



Using Jamf Connect with
G Suite Cloud Identity



Contents

Preface	3
Section 1: Create OAuth Client ID Credentials	4
Section 2: Jamf Connect Configuration	9
Section 3: Upload Jamf Connect Login Package & Create Configuration Profile	13
Section 4: Configure Jamf Connect Login.....	16
Section 5: Deploy Jamf Connect Login.....	22



With so much of today's workforce accessing resources remotely, organizations may have a need to provide account management in the form of an Identity Provider (IdP). One such provider is Google, which has a service called Cloud Identity (<https://cloud.google.com/identity>). Jamf Connect is a platform that allows provisioning of users using credentials from their Identity Provider and allows those credentials to stay in sync. There are three components to Jamf Connect:

- Jamf Connect Login: Allows administrators to manage authentication at the macOS login window.
- Jamf Connect Verify: Specific to use with Microsoft Azure AD & PingFederate. An app that appears in the menu bar to assist in keeping every user's local account password in sync with their IdP account password.
- Jamf Connect Sync: Specific to use with Okta. An app that appears in the menu bar to assist in keeping every user's local account password in sync with their IdP account password.

This guide shows you how to configure, deploy, and use Jamf Connect Login, leveraging Google as the Cloud Identity Provider.

Benefits of a cloud identity provider:

- Allow access outside of a local authentication server
- Centralize security management
- Create efficiency for the end user with a single set of credentials
- Reduce IT overhead by decreasing the number of password reset requests

The following was used for this guide:

- 2016 MacBook Pro
- macOS Catalina 10.15.4
- Jamf Pro 10.20.1
- Google Cloud Identity Premium
- Jamf Connect 1.19.1

You can download Jamf Connect as a 30 day trial, available here:
<https://www.jamf.com/request-trial/jamf-connect/>

These blog posts may be helpful when configuring the various Jamf Connect integrations:

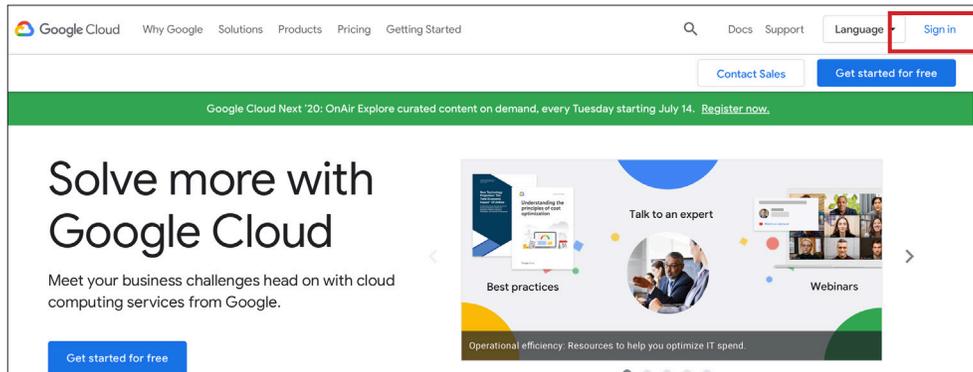
- <https://travellingtechguy.eu/?s=jamf+connect>
- <https://travellingtechguy.eu/jamf-connect-login-and-google-cloud-identity/>



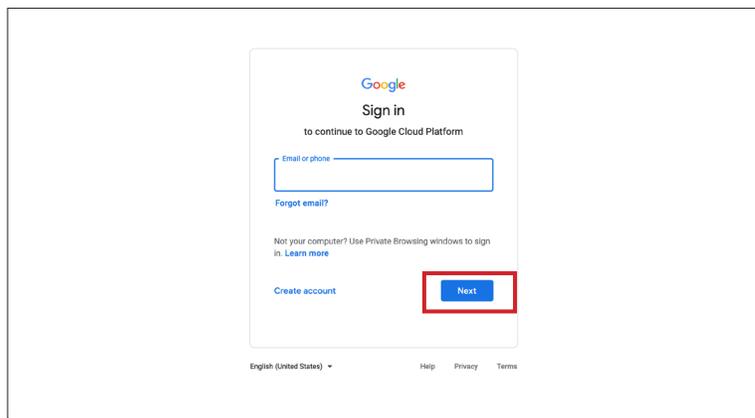
Section 1: Create OAuth Client ID Credentials

In this section, you will sign in to a Google Developers account to create OAuth credentials. These credentials will allow the integration to occur between Google and Jamf Connect.

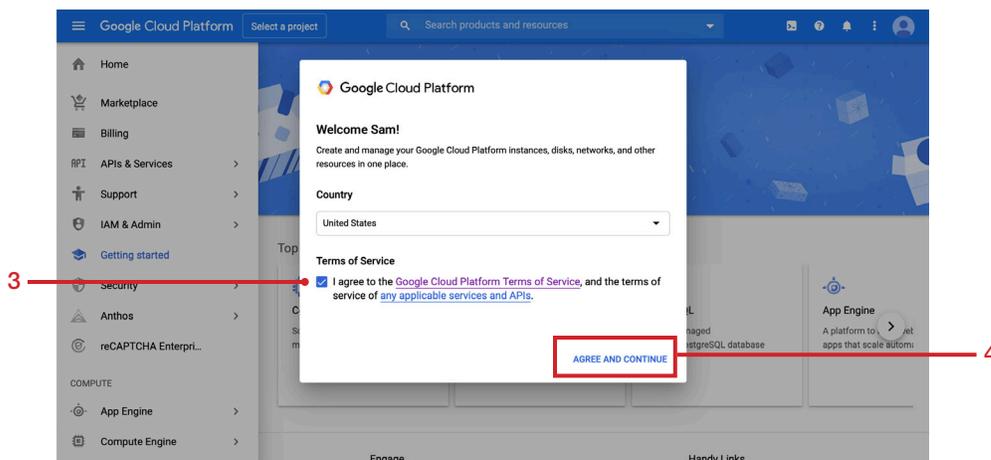
1. Navigate to <https://console.cloud.google.com/> and click Sign In.



2. Enter credentials for your Google Admin account and click Next.

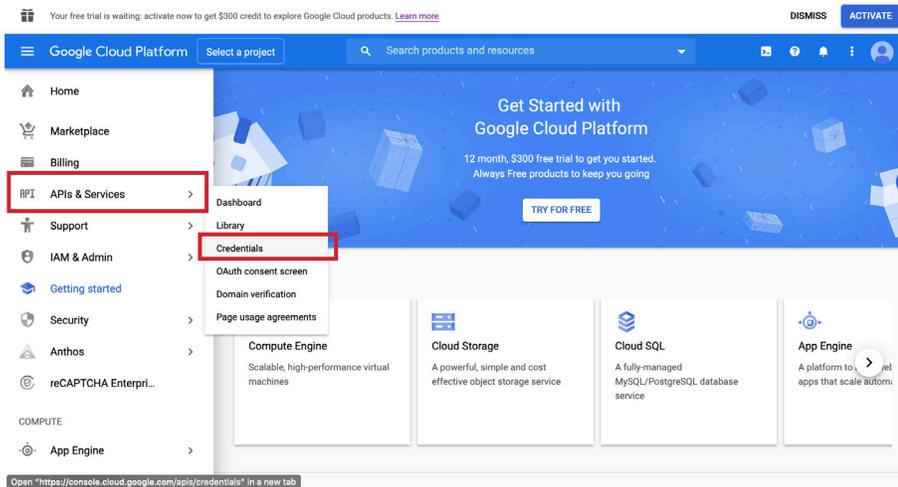


3. If you are prompted to agree to the terms of service, carefully read the terms and select the checkbox to agree.
4. Click Agree and Continue.

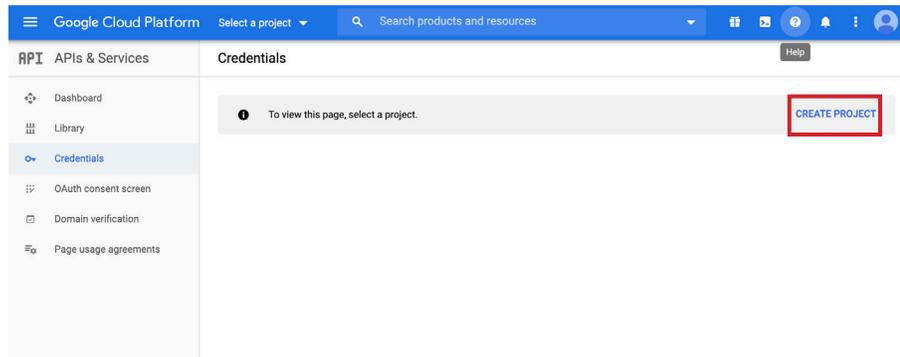




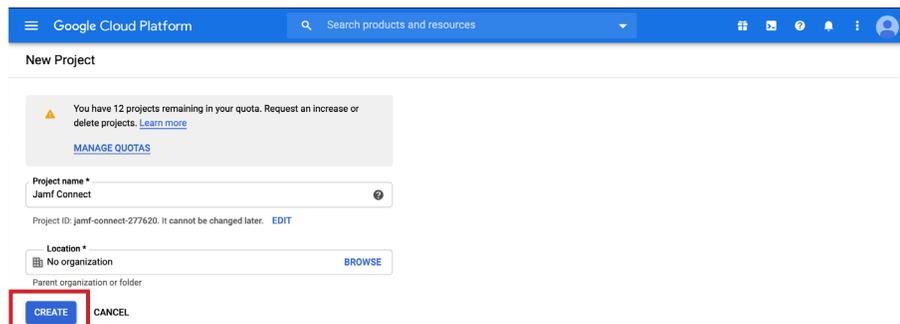
5. Navigate to API & Services and choose Credentials from the sub menu.



6. If you have not created a project before, in the upper-right corner, click Create Project.
NOTE: If you already have projects, please proceed to step 13.



7. Provide a project name and click Create. This guide uses **Jamf Connect** as an example.
NOTE: It may take a few moments for the project to create.





8. Click the button to Configure Consent Screen.

Google Cloud Platform | Jamf Connect | Search products and resources

APIs & Services | Credentials | + CREATE CREDENTIALS | DELETE

Create credentials to access your enabled APIs. [Learn more](#)

Remember to configure the OAuth consent screen with information about your application. **CONFIGURE CONSENT SCREEN**

API Keys

<input type="checkbox"/>	Name	Creation date ↓	Restrictions	Key	Usage with all services (last 30 days) ⓘ
No API keys to display					

OAuth 2.0 Client IDs

<input type="checkbox"/>	Name	Creation date ↓	Type	Client ID
No OAuth clients to display				

Service Accounts [Manage service accounts](#)

<input type="checkbox"/>	Email	Name ↑	Usage with all services (last 30 days) ⓘ
No service accounts to display			

9. At the OAuth Consent Screen, select Internal and click Create.

Google Cloud Platform | Jamf Connect | Search products and resources

samvalencia.com | Jamf Connect | HIDE

APIs & Services | OAuth consent screen

Choose how you want to configure and register your app, including your target users. You can only associate one app with your project.

User Type

Internal ⓘ

Only available to users within your organization. You will not need to submit your app for verification.

External ⓘ

Available to any user with a Google Account.

CREATE

10. Provide an Application Name and, if desired, a logo. The remaining items may be configured to your liking but are not required to save.

Google Cloud Platform | Jamf Connect | Search products and resources

samvalencia.com | Jamf Connect | HIDE

APIs & Services | OAuth consent screen

Before your users authenticate, this consent screen will allow them to choose whether they want to grant access to their private data, as well as give them a link to your terms of service and privacy policy. This page configures the consent screen for all applications in this project.

Application type

Public
Any Google Account can grant access to the scopes required by this app. [Learn more about scopes](#)

Internal ⓘ
Only users with a Google Account in your organization can grant access to the scopes requested by this app.

Application name ⓘ
The name of the app asking for consent
Jamf Connect

Application logo ⓘ
An image on the consent screen that will help users recognize your app
logo.png



Support email ⓘ

About the consent screen
The consent screen tells your users who is requesting access to their data and what kind of data you're asking to access.

OAuth verification
To protect you and your users, your consent screen and application may need to be verified by Google. Verification is required if your app is marked as Public and at least one of the following is true:

- Your app uses a sensitive and/or restricted scope
- Your app displays an icon on its OAuth consent screen
- Your app has a large number of authorized domains
- You have made changes to a previously-verified OAuth consent screen

The verification process may take up to several weeks, and you will receive email updates as it progresses. [Learn more about verification.](#)

Before your consent screen and application are verified by Google, you can still test your application with limitations. [Learn more about how your app will behave before it's verified.](#)

Let us know what you think about our OAuth experience.



