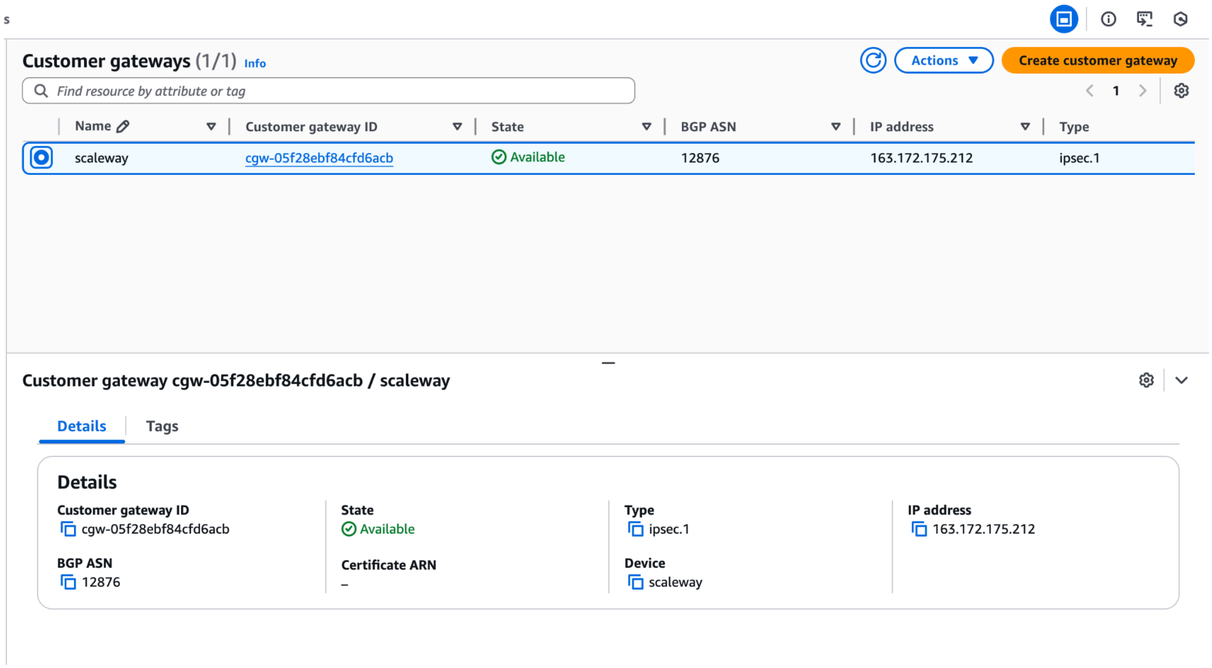
Step 1: Deploy Scaleway VPN Gateway to get its public IP

Shell

```
provider "scaleway" {
  access_key = var.scw_access_key
  secret_key = var.scw_secret_key
  project_id = var.scw_project_id
  region     = var.region
}

terraform {
  required_providers {
    scaleway = {
      source  = "scaleway/scaleway"
      version = ">= 2.28.0"
    }
  }
}

resource "scaleway_vpc" "vpc" {
  name = "workshop-vpc"
}
resource "scaleway_vpc_private_network" "pn" {
  name   = "workshop-pn"
  vpc_id = scaleway_vpc.vpc.id
  ipv4_subnet {
    subnet = "172.16.64.0/22"
  }



resource "scaleway_s2s_vpn_gateway" "vgw" {
 name               = "workshop-vpn-gw"
 private_network_id = scaleway_vpc_private_network.pn.id
 gateway_type       = "VGW-S"
}
```

Step 2: Deploy AWS Customer Gateway



Customer gateways (1/1) Info

Name	Customer gateway ID	State	BGP ASN	IP address	Type
scaleway	cgw-05f28ebf84cfd6acb	✓ Available	12876	163.172.175.212	ipsec.1

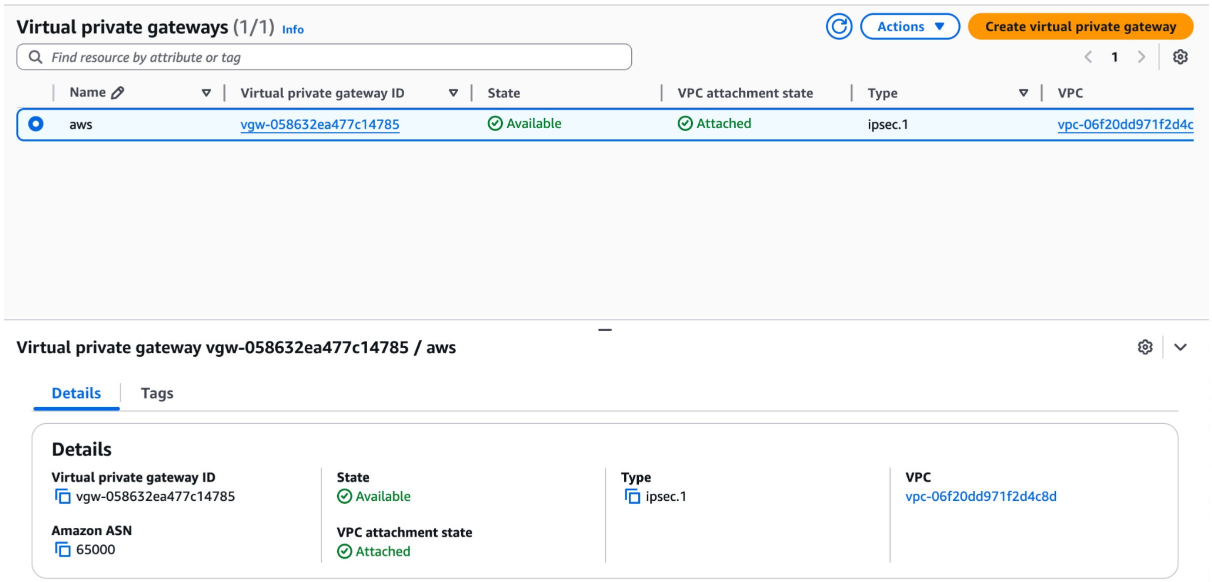
Customer gateway cgw-05f28ebf84cfd6acb / scaleway

