jamf | CONNECT

Azure

How to Configure
Jamf Connect with Microsoft Azure

HCS TECHNOLOGY GROUP

Contents

This guide was written using the following:

1. Microsoft Azure free trial account
2. Jamf Pro server 10.30.3
3. Jamf Connect version 2.4
4. Packaging Software of your choosing. This guide will use Composer
5. A Mac computer running macOS Big Sur 11.4 enrolled into a Jamf Pro server
6. A code signing certificate.

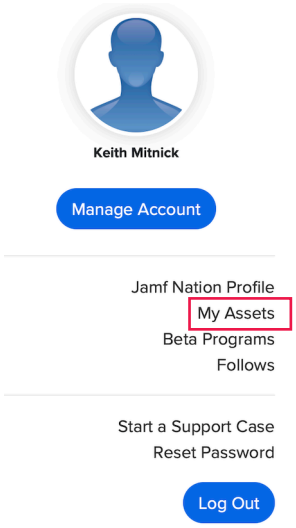
Special Thanks to the following people who assisted with this guide:

- The team at HCS
- Bill Smith
- Erin McDonald
- Paul Smith
- Sean Rabbitt

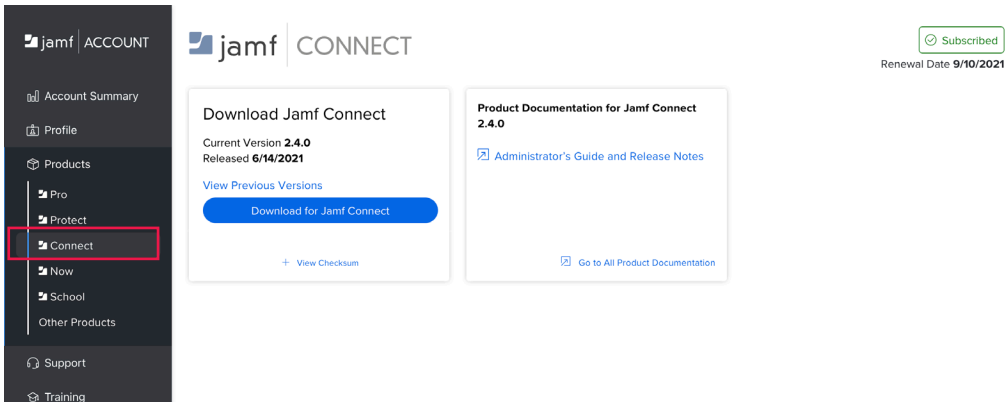
Prerequisites:
Before you begin this guide, you need to have the latest version of Jamf Connect which is 2.4 at the time this guide was written. Obtain your licensed version of Jamf Connect from your Jamf Nation account by following the instructions below.

NOTE: you can also download a demo of Jamf Connect from: https://jamf.it/connectinstall

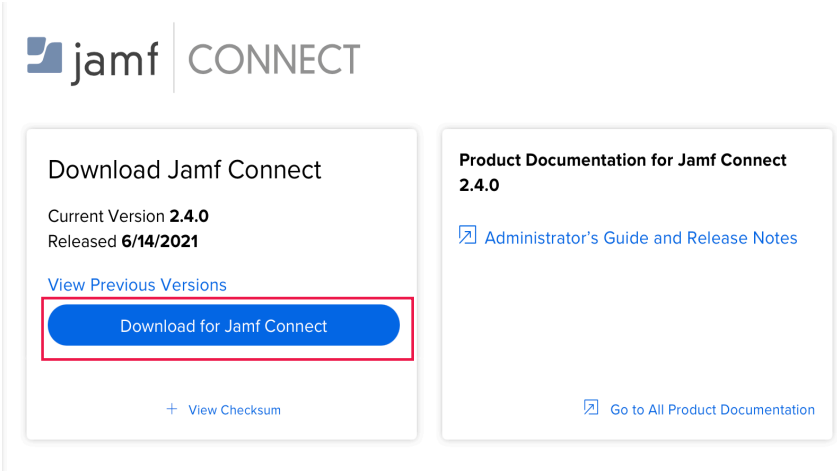
1. Log in with your Jamf ID for your Jamf Nation account at: https://www.jamf.com/jamf-nation/. Select the account icon in the upper right corner and select My Assets.



2. Under Products, select Connect

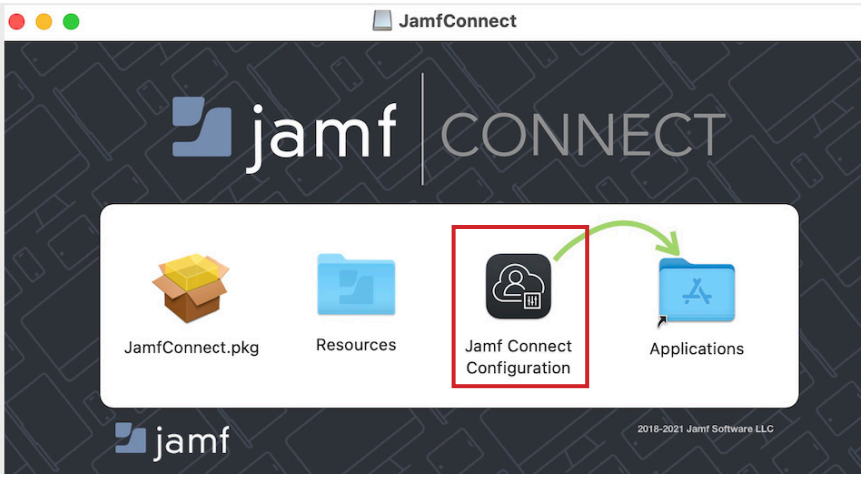


3. Click Download For Mac.



4. Once the download is completed, Open the JamfConnect-2.4.0.dmg.

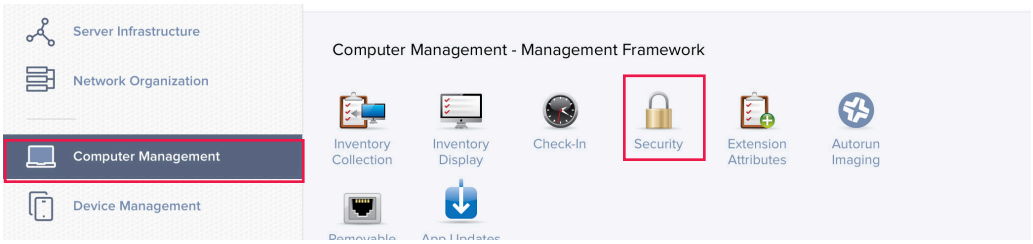
5. Copy the Jamf Connect Configuration app to the Applications folder.
Keep the JamfConnect-2.4.0.dmg as we will need it later on in the guide.



6. We will pre-configure the Jamf Pro server to allow Jamf Connect to enable FileVault and to pre approve notifications from Jamf Connect. Log into your Jamf Pro server.

7. Click Settings (looks like a gear) in the upper left-hand corner.

8. Click Computer Management, then click Security.

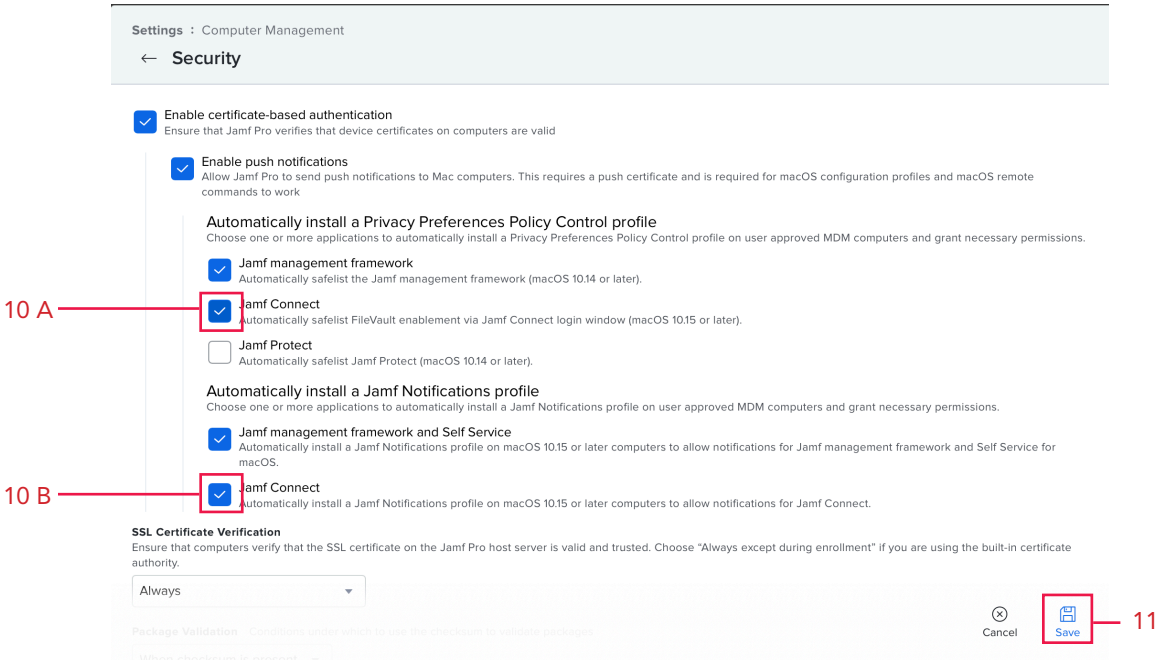


9. Select Edit at the bottom-right.

10. Enable the following checkboxes:
    A. In the Automatically Install a Privacy Preferences Policy Control profile section, enable Jamf Connect.
    B. In the Automatically Install a Jamf Notification Profile section, enable Jamf Connect.

    By enabling both of these settings for Jamf Connect, it will allow us to use Jamf Connect to Enable FileVault and auto approve any notifications for Jamf Connect.

11. Click Save.



Section 1: Create a code signing certificate using Jamf Pro's CA

We will use a code signing certificate to sign the Jamf Connect configuration profiles that we create later in this guide.

Why sign a configuration profile?

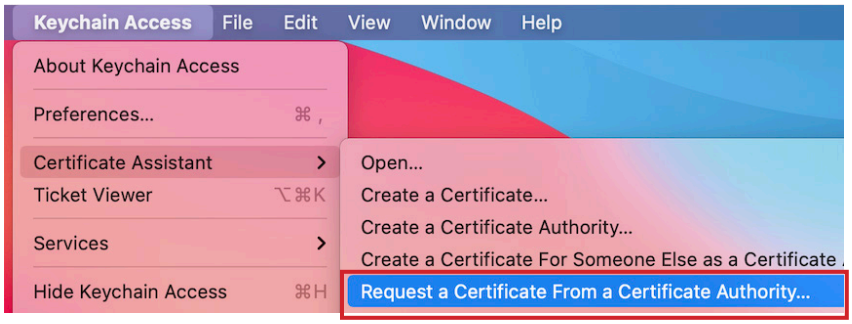
Jamf Pro attempts to import all file's values to associate with known settings within the Jamf Pro console and allow further editing. If the<PayloadType> or specific <key> values in the profile are unknown to Jamf Pro, the deployed configuration profile may not contain those values or install correctly.To avoid this, we can sign the configuration profile and upload it to Jamf Pro. When a configuration profile is signed, Jamf Pro will simply label it as a read only profile because it cannot be altered once signed. Another way to get all the settings you need to deploy from Jamf Pro is to upload a plist file. You can manually create a PLIST file that defines the properties for the preference domain you specify in Jamf Pro, and upload the PLIST file directly to Jamf Pro. This guide will focus on signing a configuration profile and creating a code signing certificate using Jamf Pro's Built in CA. If you already have a signing certificate, you can skip this section of the guide.

NOTE: When creating a code signing certificate using your Jamf Pro server, make sure to follow the steps in this guide on a Mac computer that is enrolled in Jamf Pro. Failure to do so will result in a code signing certificate that is not trusted.

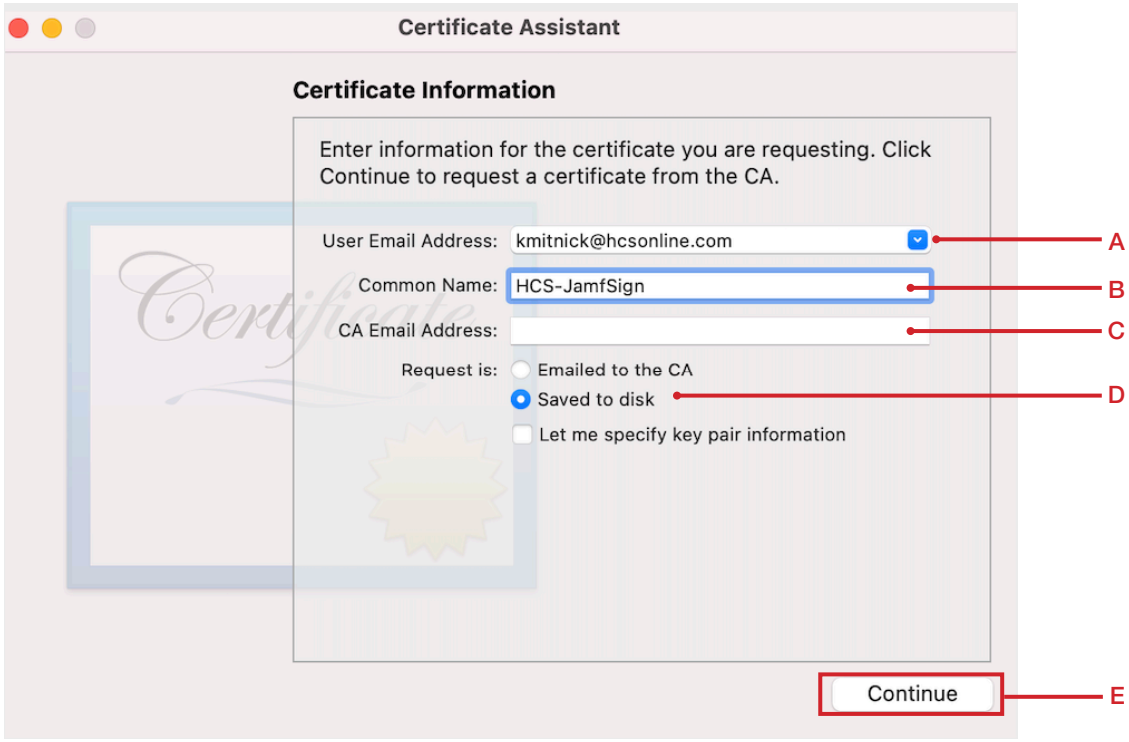
1. Open Keychain Access located in /Applications/Utilities.

Keychain Access

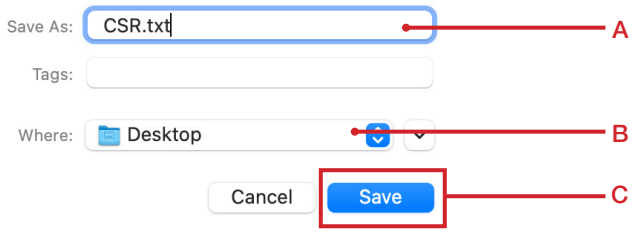
2. Select Keychain Access > Certificate Assistant > Request a Certificate From a Certificate Authority.



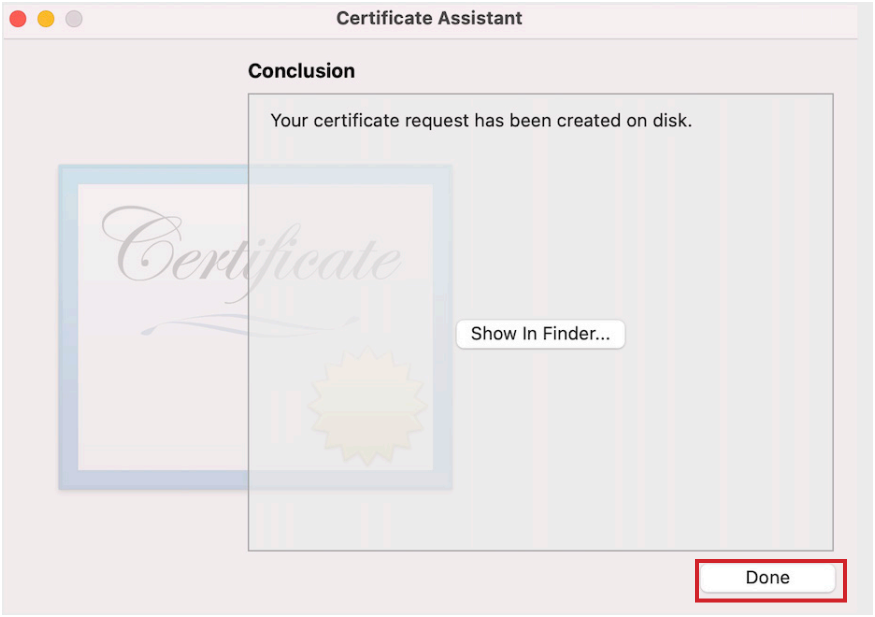
3. Configure the following:
   A. User Email Address: Enter your email address
   B. Common Name: Enter your company name. This guide will use HCS-JamfSign
   C. CA Email Address: Leave this blank.
   D. Request is: Saved to Disk.
   E. Click Continue.



4. Configure the following:
   A. Save as: CSR.txt
   B. Where: Desktop
   C. Click Save.



5. Click Done.

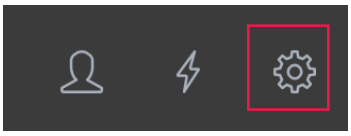


6. Open the CSR.txt file on your desktop with a text editor of your choice. This guide will use TextEdit.

7. Copy the entire CSR text.

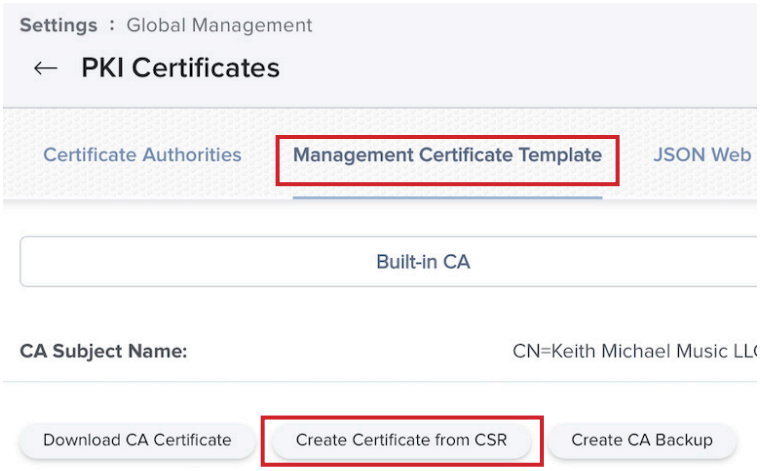
8. Log into your Jamf Pro server.

9. Select the Gear in the upper right corner.



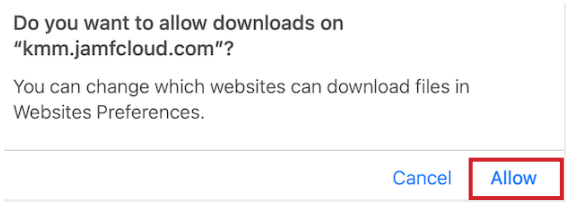
10. Click Global Management then click PKI Certificates.

11. Select Management Certificate Template, then select Create Certificate from CSR.



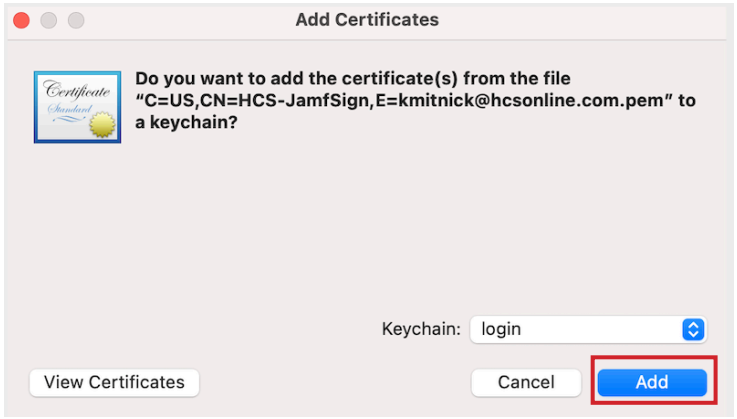
12. Configure the following:
    A. Paste in the CSR text that you copied in step 7.
    B. Certificate Type: Web Server Certificate
    C. Click Create.

13. Select Allow at the message below.
    NOTE: After downloading the file your web browser may need to be refreshed to properly display things in Jamf Pro.

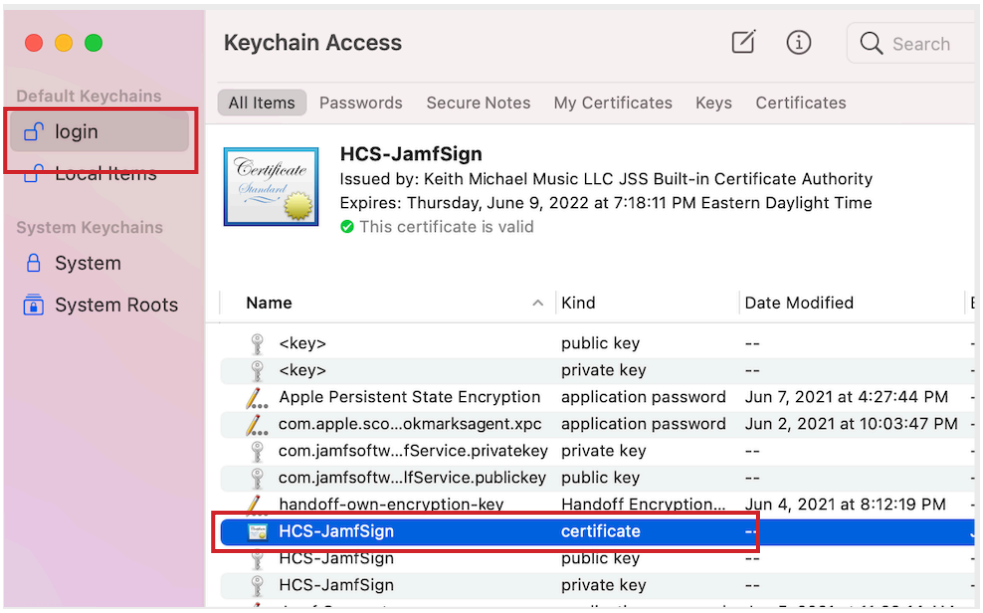


14. The certificate will download to your Downloads folder. Drag the certificate to your desktop and double click it to open it.

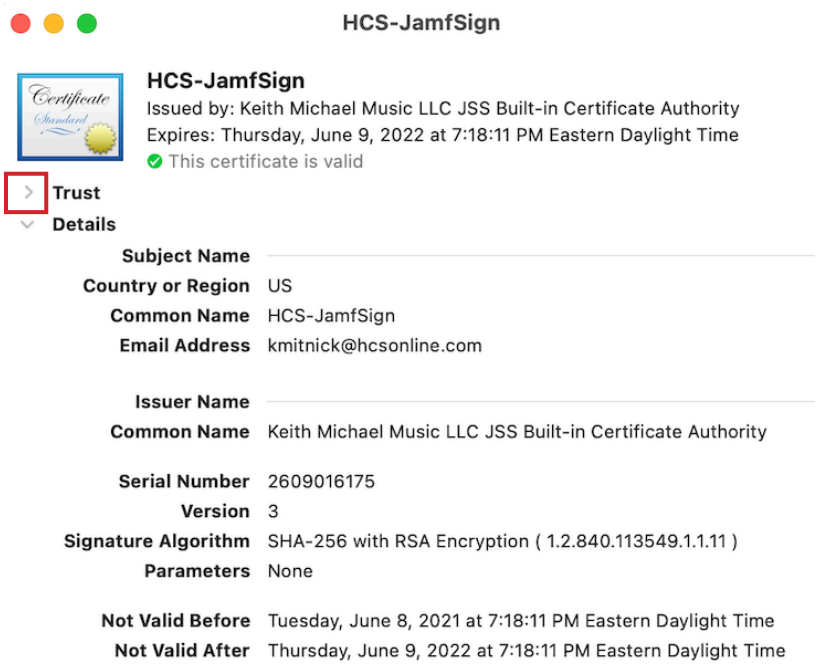
15. Select login from the Keychain dropdown menu then click Add.



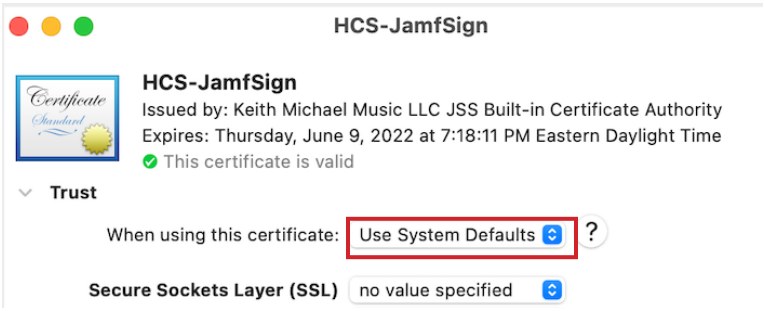
16. In Keychain Access select your login keychain, you will see the certificate on the right side. Double click on your certificate to see more settings.



17. Expand the Trust tab to view the settings.

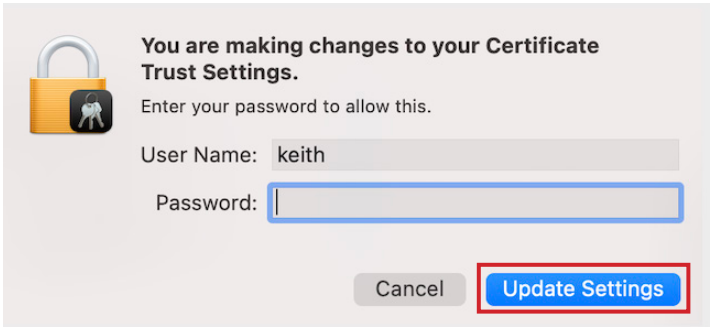


18. Click the menu, When using this certificate.

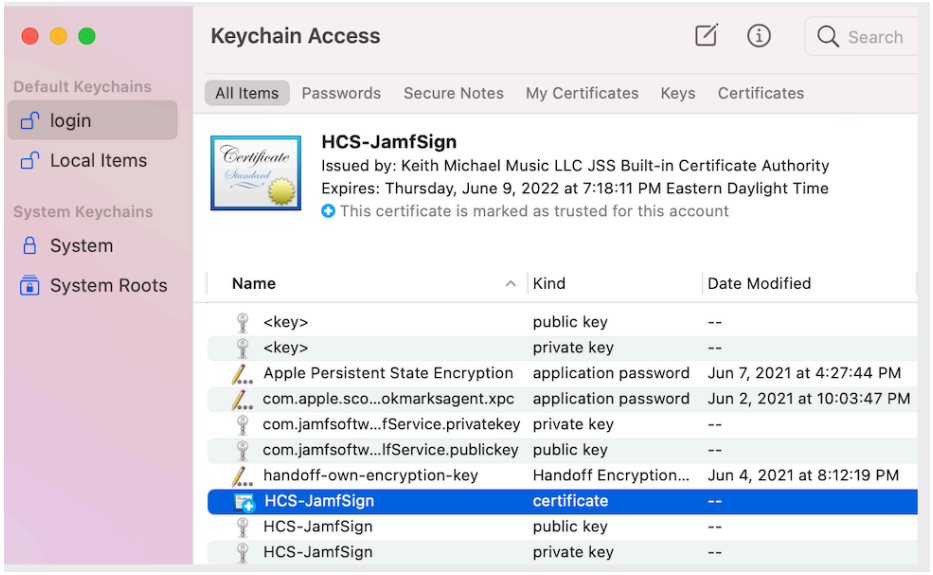


19. Select Always Trust. Close the window.

20. Enter your administrative credentials at the message below then click Update Settings.



21. The certificate shows up as trusted. Quit Keychain Access.



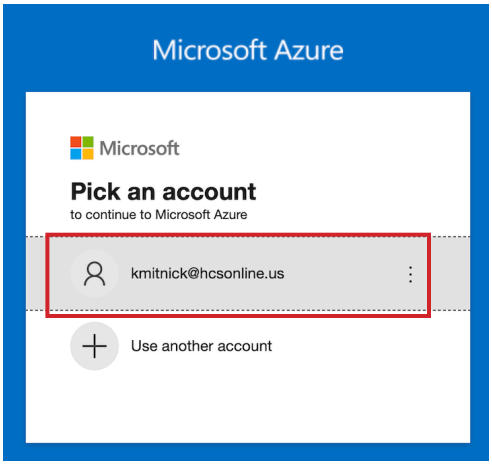
This completes this section.

Section 2: Create users and Groups in Microsoft Azure

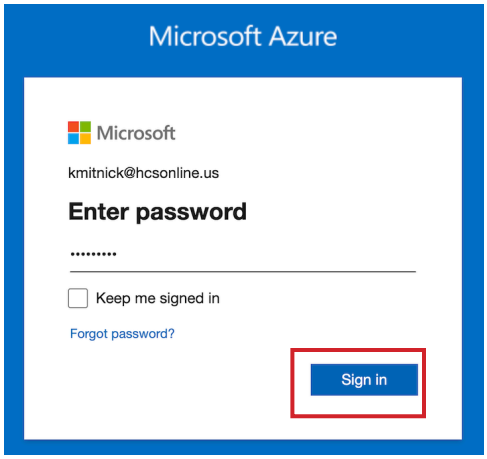
In this section we will create users and group in Microsoft Azure.

NOTE: Skip to Section 3, if you already have Users and Groups configured in your Azure portal.

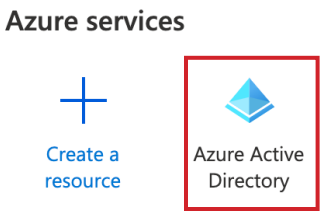
1. From a web browser of your choosing, go to https://portal.azure.com and enter a user name with appropriate privileges to manage the domain



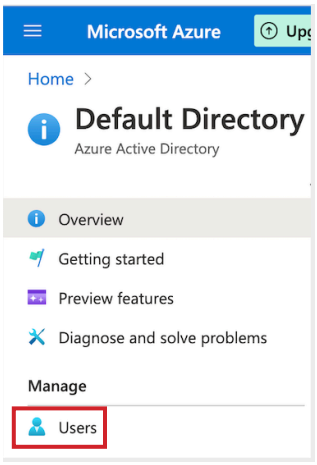
2. Enter your password and click Sign in.



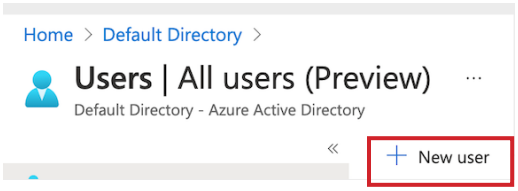
3. Select Azure Active Directory.



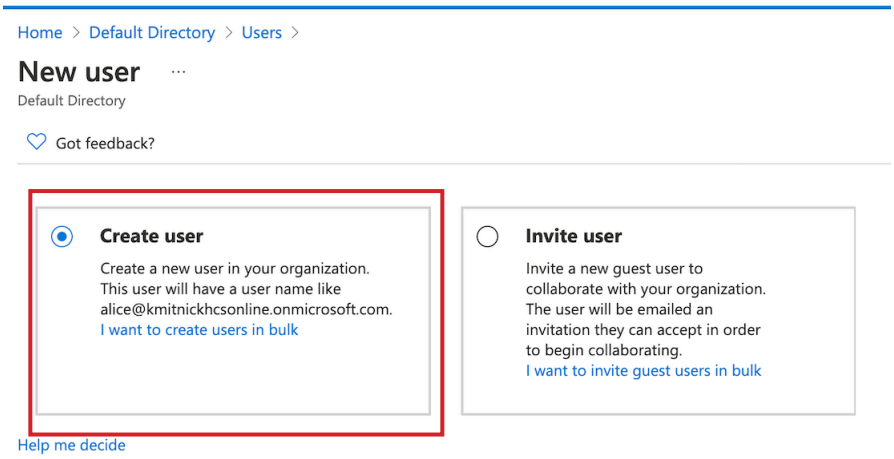
4. From the sidebar, under Manage, select Users.



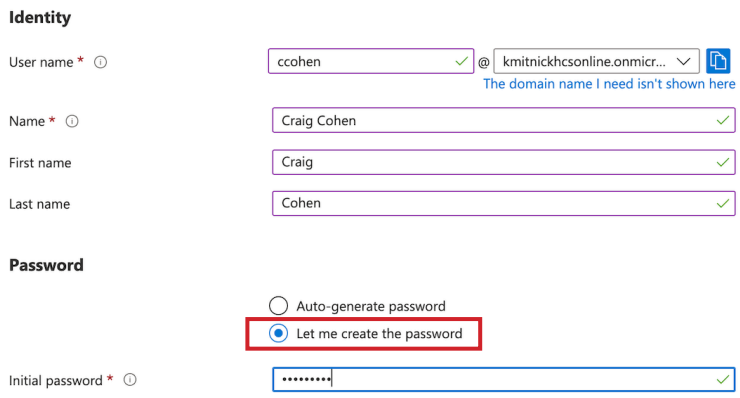
5. Click New User.



