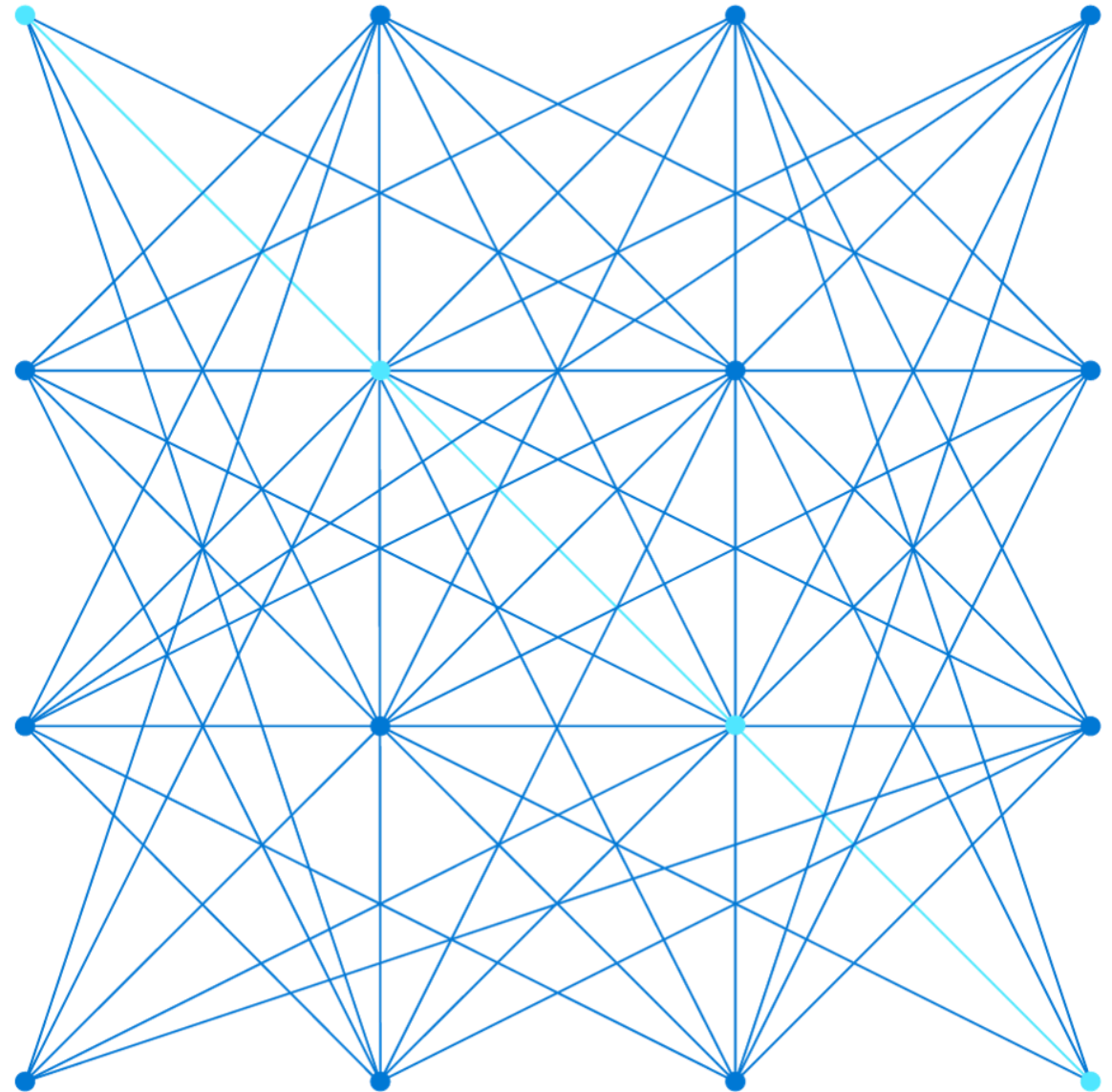


Guten Morgen!

AZ-700

**Design and implement
Azure ExpressRoute**





RBAC

Course Agenda

Module 01: Introduction to Azure Virtual Networks

Module 02: Designing and Implementing Hybrid Networking

Module 03: Designing and Implementing Azure **ExpressRoute**

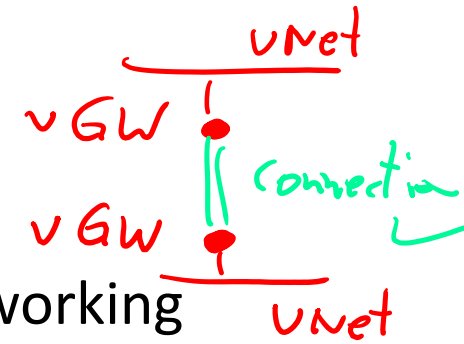
Module 04: Load balance non-HTTP(S) traffic in Azure

Module 05: Load balance HTTP(S) traffic in Azure

Module 06: Design and Implement Network Security

Module 07: Design and Implement private access to Azure Services

Module 08: Design and Implement Network Monitoring



← Lab

Module Overview



[Explore Azure ExpressRoute](#)



[Design an ExpressRoute deployment](#)



[Exercise - Configure an ExpressRoute Gateway](#)



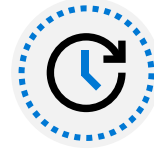
[Exercise - Provision an ExpressRoute circuit](#)



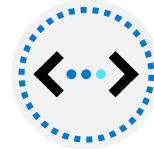
[Configure peering for an ExpressRoute deployment](#)



[Connect an ExpressRoute circuit to a VNet](#)



[Connect geographically dispersed networks with ExpressRoute Global Reach](#)

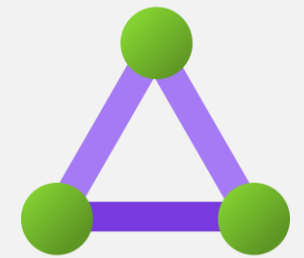


[Improve data path performance between networks with ExpressRoute FastPath](#)



[Troubleshoot ExpressRoute connection issues](#)

Explore Azure ExpressRoute



Explore Azure ExpressRoute Overview



ExpressRoute Capabilities



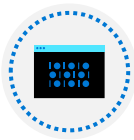
Understand use cases for Azure ExpressRoute



ExpressRoute connectivity models



Design considerations for ExpressRoute deployments



Bidirectional Forwarding Detection (BFD)



