

VPC Transit Gateway

VPC Transit Gateway

Routing

TRANSIT GATEWAY ROUTING



Demo name

TRANSIT GATEWAY DEMO ENVIRONMENT



Create 3 account EC2 instance (SHARED, PROD & DEV)

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IP
TGWDEMOSHARED01	i-06682779e0c9997be	t3.micro	ap-southeast-2a	running	2/2 checks ...	None		

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IP
TGWDEMOPROD01	i-01de5092d6f100dc7	t3.micro	ap-southeast-2a	running	2/2 checks ...	None		

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IP
TGWDEMODEV01	i-0d549d99a7f23b8ee	t3.micro	ap-southeast-2a	running	2/2 checks ...	None		

VPC Transit Gateway

Create shared account in transit gateway

Click to create Transit Gateway

[Create Transit Gateway](#) [Actions](#)

Filter by tags and attributes or search by keyword

None found

You do not have any Transit Gateways in this region

Click the Create Transit Gateway button to create your first Transit Gateway

Create Transit Gateway

Configure and create

A Transit Gateway (TGW) is a network transit hub that interconnects attachments (VPCs and VPNs) within the same account or across accounts.

Name tag

MyTGW

Description

MySharedTransitGateway

Configure the Transit Gateway

Amazon side ASN

64512

DNS support

enable

VPN ECMP support

enable

Default route table association

enable

Default route table propagation

enable

Configure sharing options for cross account

Auto accept shared attachments

enable

* Required

Cancel [Create Transit Gateway](#)

Successfully create

Transit Gateways > Create Transit Gateway

Create Transit Gateway

✓ Create Transit Gateway request succeeded

Transit Gateway ID [tgw-09e48208ee9c5f45f](#)

Close

Status check

[Create Transit Gateway](#) [Actions](#)

Filter by tags and attributes or search by keyword

<input type="checkbox"/>	Name	Transit Gateway ID	Owner ID	State
<input type="checkbox"/>	MyTGW	tgw-09e48208ee9c5f45f	296125780825	available

VPC Transit Gateway

Check transit route table default

Create Transit Gateway Route Table Actions

Filter by tags and attributes or search by keyword

Name	Transit Gateway route table ID	Transit Gateway ID	State	Default association route table	Default propagation route table
TGWDefault	tgw-rtb-074fe8a2911f7dcdf	tgw-09e48208ee9c5f45f	available	Yes	Yes

Transit Gateway Route Table: tgw-rtb-074fe8a2911f7dcdf

Details Associations Propagations Routes Tags

Transit Gateway route table ID: tgw-rtb-074fe8a2911f7dcdf
Transit Gateway ID: tgw-09e48208ee9c5f45f
State: available

Default association route table: Yes
Default propagation route table: Yes

Open create transit attachment option

Create Transit Gateway Attachment Actions

Filter by tags and attributes or search by keyword

You do not have any Transit Gateway Attachments in this region

Click the Create Transit Gateway Attachment button to create your first Transit Gateway Attachment

Create Transit Gateway Attachment

Select TGW

Create Transit Gateway Attachment

Select a Transit Gateway and the type of attachment you would like to create.

Transit Gateway ID*

Attachment type

Transit Gateway ID	Name tag	Description	Owner ID
tgw-09e48208ee9c5f45f	MyTGW	MySharedTransitGateway	296125780825

Select type VPC

Create Transit Gateway Attachment

Select a Transit Gateway and the type of attachment you would like to create.

Transit Gateway ID*

Attachment type ☒ VPC ☐ VPN ☐ Peering Connection

VPC Transit Gateway

Attach VPC and subnets & create

VPC Attachment

Select and configure your VPC attachment.

