

Step-by-Step Guide: Interconnecting Oracle Cloud Infrastructure and Google Cloud

June 12, 2024

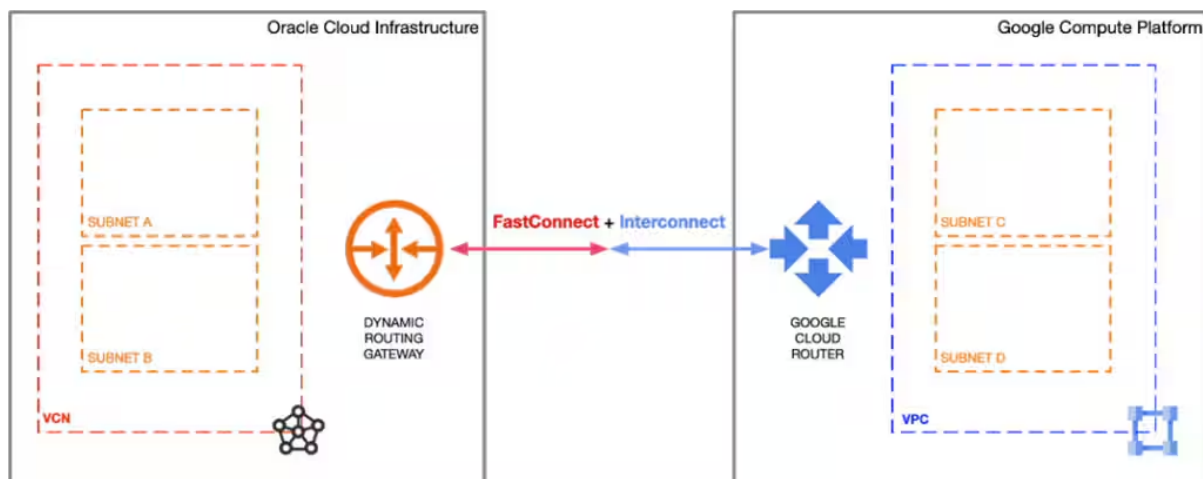
Summary

On June 11, 2024, Oracle and Google announced a cloud interoperability partnership that enables customers to migrate and run mission-critical enterprise workloads across Oracle Cloud Infrastructure (OCI) and Google Cloud. Enterprises can seamlessly connect Google Cloud services, such as analytics and AI, to Oracle Cloud services, such as Exadata and Autonomous Database. For organizations seeking to optimize and elevate their cloud infrastructure capabilities and commercial calculus, such a native multicloud model offers the best-of-both-clouds customer experience that encompasses a unified and interoperable technical and commercial stack. The Interconnect offers organizations access across their cloud solution providers, so workloads and data can be in an environment best suited to their capabilities and seamlessly interact as needed. To empower customers to create an integrated multicloud experience, the solution offers customers a direct, low-latency, and high-throughput cross-cloud connectivity between OCI and Google Cloud through OCI [FastConnect](#) and Google Cloud [VLAN](#) attachments.

This blog provides a step-by-step demonstration of how to set up the interconnection between OCI and Google Cloud. In places, it refers to other documentation for detailed background information and detailed steps.

Prerequisite

- An Oracle Cloud account. If you don't have an account, you can sign up for an [Oracle Cloud Free Tier account](#).
- A Google Cloud account. If don't have an account, you can sign up for a [Free Google Cloud Account](#).
- Required permission and resources quota to deploy resources per topology shown in the Figure below.
- Collect OCI Region, Google Cloud Region, interconnect peering location and throughput requirements.



Step by step guide

This section includes the initial steps which will be used to set up and validate interconnect between Oracle Cloud Infrastructure and Google Cloud.