Details

Customer gateway ID	State	Type	IP address
cgw-05f28ebf84cfd6acb	✓ Available	ipsec.1	163.172.175.212
BGP ASN	**Certificate ARN**	**Device**	
12876	–	scaleway	

Put the public IP of the step 1 and the BGP ASN of Scaleway 12876

Step 3: Deploy AWS VPG, nominate the ASN as 65000 or use Amazon’s default ASN, attach it to VPC



Virtual private gateways (1/1) Info

Actions ▼
Create virtual private gateway
Find resource by attribute or tag

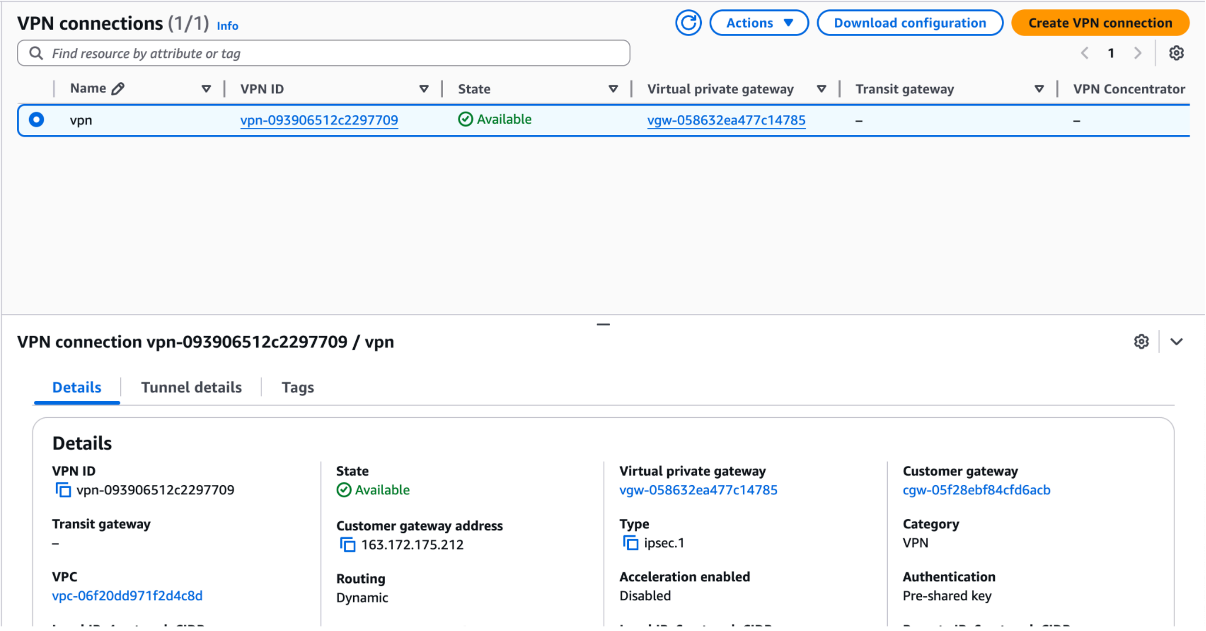
Name	Virtual private gateway ID	State	VPC attachment state	Type	VPC
aws	vgw-058632ea477c14785	✓ Available	✓ Attached	ipsec.1	vpc-06f20dd971f2d4c

Virtual private gateway vgw-058632ea477c14785 / aws

Details

Virtual private gateway ID	State	Type	VPC
vgw-058632ea477c14785	✓ Available	ipsec.1	vpc-06f20dd971f2d4c8d
Amazon ASN	**VPC attachment state**		
65000	✓ Attached		

Step 4: Create a AWS Cloudwatch log group to collect ipsec and bgp logs, and create AWS S2S VPN Connection, link the VPG and Customer Gateway, no worries about the rest of the configuration