11. Scroll down and click Save.

The screenshot shows the Google Cloud Platform 'OAuth consent screen' configuration page. The left sidebar contains navigation options: Dashboard, Library, Credentials, OAuth consent screen (selected), Domain verification, and Page usage agreements. The main content area includes fields for 'email', 'profile', and 'openid'. There is a 'Raise limit' section with radio buttons for '1h', '6h', '1d' (selected), '7d', and '30d', and a '5 min interval (mean)' option. Below these are sections for 'Authorized domains', 'Application Homepage link', 'Application Privacy Policy link', and 'Application Terms of Service link', each with a text input field. At the bottom, the 'Save' button is highlighted with a red box, next to a 'Cancel' button.

12. In the sidebar, click Credentials.

The screenshot shows the Google Cloud Platform 'Credentials' page. The left sidebar has 'Credentials' highlighted with a red box. The main content area has a '+ CREATE CREDENTIALS' button and a 'DELETE' button. Below this, there are three sections: 'API Keys' (with a table header: Name, Creation date, Restrictions, Key, Usage with all services), 'OAuth 2.0 Client IDs' (with a table header: Name, Creation date, Type, Client ID), and 'Service Accounts' (with a table header: Email, Name, Usage with all services). Each section currently shows 'No [type] to display'.

13. Click Create Credentials and choose OAuth Client ID.

The screenshot shows the Google Cloud Platform 'Credentials' page with a dropdown menu open from the '+ CREATE CREDENTIALS' button. The dropdown menu lists three options: 'API key' (Identifies your project using a simple API key to check quota and access), 'OAuth client ID' (Requests user consent so your app can access the user's data), and 'Service account' (Enables server-to-server, app-level authentication using robot accounts). The 'OAuth client ID' option is highlighted with a red box. Below the dropdown, the 'Help me choose' option is also visible, which asks a few questions to help decide which type of credential to use.



14. For Application type, select "Web application."

15. Enter the following information:

A. Name: **Jamf Connect Login**

B. Authorized redirect URLs: **https://127.0.0.1/jamfconnect**

NOTE: This URI is a recommended value. However, any valid URI may be used, as long as it matches the URI in your Jamf Connect Login configuration profile (created in section 4).

14 → Application type

- Web application
- Android [Learn more](#)
- Chrome App [Learn more](#)
- iOS [Learn more](#)
- Other

15A → Name

Jamf Connect Login

Restrictions

Enter JavaScript origins, redirect URIs, or both [Learn More](#)

Origins and redirect domains must be added to the list of Authorized Domains in the [OAuth consent settings](#).

Authorized JavaScript origins

For use with requests from a browser. This is the origin URI of the client application. It can't contain a wildcard (https://*.example.com) or a path (https://example.com/subdir). If you're using a nonstandard port, you must include it in the origin URI.

https://www.example.com

Type in the domain and press Enter to add it

Authorized redirect URIs

For use with requests from a web server. This is the path in your application that users are redirected to after they have authenticated with Google. The path will be appended with the authorization code for access. Must have a protocol. Cannot contain URL fragments or relative paths. Cannot be a public IP address.

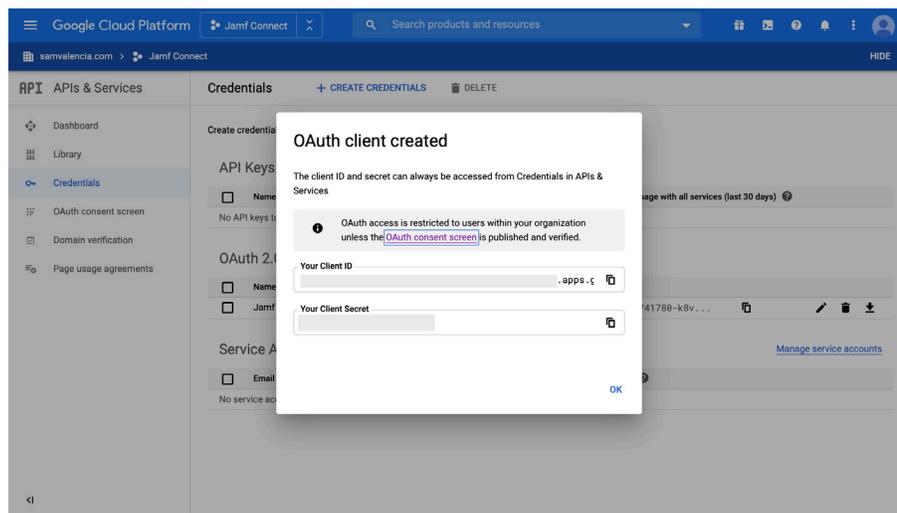
15B → https://127.0.0.1/jamfconnect

Type in the domain and press Enter to add it

Create Cancel

16. Click Create.

17. Copy the values for Your Client ID and Your Client Secret as you will need them in a later section.



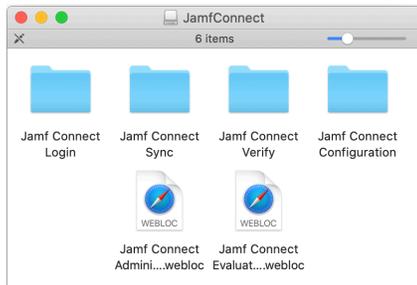
18. Click OK. It may be helpful to remain logged in as you may need to reference this information for later sections.



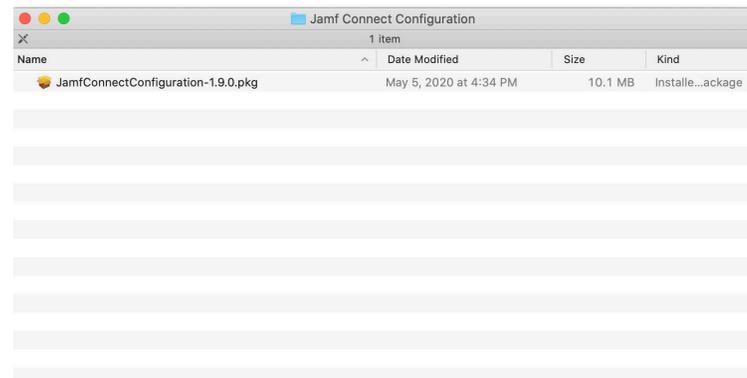
Section 2: Jamf Connect Configuration

You can install Jamf Connect Configuration on an administrative Mac computer to configure settings for Jamf Connect apps. However, in this guide you will only use the built-in test feature to test configuration settings with your IdP.

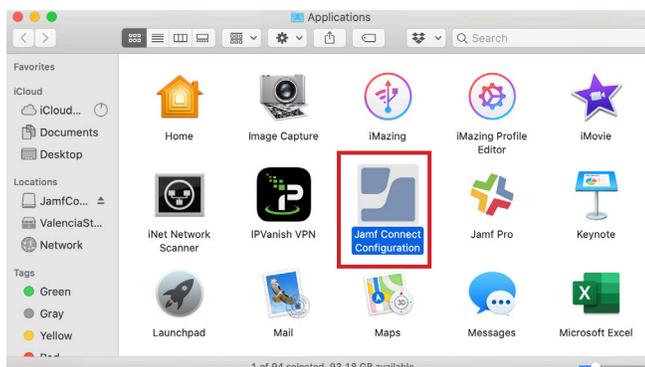
1. Download Jamf Connect: <https://files.jamfconnect.com/JamfConnect.dmg>.
2. Open the disk image file that you downloaded (with the filename suffix .dmg) and navigate to the Jamf Connect Configuration folder in the disk image.



3. Double click the package to open the installer (at the time this guide was written the package name was JamfConnectConfiguration-1.9.0.pkg).

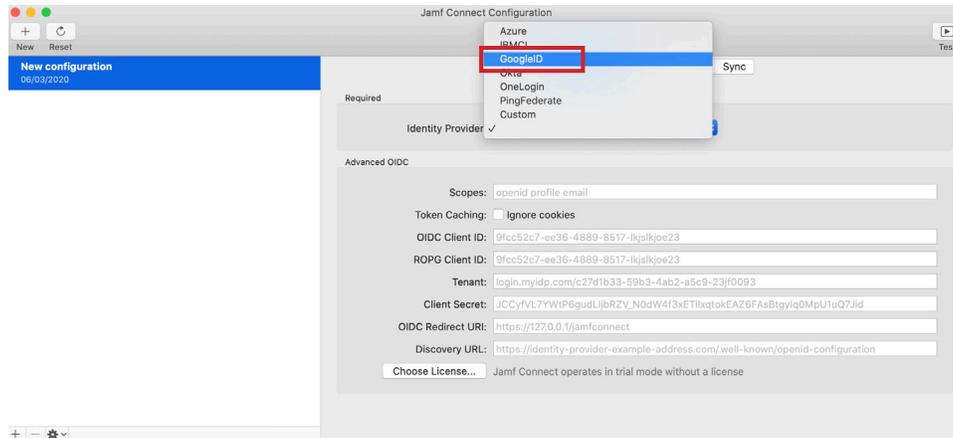


4. Proceed with the installation steps
5. Open your Applications folder.
6. Open Jamf Connect Configuration.



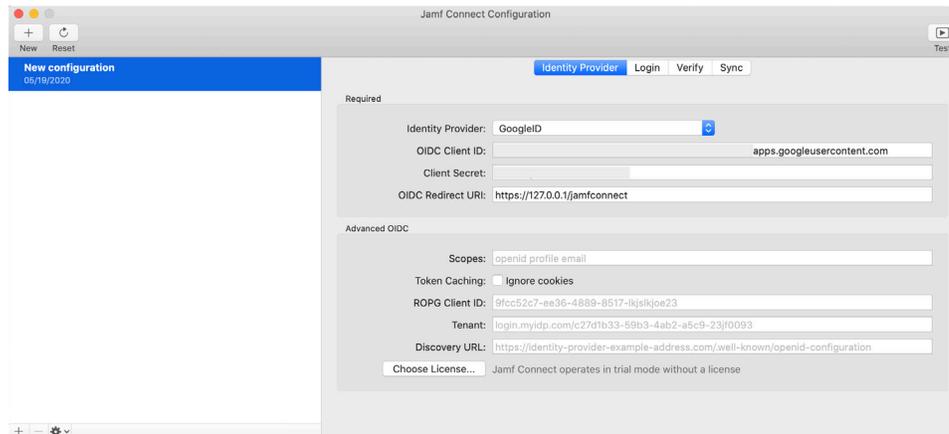


7. From the Identity Provider menu, choose GoogleID.

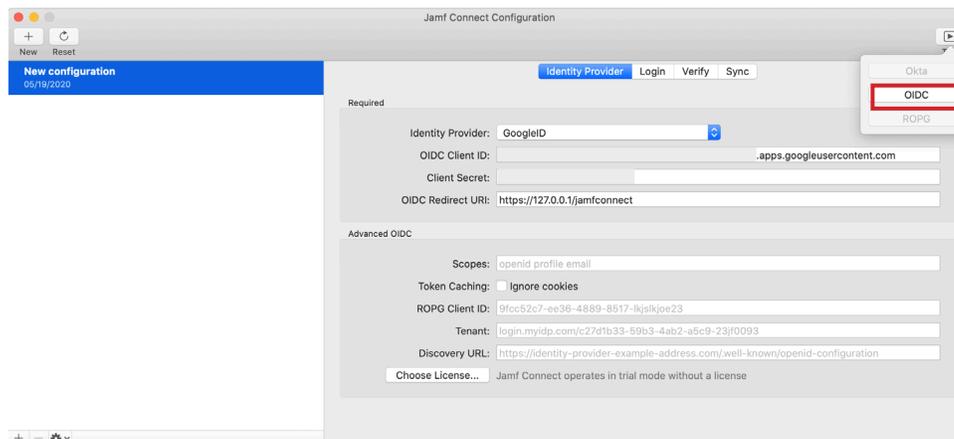


8. Populate OIDC Client ID, Client Secret, and OIDC Redirect URL from steps 15 through 18 in Section 1.

NOTE: You can configure Advanced OpenID Connect settings that allow for values like tenant and client secret. Depending on the environment, you may wish to configure these settings but they are not required for this test environment.

