erase-install

How to Upgrade macOS Using erase-install and Jamf Pro

Rev20230913

Contents

Preface

What is erase-install?

Written by the very talented Graham Pugh, erase-install is a script to reinstall macOS directly from the system volume using startosinstall, a resource binary which has been built into macOS installer applications since version 10.12.4. The --eraseinstall option was added with macOS 10.13.4 for computers with an APFS system volume. The script has many options to suit a large variety of workflows, management tools and user experiences. You can see all of the options in the addendum section of this guide.

Latest version or legacy version?

Latest Version Requirements:

- The script must run as root or sudo.
- macOS 11 or newer is required.
- The file system must be APFS.

The latest version, at the time of writing, is 30.2. This version requires mist-cli and swiftDialog, which are included in the installer package.

mist-cli is a Mac command line utility that automatically downloads macOS installers and firmware. It is created by Nindi Gill. More on mist-cli here:

https://github.com/ninxsoft/mist-cli

swiftDialog is used to create user notifications. It is created by Bart Reardon and requires macOS 11 or later. More on swiftDialog here:

https://github.com/bartreardon/swiftDialog

Legacy Version Requirements:

- The script must run as root or sudo.
- macOS 10.12.4 or greater is required for the reinstall workflows.
- macOS 10.13.4 is required for the erase-and-reinstall workflow.
- The file system must be APFS.
- Installers can only be obtained for macOS 10.13 and greater.

Version 27.3 is the most recent legacy version of erase-install which, instead of mist-cli, uses installinstallmacos.py, a python script which is included in the package installer along with a python framework to run it. It can use jamfHelper or DEPNotify, rather than swiftDialog. It is still useful on computers for upgrading computers currently running macOS 10.15 or older. If you want to use the legacy version of the erase-install script (version 27.3), get it here:

https://github.com/grahampugh/erase-install/releases/tag/v27.3

What's covered in this guide?

There are myriad ways to configure erase-install. The script, as of version 30.2, has 3385 lines of code and over 50 options. We will not cover all the options but will include a list in the addendum section of the guide. This guide will focus on using a locally cached macOS Ventura installer to upgrade macOS on a Mac computer running macOS Big Sur or later. We will not cover legacy macOS upgrades requiring version 27.3 of erase-install.

The following items were used to create this guide:

- erase-install version 30.2
- macOS Ventura 13.5.1
- Jamf Pro Server version 10.49 with administrative credentials

Methodology

Erase-install can be used to download the macOS installer, as well as for running it to upgrade a Mac. You can choose to cache it directly on the client, or download a single copy for upload to Jamf Pro. Here we will present these two options.

Method 1: use erase-install to cache the installer directly on the client
The advantage of this method is that you do not need to manually download each version of the macOS installer and upload them to Jamf Pro. The disadvantage is that you cannot test that the downloaded installer is working prior to uploading it to Jamf.

Method 2: download the installer and upload it to Jamf Pro
This allows you to download the installer as a package on your own machine, which you then upload to Jamf Pro.

Section 1: macOS Upgrade Preparation

What You'll Need

Learn what hardware, software, and information you'll need to complete the tutorials in this section.

Hardware and Software

Requirements for following along with this section:

- erase-install version 30.2 or later. This guide will use 30.2
- macOS Ventura installer (for Method 2 only). This guide will use version 13.5.1
- Administrative access to your Jamf Pro server.

1. Download erase-install here:
   https://github.com/grahampugh/erase-install/releases/latest

   - For Method 1, go to Step 2.
   - For Method 2, you also need to download the latest version of macOS Ventura. We can use erase-install to do this, which connects directly to Apple's software catalogs.

   To use erase-install, install the downloaded erase-install-30.2.pkg package on your Mac. Then, run the following command in Terminal to download the package:

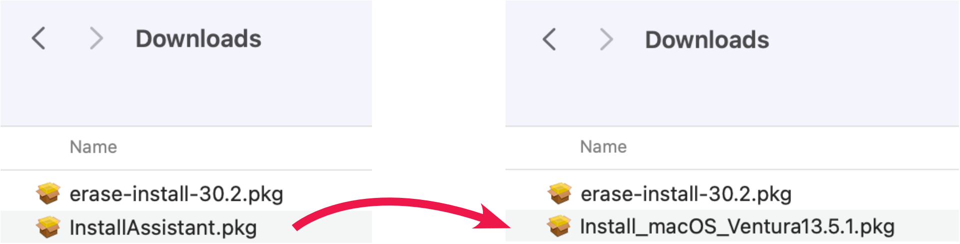
```
sudo /Library/Management/erase-install/erase-install.sh --pkg
```

   To move the downloaded package into your Downloads folder, open the folder /Library/Management/erase-install in Finder and drag the InstallAssistant.pkg to the Downloads folder.

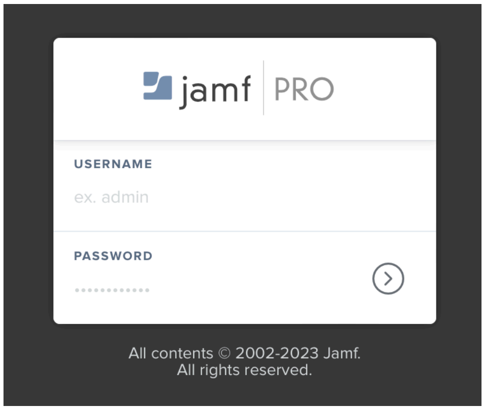
   Alternatively, you can obtain the installer packages via the web from https://mrmacintosh.com/macos-ventura-13-full-installer-database-download-directly-from-apple/ as soon as that website has been updated.

   NOTE: The macOS Ventura download is close to 12GB and may take 15 minutes or more to complete based on your download speed. Once downloaded, it will be named InstallAssistant.pkg. To better identify the macOS installer once uploaded to Jamf Pro, we recommend renaming it to:

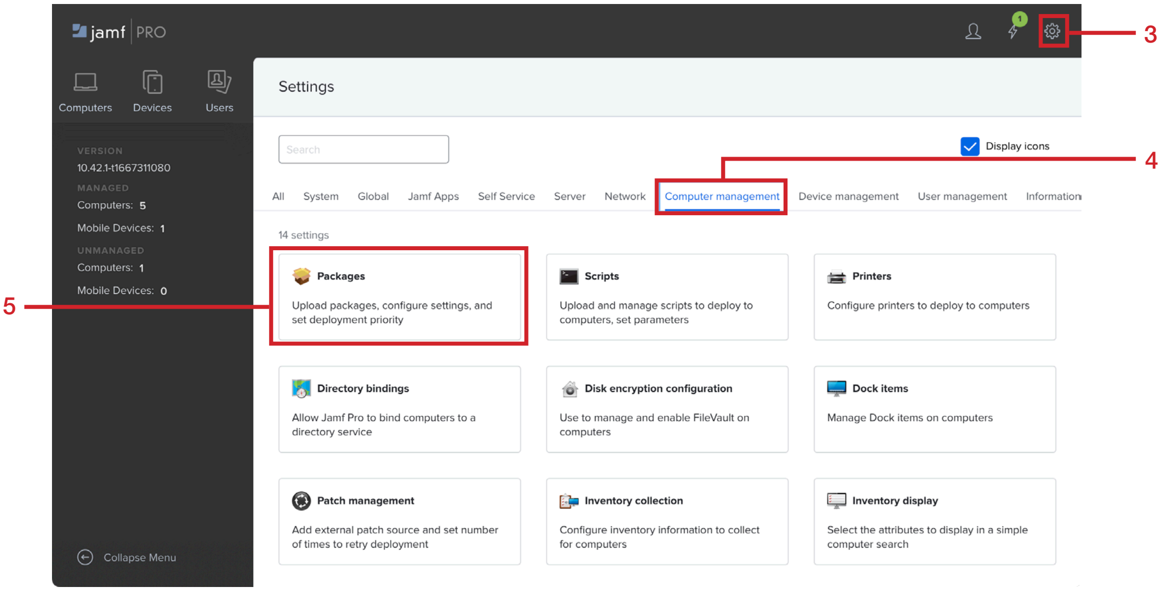
   Install_macOS_Ventura13.5.1.pkg



2. Log into your Jamf Pro Server with administrator credentials.



3. Switch back to your Jamf Pro Server instance. On the top-right corner, click Settings (⚙).
4. Click Computer management.
5. Click Packages.



VERSION
10.42.1-t1667311080
MANAGED
Computers: 5
Mobile Devices: 1
UNMANAGED
Computers: 1
Mobile Devices: 0

Settings

Search

☑ Display icons

All | System | Global | Jamf Apps | Self Service | Server | Network | Computer management | Device management | User management | Information

14 settings

Packages Upload packages, configure settings, and set deployment priority

Scripts Upload and manage scripts to deploy to computers, set parameters

Printers Configure printers to deploy to computers

Directory bindings Allow Jamf Pro to bind computers to a directory service

Disk encryption configuration Use to manage and enable FileVault on computers

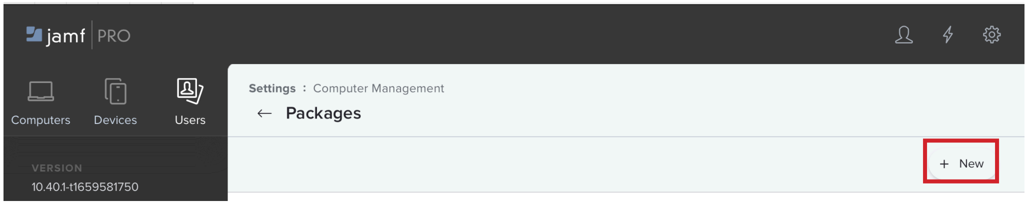
Dock items Manage Dock items on computers

Patch management Add external patch source and set number of times to retry deployment

Inventory collection Configure inventory information to collect for computers

Inventory display Select the attributes to display in a simple computer search

6. Click New.

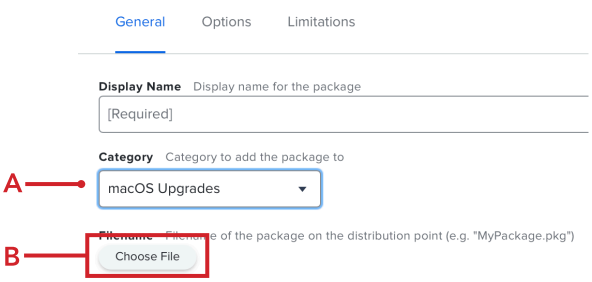


VERSION
10.40.1-t1659581750

Settings : Computer Management

← Packages

7. Configure the following:
   A. Category: This guide will use macOS Upgrades
   B. Click Choose File



Display Name Display name for the package

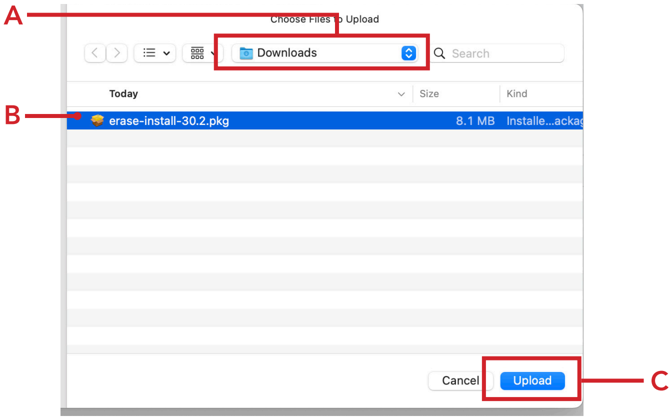
[Required]

Category Category to add the package to

macOS Upgrades

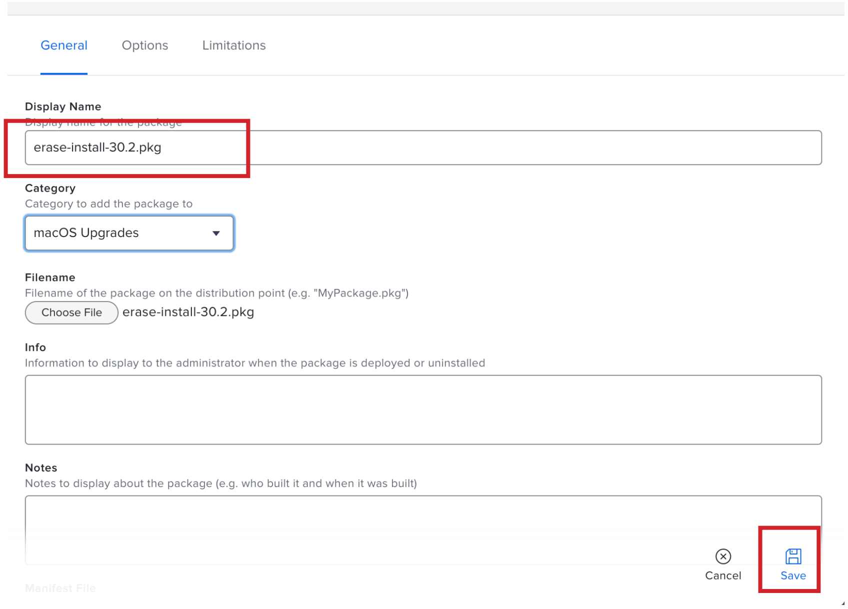
Filename Filename of the package on the distribution point (e.g. "MyPackage.pkg")

8. Perform the following:
   A. Navigate to your Downloads folder
   B. Select erase-install-30.2.pkg
   C. Click Upload



erase-install-30.2.pkg 8.1 MB Installe...ackag

9. Confirm the Display Name auto-populates with the name erase-install-30.2.pkg. Click Save to begin the upload.



Display Name
Display name for the package
erase-install-30.2.pkg

Category
Category to add the package to
macOS Upgrades

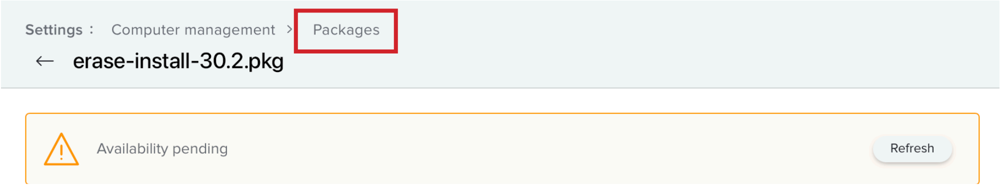
Filename
Filename of the package on the distribution point (e.g. "MyPackage.pkg")
erase-install-30.2.pkg

Info
Information to display to the administrator when the package is deployed or uninstalled

Notes
Notes to display about the package (e.g. who built it and when it was built)

For Method 1, skip to Section 2.
For Method 2, continue with steps 10-15 to upload the macOS installer package.