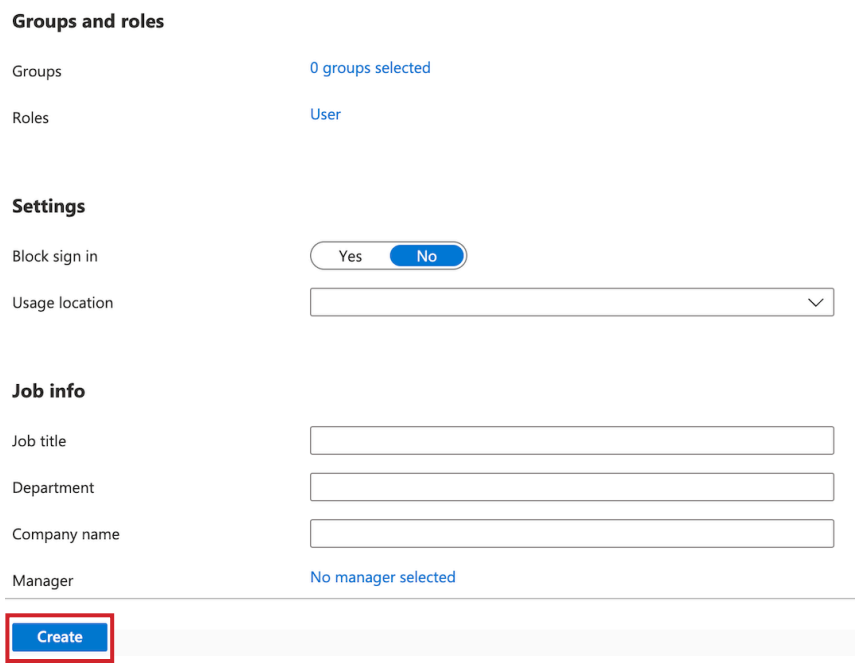
6. Select Create User.



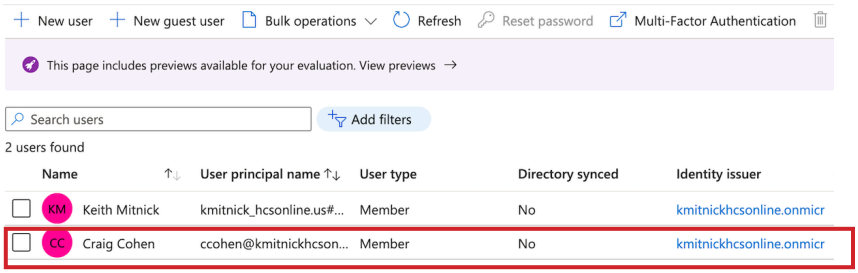
7. In the Identity section, enter your user information. In the Password section, select Let me create the password and enter a password of your choosing.



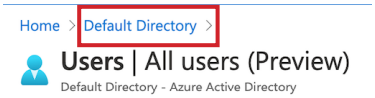
8. Leave all other sections at their default settings then click the Create button.



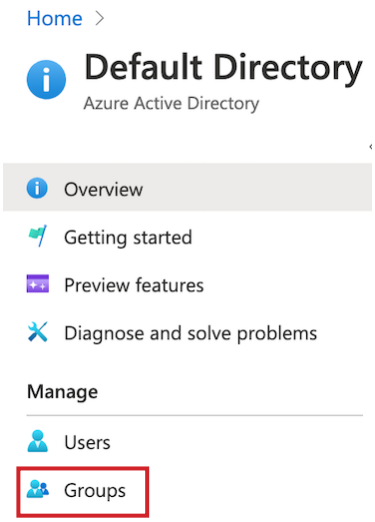
9. You will see the user you created show up in the list.



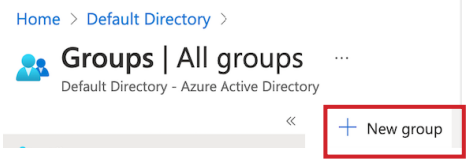
10. In the upper-right corner click the Default Directory link.



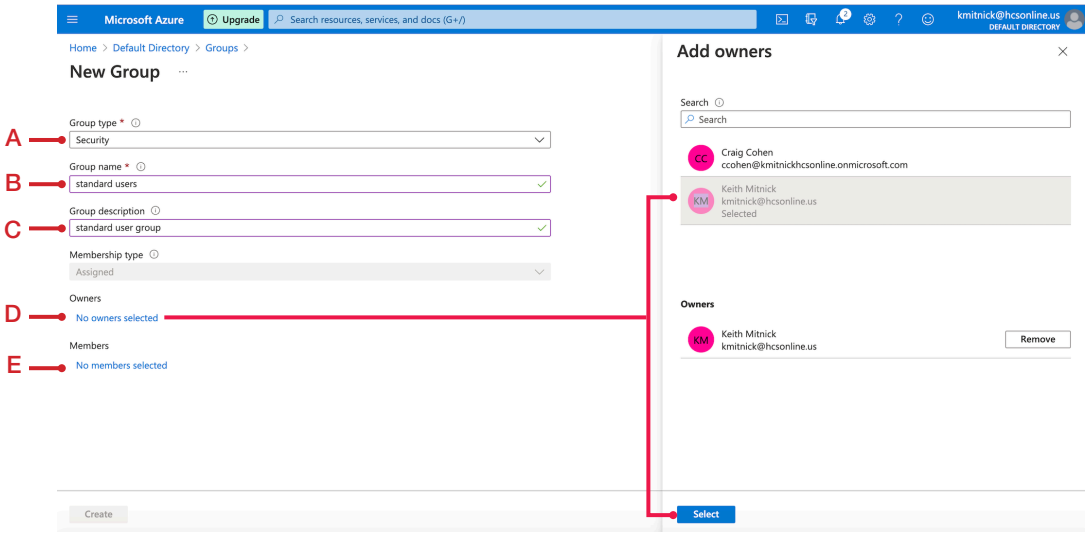
11. From the sidebar, select Groups.



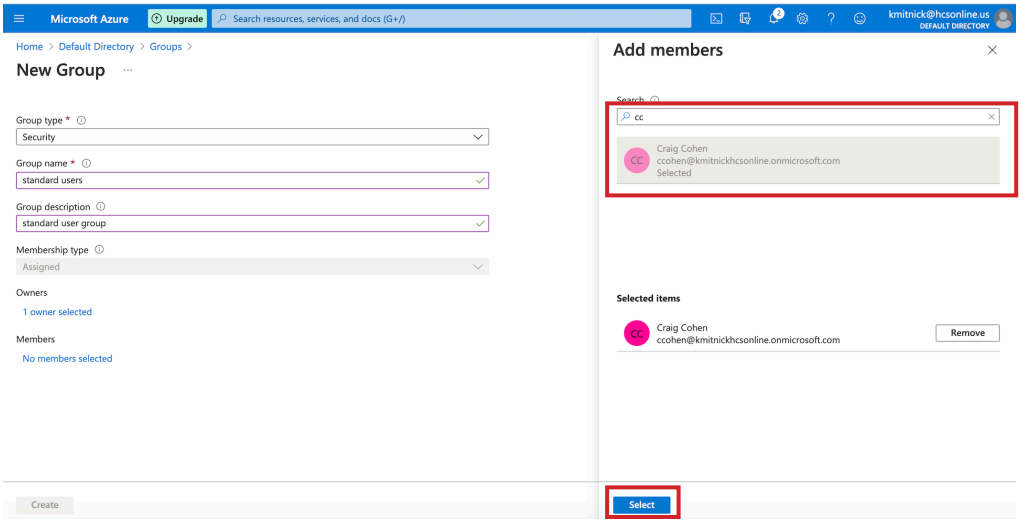
12. Click New group.



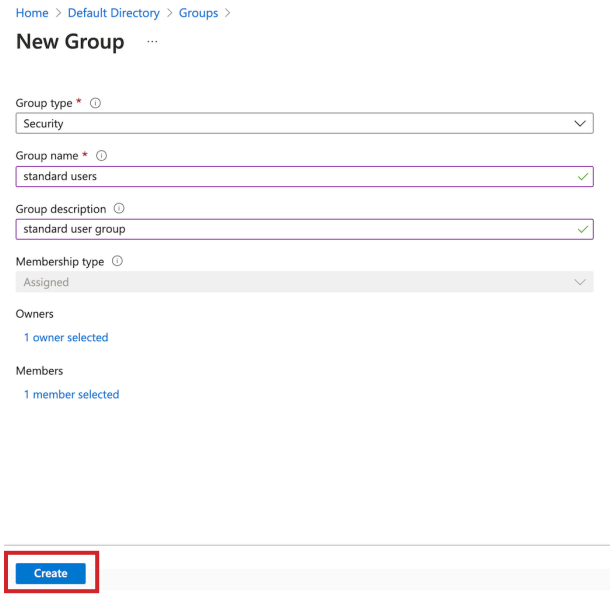
13. Enter the following:
    A. Group type: Select Security
    B. Group name: standard users
    C. Group Description: standard user group
    D. Click the No owners selected link, then in the Add owners section search for a user and select that user.
    E. Click the No members selected link



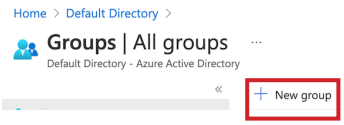
14. In the Add owners section search for a user and select that user.



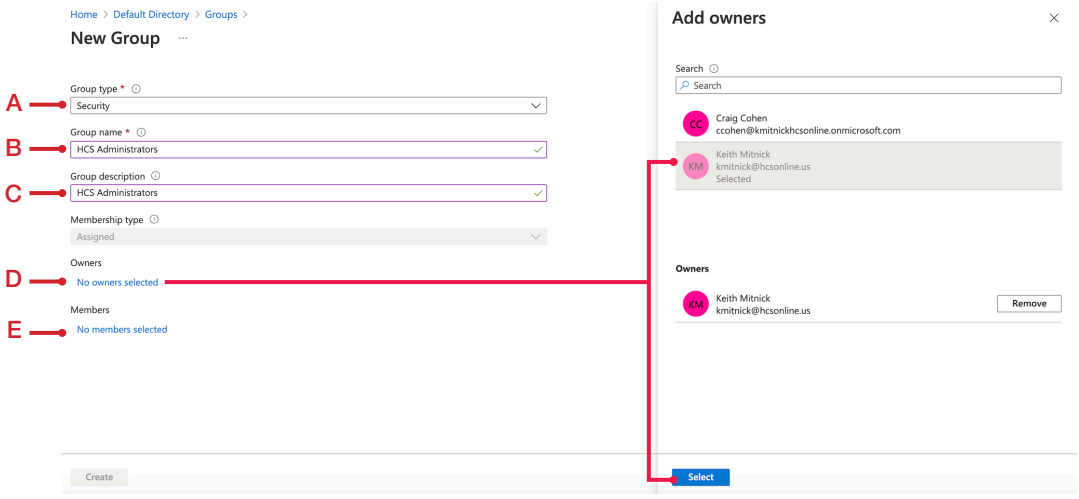
15. Click the create button.



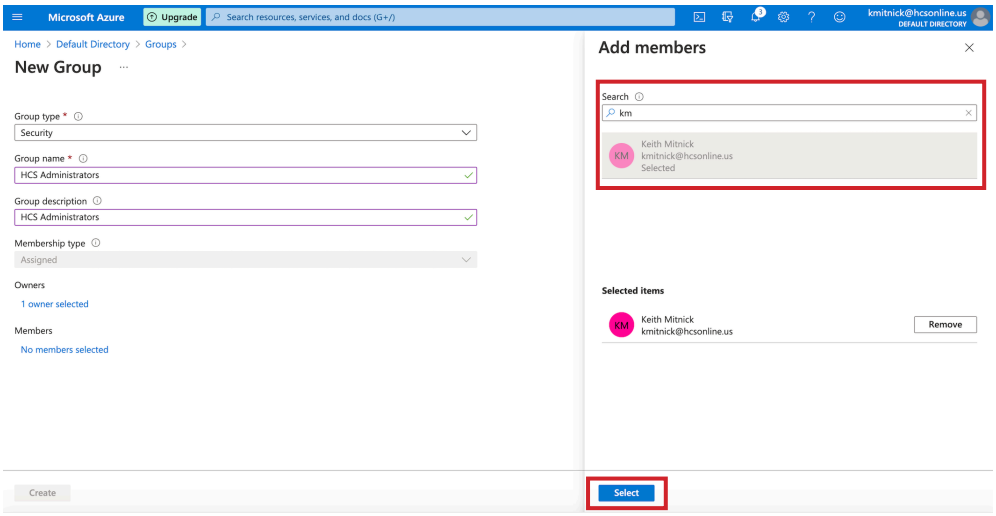
16. Select New group.



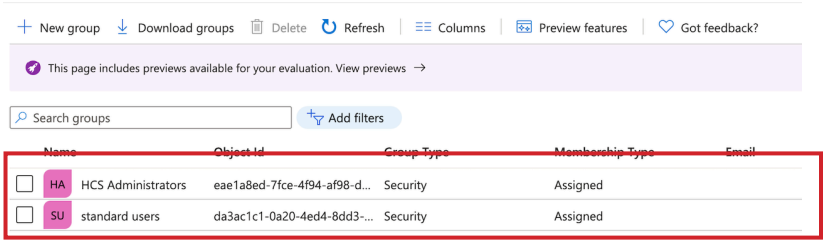
17. Enter the following:
    A. Group type: Select Security
    B. Group name: HCS Administrators
    C. Group Description: HCS Administrators
    D. Select the No owners selected link, then in the Add owners section search for a user and select that user.
    E. Select the No members selected link,



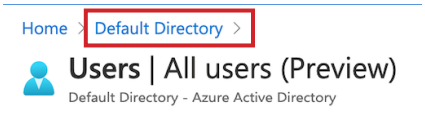
18. In the Add owners section search for a user and select that user.



20. You will see both groups configured.
    NOTE: Jamf Connect can create user accounts on a Mac Computer based on the role assigned to the user in Azure. IE.. Admin or standard user. You could ignore the role assigned in Azue by selecting Ignore Roles in your Jamf Connect Login profile.



21. In the upper-right corner click the Default Directory link.

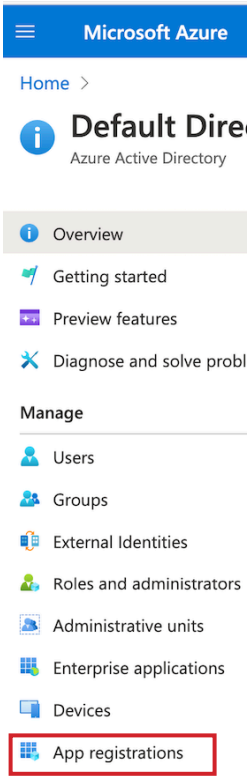


This completes this section.

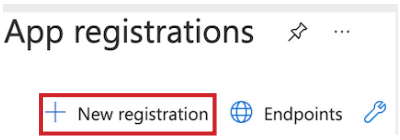
Section 3: Create App Registrations in Microsoft Azure

In this section we will create an App Registration for Jamf Connect in Microsoft Azure. This is required so Jamf Connect can speak with Microsoft Azure via API's.

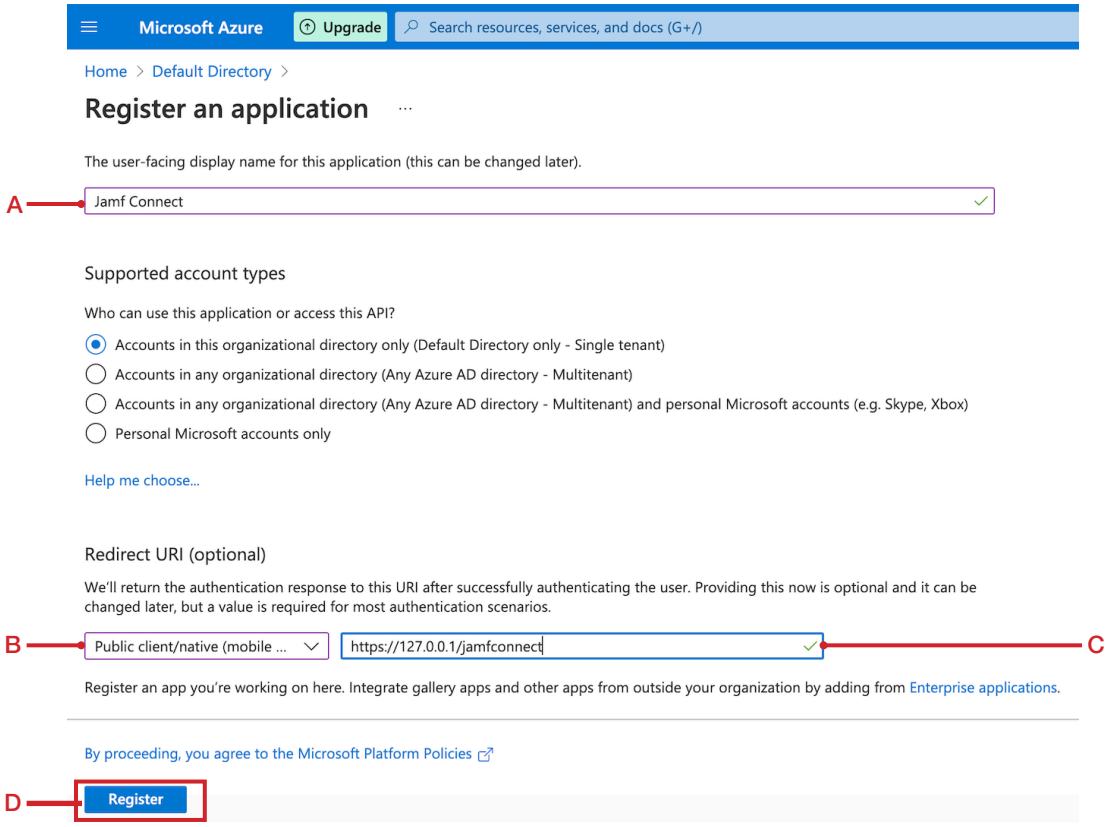
1. From the sidebar, select App registrations.



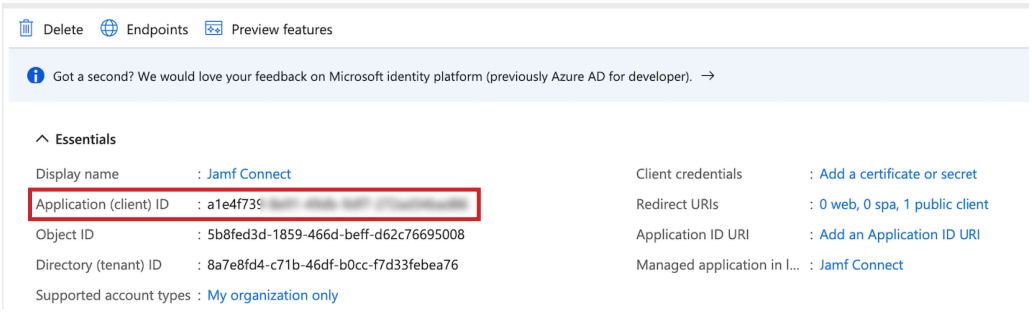
2. Select New registration.



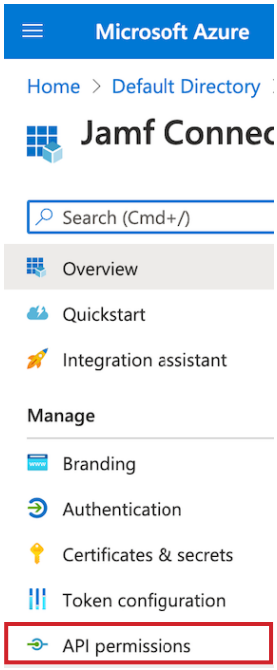
3. Enter the following:
   A. The user-facing display name: **Jamf Connect**
   B. Redirect URI: Select Public client/native (mobile & desktop)
   C. Enter this URI: **https://127.0.0.1/jamfconnect**
   D. Click the Register button.



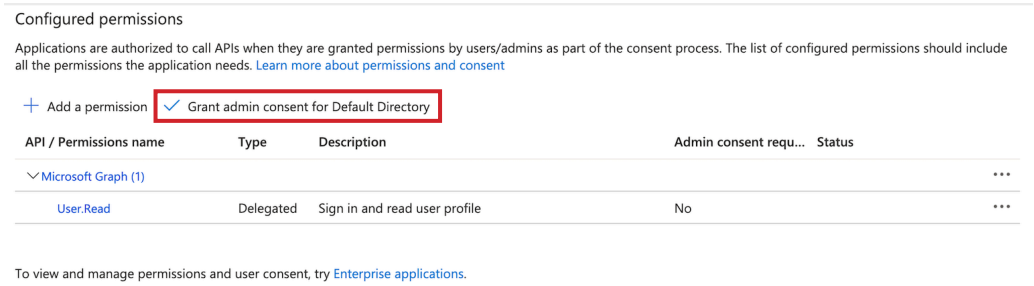
4. Copy the Application (client) ID and paste it into a sticky note on your desktop.
   We will need this ID in a later step.



5. From the sidebar, select API permissions.

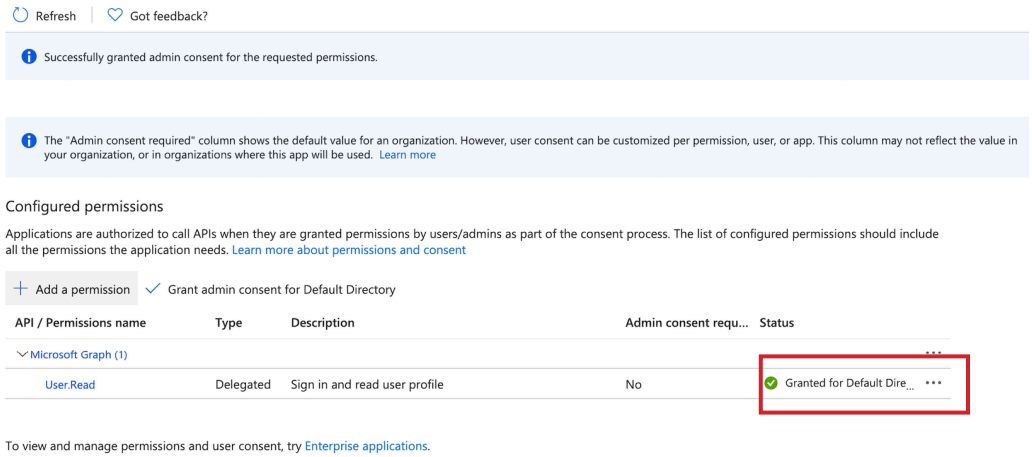


6. Select Grant admin consent for Default Directory.

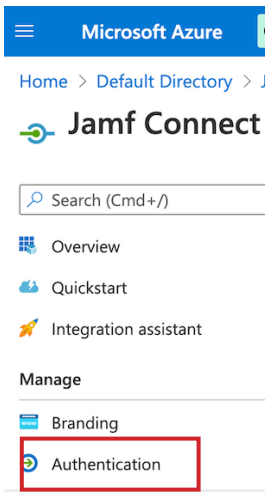


7. Click Yes.

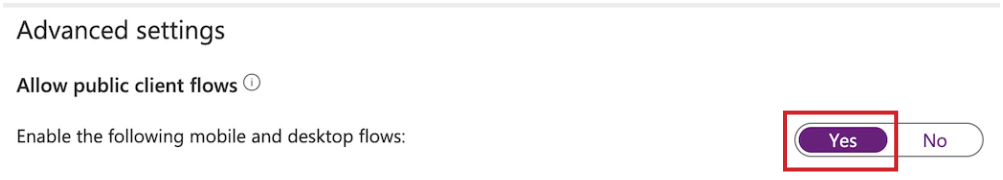
8. in the status column, it will say Granted for Default Directory.



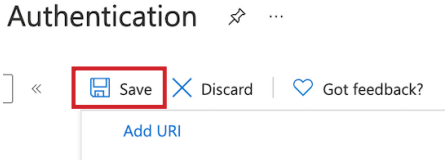
9. Select Default Directory, then select Authentication.



10. In the Advanced settings section, Set Allow public client flows to Yes.



11. Click Save. This completes the Microsoft Azure configuration.



Section 4: Test Connection to Microsoft Azure Using the Jamf Connect Configuration App

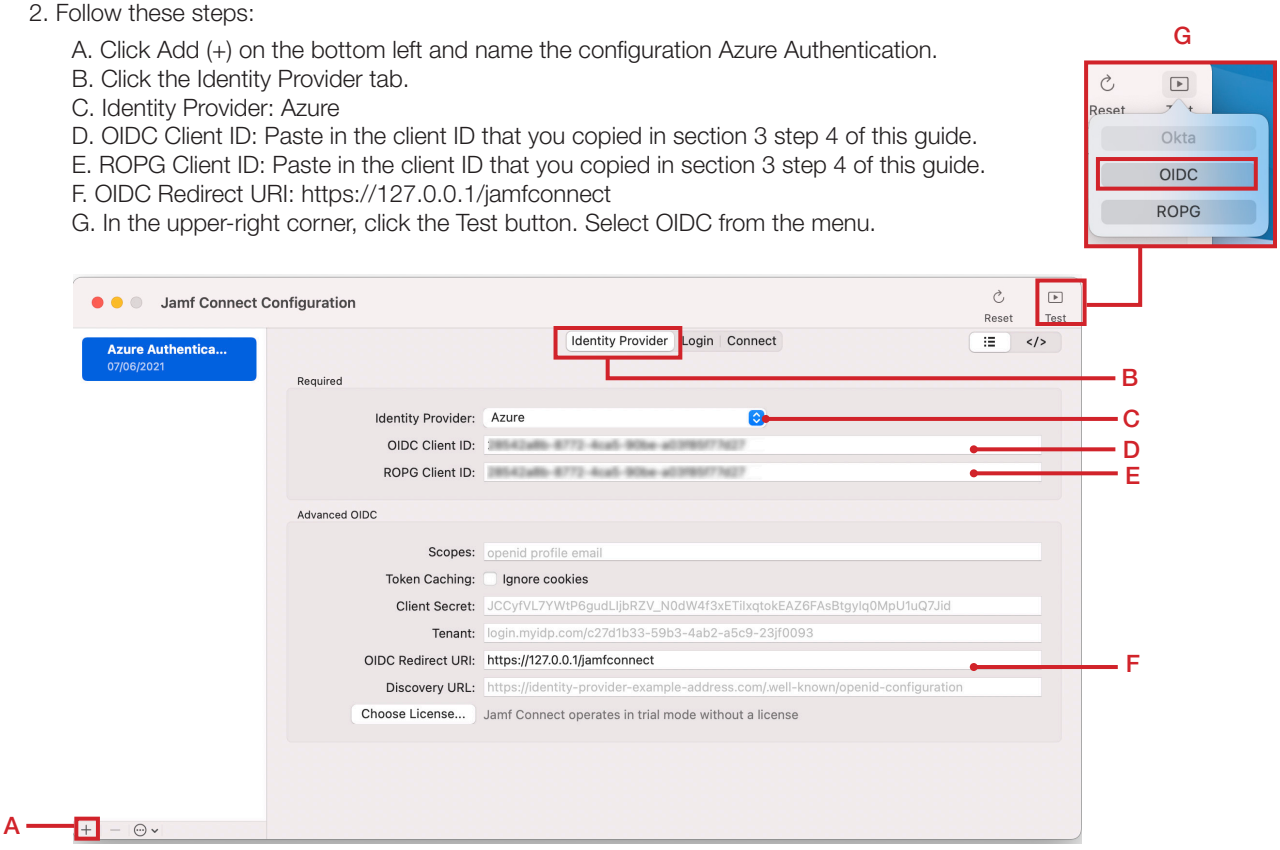
In this section we will test basic authentication using the Jamf Connect Configuration app with a Microsoft Azure account using OIDC and ROPG. OIDC will test the users authentication and ROPG will test the users authorization.

1. Open the Jamf Connect Configuration App located in the Applications folder.

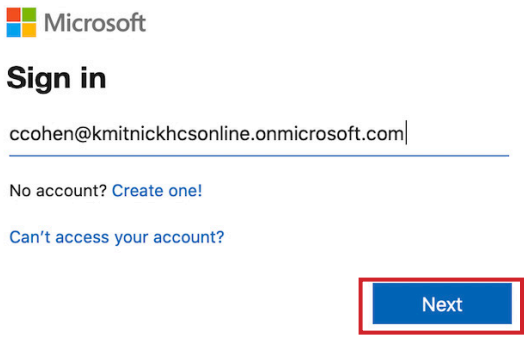
Jamf Connect Configuration

2. Follow these steps:

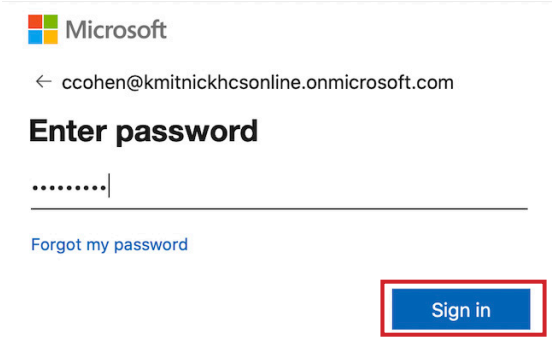
A. Click Add (+) on the bottom left and name the configuration Azure Authentication.
B. Click the Identity Provider tab.
C. Identity Provider: Azure
D. OIDC Client ID: Paste in the client ID that you copied in section 3 step 4 of this guide.
E. ROPG Client ID: Paste in the client ID that you copied in section 3 step 4 of this guide.
F. OIDC Redirect URI: https://127.0.0.1/jamfconnect
G. In the upper-right corner, click the Test button. Select OIDC from the menu.



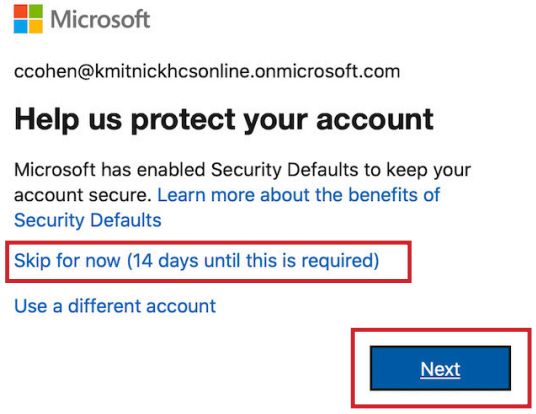
3. Enter one of your accounts in Microsoft Azure, then click Next.



4. Enter your account password, then click Sign in.

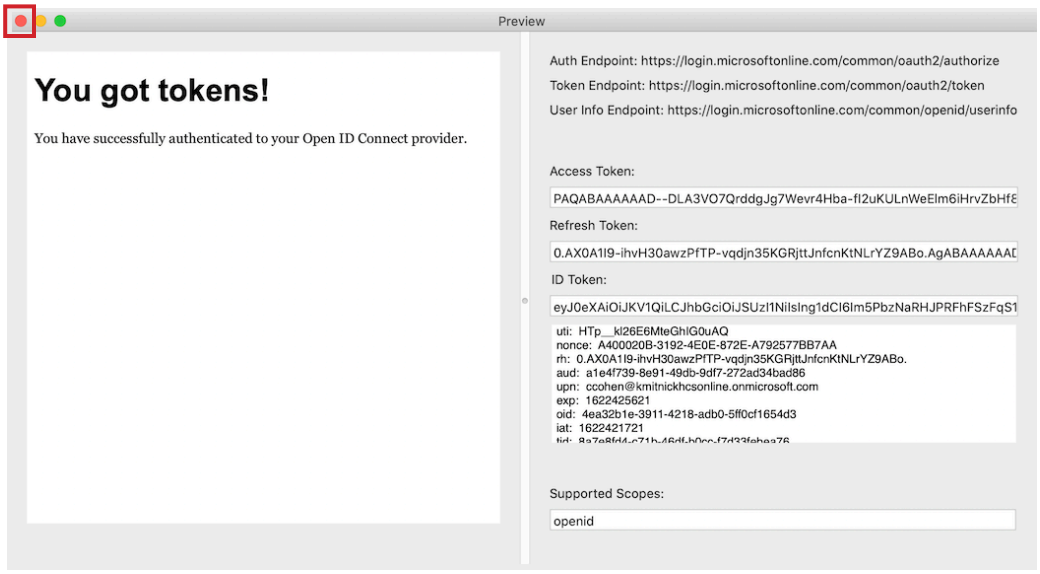


5. If greeted with the message below, select Skip for now (14 days until this is required). Click Next.

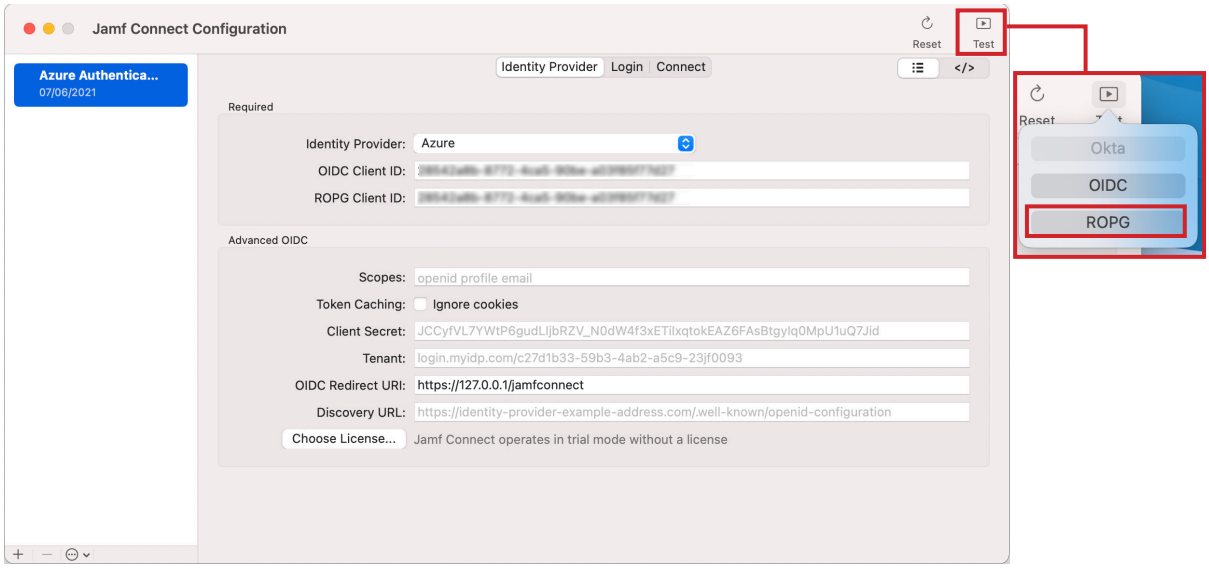


6. If all went well, you will be greeted with the message below. Close this window to return to the Jamf Connect Configuration app.