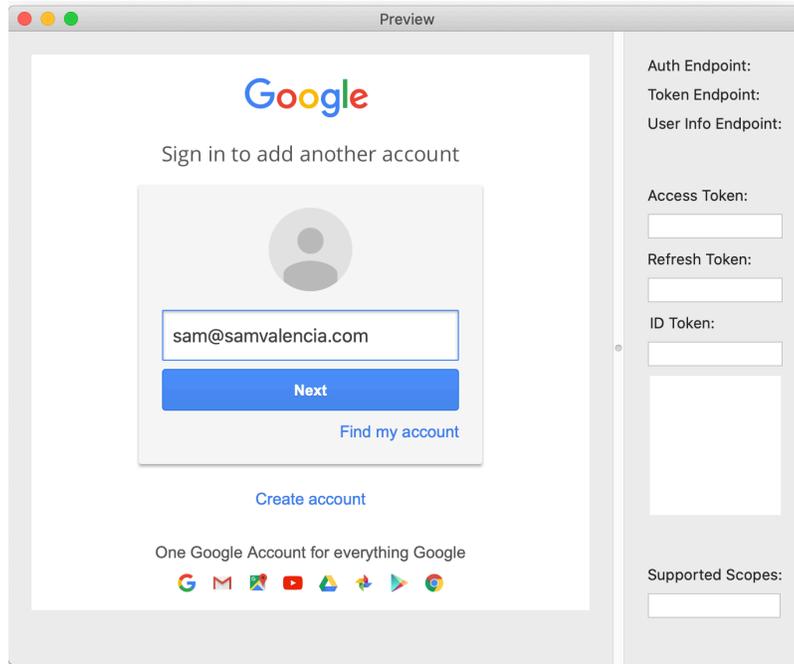


9. In the upper-right corner, click Test (looks like a triangle in a rounded square) and select OIDC to test the parameters you just entered.

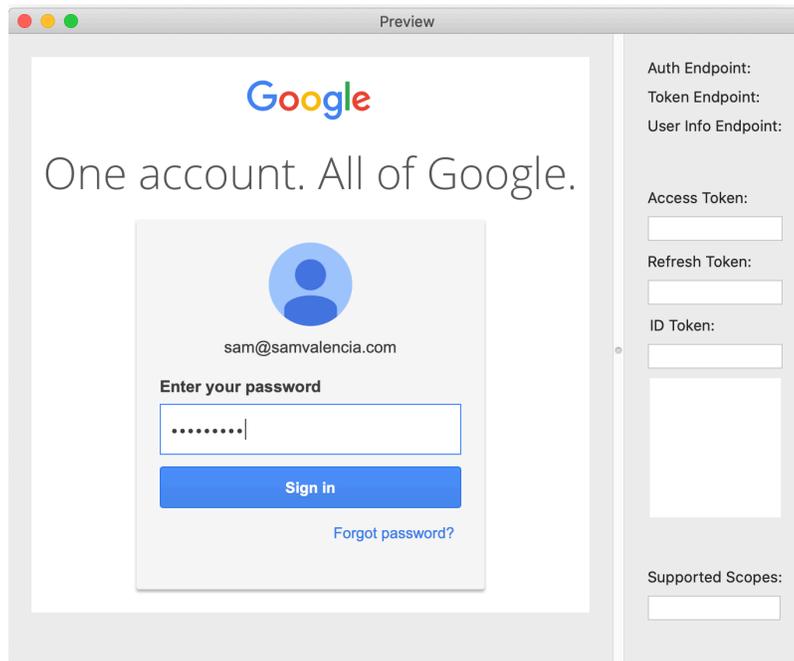




- Enter an email address in your G Suite domain.
NOTE: Ensure you have a Google Cloud Identity license assigned to this account.

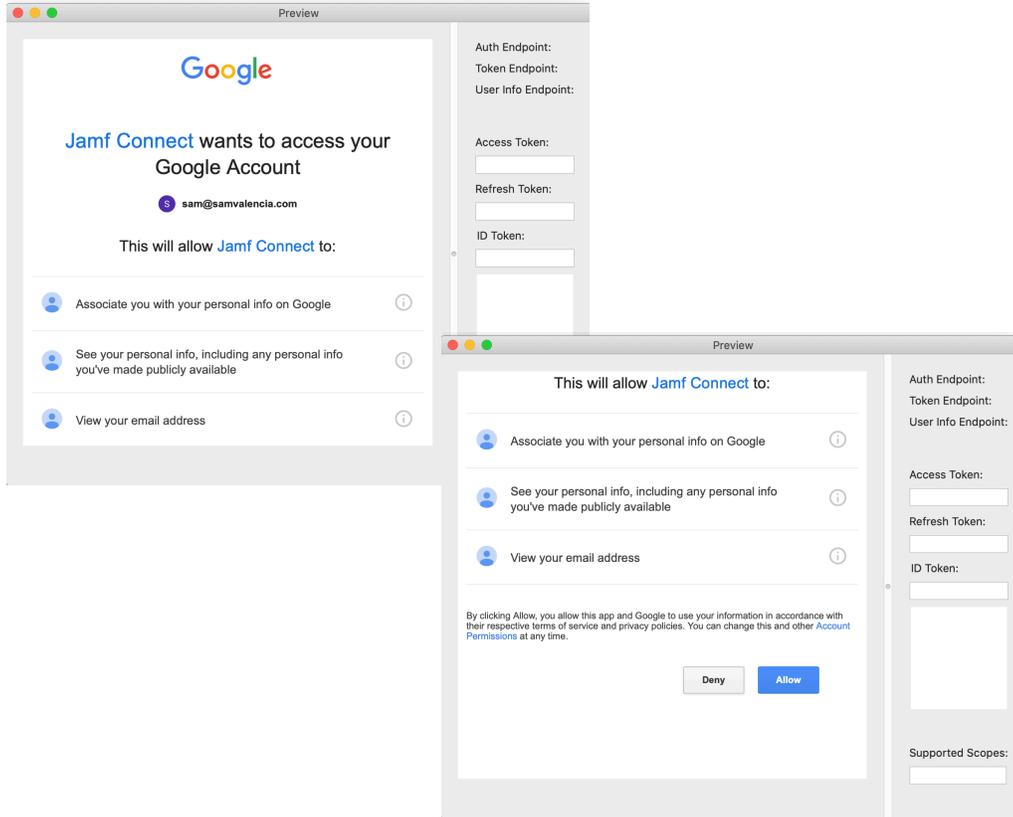


- Enter the password and click "Sign in."

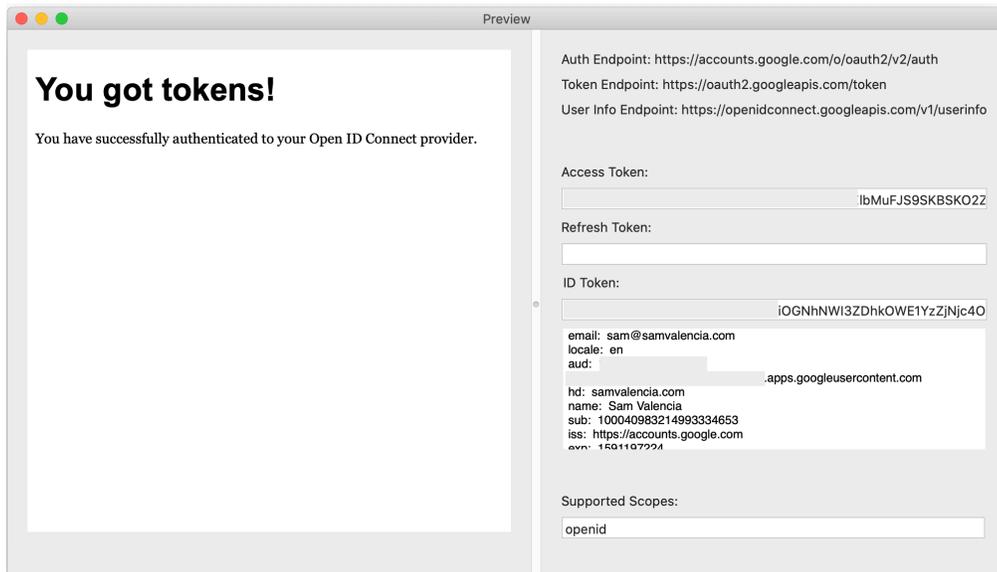




12. Note the capabilities you are allowing and click Allow.



13. Confirm that a message appears that you have successfully authenticated to your Open ID Connect provider. You are now ready to configure Jamf Connect Login.

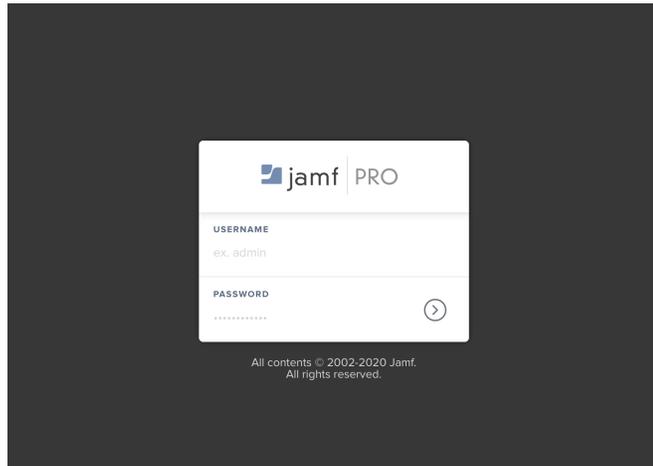




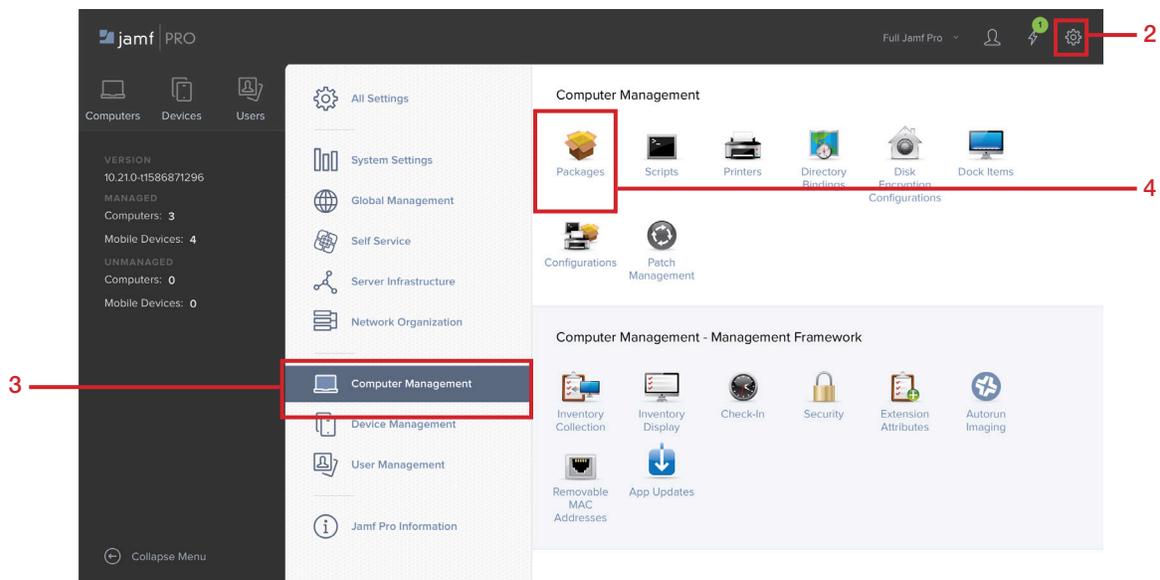
Section 3: Upload Jamf Connect Login Package & Create Configuration Profile

The computers using Jamf Connect will require the package to be installed. This section will detail uploading the Jamf Connection package for eventual deployment.

