The 'OPERATOR' column has a dropdown menu showing 'has'. The 'VALUE' column has a text input field with a blue border and a blue cursor. To the right of the input field is a three-dot menu icon. Further right is a dropdown arrow and a 'Delete' button. Below the table is an '+ Add' button. At the bottom right are 'Cancel' and 'Save' buttons.

AND/OR	CRITERIA	OPERATOR	VALUE
	FileVault 2 User	has 	<input type="text"/> 

11. Click **Save**.

Group memberships are updated each time computers check in with Jamf Pro and meet or fail to meet the specified criteria.

To view the group's membership, click **View**.

Viewing FileVault Information for a Computer

You can view the FileVault disk encryption information for a computer. You can also view its FileVault recovery key.

Viewing FileVault Disk Encryption Information for a Computer

You can use the smart computer group you created in “Creating a Smart Group of Computers that are FileVault Encrypted” to view the following information for the boot partition on a FileVault-encrypted computer:

- Last inventory update
- FileVault partition encryption state
- Personal (also known as "individual") recovery key validation
- Institutional recovery key
- Disk encryption configuration
- FileVault-enabled users

You can also view the last inventory update date and partition encryption state for any non-boot partitions on the computer.

1. Log in to Jamf Pro.
2. Click **Computers** at the top of the page.
3. Click **Smart Computer Groups**.
4. Click the smart computer group you created in “Creating a Smart Group of Computers that are FileVault Encrypted”, and then click **View**.
5. Click the computer you want to view disk encryption information for.
6. Select **Disk Encryption** in the list of categories.

The computer’s FileVault disk encryption information is displayed for the boot partition. For any additional partitions, the last inventory update date and partition encryption state is displayed.

Viewing the FileVault Recovery Key for a Computer

You can use the smart computer group you created in “Creating a Smart Group of Computers that are FileVault Encrypted” to view the recovery key for a FileVault-encrypted computer.

1. Log in to Jamf Pro.
2. Click **Computers** at the top of the page.
3. Click **Smart Computer Groups**.
4. Click the smart computer group you created in the “Creating a Smart Group of Computers that are FileVault Encrypted” section, and then click **View**.
5. Click the computer you want to view the recovery key for, and then click the **Inventory** tab.
6. Select Disk Encryption in the list of categories, and then click **Show Key**.
 - If the recovery key is a "Personal" (also known as "Individual") recovery key, it is displayed in Jamf Pro.
 - If the recovery key is an "Institutional" recovery key, click **Download** to download it.
 - If the recovery key is a "Personal and Institutional" recovery key, the personal (also known as "individual") recovery key is displayed in Jamf Pro. To download the institutional recovery key, click **Download**.

Note: When a user views the FileVault recovery key, it logs their username and the date and time viewed in the "Viewed FileVault Encryption Key".

Issuing a New FileVault Recovery Key

You can use a policy to issue a new FileVault recovery key to computers with macOS 10.14 or later that have FileVault activated. This allows you to do the following:

- Replace a personal (also known as "individual") recovery key that has been reported as invalid and does not match the recovery key stored in Jamf Pro.
- Update the recovery key on computers on a regular schedule, without needing to decrypt and then re-encrypt the computers.

Requirements


To issue a new personal recovery key to a computer, the computer must have:

- macOS 10.14 or later
- A "Recovery HD" partition
- FileVault activated
- One of the following two conditions met:
 - The management account configured as the enabled FileVault 2 user with a SecureToken. For information on SecureToken, see Apple's [Deployment Reference for Mac](#).
 - An existing, valid personal recovery key that matches the key stored in Jamf Pro.

To issue a new institutional recovery key to a computer, the computer must have:

- macOS 10.14 or later
- A "Recovery HD" partition
- FileVault enabled
- The management account configured as the enabled FileVault 2 user

Issuing a New FileVault Recovery Key to Computers

1. Log in to Jamf Pro.
2. Click **Computers** at the top of the page.
3. Click **Policies**.
4. Click **New**  .

5. In the General payload, enter a display name for the policy. For example, “FileVault New Personal Recovery Key”.

New Policy

Options Scope Self Service User Interaction

General

Packages 0 Packages

Software Updates Not Configured

Scripts 0 Scripts

Printers 0 Printers

Disk Encryption Not Configured

Dock Items 0 Dock Items

Local Accounts 0 Accounts

Management Accounts Not Configured

Directory Bindings 0 Bindings

EPI Password Not Configured

General

DISPLAY NAME Display name for the policy

[Required]

