

How to Create an ExpressRoute in Microsoft Azure

<https://campus.barracuda.com/doc/95262165/>

You can configure ExpressRoutes in the [WAN Connections](#). Follow the guide below to create an ExpressRoute in Microsoft Azure.

Before You Begin

It is highly recommended to start with the configuration only when you have all the necessary information from your provider and the necessary equipment to establish the connection.

- Allocate two /30 subnets that are not used anywhere else in your network topology. One subnet will be used for the primary link; the other will be used for the secondary link. From each of these subnets, you will assign the first usable IP address to your router because Microsoft uses the second usable IP for its router.
- A valid VLAN ID is required to establish this peering on. Ensure that no other peering in the circuit uses the same VLAN ID. For both primary and secondary links you must use the same VLAN ID. This information is provided from your provider.
- AS number for peering. You can use both 2-byte and 4-byte AS numbers. You can use a private AS number for this peering except for any number from 65515 to 65520.
- You must advertise the routes from your on-premises Edge router to Azure via BGP when you configure the private peering.

Step 1. Create an ExpressRoute in Microsoft Azure

1. Log into the Azure portal: <https://portal.azure.com>
2. In the left menu, click **Create a resource** and search for **ExpressRoute circuits**.
3. Click **+Create**.
4. The **Create ExpressRoute** window opens. In the **Basics** tab, specify values for the following:
 - **Subscription** – Select your subscription.
 - **Resource group** – Select an existing resource group or click **Create new** to deploy the ExpressRoute in an new resource group.
 - **Region** – Select a region.
 - **Name** – Enter a name for the ExpressRoute.

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Create ExpressRoute ...

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Use Azure ExpressRoute to create private connections between Azure datacenters and infrastructure on your premises or in a colocation environment. Establish connections to Azure at an ExpressRoute location, such as an Exchange provider facility, or directly connect to Azure from your existing WAN network, such as a multiprotocol label switching (MPLS) VPN, provided by a network service provider.
[Learn more about Express Route circuits](#)

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ	<input type="text" value="SDWaaS-canary"/>
Resource group * ⓘ	<input type="text" value="Campus-CGW"/>

[Create new](#)

Instance details

Region * ⓘ	<input type="text" value="West Europe"/>
Name * ⓘ	<input type="text" value="Campus-Express-Route"/>

Review + create	< Previous	Next : Configuration >
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5. Click **Next:Configuration>**.

6. The **Configuration** blade opens. Specify values for the following:

- **Port type** – Select **Provider**.
- **Create new or import from classic** – Select **Create new**.
- **Provider** – Select your provider.
- **Peering location** – Select your peering location. This information is provided from your provider.
- **Bandwidth** – Select your bandwidth. This information is provided from your provider.
- **SKU** – Select your SKU.
- **Billing model** – Select **a billing model**.
- **Allow classic operations** – Select **No**.

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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 *	<input checked="" type="radio"/> Provider <input type="radio"/> Direct
Create new or import from classic *	<input checked="" type="radio"/> Create new <input type="radio"/> Import
Provider *	AT&T
Peering location *	Silicon Valley
Bandwidth *	50Mbps
SKU *	<input checked="" type="radio"/> Standard <input type="radio"/> Premium
Billing model *	<input checked="" type="radio"/> Metered <input type="radio"/> Unlimited
Allow classic operations	<input type="radio"/> Yes <input checked="" type="radio"/> No

Review + create

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7. Click **Review + create**.

8. The **Review + create** blade opens.

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TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the [Azure Marketplace Terms](#) for additional details.

Basics

Subscription	SDWaaS-canary
Resource group	Campus-CGW
Region	Central US EUAP
Name	Campus-Express-Route

Configuration

Port type	Provider
Create new or import from classic	Create new
Provider	AT&T
Peering location	Silicon Valley
Bandwidth	50Mbps
SKU	Standard
Billing model	Metered
Allow classic operations	No

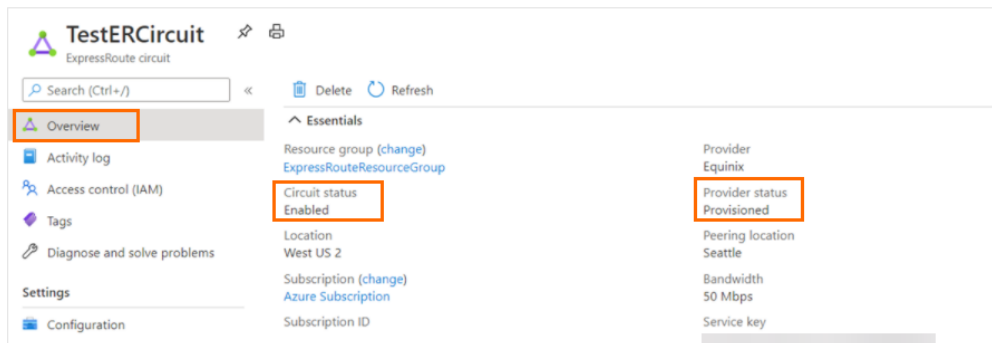
[Create](#)[< Previous](#)[Next](#)[Download a template for automation](#)