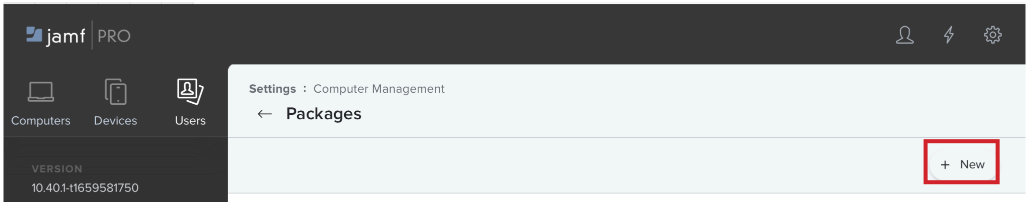
10. After the upload has completed, click Packages.



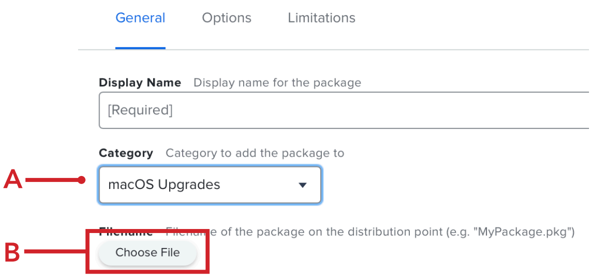
erase-install-30.2.pkg

Availability pending

11. Click New.



12. Configure the following:
    A. Category: This guide will use macOS Upgrades
    B. Click Choose File

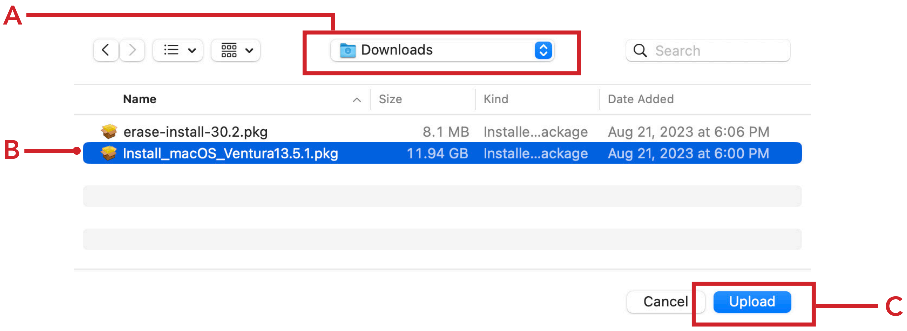


Display Name Display name for the package
[Required]

Category Category to add the package to
macOS Upgrades

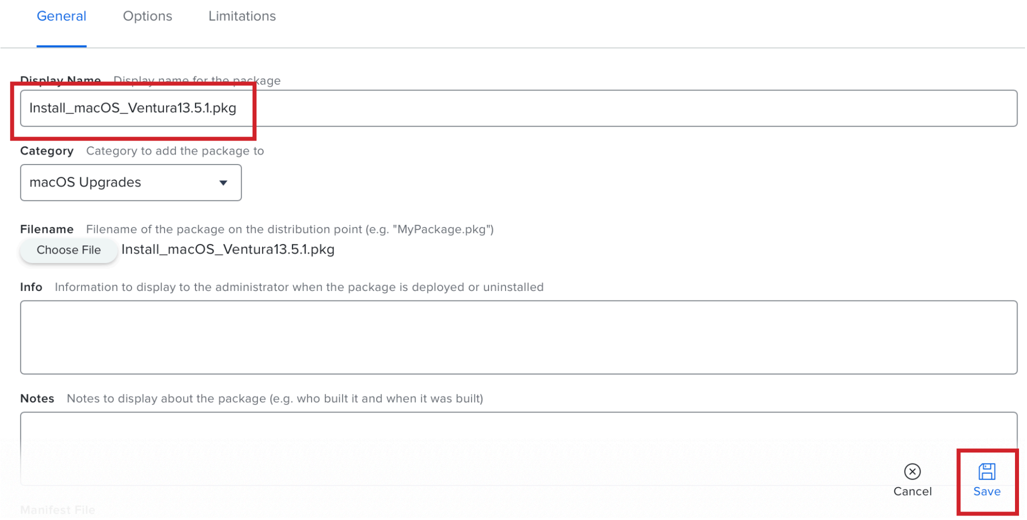
Filename Filename of the package on the distribution point (e.g. "MyPackage.pkg")

13. Perform the following:
    A. Navigate to your Downloads folder
    B. Select Install_macOS_Ventura13.5.1.pkg
    C. Click Upload



Name	Size	Kind	Date Added
erase-install-30.2.pkg	8.1 MB	Installe...ackage	Aug 21, 2023 at 6:06 PM
Install_macOS_Ventura13.5.1.pkg	11.94 GB	Installe...ackage	Aug 21, 2023 at 6:00 PM

14. Confirm the Display Name auto-populates with the name Install_macOS_Ventura13.5.1.pkg. Click Save to begin the upload.



Display Name Display name for the package
Install_macOS_Ventura13.5.1.pkg

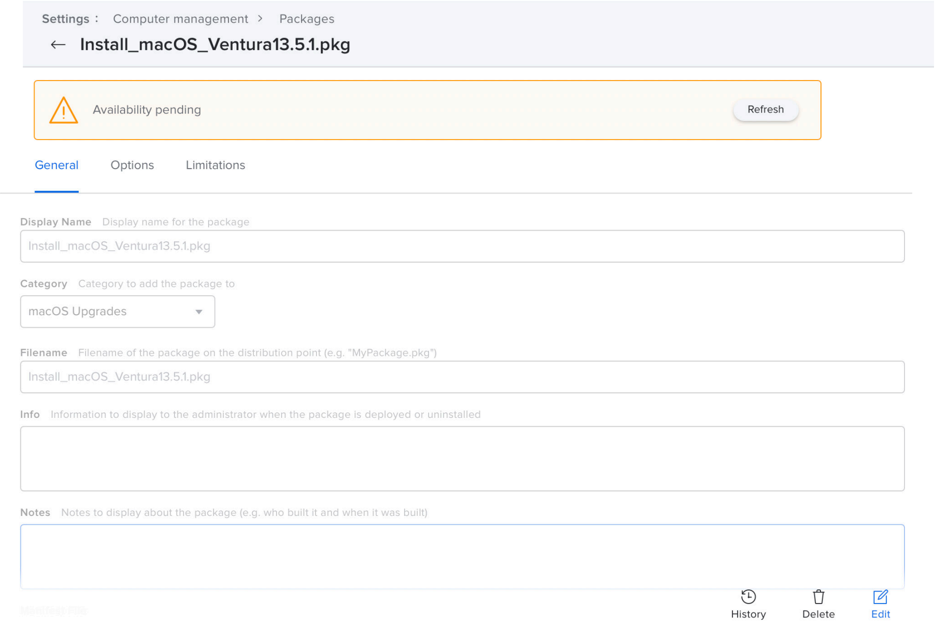
Category Category to add the package to
macOS Upgrades

Filename Filename of the package on the distribution point (e.g. "MyPackage.pkg")
Choose File Install_macOS_Ventura13.5.1.pkg

Info Information to display to the administrator when the package is deployed or uninstalled

Notes Notes to display about the package (e.g. who built it and when it was built)

15. The upload is complete.



← Install_macOS_Ventura13.5.1.pkg

Availability pending

Display Name Display name for the package
Install_macOS_Ventura13.5.1.pkg

Category Category to add the package to
macOS Upgrades

Filename Filename of the package on the distribution point (e.g. "MyPackage.pkg")
Install_macOS_Ventura13.5.1.pkg

Info Information to display to the administrator when the package is deployed or uninstalled

Notes Notes to display about the package (e.g. who built it and when it was built)

Section 2: Creating Smart Computer Groups

What You'll Need

Learn what hardware, software, and information you'll need to complete the tutorials in this section.

Hardware and Software

Requirements for following along with this section:

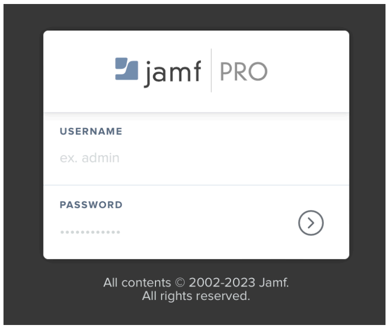
- Administrative access to your Jamf Pro server.
- Completion of section one of this guide.

In this section we will create the following:

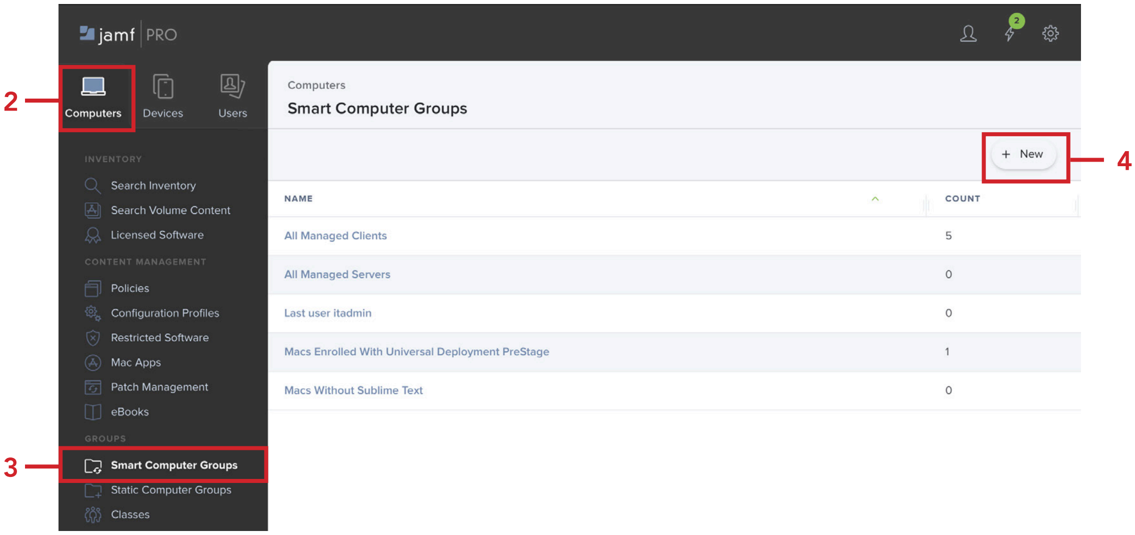
- A smart computer group to provide us with all Mac computers that can run macOS Ventura but are not running macOS Ventura 13.5.1
- A smart computer group to provide us with all Mac computers that have macOS Ventura 13.5.1 cached locally

We are creating these smart computer groups so we can use them for scoping our policies which will be covered in section 3 of this guide.

1. If necessary, Log into your Jamf Pro Server

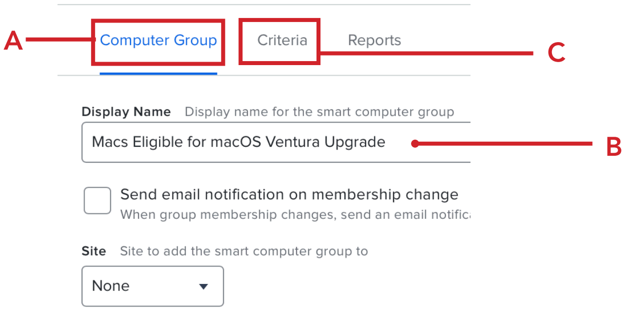


2. Click Computers
3. Click Smart Computer Groups.
4. Click New.



NAME	COUNT
All Managed Clients	5
All Managed Servers	0
Last user itadmin	0
Macs Enrolled With Universal Deployment PreStage	1
Macs Without Sublime Text	0

5. Perform the following:
   A. Click Computer Group
   B. Enter the Display Name: **Macs Eligible for macOS Ventura Upgrade**
   C. Click Criteria



Display Name Display name for the smart computer group

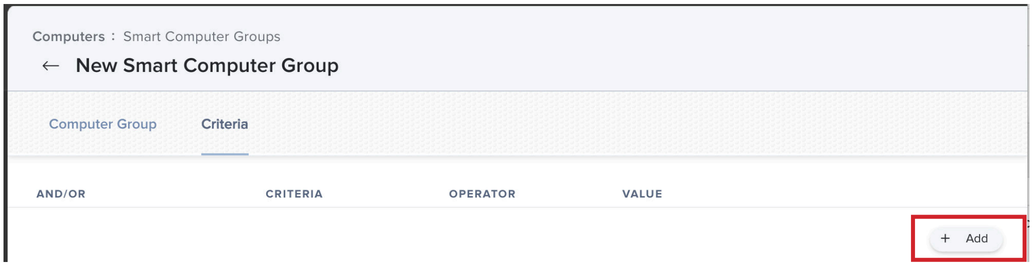
Macs Eligible for macOS Ventura Upgrade

□ Send email notification on membership change
When group membership changes, send an email notific

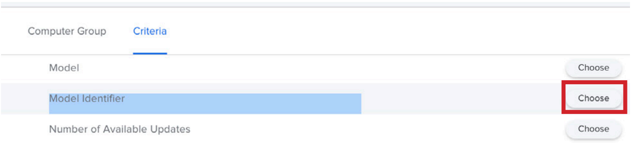
Site Site to add the smart computer group to

None ▾

6. Click Add.

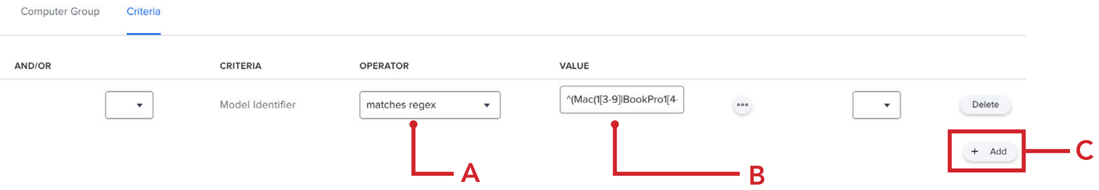


7. Locate Model Identifier, click Choose.



Model	Choose
Model Identifier	Choose
Number of Available Updates	Choose

8. Configure the following for the Criteria:
   A. Operator: **matches regex**
   B. Value: ^(Mac(1[3-9]|BookPro1[4-8]|BookAir([89]|10)|Pro[7-9]|Book\d{2,})|iMac(Pro\d+|(1[89]|[2-9]\d))|Macmini[89]),\d+$
   C. Click Add

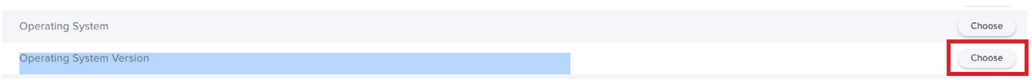


AND/OR	CRITERIA	OPERATOR	VALUE
▾	Model Identifier	matches regex ▾	^(Mac(1[3-9]|BookPro1[4-

The regex was written by the very talented Bill Smith AKA Talking Moose. Here are links for macOS Ventura and macOS Sonoma: This guide will use the regex for macOS Ventura.