Enabled

CATEGORY Category to add the policy to

None

Trigger Event(s) to use to initiate the policy

Startup When a computer starts up. A startup script that checks for policies must be configured in Jamf Pro for this to work

Login When a user logs in to a computer. A login hook that checks for policies must be configured in Jamf Pro for this to work

Logout When a user logs out of a computer. A logout hook that checks for policies must be configured in Jamf Pro for this to work

Network State Change When a computer's network state changes (e.g., when the network connection changes, when the computer name changes, when the IP address changes)

Enrollment Complete Immediately after a computer completes the enrollment process

Recurring Check-in At the recurring check-in frequency configured in Jamf Pro

Custom

Cancel Save

6. Select a trigger and execution frequency.
7. Select the Disk Encryption payload and click **Configure**.
8. Choose “Issue New Recovery Key” from the **Action** pop-up menu.

FileVault New Individual Recovery Key

Options Scope Self Service User Interaction

General

Packages 0 Packages

Software Updates Not Configured

Scripts 0 Scripts

Printers 0 Printers

Disk Encryption Issue New Recovery Key

Dock Items 0 Dock Items

Local Accounts 0 Accounts

Disk Encryption

ACTION Action to take on computers

Issue New Recovery Key

RECOVERY KEY TYPE Type of recovery key to issue

Individual

Cancel Save

9. Choose the type of recovery key you want to issue from the **Recovery Key Type** pop-up menu:

- **Individual**—A new personal (also known as "individual") recovery key is generated on each computer and then submitted to Jamf Pro for storage.
- **Institutional**—A new institutional recovery key is deployed to computers and stored in Jamf Pro.
- **Individual and Institutional**—Issues both types of recovery keys to computers.

If you chose "Institutional" or "Individual and Institutional", choose the disk encryption configuration to use to issue the new recovery key from the **Disk Encryption Configuration for Institutional Key** pop-up menu.

The screenshot shows the 'New Policy' window in Jamf Pro. The window has a sidebar on the left with a list of policy categories: Scripts (0 Scripts), Printers (0 Printers), Disk Encryption (Individual and Institutional), Dock Items (0 Dock Items), Local Accounts (0 Accounts), and Management Accounts (Not Configured). The 'Disk Encryption' category is selected and highlighted. The main area of the window is titled 'Disk Encryption' and contains the following configuration options:

- ACTION** (Action to take on computers): A dropdown menu set to 'Issue New Recovery Key'.
- RECOVERY KEY TYPE** (Type of recovery key to issue): A dropdown menu set to 'Institutional'.
- DISK ENCRYPTION CONFIGURATION FOR INSTITUTIONAL KEY**: A section with the description 'Disk encryption configuration to use to issue a new institutional recovery key' and a dropdown menu set to 'Institutional Recovery Key'.

At the bottom right of the window are 'Cancel' and 'Save' buttons.

10. Click the **Scope** tab and configure the scope of the policy.

The screenshot shows the 'FileVault New Individual Recovery Key' configuration window with the 'Scope' tab selected. The window has four tabs: 'Options', 'Scope', 'Self Service', and 'User Interaction'. Below the tabs are three sections: 'Targets', 'Limitations', and 'Exclusions'. The 'Targets' section contains two columns: 'TARGET COMPUTERS' and 'TARGET USERS'. Under 'TARGET COMPUTERS', it says 'Computers to deploy the policy to' and has a dropdown menu set to 'Specific Computers'. Under 'TARGET USERS', it says 'Users to deploy the policy to' and has a dropdown menu set to 'Specific Users'. Below these is a 'Selected Deployment Targets' section with a '+ Add' button. At the bottom, there is a table with headers 'TARGET' and 'TYPE', and a row indicating 'No Targets'. At the very bottom are 'Cancel' and 'Save' buttons.

FileVault New Individual Recovery Key	
Options Scope Self Service User Interaction	
Targets Limitations Exclusions	
TARGET COMPUTERS Computers to deploy the policy to Specific Computers ▼	TARGET USERS Users to deploy the policy to Specific Users ▼
Selected Deployment Targets + Add	
TARGET	TYPE
No Targets	
Cancel Save	

11. Click **Save**.

The policy runs on computers in the scope the next time they check in with Jamf Pro, prompting enabled users.