   NOTE: We are testing this to confirm we can get authentication tokens from Azure using OIDC. Doing this now saves us from troubleshooting connection issues later.



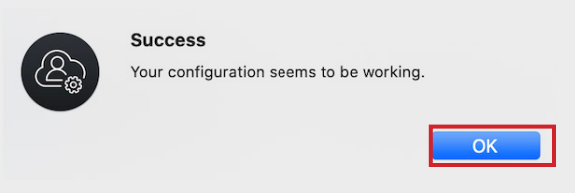
7. Click the Test button again and select ROPG from the menu.



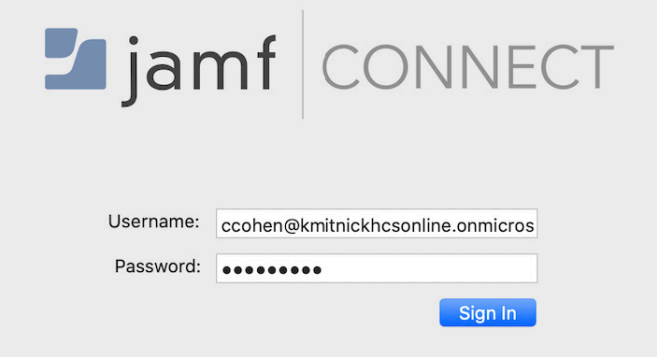
8. Enter your Microsoft Azure Account name and password, then click Sign in.

9. If all went well, you're greeted with he message below. Click OK.

NOTE: We are testing this to ensure the resource owner password grant (ROPG), which Jamf Connect uses for password verification and syncing, is correctly configured. Doing this now saves us from troubleshooting authentication issues later.



10. Close the Jamf Connect window and leave the Jamf Connect Configuration app open.



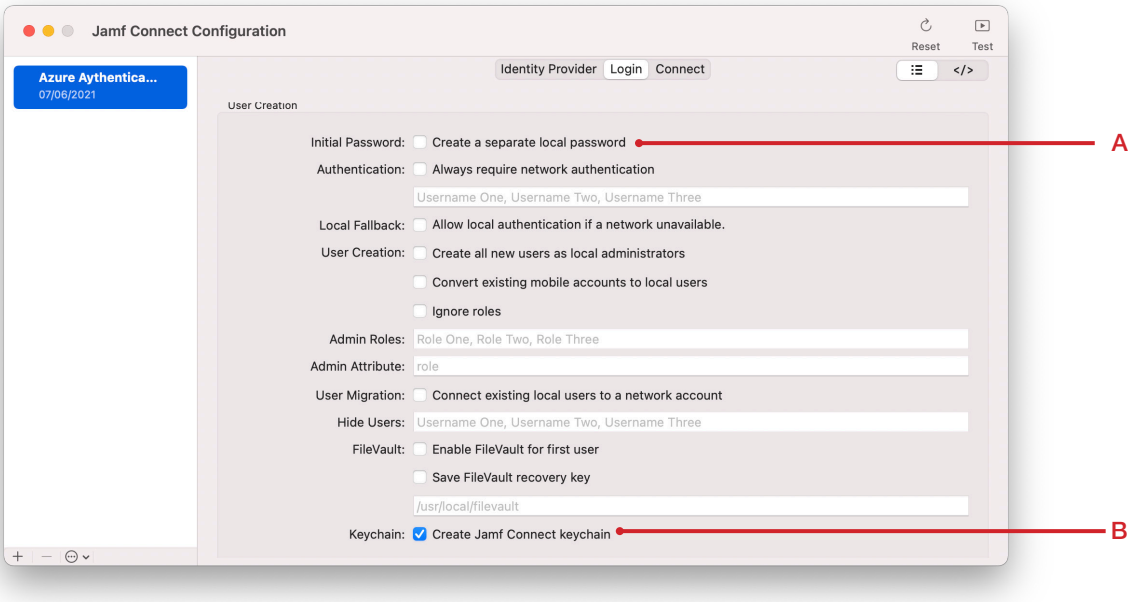
This completes this section.

Section 5: Create a Basic Jamf Connect Login and Connect Configuration Profile

In this section we will create a configuration profile for the Jamf Connect Login window and the Jamf Connect Menu Bar Item. The Login window configuration profile is used exclusively at the Login window. The Connect configuration profile is used exclusively as a Menu Bar item and is required to keep users passwords in sync with Microsoft Azure.

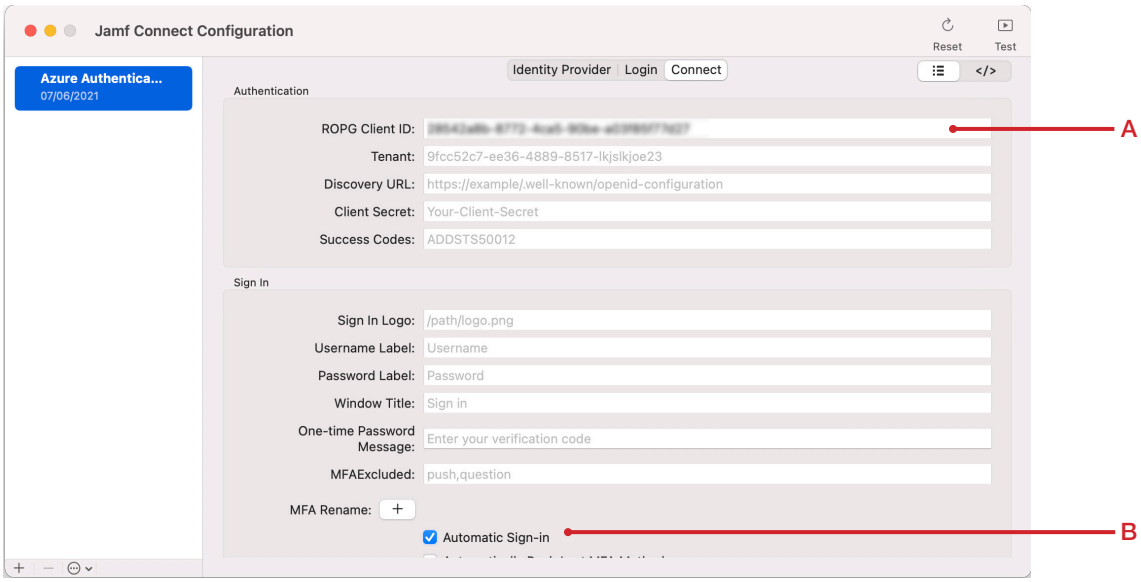
1. Open the Jamf Connect Configuration App located in the Applications folder on your Mac computer. Select the Login tab, then configure the following:
   A. Initial Password: Select then deselect the check box next to Create a separate local password. This is required so the setting key gets created and set to false.
   B. Keychain: Make sure this is enabled.

NOTE: All other settings are optional and will be covered in later sections of this guide.

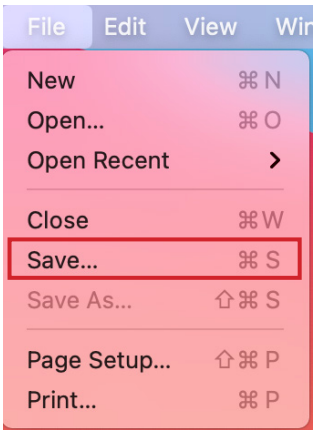


2. Select the Connect tab, then configure the following:
   A. ROPG Client ID: Make sure it shows up in the field.
   B. Automatic Sign-In: Make sure this is enabled.

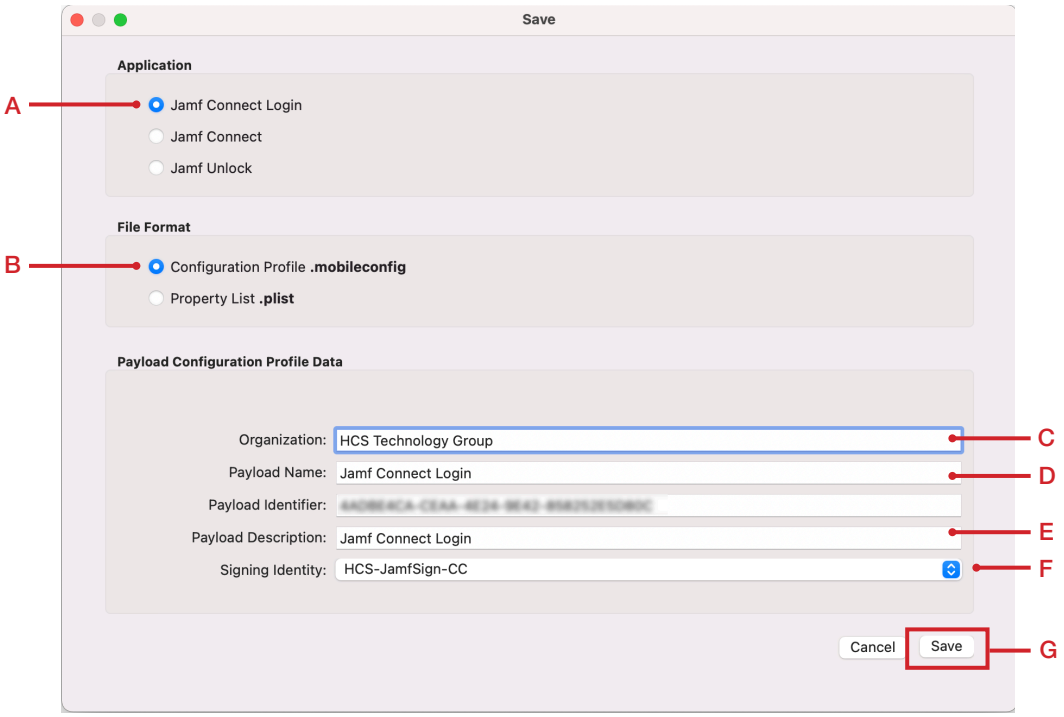
NOTE: All other settings are optional and will be covered in later sections of this guide.



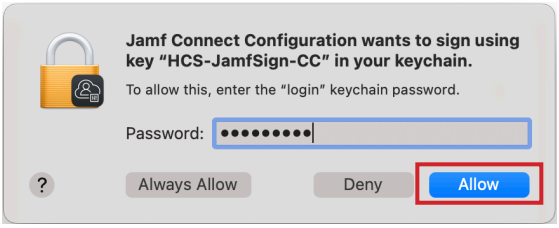
3. From the File Menu, Select Save.



4. Configure the following:
   A. Application: Confirm Jamf Connect Login is selected
   B. File Format: Confirm configuration Profile .mobileconfig is selected
   C. Organization: Enter your organization name. This guide will use **HCS Technology Group**
   D. Payload Name: Jamf Connect Login
   E. Payload Description: Jamf Connect Login
   F. Signing Identity: Select the signing certificate the we created in section 1.
   G. Click Save.



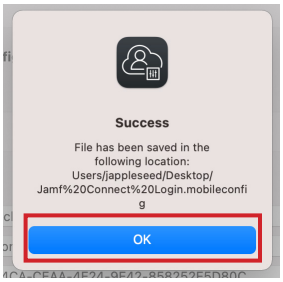
5. At the message below, enter your administrative credentials to sign the configuration profile. Click Allow. You will see this prompt twice.



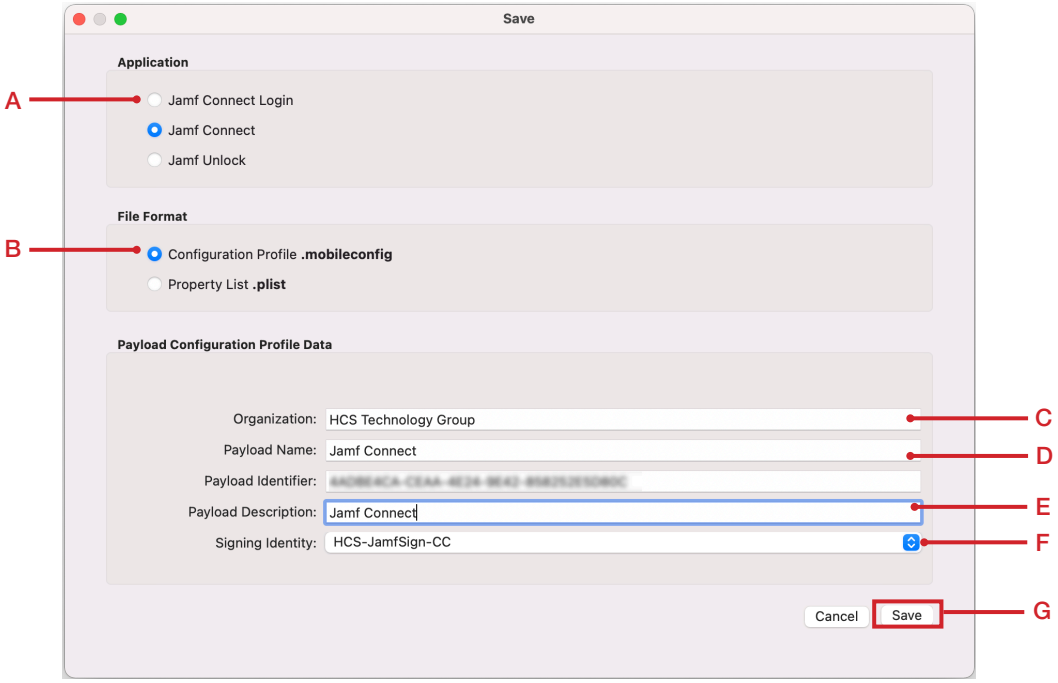
6. At the message below, enter your administrative credentials to sign the configuration profile. Click Allow.

7. Enter the following:
   A. Save As: **Jamf Connect Login**
   B. Where: Desktop
   C. Click Save

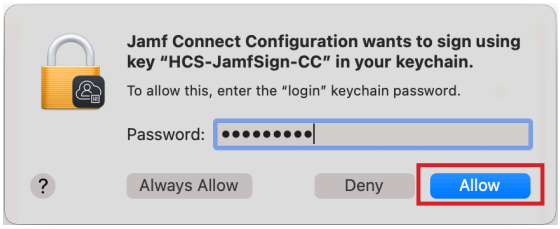
8. Click OK at the message below.



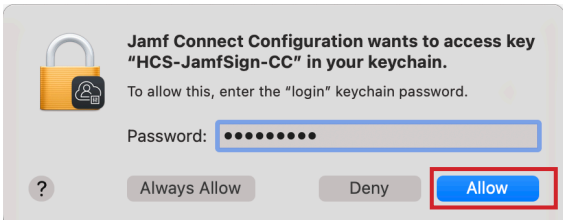
9. Configure the following:
   A. Application: Confirm Jamf Connect is selected
   B. File Format: Confirm configuration Profile .mobileconfig is selected
   C. Organization: Enter your organization name. This guide will use **HCS Technology Group**
   D. Payload Name: Jamf Connect
   E. Payload Description: Jamf Connect
   F. Signing Identity: Select the signing certificate the we created in section 1.
   G. Click Save.



10. At the message below, enter your administrative credentials to sign the configuration profile. Click Allow. You will see this prompt twice.

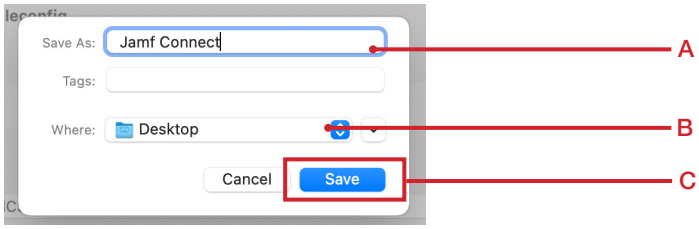


11. At the message below, enter your administrative credentials to sign the configuration profile. Click Allow.

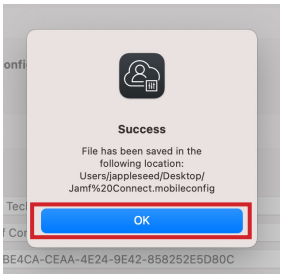


12. Enter the following:

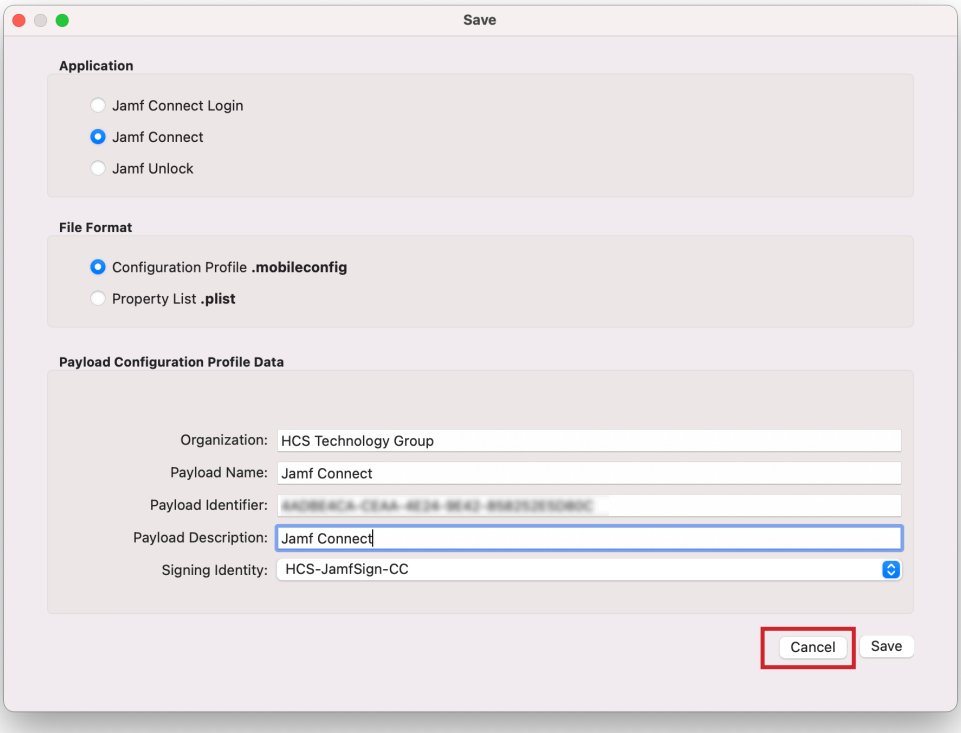
A. Save As: **Jamf Connect**
B. Where: Desktop
C. Click Save



13. Click OK at the message below.



14. Click Cancel to close this window then quit the Jamf Connect Configurator application.



15. Confirm both .mobileconfig files are saved to your Desktop.

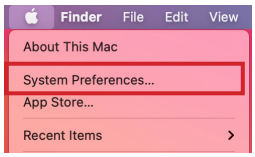
This completes this section.

Section 6: Manually Install Jamf Connect Configuration Profiles and Application

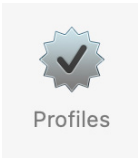
In this section we will manually install the Jamf Connect configuration profiles we created in section 5 of this guide, install the Jamf Connect Application, and install the Jamf Connect Launch Agent package that is used to auto launch Jamf Connect on startup. The reason we are manually installing all of these items first is to confirm everything is working. Once confirmed all is working, we will automate the install of all of these items using the Jamf Pro server.

1. Double Click on the Jamf Connect Login.mobileconfig profile to install it.

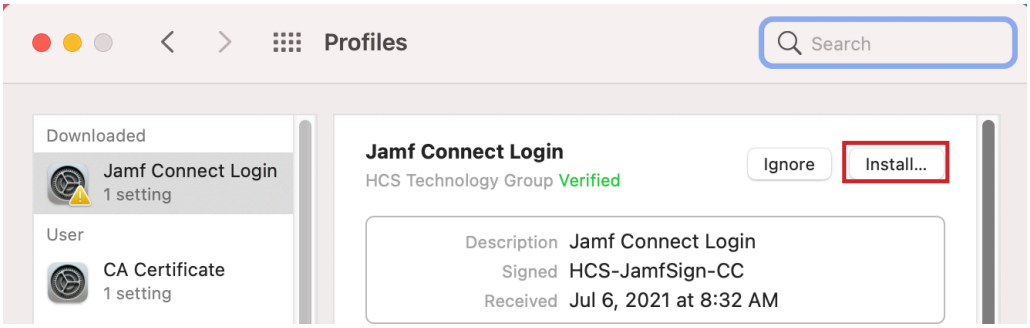
2. Open System Preferences located under the Apple menu.



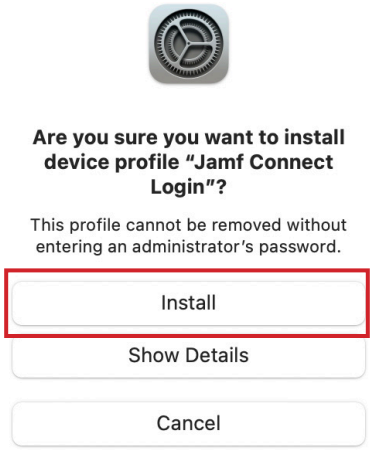
3. Select the Profiles pane



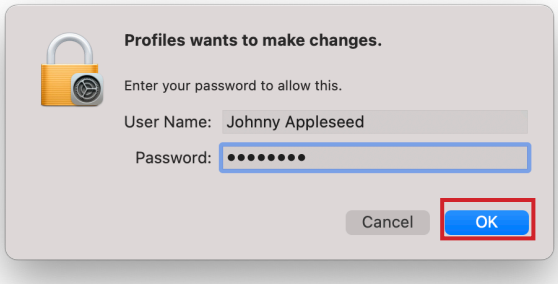
4. The Jamf Connect profile is waiting to be installed. Click Install.



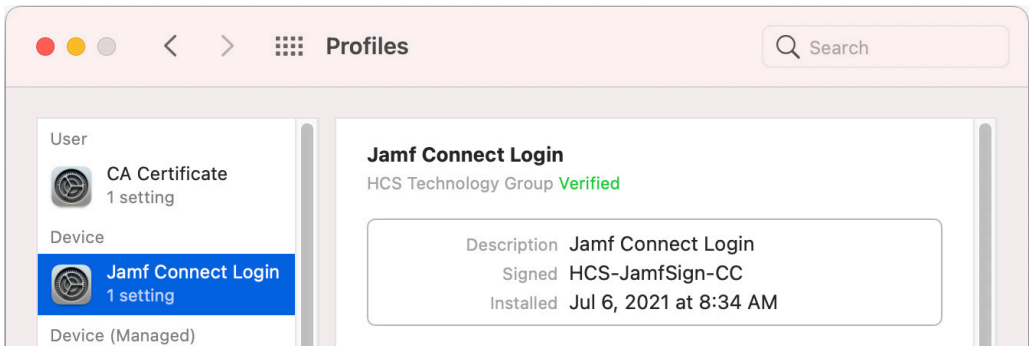
5. Click Install.



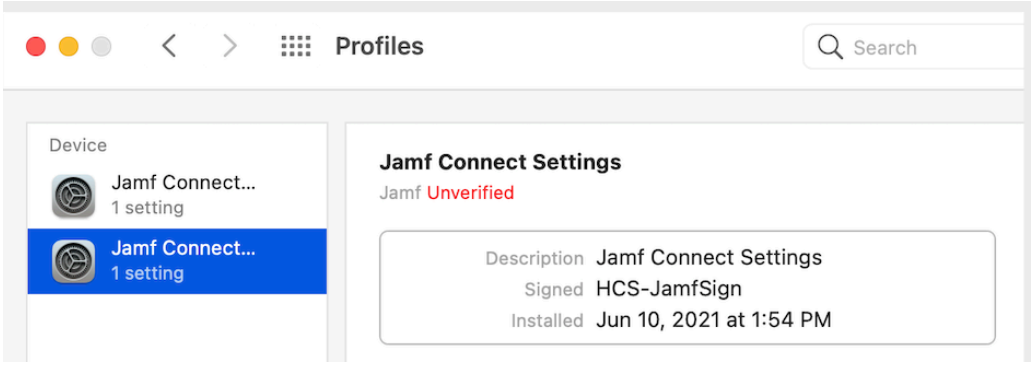
6. Enter your administrative credentials then click OK.



7. The Jamf Connect Login configuration profile is now installed. Follow steps 1-6 to install the Jamf Connect profile.



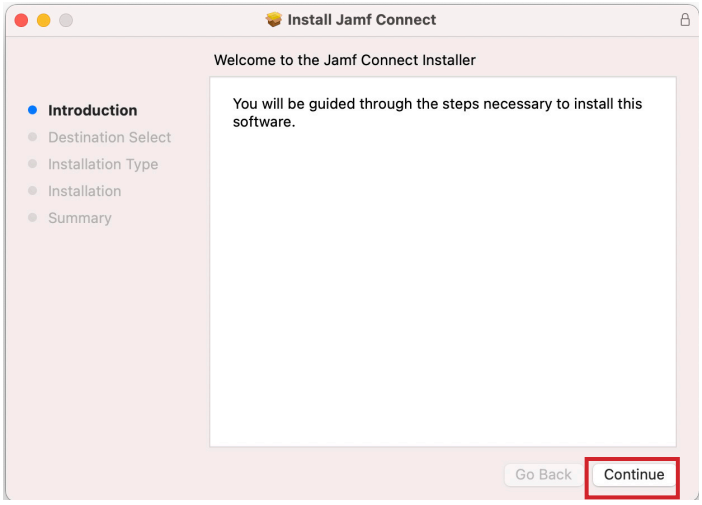
8. Once the Jamf Connect configuration profile is installed, you should have both configuration profiles installed as shown below. You may quit System Preferences if all looks good.



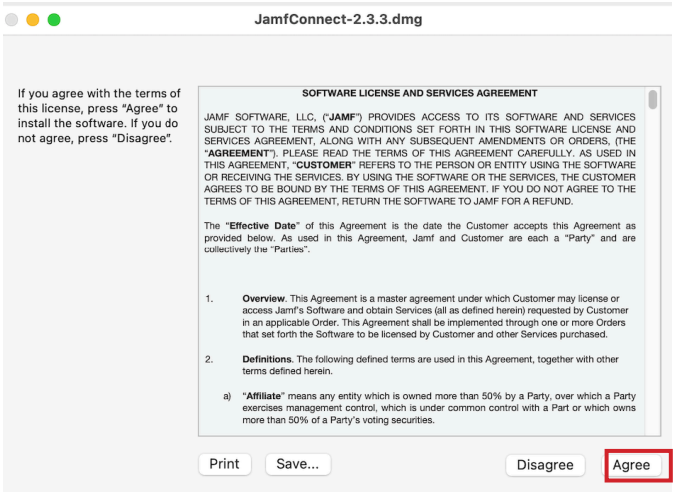
9. Open the JamfConnect-2.4.0.dmg. This was downloaded at the beginning of this guide

10. Double click the JamfConnect.pkg file to start the installation of Jamf Connect.

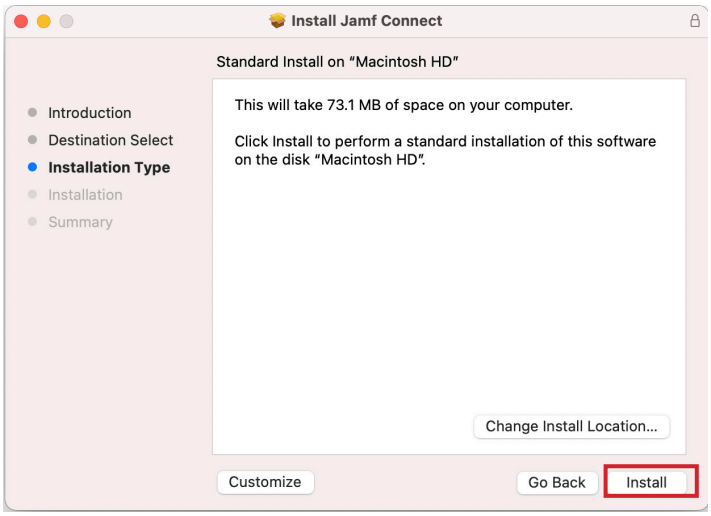
11. Click Continue.



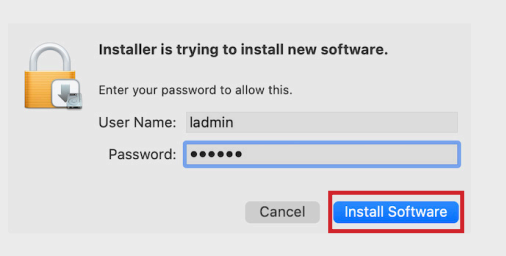
12. Click Agree.