VPN connections (1/1) Info

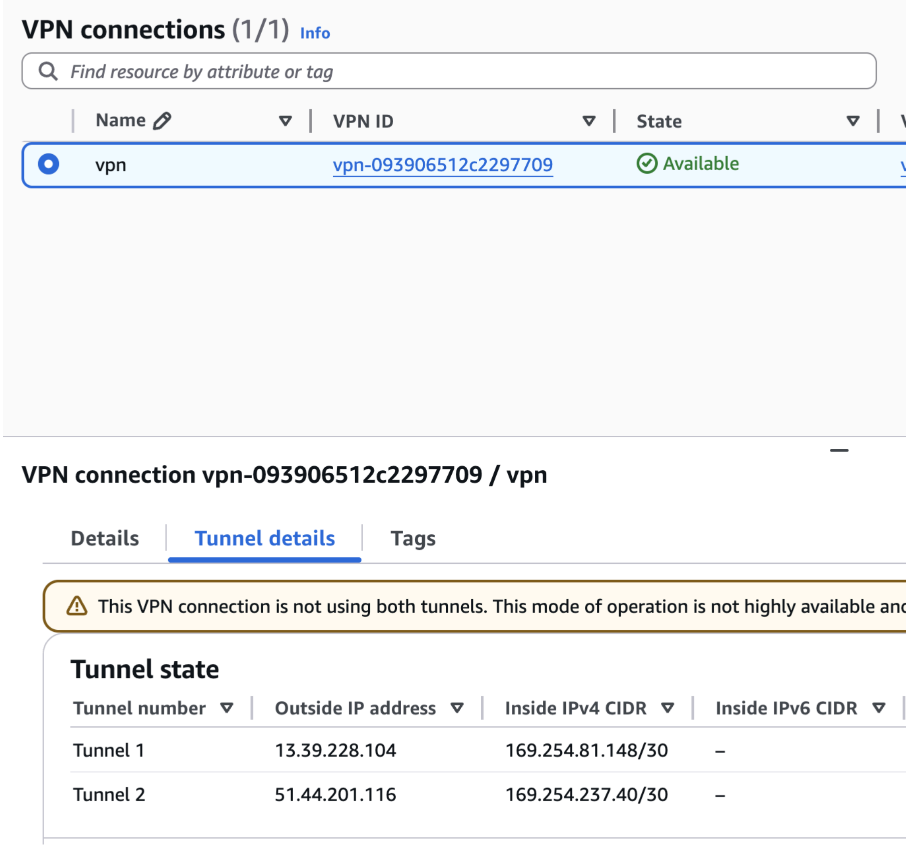
	Name	VPN ID	State	Virtual private gateway	Transit gateway	VPN Concentrator
●	vpn	vpn-093906512c2297709	✓ Available	vgw-058632ea477c14785	–	–

VPN connection vpn-093906512c2297709 / vpn

Details

VPN ID vpn-093906512c2297709	**State** ✓ Available	**Virtual private gateway** vgw-058632ea477c14785	**Customer gateway** cgw-05f28ebf84cfd6acb
Transit gateway –	**Customer gateway address** 163.172.175.212	**Type** ipsec.1	**Category** VPN
VPC vpc-06f20dd971f2d4c8d	**Routing** Dynamic	**Acceleration enabled** Disabled	**Authentication** Pre-shared key

Find out the public IP address of Tunnel 1, here is 13.39.228.104



VPN connections (1/1) Info

	Name	VPN ID	State
●	vpn	vpn-093906512c2297709	✓ Available

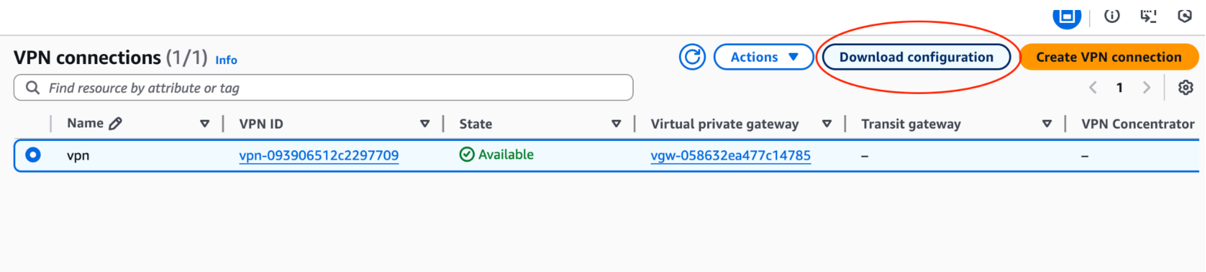
VPN connection vpn-093906512c2297709 / vpn

⚠ This VPN connection is not using both tunnels. This mode of operation is not highly available anc