1. Log in to your Jamf Pro.

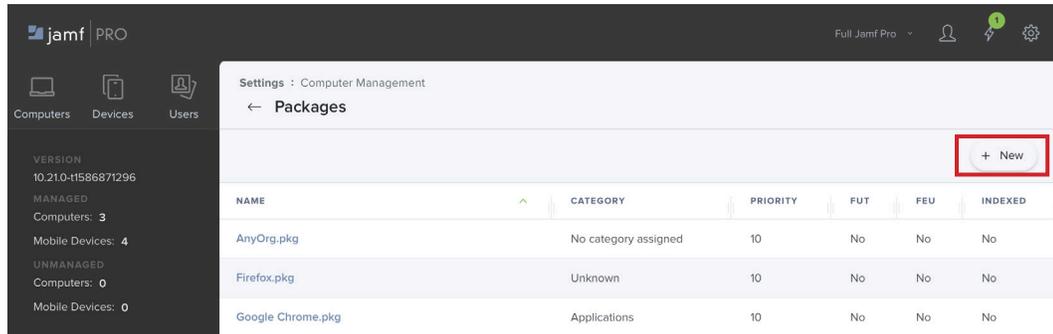


2. In the upper-right corner, click Settings.
3. Click Computer Management.
4. Click Packages.

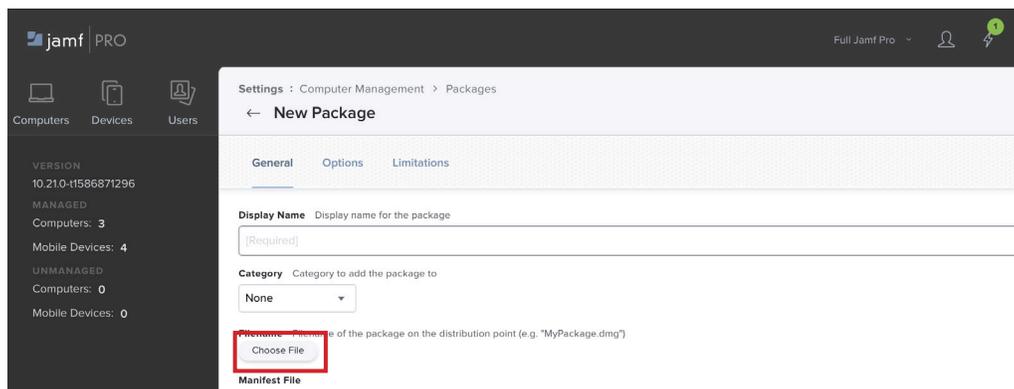




5. In the upper-right corner, click New.

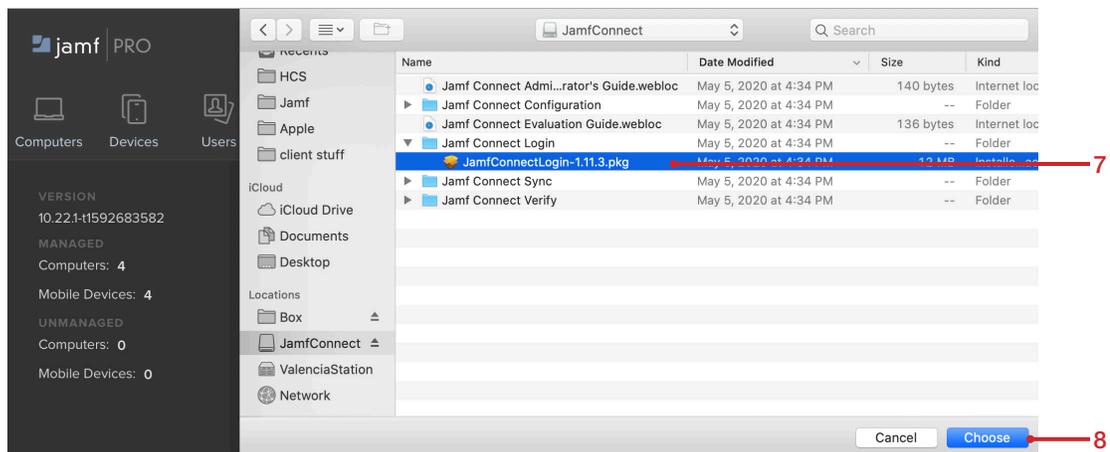


6. Click Choose File.



7. Navigate to the Jamf Connect folder that you downloaded in section 2 and select the JamfConnectLogin package (at the time this guide was written the package name was JamfConnectLogin-1.11.3.pkg) in the Jamf Connect Login folder.

8. Click Choose.





9. In the Display Name field, replace the existing name with **Jamf Connect Login**, followed by the version number. This guide uses Jamf Connect Login 1.11.3 as an example.
10. Optional: Click the Category menu and choose an appropriate category. This guide uses None.
11. Optional: In the Info and Notes fields, enter the information that your organization has standardized on entering for those fields. For simplicity, this guide leaves these fields blank.
12. Click Save.

A screenshot of the Jamf Pro web interface showing the 'New Package' configuration page. The page is titled 'Settings : Computer Management > Packages' and 'New Package'. It has three tabs: 'General', 'Options', and 'Limitations'. The 'General' tab is active. The 'Display Name' field is highlighted with a blue border and a red arrow pointing to the number '9'. The text in the field is 'Jamf Connect Login 1.11.3'. Below it, the 'Category' dropdown menu is set to 'None'. The 'Filename' field shows 'JamfConnectLogin-111.3.pkg' with a 'Change File' button. There is an 'Upload Manifest File' button. The 'Info' field is empty. At the bottom right, there are 'Cancel' and 'Save' buttons, with a red arrow pointing to the 'Save' button and the number '10'. The left sidebar shows navigation options for 'Computers', 'Devices', and 'Users', along with status information for 'VERSION', 'MANAGED', and 'UNMANAGED' devices.



Section 4: Configure Jamf Connect Login

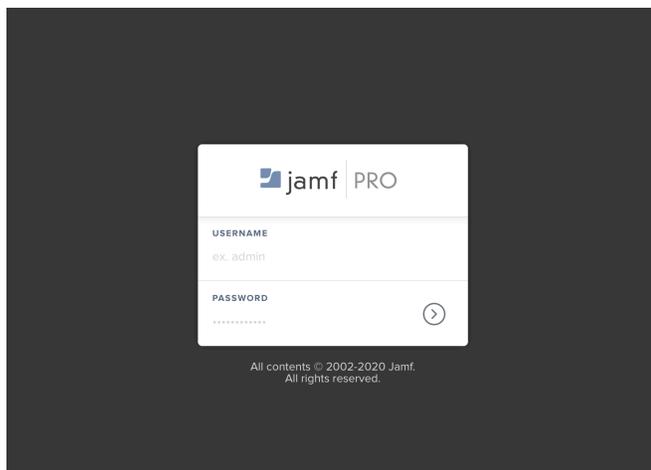
As of Jamf Pro 10.18, the Custom Settings payload in Computer Configuration Profiles was updated to Applications & Custom Settings. That new payload contains settings available for Jamf Connect Login, Sync, and Verify. Although you could use the Jamf Connect Configuration used in Section 2 to configure these settings, export the settings, then upload the settings to Jamf Pro, using the Applications & Custom Settings payload is a more straightforward and flexible process.

The following values are required for Jamf Connect Sync to work with Google as an IdP:

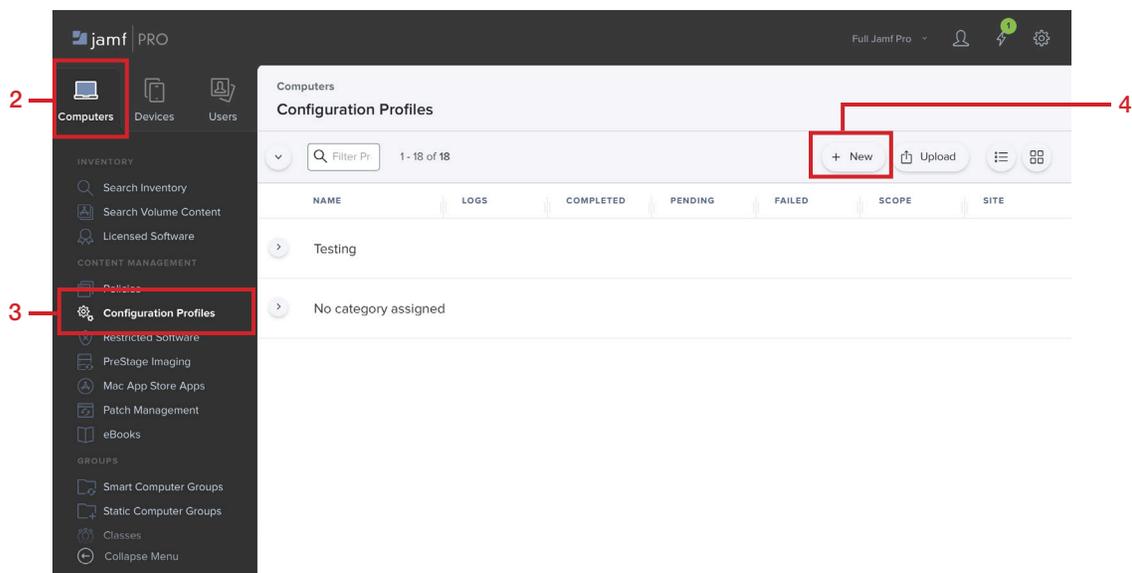
- Identity Provider
- Client Secret
- Client ID
- Create a Separate Local Password (must be set to True)
- Redirect URI

In this section you will use the Applications & Custom Settings payload to configure Jamf Connect Login.