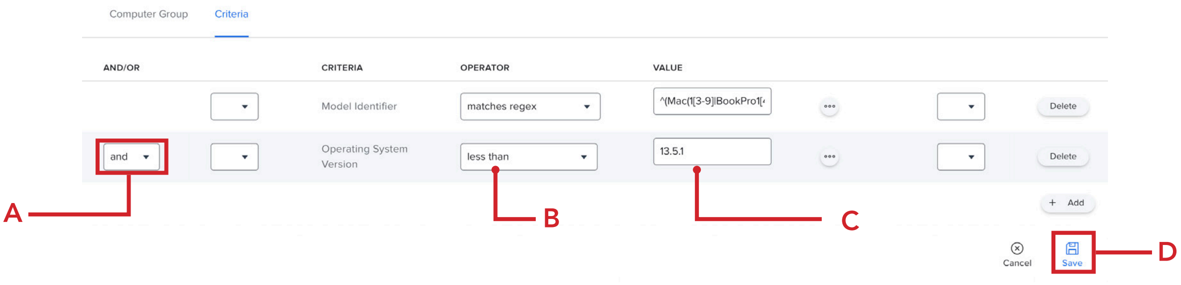
macOS Ventura Regex:
https://gist.github.com/talkingmoose/3100dab934baa13a799ba29be62ca357
macOS Sonoma Regex:
https://gist.github.com/talkingmoose/1b852e5d4fc8e76b4400ca2e4b3f3ad0

9. Locate Operating System Version, click Choose.



10. Configure the following for the Criteria as shown below:
    A. And/Or: **and**
    B. Operator: **less than**
    C. Value: **13.5.1**
    D. Click Save

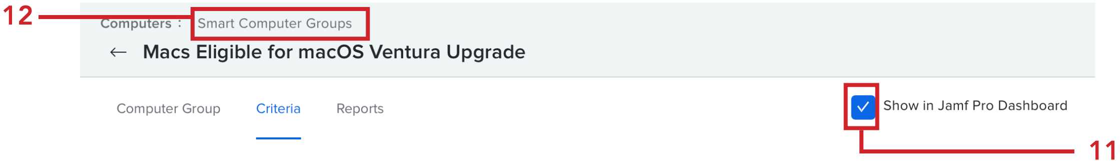
This will find all Mac computers that are compatible with macOS Ventura that are not running version 13.5.1.



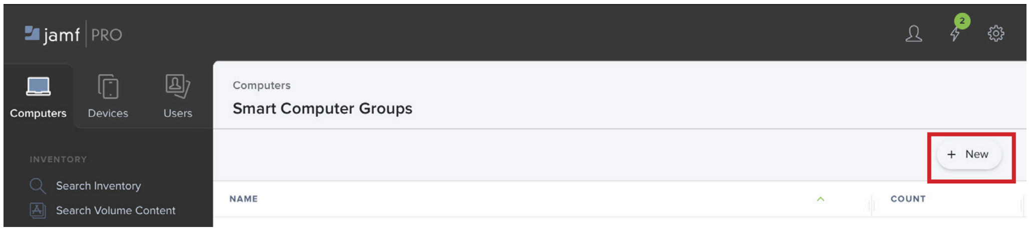
AND/OR		CRITERIA	OPERATOR	VALUE			
		Model Identifier	matches regex	^(Mac(1[3-9]|BookPro1[			Delete
and		Operating System Version	less than	13.5.1			Delete

11. Select the checkbox for Show in Jamf Pro Dashboard.

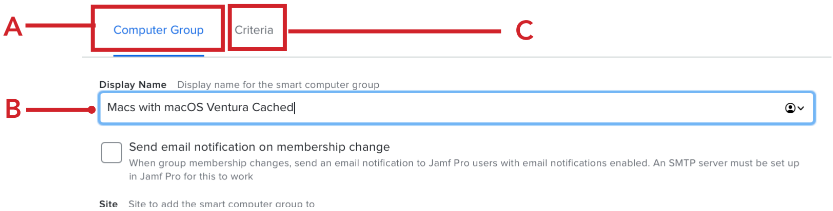
12. Click Smart Computer Groups.


12
Computers : Smart Computer Groups
← Macs Eligible for macOS Ventura Upgrade
Computer Group
Criteria
Reports
☑ Show in Jamf Pro Dashboard
11

13. Click New.



14. Perform the following:
    A. Click Computer Group
    B. Enter the Display Name: **Macs with macOS Ventura Cached**
    C. Click Criteria



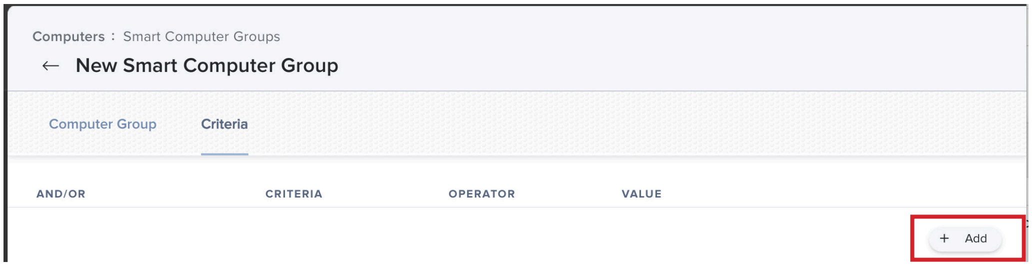
Display Name Display name for the smart computer group

Macs with macOS Ventura Cached

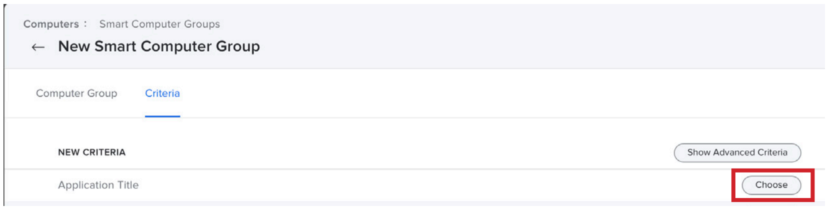
□ Send email notification on membership change
When group membership changes, send an email notification to Jamf Pro users with email notifications enabled. An SMTP server must be set up in Jamf Pro for this to work

Site Site to add the smart computer group to

15. Click Add. The criteria used depend on whether you are using Method 1 or 2.
    - For Method 1, continue with Steps 16 to 17.
    - For Method 2, skip to Step 18.

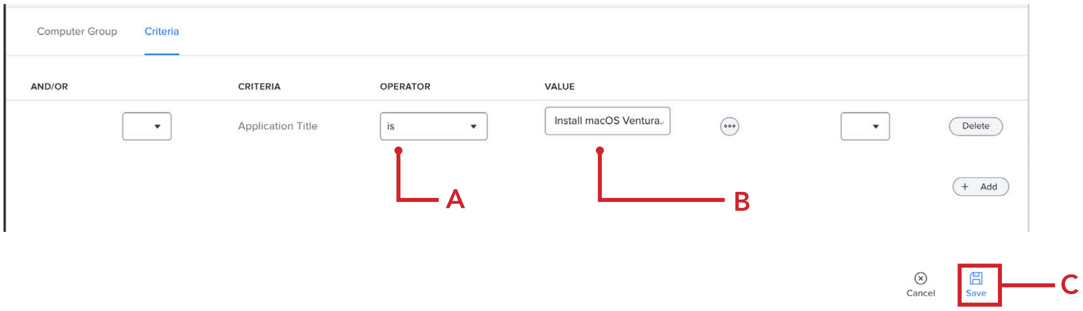


16. For Method 1, locate Application Title, click Choose.

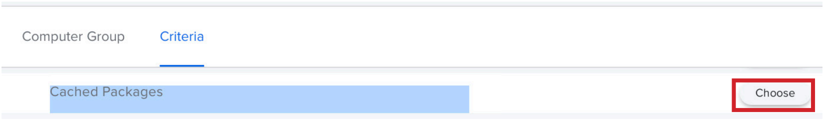


17. Configure the following for the Criteria:
    A. Operator: **is**
    B. Value: **Install macOS Ventura.app**
    C. Click Save

    This will find all Mac computers that have the Install macOS Ventura application cached locally.
    NOTE: If using method 1, skip to step 20.



18. For Method 2, locate Cached Packages, click Choose.

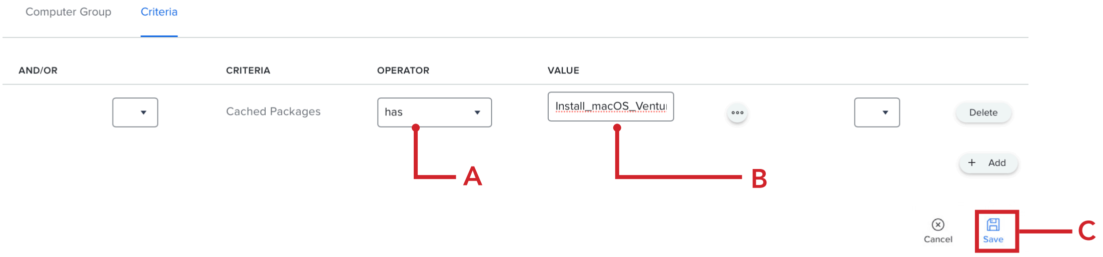


Computer Group | Criteria

Cached Packages — Choose

19. Configure the following for the Criteria:
    A. Operator: has
    B. Value: Install_macOS_Ventura13.5.1.pkg
    C. Click Save

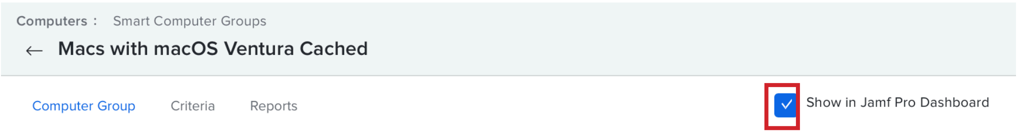
    This will find all Mac computers that have the macOS Ventura13.5.1 installer package cached locally.
    Note that for Method 2, whenever a new package is uploaded to Jamf Pro, you will need to change the criteria to the name of the newly uploaded package. This is not necessary for Method 1.



Computer Group | Criteria

AND/OR	CRITERIA	OPERATOR	VALUE
▾	Cached Packages	has ▾	Install_macOS_Ventu

20. Select the checkbox for Show in Jamf Pro Dashboard.



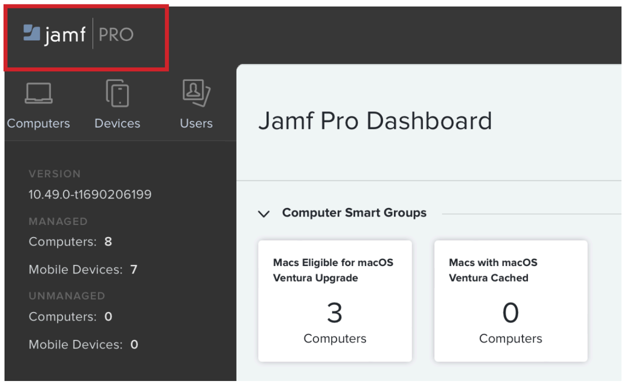
Computers : Smart Computer Groups

← Macs with macOS Ventura Cached

Computer Group | Criteria | Reports

☑ Show in Jamf Pro Dashboard

21. In the upper-left corner, click the Jamf Pro logo. This will bring us to the Dashboard where we will see the Smart Computer Groups we just created.



jamf | PRO

Computers | Devices | Users

VERSION
10.49.0-t1690206199

MANAGED
Computers: 8
Mobile Devices: 7

UNMANAGED
Computers: 0
Mobile Devices: 0

Jamf Pro Dashboard

Computer Smart Groups

Macs Eligible for macOS Ventura Upgrade — 3 Computers

Macs with macOS Ventura Cached — 0 Computers

This completes this section.

Section 3: Creating Policies

What You'll Need

Learn what hardware, software, and information you'll need to complete the tutorials in this section.

Hardware and Software

Requirements for following along with this section:

- Administrative access to your Jamf Pro server.
- Completion of sections one and two of this guide.

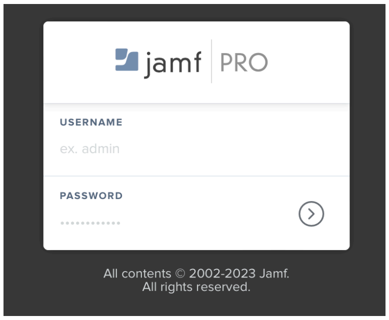
In this section we will create the following:

- A policy that caches the macOS Ventura 13.5.1 installer to all eligible Mac computers
- A policy that installs erase-install, macOS Ventura 13.5.1, and sends a command to the erase-install script
- A policy that runs an inventory update when a Mac computers starts up

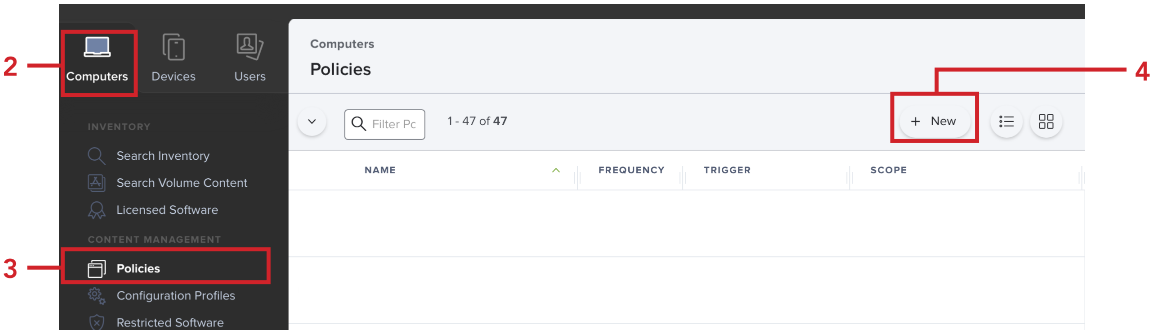
Caching the macOS installer on the client will speed up the time it takes for a Mac computer to run the upgrade, as the user will not have to wait for the 12 GB installer to be downloaded.

Note that as this is a Once-per-Computer policy, whenever a new macOS version is released, and (for Method 2) after you upload a new package to the policy, you will need to Flush the policy on all clients.

