



---

# Monitoring Google Cloud Platform

Google Cloud Platform PowerPack version 107.1

---

# Table of Contents

<b>Introduction</b> .....	<b>4</b>
What is Google Cloud Platform? .....	4
What Does the Google Cloud Platform PowerPack Monitor? .....	5
What is the GCP Resource Hierarchy? .....	5
What are GCP Regions and Zones? .....	5
Installing the Google Cloud Platform PowerPack .....	7
<b>Configuration and Discovery</b> .....	<b>8</b>
Creating a Google Cloud Platform Service Account .....	8
Enabling Google Cloud Platform APIs .....	11
Creating a SOAP/XML Credential for Google Cloud Platform .....	13
Creating a SOAP/XML Credential in the Classic SL1 User Interface .....	14
Creating a Google Cloud Platform Virtual Device .....	15
Aligning the Google Cloud Platform Dynamic Applications .....	15
Discovering Google Cloud Platform Component Devices .....	15
Configuring the GCP: BigQuery DataSet Discovery Dynamic Application .....	17
Viewing Google Cloud Platform Component Devices .....	17
Relationships Between Component Devices .....	18
<b>Dashboards</b> .....	<b>19</b>
Device Dashboards .....	19
Google Backend Service .....	19
Google Compute Instance .....	20
Google Compute Instance Service .....	20
Google Global HTTP(S) Load Balancer .....	20
Google Persistent Disk .....	21
Google Persistent Disk Service .....	21
Google Project .....	21
Google Regional TCP/UDP Load Balancer .....	22
Google Storage Bucket .....	22
Google Storage Bucket Service .....	22
<b>Key Metrics Collected by the PowerPack</b> .....	<b>24</b>
App Engine Service .....	25

BigQuery Service .....	28
Cloud SQL Service .....	34
Cloud VPN Regional Service .....	37
Folder Service .....	40
Global Backend Service .....	41
Kubernetes Engine .....	45
Load Balancing Global Service .....	47
Multi-Region Service .....	54
Organization Service .....	54
Persistent Disk Service .....	55
Project Service .....	57
Region Service .....	58
Storage Service .....	59
Token Service .....	61
VM Instance Service .....	61
VPC Service .....	66
Zone Service .....	69

---

# Chapter

# 1

## Introduction

---

### Overview

This manual describes how to monitor Google Cloud Platform (GCP) resources in SL1 using the *Google Cloud Platform PowerPack*.

The following sections provide an overview of GCP and the *Google Cloud Platform PowerPack*:

This chapter covers the following topics:

<i>What is Google Cloud Platform?</i> .....	4
<i>What Does the Google Cloud Platform PowerPack Monitor?</i> .....	5
<i>Installing the Google Cloud Platform PowerPack</i> .....	7

**NOTE:** ScienceLogic provides this documentation for the convenience of ScienceLogic customers. Some of the configuration information contained herein pertains to third-party vendor software that is subject to change without notice to ScienceLogic. ScienceLogic makes every attempt to maintain accurate technical information and cannot be held responsible for defects or changes in third-party vendor software. There is no written or implied guarantee that information contained herein will work for all third-party variants. See the End User License Agreement (EULA) for more information.

---

### What is Google Cloud Platform?

Google Cloud Platform is a suite of modular, cloud-based products and services that enables users to build, test, deploy, and manage applications for web, mobile, and back-end solutions. It combines physical assets and virtual resources that users can utilize for computing, data storage, networking, and other solutions.

---

## What Does the Google Cloud Platform PowerPack Monitor?

To monitor GCP resources using SL1, you must install the *Google Cloud Platform PowerPack*. This PowerPack enables you to discover, model, and collect performance and configuration data about GCP resources.

The *Google Cloud Platform PowerPack* includes:

- Dynamic Applications to discover, model, and collect configuration data and performance metrics for GCP services and resources
- Device Classes for each type of GCP device that SL1 monitors, plus Device Classes for each region and zone the *Google Cloud Platform PowerPack* supports
- Event Policies that are triggered when GCP resources meet certain status criteria
- A sample Credential that you can use to create SOAP/XML credentials to monitor GCP devices
- The ScienceLogic Libraries that are utilized by the PowerPack

## What is the GCP Resource Hierarchy?

The GCP resource hierarchy is a tiered methodology that determines GCP resource ownership, in which child resources inherit the access control policies and configuration settings of their parent resources.

The GCP resource hierarchy consists of the following levels:

- **Organization.** The Organization resource represents an organization, such as a company, and is the top level of the hierarchy for your GCP account. An account can have only one Organization associated with it. Organizations are not required resources, but when an account includes one, every project created by users of that account will belong to that Organization resource by default.
  - **Folders.** Folders are essentially a tool for organizing resources and creating borders between Projects. For example, they could represent different departments or teams within an Organization. Folders can include one or more Projects or additional sub-folders. Like Organizations, Folders are not required resources.
  - **Projects.** Projects are the primary resources used for organizing other GCP resources. Unlike Organizations and Folders, Projects are required. From the Project level, GCP users can create, enable, and use all GCP services and resources; manage APIs and permissions; and perform other managerial tasks.

**NOTE:** The *Google Cloud Platform PowerPack* enables you to discover GCP resources at either the Organization or Project hierarchy level.

## What are GCP Regions and Zones?

GCP resources are hosted in data centers around the globe. A GCP region is an individual data center located in a specific geographic locale. Regional resources are accessible by any resource within the same region. Examples of regional resources include IP addresses, subnets, regionally managed instance groups, and regional operations.

Each region consists of one or more zones. Zone-specific resources are unique to that zone and accessible only by other resources in the same zone. Examples of zone resources include instances, disks, machine types, zone-managed instance groups, and per-zone operations.

Zone names include the region name combined with a letter identifier. For example, "zone a" in the East Asia region is named "asia-east1-a".

The Dynamic Applications in the *Google Cloud Platform* PowerPack create a "region" component device for each discovered data center region and a "zone" component device for each zone discovered under those regions.

The PowerPack supports the following GCP regions and zones:

- Generic Region/Zone
- Asia East 1 (Taiwan)
- Asia East 2 (Hong Kong)
- Asia Northeast 1 (Tokyo)
- Asia Northeast 2 (Osaka)
- Asia South (Mumbai)
- Asia Southeast 1 (Singapore)
- Australia Southeast 1 (Sydney)
- Europe North 1 (Finland)
- Europe West 1 (Belgium)
- Europe West 2 (London)
- Europe West 3 (Frankfurt)
- Europe West 4 (Eemshaven)
- Europe West 6 (Zurich)
- North America Northeast 1 (Montréal)
- South America East 1 (São Paulo)
- US Central 1 (Iowa)
- US East 1 (South Carolina)
- US East 4 (Northern Virginia)
- US West 1 (Oregon)
- US West 2 (Los Angeles)
- Multi-Region Asia
- Multi-Region Europe North 1 / Europe West 4
- Multi-Region European Union
- Multi-Region United States
- Multi-Region US Central 1 / US East 1

---

# Installing the Google Cloud Platform PowerPack

Before completing the steps in this manual, you must import and install the latest version of the *Google Cloud Platform PowerPack*.

**NOTE:** ScienceLogic does not recommend using version 101 of the *Google Cloud Platform PowerPack* because of installation and collection issues which can arise in some system configurations. When upgrading from version 100 to later versions, ScienceLogic recommends that you delete your previously discovered Google Cloud devices as well as version 100 of the PowerPack, and then install version 102 or later. This is because the collections and devices present in version 100 is not compatible with later releases.

**TIP:** By default, installing a new version of a PowerPack overwrites all content from a previous version of that PowerPack that has already been installed on the target system. You can use the **Enable Selective PowerPack Field Protection** setting in the **Behavior Settings** page (System > Settings > Behavior) to prevent new PowerPacks from overwriting local changes for some commonly customized fields. For more information, see the section on [Global Settings](#).

**IMPORTANT:** The minimum required MySQL version is 5.6.0.

To download and install the PowerPack:

1. Search for and download the PowerPack from the **PowerPacks** page (Product Downloads > PowerPacks & SyncPacks) at the [ScienceLogic Support Site](#).
2. In SL1, go to the **PowerPacks** page (System > Manage > PowerPacks).
3. Click the **[Actions]** button and choose *Import PowerPack*. The **Import PowerPack** dialog box appears.
4. Click **[Browse]** and navigate to the PowerPack file from step 1.
5. Select the PowerPack file and click **[Import]**. The **PowerPack Installer** modal displays a list of the PowerPack contents.
6. Click **[Install]**. The PowerPack is added to the **PowerPacks** page.

**NOTE:** If you exit the **PowerPack Installer** modal without installing the imported PowerPack, the imported PowerPack will not appear in the **PowerPacks** page. However, the imported PowerPack will appear in the **Imported PowerPacks** modal. This page appears when you click the **[Actions]** menu and select *Install PowerPack*.

---

# Chapter

# 2

## Configuration and Discovery

---

### Overview

The following sections describe how to configure Google Cloud Platform resources for monitoring by SL1 using the *Google Cloud Platform PowerPack*:

This chapter covers the following topics:

<a href="#">Creating a Google Cloud Platform Service Account</a>	8
<a href="#">Enabling Google Cloud Platform APIs</a>	11
<a href="#">Creating a SOAP/XML Credential for Google Cloud Platform</a>	13
<a href="#">Creating a Google Cloud Platform Virtual Device</a>	15
<a href="#">Aligning the Google Cloud Platform Dynamic Applications</a>	15
<a href="#">Configuring the GCP: BigQuery DataSet Discovery Dynamic Application</a>	17
<a href="#">Viewing Google Cloud Platform Component Devices</a>	17

---

### Creating a Google Cloud Platform Service Account

To monitor Google Cloud Platform (GCP) resources with SL1, you must first create a GCP **service account** for SL1 in the GCP Console. This service account belongs to SL1 instead of an individual end user, and enables SL1 to communicate with Google APIs when monitoring your GCP resources.

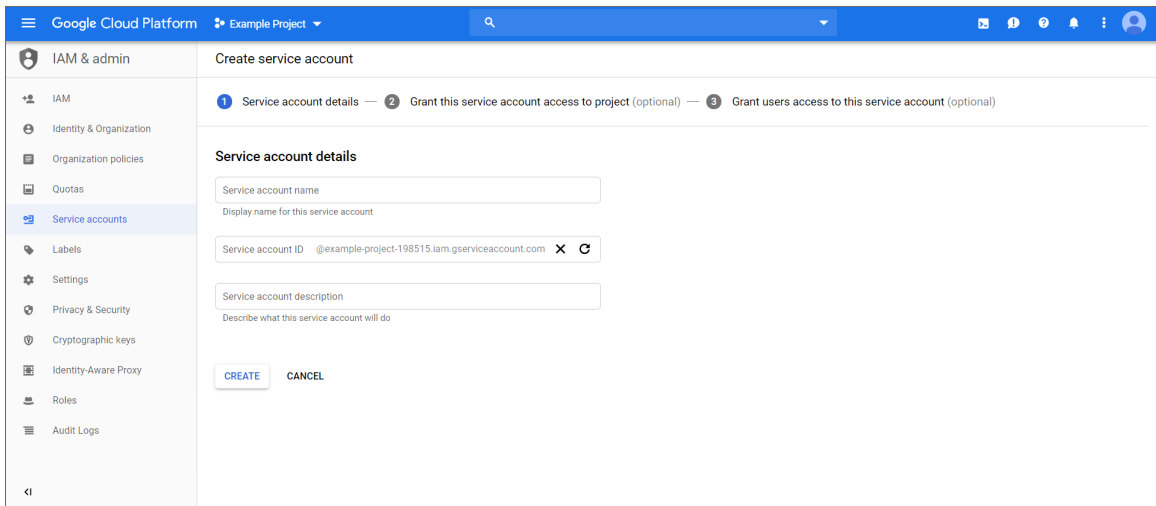
This service account's credentials will include a unique email address and a secret JSON key. You will include this email address and key information when you create the SOAP/XML credential that enables SL1 to monitor your GCP resources.