Configure encryption over ExpressRoute



Review

Sovereign Cloud

TS
RDS
AVD
Session Host

Windows 365

Windows 11
Multi

ExpressRoute Capabilities

Layer 3 connectivity with redundancy

Connectivity to all regions within a geography

Global connectivity with ExpressRoute premium add-on

Across on-premises connectivity with ExpressRoute Global Reach

Bandwidth options – 50 Mbps to 100 Gbps

Billing models – Unlimited, metered



Understand use cases for Azure ExpressRoute

Faster and Reliable connection to Azure services

Storage, backup, and Recovery

Extends Data center capabilities

Predictable, reliable, and high-throughput connections

SLA

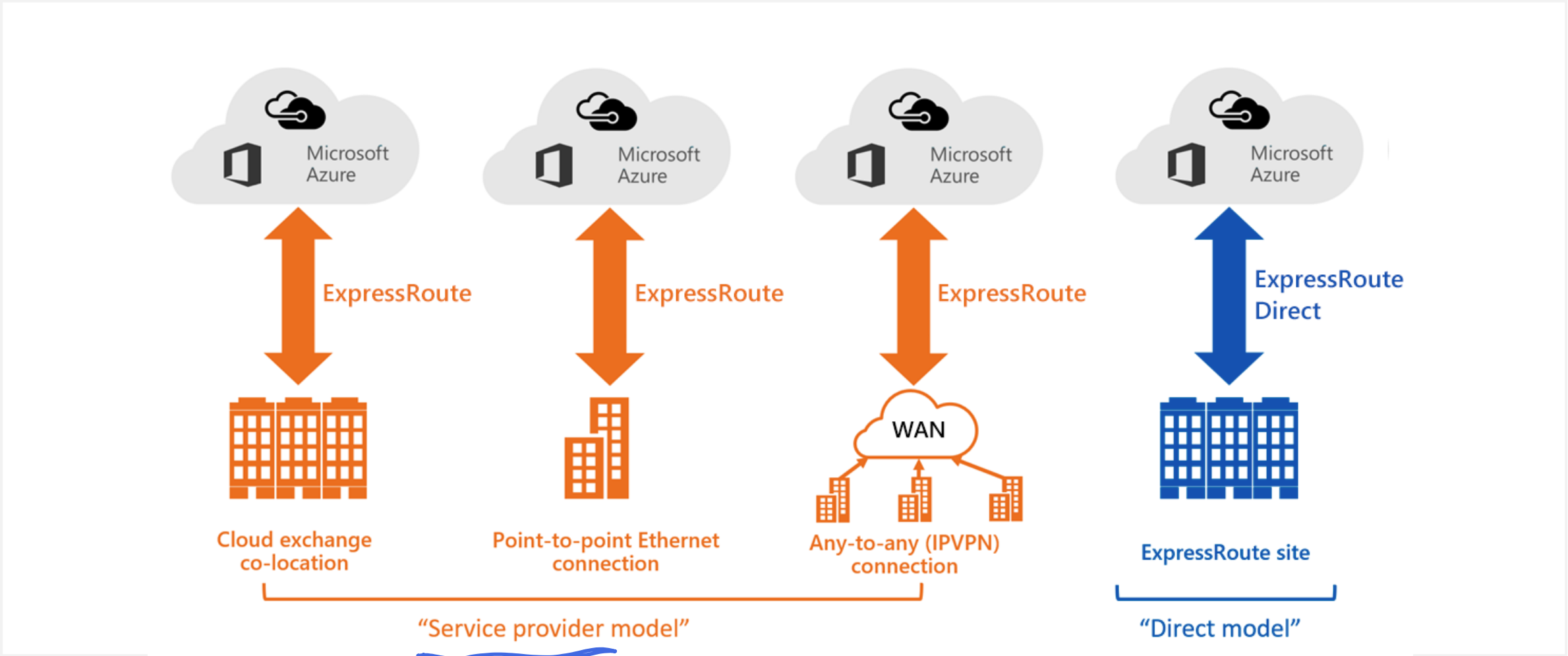
Private connection to Microsoft cloud

Built in redundant circuits

Border Gateway Protocol (BGP)

Integrates with existing Multiprotocol Label Switching (MPLS)

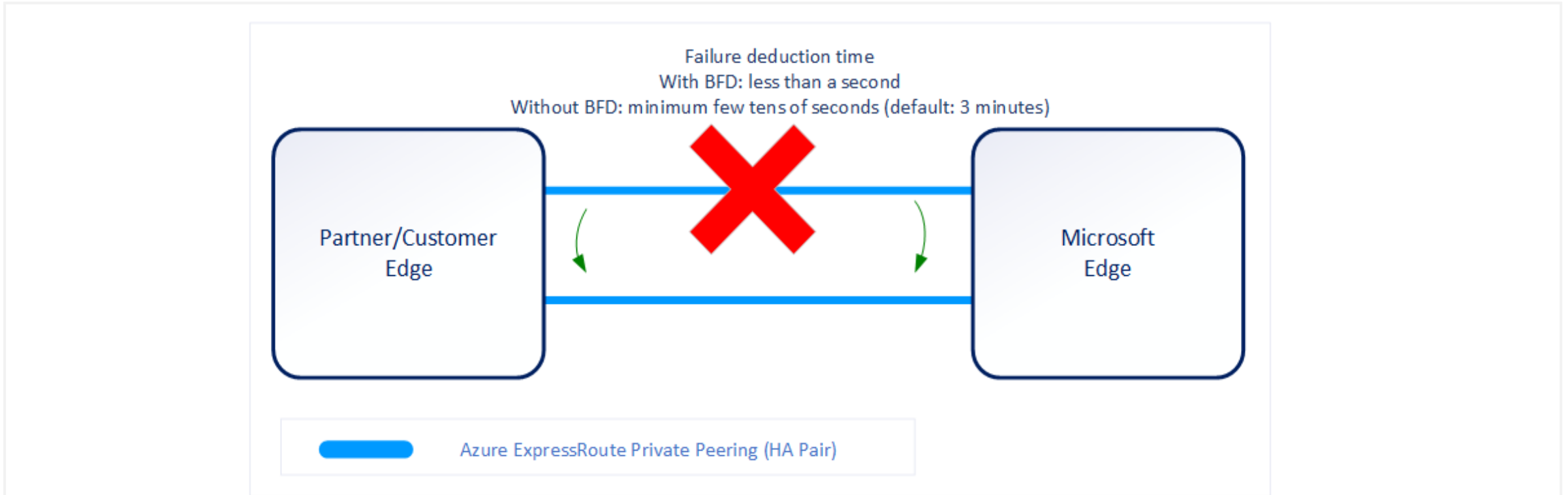
ExpressRoute connectivity models



Design considerations for ExpressRoute deployments

ExpressRoute using a Service Provider	ExpressRoute Direct
Uses service providers to enable fast onboarding and connectivity into existing infrastructure	Requires 100 Gbps/10 Gbps infrastructure and full management of all layers
Integrates with hundreds of providers including Ethernet and MPLS	Direct/Dedicated capacity for regulated industries and massive data ingestion
Circuits SKUs from 50 Mbps to 10 Gbps	Customer may select a combination of the following circuit SKUs on 100-Gbps ExpressRoute Direct: (5 Gbps, 10 Gbps, 40 Gbps, 100 Gbps) Customer may select a combination of the following circuit SKUs on 10-Gbps ExpressRoute Direct: (1 Gbps, 2 Gbps, 5 Gbps, 10 Gbps)
Optimized for single tenant	Optimized for single tenant with multiple business units and multiple work environments

Bidirectional Forwarding Detection (BFD) with ExpressRoute Private Peering

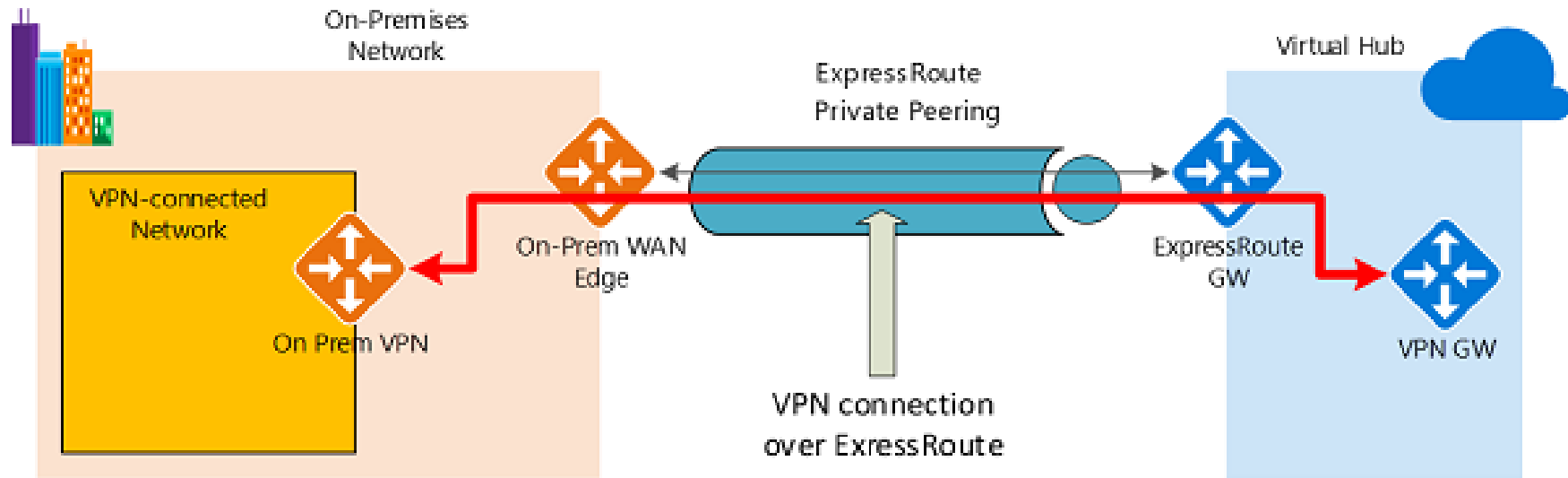


BFD is configured by default

You only need to configure BFD on both your primary and secondary devices

You configure the BFD on the interface and then link it to the BGP session.