Attachment name tag

DNS support ☒ enable

IPv6 support ☐ enable

VPC ID*

Subnet IDs*

Availability Zone	Subnet ID
<input checked="" type="checkbox"/> ap-southeast-2a	subnet-0a17235a9e3a4ca19 (Private-2a)
<input checked="" type="checkbox"/> ap-southeast-2b	subnet-00170e3637f8111ed (Private-2b)
<input checked="" type="checkbox"/> ap-southeast-2c	subnet-0d654c3fd0bd955b9 (Private-2c)

* Required

[Cancel](#) [Create attachment](#)

Create successfully

[Transit Gateway Attachments](#) > Create Transit Gateway Attachment

Create Transit Gateway Attachment

✓ Create Transit Gateway attachment request succeeded

The VPC attachment was successfully created.

[Close](#)

Created done

[Create Transit Gateway Attachment](#) [Actions](#)

Filter by tags and attributes or search by keyword

Name	Transit Gateway attachment ID	Transit Gateway ID	Resource type	Resource ID	State
SharedVPC	tgw-attach-04959ecfa5d1755bd	tgw-09e48208ee9c5f45f	VPC	vpc-0ae27b1434edc710a	available

Transit Gateway Attachment: tgw-attach-04959ecfa5d1755bd

[Details](#) [Tags](#)

Transit Gateway attachment ID	tgw-attach-04959ecfa5d1755bd	Transit Gateway owner ID	296125780825
Transit Gateway ID	tgw-09e48208ee9c5f45f	Resource owner account ID	296125780825
Resource type	VPC	State	available
Resource ID	vpc-0ae27b1434edc710a	Associated route table	tgw-rtb-074fe8a2911f7dcdf
Association state	associated	DNS support	enable
Subnet IDs	subnet-0d654c3fd0bd955b9 subnet-0a17235a9e3a4ca19 subnet-00170e3637f8111ed	IPv6 support	disable

Open TGW route table and see associations done

[Create Transit Gateway Route Table](#) [Actions](#)

Filter by tags and attributes or search by keyword

Name	Transit Gateway route table ID	Transit Gateway ID	State	Default association route table	Default propagation route table
TGWDefault	tgw-rtb-074fe8a2911f7dcdf	tgw-09e48208ee9c5f45f	available	Yes	Yes

Transit Gateway Route Table: tgw-rtb-074fe8a2911f7dcdf

[Details](#) [Associations](#) [Propagations](#) [Routes](#) [Tags](#)

[Create association](#) [Delete association](#)

Filter by attributes or search by keyword

Attachment ID	Resource type	Resource ID	State
tgw-attach-04959ecfa5d1755bd	VPC	vpc-0ae27b1434edc710a	associated

VPC Transit Gateway

Open Resource Access Manager & create

Resource Access Manager

Shared by me

Resource shares

Shared resources

Principals

Shared with me

Resource shares

Resource Access Manager > Shared by me : Resource shares

Resource shares (0)

Resource shares owned by your account

< 1 >

⚙

Resource Share Status : ACTIVE X

Name	ID	Owner	Allow external principals	Status
------	----	-------	---------------------------	--------

Enter name

Create resource share

Create a resource share to provide AWS accounts, organizational units, or organizations with access to resources

Description

Name

Provide a descriptive name for the resource share

MyTGW

Select resources Transit Gateway

Resources - optional

Choose the resources to add to the resource share

Select resource type

Transit Gateways

<input checked="" type="checkbox"/>	ID	Name	Description	State
<input checked="" type="checkbox"/>	tgw-09e48208ee9c5f45f	MyTGW	MySharedTransitGateway	available

Selected resources

tgw-09e48208ee9c5f45f X

Enter both Account Number (Dev, Prod) & create

Principals - optional

Add principals to the resource share. Principals can be AWS accounts, organizational units, or your organization.

☒ Allow external accounts [Info](#)

Provide access to other AWS accounts outside your organization

Add

Selected principals

612659717478 X

AWS account

845234222766 X

AWS account

Successfully create

Resource shares (1)

Resource shares owned by your account

< 1 >

⚙

Resource Share Status : ACTIVE X

Name	ID	Owner	Allow external principals	Status
MyTGW-Share	b38f5dd8-2c65-4efa-99bf-ed900276b9e2	296125780825	Yes	Active

VPC Transit Gateway

Open DEV account

Open Resource Access Manager

Resource Access Manager

▼ Shared by me

Resource shares

Shared resources

Principals

▼ Shared with me

Resource shares 1 invitation

Shared resources

Principals

Settings

AWS Resource Access Manager

Share AWS resources with other AWS accounts.

