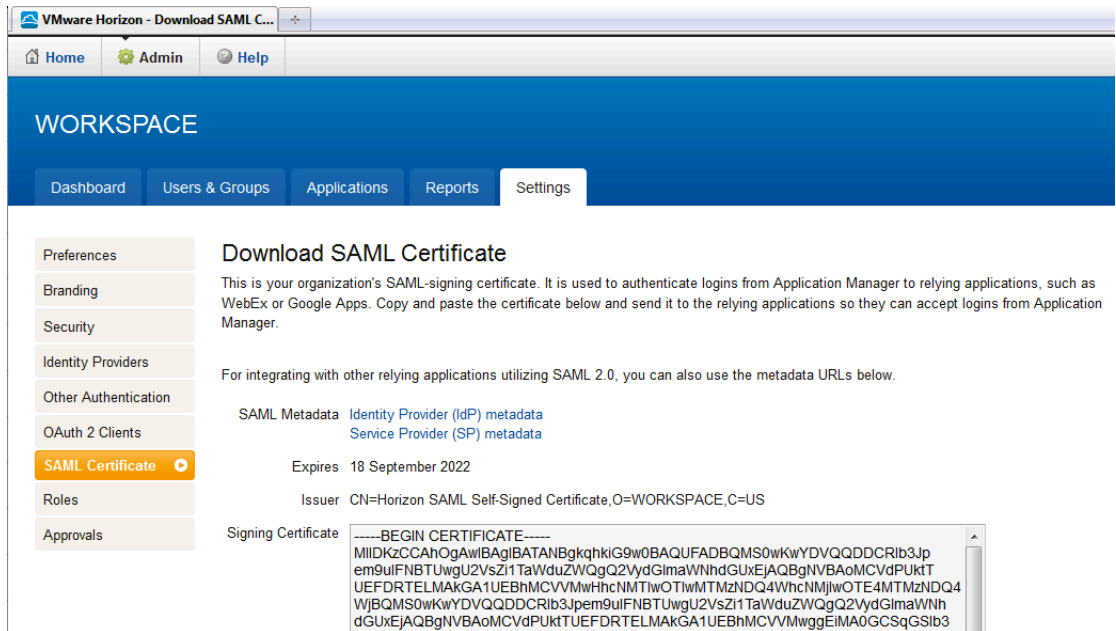


How to add Google Apps for SSO and user provisioning in Horizon Application Manager

This is a step-by-step guide how to add Google Apps to your Horizon Application Manager 1.5 implementation. Horizon supports Single Sign-On, entitlement and provisioning of Google Apps users. Provisioning means you do not have to manually create your users in Google Apps. When a user is entitled to Google Apps, Horizon automatically creates the user on the Google Apps side. With the help of Horizon Application Manager's reporting features you can keep track of your current usage of Google Apps.

1. Start exporting your Horizon SAML certificate into a text file. Later the certificate will be uploaded to Google Apps to establish a trust relationship.



The screenshot shows the VMware Horizon Administration console. The browser title is "VMware Horizon - Download SAML C...". The navigation bar includes "Home", "Admin", and "Help". The main header is "WORKSPACE" with tabs for "Dashboard", "Users & Groups", "Applications", "Reports", and "Settings". The "Settings" tab is active, and the "SAML Certificate" option in the left sidebar is highlighted. The main content area is titled "Download SAML Certificate" and contains the following text:

This is your organization's SAML-signing certificate. It is used to authenticate logins from Application Manager to relying applications, such as WebEx or Google Apps. Copy and paste the certificate below and send it to the relying applications so they can accept logins from Application Manager.

For integrating with other relying applications utilizing SAML 2.0, you can also use the metadata URLs below.

