



ENTERPRISE ARCHITECT

User Guide Series

Google Cloud Platform (GCP)

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CREATED WITH  **ENTERPRISE
ARCHITECT**

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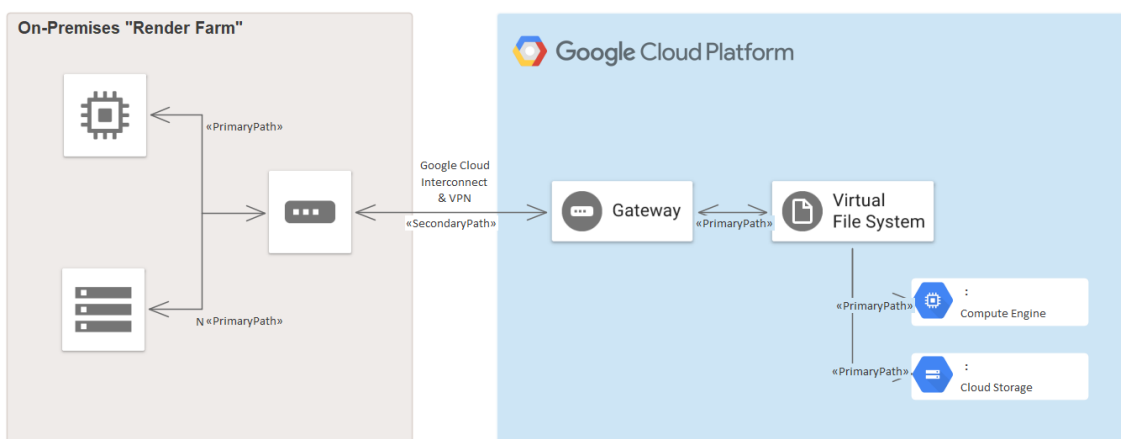
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Google Cloud Platform (GCP) Icons



Create Google Cloud Platform Diagrams that Specify and Document GCP Virtual Infrastructure

Google Cloud Platform (GCP) provides a suite of Cloud computing services, following their initial Google App offering. Alongside a set of management tools, it provides a series of modular Cloud services including computing, data storage, data analytics and machine learning. Google Cloud Platform provides infrastructure as a service IaaS, platform as a service PaaS, and server-less computing environments. Enterprise Architect provides modeling constructs that allow you to create expressive GPC diagrams that specify new Cloud infrastructure and platforms or document existing ones. You can also model other Cloud Infrastructure and platform providers such as Amazon's AWS and Microsoft's Azure.



GPC diagram showing an On-Premise Render Farm

While Google offers tools for creating diagrams, the power of Enterprise Architect is that you can create visualizations that show the relationship to on-premise platforms, and the elements and services can be related to other system life-cycle artifacts such as Strategy, Business Rules, Requirements, Constraints, Applications XML and Database Schemas, just to mention a few.


The Google Cloud Platform (GCP) UML Profile provides all of the graphics (icons and images) necessary to model GCP architecture diagrams. The icons and images are provided by a Model Builder framework pattern, which must be imported into your model before you can start creating GCP architecture diagrams. The Google Web Images pattern contains over 250 Image Assets that can be dragged-and-dropped onto diagrams.

Getting Started

In this topic you will learn how to work with the features that support Google Cloud Platform diagramming outlined in each section.

Selecting the Perspective

Enterprise Architect partitions the tool's extensive features into Perspectives, which ensures that you can focus on a specific task and work with the tools you need without the distraction of other features. To work with the Google Cloud Platform features you first need to select this Perspective:

 <perspective name> > Analysis > Google Cloud Platform

Setting the Perspective ensures that the Google Cloud Platform diagrams, their tool boxes and other features of the Perspective will be available by default.

Example Diagram

An example diagram provides a visual introduction to the topic and allows you to see some of the important elements and connectors that are created in specifying or describing the way a Cloud Architecture is defined including: Availability Zones, VPC's, Subnets, EC2, RDS and more.

Import Google Cloud Platform Patterns

Before you can start creating GCP diagrams to specify or document your cloud services you will need first to import the graphics from a pattern. This will inject all the GCP icons as components into the selected location in the Browser window.