9. Verify your settings and click **Create**.

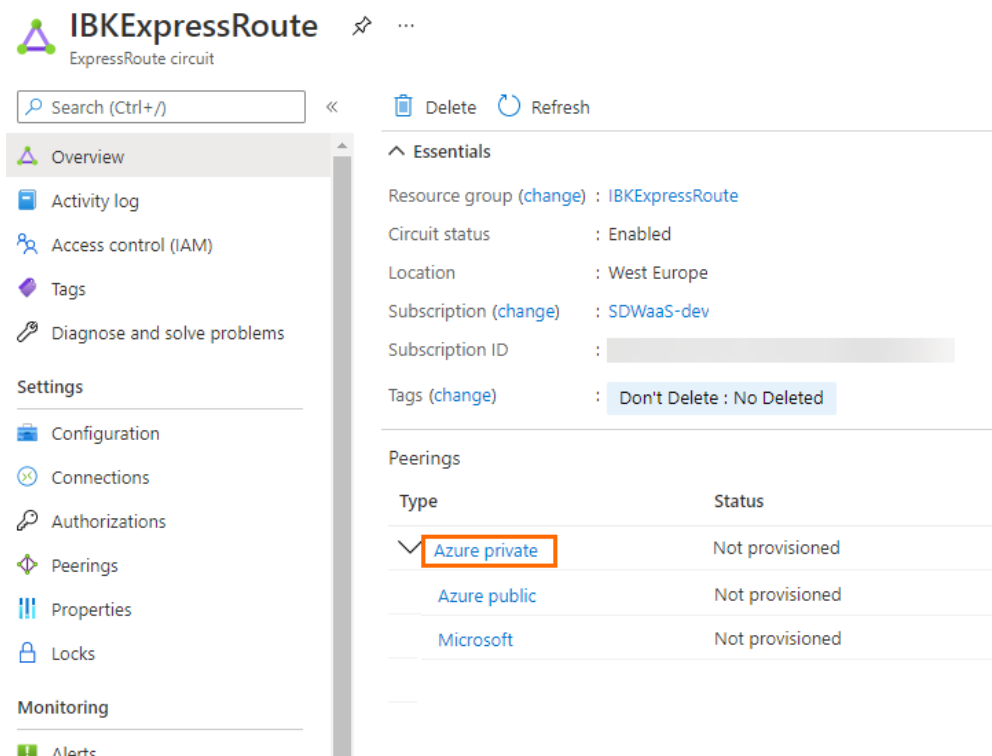
Step 2. Create a Private Peering

Verify that the **Provider status** of the circuit is **provisioned** before continuing. You can check that in the **Overview** blade of your ExpressRoute created in Step 1.

1. Log into the Azure portal: <https://portal.azure.com>.
2. Go to the Express Route created in Step 1. Verify that the **Provider status** is **Provisioned**.



3. In the **Overview** blade, click **Azure private**.



4. The **Private peering** blade opens. Specify values for the following:

- **Peer ASN** – Enter your ASN number. It must be the same as configured in Barracuda CloudGen WAN. For more information, see [How to Configure an ExpressRoute](#).
- **Subnets** – Select **Both**.
- **IPv4 Primary subnet** – Enter the primary subnet.
- **IPv4 Secondary subnet** – Enter the secondary subnet.
- **VLAN ID** – Enter the VLAN ID. This information is provided from your provider.

Private peering ASH-Cust15-ER

Peer ASN * ⓘ

Subnets
☒ Both
☐ IPv4
☐ IPv6

IPv4 Primary subnet * ⓘ

IPv4 Secondary subnet * ⓘ

☒ Enable IPv4 Peering ⓘ

VLAN ID * ⓘ

Shared key

☐ Enable Global Reach ⓘ

5. Click **SAVE**.

Step 4. Create Express Route Gateway in Your Virtual WAN

1. Log into the Azure portal: <https://portal.azure.com>.
2. Go to the virtual WAN hub used for Barracuda CloudGen WAN. For more information, see [How to Create a Microsoft Azure Virtual WAN](#).
3. Click **Hubs**.
4. Select the hub used for Barracuda CloudGen WAN.
5. In the hubs menu click ...