To create a GCP service account:

1. Log in to the GCP Console and go to the **Service accounts** page. If prompted, select a project.

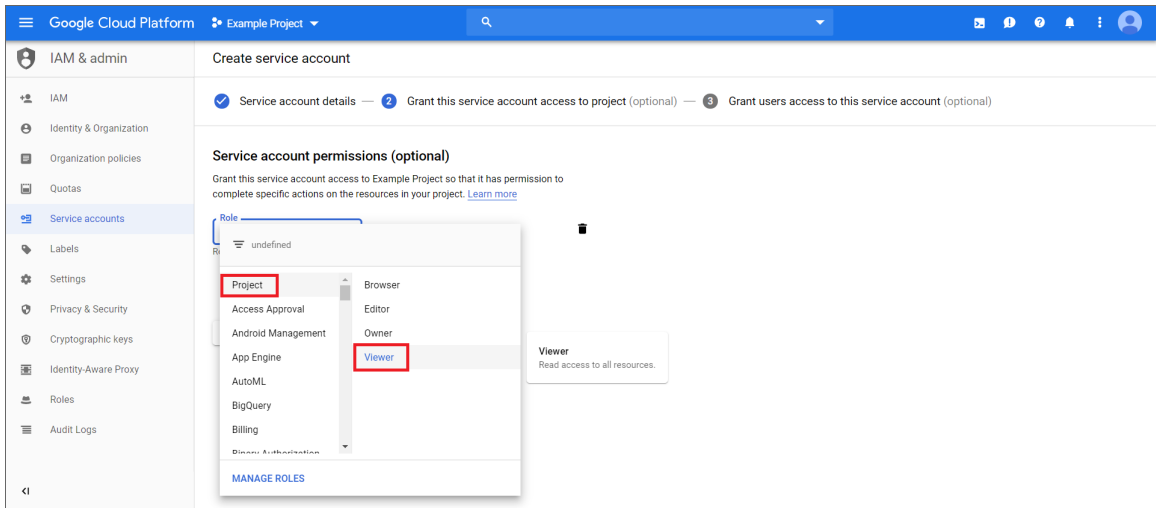


2. Click the **[CREATE SERVICE ACCOUNT]** button.
3. Complete the following fields on the **Create service account** page:



- **Service account name.** Type a name for the service account.
  - **Service account ID.** This field auto-populates with a service account ID that is based on your **Service account name**.
  - **Service account description.** Type a description for the service account.
4. Click **[Create]**. Your service account is created, and the **Service account permissions** page displays.

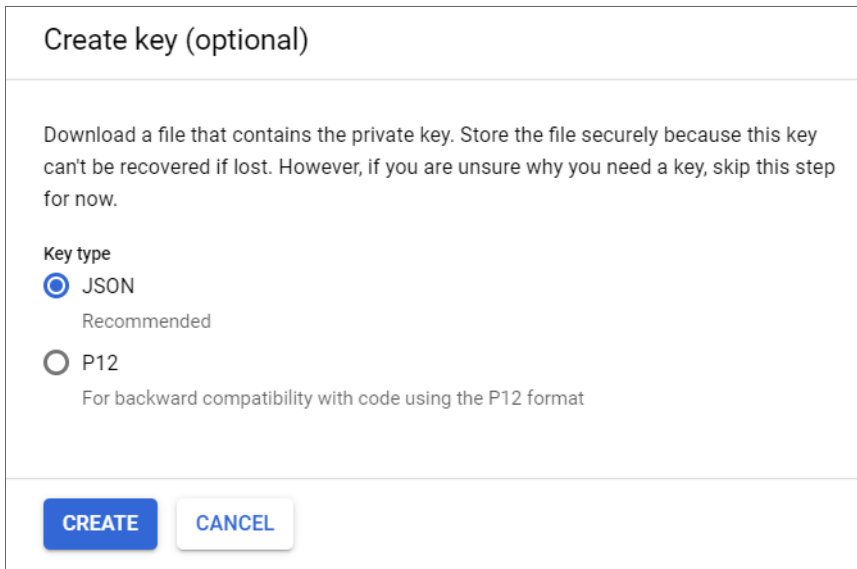
5. Complete the following fields on the **Service account permissions** page:



- **Role.** Select *Project* > *Viewer*.

**NOTE:** At a minimum, the service account must have a role of "Project" with "Viewer" permissions for the GCP service that you want to monitor.

6. Click **[Continue]**. The **Grant users access to this service account** page displays.
7. Click **[Create Key]**. The **Create key** pane appears.
8. On the **Create key** pane, select the JSON radio button and then click **[Create]**. The private JSON key is saved to your computer.



9. Click **[Close]**, and then click **[Done]**.
10. Open the JSON file that was downloaded to your computer and copy the following information:
  - client\_email
  - private\_key

**TIP:** When you copy the private key from the JSON file, it must include the "BEGIN PRIVATE KEY" and "END PRIVATE KEY" lines, including all leading and ending dashes.

*If you are discovering GCP resources at the Project level*, then you can skip the following steps and continue on to the [Enabling Google Cloud APIs](#) section.

However, *if you are discovering GCP resources at the Organization level*, then you must also do the following:

11. In the GCP Console, go to the **IAM** page and select your organization.
12. Click **[Add]**.
13. Add your service account as a member of the organization, and then add the following mandatory roles:
  - Role > Project > Viewer
  - Role > Resource Manager > Folder Viewer
  - Role > Resource Manager > Organization Viewer
14. When you are finished, click **[Save]**.

---

## Enabling Google Cloud Platform APIs

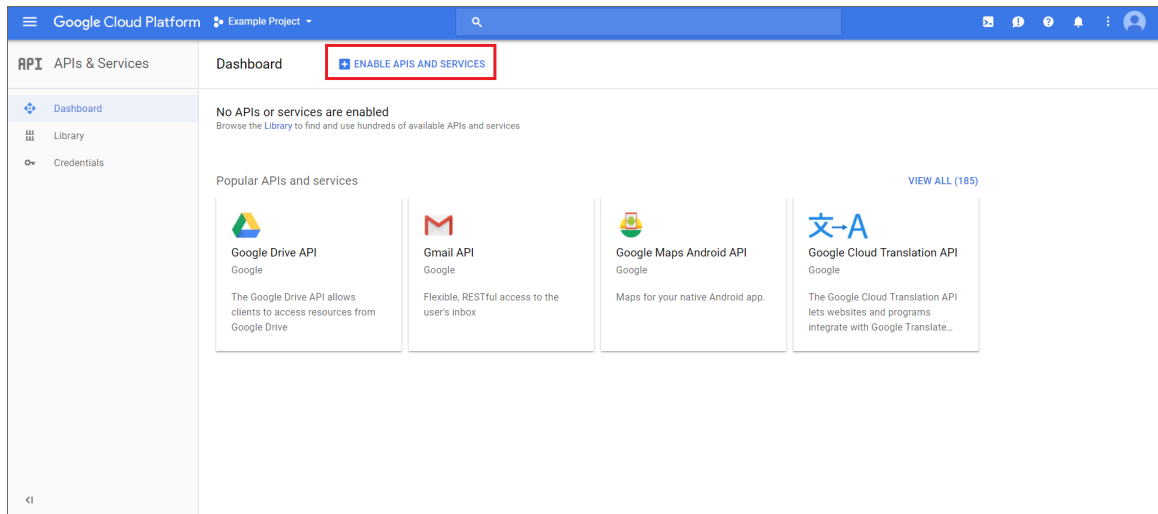
Before SL1 can monitor GCP, you must also enable two APIs in the GCP portal:

- Cloud Resource Manager API
- Compute Engine API

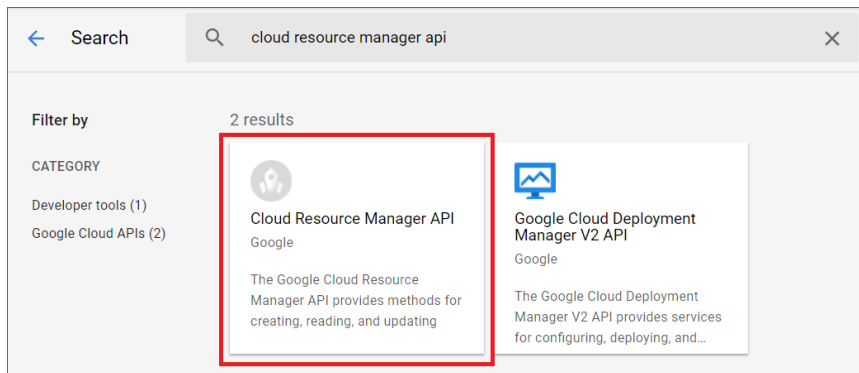
To enable these GCP APIs:

1. Log in to the GCP Console for your project and go to the **API & Services Dashboard** page.

2. Click **[ENABLE APIS AND SERVICES]**. The **API Library** page appears.



3. In the search bar, type "Cloud Resource Manager API". The page will filter search results while you type.
4. Click the **Cloud Resource Manager API** box.



5. On the **Cloud Resource Manager API** page, click the **[Enable]** button.
6. Click **[Dashboard]** on the **API & Services** left menu and then repeat steps 2-5 to enable the **Compute Engine API**.

**NOTE:** Dynamic Applications that call Google's monitoring APIs for time-series based data (ScienceLogic performance applications) may experience delay. Google's API is subject to delay that exceed the expected data retrieval latency.

# Creating a SOAP/XML Credential for Google Cloud Platform

To configure SL1 to monitor GCP, you must create a SOAP/XML credential that allows the Dynamic Applications in the *Google Cloud Platform* PowerPack to connect with your GCP service. An example SOAP/XML credential that you can edit for your own use is included in the *Google Cloud Platform* PowerPack.

**NOTE:** If you are using an SL1 system prior to version 11.1.0, the new user interface does not include the **Duplicate** option for sample credential(s). ScienceLogic recommends that you use [the classic user interface and the Save As button](#) to create new credentials from sample credentials. This will prevent you from overwriting the sample credential(s).

To define a SOAP/XML credential:

1. Go to the **Credentials** page (Manage > Credentials).
2. Locate the **GCP: SOAP Credential Example** sample credential, click its **[Actions]** icon (⋮) and select **Duplicate**. A copy of the credential, called **GCP: SOAP Credential Example copy** appears.
3. Click the **[Actions]** icon (⋮) for the **GCP: SOAP Credential Example copy** credential and select **Edit**. The **Edit Credential** modal page appears.

The screenshot shows the 'Edit Credential' modal window. The main form has the following fields and values:

- Name: GCP: SOAP Credential Example
- All Organizations: [Toggle On]
- Select the organizations the credential belongs to \*: [Dropdown]
- Timeout (ms): 20000
- Content Encoding: text/xml
- Method: POST
- HTTP Version: http/1.1
- URL: http://example.com/
- HTTP Auth User: em7admin
- HTTP Auth Password: [Masked]
- Proxy Hostname/IP: optional
- Proxy User: optional
- Proxy Password: [Masked]
- Proxy Port: 0
- Embedded Password (PUP): [Masked]
- Embed Value [%1]: <CLIENT\_EMAIL>
- Embed Value [%2]: [Empty]
- Embed Value [%3]: [Empty]
- Embed Value [%4]: [Empty]
- HTTP Headers: %silo token=Authorization:Bearer

On the right side, the 'Credential Tester' section includes:

- Select Credential Test: [Dropdown]
- Select Collector: [Dropdown]
- IP or Hostname to test \*: [Text Field]
- Test Credential: [Button]

Buttons: 'Add Header' (bottom right of main form), 'Close' (bottom right of modal).

4. Supply values in the following fields:
  - **Name.** Type a new name for your Google Cloud credential.

### **SOAP Options**

- **Embedded Password [%P]**. Paste the "private\_key" value from the private key JSON file.
- **Embed Value [%1]**. Type the "client\_email" value from the private key JSON file. For example: myprojectid@myaccount.iam.gserviceaccount.com.

**TIP:** When you copy the "private\_key" from the JSON file, it must include the "BEGIN PRIVATE KEY" and "END PRIVATE KEY" lines, including all leading and ending dashes.


5. For all remaining fields, use the default values.
6. Click **[Save & Close]** .

**NOTE:** The SOAP/XML credential tester is not supported by the *Google Cloud Platform* PowerPack

## Creating a SOAP/XML Credential in the Classic SL1 User Interface

To configure SL1 to monitor GCP, you must create a SOAP/XML credential that allows the Dynamic Applications in the *Google Cloud Platform* PowerPack to connect with your GCP service. An example SOAP/XML credential that you can edit for your own use is included in the *Google Cloud Platform* PowerPack.