SAML Metadata [Identity Provider \(IdP\) metadata](#)
[Service Provider \(SP\) metadata](#)

Expires 18 September 2022

Issuer CN=Horizon SAML Self-Signed Certificate,O=WORKSPACE,C=US

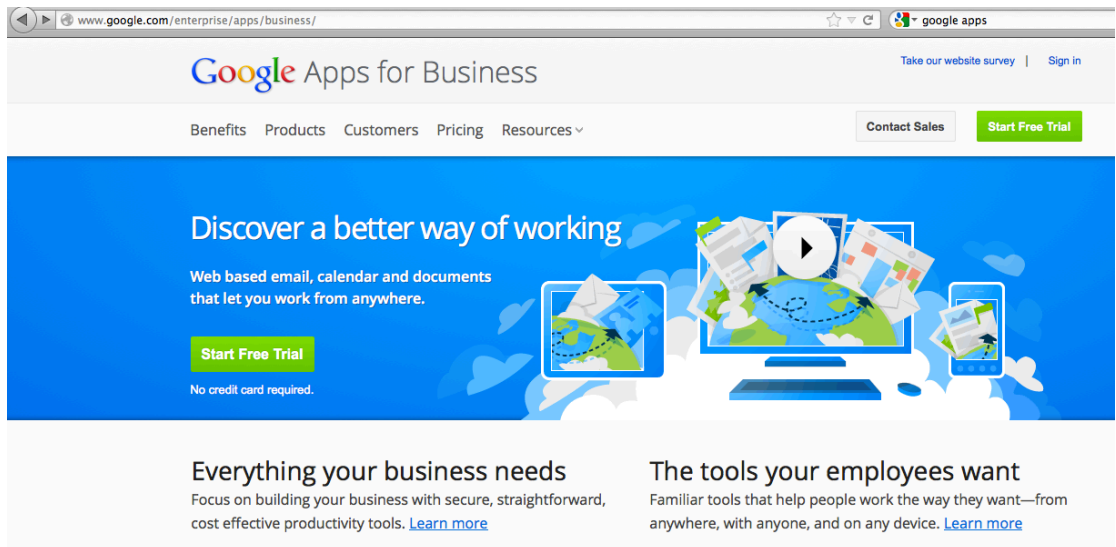
Signing Certificate

```
-----BEGIN CERTIFICATE-----
MIDKzCCAhOgAwIBAgIBATANBgkqhkiG9w0BAQUFAADBQMS0wkwYDVQQDDCRib3Jp
em9uIFNBTUwgU2VsZS11TaWduZWQgQ2VydGImaWNhdGUXEJAQBgNVBAoMVCVdPUk
UEFDRElEMAKGA1UEBhMCVVMwHincNMTIwOTIwMTMzNDQ4WmcNMjIwOTIwMTMzNDQ4
WjBQMS0wkwYDVQQDDCRib3Jpem9uIFNBTUwgU2VsZS11TaWduZWQgQ2VydGImaWNh
dGUXEJAQBgNVBAoMVCVdPUkTUEFDRElEMAKGA1UEBhMCVVMwggEIMA0GCSqGSIb3

```

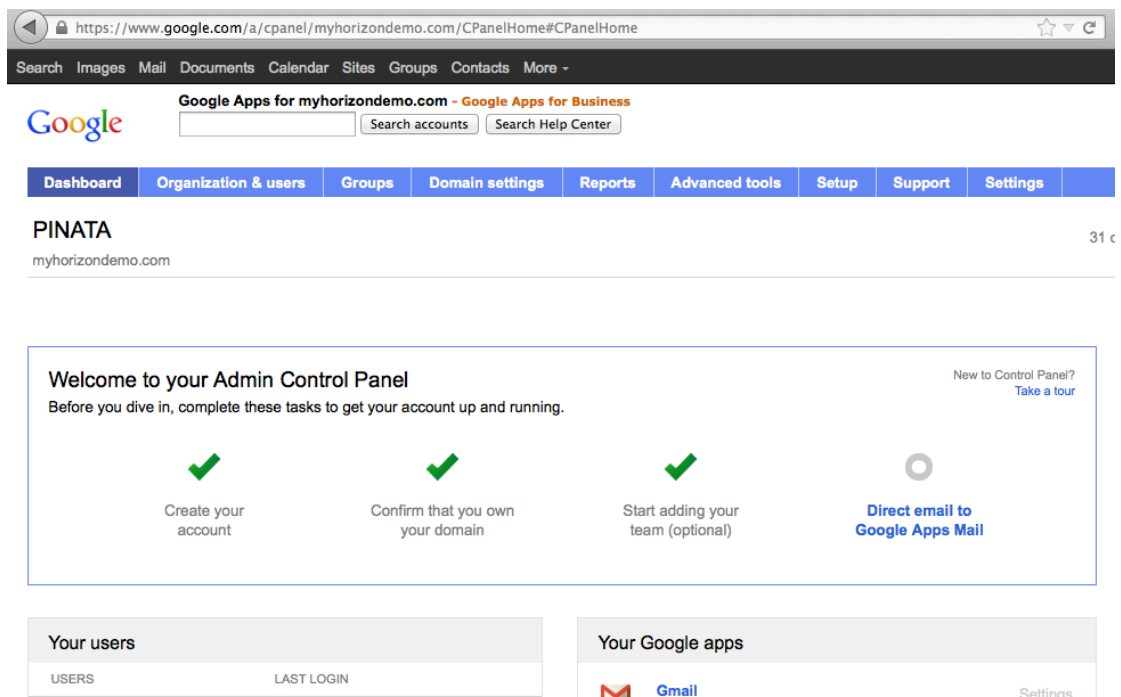
Copy the content in the Signing Certificate box and store it in a text file on your client.