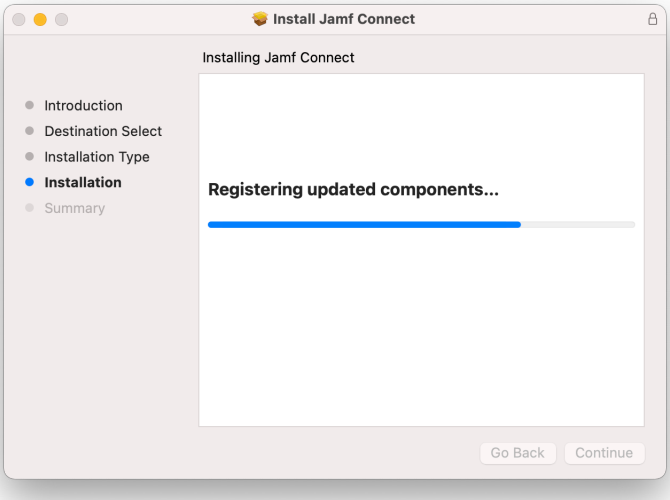


13. Click Install.

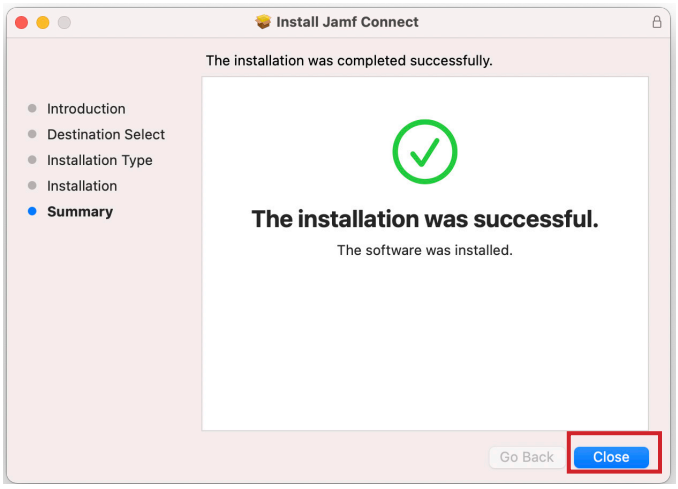


14. Enter your administrative credentials then click Install Software.

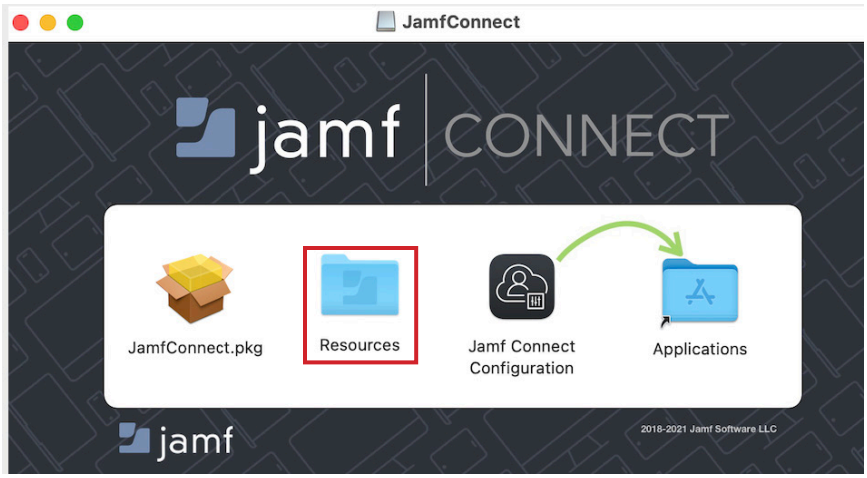




15. Click Close.

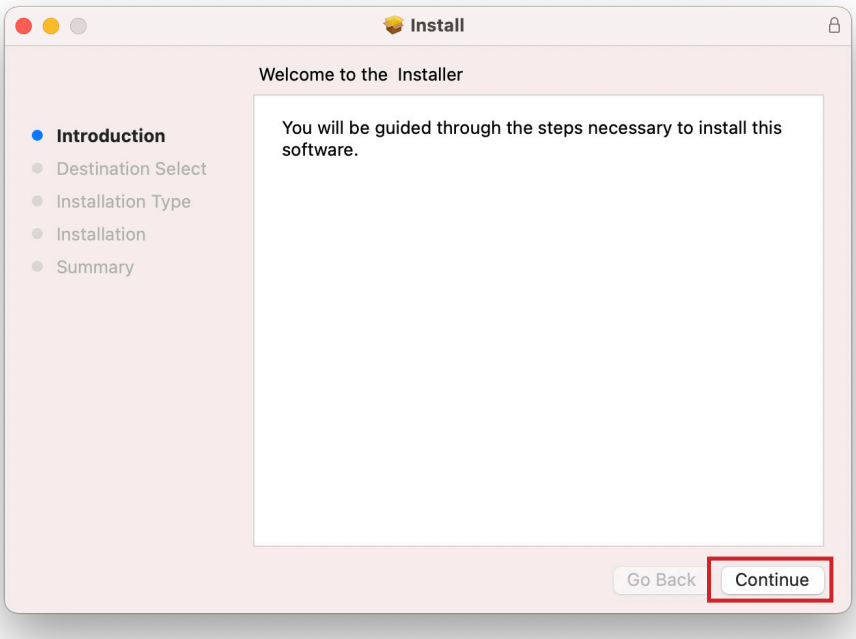


16. Open the Resources folder.

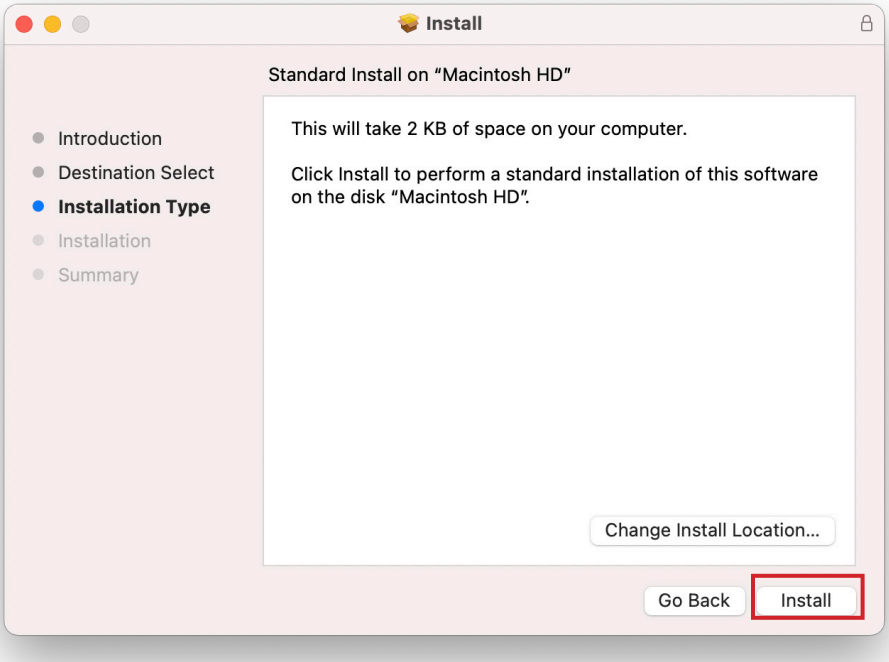


17. Double click the JamfConnectLaunchAgent.pkg file to install the launch agent. This is used to open Jamf Connect on startup.

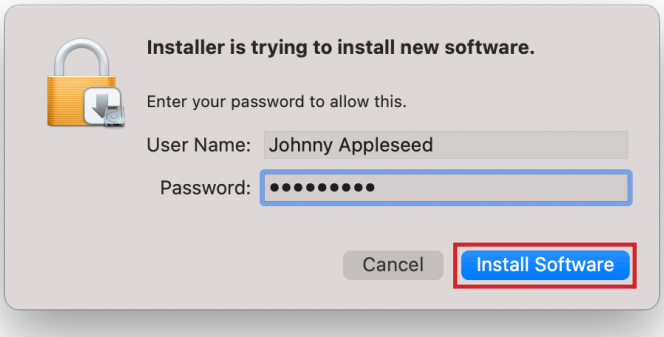
18. Click Continue.



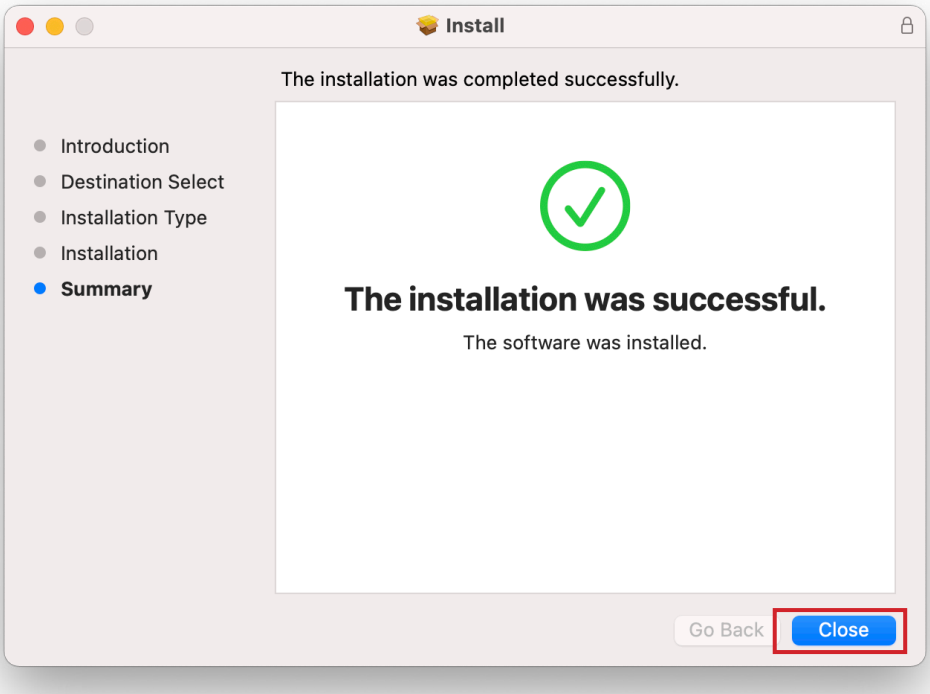
19. Click Install.



20. Enter your administrative credentials then click Install Software.

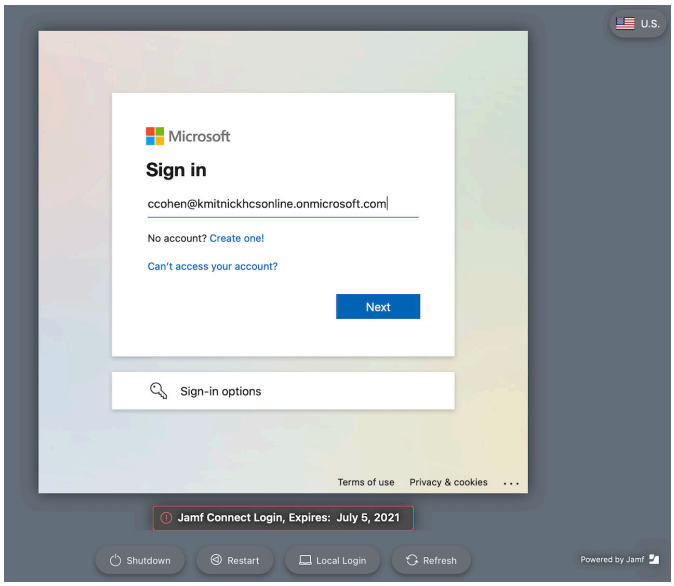


21. Click Close.

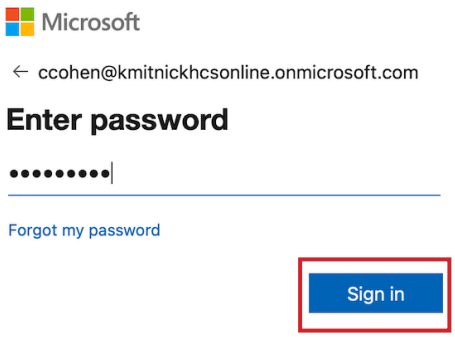


Section 7: Create an Account on the Mac Computer Using Jamf Connect.

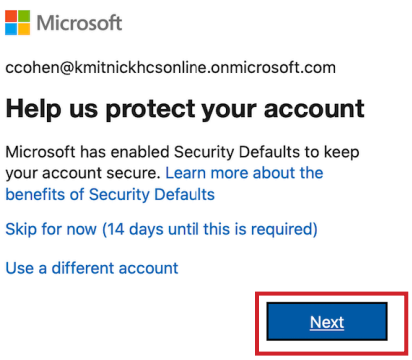
1. Logout of your Mac Computer. If all went well, you will see the Jamf Connect Login Window as shown below. Login with your Microsoft Azure credentials.



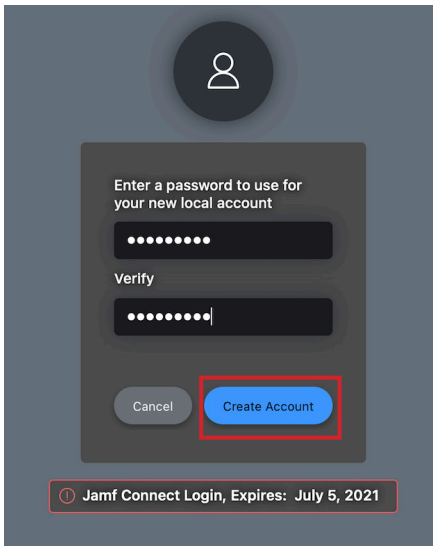
2. Enter your password then click Sign In.



3. Select Skip for now, then click Next.

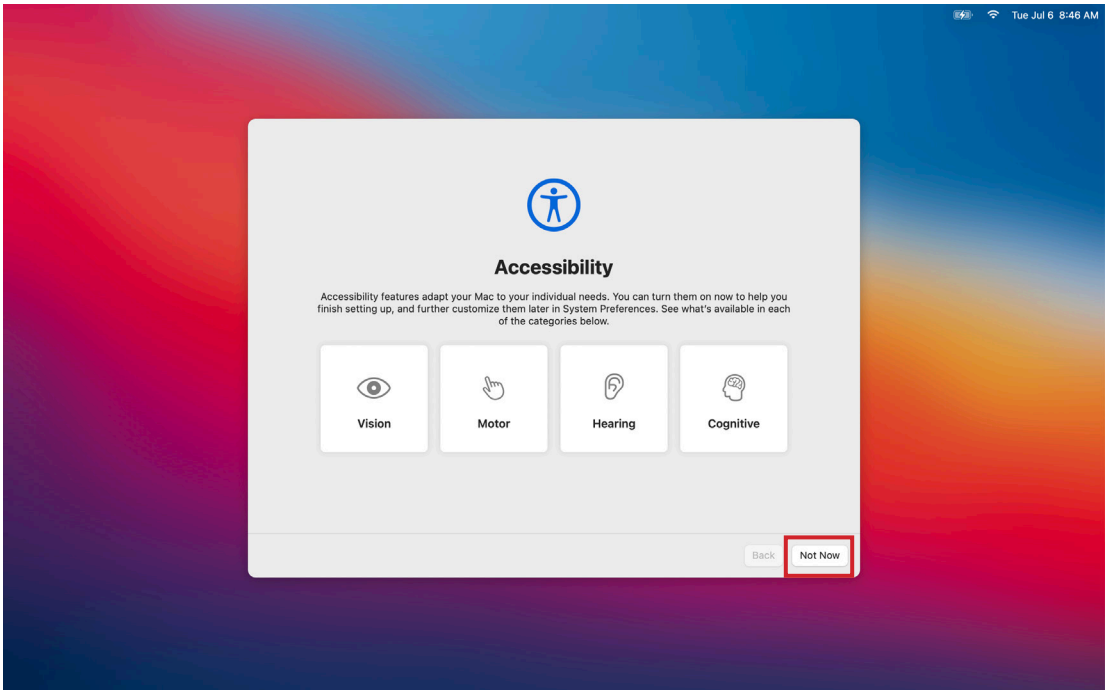


4. Enter the same password as your Microsoft Azure account, then click Create Account.



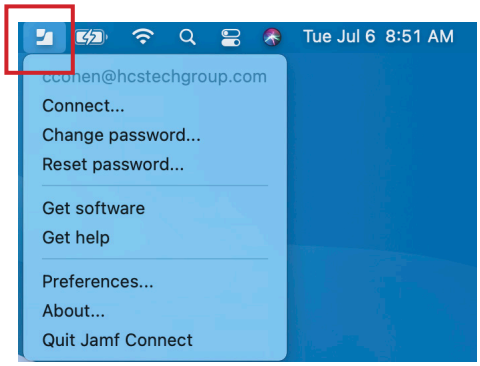
5. Click Not Now.

NOTE: Depending on how your Mac was configured, you may have more screens to configure before you are logged into your Mac Computer. This guide only shows the screen below.



6. At the Jamf Connect message below, select Don't show this window again, then click Done.

7. You will notice a Jamf Connect Icon in the Menu Bar, click on it and you will see information about your account.



This completes this section.

Section 8: Configure Jamf Connect to Enable FileVault

Jamf Connect supports enabling FileVault on the following macOS versions:

- macOS Mojave
- macOS Catalina
- macOS Big Sur

NOTE: macOS Mojave and Catalina require a LAPS user to enable FileVault. macOS Big Sur does not requires a LAPS user and will use a secure token to enable FileVault. if you need more information on the LAPS user and requirements for macOS Mojave and Catalina, have a look here:

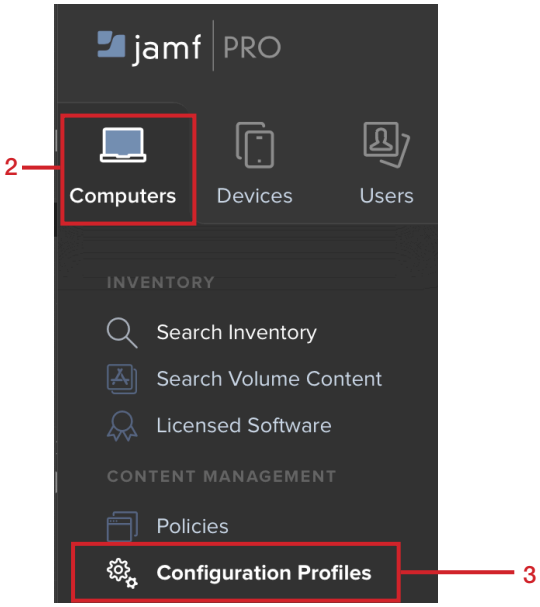
https://docs.jamf.com/jamf-connect/2.4.0/documentation/FileVault_Enablement_with_Jamf_Connect.html?hl=filevault

This guide will focus on macOS Big Sur. macOS Big Sur requires the following to enable FileVault using Jamf Connect:

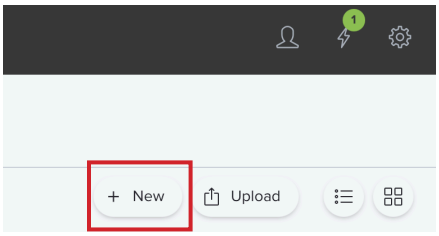
- A PPPC Profile to allow Jamf Connect to enable FileVault.
- A mobileconfig profile to escrow the FileVault key back to the Jamf Pro Server.
- A Jamf Connect Login Configuration Profile with FileVault set to enable for the first user.

1. If necessary, Log into your Jamf Pro server.

2. Click Computers.
3. Click Configurations Profiles.

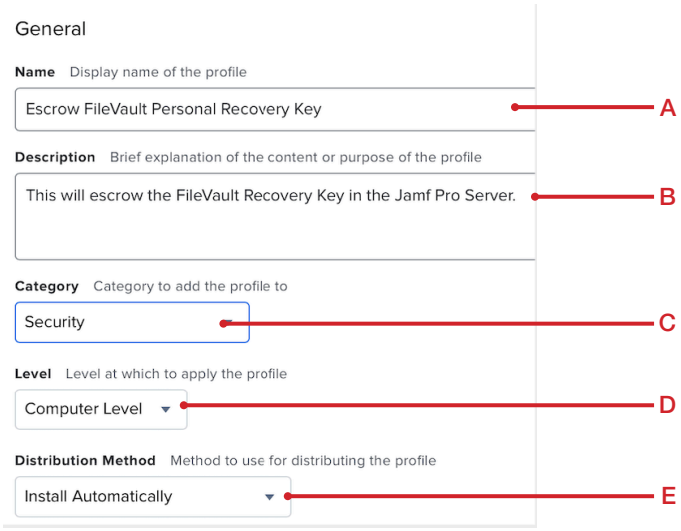


4. Click New.

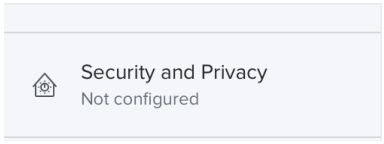


5. Enter the following in the General section:

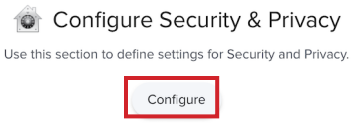
A. Name: **Escrow FileVault Personal Recovery Key**
B. Description: **This will escrow the FileVault Recovery Key in the Jamf Pro Server**
C. Category: Select a category of your choosing, This guide will use the Security category.
D. Level: Computer Level.
E. Distribution Method: Install Automatically



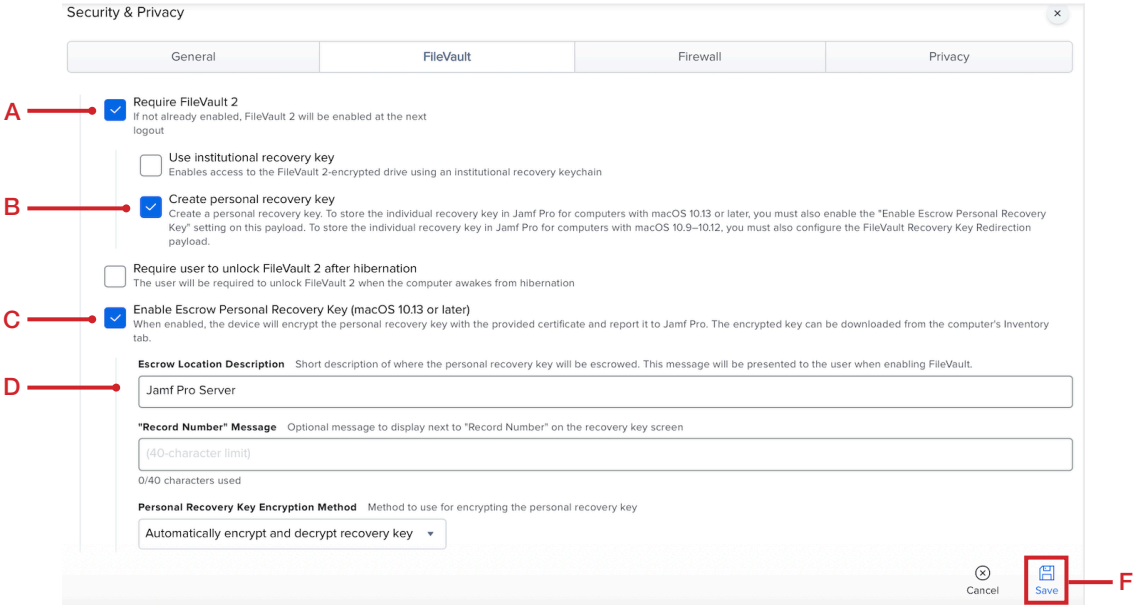
6. Select the Security and Privacy payload.



7. Select Configure.



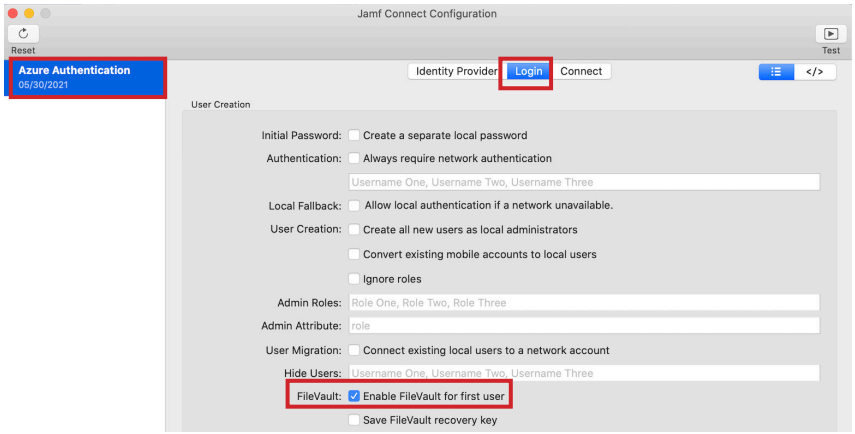
8. Select the FileVault tab, then configure the following:
   A. Require FileVault 2
   B. Create personal recovery key
   C. Enable Escrow Personal Recovery Key (macOS 10.13 or later)
   D. Escrow Location Description: Jamf Pro Server.
   E. Scope the policy to your needs.
   F. Click Save.



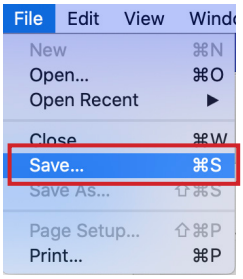
9. Go to the Applications folder and open the Jamf Connect Configuration App.

Jamf Connect Configuration

10. Select the existing Azure Authentication profile. Select the Login tab and enable the FileVault checkbox.

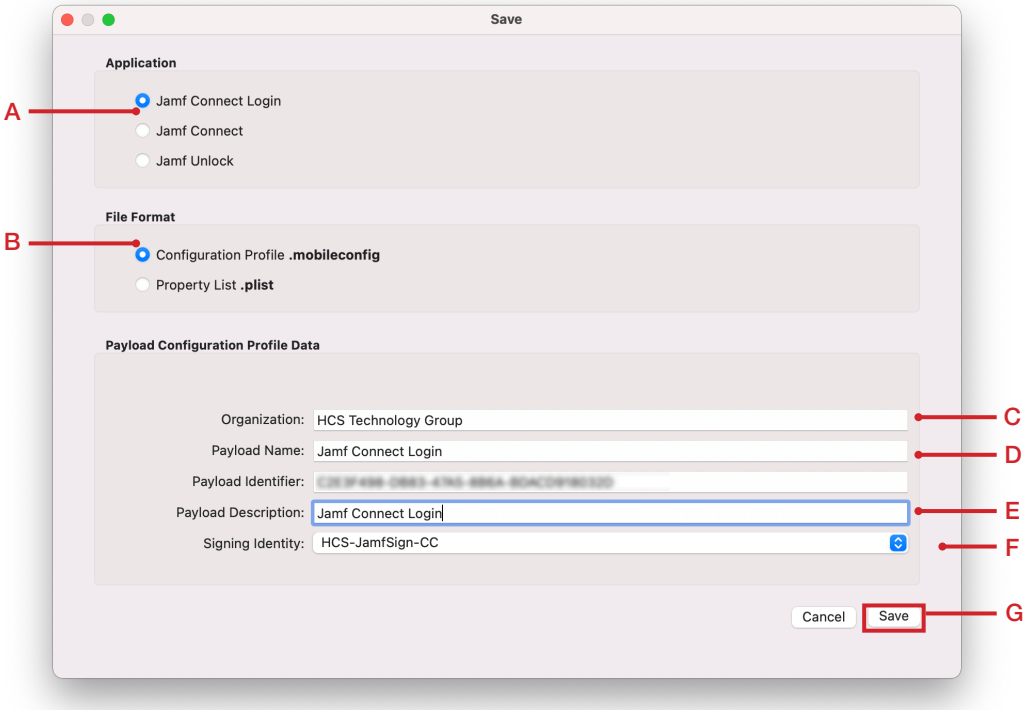


11. Select the File menu and choose Save.

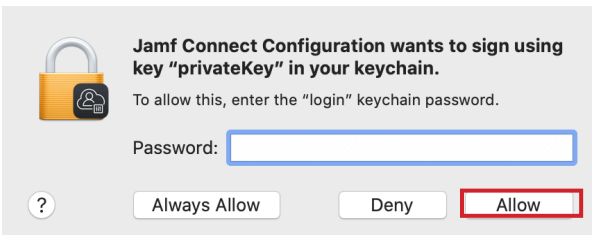


12. Enter the following:

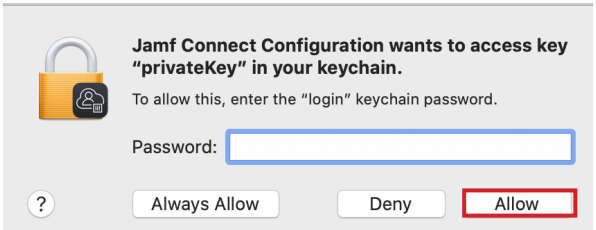
A. Applications: Jamf Connect Login
B. File Format: Configuration Profile
C. Organization: **HCS Techonology Group**
D. Payload Name: **Jamf Connect Login**
E. Payload Description: **Jamf Connect Login**
F. Signing Identity: Select the signing certificate the we created in section 1.
G. Click Save.



13. At the message below, enter your administrative credentials to sign the configuration profile. Click Allow. You will see this prompt twice.

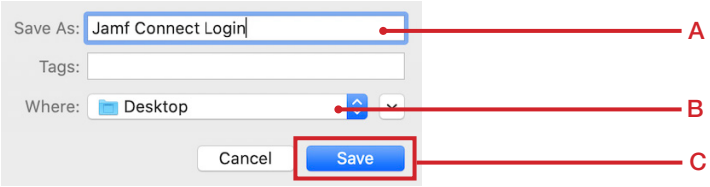


14. At the message below, enter your administrative credentials to sign the configuration profile. Click Allow.

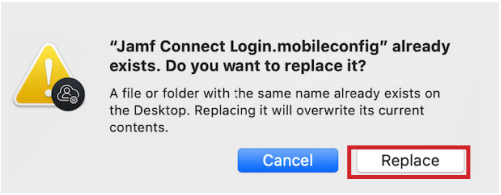


15. Enter the following:

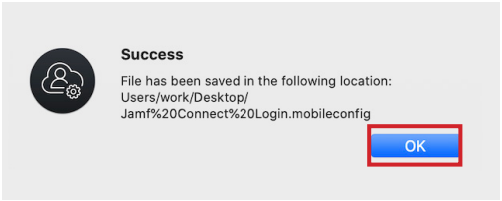
A. Save As: **Jamf Connect Login**
B. Where: Desktop
C. Click Save



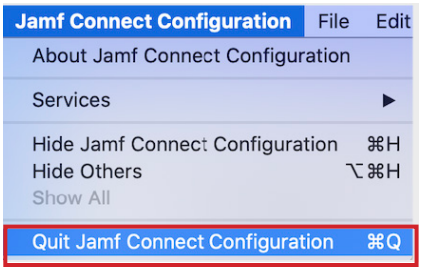
16. At the message below select Replace.



17. At the message below select OK.

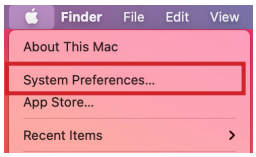


18. Select the Jamf Connect Configuration menu then select Quit Jamf Connect Configuration.

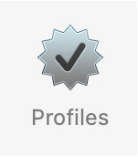


19. The updated Jamf Connect Login configuration profile should be on your desktop along with the Jamf Connect profile that we created in section 5 of this guide.

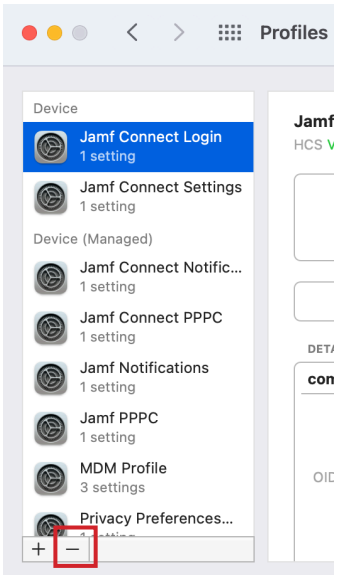
20. Click on the Apple icon in the upper left corner then select System Preferences.



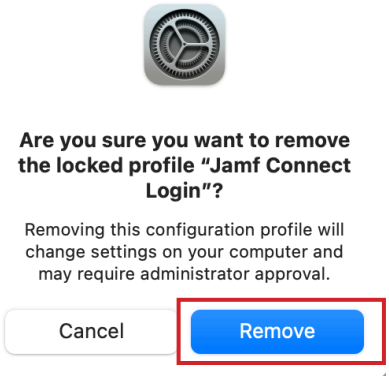
21. Select the Profiles pane



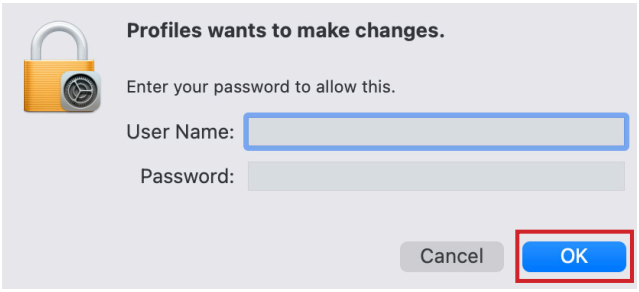
22. Click Remove (–) to delete the Jamf Connect Login configuration profile.



23. Click Remove at the message below.

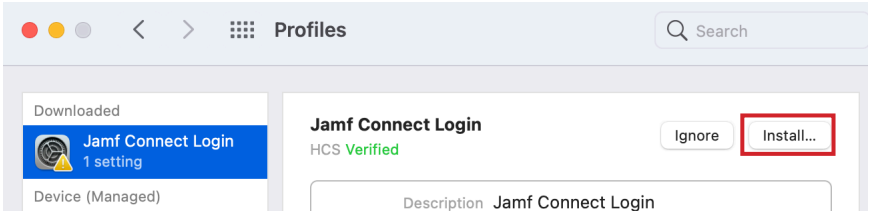


24. Enter your administrative credentials then click OK.

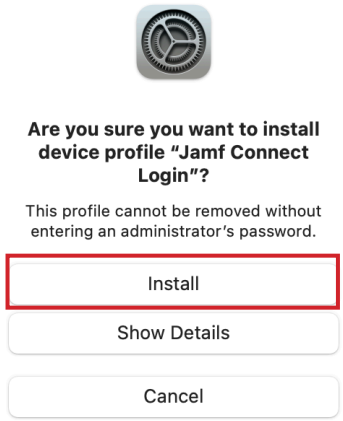


25. Double click the Jamf Connect Login.mobileconfig file to install it.

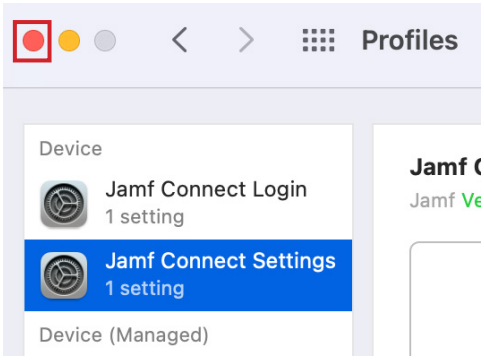
26. Click Install.



27. Click Install.



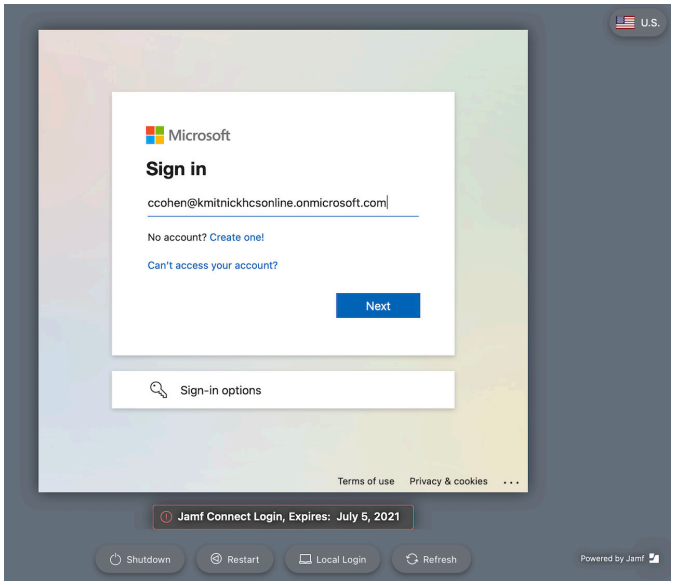
28. Quit System preferences.



