

【MeshCloud】 GCP与AWS路由打通

目的

- 打通AWS与GCP互联

注意

- 需格外注意aws与gcp侧vpc网段规划，不要冲突
- GCP侧同时需注意vpc其余region网段与aws vpc网段冲突问题

GCP

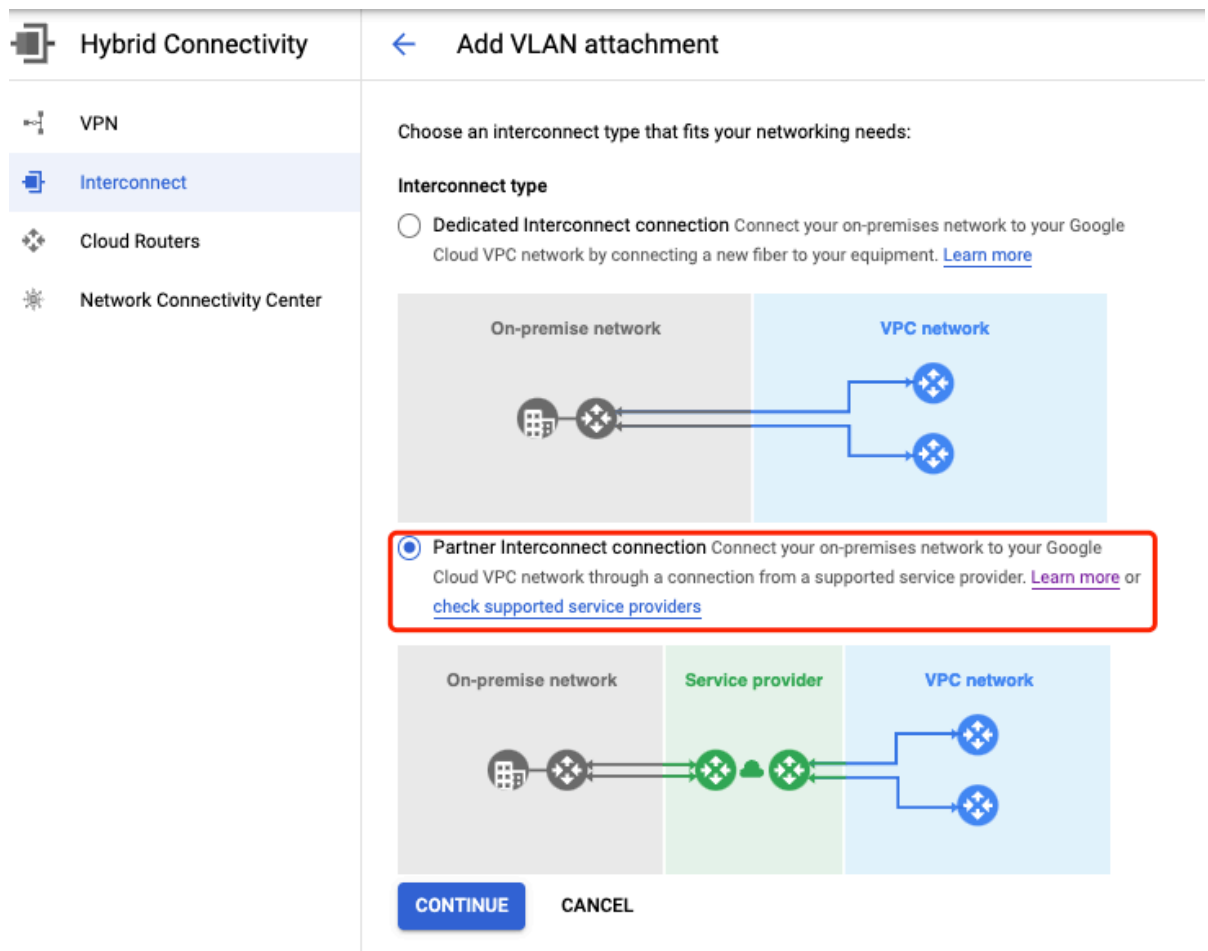
1. 创建Interconnect

- Console位置
 - Hybrid Connectivity----->Interconnect
- 说明

该项为创建互联专线，分为物理直连和Partner互联模式两种，此次选择Partner互联模式

- 步骤

1. 选择创建Partner Interconnect connection



2. 选择自己提供服务商

Hybrid Connectivity

VPN

Interconnect

Cloud Routers

Network Connectivity Center

← Add Partner VLAN attachment

1 Check your connection — 2 Add VLAN attachments — 3 Connect to your VPC networks

You need to set up physical connection with your service provider. [Check available service providers](#) for more information.

