

**webMethods CloudStreams Provider for GOOGLE Compute Engine**

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# Document Change History

|  |  |
| --- | --- |
| **Document revision date** | **Summary of changes** |
| 30 January 2022 | First release of this document. |

# What is webMethods CloudStreams Provider for Google ComputeEngine?

Google Compute Engine (GCE) is an Infrastructure as a Service ([IaaS](https://www.techtarget.com/searchcloudcomputing/definition/Infrastructure-as-a-Service-IaaS)) offering that allows clients to run workloads on Google's physical hardware.

Google Compute Engine provides a scalable number of virtual machines (VMs) to serve as large compute clusters for that purpose. GCE can be managed through a RESTful API, command line interface (CLI) or Web console.

GCE's application program interface (API) provides administrator functionalities with virtual machine and its related services.

webMethods CloudStreams Provider for Compute Engine can be used for below operations

* VM Instances Management:

Create, Delete, Start, Stop, Suspend, Resume, Update etc operations.

* Firewall Management:

Create, delete, list operations

* Disks and Images Management.

Create, delete, list operations

* Creating Https Health Check resource for load balancers.

For more information about how to configure and use CloudStreams connectors with webMethods CloudStreams, see the Administering webMethods CloudStreams document available in the **webMethods** section of the [Software AG Documentation](http://documentation.softwareag.com) web page.

# Steps to create the connector connection

Follow the below steps to create Connector connection.

* Create a connection for a published Connector.  
  Go to **Integration Server Admin page > Solutions > CloudStreams > Providers > Google > ComputeEngine from the connectors list > Configure New Connection.**
* Go to Integration Server Admin page > Solutions > CloudStreams > Providers > Google > Connectors

Graphical user interface, application

Description automatically generated

**Click on Compute Engine>** **Configure New Connection**

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* To generate the required fields for Connection, refer to the **Google OAuth** configuration as mentioned in this [article](https://tech.forums.softwareag.com/t/configuring-google-oauth-account-in-webmethods-io-integration-workflow/242841).

Switch to **Advanced view** and Provide the connection details by selecting the IS Package, Connection Type, Folder name, Connection name, Server URL, and OAuth 2.0 authentication details(Client ID, Consumer Secret, Access Token, and Refresh Token)  
 **Example:**  
 **Package:** DemoGoogleComputeEngineProviderTest  
 **Connection Type:** SAG\_Connection  
 **Folder Name:** DemoGoogleComputeEngineProviderTest   
 **Connection Name:** ComputeEngine\_1  
 **Server URL:** https://compute.googleapis.com  
 **Refresh URL:** <https://www.googleapis.com/oauth2/v4/token>

**Refresh URL :** Body Query String

OAuth 2.0 authentication details (**Client ID, Consumer Secret, Access Token, Refresh Token**)  
**Session management:** auto

**Note**: - Set **Enable SNI** to **true** that will enable the inclusion of the hostname specified in the Server URL and to avoid any issues related to hostname verification while configuring the connection.

**Click on Generate Access Token and fill below details and click on Authorize to generate Access Token and Refresh Token:**

Graphical user interface

Description automatically generated

**Request Endpoints>** Authorization Server URL\* : <https://accounts.google.com/o/oauth2/auth>

**Request Endpoints>** Authentication Server URL\* : <https://accounts.google.com/o/oauth2/token>

**Request Parameters>** Consumer ID\* : <<Get it from Google Cloud Console>>

**Request Parameters>** Consumer Secret: <<Get it from Google Cloud Console>>

**Request Parameters>** scope: https://www.googleapis.com/auth/cloud-platform https://www.googleapis.com/auth/compute

**Request Parameters>** Redirect URI: <https://localhost:5543/WmCloudStreams/oauth-redirect.dsp>

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* Enable the connection after creating the connection

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# webMethods CloudStreams Provider for ComputeEngine Connector

## Connector Details

The connector details include:

* **IaaS Provider**: Goolge ComputeEngine
* **API Version**: v1
* **API Type**: REST
* **Developer**: Chethan BG, Rekha Kumari
* **Group**: Google
* **CloudStreams Minimum Version Compatibility**: 10.11
* **Provider Package Name**: WmGoogleComputeEngineProvider