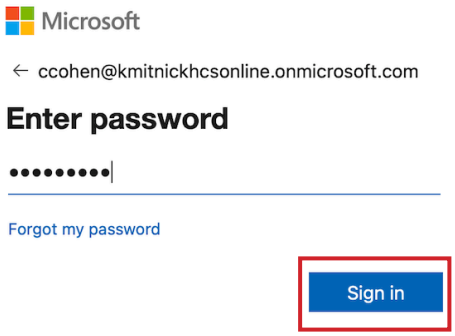
This completes this section.

Section 9: Enable FileVault with Jamf Connect

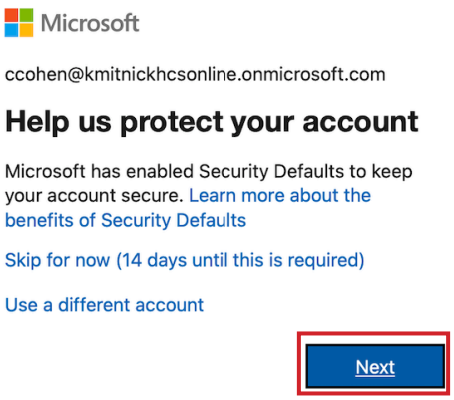
1. Enter your Microsoft Azure Credentials. Click Next.



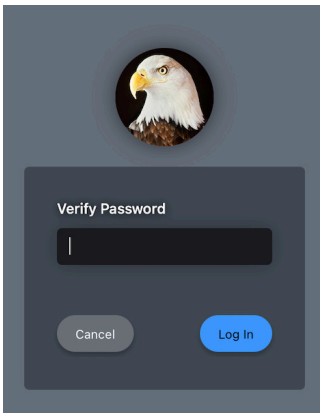
2. Enter your password then click Sign In.



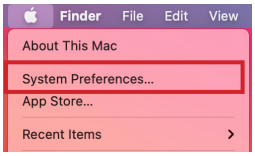
3. Select Skip for now, then click Next.



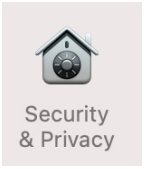
4. Enter your Microsoft Azure password. Click Log In.



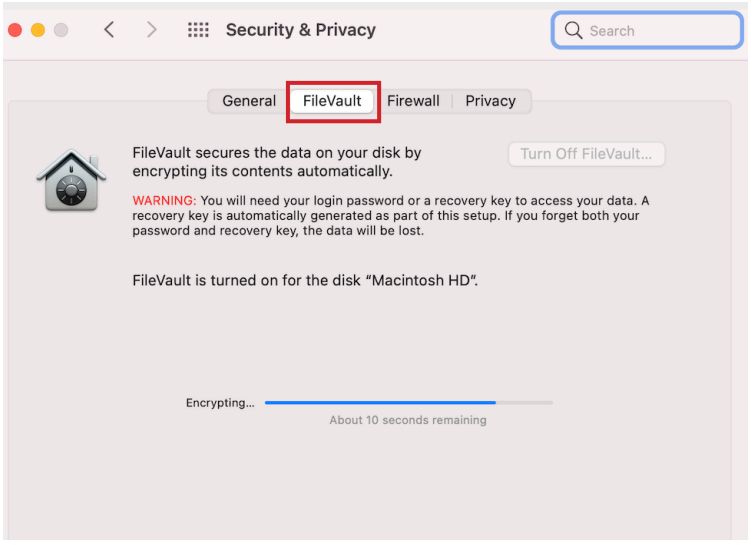
5. Click the Apple Icon, then select System Preferences.



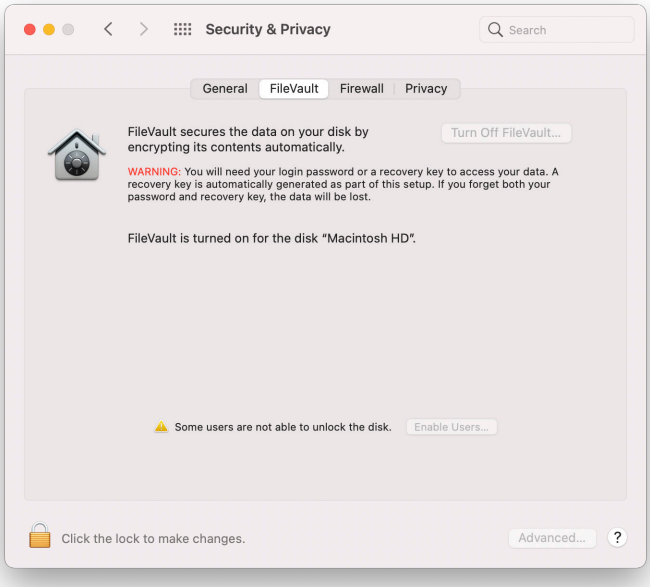
6. Click the Security & Privacy pane.



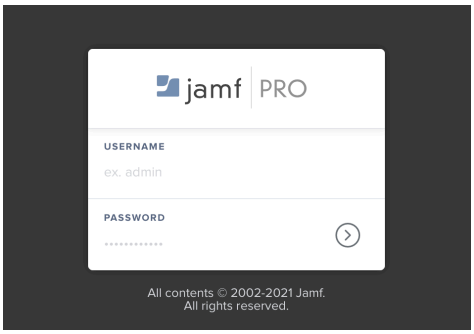
7. Click FileVault. The FileVault encryption process has started.



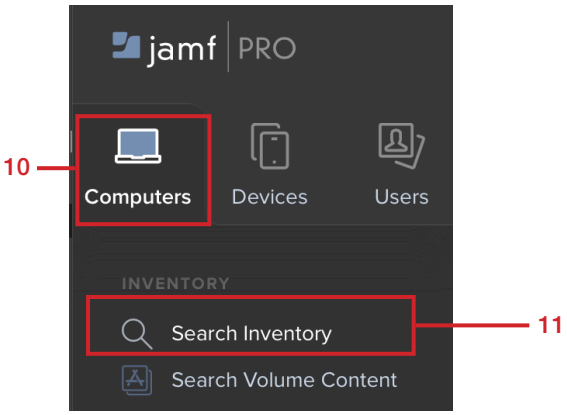
8. Once the FileVault encryption process is complete, quit System Preferences.



9. Let's check to make sure the FileVault Individual recovery key was escrowed on the Jamf Pro server. If necessary, log into your Jamf Pro server.

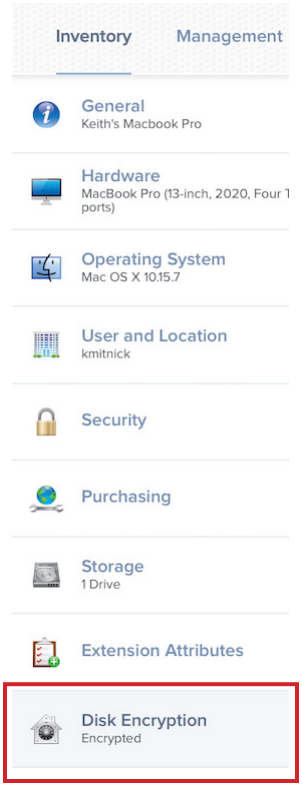


10. Click Computers.
11. Click Configurations Profiles.

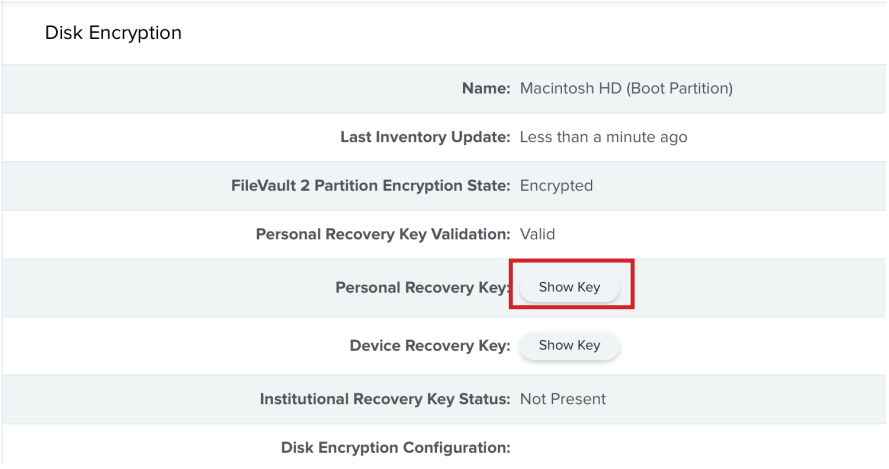


12. Enter the name of the computer that you just enabled FileVault on then click Search.

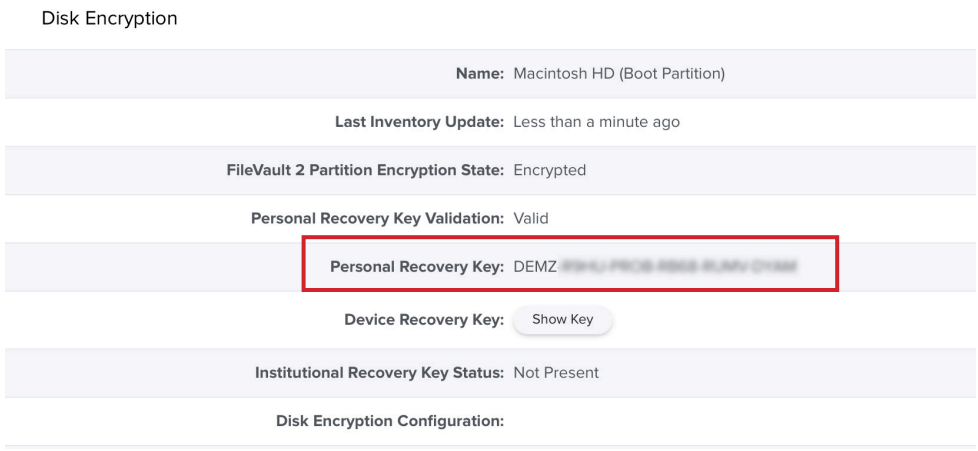
13. Open the computer record. In the Inventory section, Select Disk Encryption.



14. Next to Personal Recovery Key, click Show Key.



15. Confirm your individual FileVault key was successfully escrowed to the Jamf Pro server.



This completes this section.

Section 10: Create a package folder structure for Branding, Login Window, and Menu bar scripts.

In this section we will create a folder structure for branding images, Login Window scripts, and Menu bar scripts. Once the structure is created, we will add our branding images, Login Window scripts, and Menu bar scripts to the corresponding folders and use Composer to set permissions and create a package to deploy to all computers.

To follow along with this section you will need your branding images, Login Window scripts, and Menu bar scripts readily available. This guide assumes those items are located on your Desktop. You may download HCS' branding images at:

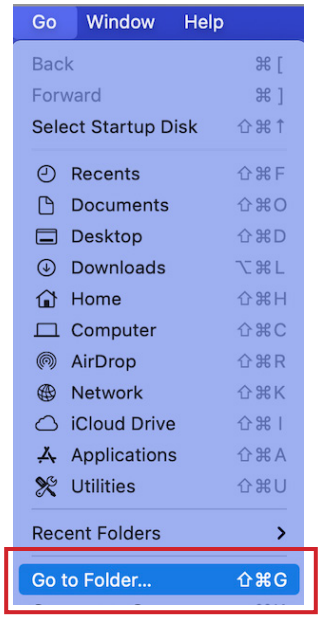
https://hcsonline.com/images/banners/branding.zip

The recommended size for branding icons:

- Menu bar icons: 16x16 pixels
- Login logo: 250 x 250 pixels
- Sign in Logo 512x512 pixels

NOTE: This guide will use Composer for packaging. You can get Composer from your Jamf Nation account. If you want to use other packaging software, feel free.

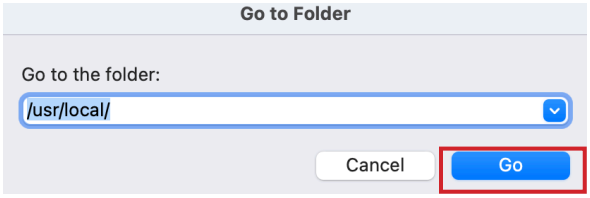
1. In the Finder, click the Go menu then select Go To Folder.



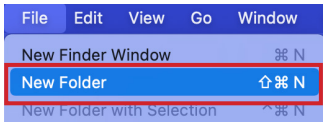
2. Enter the following path:

   /usr/local/

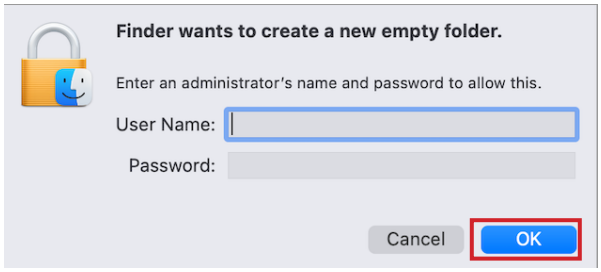
   Click Go.



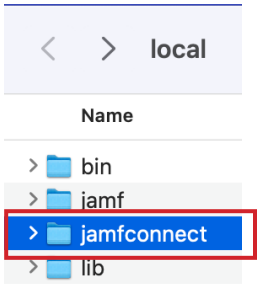
3. Click the File menu, then select New Folder.



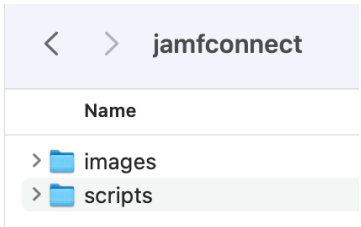
4. Enter your administrative credentials the click OK.



5. Name the folder jamfconnect then open the jamfconnect folder.



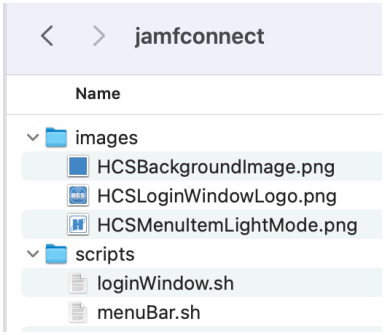
6. Follow steps 3 and 4 to create the following two folders inside the jamfconnect folder:
   - images
   - scripts



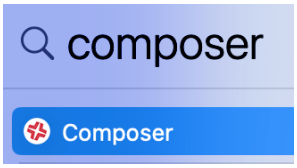
7. Drag your branding images from the Desktop to the Images folder. You may download HCS' branding images at:

   https://hcsonline.com/images/banners/branding.zip

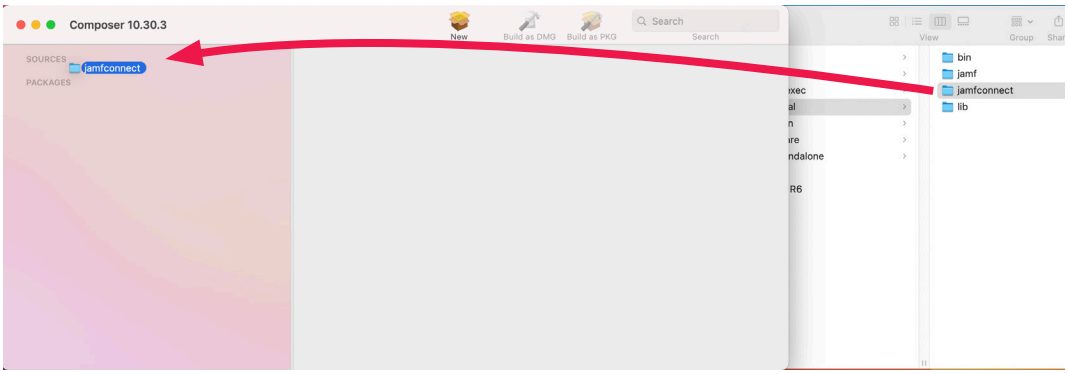
   NOTE: If you have Login window scripts or Menu bar scripts, drag them into the scripts folder now.



8. Perform a Spotlight search for Composer.
   NOTE: This guide uses Composer for packaging. You can get Composer from your Jamf Nation account. If you want to use other packaging software, feel free.

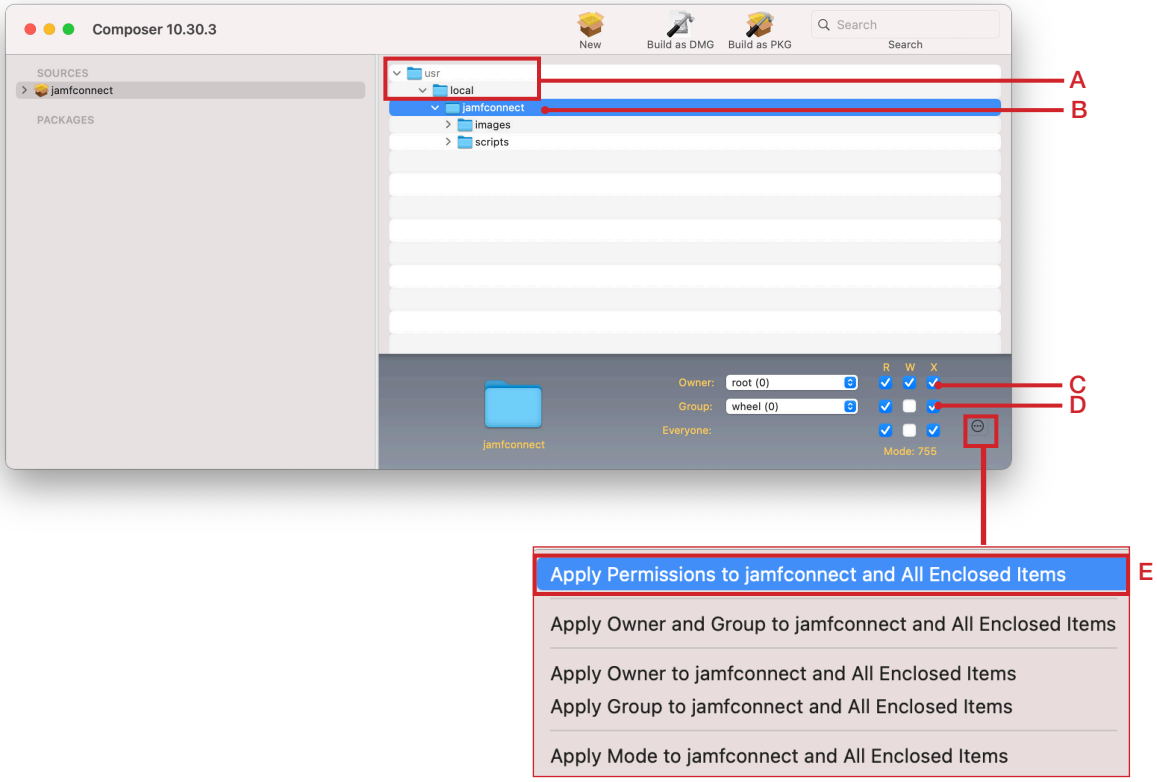


9. Drag the jamfconnect folder to the SOURCES section of Composer.

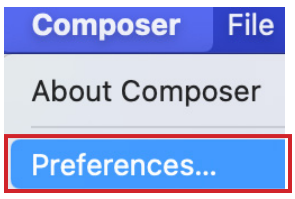


10. Perform the following steps:

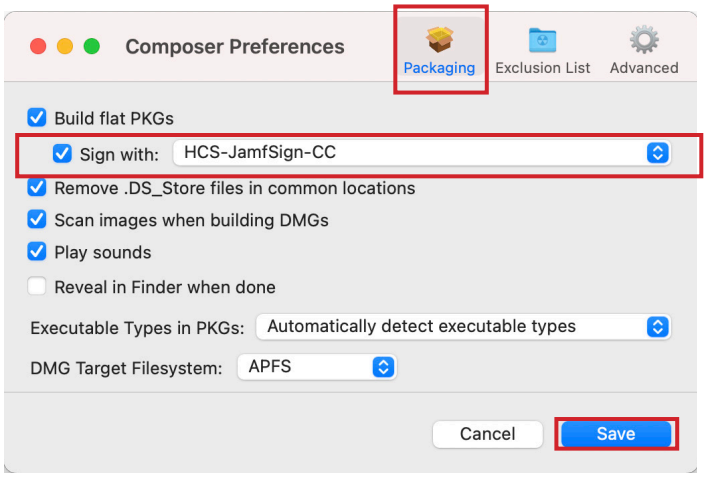
A. Expand the folders /usr/local/ to show jamfconnect
B. Select the jamfconnect folder.
C. Change the Owner to: root
D. Change the Group to: wheel
E. Confirm the permissions are set to 755 as shown in the screen shot below.
F. Click the ellipse icon and select Apply Permissions to jamfconnect and All Enclosed items.



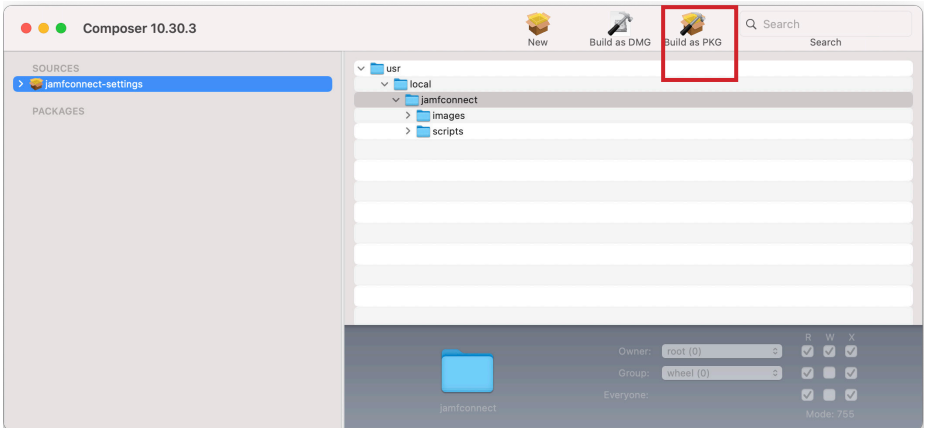
11. Click the Composer menu then select Preferences.



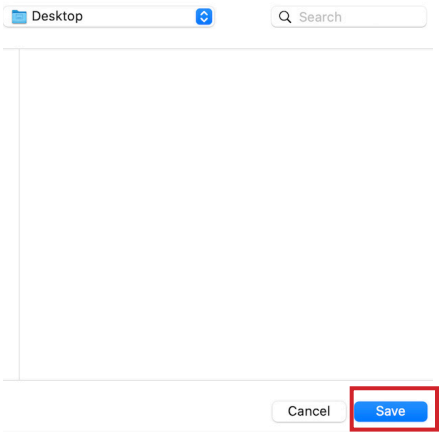
12. Select Packaging, then check the Sign with checkbox and select your signing certificate. Click Save.
    NOTE: We need to sign this package if we want to use it in a Prestage enrollment.



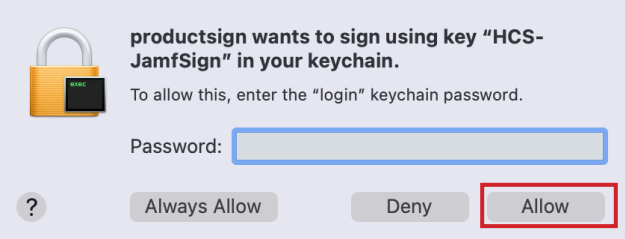
13. Rename the package to jamfconnect-settings, then select Build as PKG.



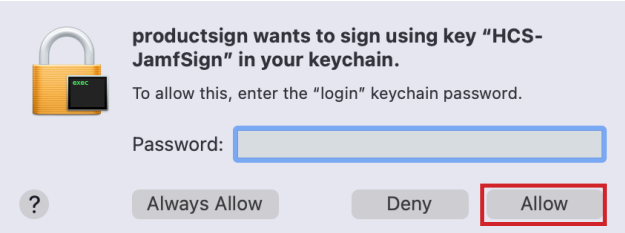
14. Select Desktop, then click Save



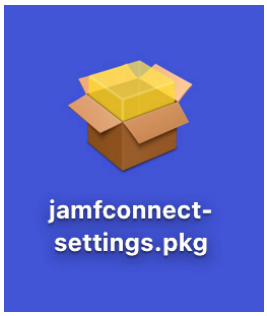
15. Enter your administrative password to sign the package then click Allow. You will see this message twice.



16. Enter your administrative password to sign the package then click Allow.



17. Confirm the package was created on our Desktop.



This completes this section.

Section 11: Add Branding and Scripts to the Jamf Connect Configuration Profiles

This section requires your Mac Computer to be enrolled into Jamf Pro. If your Mac Computer is not enrolled in Jamf Pro, some steps in this guide will not work,

NOTE: Jamf Connect version 2.4 was released when this section was written. Some screen shots will include the new Jamf Unlock radio button when saving a configuration profile.

In this section we will add the paths to the images and scripts we created in section 10 of this guide and confirm the branding and scripts work.

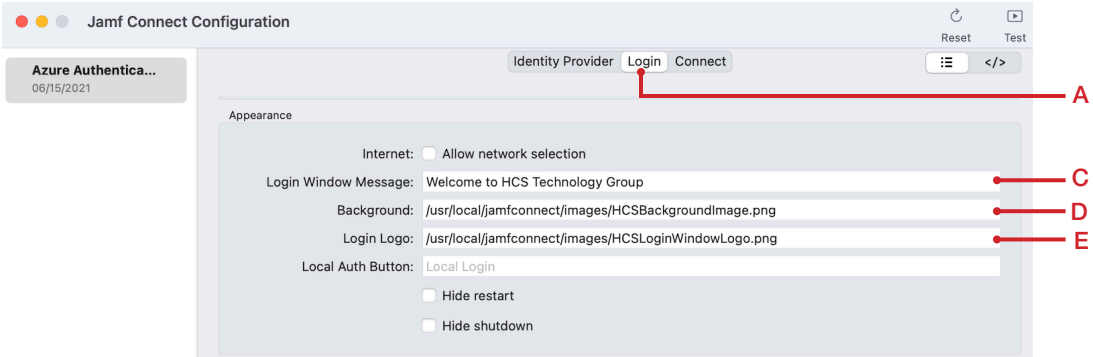
1. Open the Jamf Connect Configuration app

Jamf Connect Configuration

2. Select the Azure Authentication configuration then configure the following:

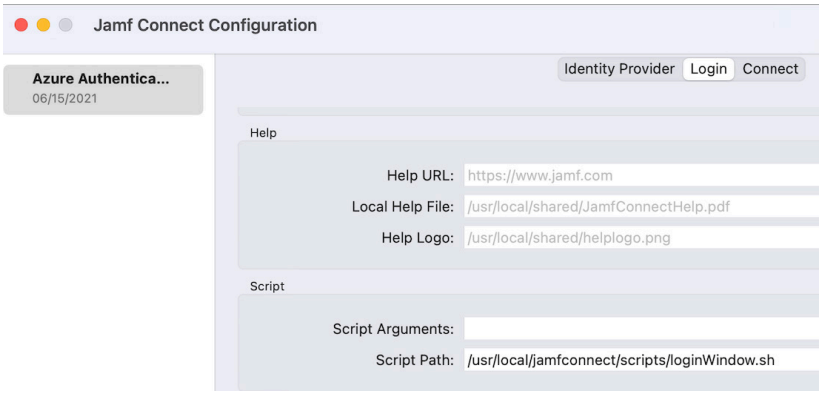
A. Select the Login tab.
B. Go to the Appearance section.
C. Login Window message: this guide will use “Welcome to HCS Technology Group”
D. Background: Add the path to your background image. This guide will use: /usr/local/jamfconnect/images/HCSBackgroundImage.png
E. Login Logo: Add the path to your login image. This guide will use: /usr/local/jamfconnect/images/HCSLoginWindowLogo.png
F. Scroll down to the Script section.

NOTE: The Background and Login Logo images will display custom branded background image and a custom logo at the login window.



3. Script Path: Add the path to your login window script. This guide will use: /usr/local/jamfconnect/scripts/loginWindow.sh

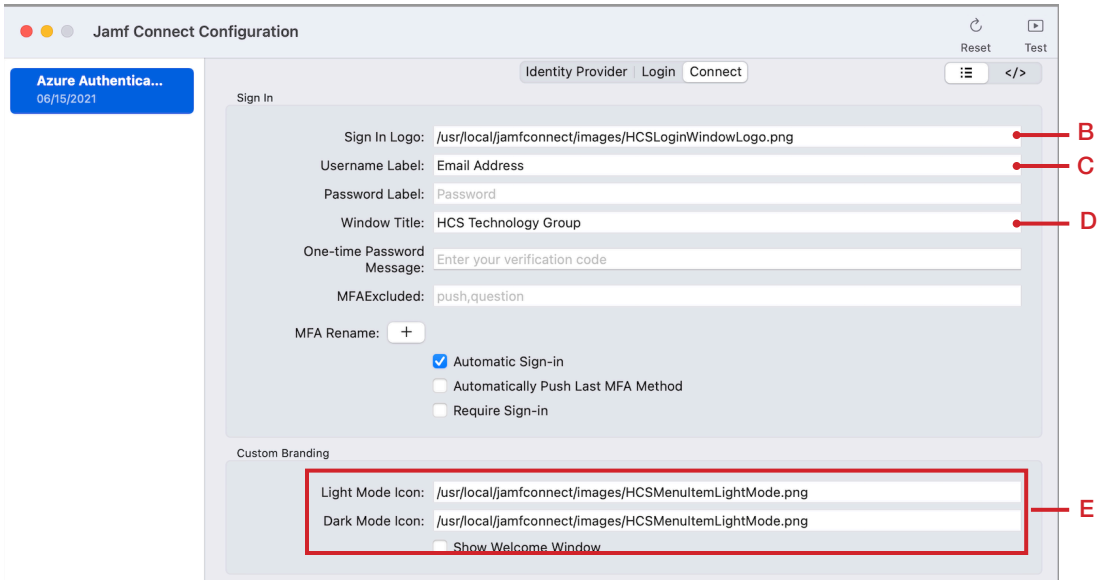
   NOTE: The loginWindow.sh script will run when the user logs in. This sample script will open Safari and go to the HCS webpage on login.



4. Select the Connect tab then configure the following

   A. Go to the Sign In section.
   B. Sign in Logo: Add the path to your icon. This guide will use: /usr/local/jamfconnect/images/HCSLoginWindowLogo.png
   C. Username Label: Email Address (this will change Username to Email Address at the Jamf Connect Login Window)
   D. Window Title: this guide will use “HCS Technology Group”
   E. FIll out the following in the Custom Branding section.
      • Light Mode Icon: Add the path to your icon. This guide will use: /usr/local/jamfconnect/images/HCSMenuItemLightMode.png.
      • Dark Mode Icon: Add the path to your icon. This guide will use: /usr/local/jamfconnect/images/HCSMenuItemLightMode.png

   NOTE: The Light and Dark mode images will be displayed in the menubar. It’s a customized Jamf connect menu bar logo.

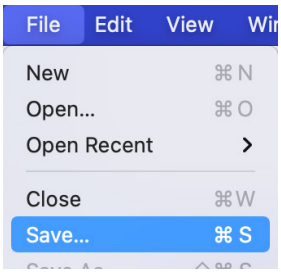


5. On Auth Failure: Enter the path to your script. This guide will use:

   /usr/local/jamfconnect/scripts/menuBar.sh

   NOTE: The menuBar.sh script will present a Jamf Helper message to the user if there was a failure to authenticate to Azure.

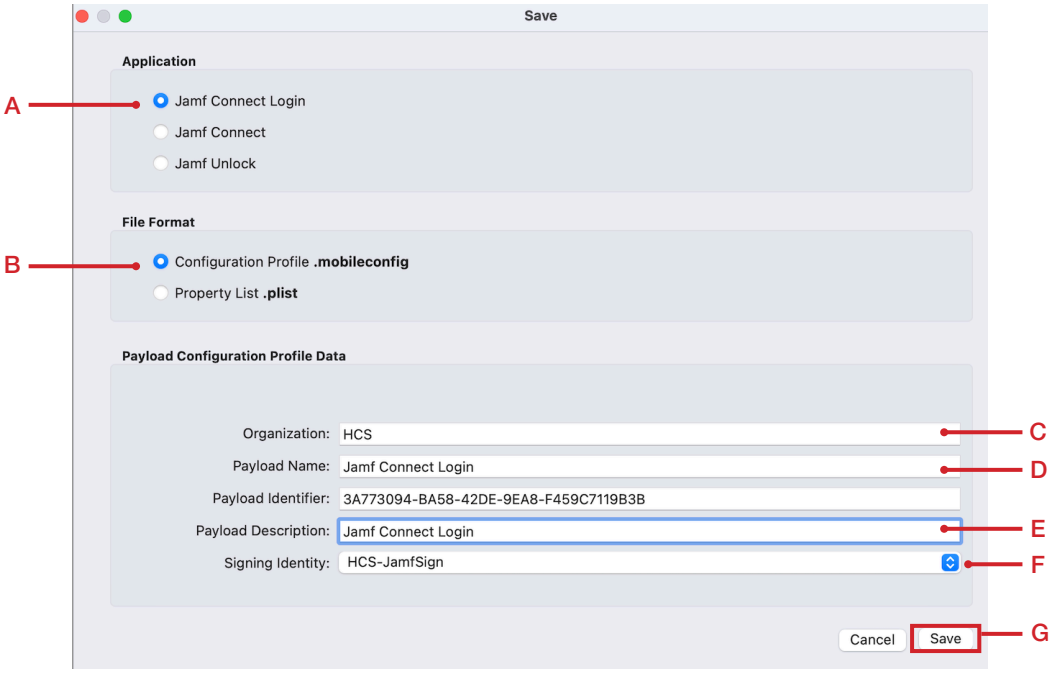
6. Click the File menu then select Save.