To create a SOAP/XML credential to access GCP:

1. Go to the **Credential Management** page (System > Manage > Credentials).
2. Locate the **GCP: SOAP Credential Example** and then click its wrench icon (). The **Edit SOAP/XML Credential** modal page appears.
3. Complete the following fields:

### **Basic Settings**

- **Profile Name**. Type a new name for the credential.

### **SOAP Options**

- **Embedded Password [%P]**. Paste the "private\_key" value from the private key JSON file.
- **Embed Value [%1]**. Type the "client\_email" value from the private key JSON file. For example: myprojectid@myaccount.iam.gserviceaccount.com.

**TIP:** When you copy the "private\_key" from the JSON file, it must include the "BEGIN PRIVATE KEY" and "END PRIVATE KEY" lines, including all leading and ending dashes.

4. For all remaining fields, use the default values.
5. Click the **[Save As]** button, and then click **[OK]**.

---

## Creating a Google Cloud Platform Virtual Device

Because the GCP service does not have a static IP address, you cannot discover GCP devices using a regular discovery session. Instead, you must create a **virtual device** that represents the GCP service. A virtual device is a user-defined container that represents a device or service that cannot be discovered by SL1. You can use the virtual device to store information gathered by policies or Dynamic Applications.

To create a virtual device that represents your GCP service:

1. Go to the **Device Manager** page (Registry > Devices > Device Manager).
2. Click the **[Actions]** button and select *Create Virtual Device* from the menu. The **Virtual Device** modal page appears.
3. Complete the following fields:
  - **Device Name**. Type a name for the device.
  - **Organization**. Select the organization for this device. The organization you associate with the device limits the users that will be able to view and edit the device. Typically, only members of the organization will be able to view and edit the device.
  - **Device Class**. Select *GCP | Service*.
  - **Collector**. Select the collector group that will monitor the device.
4. Click **[Add]** to create the virtual device.

---

## Aligning the Google Cloud Platform Dynamic Applications

The Dynamic Applications in the *Google Cloud Platform PowerPack* are divided into the following types:

- **Discovery**. These Dynamic Applications poll GCP for new instances of services or changes to existing instances of services.
- **Configuration**. These Dynamic Applications retrieve configuration information about each service instance and retrieve any changes to that configuration information.
- **Performance**. These Dynamic Applications poll GCP for performance metrics.


When configuring SL1 to monitor GCP services, you must manually align Dynamic Applications to discover GCP component devices.

## Discovering Google Cloud Platform Component Devices

To discover all the components of your GCP service, you must manually align two Dynamic Applications with the GCP virtual device. The specific Dynamic Applications that you must align to the virtual device vary based on whether you are discovering GCP resources from the Organization level or the Project level.

- If you are discovering an Organization, you must align the following Dynamic Applications:
  - GCP: Token
  - GCP: Organization Discovery
- If you are discovering GCP resources from the Project level, you must align the following Dynamic Applications:
  - GCP: Token
  - GCP: Project Discovery

To manually align these Dynamic Applications:

1. Go to the **Device Manager** page (Registry > Devices > Device Manager).
2. Click the wrench icon () for your GCP virtual device.
3. In the **Device Administration** panel, click the **[Collections]** tab. The **Dynamic Application Collections** page appears.
4. Click the **[Actions]** button and select *Add Dynamic Application* from the menu.
5. In the **Dynamic Application Alignment** modal:
  - In the **Dynamic Applications** field, select *GCP Token*.
  - In the **Credentials** field, select the credential you created for your GCP service.
6. Click **[Save]** to align the Dynamic Application with the GCP virtual device.
7. Repeat steps 2-6 to align the "GCP Project Discovery" or "GCP Project Discovery" Dynamic Application, depending on whether you are discovering an Organization or a Project.

**NOTE:** You must align the "GCP: Token" Dynamic Application **before** you align the "GCP: Organization Discovery" or "GCP: Project Discovery" Dynamic Application.

When you align the Dynamic Applications with the virtual device representing your GCP service, SL1 creates a component device representing your GCP Organization or Project.

SL1 then automatically aligns several other Dynamic Applications to that component device. These Dynamic Applications discover and create additional component devices representing your GCP resources.

**NOTE:** SL1 might take several minutes to align these Dynamic Applications and create the component devices in your GCP service.





---

## Configuring the GCP: BigQuery DataSet Discovery Dynamic Application

The "GCP: BigQuery DataSet Discovery" Dynamic Application is set by default to discover only visible datasets. You can optionally edit the Dynamic Application to discover visible and hidden datasets by updating the 'ALL' value in the Dynamic Application snippet to "true".

To edit the snippet:

1. Go to the **Dynamic Applications Manager** page (System > Manage > Applications).
2. Find the "GCP: BigQuery DataSet Discovery" Dynamic Application and click its wrench icon ().
3. In the **Dynamic Applications Properties Editor**, click the **[Snippets]** tab.
4. In the **Dynamic Applications Snippet Editor & Registry** page, click the wrench icon () of the "GCP: BigQuery DataSet Discovery" snippet.
5. The content of the snippet will appear. Edit the 'false' value in the following snippet text to 'true':


```
subs ={  
  
'PROJECT_ID':project_id,  
  
'ALL':'false' <----- <FLAG>  
  
}
```

6. Click **[Save]**.

---

## Viewing Google Cloud Platform Component Devices

In addition to the **Device Manager** page (Registry > Devices > Device Manager), you can view the GCP service and all associated component devices in the following places in the user interface:

- The **Device View** modal page (click the bar-graph icon ) for a device, then click the **Topology** tab) displays a map of a particular device and all of the devices with which it has parent-child relationships. Double-clicking any of the devices listed reloads the page to make the selected device the primary device.
- The **Device Components** page (Registry > Devices > Device Components) displays a list of all root devices and component devices discovered by SL1 in an indented view, so you can easily view the hierarchy and relationships between child devices, parent devices, and root devices. To view the component devices associated with the GCP service, find the GCP virtual device and click its plus icon (+).

- The **Component Map** page (Classic Maps > Device Maps > Components) allows you to view devices by root node and view the relationships between root nodes, parent components, and child components in a map. This makes it easy to visualize and manage root nodes and their components. SL1 automatically updates the **Component Map** as new component devices are discovered. The platform also updates each map with the latest status and event information. To view the map for the GCP service, go to the **Component Map** page and select the map from the list in the left NavBar. To learn more about the **Component Map** page, see the **Views** manual.

## Relationships Between Component Devices

In addition to parent/child relationships between component devices, SL1 also creates relationships between the following component devices:

- Compute Instances and Storage Persistent Disks
- Compute Instances and Subnets
- Compute Instances and VPC Networks
- Load Balancing Global HTTPS and Backend Buckets
- Load Balancing Global HTTPS and Backend Services
- Load Balancing Global HTTPS and Default Backend Services
- Load Balancing Global SSL Proxy and Backend Services
- Load Balancing Global TCP Proxy and Backend Services
- Load Balancing Regional Network TCP/UDP and Compute Instances
- VPC Subnets and VPC Networks

**NOTE:** If an instance is configured in GCP to automatically delete any associated read-write persistent disks when the instance is deleted, then that behavior will also occur in SL1: If the instance is deleted, its related persistent disks will also be deleted. This behavior is controlled in GCP on the **VM Instances** page by the *Delete boot disk when instance is deleted* checkbox for boot disks and the **When deleting instance** field for additional disks.

Additionally, SL1 can also build relationships between GCP VM Instances and Kubernetes Nodes, for users who also have the *Kubernetes PowerPack* installed.

---

# Chapter

# 3

## Dashboards

---

### Overview

The following sections describe the device dashboards that are included in the *Google Cloud Platform PowerPack*:

This chapter covers the following topics:

<a href="#">Device Dashboards</a> .....	19
-----------------------------------------	----

---

### Device Dashboards

The *Google Cloud Platform PowerPack* includes device dashboards that provide summary information for GCP component devices. Each of the device dashboards in the *Google Cloud Platform PowerPack* is set as the default device dashboard for the equivalent device class.

### Google Backend Service

The **Google Backend Service** dashboard displays the following information:

- The basic information about the device
- Six instances of the Multi-series Performance Widget that display the following metrics trended over the specified period of time:
  - Inbound traffic
  - Outbound traffic
  - New connections per second
  - Closed connections per second

- Frontend RTT
- Open connections

## Google Compute Instance

The **Google Compute Instance** dashboard displays the following information:

- The basic information about the device
- A list of events and tickets for the device
- Nine instances of the Multi-series Performance Widget that display the following metrics trended over the specified period of time:
  - CPU utilization
  - Availability
  - Reserved cores
  - Disk IOPS
  - Dropped packets
  - Packets sent and received
  - Disk read/write bytes count
  - Dropped bytes
  - Bytes sent/received

## Google Compute Instance Service

The **Google Compute Instance Service** dashboard displays the following information:

- The basic information about the device
- Three instances of the Multi-series Performance Widget that display the following metrics trended over the specified period of time:
  - Top 10 instances by CPU utilization
  - Top 10 instances by disk write IOPS
  - Top 10 instances by packets received

## Google Global HTTP(S) Load Balancer

The **Google Global HTTP(S) Load Balancer** dashboard displays the following information:

- The basic information about the device
- A list of events and tickets for the device

- Five instances of the Multi-series Performance Widget that display the following metrics trended over the specified period of time:
  - Latency
  - Request counts
  - Frontend RTT
  - Request bytes
  - Response bytes

## Google Persistent Disk

The **Google Persistent Disk** dashboard displays the following information:

- The basic information about the device
- A list of events and tickets for the device
- Six instances of the Multi-series Performance Widget that display the following metrics trended over the specified period of time:
  - Disk throttled byte count
  - Disk read/write byte count
  - Disk read operations
  - Disk write operations
  - Disk throttled read operations
  - Disk throttled write operations

## Google Persistent Disk Service

The **Google Persistent Disk Service** dashboard displays the following information:

- The basic information about the device
- Three instances of the Multi-series Performance Widget that display the following metrics trended over the specified period of time:
  - Top 10 disks by write byte count
  - Top 10 disks by disk write IOPS
  - Top 10 instances by throttled write bytes count

## Google Project

The **Google Project** dashboard displays the following information:

- The basic information about the device
- Three instances of the Multi-series Performance Widget that display the following metrics trended over the specified period of time:
  - Top VMs by CPU utilization
  - Top disks by write operations
  - Top storage buckets by network received bytes

## Google Regional TCP/UDP Load Balancer

The **Google Regional TCP/UDP Load Balancer** dashboard displays the following information:

- The basic information about the device
- A list of events and tickets for the device
- Three instances of the Multi-series Performance Widget that display the following metrics trended over the specified period of time:
  - RTT latency
  - Throughput inbound/outbound
  - Packets inbound/outbound

## Google Storage Bucket

The **Google Storage Bucket** dashboard displays the following information:

- The basic information about the device
- A list of events and tickets for the device
- Five instances of the Multi-series Performance Widget that display the following metrics trended over the specified period of time:
  - Network sent/received byte counts
  - Object ACL access and mutation counts
  - API request count
  - Storage object count
  - Total bytes

## Google Storage Bucket Service

The **Google Storage Bucket Service** dashboard displays the following information:

- The basic information about the device
- Three instances of the Multi-series Performance Widget that display the following metrics trended over the specified period of time:

- Top storage buckets by network sent bytes
- Top storage buckets by size
- Top storage buckets by ACL access count

---

# Chapter

# 4

## Key Metrics Collected by the PowerPack

---

### Overview

This section lists the key metrics for GCP services that the *Google Cloud Platform* PowerPack collects by Dynamic Application.