2. Next you must register for a Google Apps for Business account if you do not already have one. If you are working with an existing Google Apps for Business account please note that all your users must login via Horizon when you activate SAML authentication.



You register for a trial account at:
<http://www.google.com/enterprise/apps/business/>

- Once you've registered for a trial make sure you verify your domain. In my example I'm using myhorizondemo.com as the domain and PINATA as my organization. You must of course use your own org. and domain name.



Verify you have confirmed your domain.

- Now it's time to activate provisioning and SAML authentication for your Google Apps organization.

https://www.google.com/a/cpanel/myhorizondemo.com/DomainSettings#DomainSettings/subtab=settings

Search Images Mail Documents Calendar Sites Groups Contacts More -

Google Apps for myhorizondemo.com - Google Apps for Business

Search accounts Search Help Center

Dashboard Organization & users Groups Domain settings Reports Advanced tools Setup Support Settings

Domain settings

General Subscriptions & Billing Domain names **User settings** Admin roles Appearance

Enable provisioning API Enable provisioning API

The Provisioning API allows you to programmatically manage user accounts and synchronize your user base with your own user only. [Learn more](#)

Sign-in page [Set up single sign-on \(SSO\)](#)

SAML-based Single Sign-On (SSO) service allows you to authenticate user accounts for web based applications (like Gmail or C Gmail), your users must continue to sign in directly with the username and password configured for them via the Google admin o

Advanced Password Settings [Adjust password settings](#)

Allows you to control the length of passwords used at VMware, and monitor existing users password strength.

In Domain settings – User settings enable “Enable provisioning API” and click on “Set up single sign-on (SSO)”

5. Fill in your Horizon installation data:

Sign-in page URL: http://FQDN_to_service-va/SAAS/API/1.0/POST/sso

Sign-out page URL: http://FQDN_to_service-va /SAAS/

Change password URL: http://FQDN_to_service-va /SAAS/

Verification certificate: Upload your SAML certificate from step 1.

Use a domain specific issuer: Enable

https://www.google.com/a/cpanel/myhorizondemo.com/SetupSSO

Google Apps for myhorizondemo.com - Google Apps for Business

Dashboard Organization & users Groups Domain settings Reports Advanced tools Setup Support Settings

Set up single sign-on (SSO)

To set up SSO, please provide the information below. [SSO Reference](#)

Enable Single Sign-on

Sign-in page URL *
 URL for signing in to your system and Google Apps

Sign-out page URL *
 URL to redirect users to when they sign out

Change password URL *
 URL to let users change their password in your system; when defined here, this URL is shown even if you do not have a change password page

Verification certificate *
 A certificate file has been uploaded. [Replace certificate](#)

The certificate file must contain the public key for Google to verify sign-in requests. [Learn more](#)

Use a domain specific issuer

This must be checked if your domain uses an IDP Aggregator to handle SAML requests. If enabled, the issuer value sent in the SAML request will be **google.com/a/myhorizondemo.com** instead of simply **google.com**. [Learn more](#)

Network masks

Network masks determine which addresses will be affected by single sign-on. If no masks are specified, SSO functionality will be applied to the entire network. Use a semicolon to separate the masks. Example: (64.233.187.99/8; 72.14.0.0/16) For ranges, use a dash. Example: (64.233.167-204.99/32) All network masks must end with a CIDR. [Learn more](#)

Make sure to click Save changes. Go back and verify your changes have been successfully saved. I've noticed you sometimes have to fill in your settings multiple times for it to be saved.