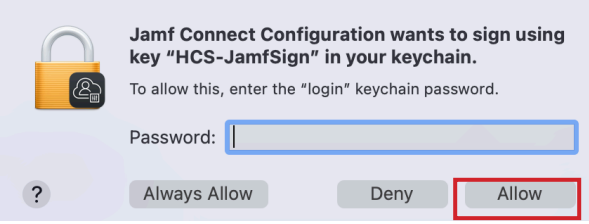
7. Configure the following:

   A. Application: Select Jamf Connect Login
   B. File Format: Select Configuration Profile
   C. Organization: This guide will use HCS
   D. Payload Name: Jamf Connect Login
   E. Payload Description: Jamf Connect Login
   F. Signing Identity: Select your signing certificate
   G. Click Save.

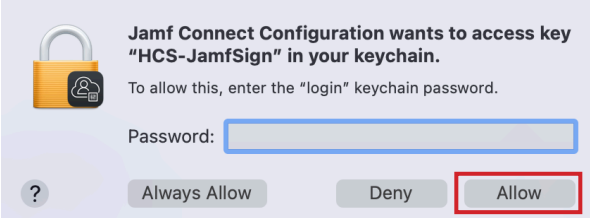
   NOTE: Notice the Jamf Unlock radio button in the Application section, this was added in Jamf Connect Configuration 2.4.



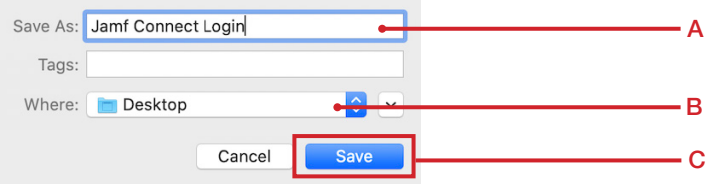
8. Enter your administrative password. Click Allow. You will see this prompt twice.



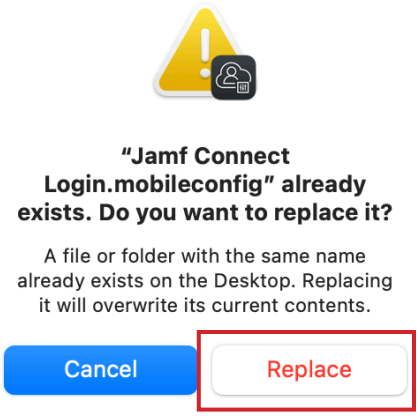
9. Enter your administrative password. Click Allow.



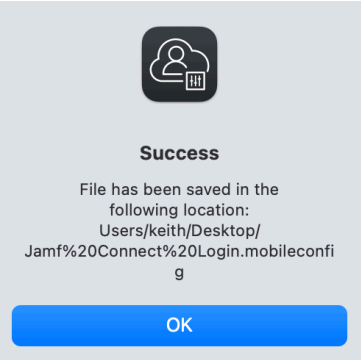
10. Enter the following:
    A. Save As: Jamf Connect Login
    B. Where: Desktop
    C. Click Save



11. Select Replace and the message below.

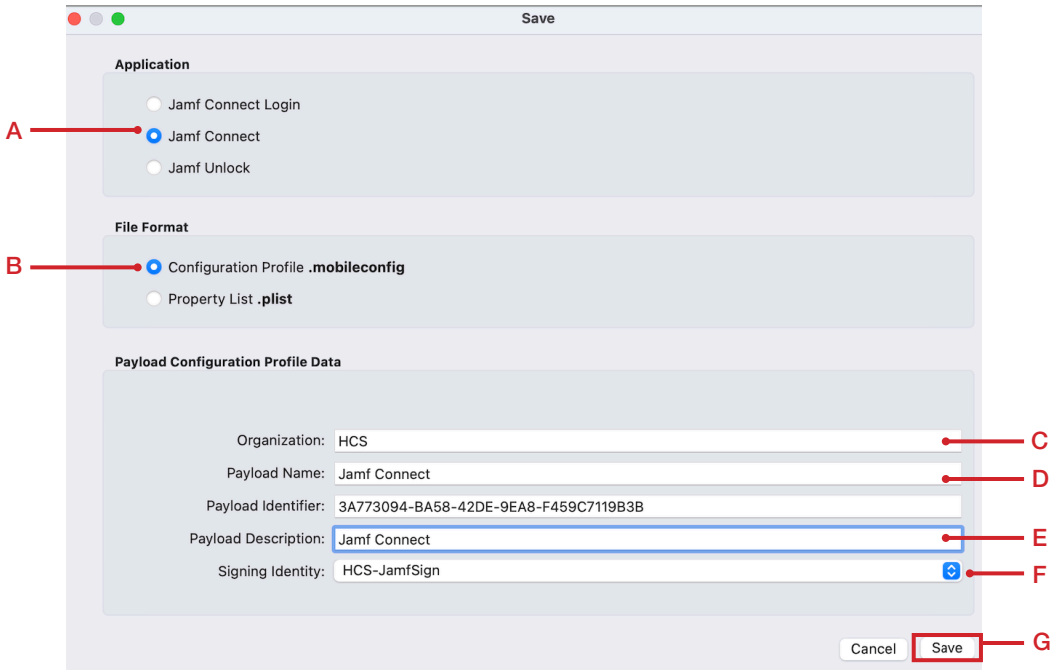


12. Select OK at the message below.

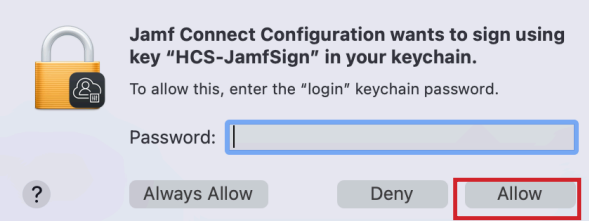


13. Configure the following:

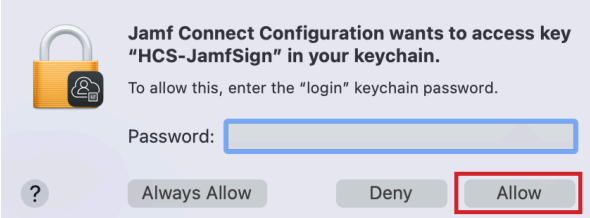
A. Application: Select Jamf Connect
B. File Format: Select Configuration Profile
C. Organization: This guide will use HCS
D. Payload Name: Jamf Connect
E. Payload Description: Jamf Connect
F. Signing Identity: Select your signing certificate
G. Click Save.



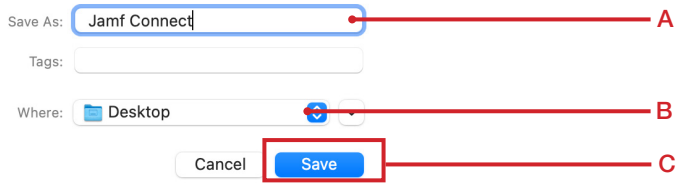
14. Enter your administrative password. Click Allow. You will see this prompt twice.



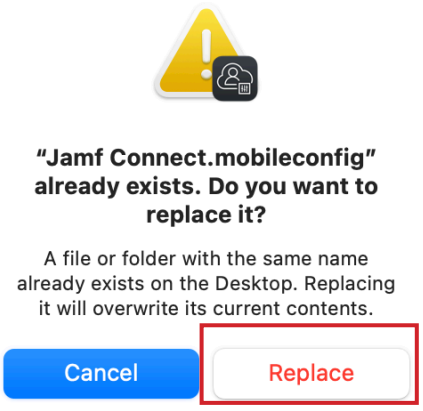
15. Enter your administrative password. Click Allow.



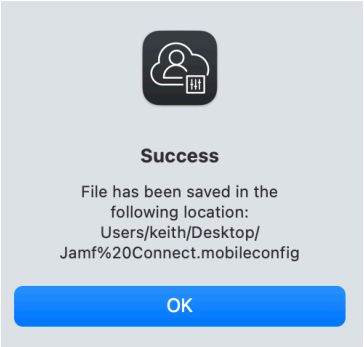
10. Enter the following:
    A. Save As: Jamf Connect
    B. Where: Desktop
    C. Click Save



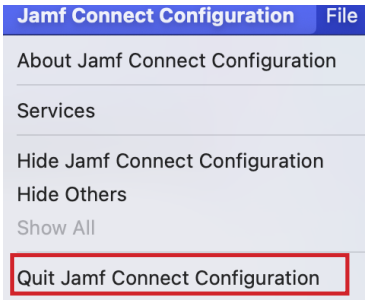
17. Select Replace and the message below.



18. Select OK at the message below.

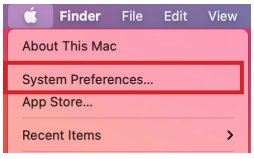


19. Go to the Jamf Connect Configuration menu and select Quit Jamf Connect Configuration.

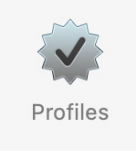


20. You should have two configuration profiles on your Desktop.

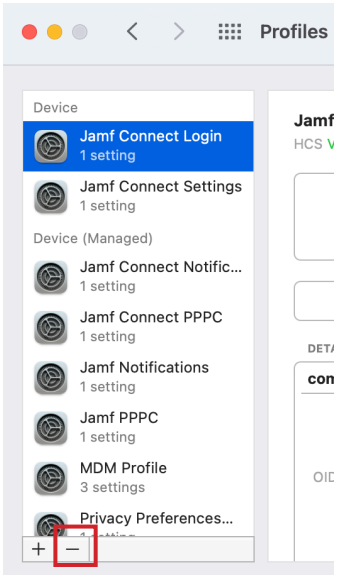
21. Click on the Apple icon in the upper left corner then select System Preferences.



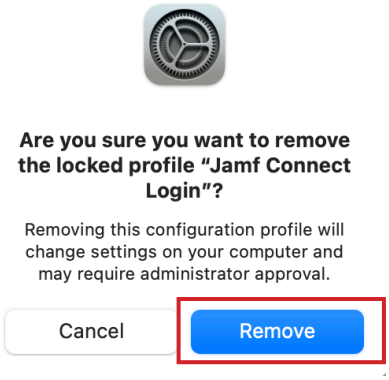
22. Select the Profiles pane



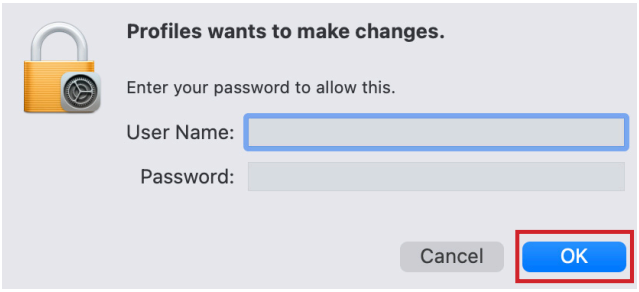
23. Click Remove (–) to delete the Jamf Connect Login configuration profile.



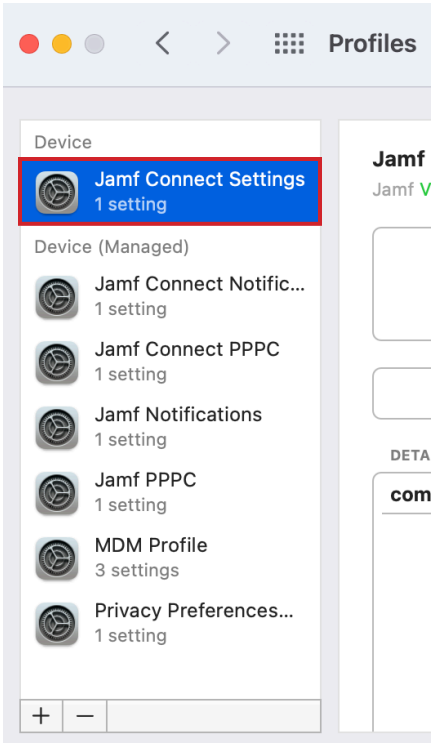
24. Click Remove at the message below.



25. Enter your administrative credentials then click OK.

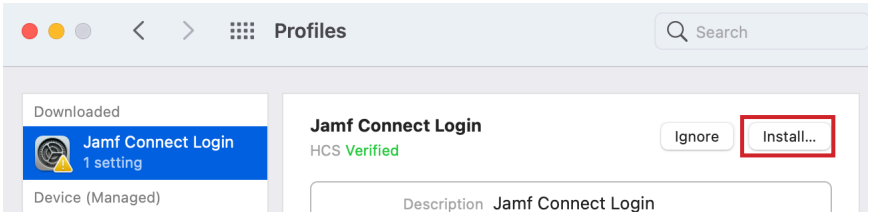


26. Follow steps 23 -25 to remove the Jamf Connect Settings configuration profile.

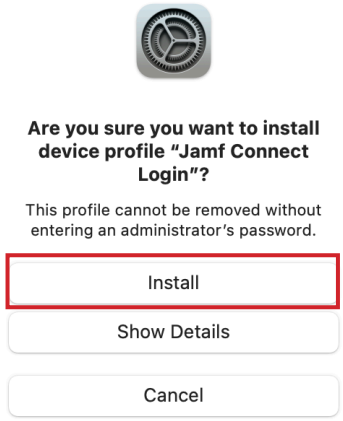


27. Double-click the Jamf Connect Login.mobileconfig file to install it.

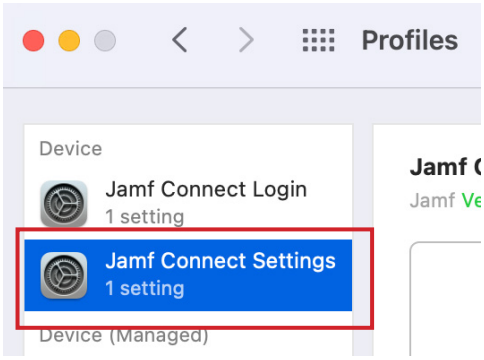
28. Click Install.



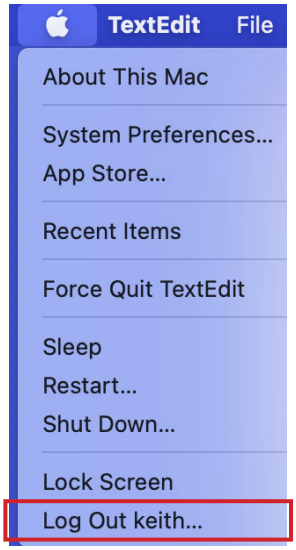
29. Click Install.



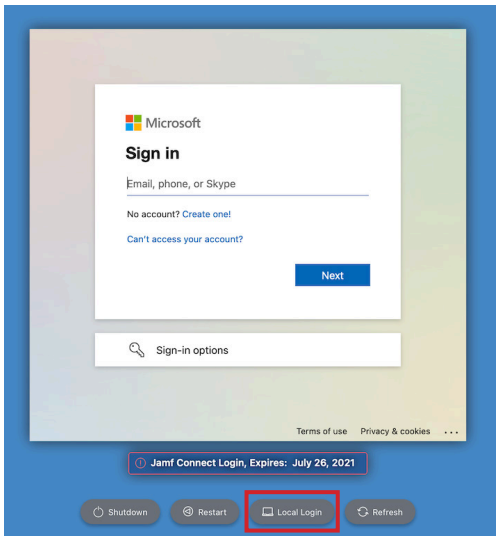
30. Follow steps 27 - 29 to install the Jamf Connect Settings configuration profile. Once both configuration profiles are installed, quit System preferences.



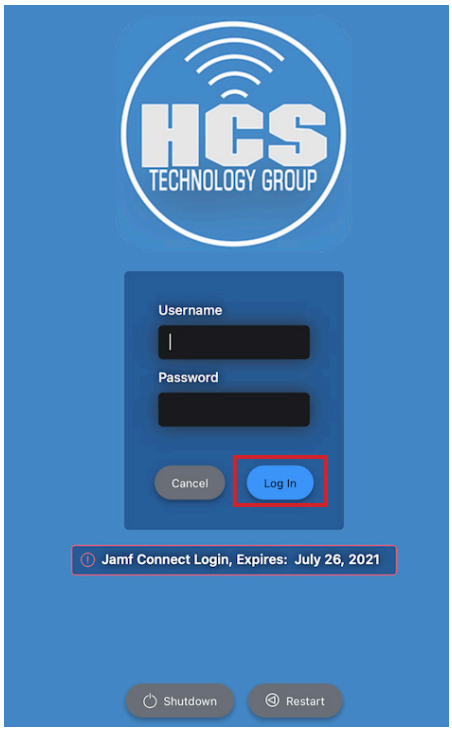
31. Click on the Apple icon in the upper left corner then select Logout.



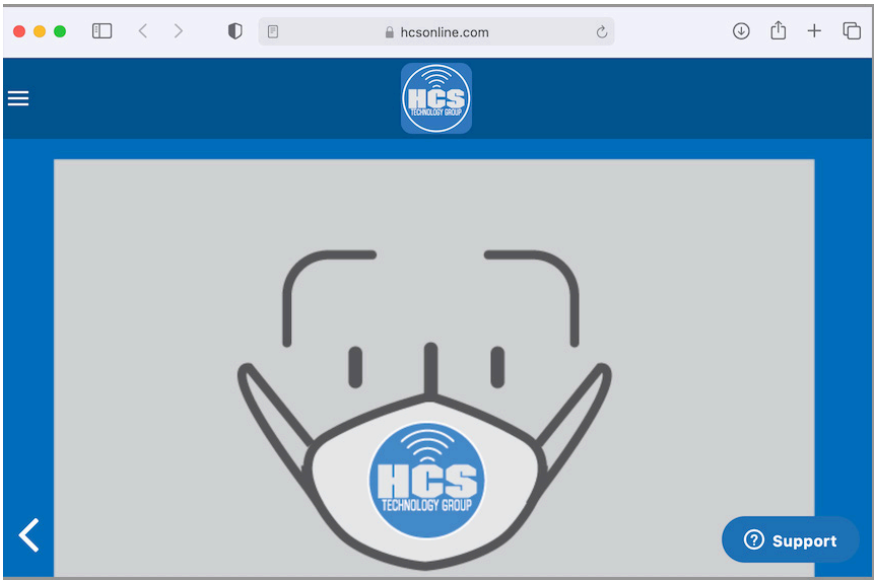
32. Notice the Login Window background is now blue. This is using our custom background image. Select the Local Login button.



33. Notice we now have a custom login window logo. Enter your local user credentials then select Log In.

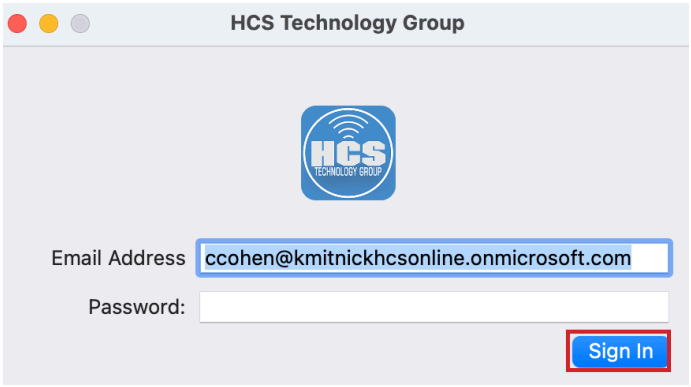


34. Upon login you will notice Safari will open and go to https://www.hcsonline.com. Our loginWindow.sh script was programmed to do this on login.

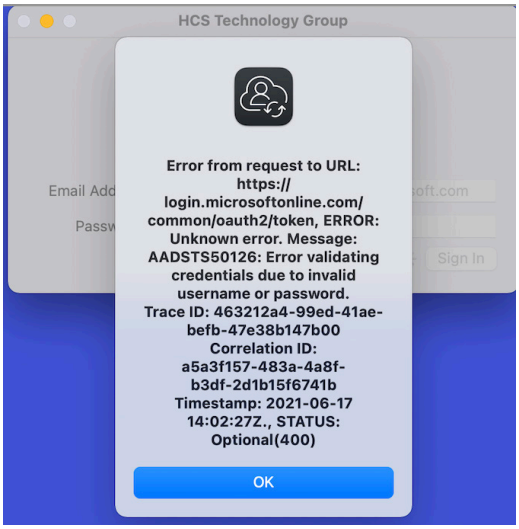


35. In the menu bar, notice the customized Jamf Connect icon.

36. In the Jamf Connect window, enter in a email address and password then click Sign In. We are doing this to confirm our menuBar.sh script runs on authentication failure.
NOTE: The Email Address was a custom setting. It used to say “User name”. Also notice the customized logo.



37. You will see the error message below. DO NOT click OK. The menuBar.sh script is programmed to show a failure message in the next step.



38. This is our menuBar.sh script letting us know there was an authentication failure. Click OK and it will close both alert messages. All of our branding and scripts are working. This completes the section.
NOTE: This alert is running the menuBar.sh script. That script will run on authentication failure. The script uses Jamf Helper which is why your Mac computer needs to be enrolled into Jamf Pro.

Section 12: Deploy Jamf Connect from Jamf Pro

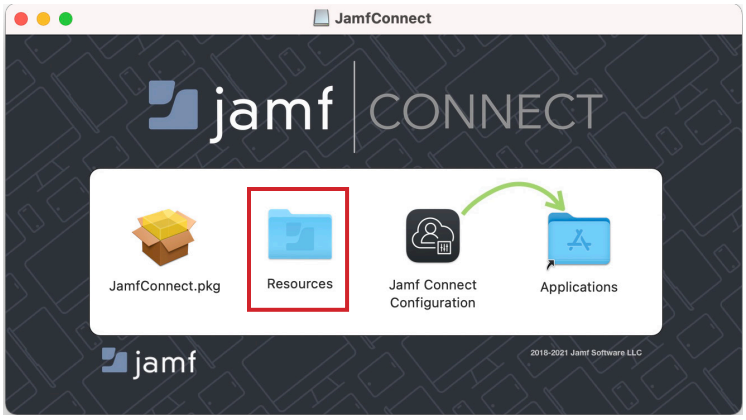
JAMF Pro version 10.30 introduced a new way to deploy Jamf Connect directly from JAMF Pro. You no longer need to add Jamf Connect to a prestage in JAMF Pro to deploy it. If you require the Jamf Connect Launch Agent, that still needs to be deployed from a prestage or via a policy in JAMF Pro

This section requires the following:

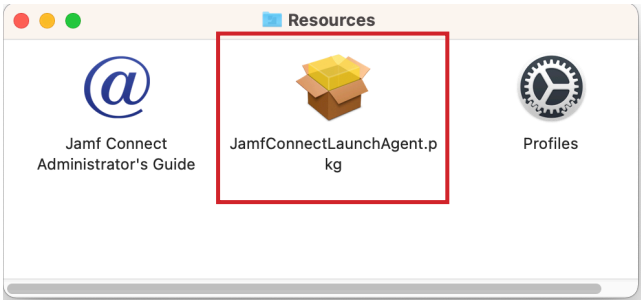
A. JAMF Pro server version 10.30 or later.
B. Jamf Connect License mobile configuration profile.
C. Jamf Connect Login and Jamf Connect settings mobile configuration profiles.
D. Jamf Connect Launch Agent which is located in the Resources folder of the Jamf Connect 2.4 installer DMG.
E. A prestage enrollment configured on your JAMF Pro server that skips account creation at setup.

1. Open the Jamf Connect 2.4 DMG file.

2. Open the Resources folder.

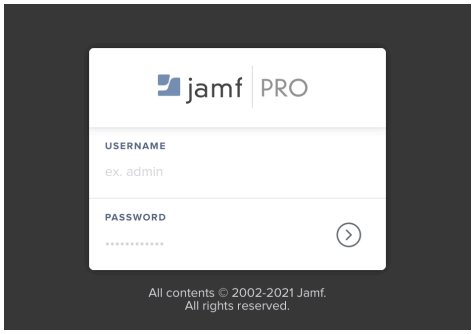


3. Drag the JamfConnectLaunchAgent.pkg to the Desktop.

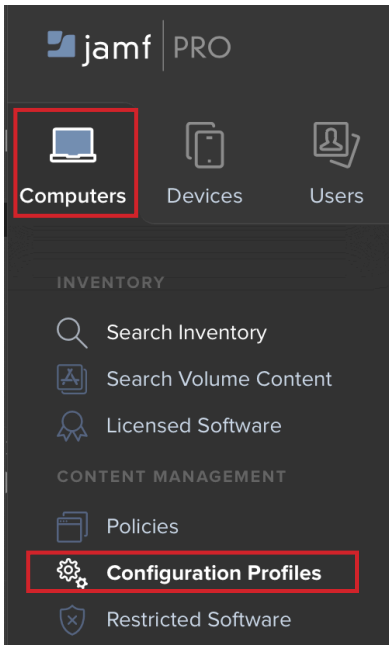


4. You should have the following files on your Desktop
   - Jamf Connect License.mobileconfig
   - Jamf Connect Settings.mobileconfig
   - Jamf Connect Login.mobileconfig
   - JamfConnectLaunchAgent.pkg

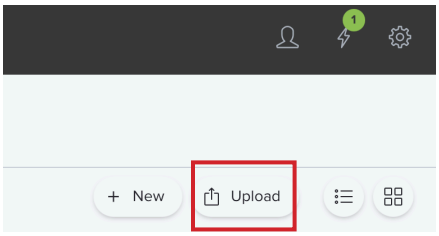
5. If necessary, Log into your Jamf Pro server.



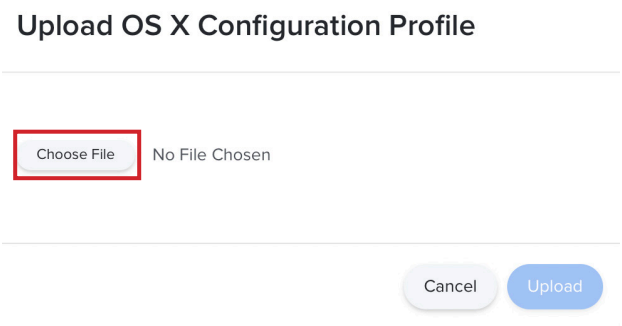
6. Click on Computers, then click Configuration Profiles.



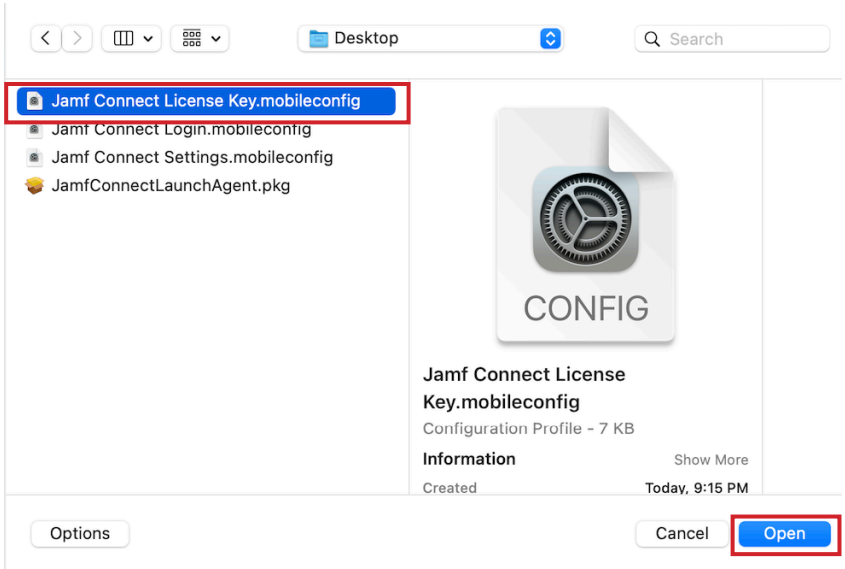
7. Click Upload.



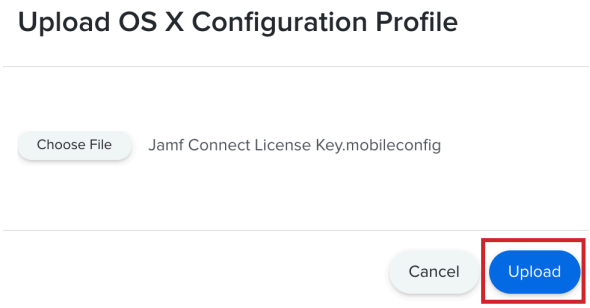
8. Click Choose File.



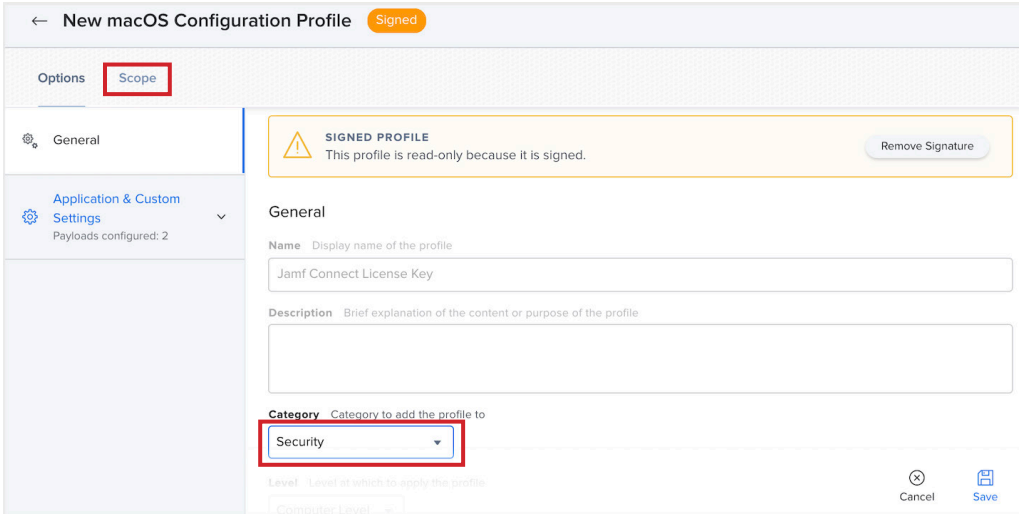
9. Select your Jamf Connect License Key.mobileconfig file, then click Open.



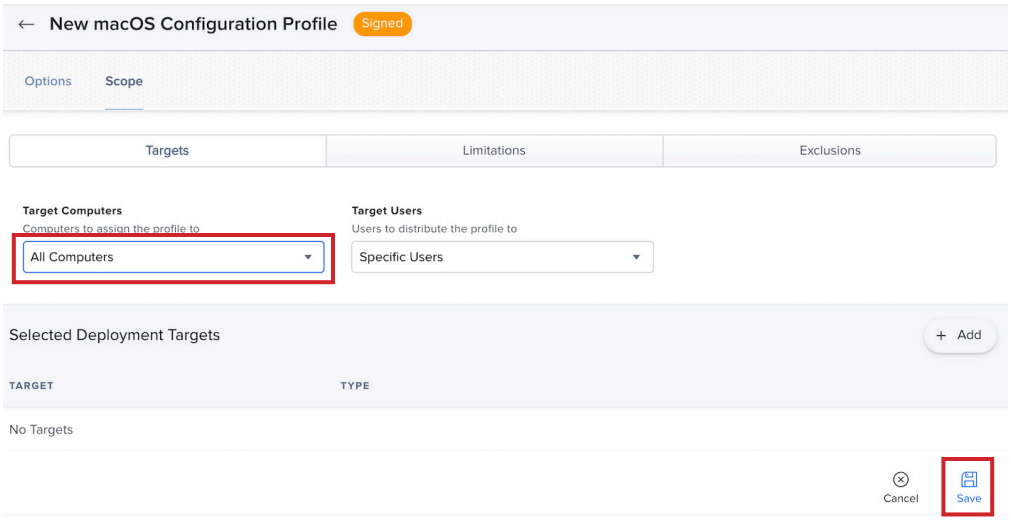
10. Click Upload.



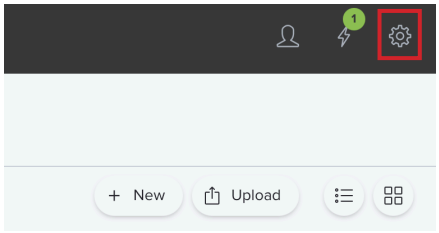
11. Select a category then click Scope.