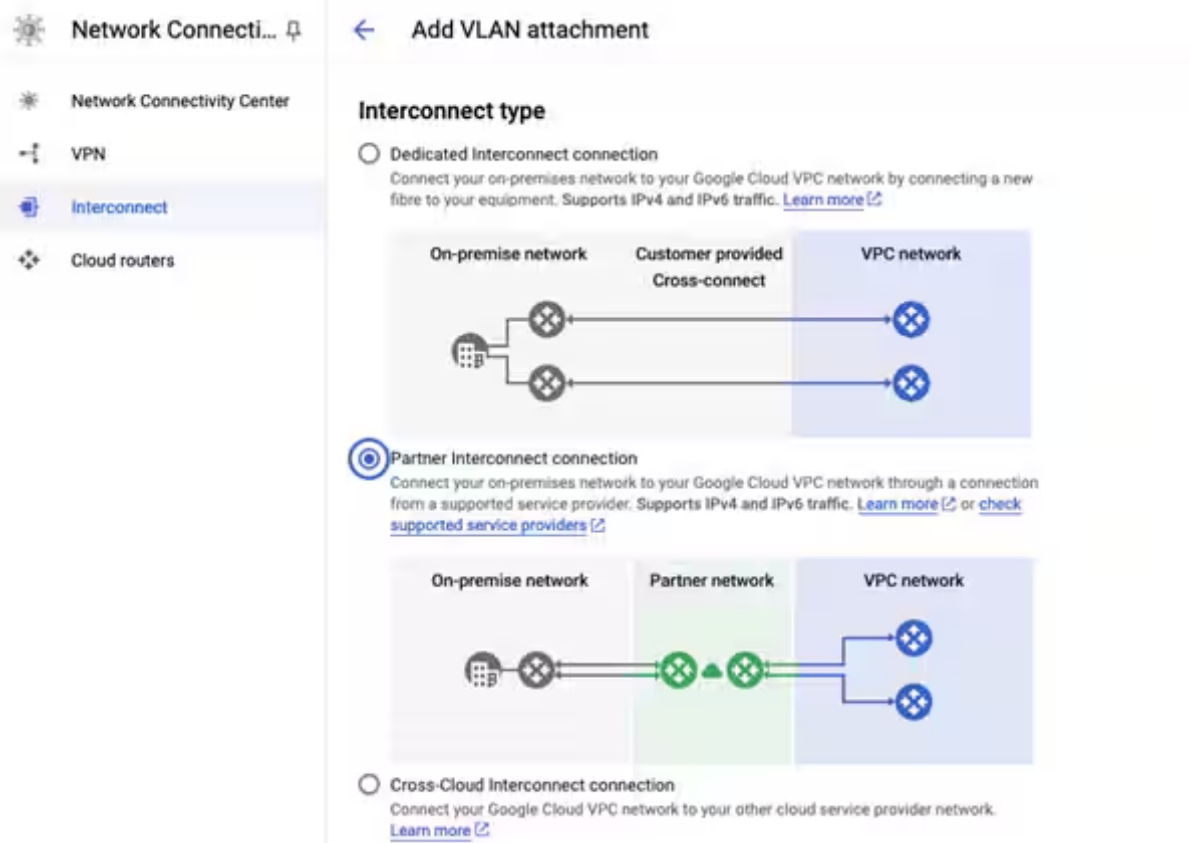
Step 1: Locate Your Desired Regions.

You need to reference Google Cloud and OCI connectivity documentations embedded here and identify the desired regions that you would like to utilize to connect your Google Cloud and OCI workloads. The OCI-Google Cloud interconnect feature is currently supported in the regions listed below:

	OCI Region	Google Cloud Region
1	ca-montreal-1	northamerica-northeast1
2	eu-frankfurt-1	europa-west3
3	ap-singapore-1	asia-southeast1
4	eu-madrid-1	europa-southwest1
5	sa-saopaulo-1	southamerica-east1
6	ap-sydney-1	australia-southeast1
7	ap-mumbai-1	asia-south1
8	ap-melbourne-1	australia-southeast2
9	ap-tokyo-1	asia-northeast1
10	us-ashburn-1	us-east4
11	uk-london-1	europa-west2

Step 2 (in Google Cloud): Create Interconnect VLAN and Establish Pairing Keys.