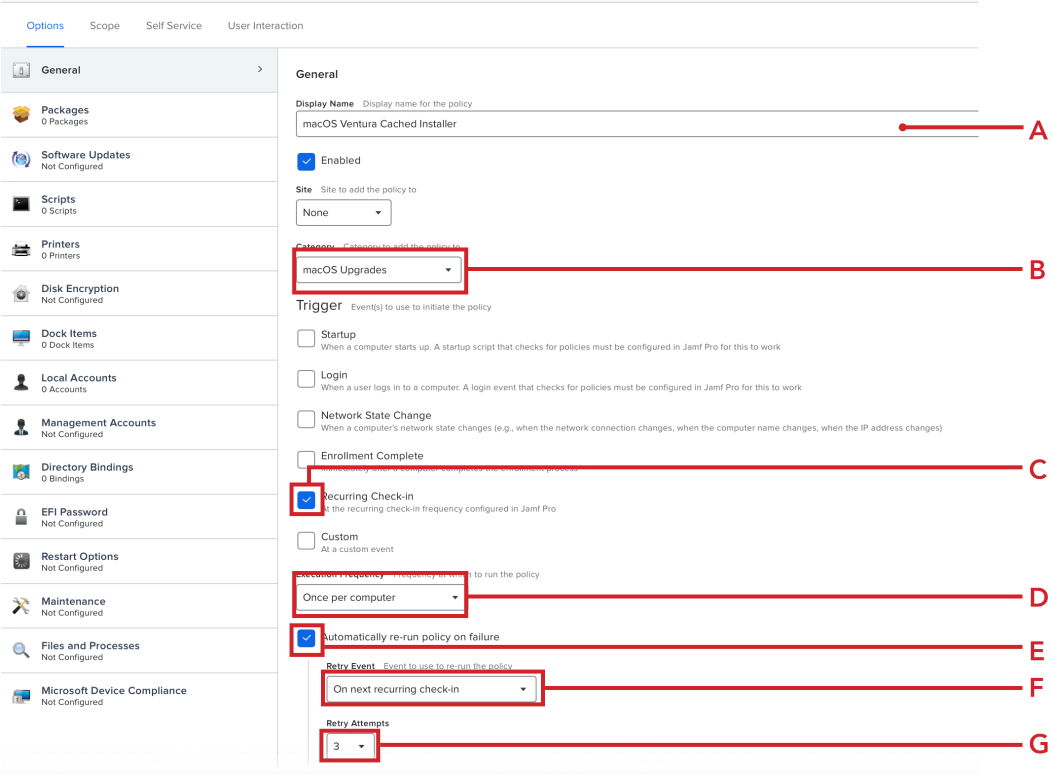
1. If necessary, Log into your Jamf Pro Server



2. Click Computers.
3. Click Policies.
4. Click New.



5. Perform the following in the General Payload:
   A. Display Name: **macOS Ventura Cached Installer**
   B. Category: **This guide will use macOS Upgrades**
   C. Trigger: **Recurring Check-in**
   D. Execution Frequency: **Once per computer**
   E. Automatically re-run policy on failure: **Enabled**
   F. Retry Event: **On next recurring check-in**
   G. Retry Attempts: **3**



General

Display Name Display name for the policy
macOS Ventura Cached Installer

☑ Enabled

Site Site to add the policy to
None

Category Category to add the policy to
macOS Upgrades

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 event 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
At a custom event

Execution Frequency Frequency at which to run the policy
Once per computer

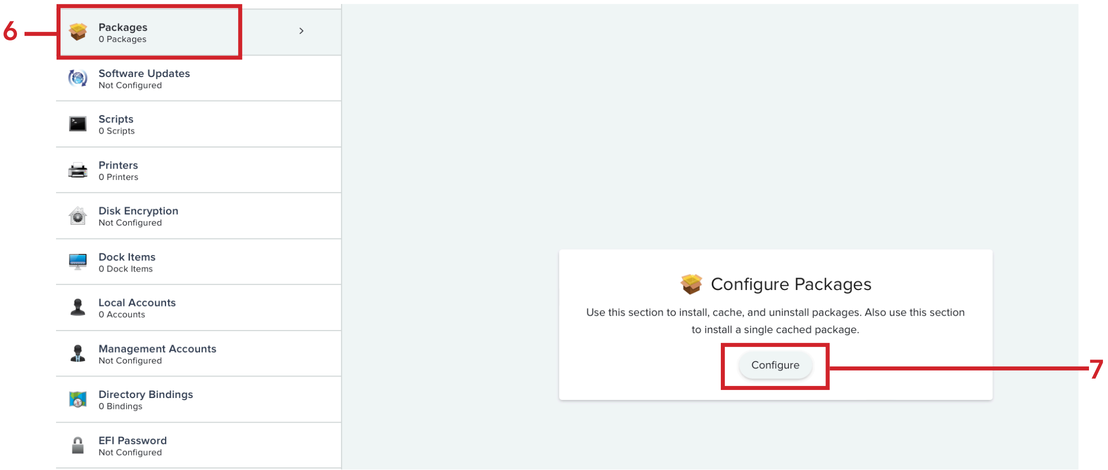
☑ Automatically re-run policy on failure

Retry Event Event to use to re-run the policy
On next recurring check-in

Retry Attempts
3

Steps 6-10 are required for Method 2. For Method 1, skip to step 11.

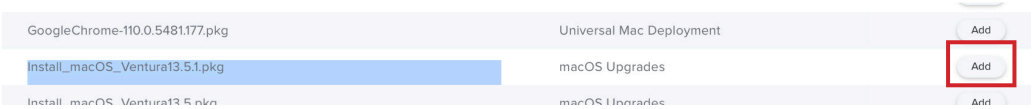
6. Click the Packages payload.
7. Click Configure.



Configure Packages

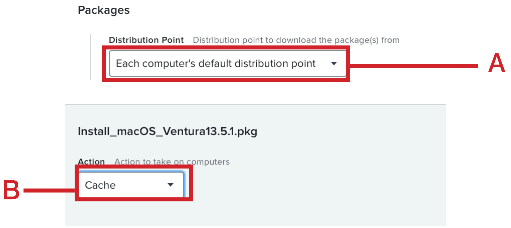
Use this section to install, cache, and uninstall packages. Also use this section to install a single cached package.

8. Locate Install_macOS_Ventura13.5.1.pkg.
9. Click Add.



GoogleChrome-110.0.5481.177.pkg	Universal Mac Deployment	Add
Install_macOS_Ventura13.5.1.pkg	macOS Upgrades	Add
Install_macOS_Ventura13.5.pkg	macOS Upgrades	Add

10. Configure the following:
    A. Packages: Select the distribution point the works best for you. This guide will use the default.
    B. Action: Select Cache from the menu.



Packages

Distribution Point Distribution point to download the package(s) from

Each computer's default distribution point

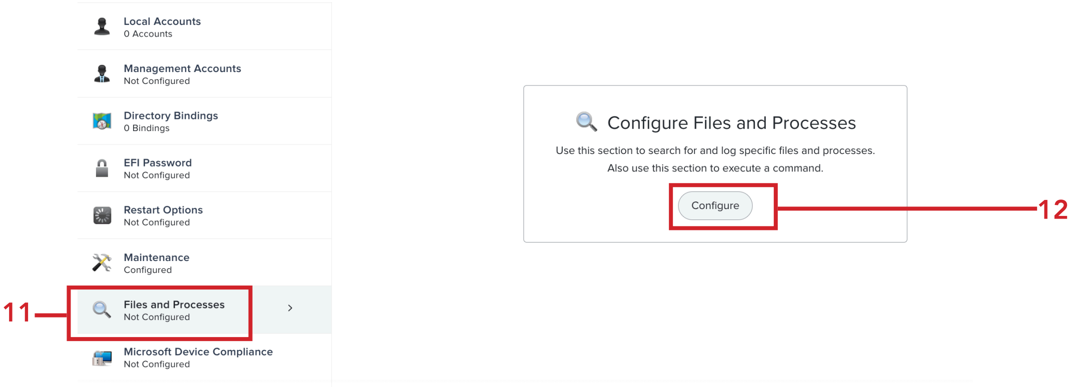
Install_macOS_Ventura13.5.1.pkg

Action Action to take on computers

Cache

Steps 11-13 are required for Method 1. For Method 2, skip to step 14.

11. Click the Files and Processes payload.
12. Click Configure.



Local Accounts
0 Accounts

Management Accounts
Not Configured

Directory Bindings
0 Bindings

EFI Password
Not Configured

Restart Options
Not Configured

Maintenance
Configured

Files and Processes
Not Configured

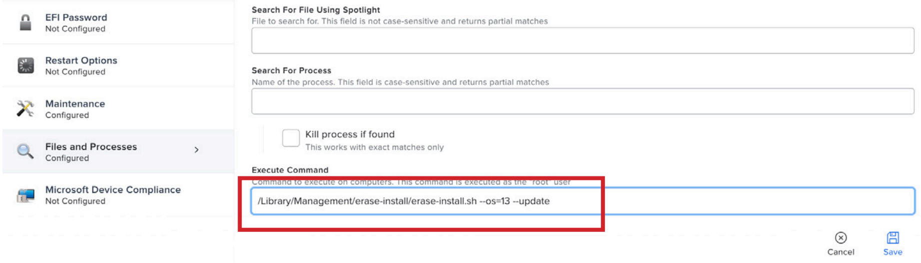
Microsoft Device Compliance
Not Configured

Configure Files and Processes

Use this section to search for and log specific files and processes.
Also use this section to execute a command.

13. Enter the following into the Execute Command field:

```
/Library/Management/erase-install/erase-install.sh --os=13 --update
```



EFI Password
Not Configured

Restart Options
Not Configured

Maintenance
Configured

Files and Processes
Configured

Microsoft Device Compliance
Not Configured

Search For File Using Spotlight
File to search for. This field is not case-sensitive and returns partial matches

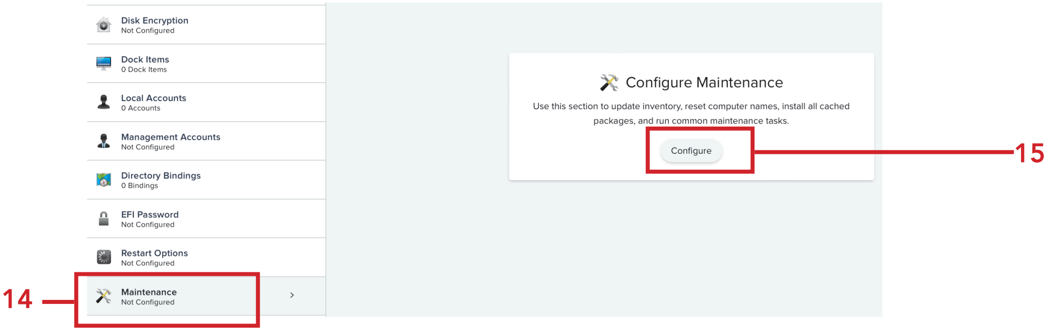
Search For Process
Name of the process. This field is case-sensitive and returns partial matches

☐ Kill process if found
This works with exact matches only

Execute Command
Command to execute on computers. This command is executed as the "root" user

/Library/Management/erase-install/erase-install.sh --os=13 --update

14. Click the Maintenance Payload.
15. Click Configure.



Disk Encryption
Not Configured

Dock Items
0 Dock Items

Local Accounts
0 Accounts

Management Accounts
Not Configured

Directory Bindings
0 Bindings

EFI Password
Not Configured

Restart Options
Not Configured

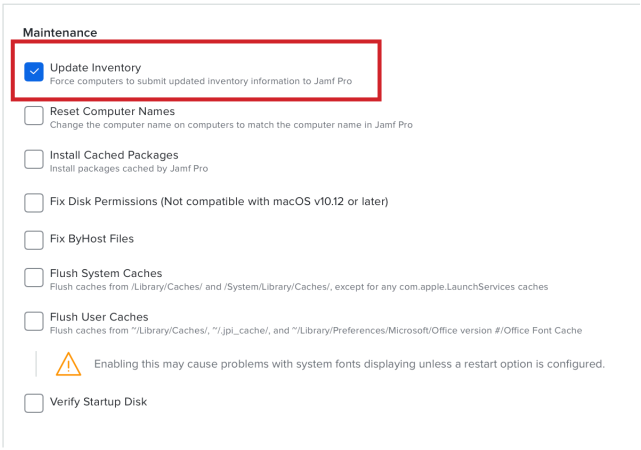
Maintenance
Not Configured

Configure Maintenance

Use this section to update inventory, reset computer names, install all cached packages, and run common maintenance tasks.

Configure

16. Make sure Update Inventory is selected. This will force an inventory update once the macOS installer is cached.



Maintenance

☑ Update Inventory
Force computers to submit updated inventory information to Jamf Pro

☐ Reset Computer Names
Change the computer name on computers to match the computer name in Jamf Pro

☐ Install Cached Packages
Install packages cached by Jamf Pro

☐ Fix Disk Permissions (Not compatible with macOS v10.12 or later)

☐ Fix ByHost Files

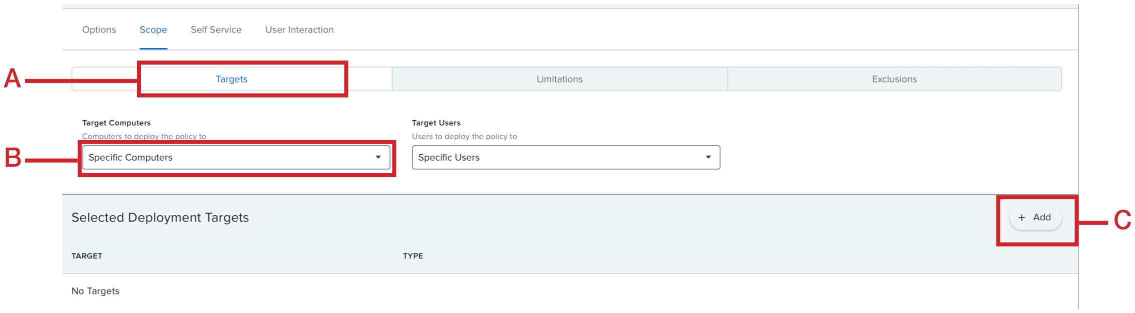
☐ Flush System Caches
Flush caches from /Library/Caches/ and /System/Library/Caches/, except for any com.apple.LaunchServices caches

☐ Flush User Caches
Flush caches from ~/Library/Caches/, ~/.jpi_cache/, and ~/Library/Preferences/Microsoft/Office version #/Office Font Cache

⚠ Enabling this may cause problems with system fonts displaying unless a restart option is configured.

