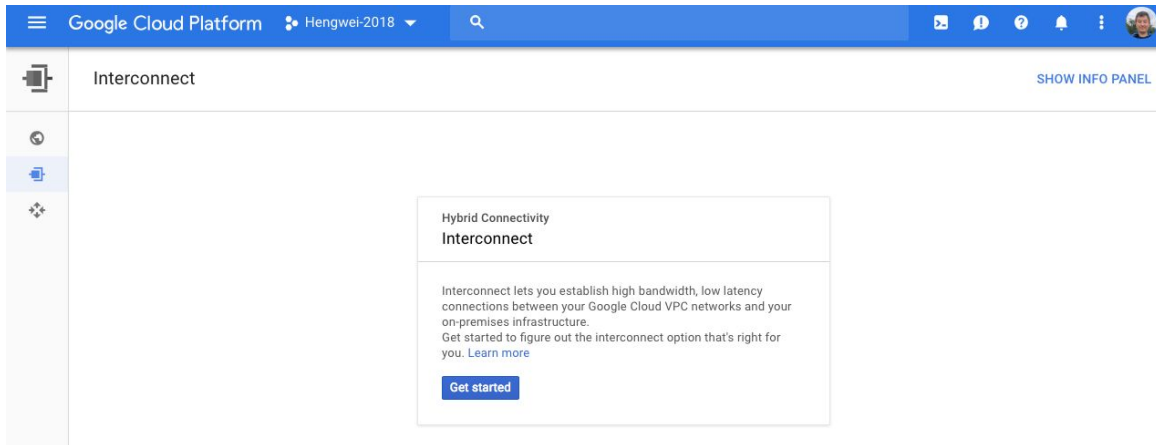
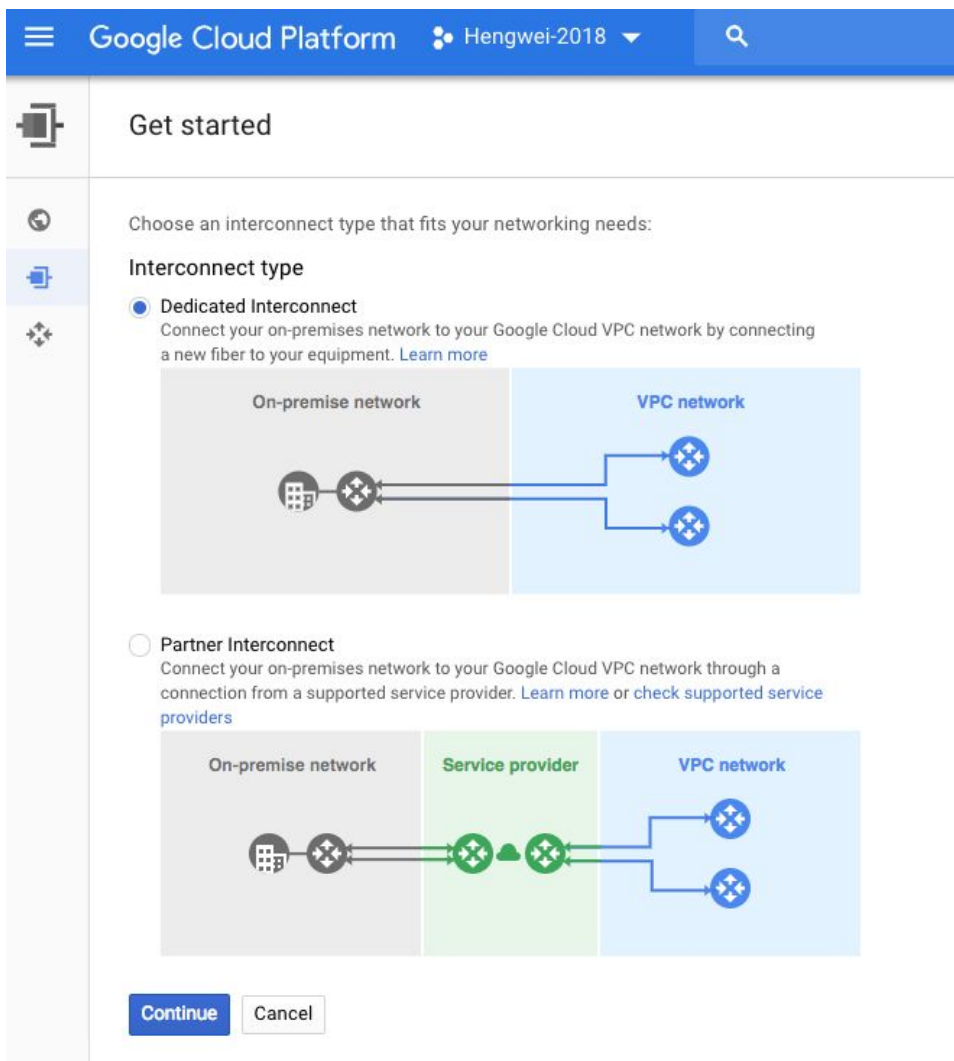


