

3.4. GOOGLE COMPUTE ENGINE PROVIDERS

3.4.1. Adding Google Compute Engine Providers

After initial installation and creation of a CloudForms environment, add a Google Compute Engine provider by following this procedure.



Prerequisites

To add a Google Compute Engine provider to CloudForms, you need:

- » A Google Cloud Platform account
- » A Google Compute Engine project with the Google Compute Engine API enabled
- » A Service Account JSON key for your project.

To add a Google Compute Engine provider:

1. Navigate to **Compute** → **Clouds** → **Providers**.

2. Click  (**Configuration**), then click  (**Add a New Cloud Provider**).
3. Enter a **Name** for the provider.
4. From the **Type** list, select **Google Compute Engine**.
5. Select your **Preferred Region** from the list.
6. Enter your Google Compute Engine Project ID for **Project**.
7. Select the appropriate **Zone** if you have more than one available. Red Hat recommends creating a new zone for your Google Compute Engine provider.
8. Copy your project's **Service Account** JSON key contents to the **Service Account JSON** field.

Note

You can generate a private JSON key for your project in **IAM & Admin** → **Service Accounts** in Google Compute Platform. This key is used to authenticate against your provider.


9. Click **Validate** to validate the credentials.
10. Click **Add**.

3.4.2. Enabling Google Compute Engine Events


After adding Google Compute Engine as a provider in CloudForms, enable events for the provider so that you can monitor the system from CloudForms.

Events are set up on a per-project basis by using Google Stackdriver logging combined with Google Pub/Sub. Stackdriver logging is a service that aggregates and exposes log events from Google services and applications. Google Pub/Sub is a messaging service that exports these log events. This section describes how to export activity log entries for a Google Compute Engine project so that events are captured in CloudForms.

Prerequisites for Exporting Google Compute Engine Events

- » You must have owner permission on the project you are exporting.
- » The Google Cloud Pub/Sub API and the Google Cloud Dataproc API must be enabled for your project. To enable the APIs:
 - » In Google Cloud Platform, select your project from the top menu bar.
 - » Click  to show the **Products and Services** menu. Click **API Manager**. This takes you to <https://console.cloud.google.com/apis/library/YOURPROJECT>.
 - » In the API Manager **Overview** tab, search for **Pub/Sub** in the **Google APIs** search bar and select **Google Cloud Pub/Sub API** from the results.
 - » Click the **Enable** button. If Google Cloud Pub/Sub API is already enabled, the **Enable** button will not show, and instead **Google Cloud Pub/Sub API** will be listed under **Enabled APIs**.
 - » Complete the same steps to enable the Google Cloud Dataproc API.
- » The Stackdriver logging service must have permission to publish to your project's Pub/Sub service.


To add the required permissions:

- » In Google Cloud Platform, select your project and navigate to  **Products and Services** → **IAM & Admin**. This takes you to <https://console.cloud.google.com/iam-admin/iam/YOURPROJECT>.
- » Ensure your project has **Editor** and **Logs Configuration Writer** permissions assigned:
 - » If the **cloud-logs@system.gserviceaccount.com** account is already listed under **Members**, ensure **Editor** is selected under **Role(s)**.
 - » If the **cloud-logs@system.gserviceaccount.com** account is not listed, click **Add Member**.
 - » Enter **cloud-logs@system.gserviceaccount.com** in **Members** to add the Google APIs service account to the permissions list. In **Select a Role** dropdown, select **Project** → **Editor**.
 - » Select **Add**.
- » Complete the same steps to verify or assign **Logs Configuration Writer** permissions.

3.4.2.1. Configuring Google Compute Engine to Export Events

After the prerequisites from [Prerequisites for Exporting Google Compute Engine Events](#) are configured, you can set up your Google Compute Engine project to export events to CloudForms with the following

steps:

1. In Google Cloud Platform, click  to show the **Products and Services** menu, and click **Logging**. This takes you to <https://console.cloud.google.com/logs/exports/YOURPROJECT>.
2. Select your project from the top menu bar.
3. Click **Exports** from the **Logging** menu.
4. In the **Select service** list, select **Compute Engine**.
5. Under **Export these sources**, click **Add item**. Make sure **compute.googleapis.com/activity_log** is selected.
6. Under **Select export destinations**, click the **Publish to Cloud Pub/Sub topic** dropdown and select **Add new topic...**
7. In the **Create Cloud Pub/Sub Topic** dialog, enter **manageiq-activity-log** as the **Name**. Click **Create**.

Exports

Select service

Compute Engine ▼

Export these sources

All logs

compute.googleapis.com/activity_log ×

+ Add item

Select export destinations

Stream to BigQuery dataset ?

Don't export to BigQuery ▼

Save to Cloud Storage bucket ?

Don't export to Cloud Storage ▼

Publish to Cloud Pub/Sub topic ?

manageiq-activity-log ▼

Save

Revert

8. Click **Save**.

When changes occur to Google Compute Engine instances, CloudForms is now notified and reports these changes as events.

You can view events for your Google Compute Engine provider in CloudForms by navigating to **Compute** → **Clouds** → **Providers** and selecting the Google Compute Engine provider. Events can be viewed from **Monitoring** → **Timelines** on the provider summary page.