Configure encryption over ExpressRoute

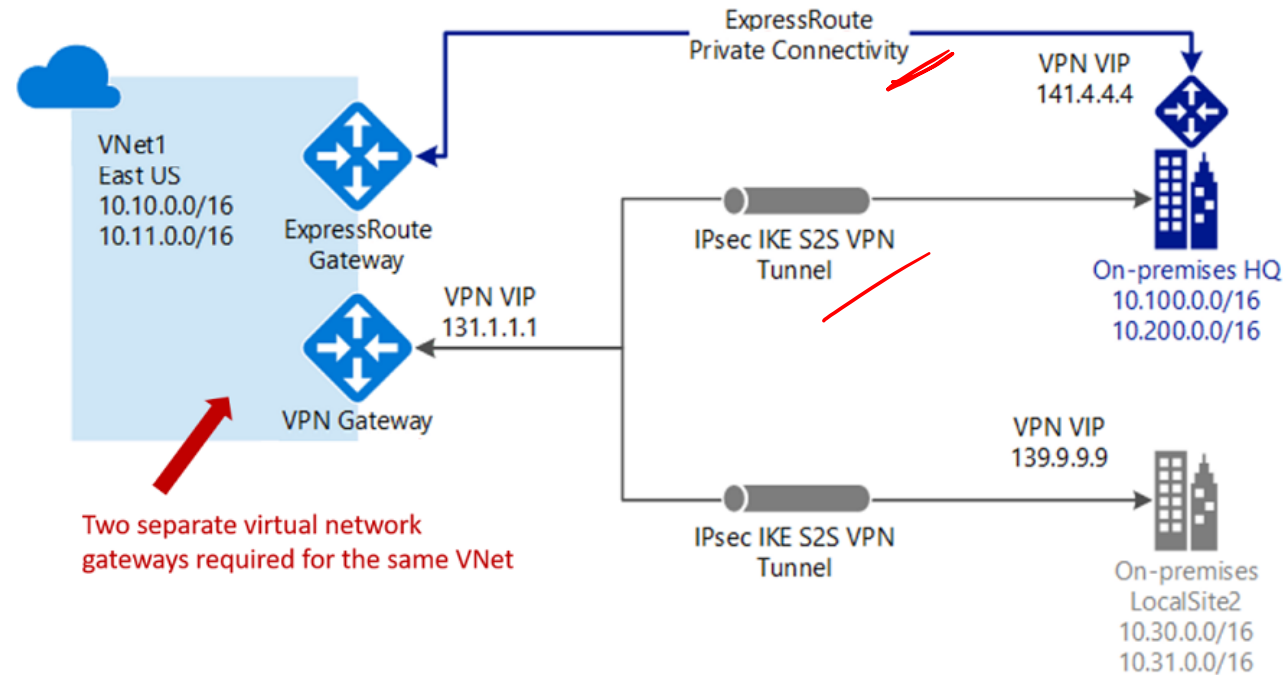


Establish ExpressRoute connectivity with an ExpressRoute circuit and private peering

Establish the VPN connectivity over ExpressRoute

Routing between the on-premises networks and Azure over both the ExpressRoute and VPN paths

Coexisting Site-to-Site and ExpressRoute



Use S2S VPN as a
secure failover path
for ExpressRoute

Use S2S VPNs to connect to
sites that are not connected
with ExpressRoute

Notice two VNet
gateways for the
same virtual network

Design an ExpressRoute deployment Review

Knowledge Check Questions

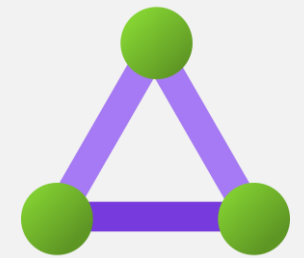
Microsoft Learn Modules (docs.microsoft.com/Learn)



Connect your on-premises network to the Microsoft global network by using ExpressRoute

Configure the network for your virtual machines

Design an ExpressRoute deployment



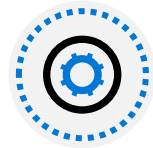
Design an ExpressRoute deployment Overview



ExpressRoute SKUs and Tiers



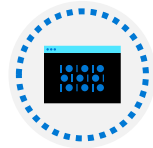
Choose a peering location



Choose the right ExpressRoute Circuit and billing model



Demonstration



Review

ExpressRoute SKUs


Local (if available) - provides free egress data transfer and gives you access to only 1-2 Azure regions in the same area as your circuit

Standard SKU - gives you access to all Azure regions in a geopolitical area

Premium SKU - provides support for more than 4K routes, ability to connect to more than 10 virtual networks, and global connectivity

Basics **Configuration** Tags Review + create

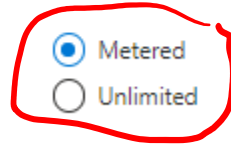
ExpressRoute circuits can connect to Azure through a service provider or directly to Azure at a global peering location. [Learn more about circuit types](#)

Port type * ⓘ ☒ Provider  ☐ Direct

Create new or import from classic * ⓘ ☒ Create new ☐ Import

Provider * ⓘ

SKU * ⓘ ☐ Local ☒ Standard ☐ Premium

Billing model * ⓘ ☒ Metered  ☐ Unlimited

Allow classic operations ⓘ ☐ Yes ☒ No

Choose a peering location



Choose the right ExpressRoute Circuit and billing model

Choose Metered or unlimited data plan

Choose Bandwidth

You can increase gateway size but not decrease without service outage

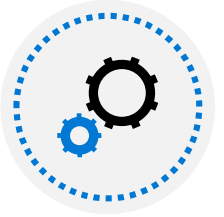
Pricing varies by region and zone

Unlimited data. Billing is based on a monthly fee; all inbound and outbound data transfer is included free of charge.

Metered data. Billing is based on a monthly fee; all inbound data transfer is free of charge. Outbound data transfer is charged per GB of data transfer. Data transfer rates vary by region.

ExpressRoute premium add-on. ExpressRoute premium is an add-on to the ExpressRoute circuit.

Demonstration



Review and deploy ExpressRoute circuit



Review and deploy ExpressRoute gateway

Design for an ExpressRoute deployment - Review

Knowledge Check



Microsoft Learn Modules (docs.microsoft.com/Learn)

[Azure ExpressRoute: Designing for high availability | Microsoft Docs](#)

[Extend an on-premises network using ExpressRoute - Azure Architecture Center | Microsoft Docs](#)

Exercise - Configure an ExpressRoute Gateway

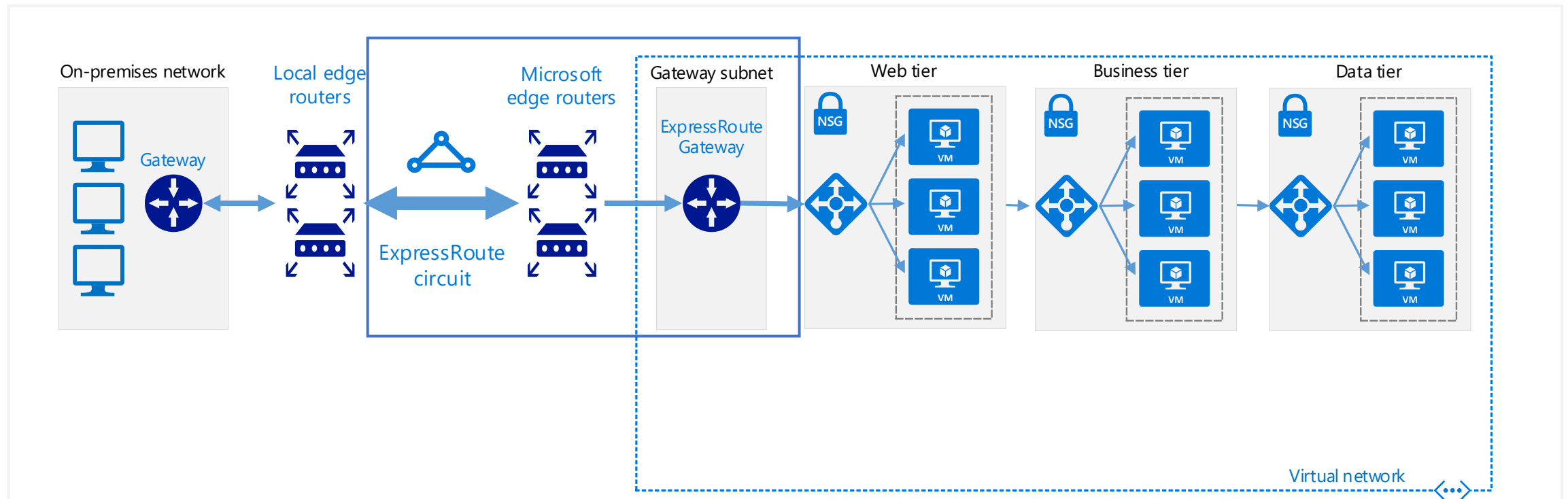
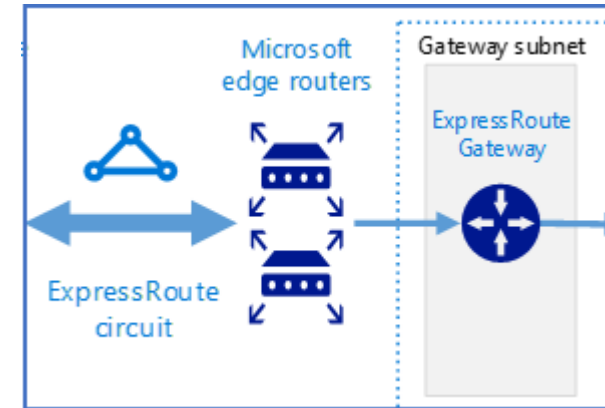