Tunnel state

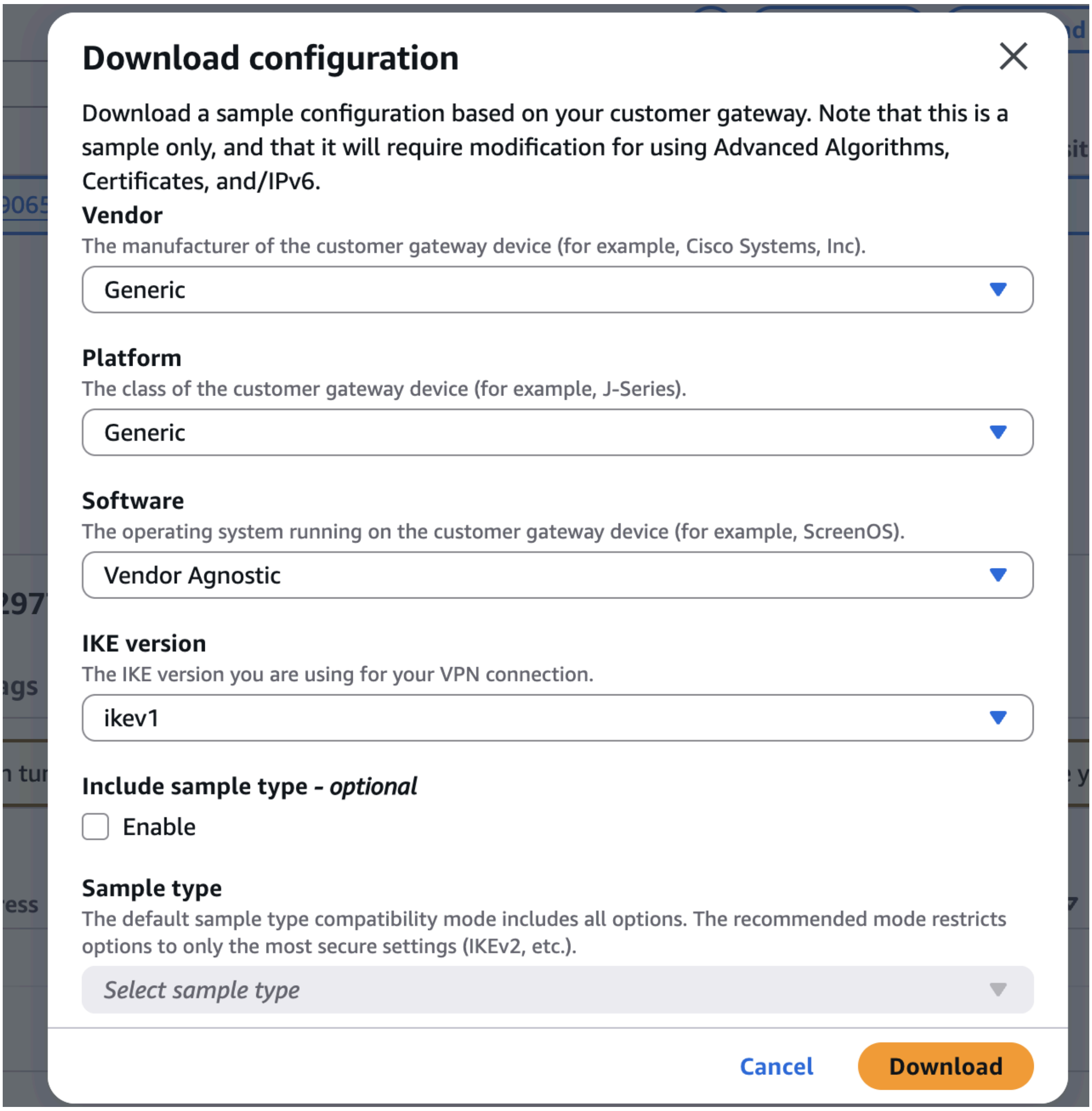
Tunnel number	Outside IP address	Inside IPv4 CIDR	Inside IPv6 CIDR
Tunnel 1	13.39.228.104	169.254.81.148/30	–
Tunnel 2	51.44.201.116	169.254.237.40/30	–

Download the configuration



VPN connections (1/1) Info

	Name	VPN ID	State	Virtual private gateway	Transit gateway	VPN Concentrator
●	vpn	vpn-093906512c2297709	✓ Available	vgw-058632ea477c14785	–	–



Download configuration

Download a sample configuration based on your customer gateway. Note that this is a sample only, and that it will require modification for using Advanced Algorithms, Certificates, and/IPv6.

Vendor
The manufacturer of the customer gateway device (for example, Cisco Systems, Inc).
Generic ▼

Platform
The class of the customer gateway device (for example, J-Series).
Generic ▼

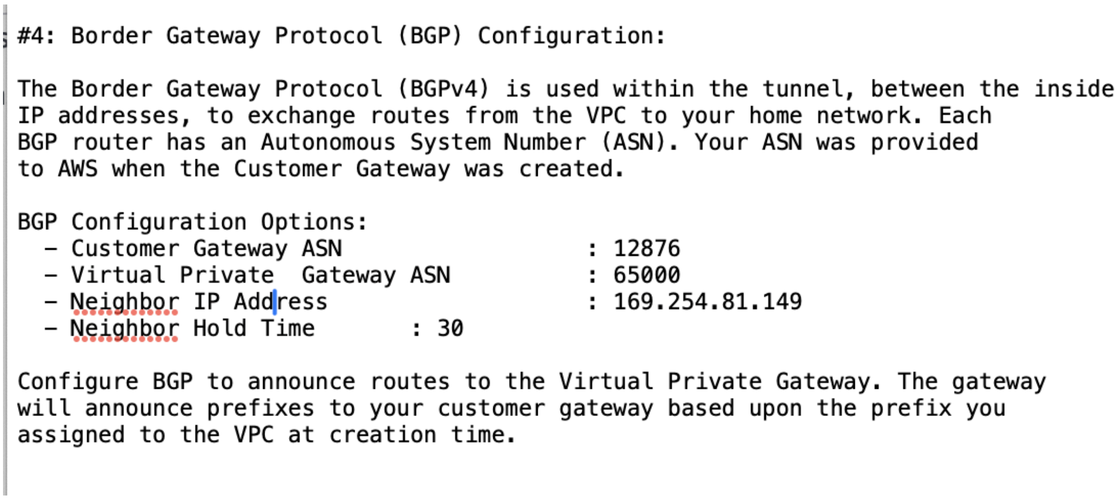
Software
The operating system running on the customer gateway device (for example, ScreenOS).
Vendor Agnostic ▼

IKE version
The IKE version you are using for your VPN connection.
ikev1 ▼

Include sample type - *optional*
□ Enable

Sample type
The default sample type compatibility mode includes all options. The recommended mode restricts options to only the most secure settings (IKEv2, etc.).
Select sample type ▼