This chapter covers the following topics:

<i>App Engine Service</i> .....	25
<i>BigQuery Service</i> .....	28
<i>Cloud SQL Service</i> .....	34
<i>Cloud VPN Regional Service</i> .....	37
<i>Folder Service</i> .....	40
<i>Global Backend Service</i> .....	41
<i>Kubernetes Engine</i> .....	45
<i>Load Balancing Global Service</i> .....	47
<i>Multi-Region Service</i> .....	54
<i>Organization Service</i> .....	54
<i>Persistent Disk Service</i> .....	55
<i>Project Service</i> .....	57
<i>Region Service</i> .....	58
<i>Storage Service</i> .....	59
<i>Token Service</i> .....	61
<i>VM Instance Service</i> .....	61
<i>VPC Service</i> .....	66



## App Engine Service

GCP: App Engine Configuration	
Object Name	Object Description
Auth Domain	Google Apps authentication domain that controls which users can access this application. Defaults to open access for any Google Account.
Code Bucket	Google Cloud Storage bucket that can be used for storing files associated with this application. This bucket is associated with the application and can be used by the gcloud deployment commands. Note: This field is used in responses only. Any value specified here in a request is ignored.
Database Type	The type of the Cloud Firestore or Cloud Datastore database associated with this application.
Default Bucket	Google Cloud Storage bucket that can be used by this application to store content. Note: This field is used in responses only. Any value specified here in a request is ignored.
Default Hostname	Hostname used to reach this application, as resolved by App Engine. Note: This field is used in responses only. Any value specified here in a request is ignored.
Feature - Split Health Check	Boolean value indicating if split health checks should be used instead of the legacy health checks. At an app.yaml level, this means defaulting to readinessCheck and livenessCheck values instead of healthCheck ones. Once the legacy healthCheck behavior is deprecated, and this value is always true, this setting can be removed.
Feature - Use Container Optimized OS	If true, use Container-Optimized OS base image for VMs, rather than a base Debian image.
GCR Domain	The Google Container Registry domain used for storing managed build docker images for this application.

ID	Identifier of the Application resource. This identifier is equivalent to the project ID of the Google Cloud Platform project where you want to deploy your application. Example: myapp.
Location ID	Location from which this application runs. Application instances run out of the data centers in the specified location, which is also where all of the application's end user content is stored. Defaults to us-central.
Service Account	Service account of this application.
Serving Status	Serving status of this application.

GCP: App Engine Discovery	
Object Name	Object Description
App Engine Discovery Details	App engine discovery details collection group.
Availability	Full path to the Application resource in the API. Example: apps/myapp. Note: This field is used in responses only. Any value specified here in a request is ignored.
ID	Full path to the Application resource in the API. Example: apps/myapp. Note: This field is used in responses only. Any value specified here in a request is ignored.
Name	Identifier of the Application resource. This identifier is equivalent to the project ID of the Google Cloud Platform project where you want to deploy your application. Example: myapp.

GCP: App Engine Service Configuration	
Object Name	Object Description
Create Time	A timestamp in RFC3339 UTC "Zulu" format, with nanosecond resolution and up to nine fractional digits. Examples: "2014-10-02T15:01:23Z" and "2014-10-02T15:01:23.045123456Z". Note: This field is used in responses only. Any value specified here in a request is ignored.

Created By	Email address of the user who created this version. Note: This field is used in responses only. Any value specified here in a request is ignored.
Disk Usage Bytes	Total size in bytes of all the files that are included in this version and currently hosted on the App Engine disk. Note: This field is used in responses only. Any value specified here in a request is ignored.
Environment	App Engine execution environment for this version. Defaults to standard.
ID	Relative name of the version within the service. Example: v1. Version names can contain only lowercase letters, numbers, or hyphens. Reserved names: "default", "latest", and any name with the prefix "ah-".
Instance Class	Instance class that is used to run this version. Valid values are: - AutomaticScaling: F1, F2, F4, F4_1G - ManualScaling or BasicScaling: B1, B2, B4, B8, B4_1G Defaults to F1 for AutomaticScaling and B1 for ManualScaling or BasicScaling.
Runtime	Desired runtime. Example: python27.
Runtime Channel	The channel of the runtime to use. Only available for some runtimes. Defaults to the default channel.
Serving Status	Current serving status of this version. Only the versions with a SERVING status create instances and can be billed. SERVING_STATUS_UNSPECIFIED is an invalid value. Defaults to SERVING.
Thread Safe	Whether multiple requests can be dispatched to this version at once.
Version URL	Serving URL for this version. Example: "https://myversion-dot-myservice-dot-myapp.appspot.com" Note: This field is used in responses only. Any value specified here in a request is ignored.

### GCP: App Engine Service Discovery

Object Name	Object Description
App Engine Service Discovery Details	Engine service collection group.
Availability	Engine Service availability.

ID	Relative name of the version within the service. Example: v1. Version names can contain only lowercase letters, numbers, or hyphens. Reserved names: "default", "latest", and any name with the prefix "ah-".
Name	Full path to the Version resource in the API. Example: apps/myapp/services/default/versions/v1. Note: This field is used in responses only. Any value specified here in a request is ignored.

### GCP: App Engine Error Reporting

Object Name	Object Description
Error Group Alert Count	Error Group Alert Count
Error Group Name	Optional. List all ErrorGroupStats with these IDs.

## BigQuery Service

### GCP: BigQuery DataSet Configuration

Object Name	Object Description
Creation Time	The time when this dataset was created.
Creation Timestamp	The time when this dataset was created, in milliseconds since the epoch.
DataSet Config Details	The most recent total Current Conections metric for an Azure Application Gateway.

Default Table Expiration	The default lifetime of all tables in the dataset, in minutes. The minimum lifetime value is 3600000 milliseconds (one hour). To clear an existing default expiration with a PATCH request, set to 0. Once this property is set, all newly-created tables in the dataset will have an expirationTime property set to the creation time plus the value in this property, and changing the value will only affect new tables, not existing ones. When the expirationTime for a given table is reached, that table will be deleted automatically. If a table's expirationTime is modified or removed before the table expires, or if you provide an explicit expirationTime when creating a table, that value takes precedence over the default expiration time indicated by this property.
Description	A user-friendly description of the dataset.
Etag	A hash of the resource.
Friendly Name	A descriptive name for this model.
ID	The fully-qualified unique name of the dataset in the format projectId:datasetId. The dataset name without the project name is given in the datasetId field.
Kind	The resource type.
Labels	Labels group.
Last Modified Time	The last time when this dataset was modified.
Last Modified Time Timestamp	The date when this dataset was last modified, in milliseconds since the epoch.
Location	The geographic location where the dataset should reside. See <a href="https://cloud.google.com/bigquery/docs/locations">https://cloud.google.com/bigquery/docs/locations</a> for supported locations.
Metadata	Metadata group.
Project ID	The ID of the project containing this dataset.
Self Link	The ID of the project containing this dataset.

GCP: BigQuery DataSet Discovery

Object Name	Object Description
Datasets Discovery Details	

ID	A unique ID for this dataset, without the project name.
Kind	The resource type of the dataset.
Location	The geographic location where the dataset resides.
Unique ID	The full path of the dataset model in the DCM tree, for example <project_id>/BigQuery/<dataset_id>, will be used to get resources from the API. Note: This field is used in responses only. Any value specified here in a request is ignored.

#### GCP: BigQuery DataSet Models Config

Object Name	Object Description
DataSet Model Details / Config	
Description	A user-friendly description of this model.
Friendly Name	A descriptive name for this model.
Model ID	The ID of the model.

#### GCP: BigQuery DataSet Performance

Object Name	Object Description
Model Count	Total number of models in the dataset.
Stored Bytes	Total number of bytes stored in the dataset. Sampled every 1800 seconds. After data is sampled, it will take 3 hours to become available to be queried. Due to this constraint, it is only possible to query data in a time window starting at least 3 hours prior to the current time. Aggregator aligner ALIGN_MEAN is used and a SUM reducer.
Table Count	Total number of tables in the dataset.

#### GCP: BigQuery DataSet Routines Config

Object Name	Object Description
Routine ID	The ID of the routine.
Routine Type	The type of routine.
DataSets Routines Config Details	Datasets Config Details label collection group.
Language	Defaults to "SQL".

### GCP: BigQuery Job Stats

Object Name	Object Description
Pending Jobs	Number of pending jobs on BigQuery
Running Jobs	Number of running jobs on BigQuery

### GCP: BigQuery Service Discovery

Object Name	Object Description
ServiceName	The Name of the Service being discovered.
UniquelD	Unique ID for the service that contains both the project name and the Service Name.

### GCP: BigQuery Service Performance

Object Name	Object Description
QueryCount	In flight queries. Sampled every 60 seconds. After sampling, data is not visible for up to 420 seconds.
Query Execution Times	Distribution of execution times for queries that completed successfully within the last sampling interval. Incomplete and failed queries are not included. Sampled every 60 seconds. After sampling, data is not visible for up to 420 seconds.
Slots Allocated	Number of BigQuery slots currently allocated for project. Slot allocation can be broken down based on reservation and job type. Sampled every 60 seconds. After sampling, data is not visible for up to 420 seconds. reservation: Reservation. This field is unset if the query is on-demand.
Slots Allocated For Project	Number of BigQuery slots currently allocated for query jobs in the project. Sampled every 60 seconds. After sampling, data is not visible for up to 420 seconds.
Slots Allocated For Project and Job Type	Number of BigQuery slots currently allocated for the project and job type. Sampled every 60 seconds. After sampling, data is not visible for up to 420 seconds.
Slots Allocated For Reservation	Number of BigQuery slots currently allocated for project in the reservation. Sampled every 60 seconds. After sampling, data is not visible for up to 420 seconds.

Slots Total Allocated For Reservation	Number of BigQuery slots currently allocated across projects in the reservation. Note that the metric data is only reported while at least one project has been assigned to the reservation and is consuming slots. As an alternative, consider querying reservations information from INFORMATION_SCHEMA ( <a href="https://cloud.google.com/bigquery/docs/information-schema-reservations">https://cloud.google.com/bigquery/docs/information-schema-reservations</a> ), which does not have these limitations. Sampled every 60 seconds. After sampling, data is not visible for up to 420 seconds
Slots Total Available	(Deprecated) Total number of BigQuery slots available for the project. If you are using the BigQuery Reservations API, consider using <a href="https://bigquery.googleapis.com/slots/assigned">bigquery.googleapis.com/slots/assigned</a> and <a href="https://bigquery.googleapis.com/slots/max_assigned">bigquery.googleapis.com/slots/max_assigned</a> instead. Sampled every 60 seconds. After sampling, data is not visible for up to 420 seconds.

GCP: BigQuery Table Config	
Object Name	Object Description
Creation Time	The time when this table was created.
Creation Timestamp	The time when this table was created, in milliseconds since the epoch.
Dataset ID	The ID of the dataset containing this table.
Description	A user-friendly description of this table.
Expiration Time	The time when this table expires. If not present, the table will persist indefinitely. Expired tables will be deleted and their storage reclaimed. The <code>defaultTableExpirationMs</code> property of the encapsulating dataset can be used to set a default <code>expirationTime</code> on newly created tables.
Expiration Timestamp	The time when this table expires, in milliseconds since the epoch. If not present, the table will persist indefinitely. Expired tables will be deleted and their storage reclaimed. The <code>defaultTableExpirationMs</code> property of the encapsulating dataset can be used to set a default <code>expirationTime</code> on newly created tables.
Friendly Name	A descriptive name for this table.
Labels	Labels collection group.



Labels	The labels associated with this table. You can use these to organize and group your tables. An object containing a list of "key": value pairs. Example: { "name": "wrench", "mass": "1.3kg", "count": "3" }.
Last Modified Time	The time when this table was last modified.
Last Modified Timestamp	The time when this table was last modified, in milliseconds since the epoch.
Location	The geographic location where the table resides. This value is inherited from the dataset.
Location	Location group.
Metadata	Metadata collection group.
Project ID	The ID of the project containing this table.
Self Link	A URL that can be used to access this resource again.
Table ID	The ID of the table.
Type	Describes the table type. The default value is TABLE.

### GCP: Big Query Tables Discovery

Object Name	Object Description
Unique Id	The full path of the table model in the DCM tree, for example <project_id>/BigQuery/<dataset_id> <table_id>, will be used to get resources from the API. Note: This field is used in responses only. Any value specified here in a request is ignored.
Creation Time	The time when this table was created, in date since the epoch.
Creation Timestamp	The time when this table was created, in milliseconds since the epoch.
DataSets Table Details	Tables discovery collection label group.
Friendly Name	A descriptive name for this table.
Kind of table	The type of resource ID.
Name	The ID of the table.
Type	Describes the table type.