Exercise - Configure an ExpressRoute Gateway

In this exercise, you learn how to:

Task 1: Create the VNet and gateway subnet

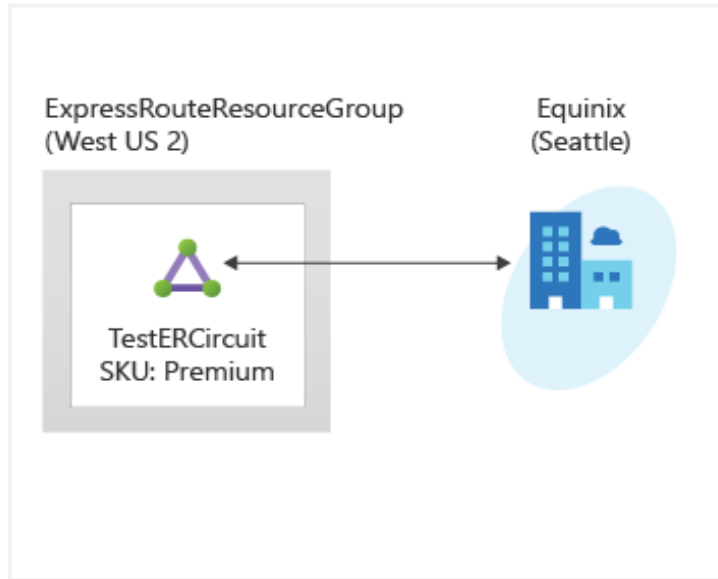
Task 2: Create the virtual network gateway



Exercise - Provision an ExpressRoute circuit



Exercise



In this exercise, you learn how to:

Task 1: Create and provision an ExpressRoute circuit

Task 2: Retrieve your Service key

Task 3: Deprovisioning an ExpressRoute circuit

Create ExpressRoute

Basics Configuration Tags Review + create

ExpressRoute circuits can connect to Azure through a service provider or directly to Azure at a global peering location.
[Learn more about circuit types](#)

Port type * ☒ Provider ☐ Direct

Create new or import from classic * ☒ Create new ☐ Import

Provider *

Peering location *

Bandwidth *

SKU * ☐ Standard ☒ Premium

Billing model * ☐ Metered ☒ Unlimited

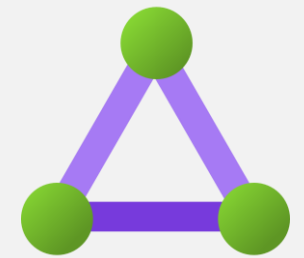
Allow classic operations ☐ Yes ☒ No

Review + create

< Previous

Next : Tags >

Configure peering for an ExpressRoute deployment



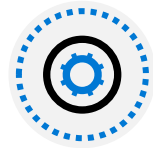
Configure peering for an ExpressRoute deployment Overview



Configure Private peering



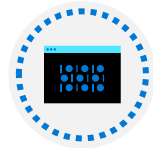
Configure Microsoft peering



Choose between private peering only, Microsoft peering only, or both



Route filters



Review

Configure Private peering




A pair of subnets that are not part of any address space reserved for virtual networks. One subnet will be used for the primary link, while the other will be used for the secondary link

A valid on-prem VLAN ID to establish this peering on

AS number for peering

Advertise the routes from your on-premises Edge router to Azure via BGP

Optional - An MD5 hash if you choose to use one

 **Private peering**  

ASH-Cust15-ER

Peer ASN * ⓘ

65021 ✓

Subnets

☒ Both

☐ IPv4

☐ IPv6

IPv4 Primary subnet * ⓘ

192.168.15.16/30 ✓

IPv4 Secondary subnet * ⓘ

192.168.15.20/30 ✓

☒ Enable IPv4 Peering ⓘ

IPv6 Primary subnet * ⓘ

fd:1:2:15FF::/126 ✓

IPv6 Secondary subnet * ⓘ

fd:1:2:15FF::4/126 ✓

☒ Enable IPv6 Peering ⓘ

VLAN ID * ⓘ

150 ✓

Shared key

Add Global Reach

Global Reach name	ExpressRoute Circuit name ⓘ	IPv4 Subnet ⓘ	IPv6 Subnet ⓘ

Save Cancel

Configure Microsoft peering

A pair of subnets owned by you and registered in an RIR/IRR. One subnet will be used for the primary link, while the other will be used for the secondary link.

A valid on-prem VLAN ID to establish this peering on

AS number for peering


Advertised prefixes: You provide a list of all prefixes you plan to advertise over the BGP session


Routing Registry Name



Home > ExpressRoute circuits > TestERCircuit >





Microsoft peering



TestERCircuit



 To receive route advertisements on Microsoft peering, attach route filters to the circuit after creating Microsoft Peering. [Learn More.](#)



☒ Enable Peering 

Peer ASN * 
394749 



IPv4 Primary subnet *  IPv4 Secondary subnet * 
64.191.192.240/30  64.191.192.240/30 

VLAN ID * 
152 

Customer ASN 
394749 

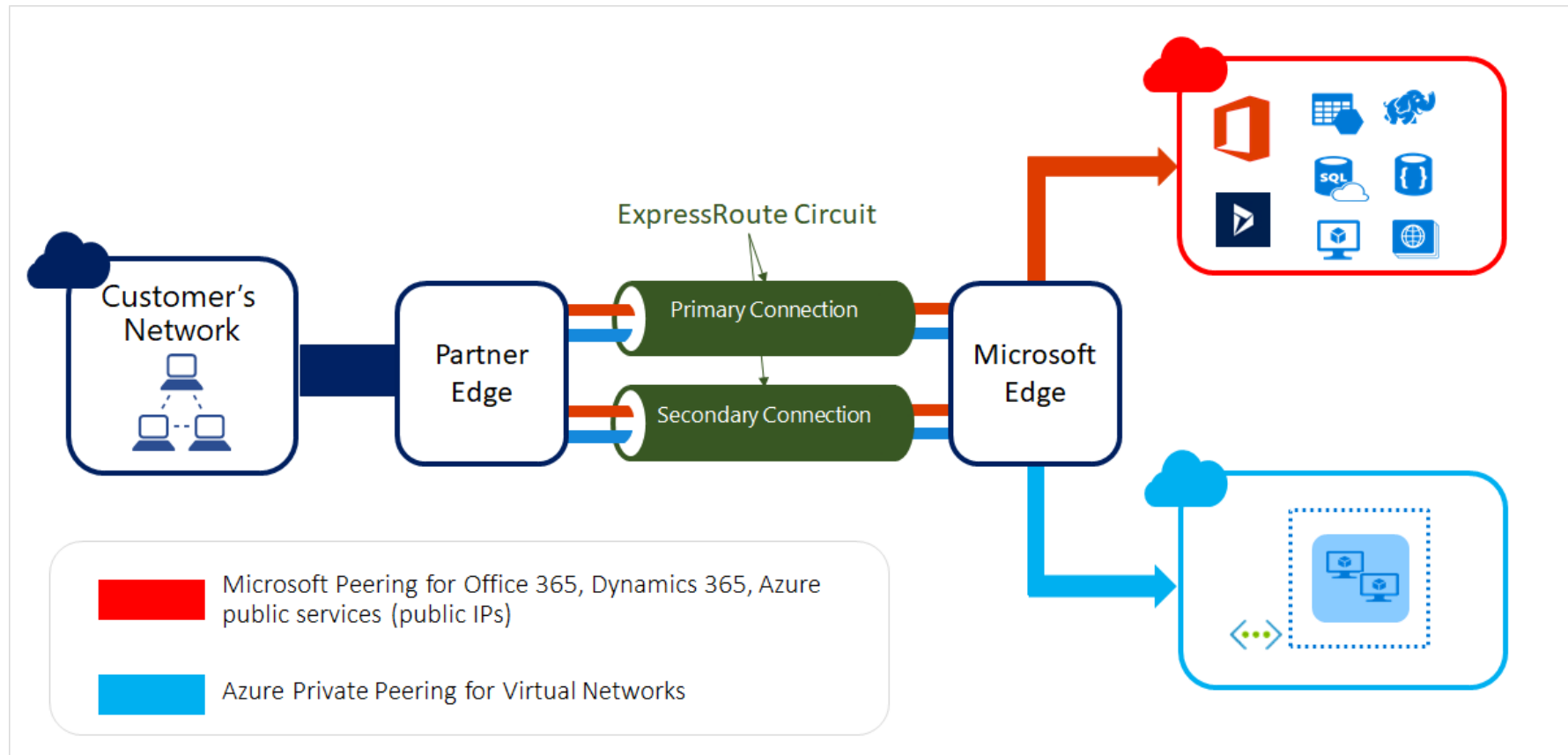
Routing registry name 
ARIN 

Shared key

Advertised public prefixes * 
64.191.192.224/28 

Status: Validation Needed

Choose between private peering only, Microsoft peering only, or both



Route filters

Create route filter

Basics

Tags

Review + create

Route filters help you filter the traffic going through your ExpressRoute. Essentially a white list of all the BGP community values, a route filter lets you identify services you want to consume through your ExpressRoute circuit's Microsoft peering. Once a route filter resource is defined and attached to an ExpressRoute circuit, all prefixes that map to the BGP community values are advertised to your network. [Learn more about route filters](#)

Project details

Subscription *

Azure Subscription

Resource group *

ExpressRouteResourceGroup

Create new

Instance details

Name *

MyRouteFilter

Region *

(US) West US 2

Route filter must be created in the same location as the ExpressRoutes it will be associated with.