Confirm all the setup and also the IP of BGP interface



```
#4: Border Gateway Protocol (BGP) Configuration:

The Border Gateway Protocol (BGPv4) is used within the tunnel, between the inside
IP addresses, to exchange routes from the VPC to your home network. Each
BGP router has an Autonomous System Number (ASN). Your ASN was provided
to AWS when the Customer Gateway was created.

BGP Configuration Options:
  - Customer Gateway ASN                  : 12876
  - Virtual Private  Gateway ASN          : 65000
  - Neighbor IP Address                   : 169.254.81.149
  - Neighbor Hold Time       : 30

Configure BGP to announce routes to the Virtual Private Gateway. The gateway
will announce prefixes to your customer gateway based upon the prefix you
assigned to the VPC at creation time.
```

Step 5: Deploy Scaleway Customer Gateway and build connection

Shell

```
resource "scaleway_s2s_vpn_customer_gateway" "cgw" {
 name        = "workshop-customer-gw"
 ipv4_public = var.cgw_ip
 asn         = var.cgw_asn
}


resource "scaleway_s2s_vpn_routing_policy" "policy" {
 name              = "workshop-vpn-policy"
 is_ipv6           = false
 prefix_filter_in = ["172.31.0.0/16"]  #VPC CIDR of AWS
 prefix_filter_out = ["172.16.64.0/22"]  #VPC CIDR of SCW
}


resource "scaleway_s2s_vpn_connection" "main" {
 name                     = "workshop-connection"
 vpn_gateway_id           = scaleway_s2s_vpn_gateway.vgw.id
 customer_gateway_id      = scaleway_s2s_vpn_customer_gateway.cgw.id
 initiation_policy        = "customer_gateway"
 enable_route_propagation = true


 bgp_config_ipv4 {
   routing_policy_id = scaleway_s2s_vpn_routing_policy.policy.id
   private_ip        = "169.254.81.150/30" #Use another ip but within the
same CIDR
   peer_private_ip   = "169.254.81.149/30" #BGP interface ip used by AWS
 }


 ikev2_ciphers {
   encryption = "aes256"
   integrity  = "sha256"
   dh_group   = "modp2048"
 }
 esp_ciphers {
   encryption = "aes256"
   integrity  = "sha256"
   dh_group   = "modp2048"
 }
}




data "scaleway_secret_version" "s2s_psk" {
 secret_id = scaleway_s2s_vpn_connection.main.secret_id
 revision  = tostring(scaleway_s2s_vpn_connection.main.secret_version)
}


output "psk" {
 value     = data.scaleway_secret_version.s2s_psk.data
 sensitive = true
}
```

Step 6: Fetch the psk secret of Scaleway's VPN connection and put it into AWS Tunnel 1

Shell

```
scw secret secret list region=fr-par -o json | jq .
[
  {
    "id": "6382b71a-a958-40a3-952c-890c19354fa0",
    "project_id": "50fc0d26-96ad-4d8b-8b37-aeff2d19396a",
    "name": "connection_1fc87ea9-cb89-4aea-bceb-4a5f6a04c0ba",
    "status": "ready",
    "created_at": "2026-02-05T15:06:58.823909Z",
    "updated_at": "2026-02-05T15:06:58.823909Z",
    "tags": [
      "S2S VPN"
    ],
    "version_count": 1,
    "description": "Generated by Scaleway",
    "managed": false,
    "protected": true,
    "type": "opaque",
    "path": "/s2s_vpn",
    "ephemeral_policy": null,
    "used_by": [
      "s2s_vpn"
    ],
    "deletion_requested_at": null,
    "region": "fr-par"
  }
]
```

Shell

```
scw secret version list 6382b71a-a958-40a3-952c-890c19354fa0
region=fr-par


REVISION  SECRET ID                             STATUS   CREATED AT
UPDATED AT      DELETED AT  DESCRIPTION  LATEST  DELETION REQUESTED AT
1         6382b71a-a958-40a3-952c-890c19354fa0  enabled  25 minutes ago  25
minutes ago  -           -            true    -
```

Shell

```
scw secret version access 6382b71a-a958-40a3-952c-890c19354fa0 revision=1
region=fr-par
SecretID  6382b71a-a958-40a3-952c-890c19354fa0
Revision  1
Data      QlpDZlNKOU1uUThwMzNFWlBPcVp5TmpUR2xNSVZtZm4=
Type      opaque
```