☐ Verify Startup Disk

17. Click Scope and configure the following:
    A. Click Targets
    B. Target Computers: Specific Computers
    C. Click Add



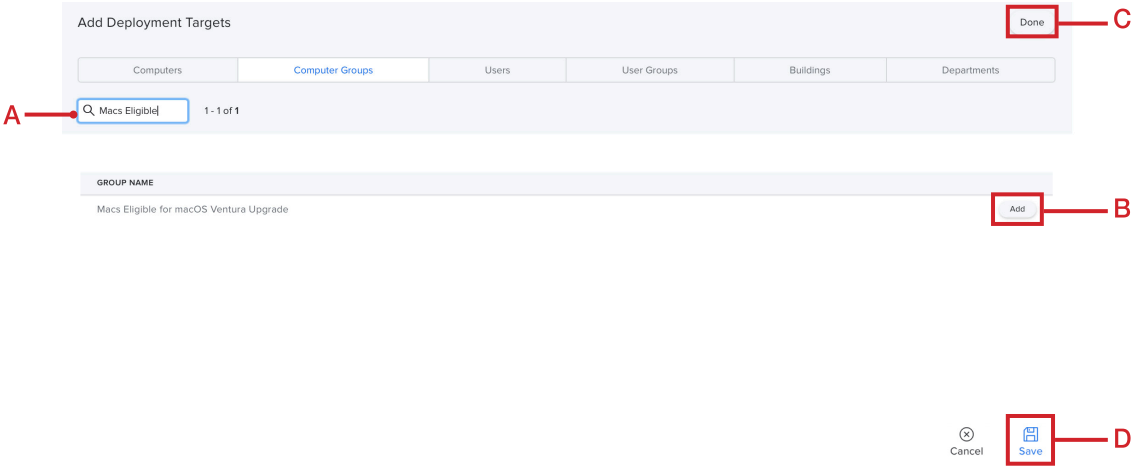
Target Computers
Computers to deploy the policy to
Specific Computers

Target Users
Users to deploy the policy to
Specific Users

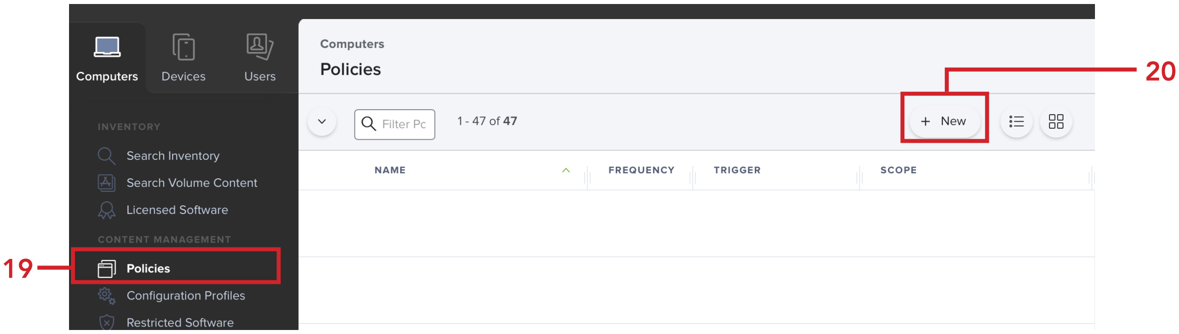
Selected Deployment Targets

TARGET	TYPE
No Targets	

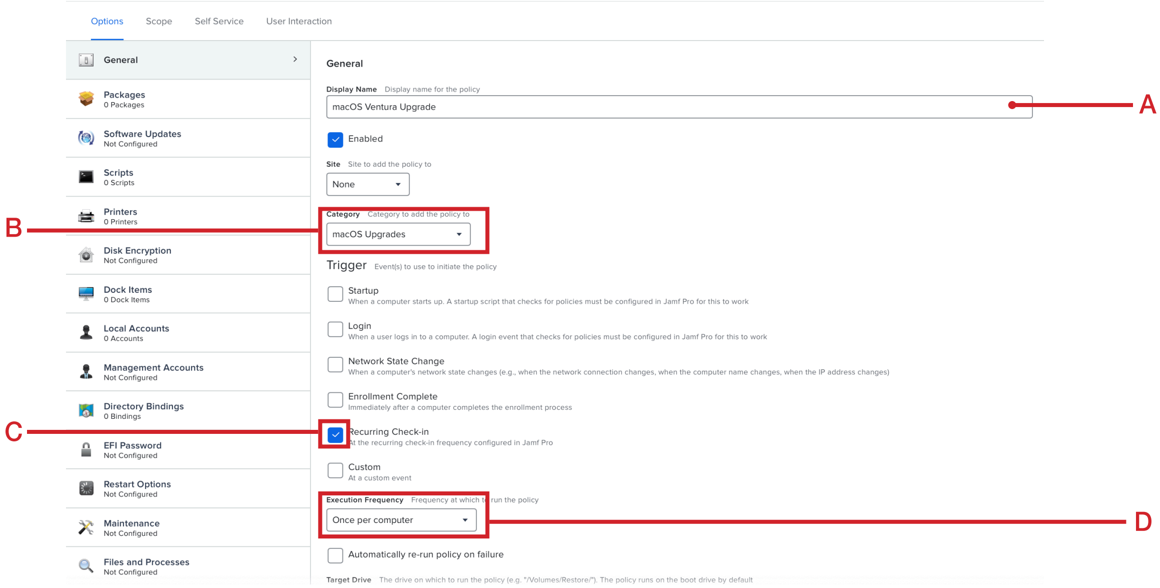
18. Select Computer Groups and configure the following:
    A. In the search field enter Macs Eligible.
    B. Click Add for Macs Eligible for macOS Ventura Upgrade.
    C. Click Done.
    D. Click Save.



19. Click Policies.
20. Click New.



21. Perform the following in the General Payload:
    A. Display Name: **macOS Ventura Upgrade**
    B. Category: **This guide will use macOS Upgrades**
    C. Trigger: **Recurring Check-in**
    D. Execution Frequency: **Once per computer**



General

Display Name Display name for the policy
macOS Ventura Upgrade

☑ Enabled

Site Site to add the policy to
None

Category Category to add the policy to
macOS Upgrades

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 event 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

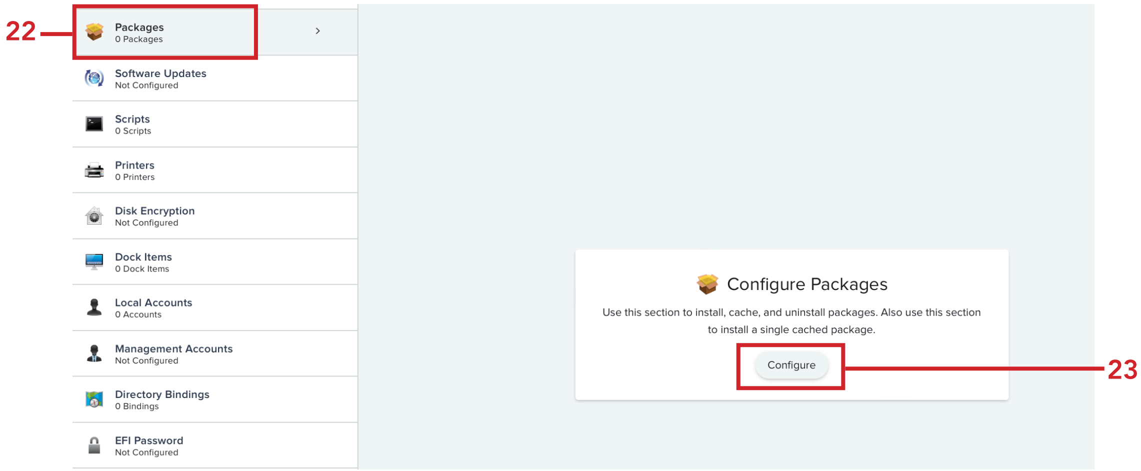
☐ Custom
At a custom event

Execution Frequency Frequency at which to run the policy
Once per computer

☐ Automatically re-run policy on failure

Target Drive The drive on which to run the policy (e.g. "/Volumes/Restore/"). The policy runs on the boot drive by default

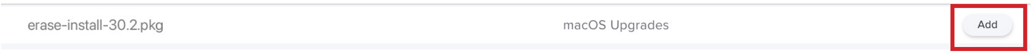
22. Click the Packages payload.
23. Click Configure.



Configure Packages

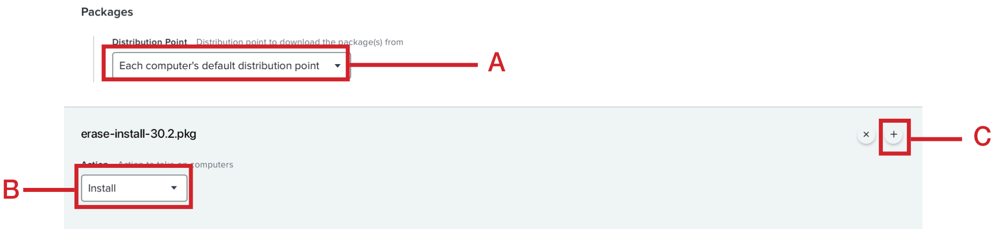
Use this section to install, cache, and uninstall packages. Also use this section to install a single cached package.

24. Locate erase-install-30.2.pkg.
25. Click Add.



erase-install-30.2.pkg	macOS Upgrades	Add

26. Configure the following:
    A. Packages: Select the distribution point the works best for you. This guide will use the default.
    B. Action: Select Install from the menu.
    C. Click Add (+).



Packages

Distribution Point   Distribution point to download the package(s) from

Each computer's default distribution point

erase-install-30.2.pkg

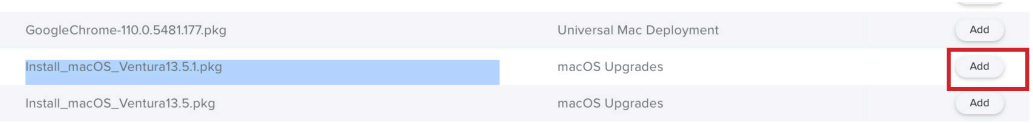
Action   Action to take on computers

Install

The following steps 27- 30 apply only to Method 2. For Method 1, skip to step 31.

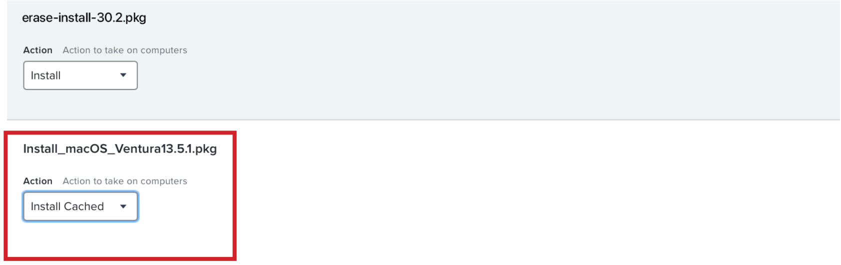
27. Locate Install_macOS_Ventura13.5.1.pkg.

28. Click Add.



GoogleChrome-110.0.5481.177.pkg	Universal Mac Deployment	Add
Install_macOS_Ventura13.5.1.pkg	macOS Upgrades	Add
Install_macOS_Ventura13.5.pkg	macOS Upgrades	Add

29. From the menu, Action, select Install Cached.



erase-install-30.2.pkg

Action   Action to take on computers

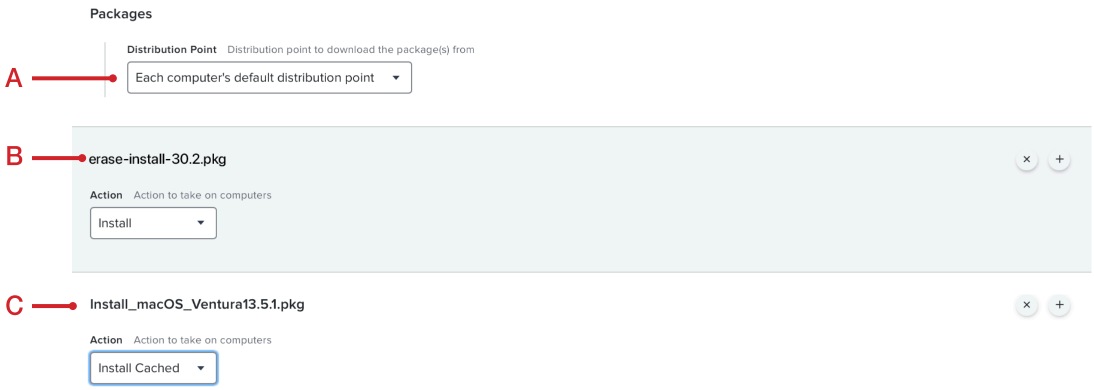
Install

Install_macOS_Ventura13.5.1.pkg

Action   Action to take on computers

Install Cached

30. Confirm the following to match the graphic below:
    A. Packages: Select the distribution point the works best for you. This guide will use the default.
    B. erase-install-30.2.pkg: Action: Install.
    C. Install_macOS_Ventura13.5.1.pkg: Action: Install Cached.


Packages

Distribution Point: Distribution point to download the package(s) from — Each computer's default distribution point

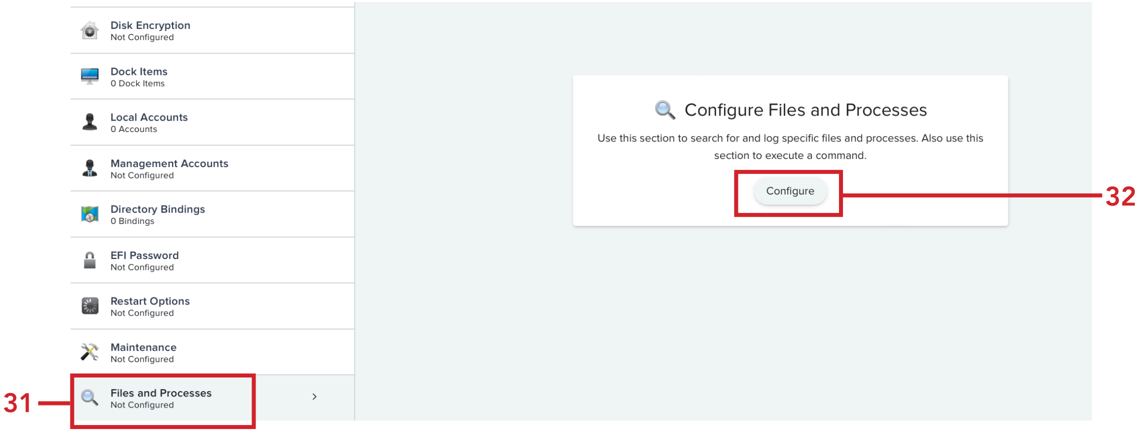
erase-install-30.2.pkg

Action: Action to take on computers — Install

Install_macOS_Ventura13.5.1.pkg

Action: Action to take on computers — Install Cached

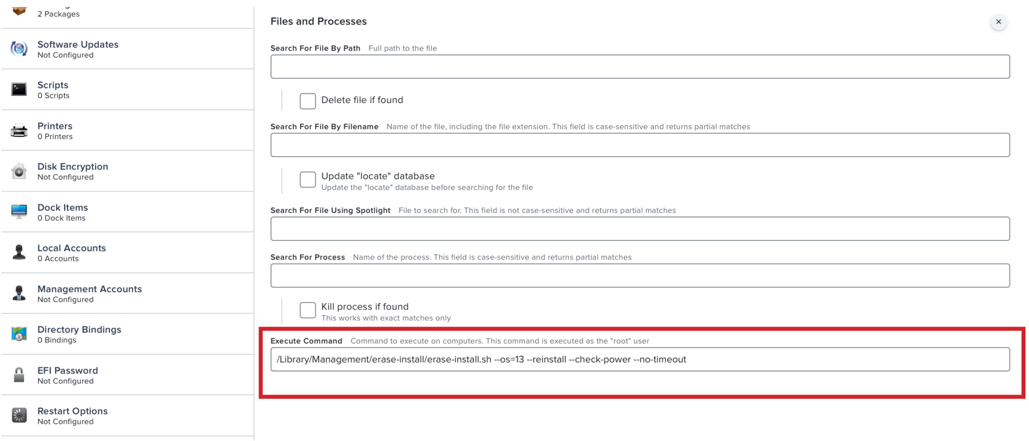
31. Click the Files and Processes payload.
32. Click Configure.