Partner Interconnect配置过程的状态记录

1 在Google Cloud Console中点击Interconnect, 点击Get Started



2 选择Partner Interconnect



3. 选择I already have a service provider

Google Cloud Platform Hengwei-2018

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

Get connected through a service provider partner

To connect your on-premise network to Google via a connection from a service provider

- Check your connection**
Get a connection to a [supported service provider](#) to start using Partner Interconnect. In the premises that you want to access your Google Cloud Platform resources, you must already have equipment that is connected to your chosen service provider.
- Add VLAN attachments**
Add VLAN attachments to your VPC network, which generate pairing keys for your service provider.
- Connect to your VPC networks**
Go to your service provider and connect your VPC network. Your service provider will ask for your pairing keys.
You will need to return here to complete your connection unless your service provider is managing BGP for you and you pre-activate the connection.

4. 在add partner attachment中，先选择cloud router，创建一个新的cloud router，注意这里AS号码已经自动为16550

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 ?

hwrouter01

Description (Optional)

Network ?

vpn-interconnect

Region ?

asia-east1

Google ASN

16550

Advertised routes

Create

Cancel

5. 完成add partner attachment的设置，根据申请线路的情况，选择冗余的连接，或没有冗余的连接。另外这里的vlan attachment name不是vlan id，只是一个标示

Google Cloud Platform

Hengwei-2018

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)

VPC Network

vpn-interconnect

Region ?

asia-east1

VLAN

Cloud Router ?
 hwrouter01

VLAN attachment name ?
 hwvlan01

Description (Optional)

6. 完成创建后，生成Pairing Key。把这个Pairing key交给运营商做施工。如果是L2的线路，这里的Pre-active的选项不需要勾选，如果是L3的线路，运营商给配置BGP，这里的Pre-Active的选项需要选择

Google Cloud Platform

Hengwei-2018

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.

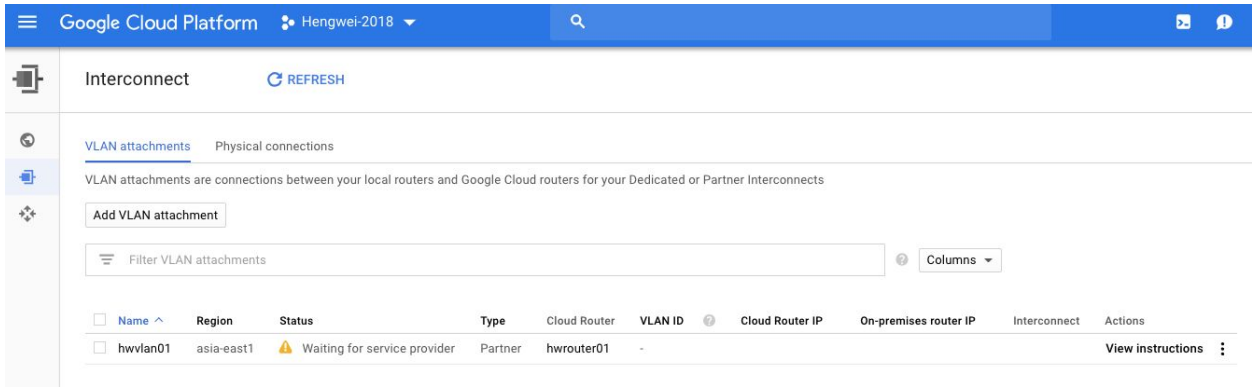
VLAN attachment name
Pairing key

hwvlan01
 a44aefc1-7017-4c46-ae94-5598b6ac8e5d/asia-east1/1

Pre-activate these VLAN attachments ?

☐ Enable

7. 此时，可以看到Interconnect的状态是：waiting for service provider



8. 运营商施工完成后状态变成Activation needed



点击后面的Activate，进行激活。

9. 激活后，状态变成需要配置BGP，可以看到，状态改变成了“需要BGP配置”。可以看到Cloud Router的IP地址和IDC的IP地址在一个169.254.x.x/29的link local的地址。同时可以看到运营商partner的详细互联信息，在哪个zone，和哪个nni：



10. 点击“配置BGP”，进入BGP配置页面，输入Peer ASN号码。如果对MED值有修改的需求，在Advertised route priority(MED)的值进行修改：

EDIT BGP session

Name ?

auto-ia-bgp-second-vlan-att-4f1152f0daf0b7e

Peer ASN ?

