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 must be enabled for your project. To enable the API:
    - In Google Cloud Platform, select your project from the top menu bar.
    - Click  to show the **Products and Services** menu. Click **API Manager** to go to https://console.cloud.google.com/apis/library/.
    - 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**.
- The Stackdriver logging service must have permission to publish to your project's Pub/Sub service. To add the required permissions:

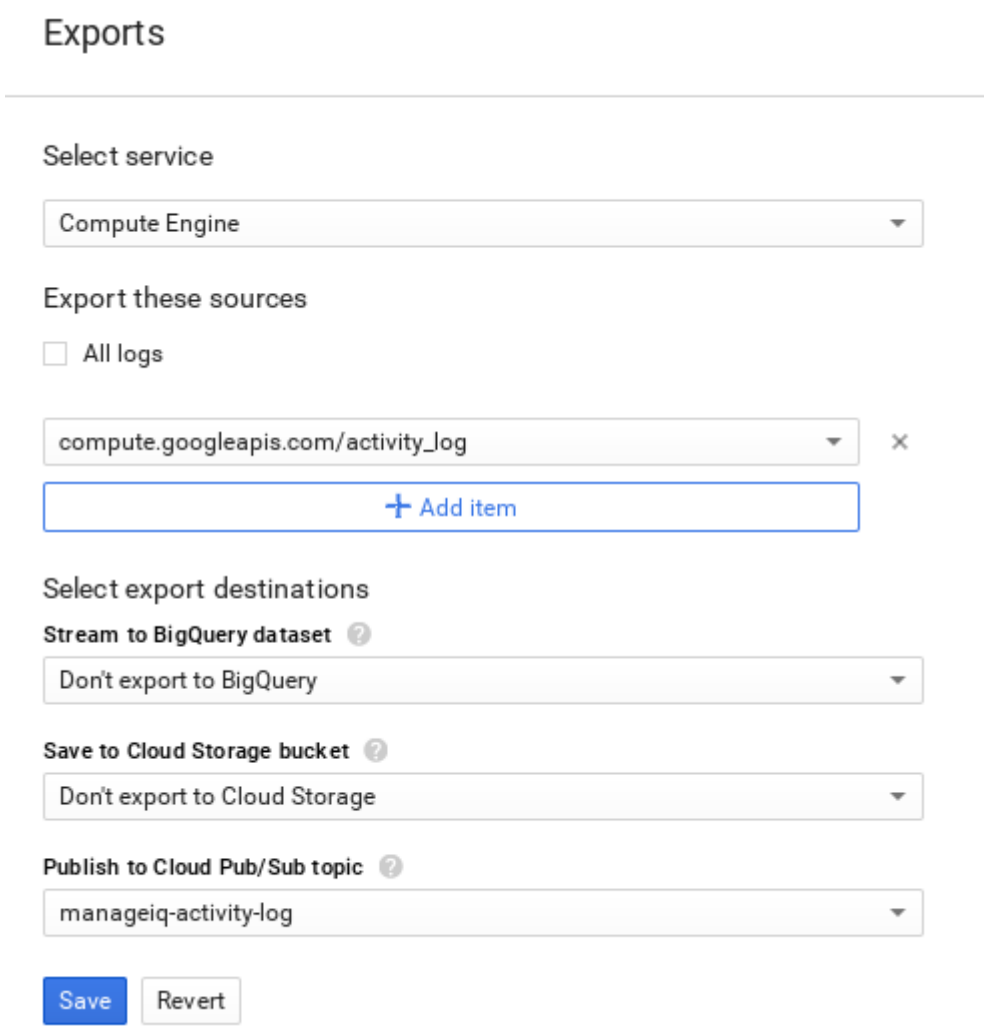
- In Google Cloud Platform, select your project and navigate to **Products and Services** → **IAM & Admin** to go to https://console.cloud.google.com/iam-admin/iam/.
- Ensure your project has **Logs Configuration Writer** permissions assigned:
  - If the **`cloud-logs@system.gserviceaccount.com`** account is already listed under **Members**, ensure **Logs Configuration Writer** is selected under **Role(s)**.
  - If the **`cloud-logs@system.gserviceaccount.com`** account is not listed, click **Add** to add the permissions.
    - In the dialog box, 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 **Logging** → **Logs Configuration Writer** and click **Add**.

3.4.2.1. Configuring Google Compute Engine to Export Events

After you have completed the steps from Prerequisites for Exporting Google Compute Engine Events, 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** to go to https://console.cloud.google.com/logs/exports/.
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**, and select **`compute.googleapis.com/activity_log`** from the list.
6. Under **Select export destinations**, click the **Publish to Cloud Pub/Sub topic** dropdown and click **Add new topic…**
7. In the **Create Cloud Pub/Sub Topic** dialog, enter **`manageiq-activity-log`** as the **Name**. Click **Create**.



8. Click **Save**.

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

Note

For additional information about Google Compute Engine, see the Google Compute Platform documentation:

- For information on setting up a cloud logging export on Google Cloud Platform, see https://cloud.google.com/logging/docs/export/configure_export.
- For information on Google Cloud Pub/Sub API operations and costs, see https://cloud.google.com/pubsub/.

3.4.2.2. Viewing Google Compute Engine Events in CloudForms

In CloudForms, view events for a Google Compute Engine project by following these steps:

1. Navigate to **Compute** → **Clouds** → **Providers** and select the Google Compute Engine project.
2. Click **Monitoring** → **Timelines** on the provider summary page to see an events timeline for that project.