1. Log in to your Jamf Pro.

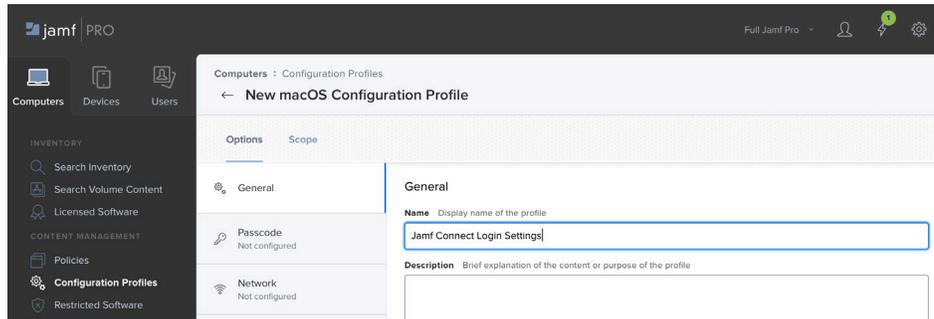


2. Click Computers.
3. Click Configuration Profiles.
4. Click New.



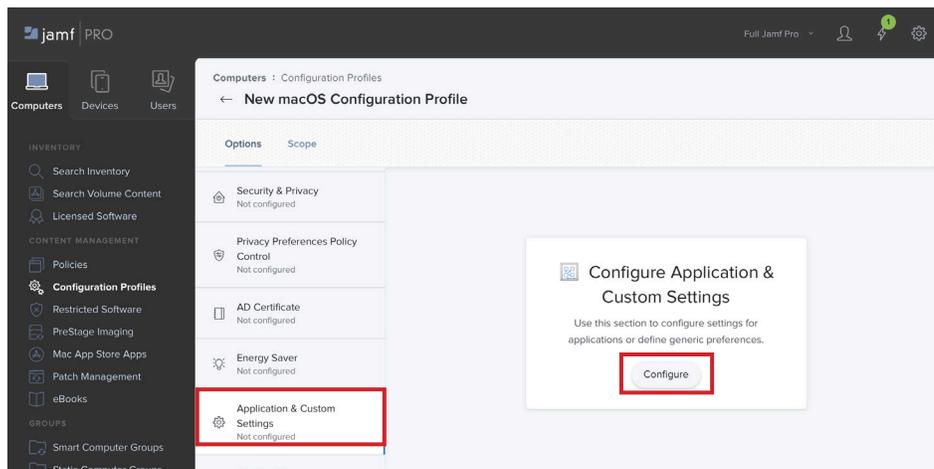


5. In the Name field, enter **Jamf Connect Login Settings**.

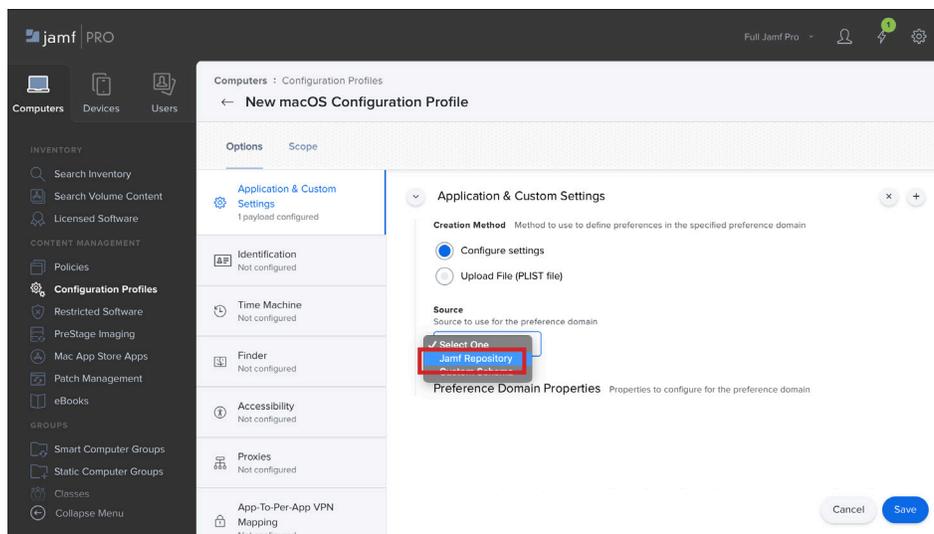


6. Scroll to the Application & Custom Settings payload and select it.

7. Click Configure.

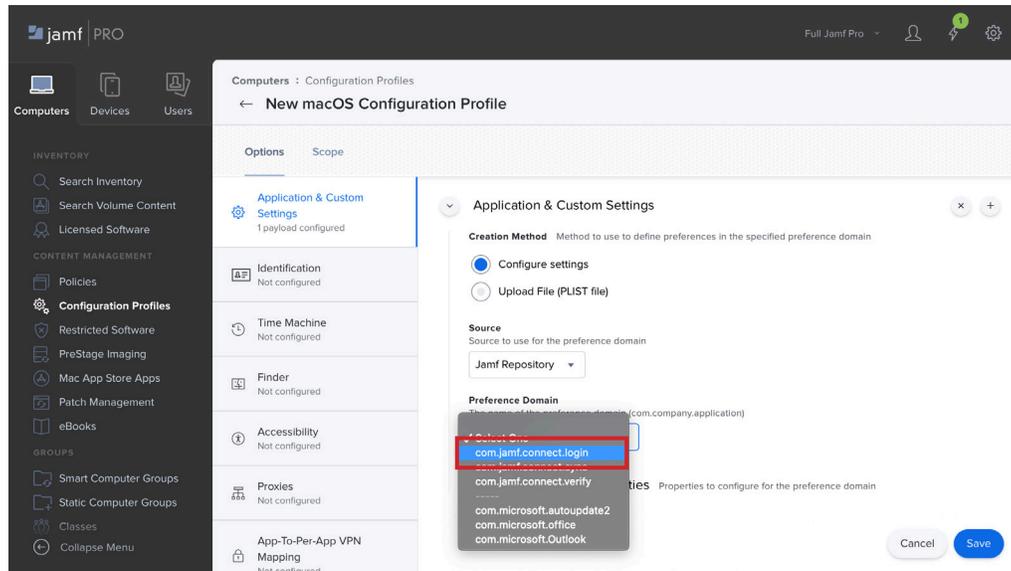


8. Click the Source menu and choose Jamf Repository.

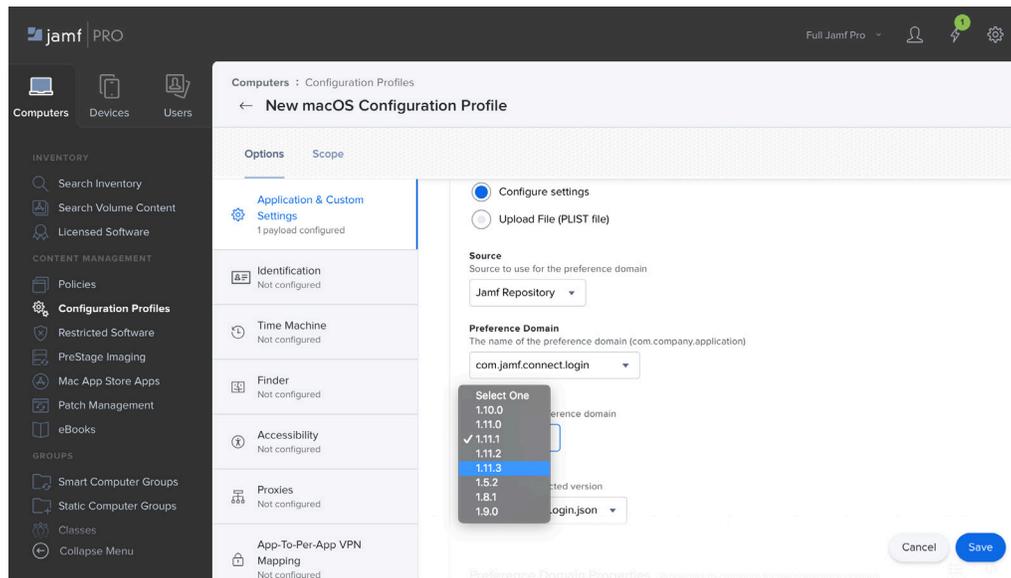




9. Click the Preference Domain menu that appears, and choose com.jamf.connect.login.



8. Click the Version menu that appears and choose the version that you uploaded. This guide uses 1.11.3 as an example.



9. Leave the Variant menu at its default value, (There are no options besides JSON.)



10. Click Add/Remove Keys.

IMPORTANT NOTE: Deselect all unnecessary keys, because leaving them in can result in settings that cause errors during authentication.
11. Deselect all keys except the following:
 - Use Local Authentication by Default
 - Create a Separate Local Password
 - Identity Provider
 - Client ID
 - Client ID (Password Verification)
 - Redirect URI
 - Client Secret

The screenshot shows the Jamf Pro interface for configuring Jamf Connect Login Settings. The main window displays the 'Add/Remove Keys' dialog box, which is highlighted with a red box. This dialog box contains the following options:

- Use Local Authentication by Default
- Create a Separate Local Password
- Identity Provider
- Client ID

Below the main screenshot, two additional 'Add/Remove Properties' dialog boxes are shown, also highlighted with red boxes. The first dialog box contains the following options:

- Client ID (Password Verification)
- Redirect URI
- Admin Roles
- Admin Attribute

The second dialog box contains the following options:

- Admin Attribute
- Client Secret
- Ignore Roles
- Tenant ID



12. For Preference Domain Properties, configure the following settings with the following values:
- Use Local Authentication by Default: `false` (a value of `true` allows a user to log in, even without a network connection)
 - Create a Separate Local Password: `true` (This ensures each user's local password is synced with their network password)
 - Identity Provider: GoogleID
 - Client ID: Enter the Client ID from the Google Cloud instance that you created in section 1
 - Client ID (Password Verification): Since credentials are stored in the same tenant, enter the Client ID from above again
 - Redirect URI: **`https://127.0.0.1/jamfconnect`**
 - Client Secret: Enter the Client Secret from the Google Cloud instance that you created in section 1

The image displays two screenshots of the Jamf Connect configuration interface. The left screenshot shows the 'Preference Domain' settings for 'com.jamfconnect.login'. It includes sections for 'Use Local Authentication by Default', 'Create a Separate Local Password', and 'Identity Provider'. Red arrows labeled A, B, and C point to the 'false' checkbox for 'Use Local Authentication by Default', the 'true' checkbox for 'Create a Separate Local Password', and the 'GoogleID' selection in the 'Identity Provider' dropdown, respectively. The right screenshot shows the 'Client ID', 'Client ID (Password Verification)', 'Redirect URI', and 'Client Secret' fields. Red arrows labeled D, E, F, and G point to the input boxes for these fields, which contain '0000000.apps.google.com', '0000000.apps.google.com', 'https://127.0.0.1/jamfconnect', and a masked secret key, respectively.

There are many different settings in this payload. Some are not relevant to Google (They are meant for other IdPs). The following settings are not relevant to using Google as an IdP:

- Allow Local Fallback - Allow local authentication if a network is unavailable
- Create Admin Users - If set to true, all users are created as local administrators.
NOTE: Admin Roles is a feature not currently supported with Google ID: <https://docs.jamf.com/jamf-connect/1.19.0/administrator-guide/>
- Users with local authentication privileges - Specify users (ie. An IT administrator account) that are allowed to bypass network authentication.
- License File - If you purchase licenses for Jamf Connect, you can enter a license file here. We recommend that you distribute the license with a separate configuration profile.
- Connect existing local accounts to a network account - This can be useful if there are already local accounts on the computer.
- Local Accounts prohibited from network account creation - These accounts would be excluded from the Jamf Connect migration menu.
- Login Logo - A company logo that would appear during password validation or local password creation. This file must be stored locally on the computer so consider a separate policy to deploy the image. This can be used with Google but is beyond the scope of this guide.
- Allow Network Selection - Allow users to select their network at the login window.
- Help URL/Icon/File - Methods to allow users to find assistance if they cannot login.
- Audit Filepath/EULA Text/EULA Title/EULA Subtitle - Entries to incorporate an End User License Agreement.
- Enable FileVault - Setting this as `true` will enable FileVault for the first user that logs in.
- Save FileVault Recovery Key - Stores the FileVault recovery key in `/var/db/NoMADFDE` on the local computer.
- Set Recovery Key Filepath - Specify a custom directory for the recovery key.



13. Click Scope and scope this configuration profile to your desired target computers.
NOTE: It is recommended to scope to test computers first, to test functionality.

The screenshot shows the Jamf Pro interface for configuring a profile. The main heading is "Jamf Connect Login Settings" under the "Scope" tab. There are three sub-tabs: "Targets", "Limitations", and "Exclusions".

Target Computers
Computers to assign the profile to
Specific Computers

Target Users
Users to distribute the profile to
Specific Users

Selected Deployment Targets

TARGET	TYPE	
IT's MacBook Air	Computer	Remove

Buttons: Cancel, Save



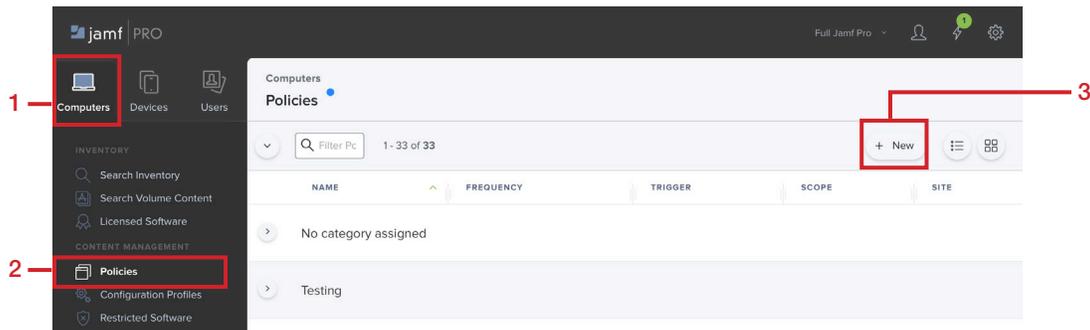
Section 5: Deploy Jamf Connect Login

You can deploy Jamf Connect Login to computers that have already been configured with local accounts, as well as to computers prior to unboxing. Your method of deployment will depend on the status of your fleet.

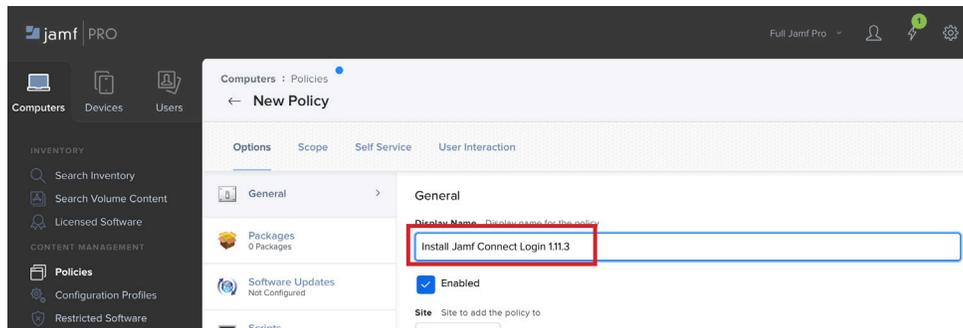
Option A:

In this option, you will configure Jamf Connect Login to deploy to computers with existing local users.

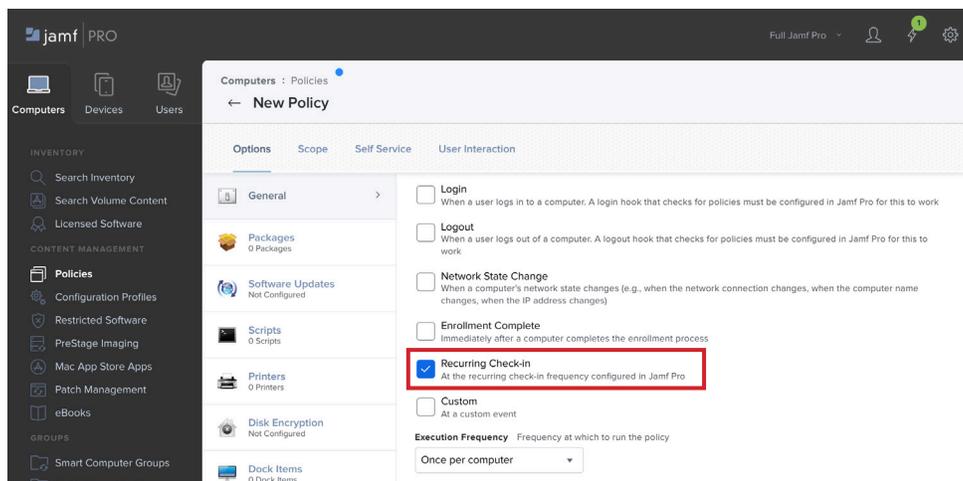
1. Click Computers.
2. Click Policies.
3. Click New.