65001

Advertised route priority (MED) (Optional) ?

Cloud Router BGP IP

169.254.135.217

BGP peer IP

169.254.135.218

Advertised routes

11. 配置完成后，如果IDC内的路由器配置和云端出现不匹配，云端状态会出现“已停止”



11. IDC内的路由器配置成功后，Interconnect的状态会变成运行中：

名称 ^	区域	状态	类型	Cloud Router	VLAN ID	Cloud Router IP	内部部署式路由器 IP	互连	操作
	asia-southeast1	正在等待服务提供商	合作伙伴	primary	-				查看说明
	asia-southeast1	运行中	合作伙伴	second	-	169.254. i/29	169.254. i/29	eqix-google-nni4-sg-sec-zone2 合作伙伴: Equinix Inc.	

12. 下面是Cisco和Juniper的Sample配置

```
router bgp 64500
  bgp graceful-restart
  neighbor 169.254.180.81 description "bgp to my-router in us-central1"
  neighbor 169.254.180.81 remote-as 65200
  neighbor 169.254.180.81 local-as 65201
  neighbor 169.254.180.81 ebgp-multihop 4
  neighbor 169.254.180.81 update-source Port-channel22.1000
  neighbor 169.254.180.81 route-map SEND-T0-GCP out
!
interface GigabitEthernet0/0/0
  channel-group 22 mode active
!
interface Port-channel22.1
  description "Untagged VLAN for testing"
  encapsulation dot1Q 1 native
  ip address 169.254.202.254 255.255.255.252
!
interface Port-channel22.1000
  description "my-attachment to my-router in us-central1"
  encapsulation dot1Q 1000
  ip address 169.254.180.82 255.255.255.248
  ip mtu 1440
!
```

```

interface ae20 {
  description "Cloud Interconnect - myinterconnect";
  flexible-vlan-tagging;
  native-vlan-id 1;
  aggregated-ether-options {
    lacp {
      active;
    }
  }
  unit 0 {
    description "Untagged VLAN for testing"
    vlan-id 1;
    family inet {
      address 169.254.202.254/30;
    }
  }
  unit 1 {
    description "myattachment to myrouter in us-central1"
    vlan-id 1000;
    family inet {
      address 169.254.180.82/29;
      mtu 1440;
    }
  }
}

routing-options {
  graceful-restart;
}

protocols bgp {
  group test-interconnect {
    type external;
    multihop {
      ttl 4;
    }
    graceful-restart;
    hold-time 60;
    local-address 169.254.180.82;
    export [ MY_ROUTES ];
    local-as 65201;
    neighbor 169.254.180.81 {
      peer-as 65200;
    }
  }
}

```

13. 需要注意的事项


云端路由器和IDC路由器的互联地址为169.254.x.x，这个169.254.x.x的地址，在路由器上是可以ping通的。

14. 更改customer BGP AS number

更改Customer BGP AS number的位置比较隐蔽，具体修改方法如下：


Interconnect [REFRESH](#)





[VLAN attachments](#) Physical connections

 BGP is down on 4 VLAN attachments


VLAN attachments are connections between your local routers and Google Cloud routers for your Dedicated or Partner Interconnect.

[Add VLAN attachment](#)

 Filter VLAN attachments


<input type="checkbox"/> Name ^	Region	Status	Type	Cloud Router
<input type="checkbox"/> europe-west2-m	europe-west2	 Down	Partner	europe-west2-router-m
<input type="checkbox"/> sdy-attachment-01	australia-southeast1	 Down	Partner	sdy-router-01
<input type="checkbox"/> second-vlan-attachment-backup	asia-southeast1	 Down	Partner	second-cloud-router-backup
<input type="checkbox"/> us-west-attachment-01	us-west1	 Down	Partner	us-west-router-01

[←](#) VLAN attachment details [DELETE](#) [DISABLE](#)

 europe-west2-m

Status: Down

[Details](#) [Monitoring](#)

Type	Partner
Description	-
Bandwidth	50 Mb/s
Interconnect	eqix-google-nni1-ld-pri-zone1 Partner: Equinix Inc. 
Region	europe-west2

Connection

Cloud router	europe-west2-router-m
Cloud router IP	169.254.0.57/29
Local router IP	169.254.0.58/29
BGP session	auto-ia-bgp-europe-west2-m-52a1d3fd6b98c68

EDIT BGP session

Name 

Peer ASN 

Advertised route priority (MED) (Optional) 

Cloud Router BGP IP

BGP peer IP

 [Advertised routes](#)