Review + create

< Previous

Next : Tags >

[Download a template for automation](#)

Manage rule

MyRouteFilter

Save

Discard

Rule name *

Rule1

Allowed service communities *

2 selected

Select all

Exchange (12076:5010)

Other Office 365 Services (12076:510)

SharePoint Online (12076:5020)

Skype For Business (12076:5030)

CRM Online (12076:5040)

Azure Active Directory (12076:5060)

Azure Australia Central (12076:5103)

Azure Australia Central 2 (12076:510)

Azure Australia East (12076:51015)

Azure Australia Southeast (12076:51)

Azure Brazil South (12076:51014)

Azure Canada Central (12076:51020)

Azure Canada East (12076:51021)

Azure Central India (12076:51017)

Azure Central US (12076:51009)

Azure Central US EUAP (12076:5100)

Azure East Asia (12076:51010)

Azure East US (12076:51004)

Azure East US 2 (12076:51005)

Create route filter and create route filter rules

Attach the route filter to an ExpressRoute circuit

Configure peering for an ExpressRoute deployment- Review

Knowledge Check

Microsoft Learn Modules (docs.microsoft.com/Learn)

[Azure ExpressRoute: circuits and peering | Microsoft Docs](#)



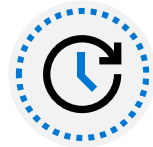
Connect an ExpressRoute circuit to a VNet



Connect an ExpressRoute circuit to a VNet Overview

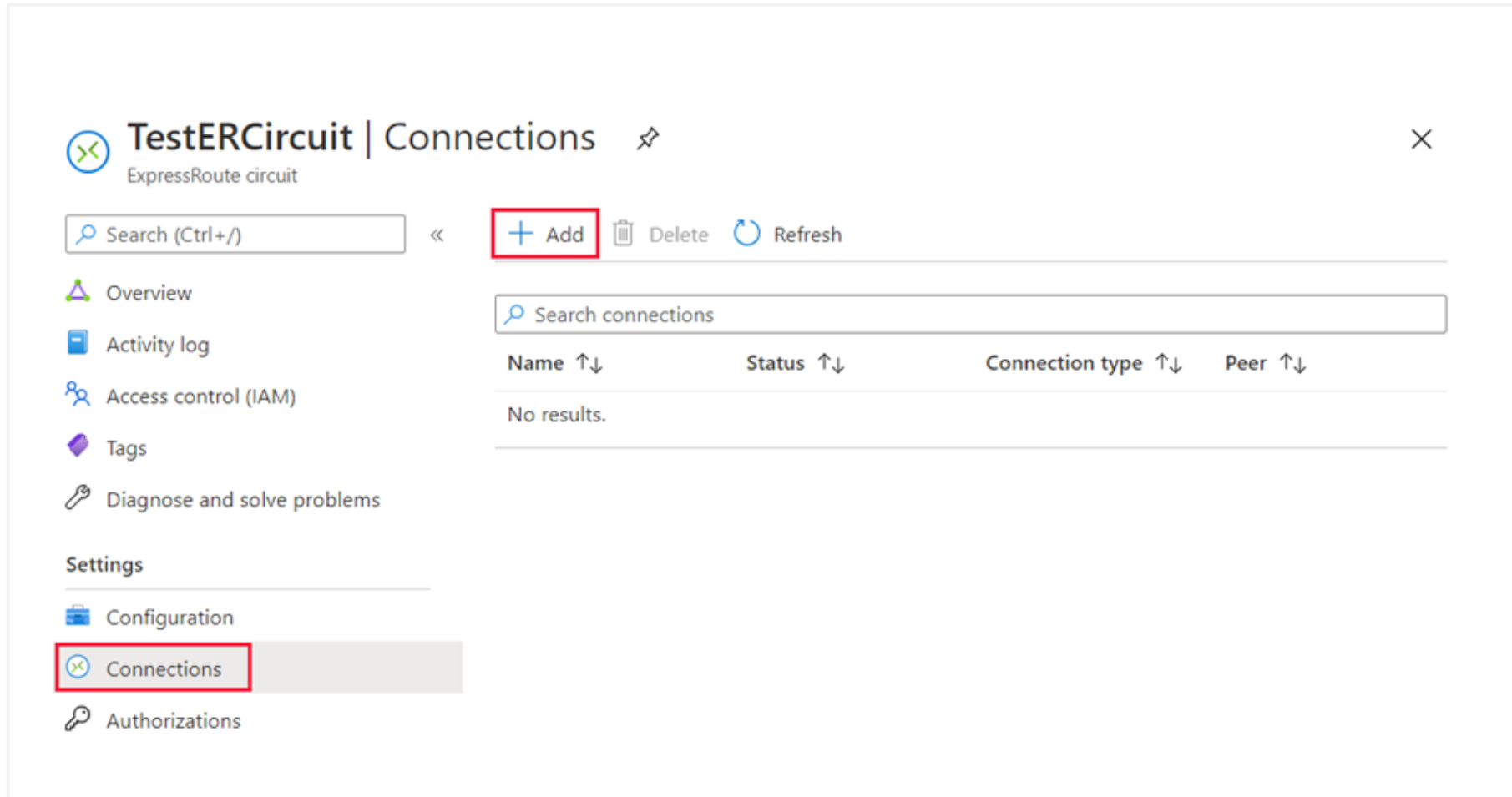


Connect virtual network to an ExpressRoute circuit



Review

Connect virtual network to an ExpressRoute circuit



The screenshot shows the 'TestERCircuit | Connections' page in the Azure portal. The page title is 'TestERCircuit | Connections' with a sub-label 'ExpressRoute circuit'. The left sidebar contains navigation items: Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Settings, Configuration, Connections (highlighted with a red box), and Authorizations. The main content area has a search bar 'Search (Ctrl+ /)' and a table of connections. The table has columns: Name ↑↓, Status ↑↓, Connection type ↑↓, and Peer ↑↓. The table currently shows 'No results.' The 'Add' button (a blue plus icon) is highlighted with a red box. Other buttons include 'Delete' (trash icon) and 'Refresh' (circular arrow icon).

TestERCircuit | Connections ExpressRoute circuit

Search (Ctrl+ /) << + Add Delete Refresh

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Configuration

Connections

Authorizations

Search connections

Name ↑↓	Status ↑↓	Connection type ↑↓	Peer ↑↓
No results.			

Connect virtual network to an ExpressRoute circuit – continued

Create connection

Basics Settings Tags Review + create

Create a secure connection to your virtual network by using VPN Gateway or ExpressRoute. [Learn more about VPN Gateway](#) [Learn more about ExpressRoute](#)

Project details

Subscription Azure Subscription

Resource group ExpressRouteResourceGroup [Create new](#)

Instance details

Connection type ⓘ ExpressRoute

Name * ER-VNet-Connection

Region (US) West US 2

Review + create

< Previous

Next : Settings >

[Download a template for automation](#)

Create connection

Basics **Settings** Tags Review + create

Virtual network gateway

To use a virtual network with a connection, it must be associated to a virtual network gateway.