Once the regions of choice have been identified, you can create Partner Interconnect VLAN attachments from the Google Cloud console (or using a `gcloud` command):



Network Connectivity Center | Add VLAN attachment

Interconnect type

- Dedicated Interconnect connection**
Connect your on-premises network to your Google Cloud VPC network by connecting a new fibre to your equipment. Supports IPv4 and IPv6 traffic. [Learn more](#)
- Partner Interconnect connection**
Connect your on-premises network to your Google Cloud VPC network through a connection from a supported service provider. Supports IPv4 and IPv6 traffic. [Learn more](#) or [check supported service providers](#)
- Cross-Cloud Interconnect connection**
Connect your Google Cloud VPC network to your other cloud service provider network. [Learn more](#)

We recommend creating a redundant pair of VLANs to increase availability. The creation of a redundant pair of VLANs will result in 2 pairing keys. If you don't need redundancy or an SLA, you can create a single VLAN attachment (and make it redundant later), which would result in only single pairing key.

- ✓ Check your connection
- 2 Add VLAN attachments**
- 3 Connect to your VPC networks

Add VLAN attachments

A VLAN attachment allows you to access your VPC network by adding a VLAN to your existing service provider connection. [Learn more](#)

Redundancy

Creating a redundant pair of VLANs is recommended to increase availability. If you don't need redundancy or an SLA, you can create a single VLAN attachment (and make it redundant later). [Learn more about redundancy](#)

- Create a redundant pair of VLAN attachments (recommended)
- Add a redundant VLAN to an existing VLAN
- Create a single VLAN (no redundancy)

Network *
default

Region *
us-east4 (Northern Virginia) ?
Region is permanent

VLAN A

Cloud Router *
testrouter ?

VLAN attachment name *
oc-test ?
Lowercase letters, numbers, hyphens allowed

Description

IP stack type

- IPv4 (single-stack)
- IPv4 and IPv6 (dual-stack) ?

Maximum transmission unit (MTU) *
1500

VLAN B

Cloud Router *
testrouter ?

VLAN attachment name *
test-oci ?
Lowercase letters, numbers, hyphens allowed

Description

IP stack type

- IPv4 (single-stack)
- IPv4 and IPv6 (dual-stack) ?

Maximum transmission unit (MTU) *
1500



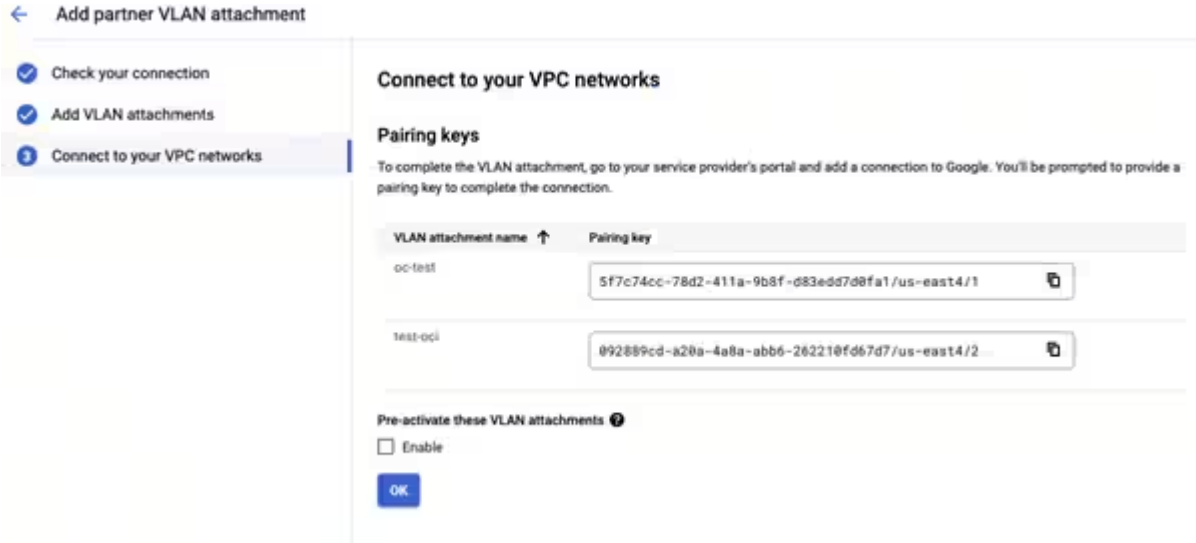
A VPC network that uses the VLAN attachment should have the same MTU value. [Learn more](#)