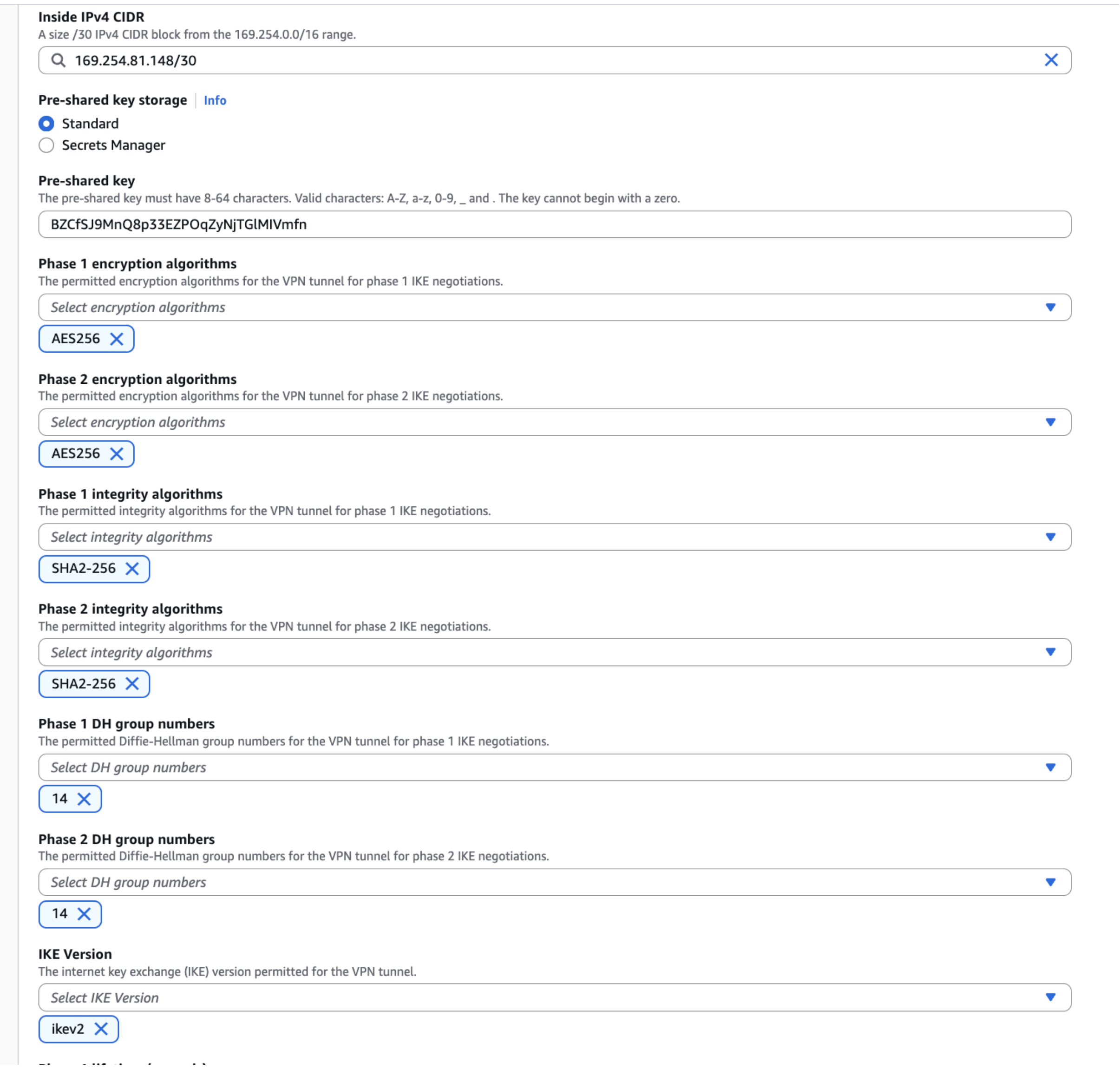
Shell

```
echo 'QlpDZlNKOU1uUThwMzNFWlBPcVp5TmpUR2xNSVZtZm4=' | base64 -D
BZCfSJ9MnQ8p33EZPOqZyNjTGlMIVmfn
```

Copy BZCfSJ9MnQ8p33EZPOqZyNjTGlMIVmfn into AWS tunnel 1, meanwhile make sure all the encryption rules are aligned with what we configured at Scaleway

Shell

```
We run **IPsec over IKEv2** on both sides and made sure everything lines up:
| Parameter           | Our AWS side    | Our Scaleway side |
|--------------------|----------------|------------------|
| IKE version         | IKEv2           | IKEv2             |
| Phase 1 encrypt     | AES-256         | aes256            |
| Phase 1 integrity   | SHA2-256        | sha256            |
| Phase 1 DH          | 14 (MODP2048)   | modp2048          |
| Phase 2 encrypt     | AES-256         | aes256            |
| Phase 2 integrity   | SHA2-256        | sha256            |
| Phase 2 DH          | 14              | modp2048          |
| DPD                 | restart after 30 s | (aligned as needed) |
```



Inside IPv4 CIDR
A size /30 IPv4 CIDR block from the 169.254.0.0/16 range.
169.254.81.148/30

Pre-shared key storage | Info
● Standard
○ Secrets Manager

Pre-shared key
The pre-shared key must have 8-64 characters. Valid characters: A-Z, a-z, 0-9, _ and . The key cannot begin with a zero.
BZCfSJ9MnQ8p33EZPOqZyNjTGlMIVmfn

Phase 1 encryption algorithms
The permitted encryption algorithms for the VPN tunnel for phase 1 IKE negotiations.
Select encryption algorithms
AES256 ✕

Phase 2 encryption algorithms
The permitted encryption algorithms for the VPN tunnel for phase 2 IKE negotiations.
Select encryption algorithms
AES256 ✕

Phase 1 integrity algorithms
The permitted integrity algorithms for the VPN tunnel for phase 1 IKE negotiations.
Select integrity algorithms
SHA2-256 ✕