### Supported Resources

List down resources supported by the provider:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Service: Bundle** | | | | |
| S.No | **Name** | **Path** | **Method** | **Description** |
| 1 | firewalls | /compute/v1/projects/{project}/global/firewalls | POST | Creates a firewall rule in the specified project using the data included in the request. |
| 2 | /compute/v1/projects/{project}/global/firewalls | GET | Retrieves the list of firewall rules available to the specified project |
| 3 | /compute/v1/projects/{project}/global/firewalls/{resourceId} | GET | Returns the specified firewall. |
| 4 | /compute/v1/projects/{project}/global/firewalls/{resourceId} | DELETE | Deletes the specified firewall. |
| 5 | instances | compute/v1/projects/{project}/zones/{zone}/instances | POST | Creates an instance resource in the specified project using the data included in the request. |
| 6 | /compute/v1/projects/{project}/zones/{zone}/instances | GET | Retrieves the list of instances contained within the specified zone. |
| 7 | /compute/v1/projects/{project}/zones/{zone}/instances/{resourceId} | GET | Returns the specified Instance resource. Gets a list of available instances by making a list() request. |
| 8 | /compute/v1/projects/{project}/zones/{zone}/instances/{resourceId}/start | POST | Starts an instance that was stopped |
| 9 | /compute/v1/projects/{project}/zones/{zone}/instances/{resourceId}/stop | POST | Stops a running instance, shutting it down cleanly, and allows you to restart the instance at a later time. |
| 10 | /compute/v1/projects/{project}/zones/{zone}/instances/{resourceId}/suspend | POST | This method suspends a running instance, saving its state to persistent storage, and allows you to resume the instance at a later time. |
| 11 |  | compute/v1/projects/{project}/zones/{zone}/instances/{resourceId}/resume | POST | Resumes an instance that was suspended |
| 12 |  | /compute/v1/projects/{project}/zones/{zone}/instances/{resourceId} | DELETE | Deletes the specified Instance resource. |
| 13 | addresses | /compute/v1/projects/{project}/aggregated/addresses | GET | Retrieves an aggregated list of addresses. |
| 14 | disks | /compute/v1/projects/{project}/aggregated/disks | GET | Retrieves an aggregated list of persistent disks. |
| 15 | /compute/v1/projects/{project}/zones/{zone}/disks/{resourceId}/createSnapshot | GET | Creates a snapshot of a specified persistent disk. |
| 16 | /compute/v1/projects/{project}/zones/{zone}/disks | POST | Creates a persistent disk in the specified project using the data in the request. |
| 17 | /compute/v1/projects/{project}/zones/{zone}/disks/{resourceId} | DELETE | Deletes the specified persistent disk. |
| 18 | images | /compute/v1/projects/{project}/global/images | POST | Creates an image in the specified project using the data included in the request. |
| 19 |  | /compute/v1/projects/{project}/global/images | GET | Retrieves the list of [custom images](https://cloud.google.com/compute/docs/images) available to the specified project. |
| 20 |  | /compute/v1/projects/{project}/global/images/{resourceId} | DELETE | Deletes the specified image. |
| 21 | httpsHealthChecks | /compute/v1/projects/{project}/global/httpsHealthChecks | POST | Creates a HttpsHealthCheck resource in the specified project using the data included in the request. |
| 22 |  | /compute/v1/projects/{project}/global/httpsHealthChecks | GET | Retrieves the list of HttpsHealthCheck resources available to the specified project. |
| 23 |  | /compute/v1/projects/{project}/global/httpsHealthChecks/{resourceId} | DELETE | Deletes the specified HttpsHealthCheck resource. |

Note: The above listed resources which are used for webMethods Cloudstream Compute Engine Connector development and same has been tested. Google Compute Engine provides plenty of REST APIs for many operations. For more information, click [here](https://cloud.google.com/compute/docs/reference/rest/v1).

### Usage Notes

Currently facing issue in Auto generation of Refresh Token in OAuth flow and R&D team has been notified regarding the same and working on fixing this.

As a workaround suggested by R&D, we have used Goolge OAuth Playground to generate Access Token and Refresh Token and manually configuring the same in Compute Engine connection.