If you already have an existing physical connection provided by your service provider, you can continue.

I ALREADY HAVE A SERVICE PROVIDER

FIND A SERVICE PROVIDER

CANCEL

3. 配置专线相关信息

Hybrid Connectivity

VPN

Interconnect

Cloud Routers

Network Connectivity Center

← Add Partner VLAN attachment

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

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 关联 VPC，此处选择默认 default

Region *

asia-southeast1 (Singapore) 选择对应 Region

Region is permanent

4. 创建虚拟路由器

Create a router

Google Cloud Router dynamically exchanges routes between your Virtual Private Cloud (VPC) and on-premises networks by using Border Gateway Protocol (BGP)

Name *

gcp-cloudrouter



Lowercase letters, numbers, hyphens allowed

Description

Network *

default



Region *

asia-southeast1 (Singapore)



Google ASN

16550

BGP peer keepalive interval

20

seconds



Advertised routes

Routes

☒ Advertise all subnets visible to the Cloud Router (Default)

☐ Create custom routes

CREATE

CANCEL

5. 配置vlan attachment name和MTU，并创建专线

Hybrid Connectivity

VPN

Interconnect

Cloud Routers

Network Connectivity Center

← Add Partner VLAN attachment

✓ Check your connection

 —

2 Add VLAN attachments

 —

3 Connect to your VPC networks

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

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Network *

default

Region *

asia-southeast1 (Singapore)

Region is permanent

VLAN

Cloud Router *

gcp-cloudrouter

关联创建 cloud router

VLAN attachment name *

viangcp

自定义关联 vlan 名称

Lowercase letters, numbers, hyphens allowed

Description

Maximum transmission unit (MTU) *

1500

配置 MTU，选择 1500 即可

CREATE

BACK

6. 获取专线paring key并预激活vlan配置

Hybrid Connectivity

VPN

Interconnect

Cloud Routers

Network Connectivity Center

← Add Partner VLAN attachment

✓ Check your connection

 —

✓ Add VLAN attachments

 —

3 Connect to your VPC networks

Pairing key

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
viangcp	880947a8-1884-4bac-bef4-0b28b4284718/asia-southeast1/复制该段信息

Pre-activate these VLAN attachments

☒ Enable

OK

MegaPort

下方仅为范例介绍，具体位置按需进行选择


创建MCR

1, 选择MCR位置


*** Select MCR Location**

USA


Search


EQUINIX


Equinix MI1
Miami, USA


EQUINIX


Equinix NY9
New York, USA


EQUINIX


Equinix SE2
Seattle, USA


EQUINIX


Equinix SV1
San Jose, USA


INTERNAP

Internap SEF
Seattle, USA


IRON MOUNTAIN

Iron Mountain DEN-1
Denver, USA


IRON MOUNTAIN

Iron Mountain Phoenix
Phoenix, USA

Cancel

Next

2, 选择带宽及配置asn和名称



aws-2-gcp
1 Gbps
Equinix SE2, Seattle



Details

Prefix Filter Lists New

* Rate Limit

1 Gbps

The rate limit of the MCR is fixed for the life of the service

* MCR Name

aws-2-gcp

Service Level Reference ?

You can configure the Autonomous System Number (ASN) of this MCR or use the Megaport supplied public ASN 133937. The ASN will be used for BGP peering sessions on any VXC's connected to this MCR. It **cannot be edited** once the MCR has been ordered. Note that some public cloud services require the use of a public ASN. Consult the documentation relating to your cloud provider before overriding this default value.

* MCR ASN

133937

BGP Default State ?