CREATE

BACK

You can store the pairing key in a secure place so that you can utilize it in the OCI console. The pairing key is a unique key that lets OCI identify and connect to your Google Cloud Virtual Private Cloud (VPC) network and the associated Cloud Router. OCI requires this key to complete the configuration of your VLAN attachment.

To avoid activating VLAN attachments post provisioning of Virtual Circuits, please pre-activate these VLAN attachments.



← Add partner VLAN attachment

- ✓ Check your connection
- ✓ Add VLAN attachments
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Connect to your VPC networks

Pairing keys

To complete the VLAN attachment, go to your service provider's portal and add a connection to Google. You'll be prompted to provide a pairing key to complete the connection.

VLAN attachment name ↑	Pairing key
oc-test	5f7c74cc-78d2-411a-9b8f-d83edd7d8fa1/us-east4/1
test-oci	092889cd-a20a-4a8a-abb6-262210fd67d7/us-east4/2

Pre-activate these VLAN attachments ⓘ

Enable

OK

You may find more details on how to create a partner VLAN attachments can be found at the [Partner Interconnect provisioning overview in Google Cloud](#) . Additional Cloud Router documentation can be found [here](#).

Step 3 (in OCI): Creating and Configuring a Virtual Circuit.

- In the Console, confirm that you are viewing the **compartment** that you want to work in. If you are not sure, use the compartment that contains the DRG that you will connect to. The choice of compartment, along with a corresponding [IAM policy](#), would control who can access the virtual circuit that you are about to create.
- Open the navigation menu and click **Networking**. Under Customer connectivity, click **FastConnect**. The resulting FastConnect page is where you create a new virtual circuit and later return to when you need to manage the virtual circuit.
- Click **Create Connection**.
- Select FastConnect partner and choose **Google Cloud : OCI Interconnect** from the list.

- Enter the following for your virtual circuit:
 - Name: Choose a familiar name. The value does not need to be unique across your virtual circuits, and you can change it later. Avoid entering any confidential information.
 - Compartment: Leave as is (the compartment you're currently working in).
 - Virtual Circuit Type: Select Private Virtual Circuit.
 - Dynamic Routing Gateway Compartment: Select the compartment where the DRG resides (it should already be selected).
 - Dynamic Routing Gateway: Select the DRG.
 - Provisioned Bandwidth: Choose the same bandwidth level. The Supported Bandwidth Shapes are 1 Gbps, 5 Gbps, 10 Gbps, 20 Gbps, 30 Gbps, 40 Gbps, and 50 Gbps.
 - Partner Service Key: Enter the Pairing key that you received from Google Cloud when you set up the VLAN attachment.
 - MTU: Choose MTU value as 1500.
- Click **Continue**. The virtual circuit is now created.
- Click **Close**.

Create connection

1 Connection type
2 Configuration

Connection type

FastConnect lets you access your existing network from your virtual cloud network (VCN) without traversing the internet. Choose an option:

Connection type

FastConnect partner

Use this option if you have a relationship with a FastConnect partner. Here you set up the Oracle side of a virtual circuit that runs on the partner's connection. See the topics to the right.