### GCP: Big Query Table Performance

Object Name	Object Description
Uploaded Bytes	Number of bytes uploaded to any table in the dataset. Sampled every 60 seconds. After sampling, data is not visible for up to 21720 seconds.
Uploaded Bytes Billed	Number of bytes uploaded to any table in the dataset that were billed. Sampled every 60 seconds. After sampling, data is not visible for up to 21720 seconds.
Uploaded Row Count	Number of records uploaded to any table in the dataset. Sampled every 60 seconds. After sampling, data is not visible for up to 21720 seconds.

#### GCP: BigQuery Tables RowAccess Config

Object Name	Object Description
Creation Time	The time when this row access policy was created
Creation Timestamp	The time when this row access policy was created, in milliseconds since the epoch.
Filter Predicate	A SQL boolean expression that represents the rows defined by this row access policy, similar to the boolean expression in a WHERE clause of a SELECT query on a table.
Last Modified Time	The time when this row access policy was last modified
Last Modified Timestamp	The time when this row access policy was last modified, in milliseconds since the epoch.
Policy Id	The ID of the row access policy.
Tables Row Access Config Details	Tables Row Access Config Details label collection group.

## Cloud SQL Service

#### GCP: Cloud SQL Instance Configuration

Object Name	Object Description
Connection Name	Connection name of the Cloud SQL instance used in connection strings.

Database Version	The database engine type and version. The databaseVersion field cannot be changed after instance creation.
GCE Zone	The Compute Engine zone that the instance is currently serving from. This value could be different from the zone that was specified when the instance was created if the instance has failed over to its secondary zone. WARNING: Changing this might restart the instance.
Instance Type	The instance type.
IP Address	The IP address assigned.
IP Address Details	IP Address collection group.
IP Type	The type of this IP address. A PRIMARY address is a public address that can accept incoming connections. A PRIVATE address is a private address that can accept incoming connections. An OUTGOING address is the source address of connections originating from the instance, if supported.
Name	Name of the Cloud SQL instance. This does not include the project ID.
Project	The project ID of the project containing the Cloud SQL instance. The Google apps domain is prefixed if applicable.
Region	The geographical region. Can be: * us-central (**FIRST_GEN** instances only) * us-central1 (**SECOND_GEN** instances only) * asia-east1 or europe-west1. Defaults to us-central or us-central1 depending on the instance type. The region cannot be changed after instance creation.
Secondary GCE Zone	The Compute Engine zone that the failover instance is currently serving from for a regional instance. This value could be different from the zone that was specified when the instance was created if the instance has failed over to its secondary/failover zone. Reserved for future use.
Service Account Email	The service account email address assigned to the instance. This property is read-only.
State	The current serving state of the Cloud SQL instance.
UserLabel Details	User label collection group.

UserLabel Key	User-provided labels, represented as a dictionary where each label is a single key value pair. An object containing a list of "key": value pairs. Example: { "name": "wrench", "mass": "1.3kg", "count": "3" }.
UserLabel Value	User-provided labels, represented as a dictionary where each label is a single key value pair.

### GCP: Cloud SQL Instance Discovery

Object Name	Object Description
Availability	Specifies availability of instance by state. 1 means available and 0 means not found or not available.
Cloud SQL Instance Details	Cloud SQL Instance collection group.
Connection Name	Specifies a combination of the project name and the region name of SQL instance.
Name	Specifies a combination of the region name and the instance name of SQL instance.

### GCP: Cloud SQL Instance Performance

Object Name	Object Description
Auto-Failover Requests	database/auto_failover_request_count
Cloud SQL Connections	database/network/connections
CPU Utilization	database/cpu/utilization
Disk Read IO	database/disk/read_ops_count
Disk Utilization	database/disk/utilization
Disk Write IO	database/disk/write_ops_count
Lag Bytes	database/postgresql/replication/replica_byte_lag
Memory Utilization	database/mysql/received_bytes_count
Network Bytes Received by MySQL	database/mysql/sent_bytes_count
Network Bytes Sent by MySQL	database/mysql/sent_bytes_count
Number of Transactions	database/postgresql/transaction_count
PostgreAQL Connections	database/postgresql/num_backends
Queries	database/mysql/queries

Received Bytes	database/network/received_bytes_count
Replication Lag	database/replication/replica_lag
Sent Bytes	database/network/sent_bytes_count
Server Up	database/up

#### GCP: Cloud SQL Service Discovery

Object Name	Object Description
Availability	Database instance State. Specifies availability of the database in the alignment period. 1 means available and 0 means not found or not available.
ID	Specifies a combination of the project name and the region name of SQL instance.
Region Name	Specifies the region name of SQL instance.

## Cloud VPN Regional Service

#### GCP: Cloud VPN Regional Service Discovery

Object Name	Object Description
Availability	[Output Only] The unique identifier for the resource. This identifier is defined by the server.
ID	Unique Identifier of the Regional VPN Tunnel.
Name	Name of the Regional VPN Tunnel Bucket.

#### GCP: Cloud VPN Regional VPN Tunnel Configuration

Object Name	Object Description
Creation Timestamp	[Output Only] Creation timestamp in RFC3339 text format.
Description	An optional description of this resource. Provide this property when you create the resource.
Detailed Status	[Output Only] Detailed status message for the VPN tunnel.

ID	[Output Only] The unique identifier for the resource. This identifier is defined by the server.
IKE Version	IKE protocol version to use when establishing the VPN tunnel with the peer VPN gateway. Acceptable IKE versions are 1 or 2. The default version is 2.
Local Traffic Selector	Local traffic selector to use when establishing the VPN tunnel with the peer VPN gateway. The value should be a CIDR formatted string, for example: 192.168.0.0/16. The ranges must be disjoint. Only IPv4 is supported.
Name	Name of the resource. Provided by the client when the resource is created. The name must be 1-63 characters long, and comply with RFC1035. Specifically, the name must be 1-63 characters long and match the regular expression <code>[a-z][(-a-z0-9)*(-a-z0-9)]?</code> which means the first character must be a lowercase letter, and all following characters must be a dash, lowercase letter, or digit, except the last character, which cannot be a dash.
Peer External Gateway	URL of the peer side external VPN gateway to which this VPN tunnel is connected. Provided by the client when the VPN tunnel is created. This field is exclusive with the field <code>peerGcpGateway</code> .
Peer External Gateway Interface	The interface ID of the external VPN gateway to which this VPN tunnel is connected. Provided by the client when the VPN tunnel is created.
Peer GCP Gateway	URL of the peer side HA GCP VPN gateway to which this VPN tunnel is connected. Provided by the client when the VPN tunnel is created. This field can be used when creating highly available VPN from VPC network to VPC network, the field is exclusive with the field <code>peerExternalGateway</code> . If provided, the VPN tunnel will automatically use the same <code>vpnGatewayInterface</code> ID in the peer GCP VPN gateway.
Peer IP	IP address of the peer VPN gateway. Only IPv4 is supported.
Region	[Output Only] URL of the region where the VPN tunnel resides. You must specify this field as part of the HTTP request URL. It is not settable as a field in the request body.

Remote Traffic Selector	Remote traffic selectors to use when establishing the VPN tunnel with the peer VPN gateway. The value should be a CIDR formatted string, for example: 192.168.0.0/16. The ranges should be disjoint. Only IPv4 is supported.
Router	URL of the router resource to be used for dynamic routing.
Status	[Output Only] The status of the VPN tunnel, which can be one of the following: PROVISIONING: Resource is being allocated for the VPN tunnel. WAITING_FOR_FULL_CONFIG: Waiting to receive all VPN-related configs from the user. Network, TargetVpnGateway, VpnTunnel, ForwardingRule, and Route resources are needed to setup the VPN tunnel. FIRST_HANDSHAKE: Successful first handshake with the peer VPN. ESTABLISHED: Secure session is successfully established with the peer VPN. NETWORK_ERROR: Deprecated, replaced by NO_INCOMING_PACKETS AUTHORIZATION_ERROR: Auth error (for example, bad shared secret). NEGOTIATION_FAILURE: Handshake failed. DEPROVISIONING: Resources are being deallocated for the VPN tunnel. FAILED: Tunnel creation has failed and the tunnel is not ready to be used. NO_INCOMING_PACKETS: No incoming packets from peer. REJECTED: Tunnel configuration was rejected, can be result of being denied access. ALLOCATING_RESOURCES: Cloud VPN is in the process of allocating all required resources. STOPPED: Tunnel is stopped due to its Forwarding Rules being deleted for Classic VPN tunnels or the project is in frozen state. PEER_IDENTITY_MISMATCH: Peer identity does not match peer IP, probably behind NAT. TS_NARROWING_NOT_ALLOWED: Traffic selector narrowing not allowed for an HA-VPN tunnel.
Target VPN Gateway	URL of the Target VPN gateway with which this VPN tunnel is associated. Provided by the client when the VPN tunnel is created.
VPN Gateway	URL of the VPN gateway with which this VPN tunnel is associated. Provided by the client when the VPN tunnel is created. This must be used (instead of targetVpnGateway) if a High Availability VPN gateway resource is created.
VPN Gateway Interface	The interface ID of the VPN gateway with which this VPN tunnel is associated.
VPN Tunnel Details	VPN Tunnel collection group.

GCP: Cloud VPN Regional VPN Tunnel Discovery

Object Name	Object Description
Availability	[Output Only] Server-defined URL for the resource.
ID	[Output Only] Server-defined URL for the resource.
Name	[Output Only] Server-defined URL for the resource.
VPN Tunnels	VPN Tunnels collection group

## Folder Service

GCP: Folder Configuration

Object Name	Object Description
Name	The folder's display name. A folder's display name must be unique amongst its siblings, e.g. no two folders with the same parent can share the same display name. The display name must start and end with a letter or digit, may contain letters, digits, spaces, hyphens and underscores and can be no longer than 30 characters. This is captured by the regular expression: <code>[\p{L}\p{N}]{1,30}([\p{L}\p{N}_-]{0,28}[\p{L}\p{N}])?</code>
Create Time	Output only. Timestamp when the Folder was created. Assigned by the server. A timestamp in RFC3339 UTC "Zulu" format, with nanosecond resolution and up to nine fractional digits. Examples: "2014-10-02T15:01:23Z" and "2014-10-02T15:01:23.045123456Z".
ID	Output only. The resource name of the Folder. Its format is <code>folders/{folder_id}</code> , for example: "folders/1234".
Lifecycle State	Output only. The lifecycle state of the folder. Updates to the lifecycleState must be performed via <code>folders.delete</code> and <code>folders.undelete</code> .
Parent	Required. The Folder's parent's resource name. Updates to the folder's parent must be performed via <code>folders.move</code> .



## GCP: Folder Discovery

Object Name	Object Description
Availability	Output only. The lifecycle state of the folder. Updates to the lifecycleState must be performed via folders.delete and folders.undelete.
Folders	Folders collection group.
ID	Output only. The resource name of the Folder. Its format is folders/{folder_id}, for example: "folders/1234".
Name	The folder's display name. A folder's display name must be unique amongst its siblings, e.g. no two folders with the same parent can share the same display name. The display name must start and end with a letter or digit, may contain letters, digits, spaces, hyphens and underscores and can be no longer than 30 characters. This is captured by the regular expression: <code>[\p{L}\p{N}]{1,30}([\p{L}\p{N}_-]{0,28}[\p{L}\p{N}])?</code>

## Global Backend Service

### GCP: Global Backend Bucket Configuration

Object Name	Object Description
Bucket Name	Cloud Storage bucket name.
CDN Policy - Signed URL Keys	CDN Policy - Signed URL Keys collection group.
Creation Timestamp	Creation timestamp.
Description	An optional textual description of the resource; provided by the client when the resource is created.
Enable CDN	If true, enable Cloud CDN for this BackendBucket.

ID	Unique identifier for the resource; defined by the server.
Kind	Type of the resource.
Name	Name of the resource. Provided by the client when the resource is created.
Signed URL Cache Max Age (Seconds)	Maximum number of seconds the response to a signed URL request will be considered fresh. After this time period, the response will be revalidated before being served. Defaults to 1hr (3600s). Only present if CDN is configured for the Bucket.
Signed URL Key Names	Names of the keys for signing request URLs.