Virtual network gateway * ⓘ ERGW

ExpressRoute circuit ⓘ TestERCircuit

Redeem authorization ⓘ ☐

Routing weight * 0



Review + create

< Previous




Next : Tags >


[Download a template for automation](#)


Verify connection


 **TestERCircuit** | Connections 


ExpressRoute circuit


<<  Add  Delete  Refresh

 Overview


 Activity log


 Access control (IAM)


 Tags





 Diagnose and solve problems

Settings

 Configuration

 Connections

 Authorizations

Name 	Status 	Connection type 	Peer 
ER-VNet-Connection	Succeeded	ExpressRoute	ERGW

Connect an ExpressRoute circuit to a VNet - Review

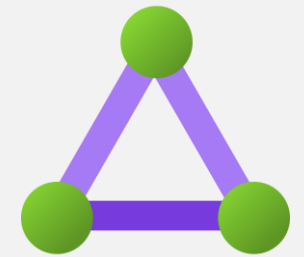
Knowledge Check



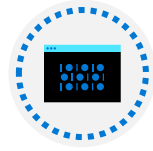
Microsoft Learn Modules (docs.microsoft.com/Learn)

[Azure ExpressRoute: Circuit configuration workflow | Microsoft Docs](#)

Connect geographically dispersed networks with ExpressRoute Global Reach



Connect geographic ally dispersed networks with ExpressRoute Global Reach Overview



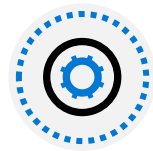
Use Cross-region connectivity to link multiple ExpressRoutes



Choose when to use ExpressRoute Global Reach



Configure ExpressRoute Global Reach



Review

Use Cross-region connectivity to link multiple ExpressRoutes

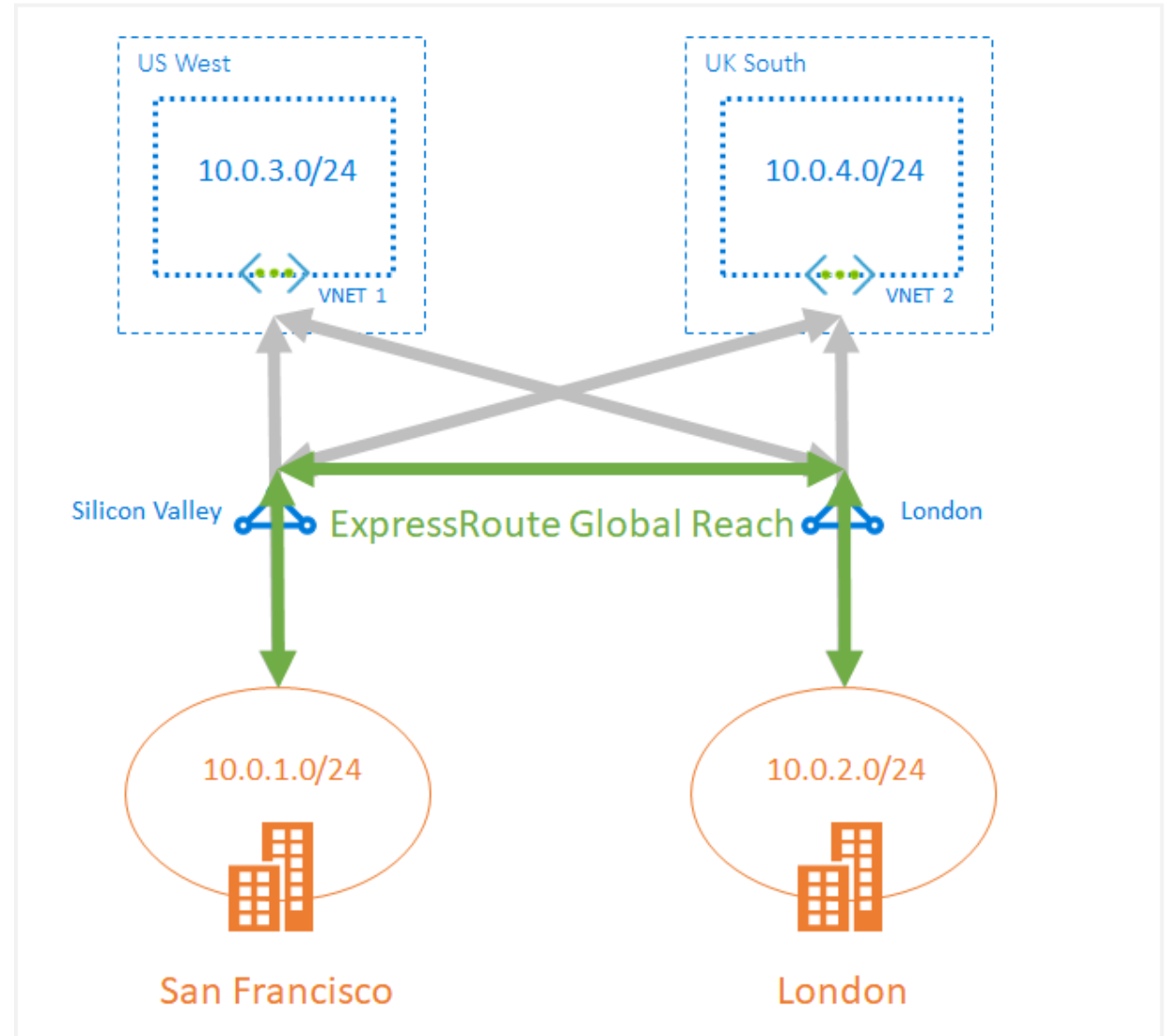
Connectivity to all regions within a geopolitical region

Global connectivity with ExpressRoute Premium

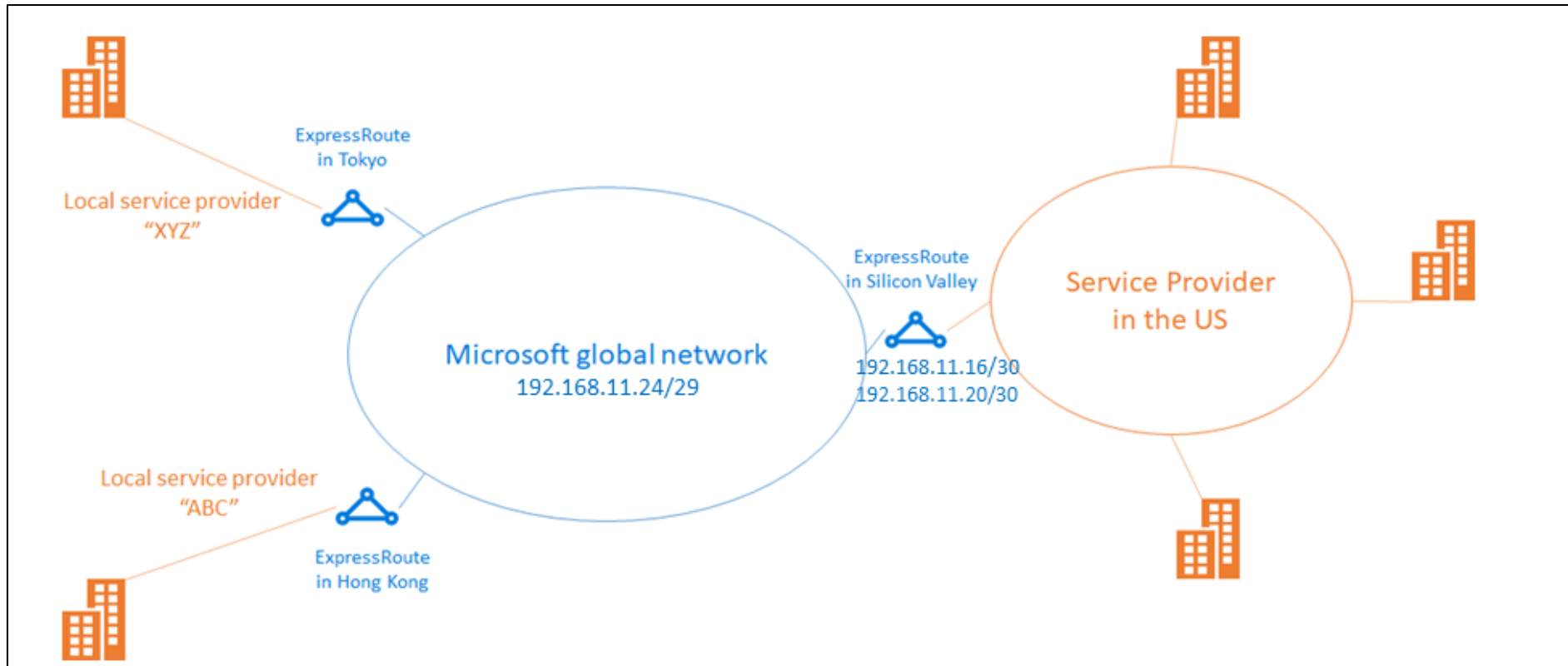
Local connectivity with ExpressRoute Local

Across on-premises connectivity with ExpressRoute Global Reach

ExpressRoute Direct





ExpressRoute Global Reach



Designed to complement your service provider's WAN implementation and connect your branch offices across the world

You can link ExpressRoute circuits together to make a private network between your on-premises networks

Configure ExpressRoute Global Reach

 **Private peering** 

TestERCircuit

☒ Enable Peering ⓘ

Peer ASN * ⓘ
65020 ✓

IPv4 Primary subnet * ⓘ
192.168.11.16/30

IPv4 Secondary subnet * ⓘ
192.168.11.20/30


VLAN ID * ⓘ
110 ✓

Shared key

Add Global Reach

Global Reach name	ExpressRoute Circuit name ⓘ	Global Reach subnet ⓘ
<input type="text"/>		