- That's all you need to do on the Google Apps side of things. Now go back to your Horizon Application Manager admin and add Google Apps as an application.

VMware Horizon - Add Application

Home Admin Help HZN Admin Account Logout

WORKSPACE

Dashboard Users & Groups Applications Reports Settings Search users, groups and apps... Go

Add Application [Back to Applications](#)

SEARCH FOR APPLICATIONS

Can't find the application you're looking for? It's easy to add any web application to your catalog. [Add an application...](#)

PLATINUM APPLICATIONS

Google Apps
 Web based office tools from Google Apps
 Provisioning Federation

PREMIER APPLICATIONS

Add Google Apps to your application catalog.

- Configure Google Apps


VMware Horizon - Edit Application

Dashboard Users & Groups Applications Reports Settings

Search users, groups and apps. Go

Edit Application ← Back to Applications

APPLICATION INFO EDIT



Google Apps
Web based office tools from Google Apps
Application ID: 1002
UUID: fe997013-79dd-45ca-8bc0-1a068043f39
Version: 1.0
Platinum Provisioning Federated

0 GROUP ENTITLEMENTS + ADD

This application does not have any group entitlements. Click "Add" to add a group.

0 INDIVIDUAL USER ENTITLEMENTS + ADD

This application does not have any user entitlements. Click "Add" to add a user.

APPLICATION URLS

Launch URL <http://workspace.myhorizondemo.com/SAAS/API/1.0/GET/apps/launch/app/1002>

Login URL <https://www.google.com/a/{domainName}/acs?RelayState=http://mail.google.com/a/{domainName}>

LICENSE MANAGEMENT EDIT

APPROVAL	LICENSE TRACKING
Audit Only	This application does not have any license tracking information. Click "Edit" to enter license information.

Click on Google Apps to edit the application.

VMware Horizon - Edit Application

APPLICATION PARAMETERS EDIT

NAME	DESCRIPTION	DEFAULT VALUE	VALUE
domainName	Google Apps Domain		myhorizondemo.com

PROVISIONING EDIT

✖ Provisioning is not enabled for this application.

SAML SUBJECT EDIT

Name ID Format Unspecified (username)
Name ID Value \${user.UserName}

SAML PARAMETERS

Authentication Profile SAML 2.0 POST profile

Under APPLICATION PARAMETERS click EDIT.

VMware Horizon - Edit Application

APPLICATION PARAMETERS

NAME	DESCRIPTION	DEFAULT VALUE	VALUE
domainName	Google Apps Domain		myhorizondemo.com

PROVISIONING

✖ Provisioning is not enabled for this application.

SAML SUBJECT

Name ID Format Unspecified (username)
Name ID Value \${user.UserName}

SAML PARAMETERS

Authentication Profile SAML 2.0 POST profile

Relay State http://mail.google.com/a/{domainName}

Edit Application URLs

NAME	DESCRIPTION	DEFAULT VALUE	CURRENT VALUE
domainName	Google Apps Domain		<input type="text" value="myhorizondemo.com"/>

Cancel Save

Specify your domain (in my case it's myhorizondemo.com), click Save

VMware Horizon - Edit Application

APPLICATION PARAMETERS [EDIT](#)

NAME	DESCRIPTION	DEFAULT VALUE	VALUE
domainName	Google Apps Domain		myhorizondemo.com

PROVISIONING [EDIT](#)

✖ Provisioning is not enabled for this application.

SAML SUBJECT [EDIT](#)

Name ID Format: Unspecified (username)
Name ID Value: \${user.UserName}

SAML PARAMETERS

Authentication Profile: SAML 2.0 POST profile

Your domain should now be listed under APPLICATION PARAMETERS. Click EDIT under PROVISIONING.

VMware Horizon - Provisioning

Home Admin Help HZN Admin Account Logout

WORKSPACE

Dashboard Users & Groups Applications Reports Settings

Search users, groups and apps... [Go](#)

Provisioning [Back to Application](#)

Test Results

✔ Made a connection to Google service.