Disk Encryption — Not Configured
Dock Items — 0 Dock Items
Local Accounts — 0 Accounts
Management Accounts — Not Configured
Directory Bindings — 0 Bindings
EFI Password — Not Configured
Restart Options — Not Configured
Maintenance — Not Configured
Files and Processes — Not Configured

Configure Files and Processes

Use this section to search for and log specific files and processes. Also use this section to execute a command.

33. In the Execute Command field, enter the following:
    /Library/Management/erase-install/erase-install.sh --os=13 --reinstall --check-power --no-timeout



2 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
EFI Password
Not Configured
Restart Options
Not Configured

Files and Processes

Search For File By Path Full path to the file

□ Delete file if found

Search For File By Filename Name of the file, including the file extension. This field is case-sensitive and returns partial matches

□ Update "locate" database
Update the "locate" database before searching for the file

Search For File Using Spotlight File to search for. This field is not case-sensitive and returns partial matches

Search For Process Name of the process. This field is case-sensitive and returns partial matches

□ Kill process if found
This works with exact matches only

Execute Command Command to execute on computers. This command is executed as the "root" user

/Library/Management/erase-install/erase-install.sh --os=13 --reinstall --check-power --no-timeout

Breakdown what this command is doing:
/Library/Management/erase-install/erase-install.sh
(This is where the erase-install script is located and will be called from)

```
/Library/Management/erase-install/erase-install.sh --os=13 --reinstall --check-power
--no-timeout
```

`--os=13` This tells erase-install what major version of macOS to use
`--reinstall` This tells erase-install to reinstall the macOS without erasing the hard drive
`--check-power` This tells erase-install to make sure a power cable is plugged in
`--no-timeout` This tells erase-install not to timeout after 1 hour and will extend timeout for one day. Helpful if your network is very slow

There are many different options you can provide in this command. It really depends on your needs. The above command is suitable for most upgrades. Check the addendum section of this guide for a listing of all the options.

NOTE: Mac computers with Apple Silicon require a user that is a volume owner and will prompt that user for their credentials before running the macOS Ventura upgrade. There is a new feature in erase-install version 30 or later that will allow you to provide a set of user credentials to run the upgrade without being prompted. Please note the password is sent in PLAIN TEXT which is very insecure. Use this at your own risk. The user credentials must be the same on all Macs that run it, for example, local admin credentials for an admin user that logged into the Mac at least once. The credentials must be base64 encoded which can be done using the Terminal.app. See the example below:

Example:
```
printf "%s:%s" "userhcs" "pass1234" | iconv -t ISO-8859-1 | base64 -i -
```

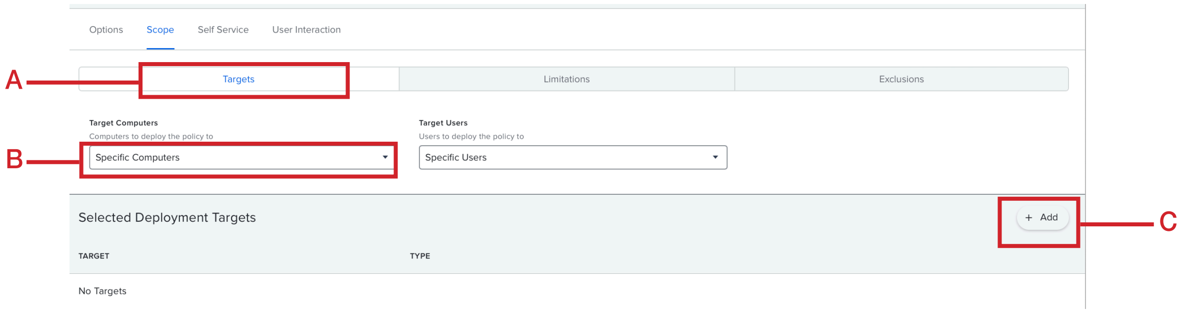
This is the output of the above command. It combines the user name and password in base64.
```
dXNlcmhjczpwYXNzMTIzNA==
```

This is what you would need to enter in the Execute Command field in Jamf Pro.

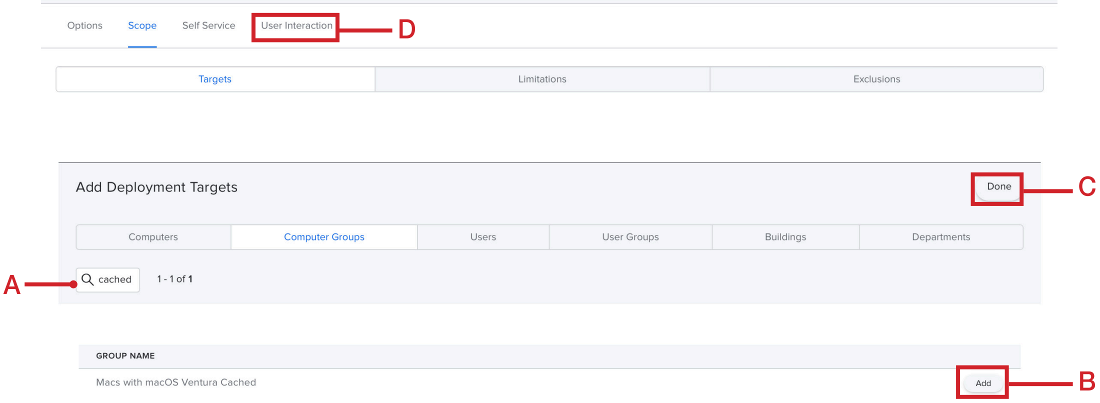
```
/Library/Management/erase-install/erase-install.sh --os=13 --reinstall --check-power
--no-timeout --very-insecure-mode --credentials dXNlcmhjczpwYXNzMTIzNA==
```

For more on this, read the release notes for version 30 here:
https://github.com/grahampugh/erase-install/releases/tag/v30.0

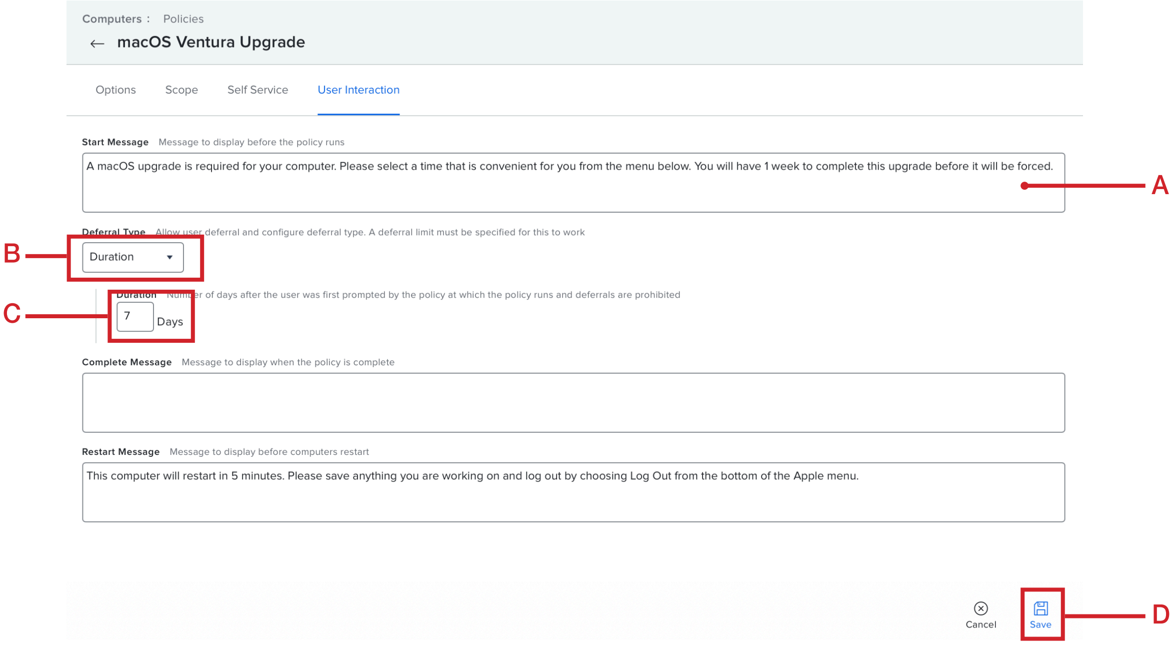
34. Click Scope and configure the following:
    A. Click Targets
    B. Target Computers: Specific Computers
    C. Click Add



35. Select Computer Groups and configure the following:
    A. In the search field enter cached.
    B. Click Add for Macs with macOS Ventura Cached
    C. Click Done.
    D. Click User Interaction.



36. Configure the following:
    A. Start Message:
        A macOS upgrade is required for your computer. Please select a time that is convenient for you from the menu below. You will have 1 week to complete this upgrade before it will be forced.
    B. Deferral Type: Duration
    C. Enter 7 for Days.
    D. Click Save.



Computers : Policies

← macOS Ventura Upgrade

Start Message Message to display before the policy runs

A macOS upgrade is required for your computer. Please select a time that is convenient for you from the menu below. You will have 1 week to complete this upgrade before it will be forced.

Deferral Type Allow user deferral and configure deferral type. A deferral limit must be specified for this to work

Duration

Duration Number of days after the user was first prompted by the policy at which the policy runs and deferrals are prohibited

7 Days

Complete Message Message to display when the policy is complete

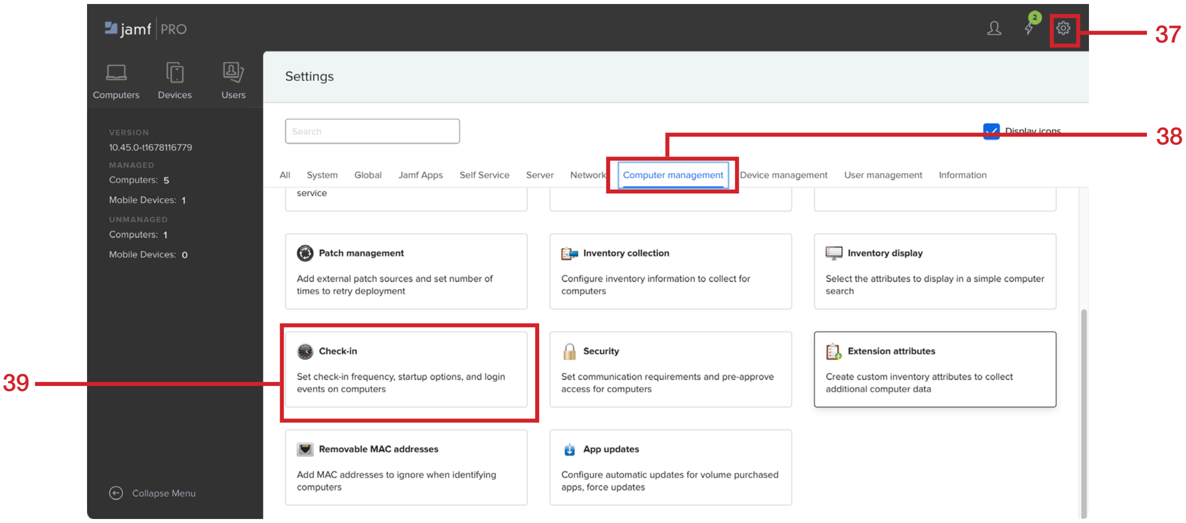
Restart Message Message to display before computers restart

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.

37. We need to make sure the Jamf Pro server is configured to make a launch daemon that executes on a computer at startup. This is required to run policies that trigger at startup. On the top-right corner, click Settings (⚙).

38. Click Computer management.

39. Click Check-in.



VERSION 10.45.0-t1678116779

MANAGED Computers: 5 Mobile Devices: 1

UNMANAGED Computers: 1 Mobile Devices: 0

Patch management — Add external patch sources and set number of times to retry deployment

Inventory collection — Configure inventory information to collect for computers

Inventory display — Select the attributes to display in a simple computer search

Check-in — Set check-in frequency, startup options, and login events on computers

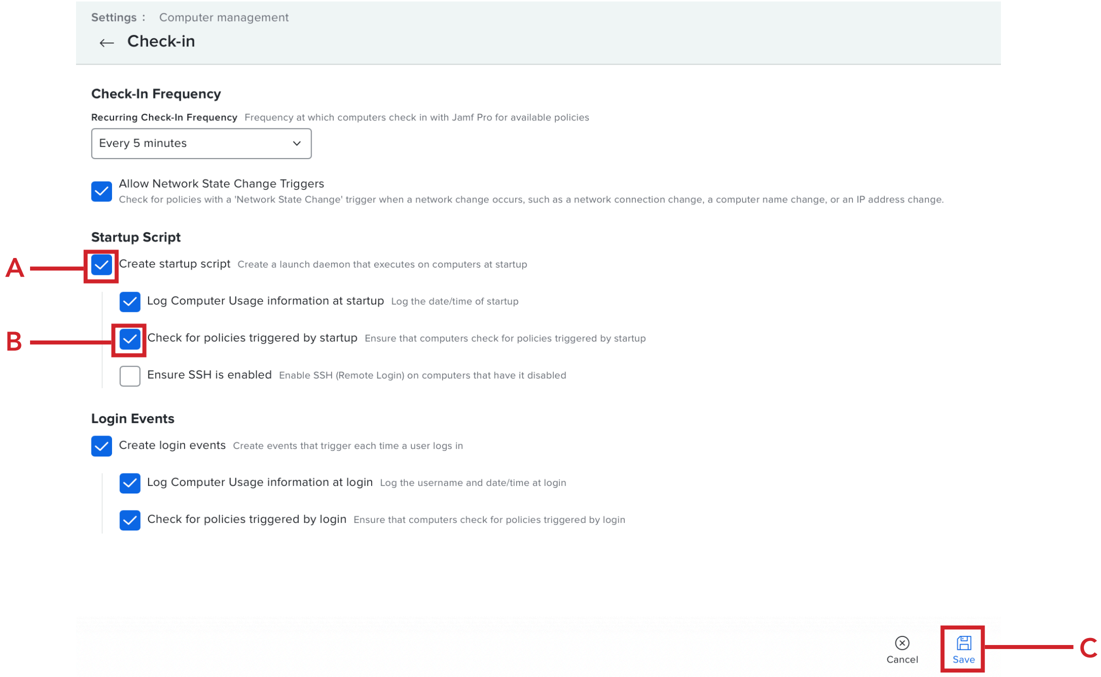
Security — Set communication requirements and pre-approve access for computers

Extension attributes — Create custom inventory attributes to collect additional computer data

Removable MAC addresses — Add MAC addresses to ignore when identifying computers

App updates — Configure automatic updates for volume purchased apps, force updates

40. Configure the following:
    A. Create startup script: Enabled
    B. Check for policies triggered by startup: Enabled
    C. Click Save.



Settings : Computer management

← Check-in

Check-In Frequency

Recurring Check-In Frequency Frequency at which computers check in with Jamf Pro for available policies

Every 5 minutes

☑ Allow Network State Change Triggers
Check for policies with a 'Network State Change' trigger when a network change occurs, such as a network connection change, a computer name change, or an IP address change.