GCP: Global Backend Bucket Discovery	
Object Name	Object Description
Availability	Availability of the component.
Global Backend Bucket	Global Backend Bucket collection group.
ID	Identifier of the Device.
Name	Name of the Backend Bucket.

GCP: Global Backend Service Configuration	
Object Name	Object Description
Affinity Cookie TTL Seconds	The TTL (time to live) duration, If set to 0, the cookie is non-persistent and lasts only until the end of the browser session (or equivalent). The maximum allowed value is one day (86,400).
Balancing Mode	Specifies the balancing mode for the backend.
Capacity Scaler	A multiplier applied to the group's maximum servicing capacity (based on UTILIZATION, RATE or CONNECTION). Default value is 1, which means the group will serve up to 100% of its configured capacity (depending on balancingMode). A setting of 0 means the group is completely drained, offering 0% of its available Capacity. Valid range is [0.0, 1.0].
CDN Policy - Signed URL Keys	CDN Policy - Signed URL Keys label collection group.

Creation Timestamp	The time the backend service was created.
Description	The description of this resource.
Draining Timeout Seconds	The amount of time in seconds to allow existing connections to persist while on unhealthy backend VMs. Only applicable if the protocol is not UDP. The valid range is [0, 3600].
Enable CDN	Boolean value that if true enables Cloud CDN for the backend service. Only applicable if the loadBalancingScheme is EXTERNAL and the protocol is HTTP or HTTPS.
Fingerprint	Fingerprint of this resource.
Health Checks	Health Checks label collection group.
Instance Groups	Instance Groups label collection group.
Load Balancing Scheme	Indicates whether the backend service will be used with internal or external load balancing.
Max Connections	Defines a maximum target for simultaneous connections for the entire backend (instance group or NEG).
Max Connections Per Endpoint	Defines a maximum target for simultaneous connections for an endpoint of a NEG.
Max Connections Per Instance	Defines a maximum target for simultaneous connections for a single VM in a backend instance group.
Max Rate	The max requests per second (RPS) of the group.
Max Rate Per Endpoint	Defines a maximum target for requests per second (RPS) for an endpoint of a NEG.
Max Rate Per Instance	Defines a maximum target for requests per second (RPS) for a single VM in a backend instance group.
Max Utilization	Defines the maximum average CPU utilization of a backend VM in an instance group. The valid range is [0.0, 1.0].
Name	Name of the backend service.
Name	The resource name for health checking this Backend Service.
Name	The name of instance group or network endpoint group (NEG) resource.
Port	The port to connect on the backend.

Port Name	A named port on a backend instance group representing the port for communication to the backend VMs in that group.
Protocol	The protocol this Backend Service uses to communicate with backends.
Session Affinity	Type of session affinity to use. The default is NONE.
Signed URL Cache Max Age (Seconds)	Maximum number of seconds the response to a signed URL request will be considered fresh. After this time period, the response will be revalidated before being served. Defaults to 1hr (3600s). Only present if CDN is configured for the Backend Service.
Signed URL Key Names	Names of the keys for signing request URLs.
Timeout Seconds	The backend service timeout has a different meaning depending on the type of load balancer. The default is 30 seconds.

#### GCP: Global Backend Service Discovery

Object Name	Object Description
Availability	Availability of the component.
Global Backend Service	Global Backend Service collection group.
ID	Identifier of the Device.
Name	Name of the Backend Service.

#### GCP: Global Backend Service Performance

Object Name	Object Description
Closed Connections Per Second	The number of connections that were terminated over TCP/SSL proxy.
Frontend RTT	Distribution of the smoothed RTT (in ms) measured by the TCP stack of proxies, each minute application layer bytes pass from proxy to client.
Inbound Traffic	The number of bytes sent from a client to VM using proxy.
New Connections Per Second	The number of connections that were created over TCP/SSL proxy.

Open Connections	The current number of outstanding connections through the TCP/SSL proxy.
Outbound Traffic	The number of bytes sent from VM to a client using proxy.

## Kubernetes Engine

GCP: Kubernetes Engine Cluster Configuration	
Object Name	Object Description
Name	The name of this cluster.
Auto Repair	A flag that specifies whether the node auto-repair is enabled for the node pool.
Auto Upgrade	A flag that specifies whether node auto-upgrade is enabled for the node pool. If enabled, node auto-upgrade helps keep the nodes in your node pool up to date with the latest release version of Kubernetes.
Autopilot	Autopilot is the configuration for the autopilot settings on the cluster.
Autoscaling Profile	Defines possible options for the autoscalingProfile field.
Conditions	A list of StatusCondition messages that describe why the cluster has a certain status.
Creation Time	The time the cluster was created, in RFC3339 text format.
DB Encryption	Denotes the state of database encryption.
Endpoint	The IP address of the master endpoint for this cluster.
Id	The unique identifier for this cluster.
Locations	The list of Google Compute Engine zones in which the cluster resides.
Max Pods	Constraint enforced on the max number of pods per node.
Network	The relative name of the Google Compute Engine network to which the cluster is connected.
Shielded Nodes	Whether or not shielded nodes are enabled on all nodes in this cluster.

Stack Type	The IP stack type of the cluster.
Status	The current status of this cluster.
Subnetwork	The relative name of the Google Compute Engine subnetwork to which the cluster is connected.
Version	The current software version of the master endpoint.

#### GCP: Kubernetes Engine Cluster Discovery

Object Name	Object Description
Cluster Name	The name of this cluster.
Id	The unique identifier for this cluster.
Location	The name of the zone or region in which the cluster resides.

#### GCP: Kubernetes Engine Cluster Stats

Object Name	Object Description
Container Restart Count	Total restart count for all containers in the cluster. Aggregator SUM reducer is used.
CPU Utilization	The average CPU utilization across all containers within this cluster. This value can be greater than 1 as usage can exceed the request. Aggregator aligner ALIGN_MEAN is used and an AVG reducer.
Disk Utilization	The average pod volume utilization across all pods within this cluster. This value cannot be greater than 1 as usage cannot exceed the total available volume space. Aggregator aligner ALIGN_MEAN is used and an AVG reducer.
Memory Utilization	The average memory utilization across all containers within this cluster. This metric combines both evictable (memory that can be easily reclaimed by the kernel) and non-evictable memory. This value can be greater than 1 as usage can exceed the request. Aggregator aligner ALIGN_MEAN is used and an AVG reducer.
Network Bytes Received	Average number of bytes received by the node over the network per second for all nodes in this cluster. Aggregator aligner ALIGN_RATE is used and an AVG reducer.

Network Bytes Sent	Average number of bytes transmitted by the node over the network per second for all nodes in this cluster. Aggregator aligner ALIGN_RATE is used and an AVG reducer.
--------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------

#### GCP: Kubernetes Engine Location Cache

Object Name	Object Description
Id	The unique identifier for this region.
Region	The name of the region supporting Kubernetes service.
Service Name	The name of this Kubernetes service.

#### GCP: Kubernetes Engine Service Discovery

Object Name	Object Description
Id	The unique identifier for this service.
Region Name	The name of the region supporting Kubernetes service.
Service Name	The name of this Kubernetes service.

---

## Load Balancing Global Service

#### GCP: Load Balancing Global HTTP(S) Configuration

Object Name	Object Description
Backend Buckets	Backend Buckets Label collection group.
Backend Services	Backend Services label collection group.
Creation Timestamp	The time the load balancer was created.
Default Backend Service	Default Backend Service label collection group.
Fingerprint	Fingerprint of the resource.
GCP LB Global HTTPS(S)/Backend	The full or partial URL of the default service resource to which traffic is directed if none of the host rules match.
GCP LB Global HTTPS(S)/Backend Bucket	The partial URL of the backend bucket resource to which traffic is directed if this rule is matched.

GCP LB Global HTTPS(S)/Backend Service	The full or partial URL of the backend service resource to which traffic is directed if this rule is matched.
Name	Name of the resource.
Name	The name of the default service resource to which traffic is directed.

#### GCP: Load Balancing Global HTTP(S) Discovery

Object Name	Object Description
Availability	Availability of the component.
ID	Identifier of the Device.
Load Balancing HTTP(S)	Load Balancing HTTP(S) label collection group.
Name	Name of the Load Balancing HTTP(S).

#### GCP: Load Balancing Global HTTP(S) Health Check Configuration

Object Name	Object Description
Group Count (Healthy)	Count of the Healthy group.
Group Count (Unhealthy)	Count of the Unhealthy group.
Group Name	Group Name.
Group Status	Group Status.
Instance Group Health Details	Instance Group Health Details label collection group.

#### GCP: Load Balancing Global HTTP(S) Performance

Object Name	Object Description
Backend Latency	A distribution of the latency calculated from when the request was sent by the proxy to the backend until the proxy received from the backend the last byte of response.
Backend Request Bytes	The number of bytes sent as requests from HTTP/S load balancer to backends.



Backend Request Count	The number of requests served by backends of HTTP/S load balancer.
Backend Request Count - 200	The number of requests served by backends of HTTP/S load balancer. HTTPS status code class = 200.
Backend Request Count - 400	The number of requests served by backends of HTTP/S load balancer. HTTPS status code class = 400.
Backend Request Count - 500	The number of requests served by backends of HTTP/S load balancer. HTTPS status code class = 500.
Backend Response Bytes	The number of bytes sent as responses from backends (or cache) to HTTP/S load balancer.
Frontend RTT	A distribution of the RTT measured for each connection between client and proxy.
Request Bytes	The number of bytes sent as requests from clients to HTTP/S load balancer.
Request Count	The number of requests served by HTTP/S load balancer.
Request Count - 200	The number of requests served by HTTP/S load balancer. HTTP status code class = 200.
Request Count - 400	The number of requests served by HTTP/S load balancer. HTTP status code class = 400.
Request Count - 500	The number of requests served by HTTP/S load balancer. HTTP status code class = 500.
Response Bytes	The number of bytes sent as responses from HTTP/S load balancer to clients.
Total Latency	A distribution of the latency calculated from when the request was received by the proxy until the proxy got ACK from client on last response byte.

### GCP: Load Balancing Global Service Discovery

Object Name	Object Description
Availability	Availability of the component.
ID	Identifier of the Device.
Load Balancing Global Service	Load Balancing Global Service Label collection group.
Name	Name of the Load Balancing Service

### GCP: Load Balancing Global SSL Proxy Configuration

Object Name	Object Description
Name	Name of the Backend Service resource.
Backend	Backend label collection group.
Creation Time	The time the load balancer instance was created.
GCP LB Global SSL Proxy/Backend	URL to the Backend Service resource.
Name	Name of the Load Balancing TCP Proxy.
Proxy Header	Specifies the type of proxy header to append before sending data to the backend, either NONE or PROXY_V1. The default is NONE.

### GCP: Load Balancing Global SSL Proxy Discovery

Object Name	Object Description
Availability	Availability of the component.
Distinguished Name	Unique Identifier Across GCP.
ID	Identifier of the Device.
Load Balancing SSL Proxy	Load Balancing SSL Proxy label collection group.
Name	Name of the Load Balancing SSL Proxy.

### GCP: Load Balancing Global TCP Proxy Configuration

Object Name	Object Description
Name	URL to the BackendService resource.
Backends	Backends label collection group.
Creation Time	The time the load balancer instance was created.
GCP LB Global TCP Proxy/Backend	Identifier to the Backend Service resource.
Name	Name of the Load Balancing TCP Proxy.
Proxy Header	Specifies the type of proxy header to append before sending data to the backend, either NONE or PROXY_V1. The default is NONE.

GCP: Load Balancing Global TCP Proxy Discovery

Object Name	Object Description
Availability	Availability of the component.
Distinguished Name	Unique Identifier Across GCP.
ID	Identifier of the Device.
Load Balancing SSL Proxy	Load Balancing Global TCP Proxy label collection group.
Name	Name of the Load Balancing TCP Proxy.