Provisioning **Enable Provisioning**
Enable the service to automatically provision users for this application.

AdminUsername*

AdminPassword*

DomainName*

[TEST CONNECTION](#) [Cancel](#) [Save](#)

HELP

The Provisioning page lets you enable provisioning for an application. Provisioning makes user management easier by automating the creation and removal of user accounts. The result is improved security and more accurate license tracking.

This page displays:

- Enable Provisioning. Add a checkmark to enable provisioning for the application.
- Configuration attributes. The list of attributes required to configure the provisioning adapter for the application.
- Test Connection. Click to test that the API method call is successful and the API key is valid, and to display the location to which the URL resolves.

Specify your Google Apps administrator. Verify functionality by clicking TEST CONNECTION. Once verified click Save.

VMware Horizon - Mapped Values

***ATTRIBUTE: FIRSTNAME** [EDIT](#)

GROUP	DESCRIPTION	VALUE
DEFAULT (ALL USERS)	FirstName	\${user.FirstName}

***ATTRIBUTE: USERNAME** [EDIT](#)

GROUP	DESCRIPTION	VALUE
DEFAULT (ALL USERS)	UserName	\${user.UserName}

***ATTRIBUTE: LASTNAME** [EDIT](#)

GROUP	DESCRIPTION	VALUE
DEFAULT (ALL USERS)	LastName	\${user.LastName}

*Required

defined by the application you are provisioning.

This page displays:

- Edit. Click to add, edit, or remove mappings for an attribute, or to change the order in which the mappings are evaluated.
- Group. The list of Horizon groups that are associated with the attribute.
- Value. The provisioned application value to which the Horizon attribute is mapped.
- Description. A descriptive name for the mapped value.

[Discard All Changes](#) [Save](#)

Click on MAPPED VALUES and specify mappings and click Save.

VMware Horizon - Edit Application

Home Admin Help HZN Admin Account Logout

WORKSPACE

Dashboard Users & Groups Applications Reports Settings Search users, groups and apps Go

Edit Application [Back to Applications](#)

APPLICATION INFO [EDIT](#)

Google Apps
Web based office tools from Google Apps
Application ID: 1002
UUID: fe997013-79dd-45ca-8bc0-1a068043f39
Version: 1.0
Platinum Provisioning Federated

0 GROUP ENTITLEMENTS [ADD](#)

This application does not have any group entitlements. Click "Add" to add a group.

2 INDIVIDUAL USER ENTITLEMENTS [ADD](#)

User1, Test (TestUser1)	Automatic	Ready to provision	EDIT REMOVE
User2, Test (testuser2)	Automatic	Ready to provision	EDIT REMOVE

APPLICATION URLS

Launch URL http://workspace.myhorizondemo.com/SAAS/API/1.0/GET/apps/launch/

LICENSE MANAGEMENT [EDIT](#)

APPROVAL LICENSE TRACKING

Entitle users to Google Apps. Click on "Ready to provision" to see the status of the provisioning process. When users are provisioned the status will change to "Provisioned".

8. Verify your Google Apps connection.

VMware Horizon - Portal x Horizon Connector - Direc... Page Safety Tools

Home Help Test User1 Account Logout

HORIZON

[Application Catalog](#)

All (6) [Find Applications](#)

