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3.4. GOOGLE COMPUTE ENGINE PROVIDERS

3.4.1. Adding Google Compute Engine Providers

After initial installation and creation of a CloudForms Management Engine environment, add a Google Compute Engine provider by following this procedure. To add a Google Compute Engine provider, you must first have a Google Compute Engine account and project configured.

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 the **Service Accounts** area of 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.

3.4.2.1. Prerequisites for Exporting Google Compute Engine Events

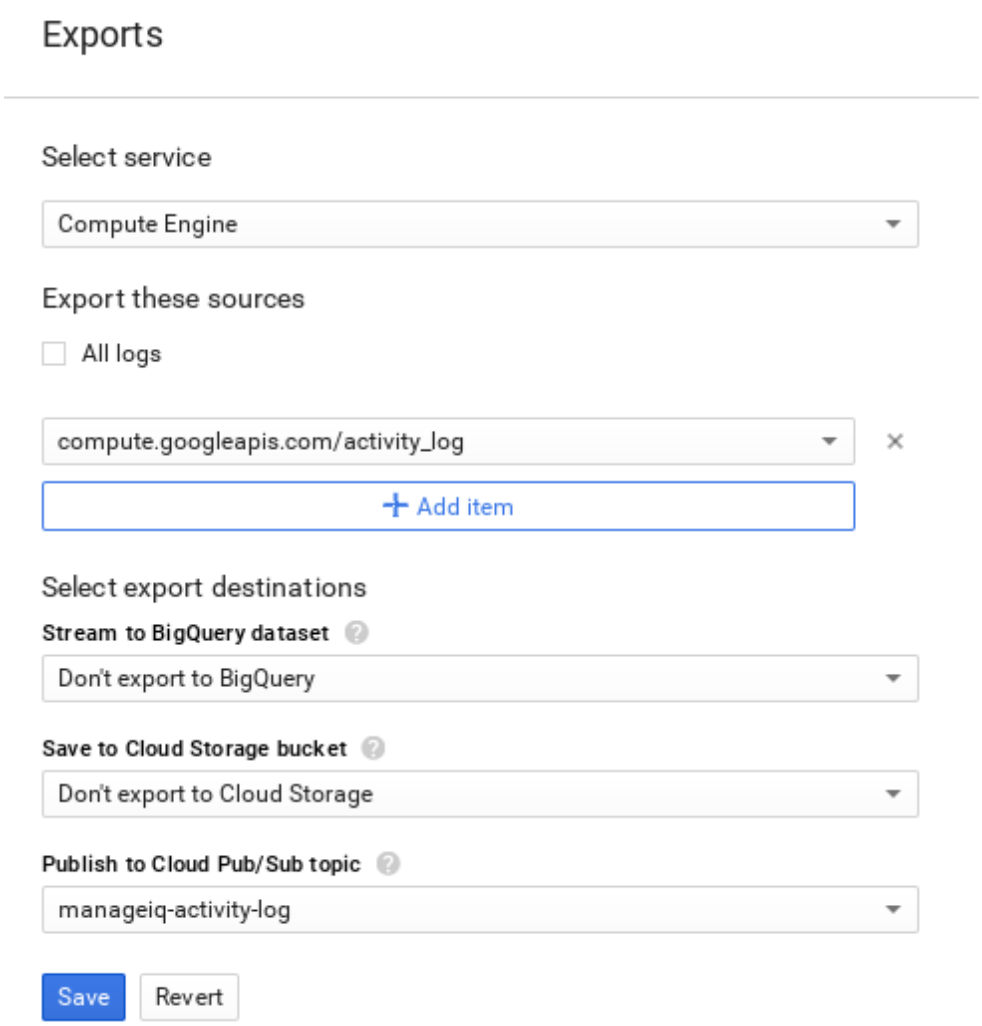
- You must have owner permission on the project you are exporting.
- Your project must have a Service Account JSON key. See Section 3.4.1, “Adding Google Compute Engine Providers” for instructions.
- The Google Cloud Pub/Sub API must be enabled for your project. To enable the API:
  - In Google Cloud Platform, select your project from the top menu bar.
  - Click  to show the **Products and Services** menu. Click **API Manager**.
  - 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 it is already enabled, the **Enable** button will not show, and **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, navigate to **Products and Services** → **IAM & Admin**. If prompted, select your project.
  - If the **`cloud-logs@system.gserviceaccount.com`** account is already listed under **Members**, change its permission from **Viewer** to **Editor**.
  - If the 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**.

3.4.2.2. Configuring Google Compute Engine to Export Events

After the prerequisites from Section 3.4.2.1, "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**.
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. When prompted, enter **manageiq-activity-log** as the **Name**.



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.