Start sharing your AWS resources with other accounts

Create a resource share

Pricing

AWS RAM is offered at no additional charge. There are no setup fees or upfront commitments.

Click to Resource shares

Resource shares (1 selected)

Resource shares my account has access to

Filter by attributes or search by keyword

Name	ID	Owner	Status
MyTGW-Share	b38f5dd8-2c65-4efa-99bf-ed900276b9e2	296125780825	Pending

Click to invitation & Accept

Resource Access Manager > Shared with me : Resource shares > Resource share b38f5dd8-2c65-4efa-99bf-ed900276b9e2

MyTGW-Share (b38f5dd8-2c65-4efa-99bf-ed900276b9e2)

Details and information relating to this resource share.

Reject resource share Accept resource share

Summary

Name	Owner	Invitation date	Status
MyTGW-Share	296125780825	2020/05/01	Pending
ARN	arn:aws:ram:ap-southeast-2:296125780825:resource-share/b38f5dd8-2c65-4efa-99bf-ed900276b9e2		

See auto create Transit Gateway

Create Transit Gateway Actions

Filter by tags and attributes or search by keyword

Name	Transit Gateway ID	Owner ID	State
	tgw-09e48208ee9c5f45f	296125780825	available

Transit Gateway: tgw-09e48208ee9c5f45f

Details Tags Sharing

Transit Gateway ID	tgw-09e48208ee9c5f45f	Owner account ID	296125780825 (shared)
State	available	Amazon ASN	64512
DNS support	enable	VPN ECMP support	enable
Auto accept shared attachments	enable	Default association route table	enable
Association route table ID	tgw-rtb-074fe8a2911f7dcaf	Default propagation route table	enable
Propagation route table ID	tgw-rtb-074fe8a2911f7dcaf		

VPC Transit Gateway

Open and create attachment

Create Transit Gateway Attachment Actions

Filter by tags and attributes or search by keyword

None found

You do not have any Transit Gateway Attachments in this region

Click the Create Transit Gateway Attachment button to create your first Transit Gateway Attachment

Create Transit Gateway Attachment

Enter transit gateway

Create Transit Gateway Attachment

Select a Transit Gateway and the type of attachment you would like to create.

Transit Gateway ID* tgw-09e48208ee9c5f45f

Attachment type VPC

Select VPC and subnet

VPC Attachment

Select and configure your VPC attachment.

Attachment name tag DevVPC

DNS support enable

IPv6 support enable

VPC ID* vpc-079724bfe0f3e988b

Subnet IDs* subnet-07f3cf8dd3baf3964 subnet-048e90bcf3de68170 subnet-00454120656834f55

Availability Zone	Subnet ID
ap-southeast-2a	subnet-07f3cf8dd3baf3964 (Private-2a)
ap-southeast-2b	subnet-048e90bcf3de68170 (Private-2b)
ap-southeast-2c	subnet-00454120656834f55 (Public-2c)

* Required

Cancel Create attachment

Add successfully

Create Transit Gateway Attachment Actions

Filter by tags and attributes or search by keyword

1 to 1 of 1

Name	Transit Gateway attachment ID	Transit Gateway ID	Resource type	Resource ID	State
DevVPC	tgw-attach-0a4efef88ed592cec	tgw-09e48208ee9c5f45f	VPC	vpc-079724bfe0f3e988b	available

Transit Gateway Attachment: tgw-attach-0a4efef88ed592cec

Details Tags

Transit Gateway attachment ID tgw-attach-0a4efef88ed592cec
Transit Gateway ID tgw-09e48208ee9c5f45f
Resource type VPC
Resource ID vpc-079724bfe0f3e988b
Association state associated
Subnet IDs subnet-048e90bcf3de68170
subnet-054ef74f445c34d6e
subnet-07f3cf8dd3baf3964