12. Scope to your needs. This guide will scope to All Computers. Click Save.

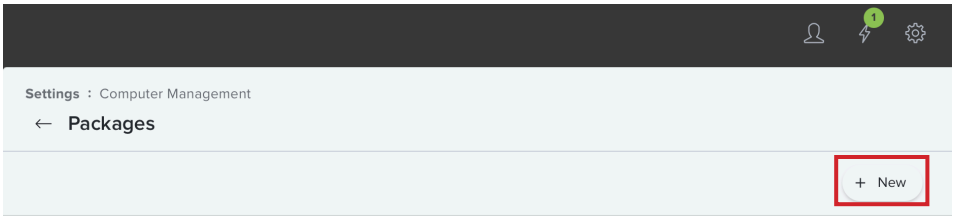


13. Click Settings (Looks like a gear) in the upper-right corner.

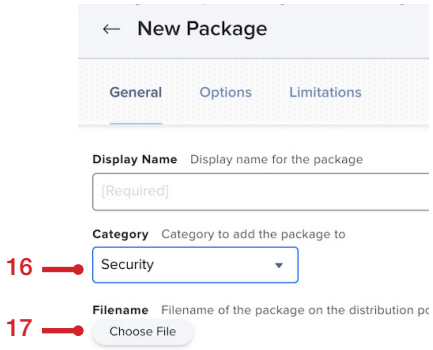


14. Click Computer Management then click Packages.

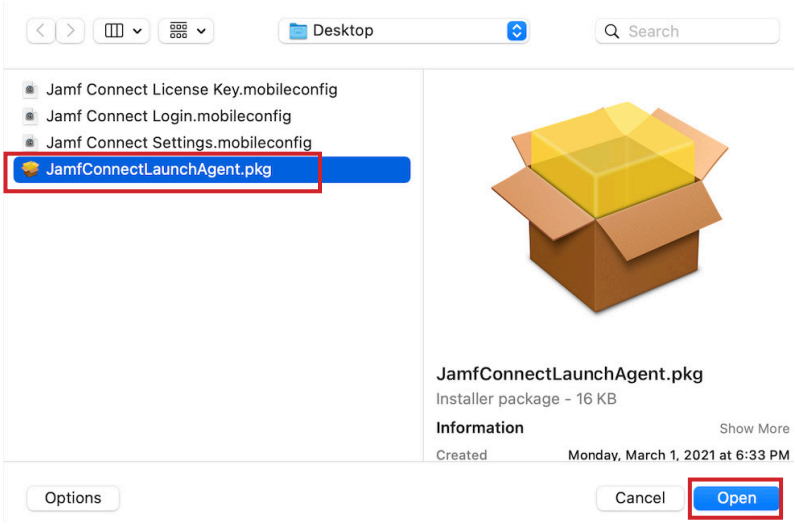
15. Click New.



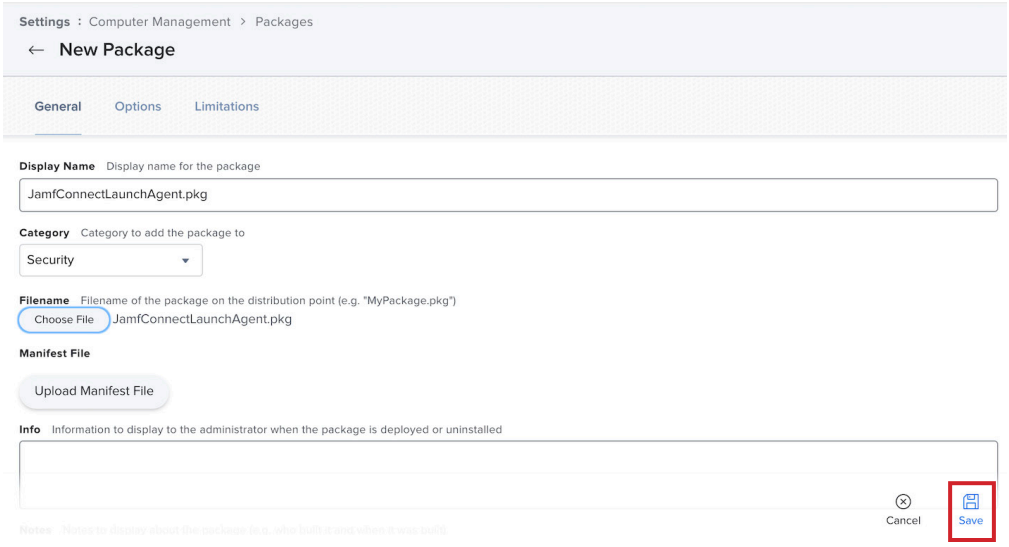
16. Select a Category.
17. Click Choose File.



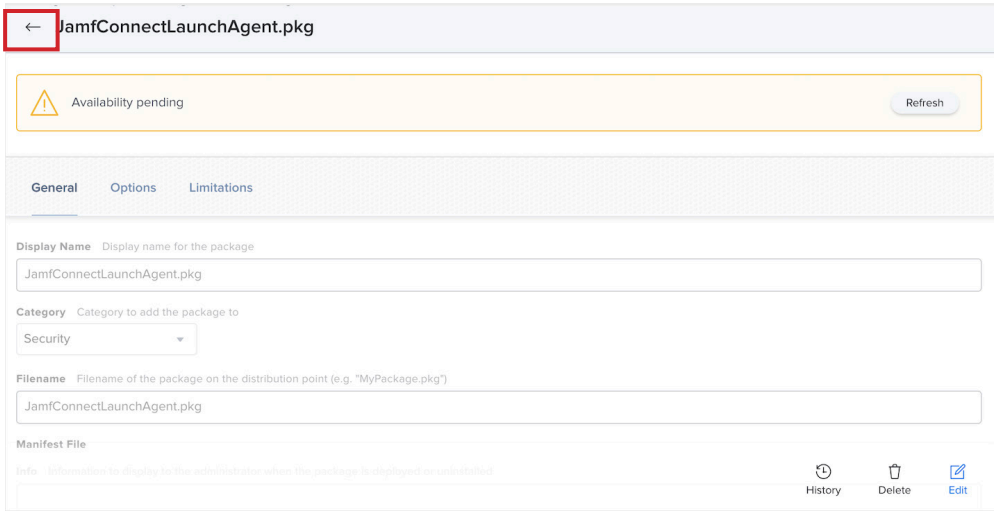
18. Select JamfConnectLaunchAgent.pkg, then select Open.



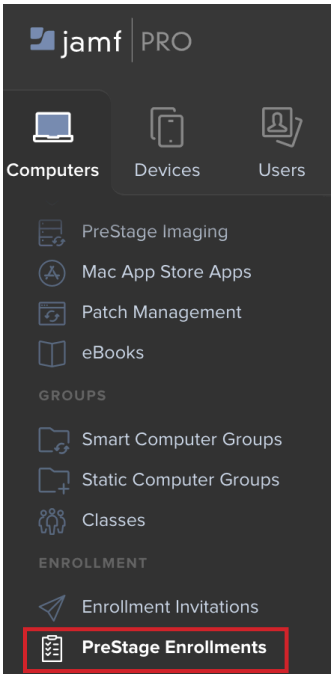
19. Click Save.



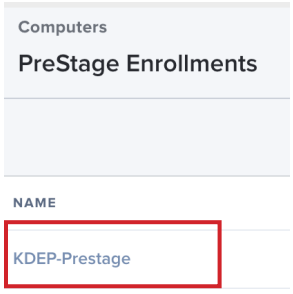
20. The upload has completed. Click Back (←).



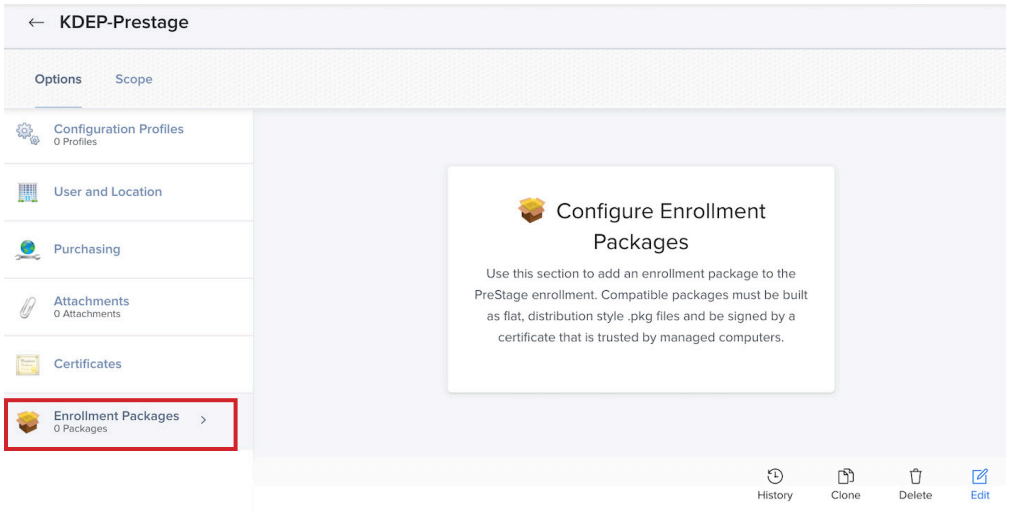
21. Click Computers then click PreStage Enrollments.
NOTE: This guide assumes you already have a pre stage enrollment configured to skip account creation during setup assistant and a test Mac Computer scoped to the prestage.



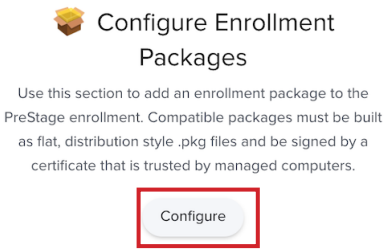
22. Open your prestage enrollment.



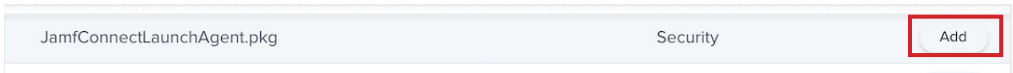
23. Click Enrollment Packages then click Edit.



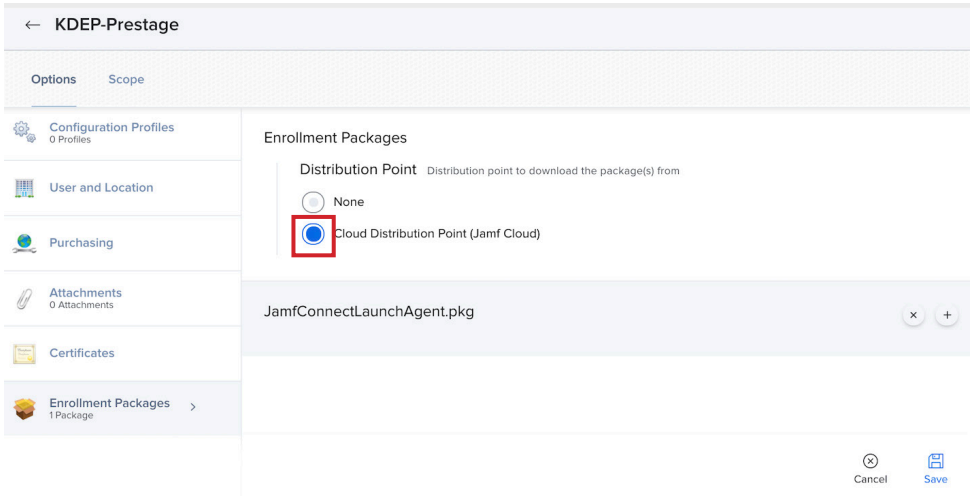
24. Click Configure.



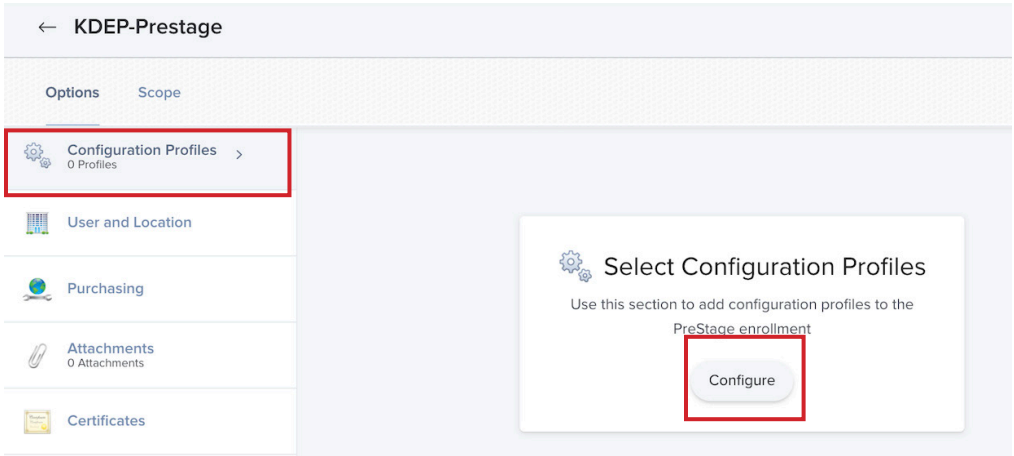
25. Add the JamfConnectLaunchAgent.pkg.
    NOTE: If you followed along this guide from the beginning and have the custom logos pkg that we created in section 10, you can add that package as well provide it's signed



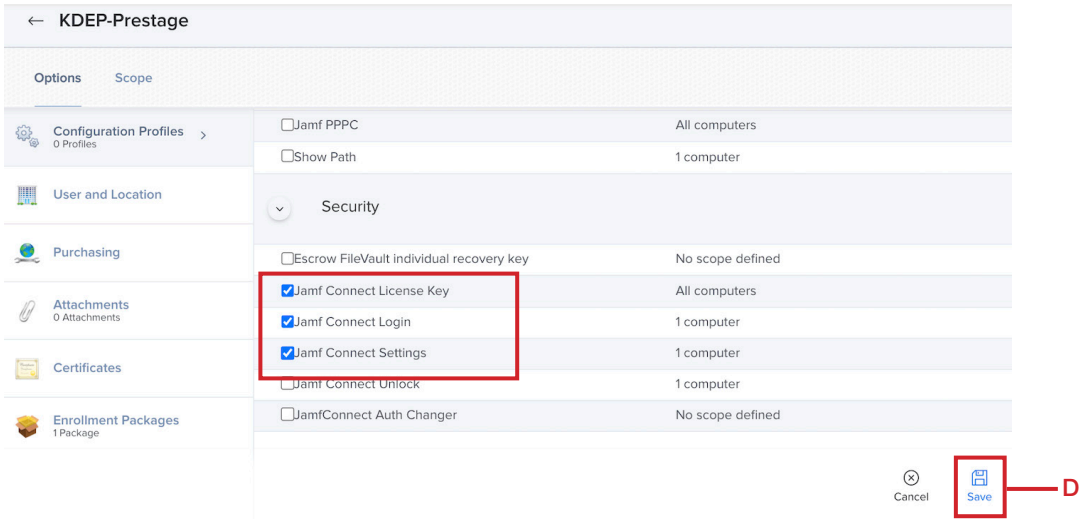
26. Select Cloud Distribution Point (Jamf Cloud)



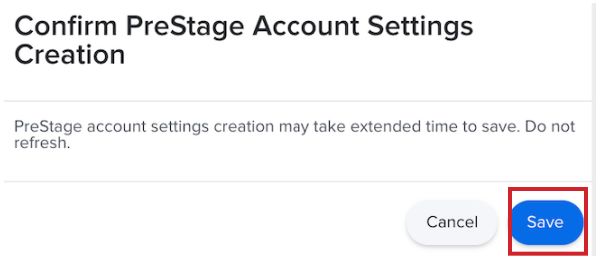
27. Select Configurations Profiles then select Configure.



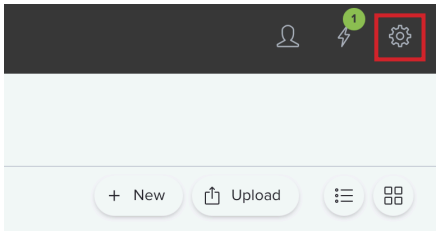
28. Select the following configuration profiles:
    A. Jamf Connect License Key
    B. Jamf Connect Login
    C. Jamf Connect Settings
    D. Click Save



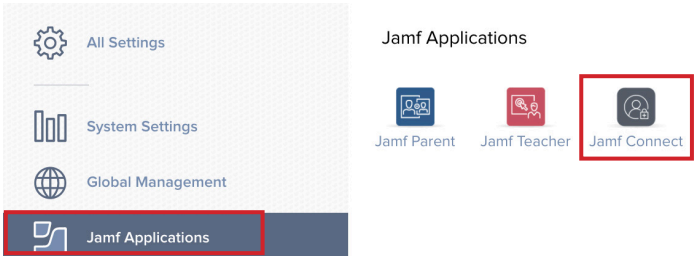
28. Click Save



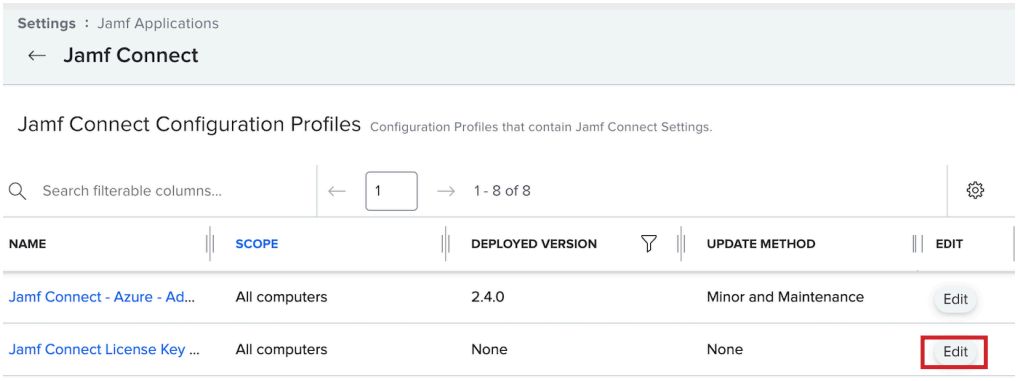
29. Click Settings (Looks like a gear) in the upper-right corner.



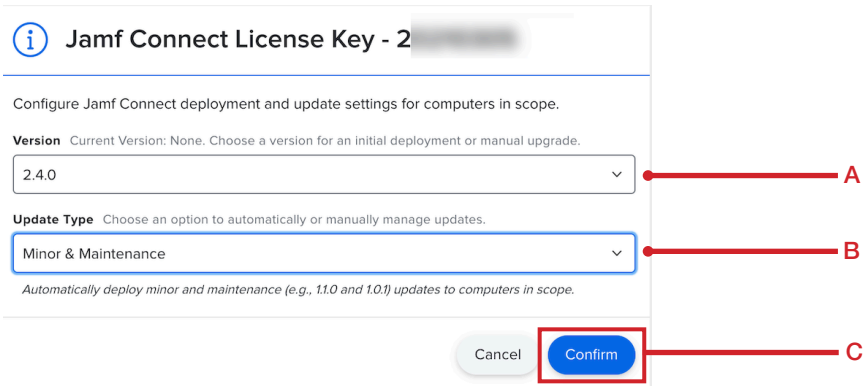
30. Click Jamf Applications then click Jamf Connect.



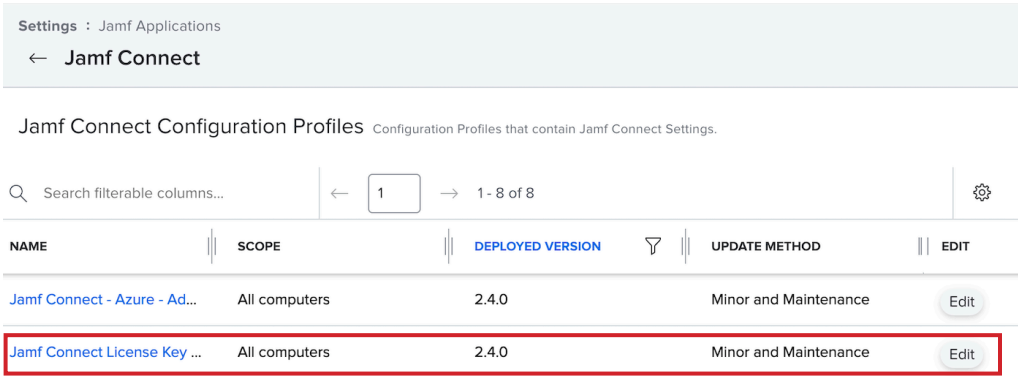
31. Click Edit on your Jamf Connect License Key.



32. Select the following:
    A. Version: 2.4.0
    B. Update Type: Minor & Maintenance
    C. Click Confirm.



33. The Jamf Connect License key is now configured for auto deployment of Jamf Connect from JAMF Pro.



34. Using a Mac Computer running macOS Mojave or greater and scoped to your prestage in JAMF Pro, enroll the Mac Computer into JAMF Pro via Automated Device Enrollment. During the setup assistant, you should be presented with a Microsoft Login Screen. Login with your Azure credentials and a local account will be created on your Mac Computer. If you used the custom icons and scripts created in this guide, then confirm all your customization are in place and the scripts run.

This completes this section.

Section 13: Configure Jamf Unlock

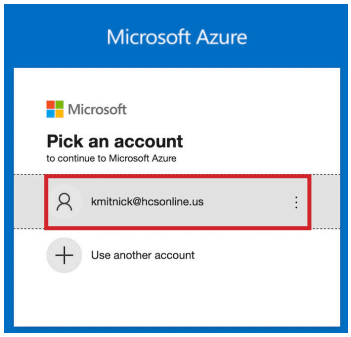
In this section we will configure Jamf Unlock. Jamf Unlock is a mobile device app that allows a user to unlock their Mac with a mobile device without using a password. With Jamf Unlock, users complete a setup process to create or generate identity credentials (certificate) on their device, which is then used to pair and establish trust with a Mac. Jamf Unlock does NOT allow you to login to your Mac Computer upon startup or reboot. It is only used in the following scenarios.

- Unlocking a Mac
- Prompts to change settings in System Preferences
- Commands executed with root privileges with the sudo command

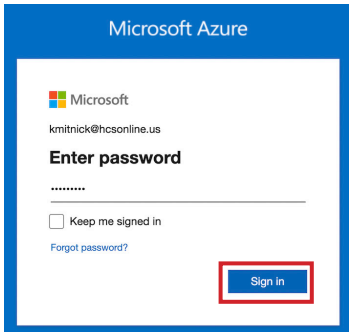
A standard macOS user can only use Jamf Unlock to unlock their Mac Computer. To use the other features, you must be an Administrator on your Mac computer to run commands with sudo privileges and unlock items in system preferences. This guide will use an Administrator user account in order to show all of what Jamf Unlock can do.

This section requires Jamf Connect version 2.4 and the Jamf Unlock App assigned to your Jamf Pro Server from either Apple Business or School Manager. An iOS device with touch or Face ID and iOS version 14 or later enrolled into your Jamf Pro Server is also required.

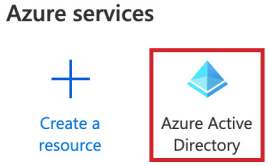
1. From a web browser of your choosing, go to https://portal.azure.com and enter a user name with appropriate privileges to manage the domain.



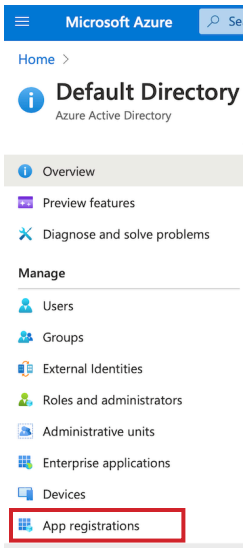
2. Enter your password and click Sign in.



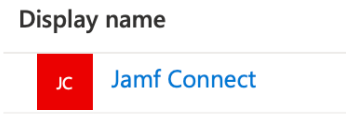
3. Click Azure Active Directory.



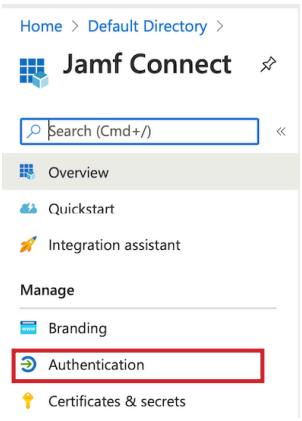
4. Click App registrations.



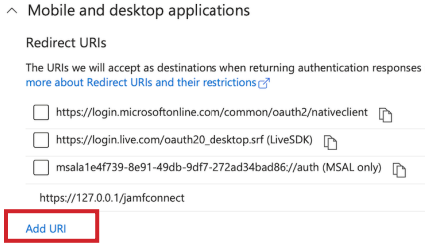
5. Select the Jamf Connect app configuration.



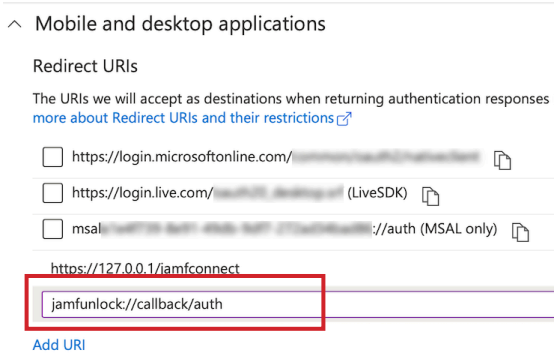
6. Click Authentication.



7. Go to the Mobile and desktop applications section and select Add URI.

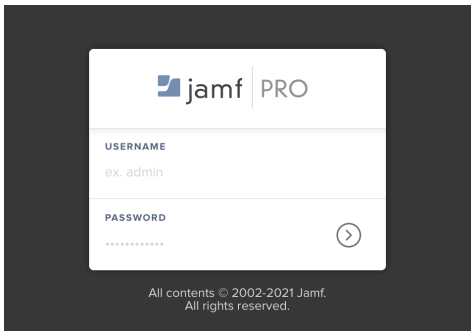


8. In the URI field, enter: **jamfunlock://callback/auth**

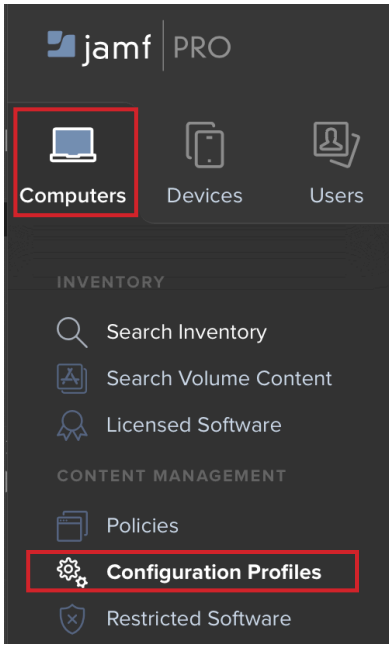


9. Click Save. We are done with the Azure AD configuration. Logout of your Azure portal.

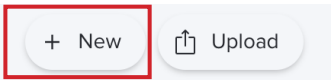
10. If necessary, Log into your Jamf Pro server.



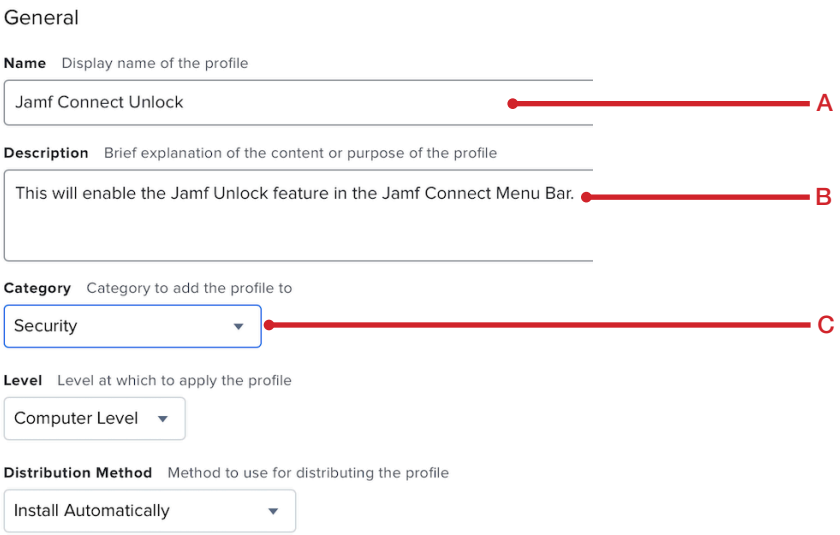
11. Click on Computers, then click Configuration Profiles.



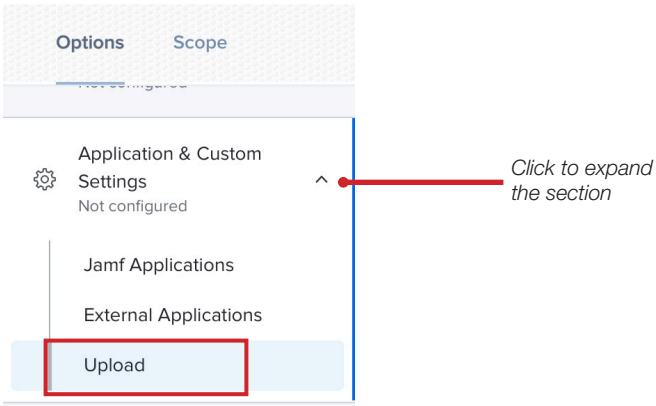
12. Click the New button.



13. In the General section, Enter the following information:
    A. Name: **Jamf Connect Unlock**
    B. Description - **Enter a description of your choosing**
    C. Category - Enter a category of your choosing - this guide will use Security
    D. Leave all other settings at their defaults



14. In the payload section, scroll down to the Application & Custom Settings payload. Click the expansion arrow and select Upload.