Startup Script

☑ Create startup script Create a launch daemon that executes on computers at startup

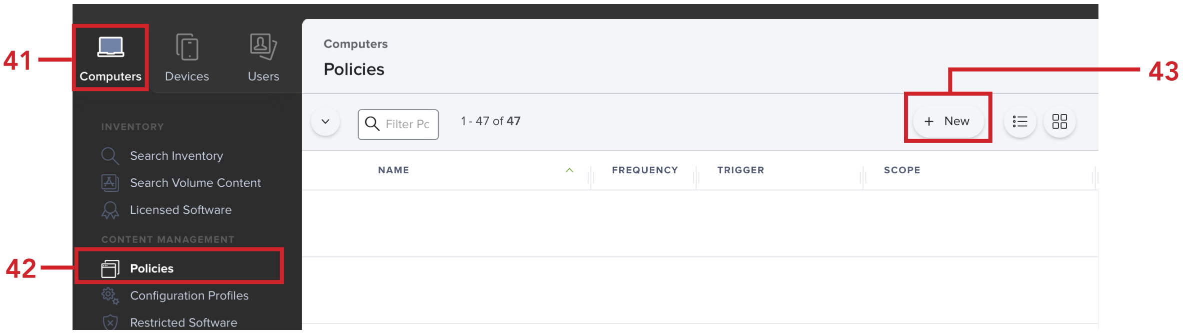
- ☑ Log Computer Usage information at startup Log the date/time of startup
- ☑ Check for policies triggered by startup Ensure that computers check for policies triggered by startup
- □ Ensure SSH is enabled Enable SSH (Remote Login) on computers that have it disabled

Login Events

☑ Create login events Create events that trigger each time a user logs in

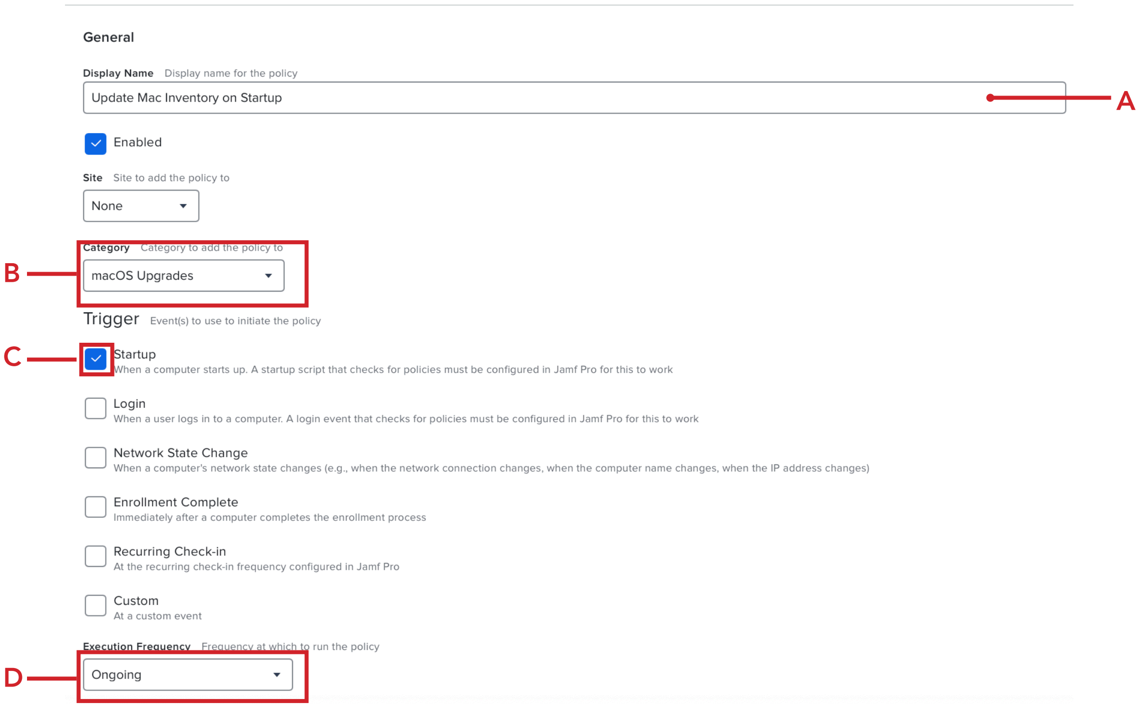
- ☑ Log Computer Usage information at login Log the username and date/time at login
- ☑ Check for policies triggered by login Ensure that computers check for policies triggered by login

41. Click Computers.
42. Click Policies.
43. Click New.



44. Configure the following in the General payload:
    A. Display Name: Update Mac Inventory on Startup
    B. Category: Select one of your choosing. This guide will use macOS Upgrades.
    C. Trigger: Startup
    E. Execution Frequency: Ongoing

    NOTE: We are creating this policy because Jamf Pro would never know when erase-install is finished as it reboots the Mac and never runs an inventory update. This will ensure an inventory update is ran once the Mac computer is rebooted. This is required to remove the Mac computers that have successfully upgraded from the smart computer groups we created in section 2 of this guide.


General

Display Name Display name for the policy
Update Mac Inventory on Startup

☑ Enabled

Site Site to add the policy to
None

Category Category to add the policy to
macOS Upgrades

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 event 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)

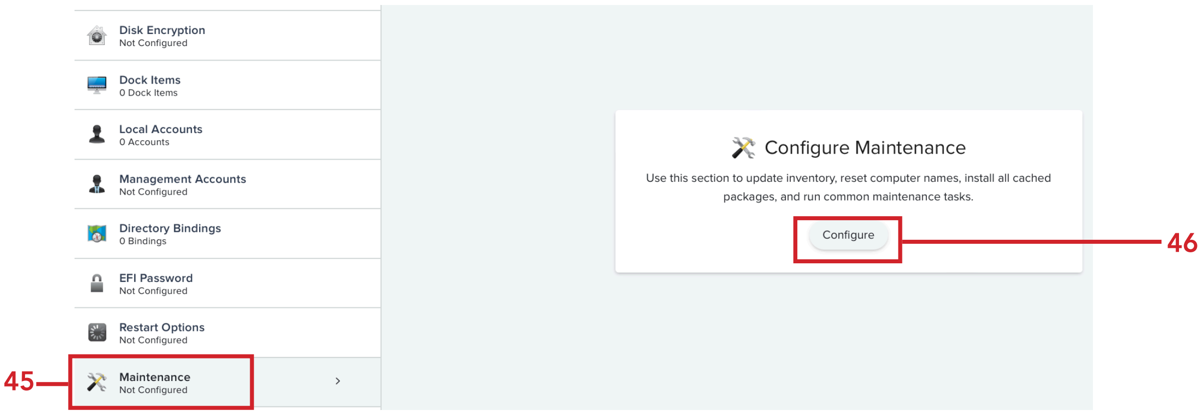
□ Enrollment Complete
Immediately after a computer completes the enrollment process

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

□ Custom
At a custom event

Execution Frequency Frequency at which to run the policy
Ongoing

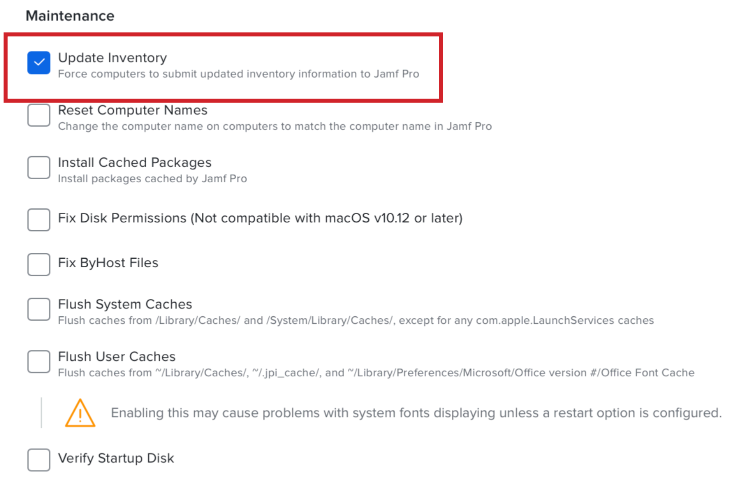
45. Click the Maintenance payload
46. Click Configure.



Configure Maintenance

Use this section to update inventory, reset computer names, install all cached packages, and run common maintenance tasks.

47. Confirm the checkbox for Update Inventory is selected



Maintenance

☑ Update Inventory
Force computers to submit updated inventory information to Jamf Pro

□ Reset Computer Names
Change the computer name on computers to match the computer name in Jamf Pro

□ Install Cached Packages
Install packages cached by Jamf Pro

□ Fix Disk Permissions (Not compatible with macOS v10.12 or later)

□ Fix ByHost Files

□ Flush System Caches
Flush caches from /Library/Caches/ and /System/Library/Caches/, except for any com.apple.LaunchServices caches

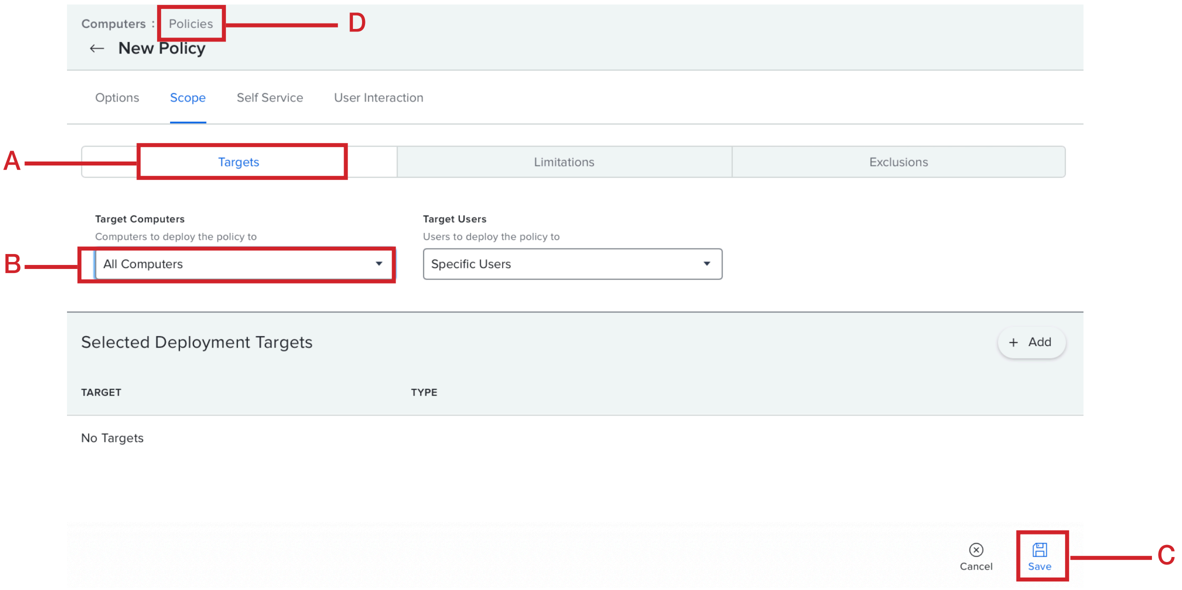
□ Flush User Caches
Flush caches from ~/Library/Caches/, ~/.jpi_cache/, and ~/Library/Preferences/Microsoft/Office version #/Office Font Cache

⚠ Enabling this may cause problems with system fonts displaying unless a restart option is configured.

□ Verify Startup Disk

48. Click Scope and configure the following:
A. Select Targets
B. Target Computers: All Computers
C. Click Save
D. Click Policies

NOTE: This guide is selecting All Computers for simplicity. If you don't want to run an inventory update each time a Mac computer starts up, then scope to your needs.



Computers : Policies
← New Policy

Options | Scope | Self Service | User Interaction

Targets | Limitations | Exclusions

Target Computers
Computers to deploy the policy to
All Computers

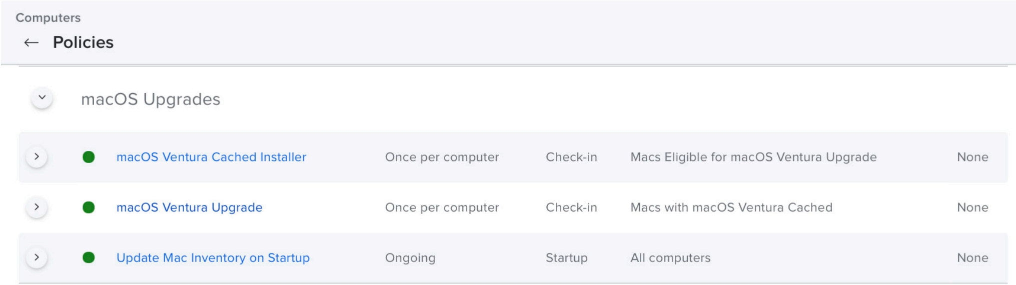
Target Users
Users to deploy the policy to
Specific Users

Selected Deployment Targets + Add

TARGET	TYPE
No Targets	

Cancel Save

49. Confirm that you see all three policies that we created with the correct triggers and scope.



Computers

← Policies

macOS Upgrades

●	macOS Ventura Cached Installer	Once per computer	Check-in	Macs Eligible for macOS Ventura Upgrade	None
●	macOS Ventura Upgrade	Once per computer	Check-in	Macs with macOS Ventura Cached	None
●	Update Mac Inventory on Startup	Ongoing	Startup	All computers	None

This completes this section.

Section 4: Upgrade to macOS Ventura

What You'll Need

Learn what hardware, software, and information you'll need to complete the tutorials in this section.

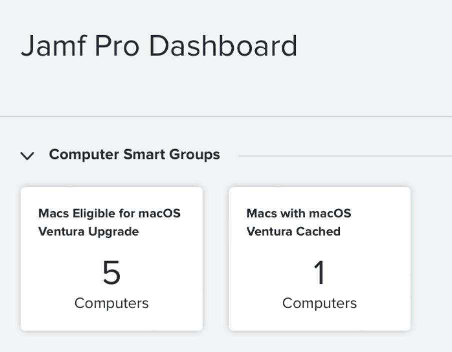
Hardware and Software

Requirements for following along with this section:

- A Mac computer enrolled in your Jamf Pro server that is NOT running macOS Ventura 13.5.1
- Administrative access to your Jamf Pro server.

In this section we will upgrade a Mac computer to macOS Ventura 13.5.1.

Please use a NON production Mac computer when testing the steps in this guide. Depending on your network speed, it can take up to 45 minutes to cache the macOS Ventura installer to your local Mac. You cannot follow the steps in this section until the macOS Ventura installer is cached to your local Mac. To find out if your Mac computer has macOS Ventura cached, log into your Jamf Pro server and look at the Macs with macOS Ventura Cached smart computer group on the dashboard. If your Mac computer shows up in the list, you are good to proceed with the steps in this section.