GCP: Load Balancing Regional Internal TCP/UDP Configuration

Object Name	Object Description
Creation Timestamp	The time the load balancer was created.
Description	Description of the resource.
Draining Timeout Sec	Time for which instance will be drained (not accept new connections, but still work to finish started).
Fingerprint	Fingerprint of this resource. This field is used in optimistic locking.
Health Checks	Health Checks label collection group.
Instance Groups	Instance Groups label collection group.
Load Balancing Scheme	Indicates whether the backend service will be used with internal or external load balancing.
Name	Name of the Load Balancing Regional Internal TCP/UDP.
Name	The list of URLs to the HttpHealthCheck or HttpsHealthCheck resource for health checking.
Name	The Instance Group or Network Endpoint Group resource. In case of instance group this defines the list of instances that serve traffic.
Protocol	The protocol to use for communicate with backends.
Region	The region where the load balancer resides.
Session Affinity	Type of session affinity to use. The default is NONE.
Timeout Sec	How many seconds to wait for the backend before considering it a failed request. Default is 30 seconds.

### GCP: Load Balancing Regional Internal TCP/UDP Discovery

Object Name	Object Description
Availability	Availability of the component.
ID	The load balancing regional internal TCP/UDP unique identifier.
Load Balancing Global Service	Load Balancing Regional Internal TCP/UDP label collection group.
Name	Name of the Load Balancing Regional Internal TCP/UDP.

### GCP: Load Balancing Regional Internal TCP/UDP Performance

Object Name	Object Description
Inbound Packets	The number of packets sent from client to ILB backend.
Inbound Throughput	The number of bytes sent from client to ILB backend (for TCP flows its counting bytes on application stream only).
Outbound Packets	The number of packets sent from ILB backend to client of the flow.
Outbound Throughput	The number of bytes sent from ILB backend to client (for TCP flows its counting bytes on application stream only).
RTT Latencies	A distribution of RTT measured over TCP connections for ILB flows.

### GCP: Load Balancing Regional Network TCP/UDP Configuration

Object Name	Object Description
Name	The virtual machine instance name serving this load balancer.
Backup Pool	This field is applicable only when the containing target pool is serving a forwarding rule as the primary pool, and its failoverRatio field is properly set to a value between [0, 1]. backupPool and failoverRatio together define the fallback behavior of the primary target pool.
Creation Timestamp	The time when the load balancer was created.

Description	Description of the resource.
Failover Ratio	This field is applicable only when the containing target pool is serving a forwarding rule as the primary pool (i.e., not as a backup pool to some other target pool). The value of the field must be in [0, 1].
GCP LB Regional Network TCP-UDP/VM Instance	The virtual machine instance id serving this load balancer.
Health Checks	Health Checks label collection group.
Instances	Instances label collection group.
Name	Name of the Load Balancing Regional Network TCP/UDP.
Name	The list of URLs to the HttpHealthCheck or HttpsHealthCheck resource for health checking.
Region	The region where the load balancer resides.
Session Affinity	Type of session affinity to use. The default is NONE.

#### GCP: Load Balancing Regional Network TCP/UDP Discovery

Object Name	Object Description
Availability	Availability of the component.
ID	The load balancing regional network TCP/UDP unique identifier.
Load Balancing Regional Network TCP/UDP	Load Balancing Regional Network TCP/UDP label collection group.
Name	Name of the Load Balancing Regional Network TCP/UDP.

#### GCP: Load Balancing Regional Service Discovery

Object Name	Object Description
Availability	The availability of load balancing regional service.
ID	The load balancing regional service unique identifier.
Load Balancing Regional Network TCP/UDP	Load Balancing Regional Service label collection group.
Name	The load balancing regional service name.

## Multi-Region Service

GCP: Multi-Region Discovery	
Object Name	Object Description
Name	GCP multi-region name. Specifies the name that is displayed for the multi-region.
Class Identifier 1	Literal class identifier for region.
ID	GCP Multi-region identifier.
Multi-Region	Multi-Region label collection group.

## Organization Service

GCP: Organization Configuration	
Object Name	Object Description
Create Time	Creation time (UTC). Timestamp when the Organization was created.
ID	The unique identifier (ID) of the organization. Its format is "organizations/[organizationId]".
Lifecycle State	The current organization lifecycle state. Assigned by the server.
Name	The display name to the Organization. This string is set by the server and cannot be changed. The string will be set to the primary domain (for example, "google.com") of the G Suite customer that owns the organization.
Owner - Directory Customer ID	The owner of this Organization. The owner should be specified on creation. Once set, it cannot be changed. This field is required.

GCP: Organization Discovery	
Object Name	Object Description
Availability	Whether or not the GCP Organization is available.

ID	The unique identifier (ID) of the organization. Its format is "organizations/[organizationId]".
Name	A human-readable string that refers to the Organization in the GCP Console UI. This string is set by the server and cannot be changed. The string will be set to the primary domain (for example, "google.com") of the G Suite customer that owns the organization.
Organizations	Organizations label collection group.

### GCP: Organization Project Discovery

Object Name	Object Description
Availability	Whether or not the GCP project is available.
ID	The unique identifier.
Name	The project name. Each project could be identified by ID, Name, or Number.
Number	The number of the project. Each project could be identified by ID, Name, or Number.
Projects	Projects label collection group.

## Persistent Disk Service

### GCP: Persistent Disk Configuration

Object Name	Object Description
Creation Time	The creation date.
Description	An optional description of this resource.
ID	Unique identifier for the resource; defined by the server.
Instance Name	Links to the users of the disk (attached instances).
Instances	Instances label collection group.
Key	Key of labels of this disk.
Labels	Labels collection group.
Last Attach	Last time the disk was attached to an instance.

Last Detach	Last time the disk was detached from an instance.
Name	Name of the disk.
Size (Gb)	Size of the persistent disk, specified in GB.
Source Image	The source image used to create this disk.
Source Snapshot	The source snapshot used to create this disk.
Status	The status of disk creation.
Type	Disk type.
Value	Value of labels of this disk.
Zone	The zone where the disk resides.

#### GCP: Persistent Disk Discovery

Object Name	Object Description
Availability	Availability of the disk.
ID	Disk identifier.
Name	Disk name.
Persistent Disk	Persistent Disk label collection group.

#### GCP: Persistent Disk Performance

Object Name	Object Description
Disk Read Bytes Count	The amount of bytes read from disk.
Disk Read Ops Count	The amount of disk read IO operations.
Disk Throttled Read Bytes Count	The amount of bytes in throttled read operations.
Disk Throttled Read Ops Count	The amount of throttled read IO operations.
Disk Throttled Write Bytes Count	The amount of bytes in throttled write operations.
Disk Throttled Write Ops Count	The amount of throttled write IO operations.
Disk Write Bytes Count	The amount of bytes written to disk.
Disk Write Ops Count	The amount of disk write IO operations.



### GCP: Persistent Disk Service Discovery

Object Name	Object Description
Availability	Availability of service component.
Disk service component	Disk service component label collection group.
ID	Disks service identifier.
Name	Disk service name.

### GCP: Persistent Disk Snapshots Configuration

Object Name	Object Description
Latest Snapshot Name	Latest Snapshot Name.
Latest Snapshot Status	Latest Snapshot Status.
Snapshot Details	Snapshot Details label collection group.
Snapshot Name	Name of the resource; provided by the client when the resource is created. The name must be 1-63 characters long, and comply with RFC1035. Specifically, the name must be 1-63 characters long and match the regular expression <code>[a-z]([-a-z0-9]*[a-z0-9])?</code> which means the first character must be a lowercase letter, and all following characters must be a dash, lowercase letter, or digit, except the last character, which cannot be a dash.
Snapshot Status	[Output Only] The status of the snapshot. This can be CREATING, DELETING, FAILED, READY, or UPLOADING.
Snapshot Timestamp	[Output Only] Creation timestamp in RFC3339 text format.

---

## Project Service

### GCP: Enabled Services Config

Object Name	Object Description
Title	The product title for the service.

Name	The DNS address name at which the service is available.
Services Details	(Config Group)
Summary	A short summary of what the service does. Provided in plain text.

### GCP: Project Configuration

Object Name	Object Description
Create Time	Creation time (UTC).
ID	The unique identifier (ID) of this project. Each project could be identified by ID, Name, or Number.
Lifecycle State	The Project lifecycle state.
Name	The unique identifier (Name) of this project. Each project could be identified by ID, Name, or Number.
Number	The unique identifier (Number) of this project. Each project could be identified by ID, Name, or Number.

### GCP: Project Discovery

Object Name	Object Description
Availability	Whether or not the GCP project is available.
ID	The unique identifier (ID) of this project. Each project could be identified by ID, Name, or Number.
Name	The unique identifier (Name) of this project. Each project could be identified by ID, Name, or Number.
Number	The unique identifier (Number) of this project. Each project could be identified by ID, Name, or Number.
Projects	Projects label collection group.

---

## Region Service

### GCP: Region Discovery

Object Name	Object Description
Class Identifier 1	Literal class Identifier for region
ID	GCP region identifier. <project_id>/<region>
Name	GCP region name. Specifies the name that is displayed for the region.
Regions	Regions label collection group.

## Storage Service

GCP: Storage Bucket Configuration	
Object Name	Object Description
Creation Time	The creation time of the bucket.
Enabled	The bucket IAM configuration. Value could be false or true.
Etag	HTTP 1.1 Entity tag for the bucket.
IAM Configuration - Bucket Policy Only	IAM Configuration - Bucket Policy Only label collection group.
ID	The ID of the bucket. For buckets, the id and name properties are the same.
Key	The key for an individual label entry.
Kind	The kind of item this is.
Labels	Labels collection group.
Location	The location of the bucket.
Metageneration	The metadata generation of this bucket.
Name	The name of the bucket.
Project Number	The project number of the project the bucket belongs to.
Self Link	The URI of the bucket.
Storage Class	The bucket storage class.
Updated	The modification time of the bucket.
Value	The value for an individual label entry.

### GCP: Storage Bucket Discovery

Object Name	Object Description
Availability	The availability of the storage bucket.
ID	The storage bucket unique identifier.
Name	The storage bucket name.
Storage Buckets	Storage Buckets label collection group.

### GCP: Storage Bucket Performance

Object Name	Object Description
API Request Count	Count of API calls.
Authentication Count	Count of HMAC/RSA signed requests grouped by authentication method and access id.
Network Received Bytes Count	Count of bytes received over the network, grouped by the API method name and response code.
Network Sent Bytes Count	Count of bytes sent over the network, grouped by the API method name and response code.
Object ACL Access Count	Delta count of requests that result in an object being granted access solely due to object ACLs.
Object ACL Mutation Count	Delta count of changes made to object specific ACLs.
Storage Object Count	Total number of objects per bucket, grouped by storage class. This value is measured once per day, and the value is repeated at each sampling interval throughout the day.
Total Bytes	Total size of all objects in the bucket, grouped by storage class. This value is measured once per day, and the value is repeated at each sampling interval throughout the day.
Total Bytes Per Second	Total daily storage in byte*seconds used by the bucket, grouped by storage class. This value is measured once per day, and the value is repeated at each sampling interval throughout the day.

### GCP: Storage Multi-regional Service Discovery

Object Name	Object Description
Availability	The availability of the storage service.
ID	The storage service unique identifier.
Name	Google Cloud Platform Storage Bucket service name. Specifies the name that is displayed for the service.
Storage Bucket Multi-Regional Service	Storage Bucket Multi-Regional Service label collection group.

#### GCP: Storage Regional Service Discovery

Object Name	Object Description
Availability	The availability of the storage regional service.
ID	The storage regional service unique identifier.
Name	The storage regional service name.
Storage Bucket Regional Service	Storage Bucket Regional Service label collection group.

---

## Token Service

#### GCP: Token Configuration

Object Name	Object Description
Token	JSON Web Token (JWT). A JSON-based open standard (RFC 7519) for creating access tokens that assert some number of claims.

---

## VM Instance Service

#### GCP: VM Instance Configuration

Object Name	Object Description
Name	The local disk name of an VM instance.
Name	The persistence disk name of an VM instance.