4. Enter **Install Jamf Connect Login** (followed by the version number) for the Display Name.

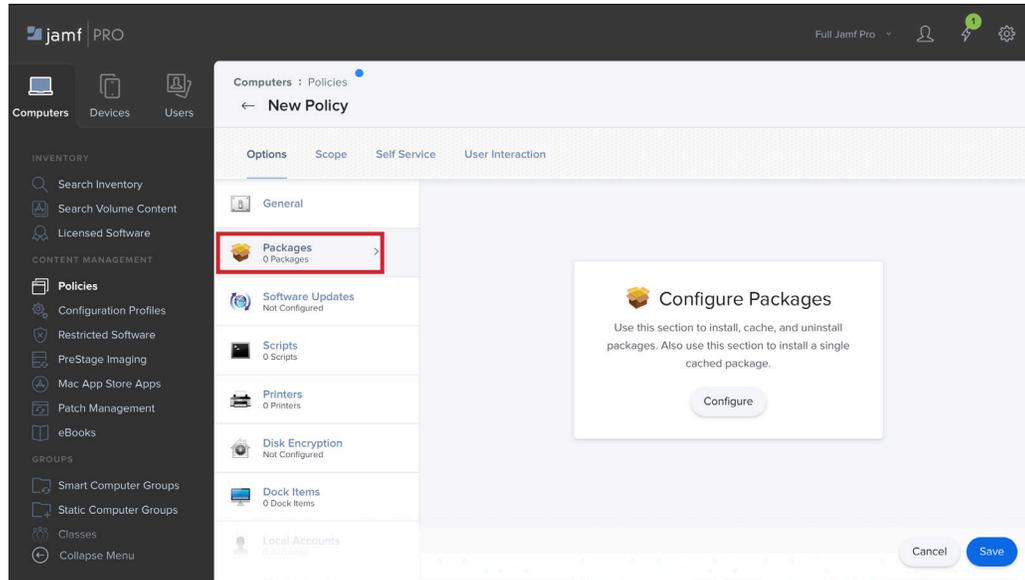


5. In the Trigger section, select the checkbox for Recurring Check-in.

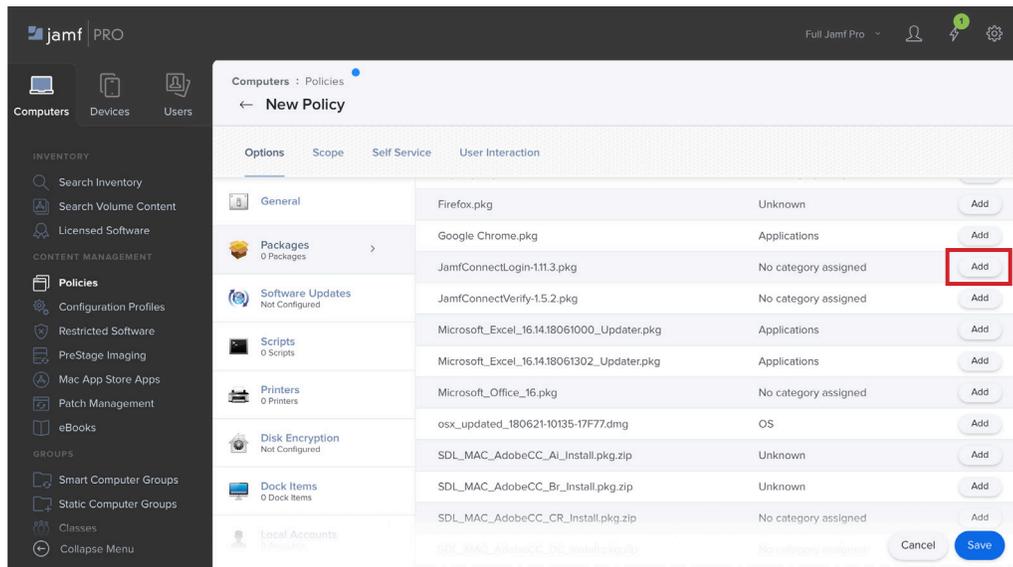




6. Leave the Execution Frequency as "Once per Computer."
7. In the list of payloads, click Packages.

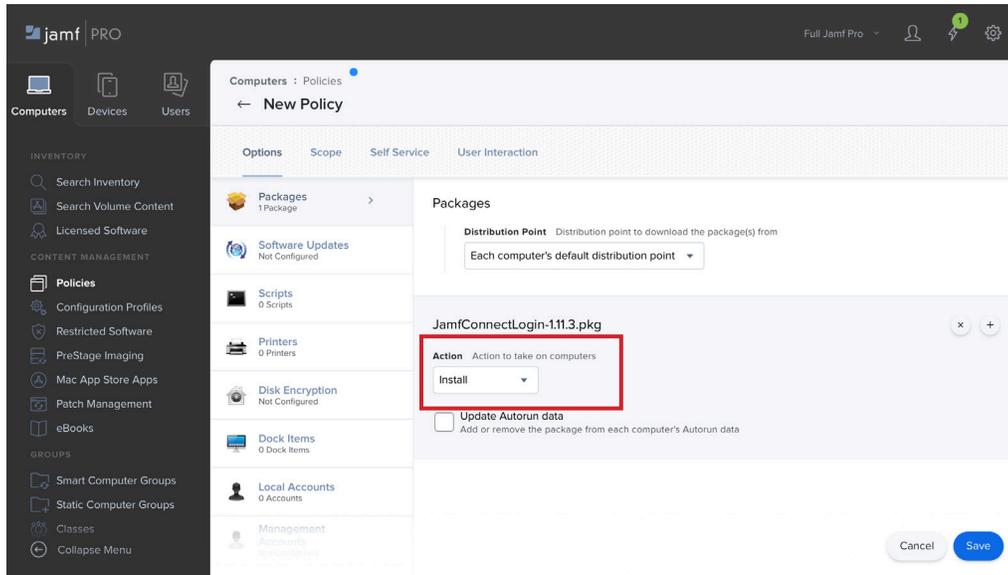


8. Click Configure.
9. Next to the package for Jamf Connect Login, click Add.

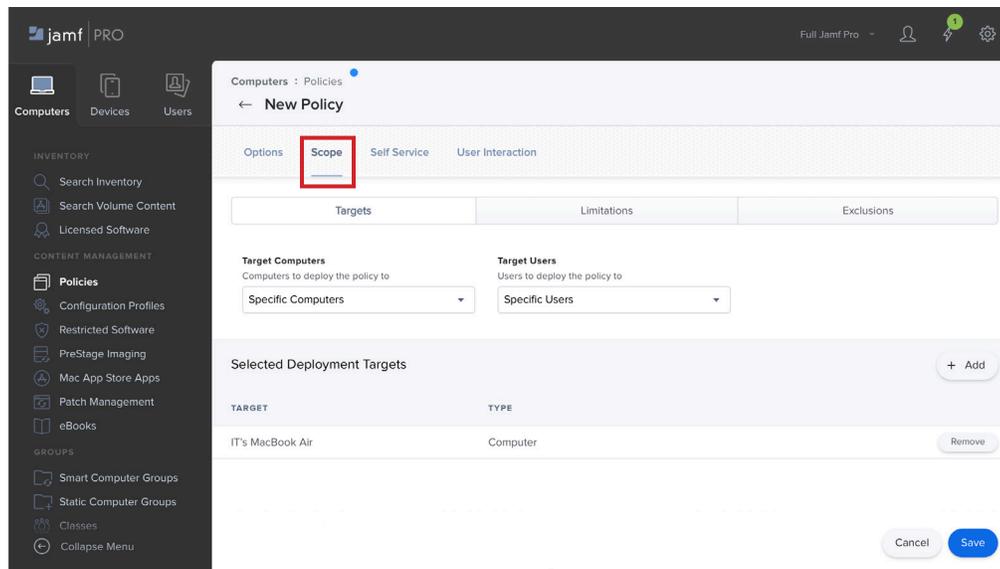




9. Leave the Action as Install.



10. Select Scope and add the target destination for computers that will use Jamf Connect.

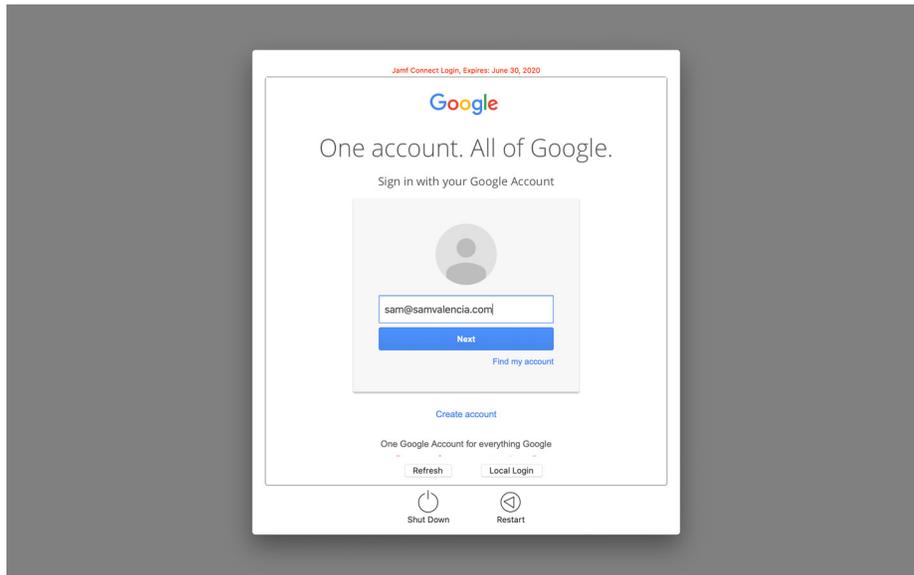


11. Click Save.

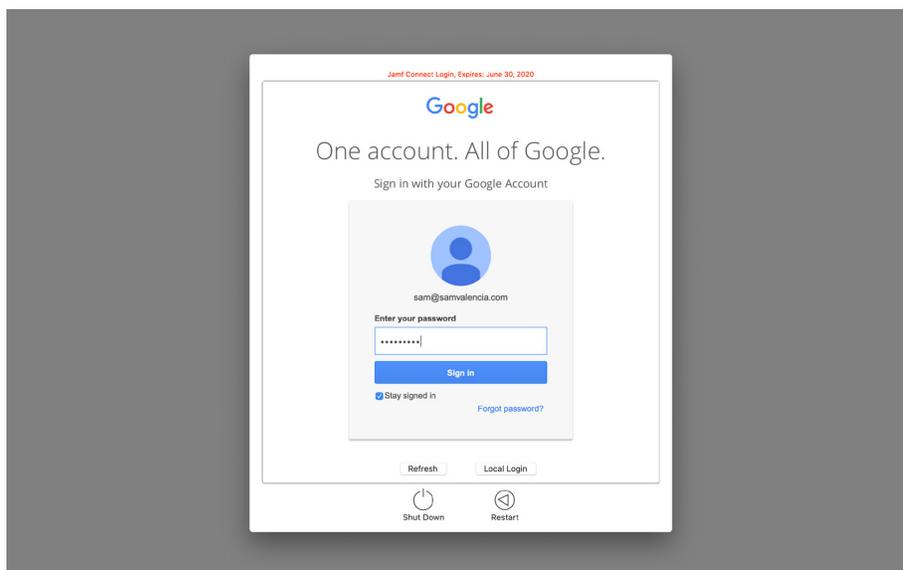


Once the Jamf Connect Login package and configuration profile have been deployed, you are now ready to test authentication.