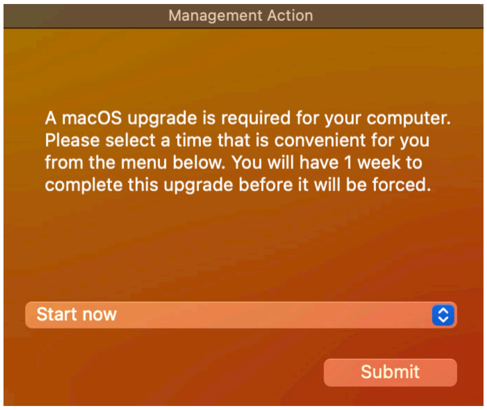
Jamf Pro Dashboard

Computer Smart Groups

Macs Eligible for macOS Ventura Upgrade: 5 Computers

Macs with macOS Ventura Cached: 1 Computers

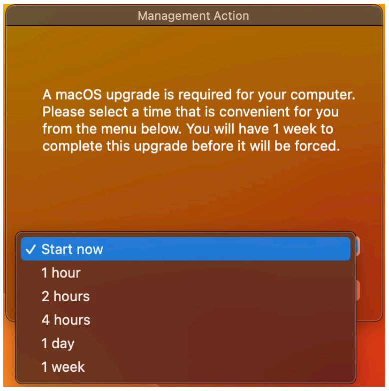
1. Log into a non production Mac computer that is enrolled in jamf and NOT running macOS Ventura 13.5.1
2. You will be presented with the screen below the next time your Mac computer checks in with your Jamf Pro server. You will only see this message if your Mac computer has the macOS installer cached locally.



Management Action

A macOS upgrade is required for your computer. Please select a time that is convenient for you from the menu below. You will have 1 week to complete this upgrade before it will be forced.

3. You have a few options in the menu. You can defer this policy from running, up to 7 days (1 Week). After the 7th day, it will be a forced upgrade. Select Start now and click Submit

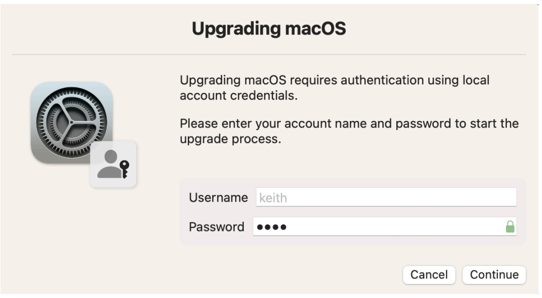


Management Action

A macOS upgrade is required for your computer. Please select a time that is convenient for you from the menu below. You will have 1 week to complete this upgrade before it will be forced.

4. If you're using a Mac computer with Apple Silicon, you will be presented with the screen below. Enter your password and click Continue.

   NOTE: If you're running a Mac Computer with an Intel processor, you will not see this message. You can pass credentials in base64 format to avoid seeing this message on Macs with Apple Silicon. The password is sent in clear text so be careful when using this method. See section 3 step 22 of this guide for more details on passing in the credentials.



Upgrading macOS

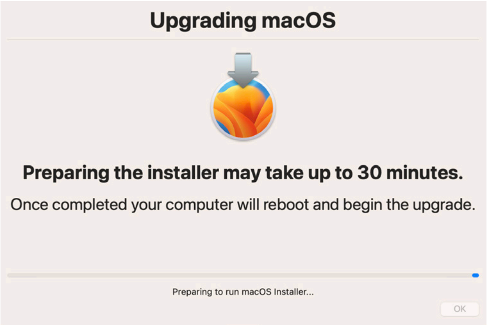
Upgrading macOS requires authentication using local account credentials.

Please enter your account name and password to start the upgrade process.

Username keith

Password ••••

5. The upgrade process will take over the entire screen. It can take 30 minutes or more to complete depending on your network speed.



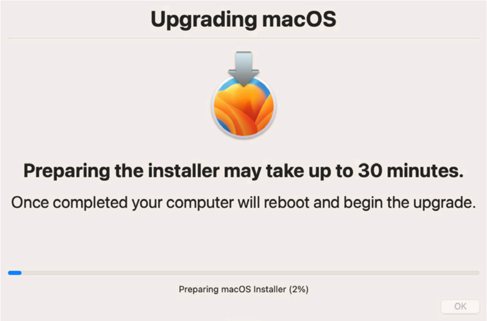
Upgrading macOS

Preparing the installer may take up to 30 minutes.

Once completed your computer will reboot and begin the upgrade.

Preparing to run macOS Installer...

6. A progress bar will show the percentage completed. Once done, your Mac computer will reboot and continue processing the upgrade.
7. Once the computer has returned to the login window, log in.



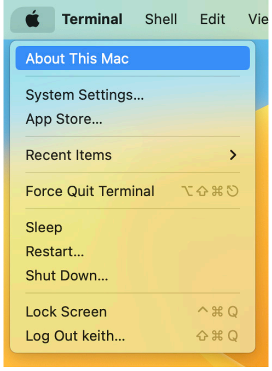
Upgrading macOS

Preparing the installer may take up to 30 minutes.

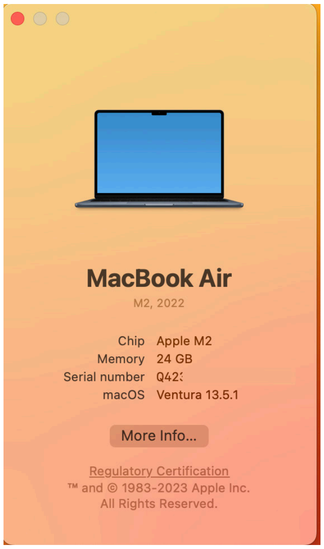
Once completed your computer will reboot and begin the upgrade.

Preparing macOS Installer (2%)

8. Log into your Mac Computer.
9. Click the Apple menu () in the top-left corner, select About This Mac.



10. Confirm your Mac computer is running macOS Ventura 13.5.1



MacBook Air

M2, 2022

Chip Apple M2
Memory 24 GB
Serial number Q42
macOS Ventura 13.5.1

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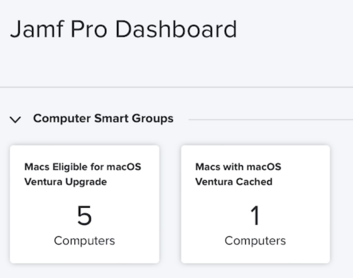
11. Log into your Jamf Pro server. Confirm your Mac computer no longer shows up in the smart computer groups we created in section 2 of this guide. The pictures below show the smart computer groups before and after the macOS Ventura Upgrade.

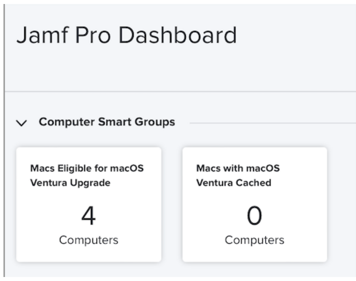


Jamf Pro Dashboard

Computer Smart Groups

Macs Eligible for macOS Ventura Upgrade
5
Computers

Macs with macOS Ventura Cached
1
Computers



Jamf Pro Dashboard

Computer Smart Groups

Macs Eligible for macOS Ventura Upgrade
4
Computers

Macs with macOS Ventura Cached
0
Computers

This completes the guide.

Addendum

Install Locations

- erase-install is located in: /Library/Management/erase-install
- mist-cli is located at: /usr/local/bin/mist
- swiftDialog is located in: /usr/local/bin/dialog and /Library/Application\Support/Dialog/Dialog.app

erase-install Log Location

The erase-install log file is located in: /Library/Management/erase-install/log

Helper Scripts

erase-install-launch-script-example.sh
https://github.com/grahampugh/erase-install/blob/main/erase-install-launch-script-example.sh

This script is an example of how you can launch erase-install from another script when deploying the standard macOS package of erase-install from within Jamf Pro. You can simply add this script to the "Scripts" section of a Jamf Pro policy, which will in turn launch erase-install.sh with all supplied parameters and return its output and return code back to Jamf Pro. The command in the script can be exactly the same as what was added in Section 3, Point 32 of this guide. The advantage of using a launch script over an Execute Command is that if the script fails, this will be reported back to Jamf Pro as a failed policy, whereas Execute Commands always exit as if the command was successful.

set-credentials.sh
https://github.com/grahampugh/erase-install/blob/main/set-credentials.sh

This script can be used to generate the base64-encoded credentials for use with Apple Silicon Mac computers. You can alternatively use the following shell command to get the same result as the set-credentials.sh script:

```
printf "%s:%s" "<USERNAME>" "<PASSWORD>" | iconv -t ISO-8859-1 | base64 -i -
```

Example: `printf "%s:%s" "hcs" "hcs1234" | iconv -t ISO-8859-1 | base64 -i -`

Available options for erase-install

Standard options for list, download, reinstall and erase	
`--list`	List available updates only. It does not download anything
`[no flags]`	Finds the latest compatible production version of macOS, downloads it.
`--reinstall`	After download, reinstalls macOS without erasing the current system.
`--erase`	After download, erases the current system and reinstalls macOS.
`--confirm`	Displays a confirmation dialog prior to erasing or reinstalling macOS.
`--check-power`	Checks for AC power if set.
`--power-wait-limit NN`	Maximum seconds to wait for detection of AC power, if --check-power is set. Default is 60.
`--check-fmm`	Prompt the user to disable Find My Mac before proceeding, when using --erase
`--fmm-wait-limit NN`	Maximum seconds to wait for removal of Find My Mac, if --check-fmm is set. Default is 300.
`--rebootdelay NN`	Delays the reboot after preparation has finished by NN seconds (max 300) (--reinstall option only). If set to greater than 10 seconds, the normal fullscreen dialog during the preparation phase is replaced with a smaller dialog, so the user can continue to work. The user is given a countdown once preparation is complete and the reboot delay has begun.

Options for filtering which installer to download/use	
`--os X.Y`	Finds a specific inputted OS version of macOS if available and downloads it if so. Will choose the latest matching build.
`--version X.Y.Z`	Finds a specific inputted minor version of macOS if available and downloads it if so. Will choose the latest matching build.
`--build XYZ`	Finds a specific inputted build of macOS if available and downloads it if so.
`--sameos`	Finds the version of macOS that matches the existing system version, downloads it. Most useful with --erase.
`--samebuild`	Finds the build of macOS that matches the existing system version, downloads it. Most useful with --erase.
`--update`	Checks that an existing installer on the system is still the most current compatible build, and if not, it will delete it and download the current installer, within the limits set by --os or --version.
`--replace-invalid`	Checks that an existing installer on the system is still valid i.e. would successfully build on this system. If not, deletes it and downloads the current installer, within the limits set by --os or --version.
`--overwrite`	Delete any existing macOS installer found in /Applications and download the current installer within the limits set by --os or --version.
`--clear-cache-only`	When used in conjunction with --overwrite, --update or --replace-invalid, the existing installer is removed but not replaced. This is useful for running the script after an upgrade to clear the working files.
`--cleanup-after-use`	Creates a LaunchDaemon to delete /Library/Management/erase-install after use. Mainly useful in conjunction with the --reinstall option.

Extra packages --eraseinstall can install packages after the new installation. By default, erase-install.sh will look for packages in /Library/Management/erase-install/extras.	
`--extras /path/to`	Overrides the path to search for extra packages

Parameters for use with Apple Silicon Mac Note that startosinstall requires user authentication on AS Mac. The user must have a Secure Token. This script checks for the Secure Token of the supplied user. A dialog is used to supply the password, so this script cannot be run at the login window or from remote terminal.	
`--max-password-attempts NN | infinite`	Overrides the default of 5 attempts to ask for the user's password. Using 'infinite' will disable the Cancel button and keep asking until the password is successfully verified.

Advanced options	
-newvolumename	If using the --erase option, lets you customize the name of the clean volume. Default is ‘Macintosh HD’.
--preinstall-command ‘some arbitrary command’	Supply a shell command to run immediately prior to startosinstall running. An example might be ‘jamf recon -department Spare’. Ensure that the command is in quotes.
--postinstall-command ‘some arbitrary command’	Supply a shell command to run immediately after startosinstall completes preparation, but before reboot. An example might be ‘jamf recon -department Spare’. Ensure that the command is in quotes.
--catalog NN	Override the default catalog with one from a different OS (overrides --seed/--seedprogram).
--catalogurl https://...	Select a non-standard catalog URL (overrides --seed/--seedprogram).
--caching-server https://...	Set mist-cli to use a Caching Server, specifying the URL to the server.
--pkg	Creates a package from the installer. Ignored if --move, --erase or --reinstall is selected. Note that mist takes a long time to build the package from the complete installer, so this method is not recommended for normal workflows.
--move	Extracts the installer to /Applications from a cached macOS installer package.
--keep-pkg	Retains a cached package if --move is used to extract an installer from it.
--fs	Uses full-screen windows for all stages, not just the preparation phase.
--no-fs	Replaces the full-screen dialog window during the preparation phase with a smaller dialog, so you can still access the desktop while the script runs.
--beta	Include beta versions in the search. Works with the no-flag (i.e. automatic), --os and --version arguments.
--path /path/to	Overrides the destination of --move to a specified directory
--min-drive-space	Override the default minimum space required for startosinstall to run (45 GB).
--no-curl	Prevents the download of swiftDialog or mist in case your security team don’t like it.
--no-timeout	The script will normally timeout if the installer has not successfully prepared after 1 hour. This extends that time limit to 1 day.

Experimental features	
`--fetch-full-installer | --ffi | -f`	Obtain the installer using 'softwareupdate --fetch-full-installer' method instead of using mist.
`--list`	List installers using 'softwareupdate --list-full-installers' when called with --fetch-full-installer
`--seed ...`	Select a non-standard seed program. This is only used with --fetch-full-installer options. Note: as this relies on 'seedutil', it no longer works with macOS 13.4 and above.
`--kc`	Keychain containing a user password (do not use the login keychain!!)
`--kc-pass`	Password to open the keychain. Note that this is still insecure since it's not possible to separate access between the keychain and the password.
`--kc-service`	The name of the key containing the account and password
`--credentials`	A base64 credential set. Only works in conjunction with --very-insecure-mode
`--very-insecure-mode`	Sends the credential password in plain text. This is very insecure. Use at your own risk.
`--silent`	Silent mode. No dialogs. Requires use of keychain for Apple Silicon to provide a password, or the --credentials mode.
`--quiet`	Remove output from mist during installer download. Note that no progress is shown.
`--preservecontainer`	Preserves other volumes in your APFS container when using --erase
`--set-securebootlevel`	Resets Secure Boot Level to High when using --erase
`--clear-firmware`	Clears the firmware NVRAM variables when using --erase

Parameters useful in testing this script	
`--test-run`	Run through the script right to the end, but do not actually run the 'startosinstall' command. The command that would be run is shown in stdout.
`--workdir /path/to`	Supply an alternative working directory. The default is the same directory in which erase-install.sh is saved.
`--cache-downloads`	Caches mist downloads in a temporary directory in /private/tmp/com.ninxsoft.mist Useful when running repeated tests.