Mode	The mode in which a local disk is attached to an VM instance, either READ_WRITE or READ_ONLY. If not specified, the default is to attach the disk in READ_WRITE mode.
Mode	The mode in which a persistence disk is attached to an VM instance, either READ_WRITE or READ_ONLY. If not specified, the default is to attach the disk in READ_WRITE mode.
Boot	Indicates that this is a boot disk. The virtual machine will use the first partition of the disk for its root filesystem.
Boot	Indicates that this is a boot disk. The virtual machine will use the first partition of the disk for its root filesystem.
Delete Disk	Specifies whether the disk will be auto-deleted when the VM instance is deleted (but not when the disk is detached from the VM instance).
Delete Disk	Specifies whether the disk will be auto-deleted when the VM instance is deleted (but not when the disk is detached from the VM instance).
Name	The persistence disk name of an VM instance.
Name	The vpc name of an VM instance.
Type	The type of the local disk, either SCRATCH or PERSISTENT. If not specified, the default is PERSISTENT.
Type	The type of the persistence disk, either SCRATCH or PERSISTENT. If not specified, the default is PERSISTENT.
Additional Disks	Additional Disks label collection group.
Can IP Forward	Allows this VM instance to send and receive packets with non-matching destination or source IPs. This is required if you plan to use this VM instance to forward routes.
CPU Platform	The CPU platform used by this VM instance.
Creation Timestamp	Creation time (UTC).
Deletion Protection	Whether the resource should be protected against deletion.
Description	An optional description of this resource. Provide this property when you create the resource.

GCP Instance/Kubernetes Node	Kubernetes node name.
GCP Instance/Persistent Disk	Relationship with the persistent disk.
GCP Instance/VPC Network	Relationship with the vpc.
GCP Instance/VPC Subnetwork	Relationship with the Subnetwork.
ID	The unique identifier of the VM instance.
ID	The unique identifier of the Kubernetes node.
Interface	The disk interface to use for attaching this local disk, which is either SCSI or NVME.
Interface	The disk interface to use for attaching this persistence disk, which is either SCSI or NVME.
Kubernetes Node Relationship	Kubernetes Node Relationship label collection group.
Label Details	Label Details collection group.
Label Key	Labels to apply to this instance. These can be later modified by the setLabels method. An object containing a list of "key": value pairs. Example: { "name": "wrench", "mass": "1.3kg", "count": "3" }.
Label Value	Labels to apply to this instance. These can be later modified by the setLabels method. An object containing a list of "key": value pairs. Example: { "name": "wrench", "mass": "1.3kg", "count": "3" }.
Local Disks	Local Disks label collection group.
Machine Type	A machine type specifies a particular collection of virtualized hardware resources available to a virtual machine (VM) instance, including the system memory size, virtual CPU (vCPU) count, and maximum persistent disk capability.
Name	Google Cloud Platform VM instance name.
Name	The name of the network interface, for example, these are eth0, eth1, etc.
Name	The Subnetwork resource for this VM instance.
Network	Name of the network resource for this VM instance. When creating an instance, if neither the network nor the subnetwork is specified, the default network is used; if the network is not specified but the subnetwork is specified, the network is inferred.
Network Interfaces	Network Interfaces label collection group.
Network IP	The IPv4 internal network address assigned to the VM instance network interface.

Persistent Disk Relationship	Persistent Disk Relationship label collection group.
Start Restricted	Whether a VM has been restricted for start because Compute Engine has detected suspicious activity.
Status	The status of the VM instance. One of the following values: PROVISIONING, STAGING, RUNNING, STOPPING, STOPPED, SUSPENDING, SUSPENDED, and TERMINATED.
Status Message	An optional, human-readable explanation of the status.
Subnet Relationship	Subnet Relationship label collection group.
Subnetwork	Name of the Subnetwork resource for this VM instance.
VPC Relationship	VPC Relationship label collection group.
Zone	The zone where the VM instance resides.

#### GCP: VM Instance Discovery

Object Name	Object Description
Name	Google Cloud Platform VM instance name.
Availability	The availability of the VM instance.
Compute Instances	Compute Instances label collection group.
ID	The unique identifier of the VM instance.

#### GCP: VM Instance Performance

Object Name	Object Description
CPU Reserved Cores	Total number of cores reserved on the host of the instance. Aggregator aligner ALIGN_MEAN is used.
CPU Usage Time	Total delta CPU usage for all cores, in seconds. Aggregator aligner ALIGN_MEAN is used.
CPU Utilization	The total fraction of the allocated CPU that is currently in use on the instance. This value can be greater than 1.0 on some machine types that allow bursting. Aggregator aligner ALIGN_MEAN is used.
Disk Read Bytes Count	Total delta count of bytes read from disk. Aggregator aligner ALIGN_RATE is used and a SUM reducer.



Disk Read Ops Count	Total delta count of disk read IO operations. Aggregator aligner ALIGN_RATE is used and a SUM reducer.
Disk Write Bytes Count	Total delta count of bytes written to disk. Aggregator aligner ALIGN_RATE is used and a SUM reducer.
Disk Write Ops Count	Total delta count of disk write IO operations. Aggregator aligner ALIGN_RATE is used and a SUM reducer.
Dropped Bytes Count	Total delta count of incoming bytes dropped by the firewall. Aggregator aligner ALIGN_MEAN is used.
Dropped Packets Count	Total delta count of incoming packets dropped by the firewall. Aggregator aligner ALIGN_MEAN is used.
Instance Uptime	How long the VM has been running. Aggregator aligner ALIGN_MEAN is used.
Network Received Bytes Count	Total delta count of bytes received from the network. Aggregator aligner ALIGN_RATE is used and a SUM reducer.
Network Received Packets Count	Total delta count of packets received from the network. Aggregator aligner ALIGN_RATE is used and a SUM reducer.
Network Sent Bytes Count	Total delta count of bytes sent over the network. Aggregator aligner ALIGN_RATE is used and a SUM reducer.
Network Sent Packets Count	Total delta count of packets sent over the network. Aggregator aligner ALIGN_RATE is used and a SUM reducer.

### GCP: VM Instance Service Discovery

Object Name	Object Description
Name	Google Cloud Platform instance service name. Specifies the name that is displayed for the instance service.
Availability	The availability of the instance service.
Compute Instances	Compute Service label collection group.
ID	The instance service unique identifier.

## VPC Service

GCP: VPC Network Configuration	
Object Name	Object Description
VPC Peer Name	The VPC Network peer name.
ID	Unique identifier for the VCP; defined by the server.
Name	The name of the VPC, provided by the client when initially creating the VPC. The name must be 1-63 characters long.
Name	The name of the subnetwork, provided by the client when initially creating the subnetwork. The name must be 1-63 characters long.
Auto Create Subnetworks	When set to true, the VPC network is created in "auto" mode. When set to false, the VPC network is created in "custom" mode.
Creation Time	The creation date.
Description	An optional description of this VPC. Provide this property when you create the VPC.
Exchange Subnet Routes	Whether full mesh connectivity is created and managed automatically. When it is set to true, Google Compute Engine will automatically create and manage the routes between two networks when the peering state is ACTIVE. Otherwise, user needs to create routes manually to route packets to peer network.
Gateway IPv4	The gateway address for default routing out of the network. This value is read only and is selected by GCP.
Peered VPC Network	The peered VPC Network name.
Region	The range of internal addresses that are legal on this network. This range is a CIDR specification, for example: 192.168.0.0/16. Provided by the client when the network is created.
Routing mode	The network-wide routing mode to use. If set to REGIONAL, this network is cloud routers will only advertise routes with subnetworks of this network in the same region as the router. If set to GLOBAL, this network's cloud routers will advertise routes with all subnetworks of this network, across regions.

State	State for the peering.
State Details	Details about the current state of the peering.
VPC Peering Connections	VPC Peering Connections label collection group.
VPC Subnets	VPC Subnets label collection group.
VPC Type	Type of resource. Always compute#networkList for lists of networks.

### GCP: VPC Network Discovery

Object Name	Object Description
Name	Name of the network.
Availability	Availability of the component.
Code	A warning code, if applicable. For example, Compute Engine returns NO_RESULTS_ON_PAGE if there are no results in the response.
ID	Identifier of the network.
Message	A human-readable description of the warning code.
VPC Networks	VPC Networks label collection group.
Warnings	Warning label collection group.

### GCP: VPC Network Service Discovery

Object Name	Object Description
Name	VPC Service name.
Availability	VPC service availability.
ID	VPC Service identifier.
VPC Services	VPC Services label collection group.

### GCP: VPC Subnets Configuration

Object Name	Object Description
Creation Time	Creation timestamp of the resource.
Description	An optional description of this resource.

Fingerprint	Fingerprint of this resource. A hash of the contents stored in this object.
Flow Logs Enabled	Whether to enable flow logging for this subnetwork.
Gateway Address	The gateway address for default routes to reach destination addresses outside this subnetwork.
ID	The unique identifier for the resource. This identifier is defined by the server.
IP CIDR Range	The range of internal addresses that are owned by this subnetwork.
Kind	Type of the resource.
Name	The name of the resource, provided by the client when initially creating the resource.
Network Name	The name of the network the subnetwork resides in.
Private IP Google Access	Whether the VMs in this subnet can access Google services without assigned external IP addresses.
Region	The region where the Subnetwork resides.
Secondary IP CIDR Range	The CIDR Range of the secondary IP Range.
Secondary IP Ranges	Secondary IP Ranges label collection group.
Secondary Range Name	The secondary IP ranges name.
VPC Network Relationship	VPC Network Relationship label collection group.
VPC Subnets/VPC Network	Name of the Subnetwork.

#### GCP: VPC Subnets Discovery

Object Name	Object Description
Availability	Availability of the VPN subnet.
ID	The unique identifier for the resource. This identifier is defined by the server.
Name	The name of the resource, provided by the client when initially creating the resource.
VPC Subnets	VPC Subnets label collection group.

#### GCP: VPC Subnets Service Discovery

Object Name	Object Description
Availability	The availability of the resource.
ID	The unique identifier for the resource. This identifier is defined by the server.
Name	Google Cloud Platform instance service name. Specifies the name that is displayed for the instance service. The name of the resource, provided by the client when initially creating the resource.
VPC Subnets Service	VPC Subnets Service label collection group.

---

## Zone Service

GCP: Zone Discovery	
Object Name	Object Description
Name	GCP zone name. Specifies the name that is displayed for the zone.
Availability	The availability of the zone.
Class Identifier 1	Literal Class Identifier for zone.
Class Identifier 2	Zone class identifier.
ID	The zone unique identifier. <project_id>/<region>/<zone>.
Zones	Zones label collection group.

© 2003 - 2024, ScienceLogic, Inc.

All rights reserved.

#### LIMITATION OF LIABILITY AND GENERAL DISCLAIMER

ALL INFORMATION AVAILABLE IN THIS GUIDE IS PROVIDED "AS IS," WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED. SCIENCELOGIC™ AND ITS SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT.

Although ScienceLogic™ has attempted to provide accurate information on this Site, information on this Site may contain inadvertent technical inaccuracies or typographical errors, and ScienceLogic™ assumes no responsibility for the accuracy of the information. Information may be changed or updated without notice. ScienceLogic™ may also make improvements and / or changes in the products or services described in this Site at any time without notice.

#### Copyrights and Trademarks

ScienceLogic, the ScienceLogic logo, and EM7 are trademarks of ScienceLogic, Inc. in the United States, other countries, or both.

Below is a list of trademarks and service marks that should be credited to ScienceLogic, Inc. The ® and ™ symbols reflect the trademark registration status in the U.S. Patent and Trademark Office and may not be appropriate for materials to be distributed outside the United States.

- ScienceLogic™
- EM7™ and em7™
- Simplify IT™
- Dynamic Application™
- Relational Infrastructure Management™

The absence of a product or service name, slogan or logo from this list does not constitute a waiver of ScienceLogic's trademark or other intellectual property rights concerning that name, slogan, or logo.

Please note that laws concerning use of trademarks or product names vary by country. Always consult a local attorney for additional guidance.

#### Other

If any provision of this agreement shall be unlawful, void, or for any reason unenforceable, then that provision shall be deemed severable from this agreement and shall not affect the validity and enforceability of any remaining provisions. This is the entire agreement between the parties relating to the matters contained herein.

In the U.S. and other jurisdictions, trademark owners have a duty to police the use of their marks. Therefore, if you become aware of any improper use of ScienceLogic Trademarks, including infringement or counterfeiting by third parties, report them to Science Logic's legal department immediately. Report as much detail as possible about the misuse, including the name of the party, contact information, and copies or photographs of the potential misuse to: [legal@sciencelogic.com](mailto:legal@sciencelogic.com). For more information, see <https://sciencelogic.com/company/legal>.

ScienceLogic

800-SCI-LOGIC (1-800-724-5644)

International: +1-703-354-1010