Home > Campus-CGW > Campus-VWAN

Campus-VWAN | Hubs

Virtual WAN

Search (Ctrl+F) New Hub Refresh

Search for hubs by name Clear all filters

Add filter





Hub	Hub status	Region	VPN sites	Address Space	Point-to-site	ExpressRoute Circuits
Campus-Hub	Succeeded	eastus2euap	No VPN gateway	172.16.1.0/24	No P2S gateway	No ExpressRoute gateway ...

6. Select **Edit virtual hub**.

+ New Hub Refresh

Search for hubs by name Clear all filters

+ Add filter

Hub	Hub status	Region	VPN sites	Address Space	Point-to-site	ExpressRoute Circuits
 Campus-Hub	 Succeeded	eastus2euap	No VPN gateway	172.16.1.0/24	No P2S gateway	 Edit virtual hub  Delete virtual hub

7. The **Edit virtual hub** window opens. Specify values for the following:
- **Include ExpressRoute gateway** – Click to enable.
 - **Gateway scale units** – Select the scale units.

Edit virtual hub



Virtual WAN hub

Basics

Name

Campus-Hub

Hub private address space ⓘ

172.16.1.0/24

☐ Include vpn gateway for vpn sites

☐ Include point-to-site gateway

☒ Include ExpressRoute gateway

*Gateway scale units ⓘ

2 scale units - 4 Gbps



Creating or updating a hub can take 30 minutes or more

Confirm

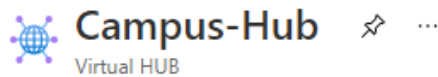
8. Click **Confirm**. It takes about 30 minutes for the hub and hub resources to fully create.

Step 5. Connect the ExpressRoute and Virtual WAN

Continue with this step when the hub has finished deploying.

1. Log into the Azure portal: <https://portal.azure.com>.
2. Go to the virtual WAN edited in Step 4.
3. Click **Hubs**.
4. Select the hub edited in Step 4.
5. In the hubs menu, click **ExpressRoute**.

[Home](#) > [Campus-VWAN](#) >



Search (Ctrl+ /) << [Delete] [Refresh] [Reset router] [Re]

Campus-Hub Virtual HUB

Overview

Connectivity

- VPN (Site to site)
- ExpressRoute**
- User VPN (Point to site)
- Routing

Security

- Convert to secure hub

Third party providers

- Network Virtual Appliance

Essentials

Name : Campus-Hub

Hub status : ✔ Succeeded

Routing status : ✔ Provisioned

Virtual network connections

vNet connections: 0

VPN (Site to site)



● No gateway ([Create](#))

6. The **ExpressRoute** blade opens.
7. Select your ExpressRoute circuit and click **Connect circuit(s)**.

[Home](#) > [Campus-VWAN](#) > [Campus-ER-HUB](#)




Campus-ER-HUB | ExpressRoute ...

Virtual HUB


 Delete gateway Overview Essentials

Gateway scale units : 2 scale units - 4 Gbps

Connectivity

 VPN (Site to site) ExpressRoute User VPN (Point to site) Routing

Security






 Convert to secure hub

Third party providers

 Network Virtual Appliance

Manage ExpressRoute circuits

All ExpressRoute circuits in your subscription(s) or redeemed by authorization key are shown below

 Redeem authorization key  Connect circuit(s)  Disconnect circuit(s)  Refresh☒ ExpressRoute circuit ↑↓ Type ↑↓ Provider☒  Campus-ER Standard AT&T

8. Wait until the connection is established.

The ExpressRoute circuit can be used now.

Further Information

- For more information on the configuration of an ExpressRoute in Barracuda CloudGen WAN, see [How to Configure an ExpressRoute](#).
- For more information on ExpressRoute circuits, see <https://docs.microsoft.com/en-us/azure/expressroute/expressroute-howto-circuit-portal-resource-manager>
- For more information on private peering, see <https://docs.microsoft.com/en-us/azure/expressroute/expressroute-howto-routing-portal-resource-manager#private>.
- For more information on the connection of a virtual WAN and ExpressRoute, see <https://docs.microsoft.com/en-us/azure/virtual-wan/virtual-wan-expressroute-portal>.

Figures

1. er_1.png
2. create_er2.png
3. er_3.png
4. er_provisioned.png
5. private_peering1.png
6. private_peering3.png
7. edit_hub.png
8. edit_hub2.png
9. edit_hub3.png
10. hub2.png
11. er_connect.png

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