Enabled

Shut Down

Cancel

← Back

Next →

3, ADD MCR完成配置


New MCR


✓

✓

3

Select LocationConfigureSummary

**aws-2-gcp**
1 Gbps
Equinix SE2, Seattle



Summary

Type: MCR


Name: aws-2-gcp

Rate Limit: 1 Gbps

MCR ASN: 133937

Initial BGP State: Enabled

Term: No Minimum Term

Monthly Rate: 

Cancel

← Back

Add MCR ✓

创建连接AWS Port

1, 选择aws连接区域

New Connection



aws-2-gcp
1 Gbps
Seattle, USA



US West (Oregon) (us-west-2)
Equinix SE2, Seattle

* Select Provider



Amazon Web Services
44 Hosted VIF Ports
72 Hosted Connection Ports



Google Cloud
60 Ports



IBM Cloud
31 Ports



Microsoft Azure
208 Ports



Nutanix
10 Ports



Oracle Cloud
46 Ports

AWS Connection Type

Hosted VIF

Hosted Connection

* Select Destination Port

USA



US West (N. California) (us-west-1)
CoreSite LA1, Los Angeles



US West (N. California) (us-west-1)
Equinix SV1, San Jose



US West (Oregon) (us-west-2)
EdgeConneX Portland, Hillsboro



US West (Oregon) (us-west-2)
Equinix SE2, Seattle



US West (Oregon) (us-west-2)
Switch SUPERNAP 7, Las Vegas

Cancel

Back

Next

2, 配置名称和速率

New Connection

✓

Select Type

✓

Select Port

3

Connection Details

4


MCR A-End


5


Cloud Details

6

Summary

aws-2-gcp
1 Gbps
Seattle, USA



US West (Oregon) (us-west-2)
Equinix SE2, Seattle

Connection Details

* Connection Name

Port-2-AWS-1G

Service Level Reference ?

Service Level Reference

* Rate Limit ?

1000

MAX: 1000 Mbps

Cancel

Back

Next

3，确认与MCR连接信息

New Connection

1

Select Type

2

Select Port

3

Connection Details

4


MCR A-End


5

Cloud Details

6

Summary

aws-2-gcp
1 Gbps
Seattle, USA

US West (Oregon) (us-west-2)
Equinix SE2, Seattle

MCR Connection detail

The MCR connection configuration will be generated automatically. Once the service is live you can modify the configuration.

Newly created BGP connections will be enabled.

Cancel

Back

Next

4，配置BGP相关信息

New Connection

1

Select Type

2

Select Port

3

Connection Details

4


MCR A-End


5

Cloud Details

6

Summary

aws-2-gcp
1 Gbps
Seattle, USA

US West (Oregon) (us-west-2)
Equinix SE2, Seattle

Connection details for AWS Service

Type

PublicPrivate

BGP Auth Key

meshcloud

AWS Connection Name

Port-2-AWS-1G

Customer IP address

192.168.1.1/30

AWS Account ID

aws侧账号id

Amazon IP address

192.168.1.2/30

Customer ASN

133937

Amazon ASN

该处需着重注意，后期需要进行调整匹配

Cancel

Back

Next

5, 确认配置完成配置

New Connection

✓

✓

✓

✓

✓

6

Select TypeSelect PortConnection DetailsMCR A-EndCloud DetailsSummary

aws-2-gcp
1 Gbps
Seattle, USA

↔

US West (Oregon) (us-west-2)
Equinix SE2, Seattle

Summary

Connection Name: Port-2-AWS-1G

Rate Limit: 1 Gbps

MCR A-End Details ▼

Cloud Details (AWS) ▼

CancelBackAdd VXC ✓

创建连接GCP Port

1, 输入gcp paring key并选择连接点

New Connection

- 1 **Select Type**
- 2 Select Port
- 3 **Connection Details**
- 4 MCR A-End
- 5 Summary



aws-2-gcp
1 Gbps
Seattle, USA



Seattle (sea-zone1-86)
Equinix SE2, Seattle

* Select Provider



AMS-IX
4 Ports



Alibaba Cloud
8 Ports



Amazon Web Services
44 Hosted VIF Ports
72 Hosted Connection Ports



Google Cloud
60 Ports



IBM Cloud
31 Ports



Microsoft Azure
208 Ports



Mikrotik

Google Cloud Configuration

* Google Partner Pairing Key 该为 gcp 侧创建复制

7f603e7e-b873-4175-9848-1f157f069e9b/us-west1/1

Valid Service Key

* Choose from available Google Ports



Los Angeles (lax-zone1-403)
Digital Realty LOS1, Los Angeles



Montreal (yul-zone1-1944)
Cologix MTL3, Montreal



New York (lga-zone1-16)
Digital Realty NYC2, New York



Phoenix (phx-zone1-917)
PhoenixNAP, Phoenix



San Jose (sjc-zone1-6)
Equinix SV1, San Jose



Seattle (sea-zone1-86)
Equinix SE2, Seattle



Toronto (yyz-zone1-392)
Cologix TOR1, Toronto

Cancel

Back

Next

2, 配置名称和速率

New Connection


1 Select Type

2 Select Port


3 Connection Details

4 MCR A-End

5 Summary

 **aws-2-gcp**
1 Gbps
Seattle, USA

↔

 **Seattle (sea-zone1-86)**
Equinix SE2, Seattle

Connection Details

* Connection Name

Service Level Reference ?