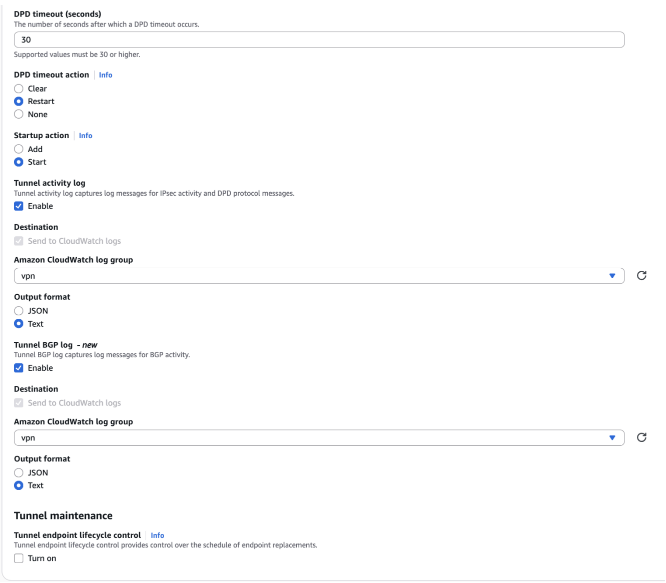
Phase 2 integrity algorithms
The permitted integrity algorithms for the VPN tunnel for phase 2 IKE negotiations.
Select integrity algorithms
SHA2-256 ✕

Phase 1 DH group numbers
The permitted Diffie-Hellman group numbers for the VPN tunnel for phase 1 IKE negotiations.
Select DH group numbers
14 ✕

Phase 2 DH group numbers
The permitted Diffie-Hellman group numbers for the VPN tunnel for phase 2 IKE negotiations.
Select DH group numbers
14 ✕

IKE Version
The internet key exchange (IKE) version permitted for the VPN tunnel.
Select IKE Version
ikev2 ✕

Ask AWS to start the session and when it’s timeout do restart



DPD timeout (seconds)
The number of seconds after which a DPD timeout occurs.
30
Supported values must be 30 or higher.

DPD timeout action Info
○ Clear
● Restart
○ None

Startup action Info
○ Add
● Start

Tunnel activity log
Tunnel activity log captures log messages for IPsec activity and DPD protocol messages.
☑ Enable

Destination
☑ Send to CloudWatch logs

Amazon CloudWatch log group
vpn

Output format
○ JSON
● Text

Tunnel BGP log - *new*
Tunnel BGP log captures log messages for BGP activity.
☑ Enable

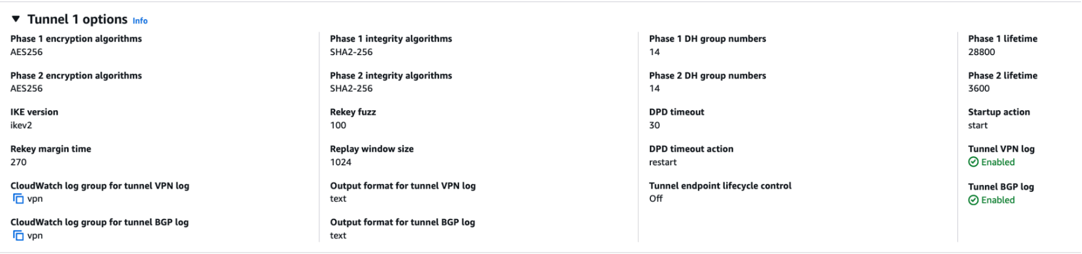
Destination
☑ Send to CloudWatch logs

Amazon CloudWatch log group
vpn

Output format
○ JSON
● Text

Tunnel maintenance

Tunnel endpoint lifecycle control Info
Tunnel endpoint lifecycle control provides control over the schedule of endpoint replacements.
□ Turn on



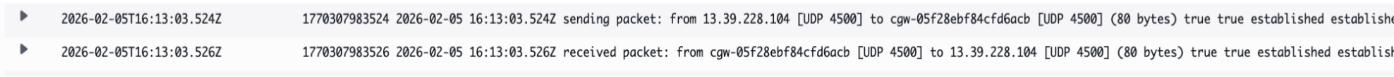
Tunnel 1 options Info

Phase 1 encryption algorithms AES256	**Phase 1 integrity algorithms** SHA2-256	**Phase 1 DH group numbers** 14	**Phase 1 lifetime** 28800
Phase 2 encryption algorithms AES256	**Phase 2 integrity algorithms** SHA2-256	**Phase 2 DH group numbers** 14	**Phase 2 lifetime** 3600
IKE version ikev2	**Rekey fuzz** 100	**DPD timeout** 30	**Startup action** start
Rekey margin time 270	**Replay window size** 1024	**DPD timeout action** restart	**Tunnel VPN log** ✓ Enabled
CloudWatch log group for tunnel VPN log vpn	**Output format for tunnel VPN log** text	**Tunnel endpoint lifecycle control** Off	**Tunnel BGP log** ✓ Enabled
CloudWatch log group for tunnel BGP log vpn	**Output format for tunnel BGP log** text		