Transit Gateway owner ID 296125780825 (shared)
Resource owner account ID 612659717478
State available
Associated route table tgw-rtb-074fe8a2911f7dcaf
DNS support enable
IPv6 support disable

VPC Transit Gateway

Same steps PROD account

Create Transit Gateway Attachment Actions

Filter by tags and attributes or search by keyword

Name	Transit Gateway attachment ID	Transit Gateway ID	Resource type	Resource ID	State
ProdVPC	tgw-attach-05ab012a2d02348bf	tgw-09e48208ee9c5f45f	VPC	vpc-05a6b368864f15d9e	available

Transit Gateway Attachment: tgw-attach-05ab012a2d02348bf

Details Tags

Transit Gateway attachment ID	tgw-attach-05ab012a2d02348bf	Transit Gateway owner ID	296125780825 (shared)
Transit Gateway ID	tgw-09e48208ee9c5f45f	Resource owner account ID	845234222766
Resource type	VPC	State	available
Resource ID	vpc-05a6b368864f15d9e	Associated route table	tgw-rtb-074fe8a2911f7dcaf
Association state	associated	DNS support	enable
Subnet IDs	subnet-01c76300e70dc3208 subnet-01bd5b02859e6ccc9 subnet-08e504f183f4cfd	IPv6 support	disable

Check main Transit route table entry

Create Transit Gateway Route Table Actions

Filter by tags and attributes or search by keyword

Name	Transit Gateway route table ID	Transit Gateway ID	State	Default association route table	Default propagation route table
TGWDefault	tgw-rtb-074fe8a2911f7dcaf	tgw-09e48208ee9c5f45f	available	Yes	Yes

Transit Gateway Route Table: tgw-rtb-074fe8a2911f7dcaf

Details Associations Propagations Routes Tags

The table below will return a maximum of 1000 routes. Narrow the filter or use export routes to view more routes.

Create route Replace route Delete route

Filter by attributes or search by keyword

CIDR	Attachment	Resource type	Route type	Route state
10.2.0.0/16	tgw-attach-04959ecfa5d1755bd vpc-0ae27b1434edc710a	VPC	propagated	active
10.3.0.0/16	tgw-attach-0a4efef88ed592cec vpc-079724bfe0f3e988b	VPC	propagated	active
10.4.0.0/16	tgw-attach-05ab012a2d02348bf vpc-05a6b368864f15d9e	VPC	propagated	active

Open subnet route table and edit

Create route table Actions

Filter by tags and attributes or search by keyword

Name	Route Table ID	Explicit subnet association	Edge associations	Main	VPC ID
private-route-table	rtb-0060128bf46e30c05	3 subnets	-	No	vpc-0ae27b1434edc710a ...
public-route-table	rtb-0270bbbb0ecf9599a	3 subnets	-	No	vpc-0ae27b1434edc710a ...
database-route-table	rtb-0a09f0bee79741375	3 subnets	-	No	vpc-0ae27b1434edc710a ...

Route Table: rtb-0060128bf46e30c05

Summary Routes Subnet Associations Edge Associations Route Propagation Tags

Edit routes

View All routes

Destination	Target	Status	Propagated
10.2.0.0/16	local	active	No
0.0.0.0/0	nat-0c9bd5fe7bf14e414	active	No

VPC Transit Gateway

Add routing both side IP

Edit routes

Destination	Target	Status	Propagated
10.2.0.0/16	local	active	No
0.0.0.0/0	nat-0c9bd5fe7bf14e414	active	No
10.3.0.0/16	tgw-09e48208ee9c5f45f		No
10.4.0.0/16	tgw-09e48208ee9c5f45f		No

* Required

Cancel Save routes

See add routing

Create route table Actions

Filter by tags and attributes or search by keyword

Name	Route Table ID	Explicit subnet association	Edge associations	Main	VPC ID
private-route-table	rtb-0060128b46e30c05	3 subnets	-	No	vpc-0ae27b1434edc710a ...
public-route-table	rtb-0270bbb0ecf9599a	3 subnets	-	No	vpc-0ae27b1434edc710a ...
database-route-table	rtb-0a09f0bee79741375	3 subnets	-	No	vpc-0ae27b1434edc710a ...