FastConnect direct

Use this option if you want a dedicated connection by way of a third-party provider or by colocating in a FastConnect location. Here you request a cross-connect and receive the letter of authorization (LOA). After cabling is complete at the FastConnect location, you return here to activate the cross-connect and set up at least one virtual circuit. See the topics to the right.

Partner

GCP US

Create connection

1 Connection type

2 Configuration

Compartment

customer_compartment

nsconnect_compartment_id (root)/customer_compartment

Virtual circuit type

Private virtual circuit

Private IP addresses (see RFC 1918) are advertised. The connection uses a dynamic routing gateway that you attach to our VCN. ✓

Traffic

All traffic

All traffic on the virtual circuit will be sent to the on-premises network. ✓

Dynamic routing gateway in **provider_compartment** [\(Change compartment\)](#)

test_change_gcp

i This creates an attachment to the selected DRG. The attachment uses a route table based on the type of resource used.

Provisioned bandwidth

Select a value

- 1 Gbps
- 5 Gbps
- 10 Gbps
- 20 Gbps
- 30 Gbps
- 40 Gbps
- 50 Gbps

Create connection

1 Connection type

2 Configuration

Compartment

customer_compartment

nsconnect_compartment_id (root)/customer_compartment

Virtual circuit type

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Provisioned bandwidth

1 Gbps

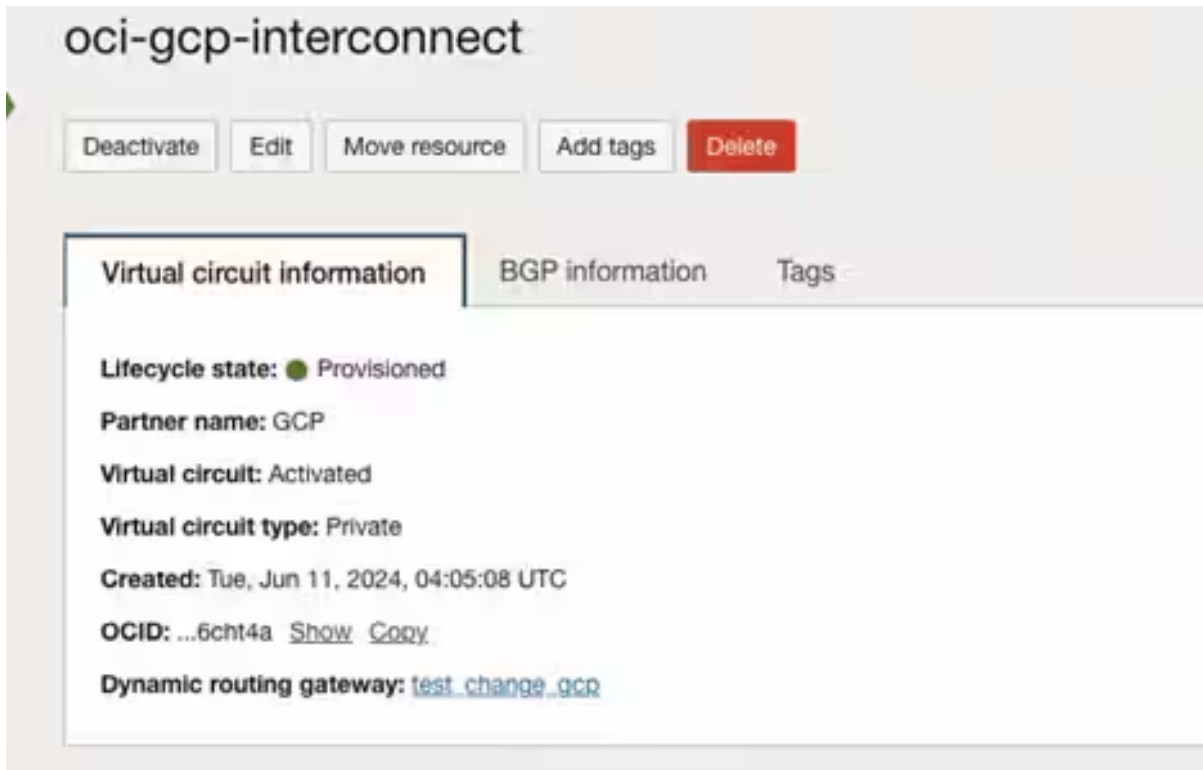
Partner service key **i**

092889cd-a20a-4a8a-abb6-262210fd67d7/us-east4/2

[Show advanced options](#)