Create Google Cloud Platform Diagrams

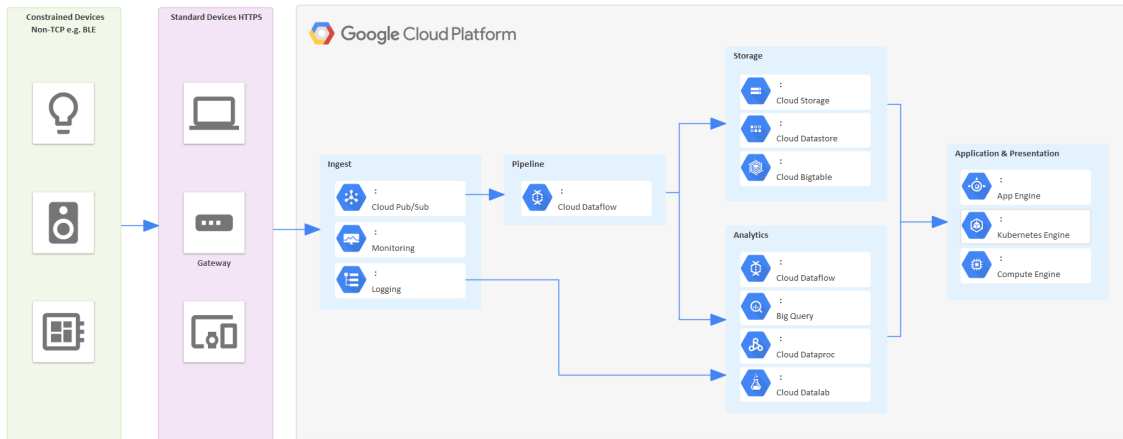
Once the GCP images have been imported creating GCP diagrams is straight forward as all the icons including App Engines, Compute Engine, Virtual File System and Gateways available from the Browser window and Toolbox. You will simply create a diagram and then drag-and-drop elements from the GCP Browser Packages or the Toolbox.

More Information

This section provides useful links to other topics and resources that you might find useful when working with the Google Cloud Platform tool features.


Example Diagram

Using GCP diagrams you can model cloud architectures. You can add new elements to the diagram from the Imported GCP Icons, the GCP toolbox or existing elements dragged from the Browser. This example is the Sensor Stream Ingest and Processing diagram.



GCP diagram showing Sensor Stream Ingest and Processing

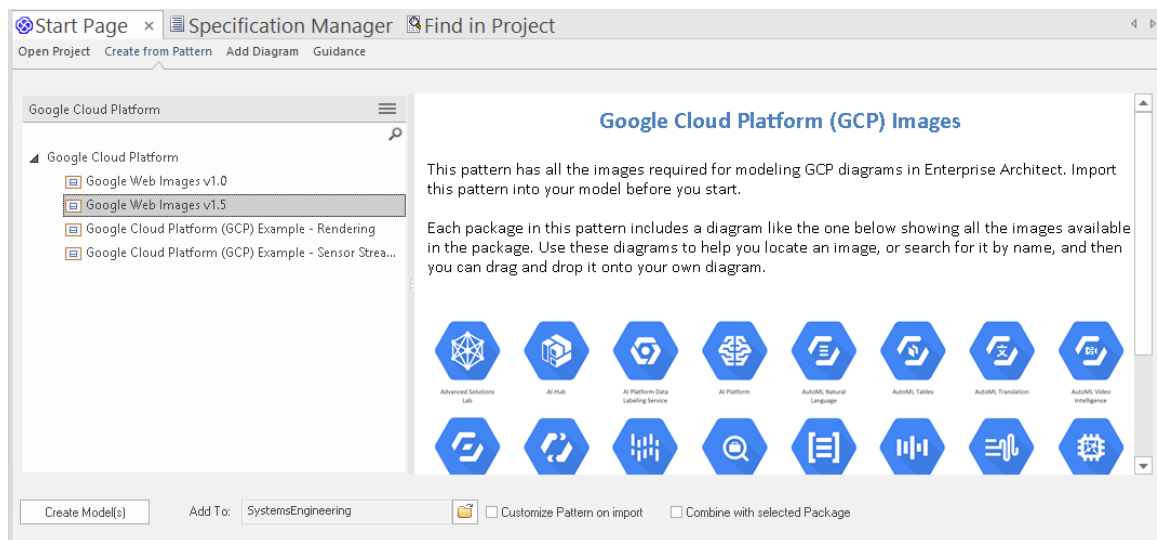
Import Google Cloud Platform Patterns

Before you import the 'Google Web Images' pattern into your model, click on the  icon and select the 'Analysis > Google Cloud Platform' Perspective.

This automatically opens the Model Builder at the 'Google Cloud Platform' page.

Click on the target Package in the Browser window, then on the 'Google Web Images' pattern and click on the Create Model button.

Note: When you have the Web Images packet in your model, do not copy it to another location in the model or save it as XMI; always use the Model Builder to import the pattern into a new model. The reason for this is that the provided Diagram Toolbox patterns, described here, refer to the Image Assets by their GUIDs. Copying the Image Assets will give them new GUIDs and the Diagram Toolbox patterns will not work.



In the Model Builder there are example patterns that show typical use of the images in diagrams, reproduced from the 'Google Cloud Platform' Powerpoint.

Create Google Cloud Platform Diagrams

You can create a diagram by right-clicking on its parent Package and selecting the 'New Diagram' menu option to display the 'Diagram Builder' page of the 'Model Builder' dialog.

If you do not have the Google Cloud Platform Perspective selected, click on the drop-down arrow in the 'Type' field and select 'Analysis > Google Cloud Platform'.