Route Table: rtb-0060128b46e30c05

Summary Routes Subnet Associations Edge Associations Route Propagation Tags

Edit routes

View All routes

Destination	Target	Status	Propagated
10.2.0.0/16	local	active	No
0.0.0.0/0	nat-0c9bd5fe7bf14e414	active	No
10.3.0.0/16	tgw-09e48208ee9c5f45f	active	No
10.4.0.0/16	tgw-09e48208ee9c5f45f	active	No

Same add both accounts add route (DEV & PROD)

CHECK Ping (Shared account to → DEV & PROD)

```
[root@tgwdemoshared01 ~]# ping 10.3.98.221
PING 10.3.98.221 (10.3.98.221) 56(84) bytes of data.
64 bytes from 10.3.98.221: icmp_seq=1 ttl=254 time=0.828 ms
64 bytes from 10.3.98.221: icmp_seq=2 ttl=254 time=0.260 ms
64 bytes from 10.3.98.221: icmp_seq=3 ttl=254 time=0.329 ms
64 bytes from 10.3.98.221: icmp_seq=4 ttl=254 time=0.302 ms
64 bytes from 10.3.98.221: icmp_seq=5 ttl=254 time=0.331 ms
64 bytes from 10.3.98.221: icmp_seq=6 ttl=254 time=0.255 ms
64 bytes from 10.3.98.221: icmp_seq=7 ttl=254 time=0.245 ms
64 bytes from 10.3.98.221: icmp_seq=8 ttl=254 time=0.325 ms
64 bytes from 10.3.98.221: icmp_seq=9 ttl=254 time=0.271 ms
64 bytes from 10.3.98.221: icmp_seq=10 ttl=254 time=0.319 ms
64 bytes from 10.3.98.221: icmp_seq=11 ttl=254 time=0.250 ms
64 bytes from 10.3.98.221: icmp_seq=12 ttl=254 time=0.249 ms
64 bytes from 10.3.98.221: icmp_seq=13 ttl=254 time=0.262 ms
^C
--- 10.3.98.221 ping statistics ---
13 packets transmitted, 13 received, 0% packet loss, time 12267ms
rtt min/avg/max/mdev = 0.245/0.325/0.828/0.148 ms
[root@tgwdemoshared01 ~]#
[root@tgwdemoshared01 ~]#
[root@tgwdemoshared01 ~]# ping 10.4.111.110
PING 10.4.111.110 (10.4.111.110) 56(84) bytes of data.
64 bytes from 10.4.111.110: icmp_seq=1 ttl=254 time=1.07 ms
64 bytes from 10.4.111.110: icmp_seq=2 ttl=254 time=0.454 ms
64 bytes from 10.4.111.110: icmp_seq=3 ttl=254 time=0.545 ms
```

VPC Transit Gateway

Check ping Prod → Dev account

```
[root@tgwdemoprod01 ~]# ping 10.3.98.221
PING 10.3.98.221 (10.3.98.221) 56(84) bytes of data.
64 bytes from 10.3.98.221: icmp_seq=1 ttl=254 time=0.788 ms
64 bytes from 10.3.98.221: icmp_seq=2 ttl=254 time=0.484 ms
64 bytes from 10.3.98.221: icmp_seq=3 ttl=254 time=3.46 ms
64 bytes from 10.3.98.221: icmp_seq=4 ttl=254 time=0.416 ms
64 bytes from 10.3.98.221: icmp_seq=5 ttl=254 time=0.434 ms
64 bytes from 10.3.98.221: icmp_seq=6 ttl=254 time=0.491 ms
64 bytes from 10.3.98.221: icmp_seq=7 ttl=254 time=0.466 ms
^C
--- 10.3.98.221 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6090ms
rtt min/avg/max/mdev = 0.416/0.935/3.467/1.040 ms
[root@tgwdemoprod01 ~]#
```