1. Turn on the target Mac computer.
2. Enter a user email address in your G Suite environment and click Next.

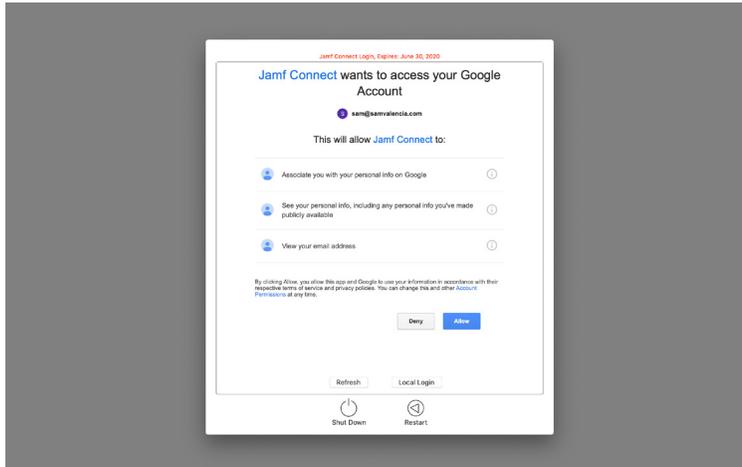


3. Enter the account password and click Sign In.





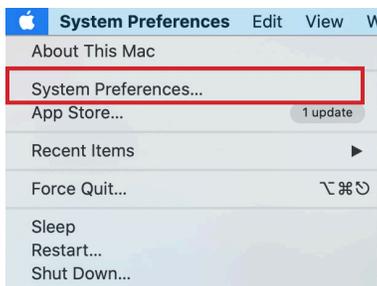
4. Confirm that Jamf Connect displays a message with information about what you will be allowing Jamf Connect to have access to.
5. Click Allow.



6. Enter and re-enter your G Suite password. Click Create Account.
NOTE: Jamf Connect Login does NOT synchronize your Google password with the local account password after creation.

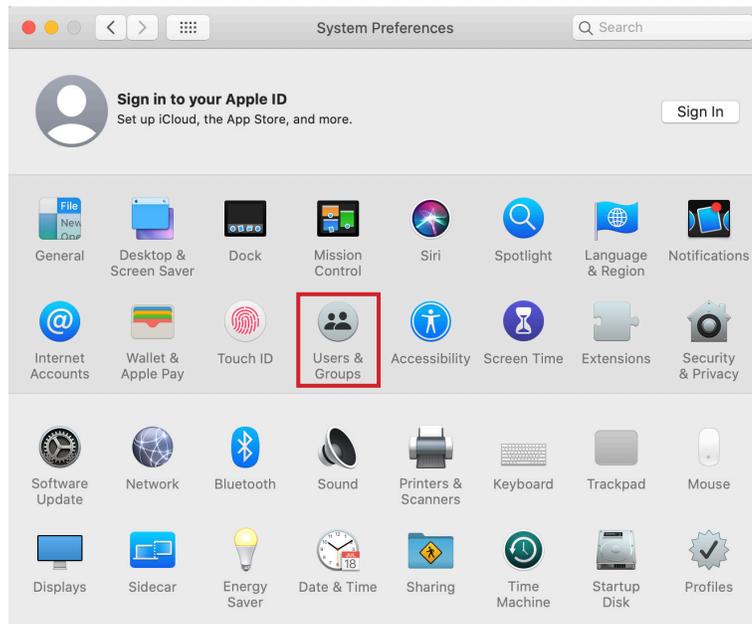


7. Once logged in, click the Apple menu and choose System Preferences.





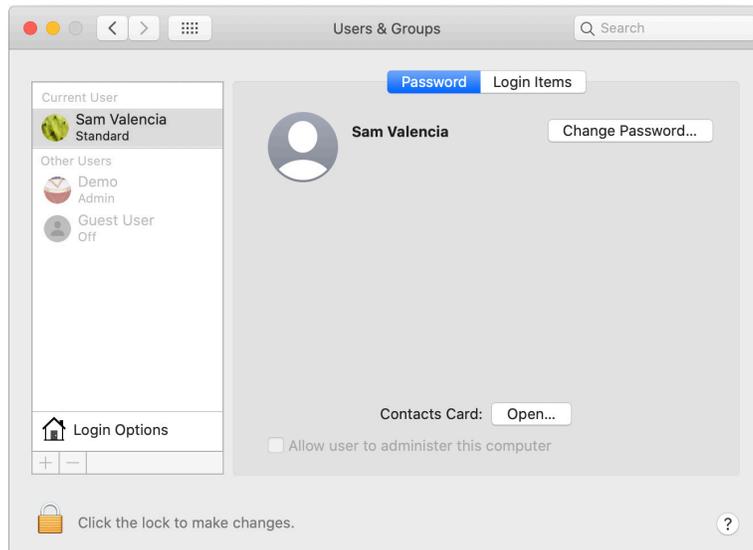
8. Click Users & Groups.



9. Select the newly-created account.

Note the following details:

- The account created by this process is a Standard account. As of this writing, Admin Roles is a feature not currently supported with Google ID:
<https://docs.jamf.com/jamf-connect/1.19.0/administrator-guide/>
- Standard accounts cannot enable FileVault
- Standard accounts can be promoted to admin.





Option B

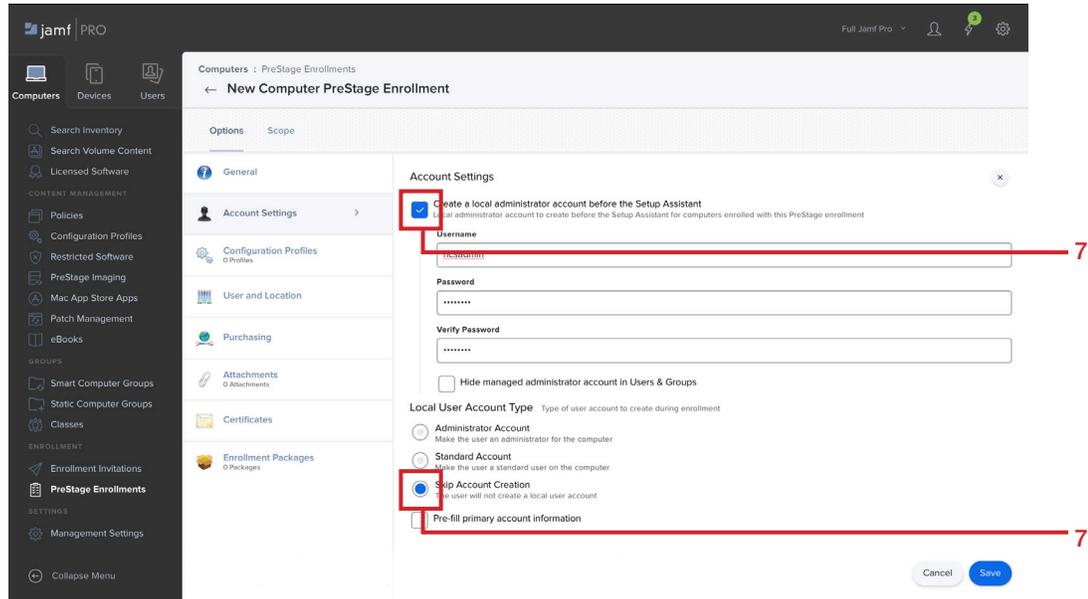
Follow the steps in this option to deploy Jamf Connect Login to computers that are enrolled in Apple Business Manager and available in a PreStage scope. In order to perform these tasks, you need to integrate Jamf Pro with Google Secure LDAP. Follow our guide to learn more: <https://hcsonline.com/support/white-papers/how-to-integrate-jamf-pro-with-google-secure-ldap-as-a-cloud-identity-provider>

1. Click Computers.
2. Click PreStage Enrollments.
3. In the General pane, confirm that the "Make MDM Profile Mandatory" option is selected.
4. Click the Enrollment Customization Configuration menu then choose your Google LDAP configuration (created separately).

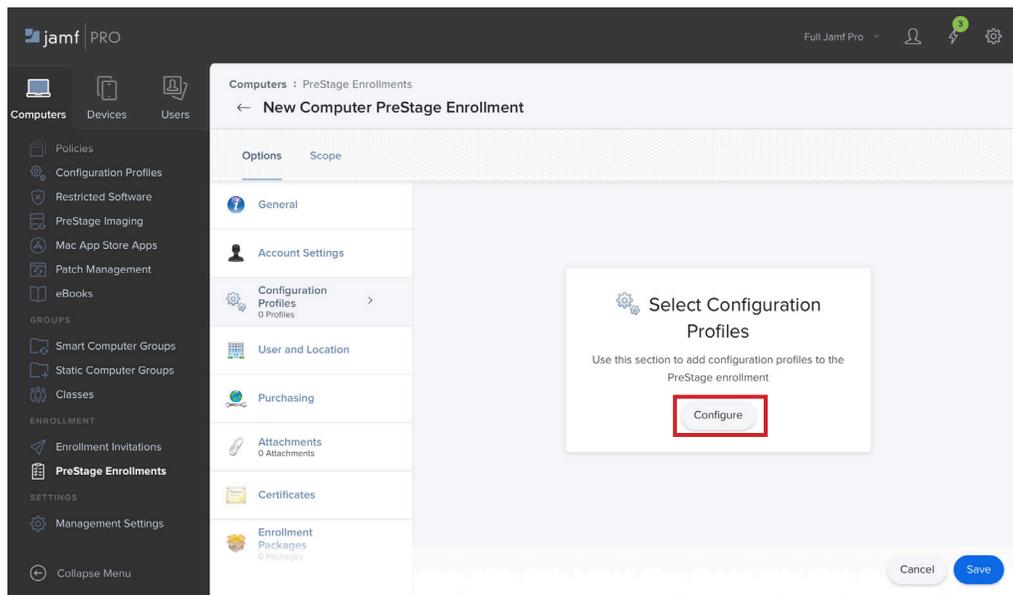
5. Select which options you would like to appear during Setup Assistant.
6. Click Account Settings and click Configure.



7. Select the checkbox for "Create a local administrator account before the Setup Assistant."
8. In the Username, Password, and Verify Password fields, enter your in administrator credentials.
9. Under Local User Account Type, select Skip Account Creation. Click Save.