In the 'Diagram' field type an appropriate name for the diagram, in the 'Select From panel' click on 'Google Cloud Platform', and in the 'Diagram Types' panel click on 'Google', and then click on the OK button. The 'Google Cloud Platform' pages of the Diagram Toolbox open, including:

- Zones
- Open Source
- AI & Machine Learning
- API Management
- Compute
- Data Analytics
- Databases
- Developer tools
- General Cards
- Hybrid and Multi Cloud
- Internet of Things
- Management Tools
- Migration
- Networking
- Serverless Computing Product Cards (Expanded)
- Security
- Serverless Computing
- Storage
- Paths

Note that the GCP diagrams are automatically set to Custom Style, and when you right-click on an element in the diagram you can make use of the Custom Style icons on the Format Toolbar.

Each Package in the Google Web Images Model Builder pattern has a diagram that shows every image that is included in the Package.

To add one of these images to your diagram, locate it in the Browser window by either:

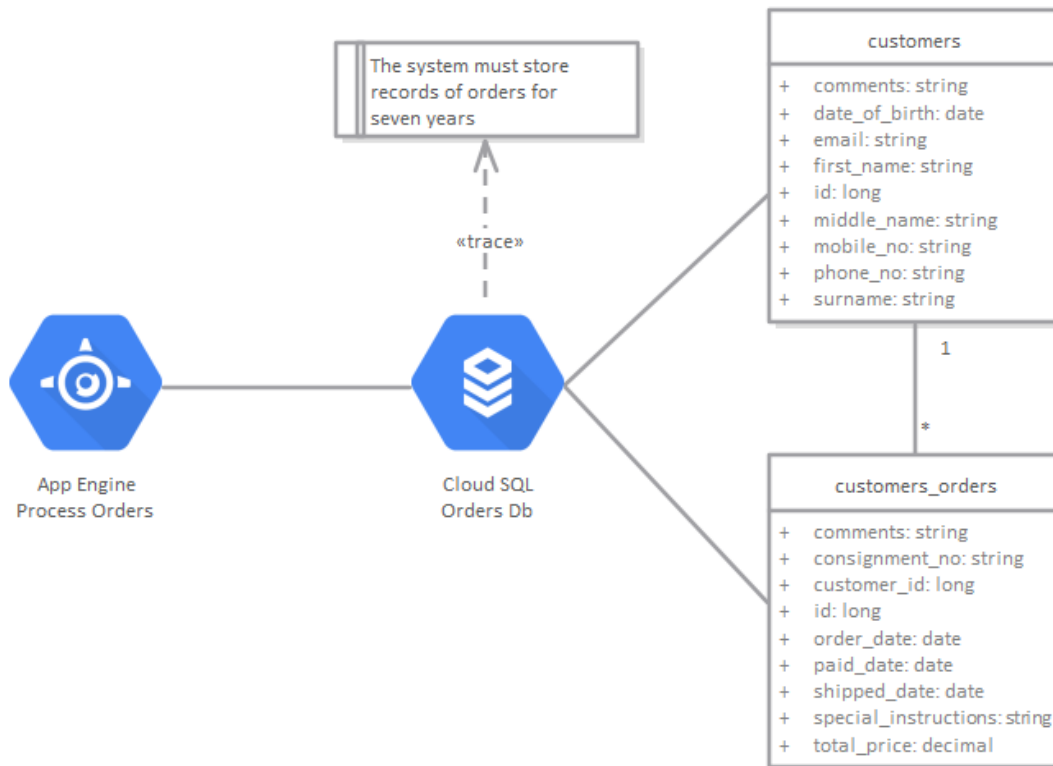
- Searching for it by name or
- Opening the diagram for the Package that you believe it should be in, finding it in the diagram and pressing Alt+G to highlight the Image Asset in the Browser window

Now drag-and-drop the Image Asset onto your diagram. You can choose to:

- Add it as an element with an icon
- Add it as an element with an image, or
- (If you have made an element from the icon already) Add as link

Traces to Project Artifacts

You can create expressive diagrams that can show how the GCP elements relate to other artifacts in your projects. This is achieved by placing any GCP element into a diagram and creating a Trace, Dependency, Association or other relationship between the AWS elements and other elements such as Requirements, User Stories, Conceptual, Logical and Physical database tables.



GCP diagram showing traces to a requirement and two database tables.

More Information

Sparx Systems Enterprise Architect is an outstanding tool for Google Cloud Platform (GCP) diagramming, offering extensive support for visualizing GCP features. Its detailed diagramming capabilities allow users to create comprehensive visual representations of GCP architectures, including components, services, and their relationships.

Edition Information

This feature is available in the Corporate, Unified and Ultimate Editions of Enterprise Architect, from Release 15.0. Enterprise Architect Release 15.2 supports Version 1.5 of the GCP graphics file.