Save

Add Global Reach 

TestERCircuit

Global Reach name *
TestERCircuit1-TestERCircuit2 ✓

☐ Redeem authorization ⓘ

ExpressRoute circuit * ⓘ
TestERCircuit2
resourceGroup: ExpressRouteResourceGroup2, location: eastus ✓

Global Reach subnet * ⓘ
192.168.11.24/29 ✓

Add

Connect geographically dispersed networks with ExpressRoute Global Reach - Review

Knowledge Check



Microsoft Learn Modules (docs.microsoft.com/Learn)

[Azure ExpressRoute: Connect to Microsoft Cloud using Global Reach | Microsoft Docs](#)

Improve data path performance between
networks with ExpressRoute FastPath



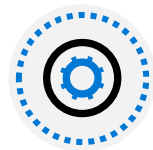
Improve data path performance between networks with ExpressRoute FastPath Overview



ExpressRoute FastPath



Configure ExpressRoute FastPath



Review

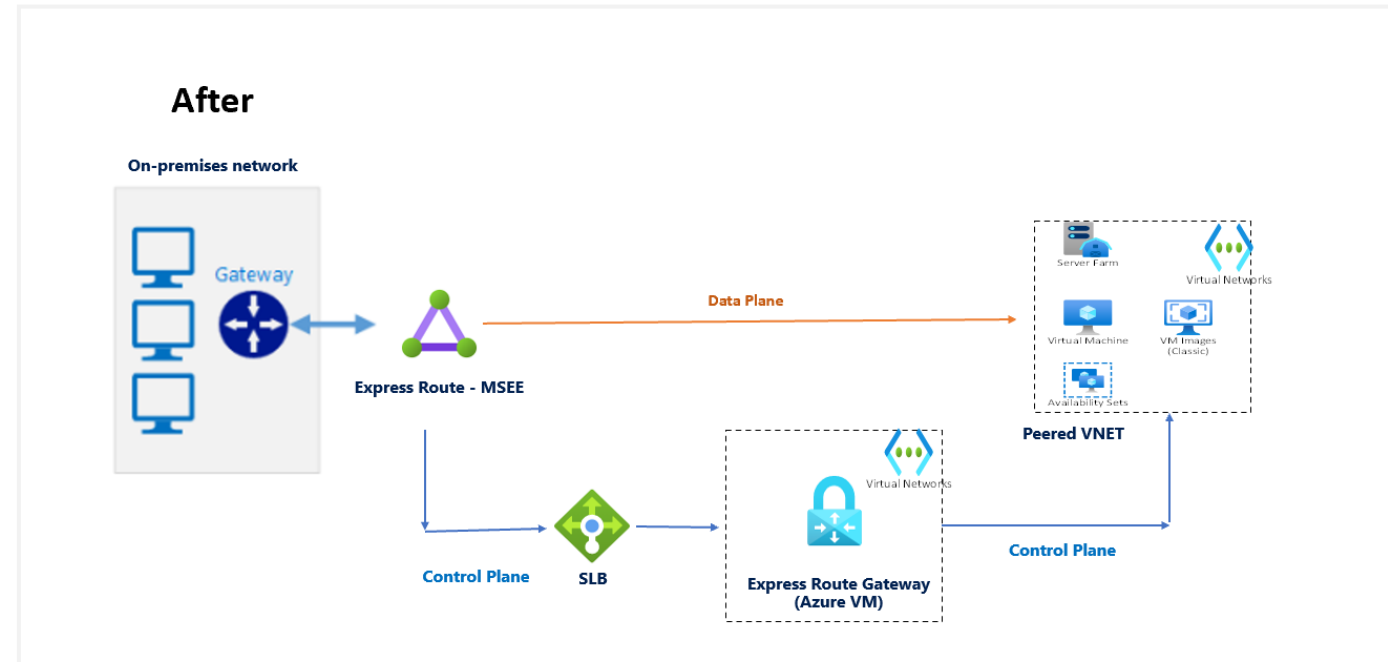
ExpressRoute FastPath

FastPath is designed to improve the data path performance between your on-premises network and your virtual network

When enabled, FastPath sends network traffic directly to virtual machines in the virtual network, bypassing the gateway.

FastPath improves data path performance such as packets per second and connections per second between your on-premises network and your virtual network.

You can enable ExpressRoute FastPath if your virtual network gateway is Ultra Performance or ErGw3AZ



Configure ExpressRoute FastPath

Configure FastPath on a new connection using PowerShell:

```
1  $circuit = Get-AzExpressRouteCircuit -Name "MyCircuit" `
2  -ResourceGroupName "MyRG"
3
4  $gw = Get-AzVirtualNetworkGateway -Name "MyGateway" `
5  -ResourceGroupName "MyRG"
6
7  $connection = New-AzVirtualNetworkGatewayConnection `
8  -Name "MyConnection" -ResourceGroupName "MyRG" `
9  -ExpressRouteGatewayBypass -VirtualNetworkGateway1 $gw
10 -PeerId $circuit.Id -ConnectionType ExpressRoute `
11 -Location "MyLocation"
12
```

Improve data path performance between networks with ExpressRoute FastPath - Review

Knowledge Check

Microsoft Learn Modules (docs.microsoft.com/Learn)

[About Azure ExpressRoute FastPath | Microsoft Docs](#)



Troubleshoot ExpressRoute connection issues



Troubleshoot ExpressRoute connection issues Overview



Verify circuit provisioning and state through the Azure portal



Validate Peering Configuration



Validate Address Resolution Protocol (ARP)



Troubleshooting network performance

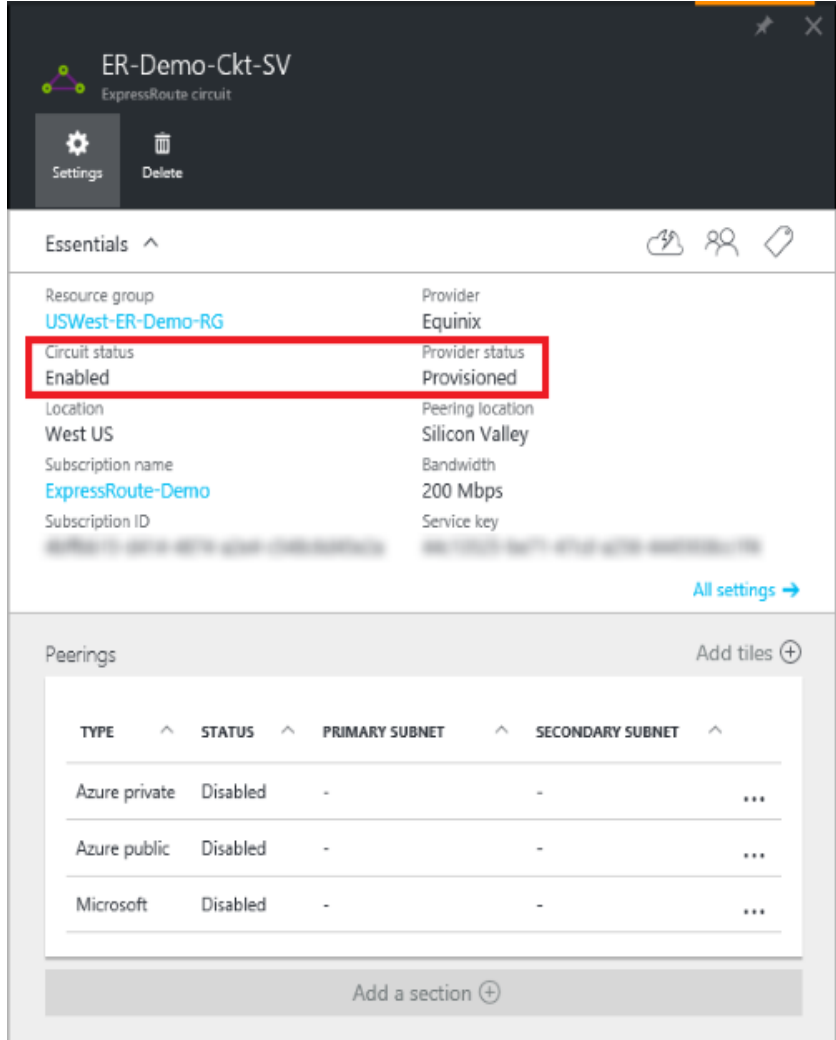


Review

Verify circuit provisioning and state

`Get-AzExpressRouteCircuit -ResourceGroupName "USWest-ER-Demo-RG" -Name "ER-Demo-Ckt-SV"`

```
Name : ER-Demo-Ckt-SV
ResourceGroupName : USWest-ER-Demo-RG
Location : westus
Id : /subscriptions/*****/resourceGroups/ USWest-ER-Demo-RG /providers/*****/expressRouteCircuits/ ER-Demo-Ckt-SV
Etag : W/"#####"
ProvisioningState : Succeeded
Sku : {
  "Name": "Standard_UnlimitedData",
  "Tier": "Standard",
  "Family": "UnlimitedData"
}
CircuitProvisioningState : Enabled
ServiceProviderProvisioningState : Provisioned
ServiceProviderNotes :
ServiceProviderProperties : {
  "ServiceProviderName": "****",
  "PeeringLocation": "*****",
  "BandwidthInMbps": 200
}
ServiceKey : *****
Peerings : []
Authorizations : []
```