Previous
Create
Save as stack
Cancel

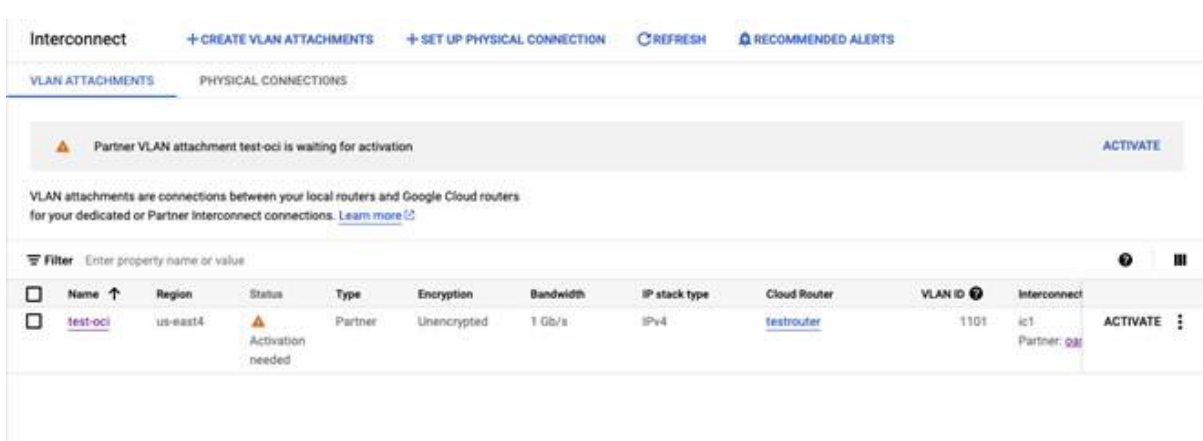
After you create the Oracle virtual circuit, wait until OCI configures your connections.



Step 4 (in Google Cloud): Activating the Connection.

This step is not required if pre-activate these VLAN attachments is Enabled in Figure.5 (Step 2)

Once configuration and provisioning have completed on the OCI side, you will receive an email notification from Google Cloud . After receiving the email, you must activate it from Google Cloud console. Activating the connection and checking its activation status enables you to verify that you have established connectivity with the Google Cloud .



Step 5 [OCI]:

Confirm that the Border Gateway Protocol (BGP) session that you have with Google Cloud is in an established state. BGP session can be verified from the OCI console as highlighted in Step 3. Don't proceed until you confirm that it is in established state. Contact OCI or Google Cloud support team if BGP state is not established.

You should be able to launch an instance in your VCN and access it (for example, with SSH) from a host in your existing private network. See [Creating an Instance](#). If you can, your FastConnect private virtual circuit is ready to use.

About Cloudsway

Cloudsway is a subsidiary of Wangsu Science and Technology (stock code: 300017), established in March 2023. Wangsu Science and Technology is a global leading provider of information infrastructure platform services, with business spread across more than 70 countries and regions worldwide.

Cloudsway is one of the three innovation engines in Wangsu's "2+3" strategy, providing enterprises with integrated products and solutions, such as cloud strategy consulting, modernized application construction, generative AI, and enterprise-grade cloud hosting services. solutions based on AWS.

Cloudsway is committed to become a leading provider of hybrid cloud solutions, offering secure, efficient, and convenient cloud services to enterprises, helping them with digital and intelligent transformation, and boosting their operational efficiency.