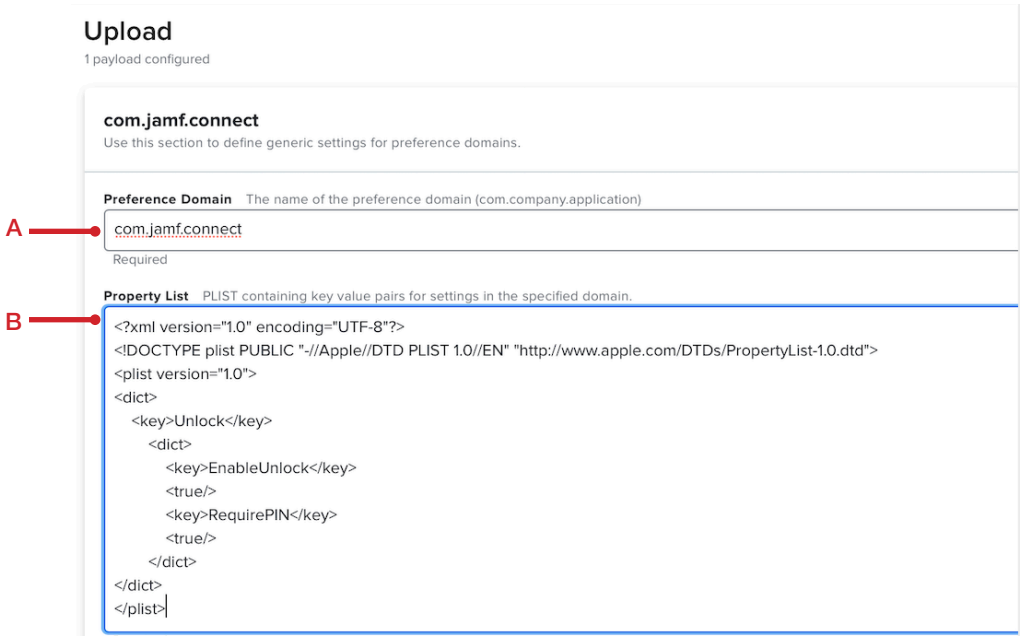


15. Click Add.

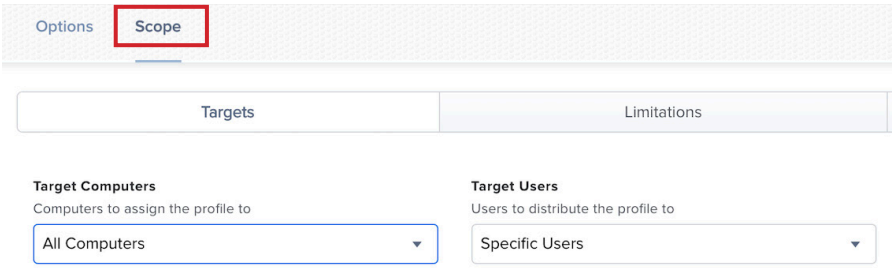
16. Enter the following information:
    A. Preference Domain: **com.jamf.connect**
    B. Property List. Paste in the property settings below:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/
  DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
<dict>
 <key>Unlock</key>
 <dict>
<key>EnableUnlock</key>
<true/>
<key>RequirePIN</key>
<true/>
 </dict>
</dict>
</plist>
```

NOTE: We are adding this configuration profile as a separate setting to enable Jamf Unlock. This will allow you to remove Jamf Unlock if you choose to at a later date without effecting your other jamf connect menu bar settings. If you want only one Jamf Connect configuration profile, you could add the above Unlock keys to your existing JamfConnect mobile configuration file for a singular solution.

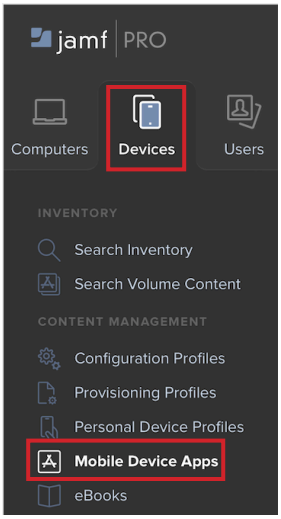


17. Click Scope and scope to your needs.

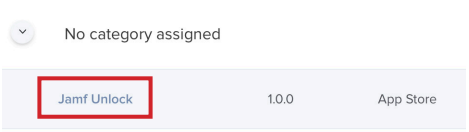


18. Click Save.

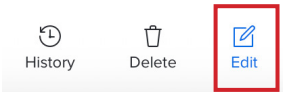
19. Click Devices, then click Mobile Device Apps.



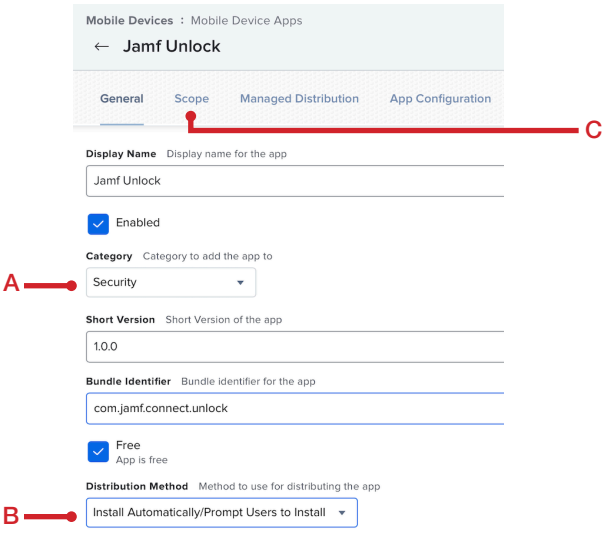
20. Select the Jamf Unlock App.



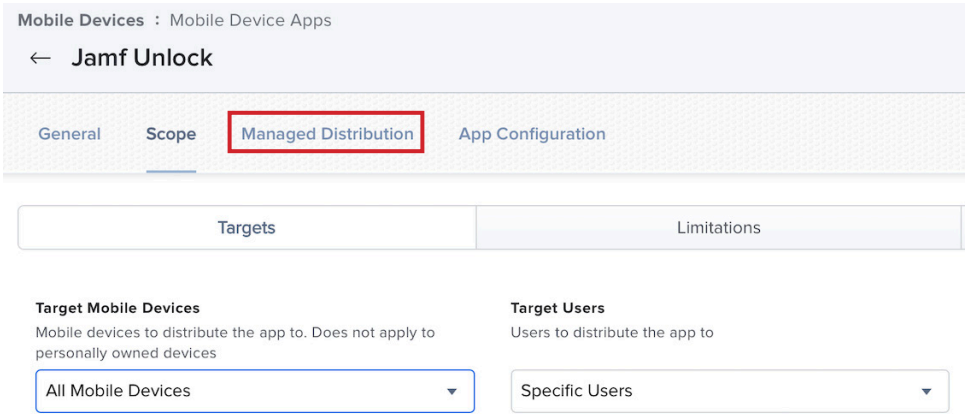
21. Click Edit.



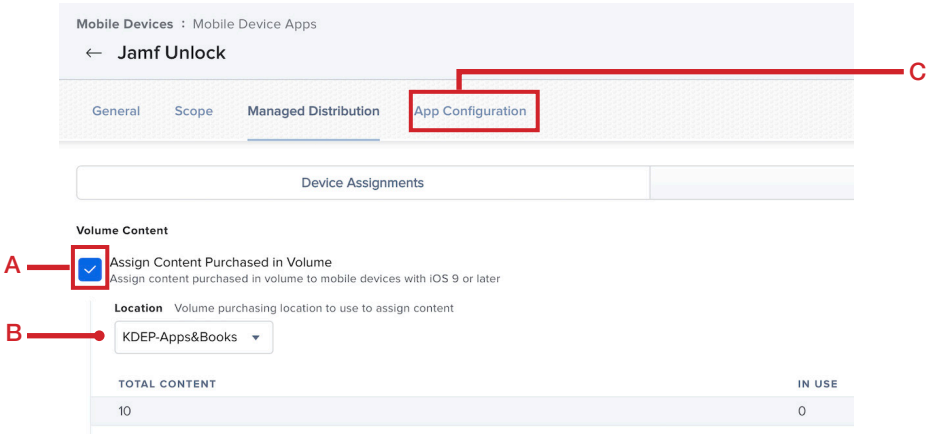
22. Configure the following:
    A. Category - Select a Category of your choosing. This guide will use Security
    B. Distribution Method - Select Install Automatically/Prompt Users to Install
    C. Select the Scope tab



23. Scope to your needs then click Managed Distribution.



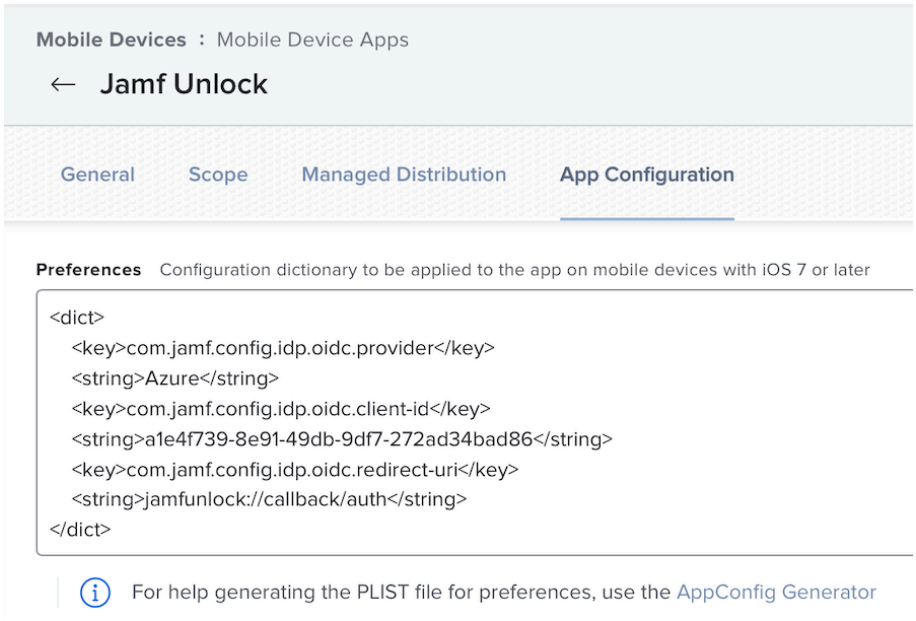
24. Do the following:
    A. Confirm Assign Content Purchased in Volume is selected
    B. Select your Location from the dropdown menu.
    C. Click App Configuration.



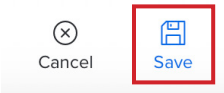
25. Paste the XML below in the preferences field.

```
<dict>
 <key>com.jamf.config.idp.oidc.provider</key>
 <string>Azure</string>
 <key>com.jamf.config.idp.oidc.client-id</key>
 <string>abcd65c-52fe-4b63-8dde-d658abc0aee8</string>
 <key>com.jamf.config.idp.oidc.redirect-uri</key>
 <string>jamfunlock://callback/auth</string>
</dict>
```

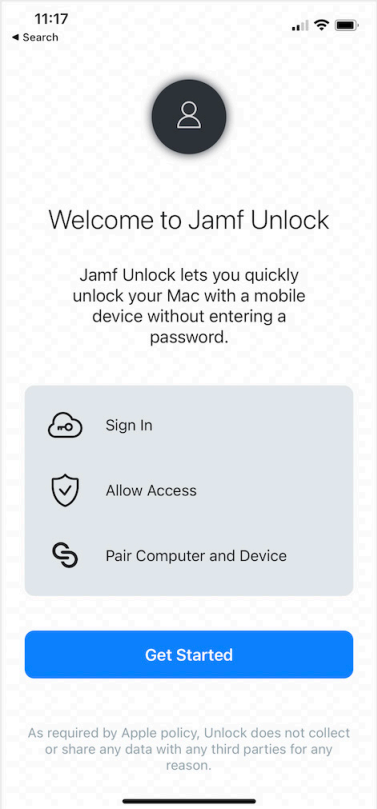
Change the com.jamf.config.idp.oidc.client-id string to the OIDC Client ID that you copied in section 3 step 4 of this guide.



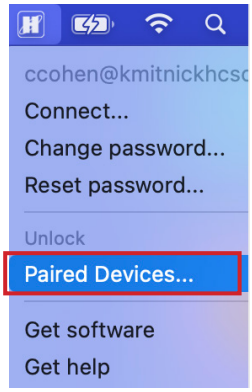
26. Click Save.



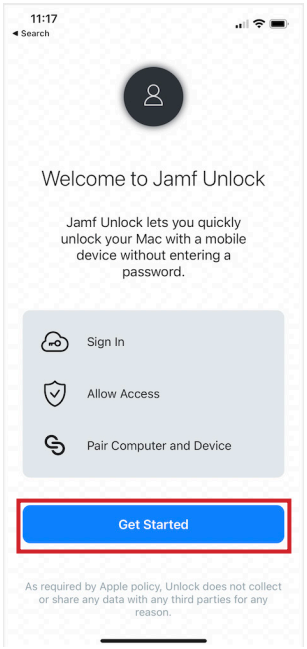
27. Open Jamf Unlock on an iOS device that is enrolled in Jamf Pro and has the Jamf Unlock app scoped to it.



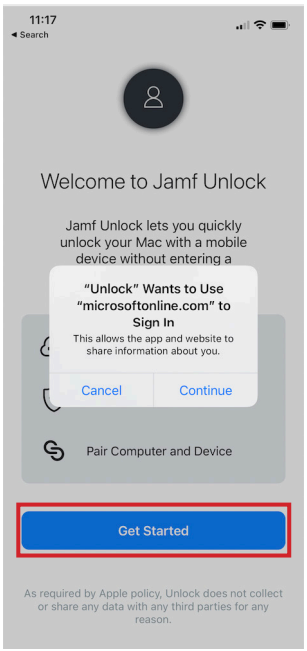
28. Confirm you have a Mac Computer with Jamf Connect installed and Unlock shows up in the Menu Bar app. Select Paired Devices. This will open the Jamf Unlock Paired Devices Screen. Leave this screen open as we will need it in a later step



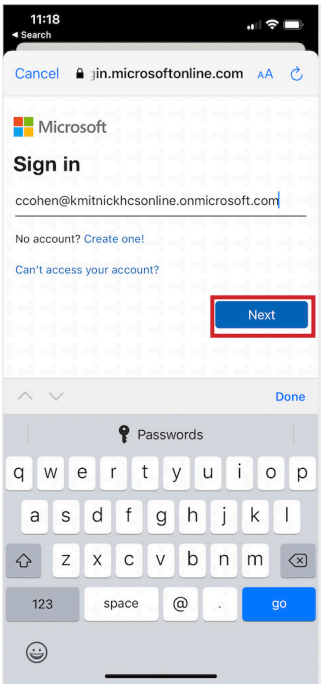
29. On your iOS device, tap Get Started.



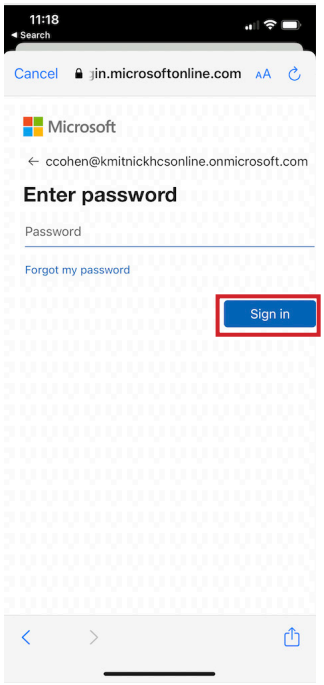
30. Tap Continue at the message below.



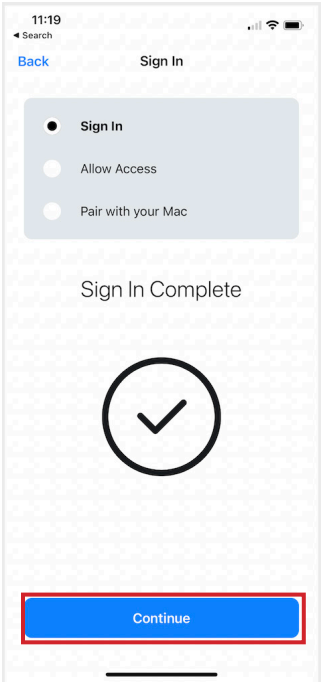
31. Enter your Microsoft Azure account then tap Next.



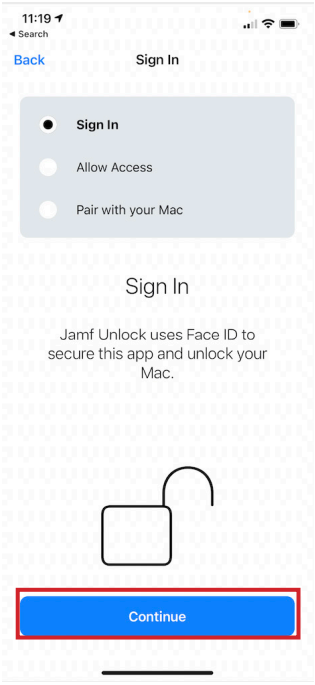
32. Enter your Microsoft Azure password, then tap Sign In.



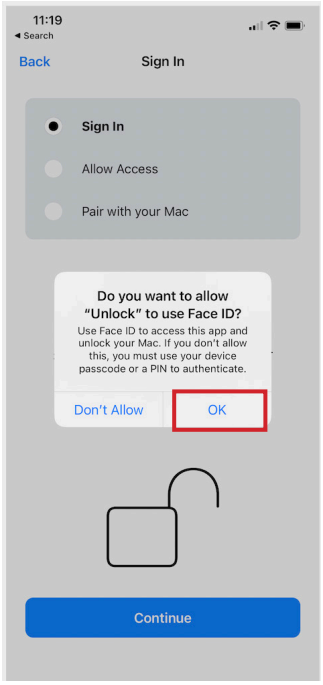
33. Tap Continue.



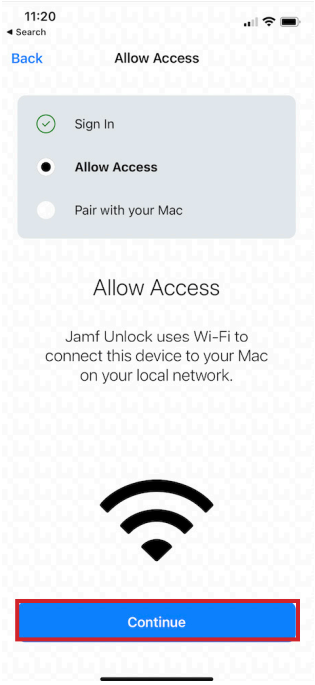
34. Tap Continue.



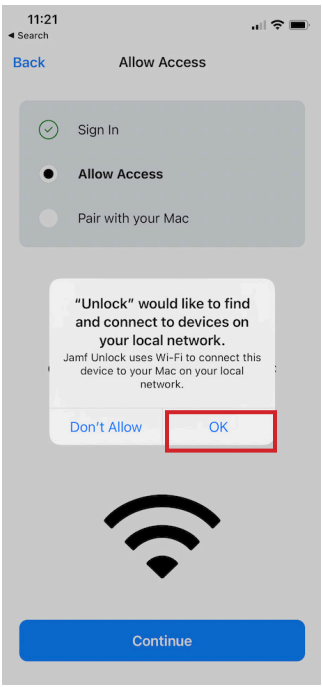
35. Tap OK at the message below.



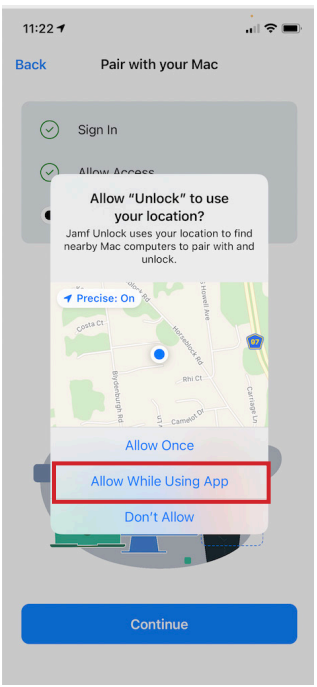
36. Tap Continue.



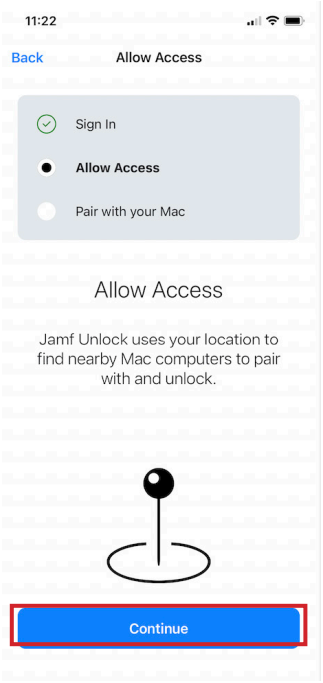
37. Tap OK at the message below.



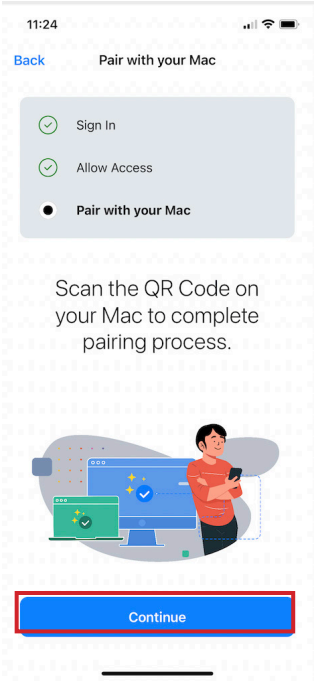
38. At the message below, make a selection of your choosing. This guide will use Allow While Using App.



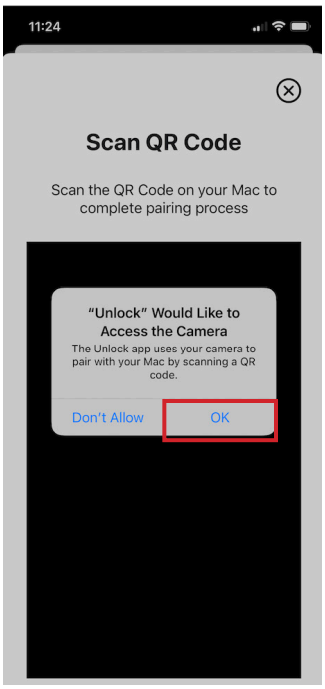
39. Tap Continue.



40. Tap Continue.

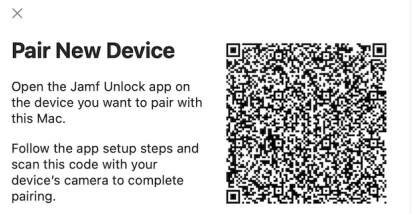


41. Select OK at the message below the use your camera to scan the QR code on your Mac Computer.

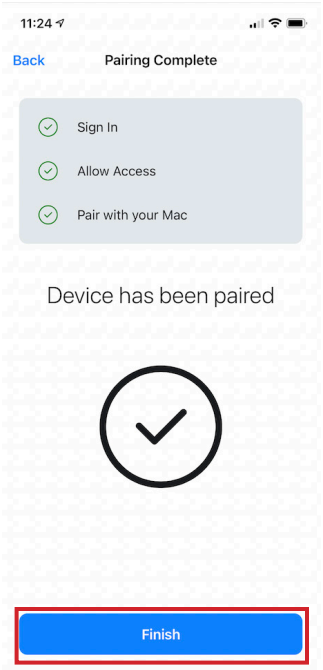


42. On your Mac Computer, click Pair new device.

43. Scan the QR code with your iOS device to begin the pairing process.

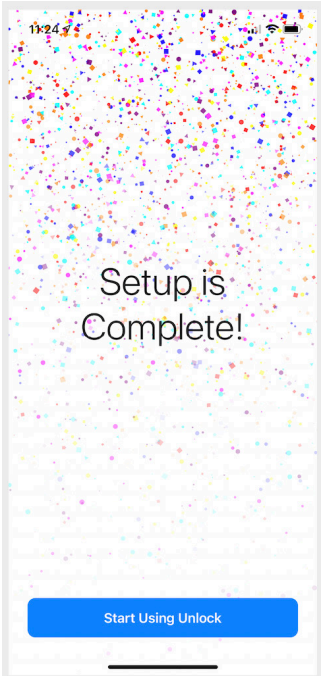


44. On your iOS device, Tap Finish.

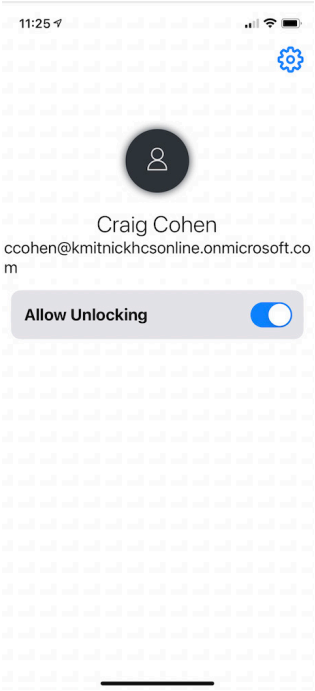


45. Tap Allow at the message below.

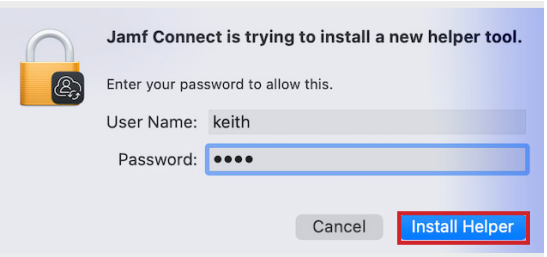
46. The setup process is done on the iOS device.



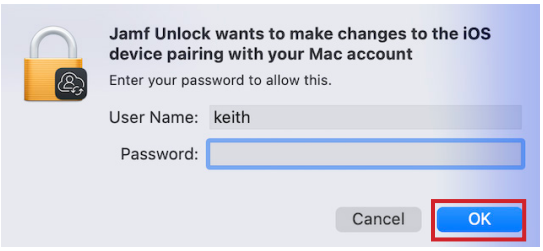
47. The unlock user is configured and ready for use.



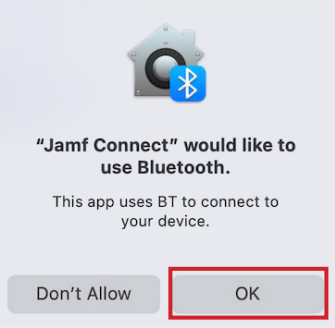
48. Switch back to your Mac computer. Enter your administrative credentials at the message below. Click Install Helper.



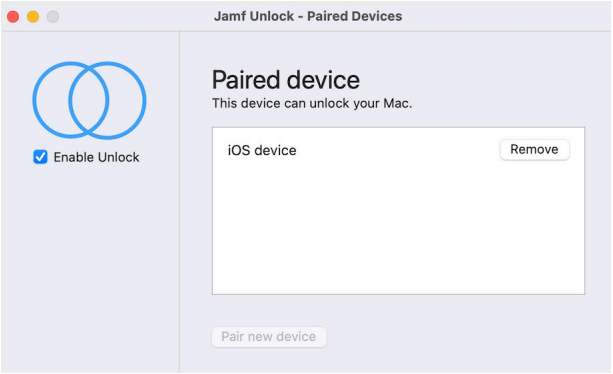
49. Enter your administrative credentials at the message below. Click OK.



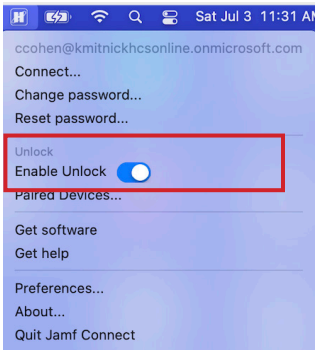
50. Click OK at the message below.



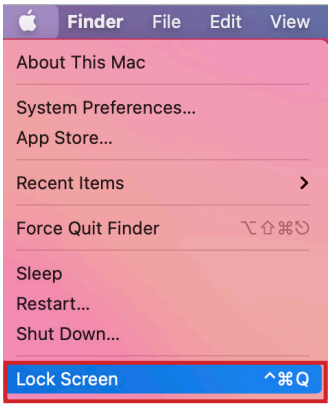
51. The pairing process has completed on the Mac Computer.



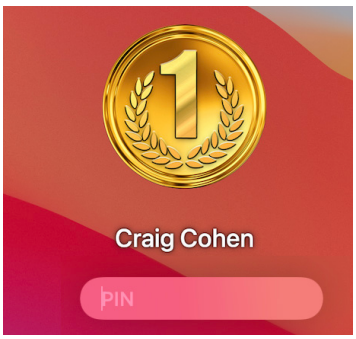
52. Select the Jamf Connect Menu Bar icon, Unlock should be Enabled.
    NOTE: We recommend turning Enable Unlock off then back on for best results. We've seen issues with the Mac computer not responding to Jamf Unlock until it's switched on and off.



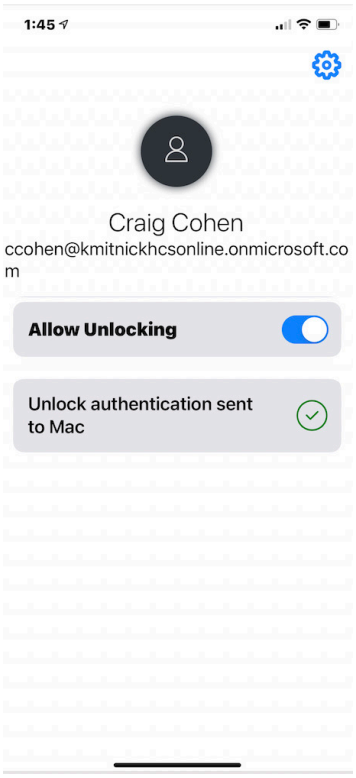
53. Let's test the unlocking process. On your Mac Computer, Select the Apple Icon in the upper left corner, then select Lock Screen.



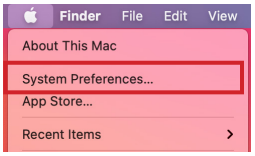
54. You will see the word PIN in the password field, click in the password field and press the Return key on the keyboard.



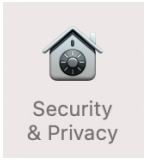
55. On your iOS device, an unlock code was sent to your Mac Computer. Your Mac Computer should be unlocked and at the Desktop.



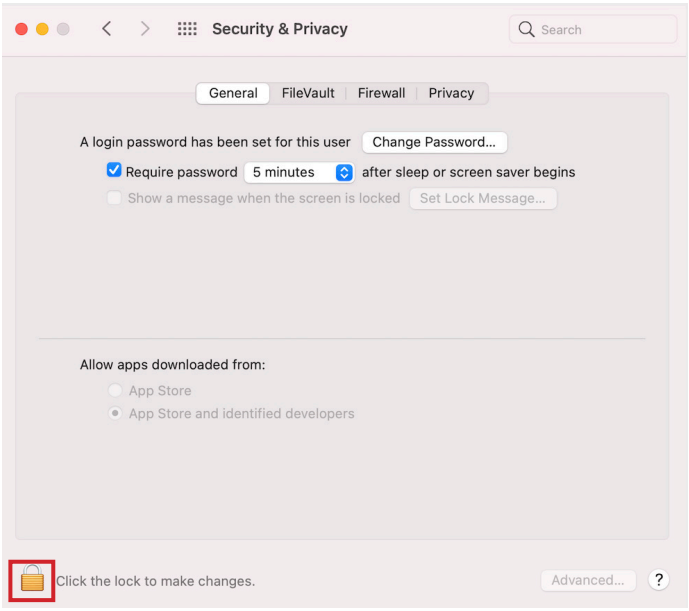
56. Click the Apple Menu and select System Preferences.



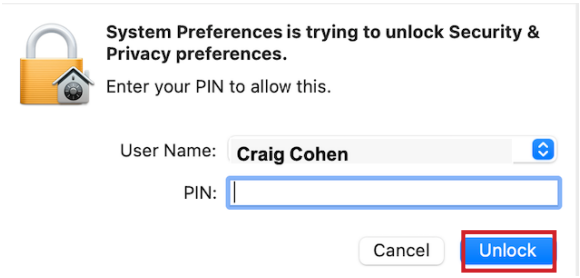
57. Click Security & Privacy.



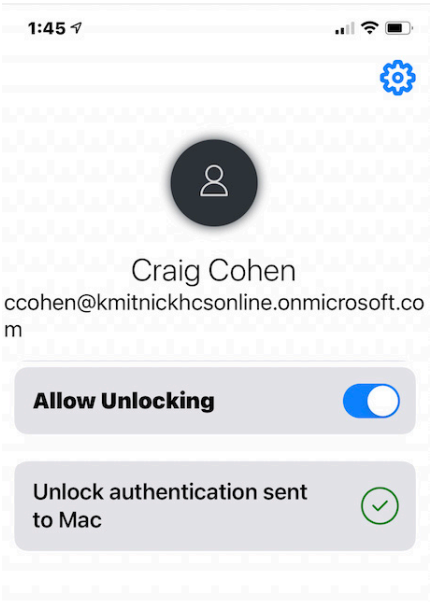
58. Click the lock at the bottom left corner.



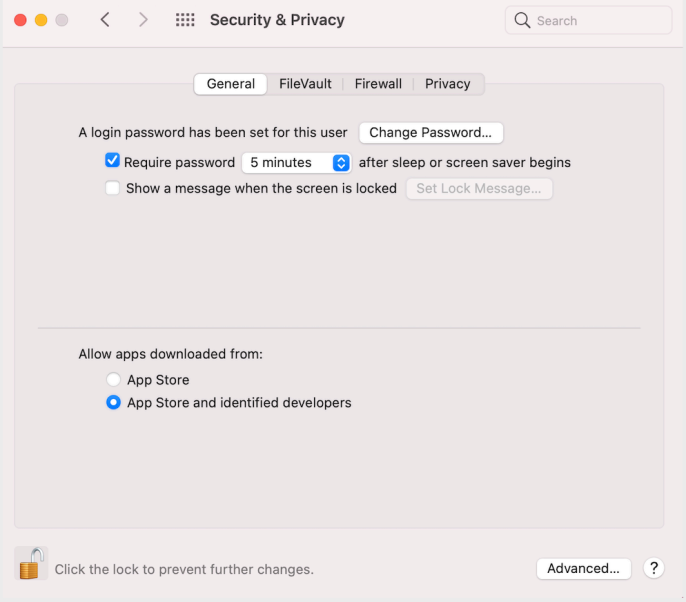
59. You will see the word PIN in the password field, click the Unlock button.



60. On your iOS device, you will see a code was sent to unlock the Security & Privacy pane.



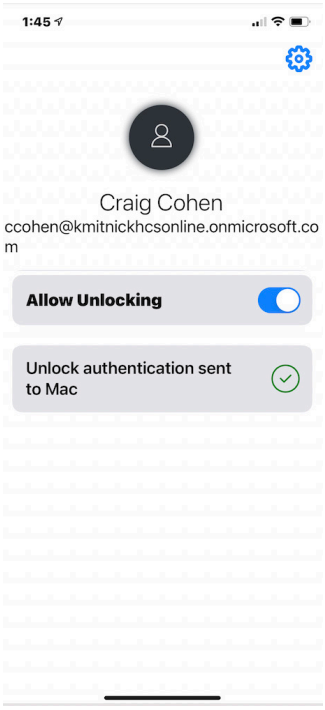
61. Notice the lock on the bottom left is now unlocked. You can quit System Preferences.



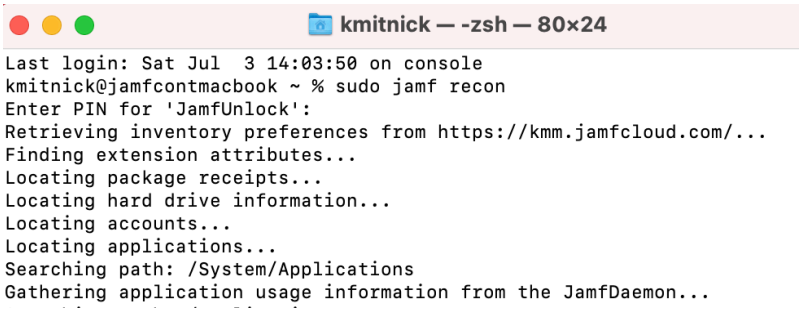
62. Open the Terminal application located in /Applications/Utilities.

63. Enter the following command: sudo jamf recon. When prompted for the password, you will see the word PIN, press the return key on your keyboard.

64. On your iOS device, you will see a code was sent to the Terminal app so the command can run.



65. The sudo jamf recon command is now running. This completes this section.



If you'd like help implementing the solution in this white paper, we are ready to help; contact us at info@hcsonline.com or (866) 518-9672.

If you have corrections please send them to info@hcsonline.com.

... and only real pizza comes from NY. 🍕 One slice from a pie is all you need.