The screenshot shows the Azure portal interface for an ExpressRoute circuit. The top section, titled 'Essentials', displays key information about the circuit. A red box highlights the 'Circuit status' and 'Provider status' fields, both of which are 'Enabled' and 'Provisioned' respectively. Below this, a table lists various details including the resource group, location, subscription name, and bandwidth. The bottom section, titled 'Peerings', shows a table with three rows: 'Azure private', 'Azure public', and 'Microsoft', all of which are currently 'Disabled'. The interface includes navigation icons for 'Settings' and 'Delete' at the top, and a 'Peering' section at the bottom with an 'Add a section' button.

TYPE	STATUS	PRIMARY SUBNET	SECONDARY SUBNET
Azure private	Disabled	-	-
Azure public	Disabled	-	-
Microsoft	Disabled	-	-

Reset a failed circuit

AZ * PowerShell
Connect-Az Account

CLI win
Linux
az login
→ json
PS
Bash

```
Connect-AzAccount  
Get-AzSubscription  
Select-AzSubscription -SubscriptionName "Replace_with_your_subscription_name"  
$ckt = Get-AzExpressRouteCircuit -Name "ExpressRouteARMCircuit" -ResourceGroupName "ExpressRouteResourceGroup"  
  
Set-AzExpressRouteCircuit -ExpressRouteCircuit $ckt
```

The circuit should now be healthy. Open a support ticket with Microsoft support if the circuit is still in a failed state.

Validate Peering Configuration

The screenshot displays the Azure portal interface for an ExpressRoute circuit. The left-hand navigation pane is visible, with the 'Overview' tab selected and highlighted by a red rectangle. The main content area shows the circuit's details, including its resource group, status, location, subscription, and ID. Below these details is a table titled 'Peerings' which lists the configured peerings. The first row in this table, representing an 'Azure private' peering, is highlighted with a red rectangle. This row shows a 'Provisioned' status, a primary subnet of '192.168.20.16/30', a secondary subnet of '192.168.20.20/30', and is modified by 'Customer'.

Home > ASH-Cust20-ER

ER-Demo-Ckt
ExpressRoute circuit

Search (Ctrl+/)

Move Delete Refresh

Overview

- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems

Settings

- Configuration
- Connections
- Authorizations
- Peerings
- Properties
- Locks
- Export template

Monitoring

- Metrics

Resource group (change)
[Demo-RG](#)

Circuit status
Enabled

Location
East US

Subscription (change)
[ExpressRoute-Lab](#)

Subscription ID
#####-####-####-#####

Tags (change)
[Click here to add tags](#)

Provider
Equinix

Provider status
Provisioned

Peering location
Washington DC

Bandwidth
50 Mbps

Service key
#####-####-####-#####

Peerings

Type	↑↓ Status	↑↓ Primary subnet	↑↓ Secondary subnet	↑↓ Last modified by	↑↓
Azure private	Provisioned	192.168.20.16/30	192.168.20.20/30	Customer	...
Azure public	Not provisioned	-	-	-	...
Microsoft	Not provisioned	-	-	-	...

Validate ARP

Address Resolution Protocol (ARP):

- layer 2 protocol defined in RFC 826.
- Used to map the Ethernet address (MAC address) with an ip address.

Title of ARP table error messages:

- On-premises MAC address show incomplete
- Microsoft entry in the ARP table

The ARP table provides a mapping of the IP address and MAC address for a particular peering. The ARP table for an ExpressRoute circuit peering provides the following information for each interface (primary and secondary):

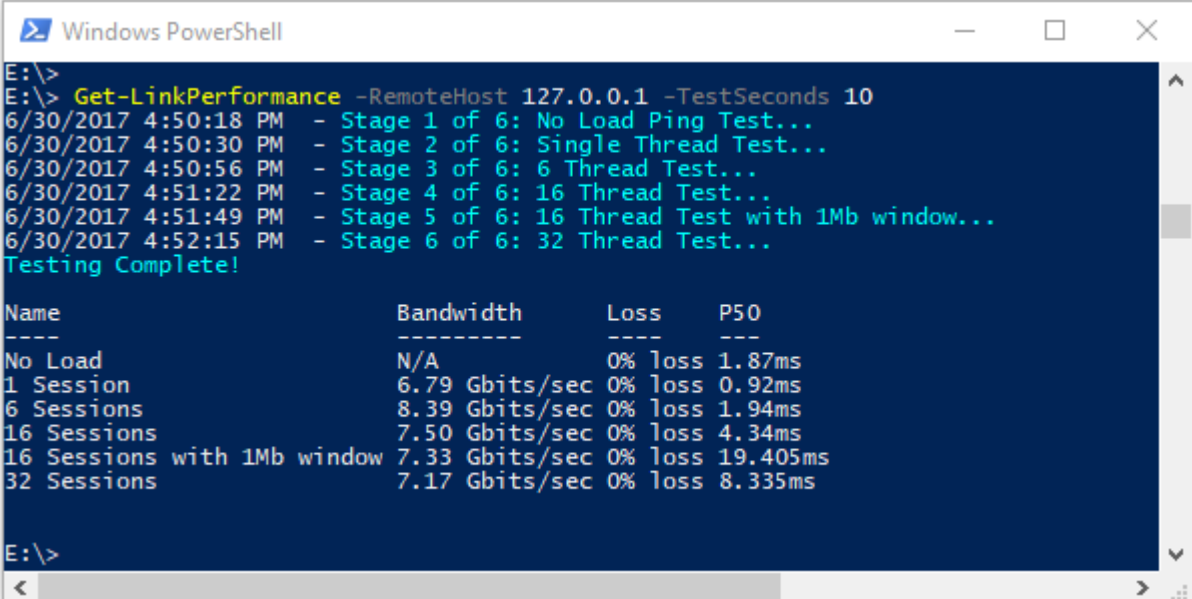
- Mapping of on-premises router interface ip address to the MAC address
- Mapping of ExpressRoute router interface ip address to the MAC address
- Age of the mapping ARP tables can help validate layer 2 configuration and troubleshooting basic layer 2 connectivity issues.

Troubleshooting network performance

Most network issues can be analyzed and isolated with Azure Network Watcher or PowerShell and CLI

To help with troubleshooting, the Azure Connectivity Toolkit (AzureCT) was developed to put some of these tools in an easy package.

These tools and methods are wrapped into a PowerShell module (AzureCT) that you can install and use



```
E:\>
E:\> Get-LinkPerformance -RemoteHost 127.0.0.1 -TestSeconds 10
6/30/2017 4:50:18 PM - Stage 1 of 6: No Load Ping Test...
6/30/2017 4:50:30 PM - Stage 2 of 6: Single Thread Test...
6/30/2017 4:50:56 PM - Stage 3 of 6: 6 Thread Test...
6/30/2017 4:51:22 PM - Stage 4 of 6: 16 Thread Test...
6/30/2017 4:51:49 PM - Stage 5 of 6: 16 Thread Test with 1Mb window...
6/30/2017 4:52:15 PM - Stage 6 of 6: 32 Thread Test...
Testing Complete!

Name                               Bandwidth      Loss      P50
----                               -
No Load                           N/A            0% loss   1.87ms
1 Session                         6.79 Gbits/sec 0% loss   0.92ms
6 Sessions                        8.39 Gbits/sec 0% loss   1.94ms
16 Sessions                       7.50 Gbits/sec 0% loss   4.34ms
16 Sessions with 1Mb window       7.33 Gbits/sec 0% loss   19.405ms
32 Sessions                       7.17 Gbits/sec 0% loss   8.335ms

E:\>
```

Troubleshoot ExpressRoute connection issues - Review

Knowledge Check



Microsoft Learn Modules (docs.microsoft.com/Learn)

[Azure ExpressRoute: Verify Connectivity - Troubleshooting Guide | Microsoft Docs](#)

[Troubleshoot network link performance: Azure | Microsoft Docs](#)

[Reset a failed circuit - ExpressRoute: PowerShell: Azure | Microsoft Docs](#)

End of presentation