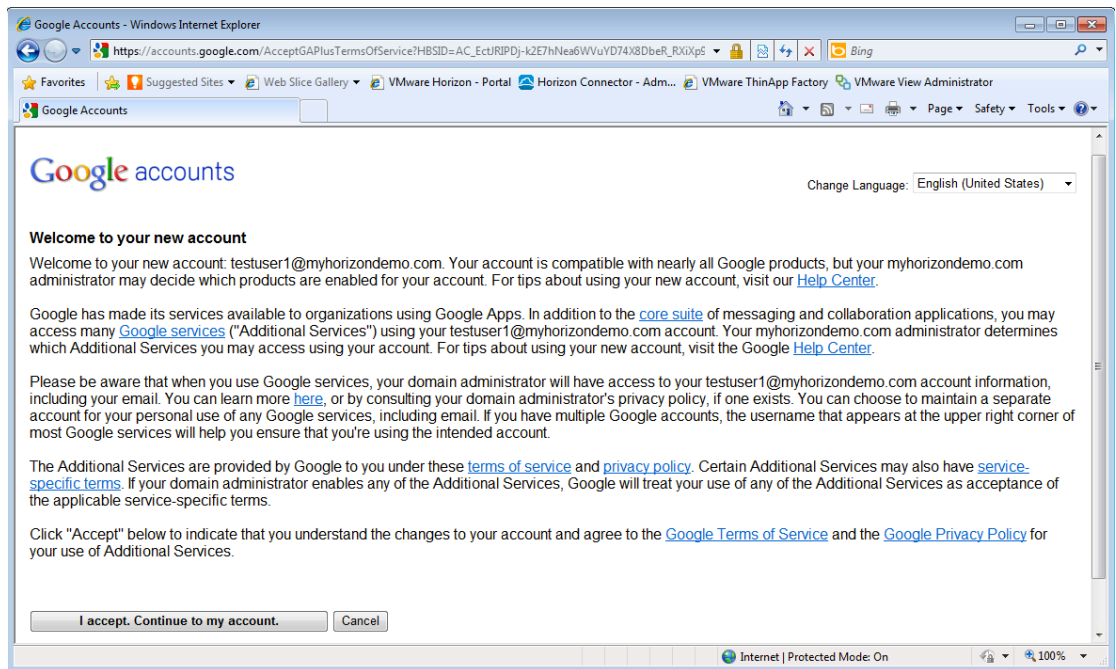
FileZilla Google Apps Google Maps Mozilla Firefox Salesforce VirtIE6

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Horizon Build 1.5.0.734000

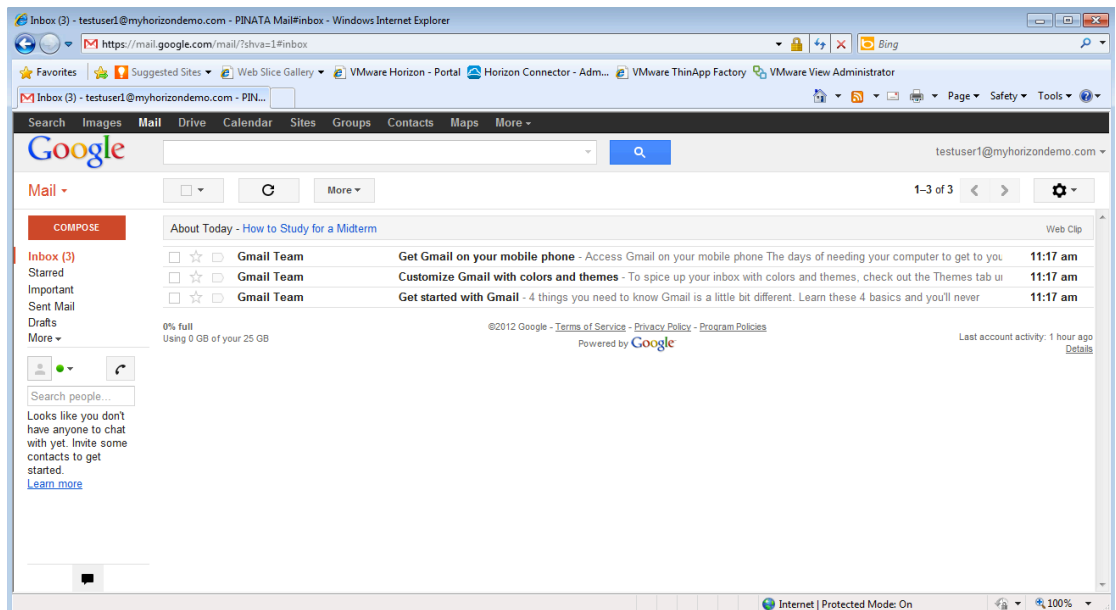
VMware Horizon Application Manager

Local intranet | Protected Mode: Off 100%

Login to your Horizon Workspace as one of the Google Apps entitled users. Click on the Google Apps icon.



If successful you'll see the "Welcome to your new account message". Click "I accept. Continue to my account".



The user should now be logged in to Google Apps.

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