* Rate Limit ?

Cancel

Back

Next

3, 确认与MCR连接信息

New Connection

✓

Select Type

✓

Select Port

✓


Connection Details


4


MCR A-End

5

Summary

aws-2-gcp
1 Gbps
Seattle, USA



Seattle (sea-zone1-86)
Equinix SE2, Seattle

MCR Connection detail

The MCR connection configuration will be generated automatically. Once the service is live you can modify the configuration.

Newly created BGP connections will be enabled.

Cancel

← Back

Next →

4, 确认配置完成配置

New Connection

✓

Select Type

✓

Select Port

✓


Connection Details

✓


MCR A-End


5

Summary



aws-2-gcp
1 Gbps
Seattle, USA





Seattle (sea-zone1-86)
Equinix SE2, Seattle

Summary

Connection Name: gcp-2-aws-1g

Rate Limit: 1 Gbps

MCR A-End Details

▼

Cloud Details (GOOGLE)

▼

....

Cancel

⬅ Back

Add VXC ✓

查看确认配置

aws-2-gcp (Design)

MCR 1 Gbps (200% allocated)

Equinix SE2, Seattle, USA

⚙️🗑️🔒

⚠️ Not ordered yet. Order using sidebar on left.

+ Connection

Port-2-AWS-1G (Design)

A End VXC (1 Gbps) - US West (Oregon) (us-west-2)- Equinix SE2, Seattle, USA

aws

⚙️🗑️🔒

⚠️ Not ordered yet. Order using sidebar on left.

gcp-2-aws-1g (Design)

A End VXC (1 Gbps) - Seattle (sea-zone1-86)- Equinix SE2, Seattle, USA

Google Cloud

⚙️🗑️🔒

⚠️ Not ordered yet. Order using sidebar on left.

接受MegaPort推送VIF

Direct Connect > Virtual Interfaces

Virtual interfaces (2)

Q Search virtual interfaces

View details

Edit

Delete

Actions

Create virtual interface

< 1 >

<input type="checkbox"/>	ID	Name	Region	Connection ID	VLAN	Type	State
<input type="checkbox"/>	dxvif-fgv0n2i6	dfw gcp -sea aws	us-west-2	dxcon-fguk9ax9	2663	private	available
<input type="checkbox"/>	dxvif-fg6gae2	Port-2-AWS-1G	us-west-2	dxlag-fgjeine3	3594	private	confirming

Direct Connect > Virtual Interfaces > DXVIF-FG6GAIE2

DXVIF-FG6GAIE2

Accept

Delete

General configuration

Virtual interface ID

dxvif-fg6gae2

Virtual interface name

Port-2-AWS-1G

AWS account

077128814083

Virtual interface type

private

State

confirming

VLAN

3594

Region

us-west-2

Amazon side ASN

7224

Connection ID

dxlag-fgjeine3

Location

EqSe2

SiteLink enabled

false

AWS logical device

EqSe2-1wulia02zznwxu

MTU

1500

Jumbo frame capable

true

Peerings

Monitoring

Tags

Test history

Peerings (1)

Delete

Add peering

ID	Name	BGP ASN	BGP authentication key	Your router peer IP	Amazon router peer IP	AWS logical device	State	BGP status
dxpeer-fgyypxlo	ipv4	133937	*****	192.168.1.1/30	192.168.1.2/30	EqSe2-1wulia02zznwxu	pending	down

Direct Connect > Virtual Interfaces > DXVIF-FG6GAIE2 > Accept

Accept virtual interface

Virtual interface settings

Gateway type

Gateway type for this virtual interface.

☐ Direct Connect Gateway - recommended

Allows connections to multiple VPCs and Regions.

☒ Virtual Private Gateway

Allows connections to a single VPC in the same Region.

Virtual private gateway

A virtual private gateway attached to a VPC you wish to connect to.

zhangtao-gcp-vpg

关联对应 vpg

Cancel

Accept virtual interface

配置VPC路由

- VPC路由表内，将GCP路由添加，并指向到对应VPG即可