Step 7: Verify ipsec connection and BGP session

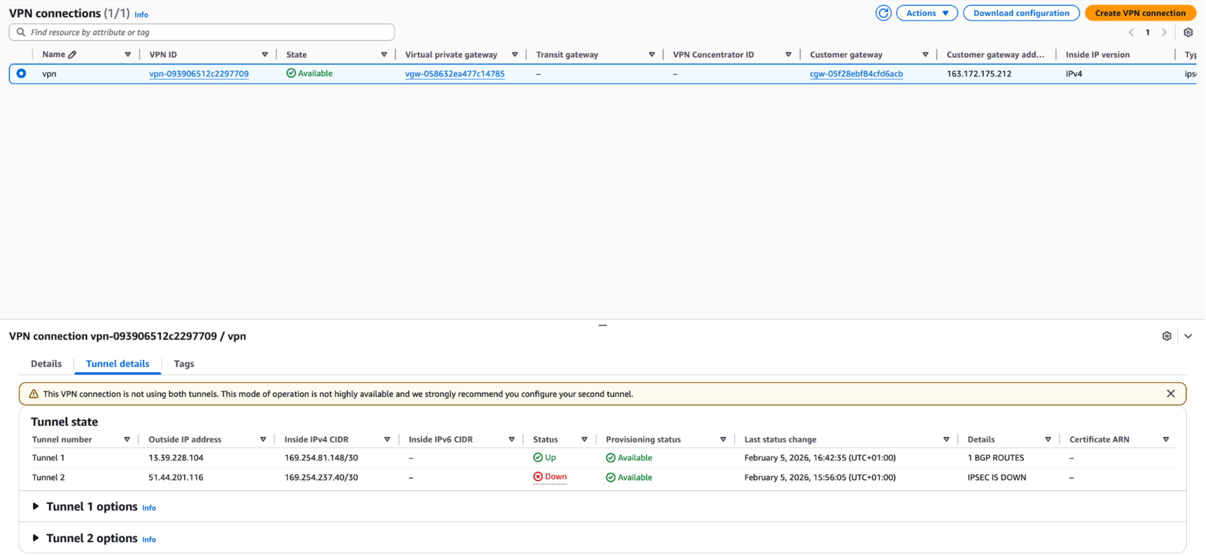
AWS:

Checkout Cloudwatch:



```
▶  2026-02-05T16:13:03.524Z    1770307983524 2026-02-05 16:13:03.524Z sending packet: from 13.39.228.104 [UDP 4500] to cgw-05f28ebf84cfd6acb [UDP 4500] (80 bytes) true true established establishe
▶  2026-02-05T16:13:03.526Z    1770307983526 2026-02-05 16:13:03.526Z received packet: from cgw-05f28ebf84cfd6acb [UDP 4500] to 13.39.228.104 [UDP 4500] (80 bytes) true true established establish
```

Checkout Console



VPN connections (1/1) Info

	Name	VPN ID	State	Virtual private gateway	Transit gateway	VPN Concentrator ID	Customer gateway	Customer gateway add...	Inside IP version	Tyı
●	vpn	vpn-093906512c2297709	✓ Available	vgw-058632ea477c14785	–	–	cgw-05f28ebf84cfd6acb	163.172.175.212	IPv4	ips

VPN connection vpn-093906512c2297709 / vpn

⚠ This VPN connection is not using both tunnels. This mode of operation is not highly available and we strongly recommend you configure your second tunnel.

Tunnel state

Tunnel number	Outside IP address	Inside IPv4 CIDR	Inside IPv6 CIDR	Status	Provisioning status	Last status change	Details	Certificate ARN
Tunnel 1	13.39.228.104	169.254.81.148/30	–	✓ Up	✓ Available	February 5, 2026, 16:42:35 (UTC+01:00)	1 BGP ROUTES	–
Tunnel 2	51.44.201.116	169.254.237.40/30	–	☒ Down	✓ Available	February 5, 2026, 15:56:05 (UTC+01:00)	IPSEC IS DOWN	–

▶ **Tunnel 1 options** Info

▶ **Tunnel 2 options** Info

Scaleway:

Python

```
scw s2s-vpn connection list

ID                                    PROJECT ID
ORGANIZATION ID                       NAME                TAGS  CREATED AT
1fc87ea9-cb89-4aea-bceb-4a5f6a04c0ba  50fc0d26-96ad-4d8b-8b37-aeff2d19396a
50fc0d26-96ad-4d8b-8b37-aeff2d19396a  workshop-connection  []    43 minutes
ago
```

Python

```
scw s2s-vpn connection get 1fc87ea9-cb89-4aea-bceb-4a5f6a04c0ba

ID                                1fc87ea9-cb89-4aea-bceb-4a5f6a04c0ba
ProjectID                         50fc0d26-96ad-4d8b-8b37-aeff2d19396a
OrganizationID                    50fc0d26-96ad-4d8b-8b37-aeff2d19396a
Name                              workshop-connection
CreatedAt                         44 minutes ago
UpdatedAt                         9 minutes ago
Status                            active
IsIPv6                            false
InitiationPolicy                  customer_gateway
SecretID                          6382b71a-a958-40a3-952c-890c19354fa0
SecretRevision                    1
Ikev2Ciphers.0.Encryption         aes256
Ikev2Ciphers.0.Integrity          sha256
Ikev2Ciphers.0.DhGroup            modp2048
EspCiphers.0.Encryption           aes256
EspCiphers.0.Integrity            sha256
EspCiphers.0.DhGroup              modp2048
RoutePropagationEnabled           true
VpnGatewayID                      e25edab1-3f7c-43d9-ac15-29548d08618d
CustomerGatewayID                 0eb9471e-4e35-4a71-9614-cb8715542856
TunnelStatus                      up
TunnelStatusIPv4                  unknown_tunnel_status
TunnelStatusIPv6                  unknown_tunnel_status
BgpStatusIPv4                     up
BgpStatusIPv6                     disabled
BgpSessionIPv4.RoutingPolicyID    3ca3c7b5-b81d-4514-96a0-aaf103931e88
BgpSessionIPv4.PrivateIP          169.254.81.150/30
BgpSessionIPv4.PeerPrivateIP      169.254.81.149/30
Region                            fr-par
```

Need to make sure Tunnel and BGP are both UP