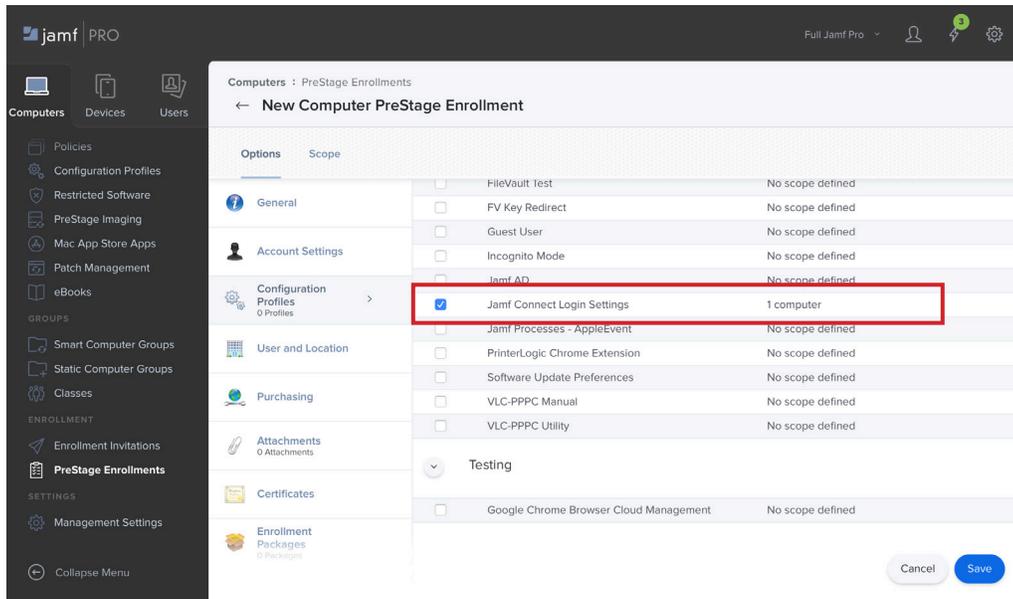


10. Click Configuration Profiles and click Configure.

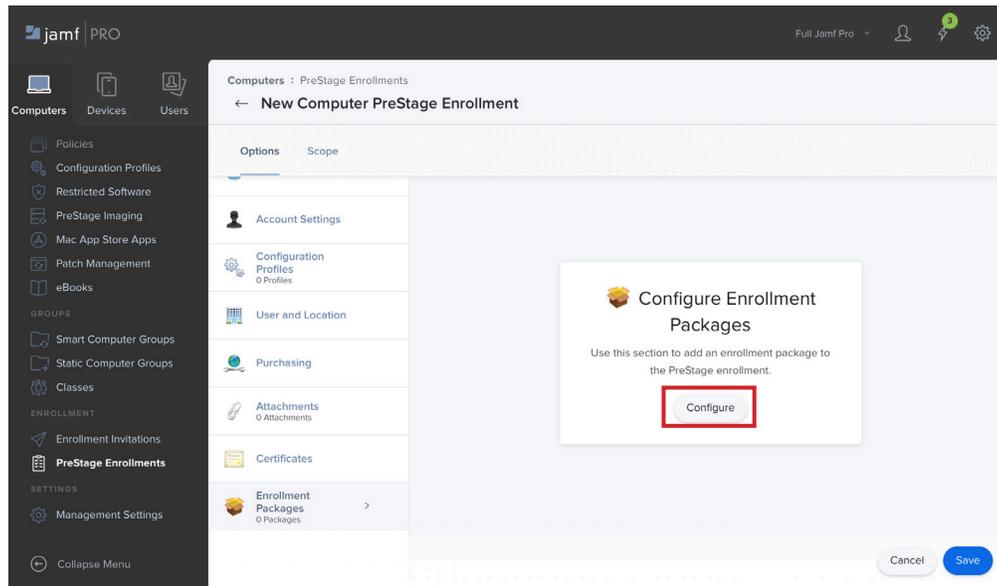




11. Select the Jamf Connect Login profile created in Section 4.

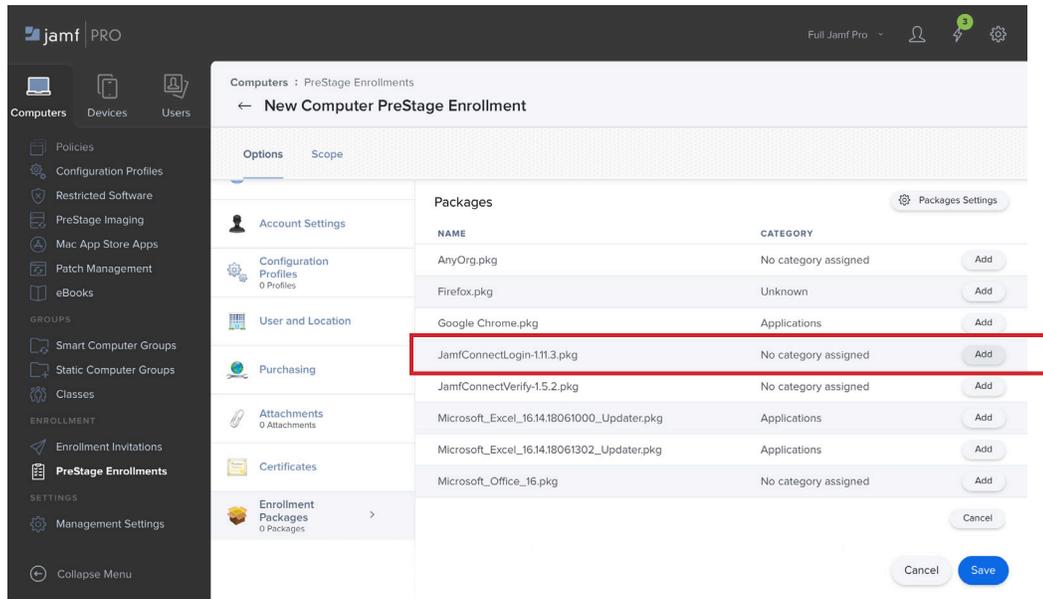


12. Select Enrollment Package and click Configure.





13. Next to your Jamf Connect Login package click Add.

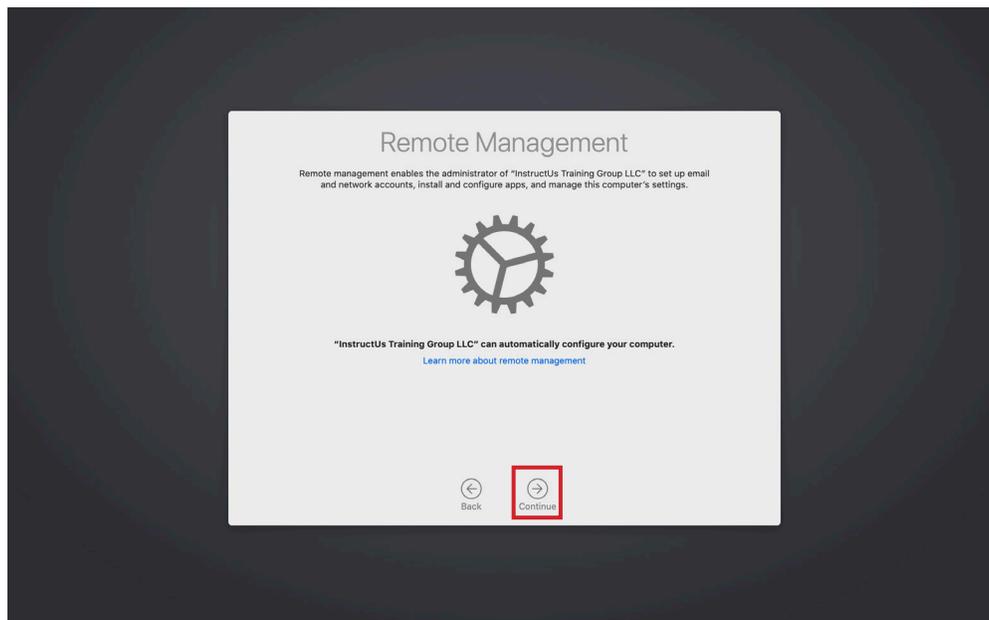


14. Click Scope to select your target computers.

15. Click Save.

You can now test authentication using a computer that has not yet been set up, and that is in the you scope of the PreStage just created.

1. Turn on the test Mac computer.
2. After connecting to a network in Setup Assistant, you should be presented with the Remote Management window. Click Continue.

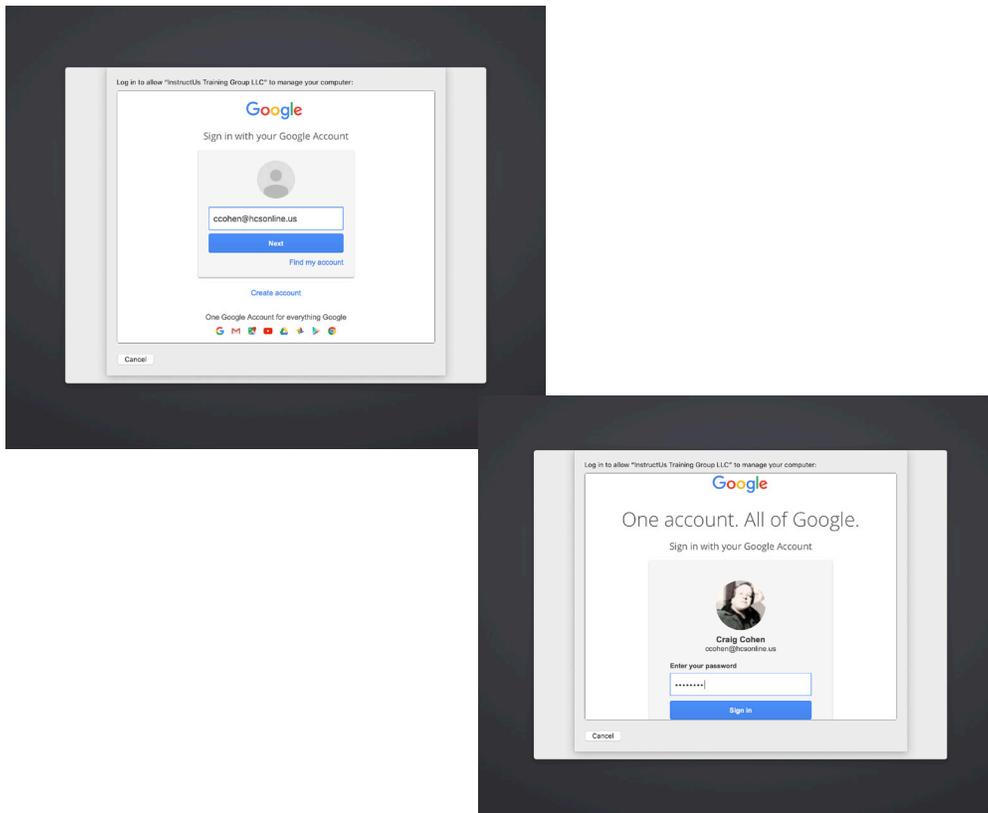




3. If you have configured verbiage for your Enrollment Customization in Jamf Pro, you would see something similar to the figure below.



4. At the Google authentication window, enter your G Suite credentials.

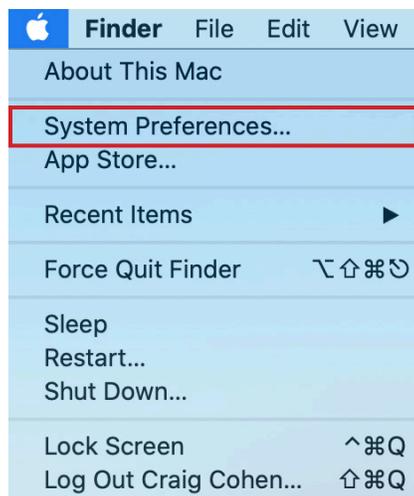




7. Enter and re-enter your G Suite password.
8. Click Create Account.
NOTE: Jamf Connect Login does NOT synchronize your Google password with the local account password after creation.

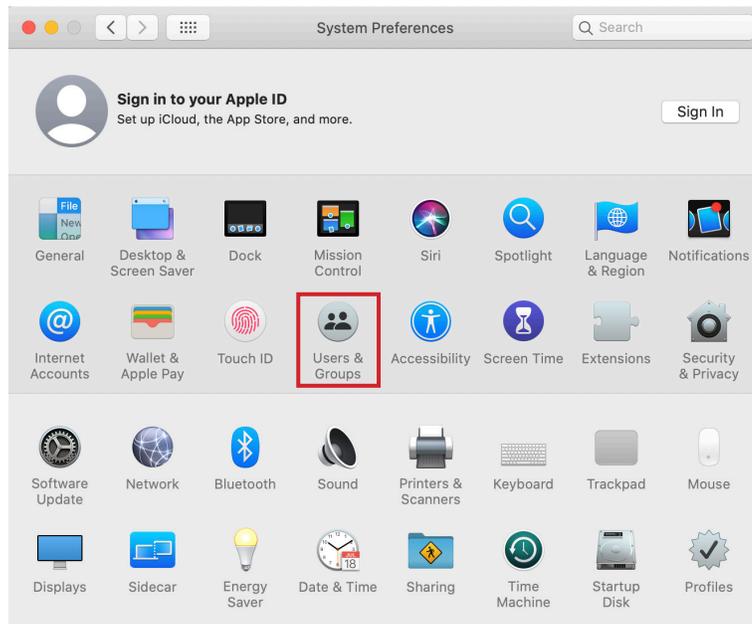


9. Once logged in, click the Apple menu and choose System Preferences.





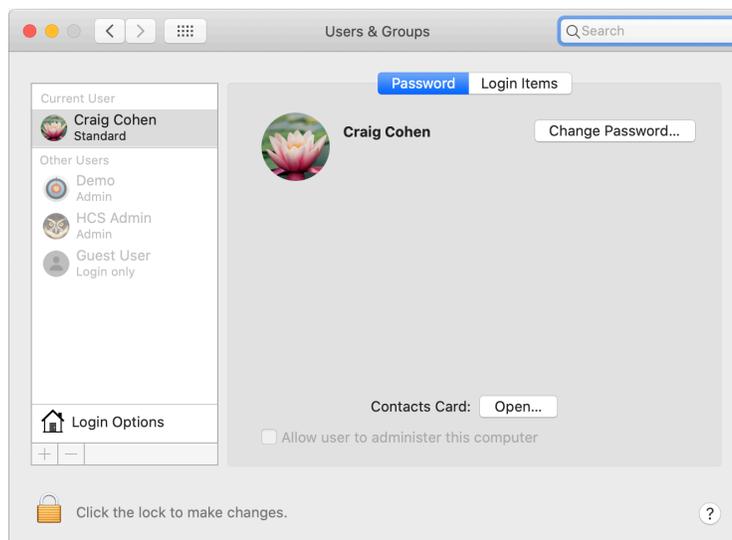
10. Click Users & Groups.



10. Select the newly created account.

Note the following details:

- The account created by this process is a Standard account. As of this writing, Admin Roles is a feature not currently supported with Google ID:
<https://docs.jamf.com/jamf-connect/1.19.0/administrator-guide/>
- Standard accounts cannot enable FileVault
- Standard accounts can be promoted to admin



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.

For more white papers, visit <https://hcsonline.com/support/white-papers>.

For more information about HCS, visit <https://hcsonline.com>.