SOP for Azure Virtual WANs

Status of SOP:

⚠ Not Endorsed.

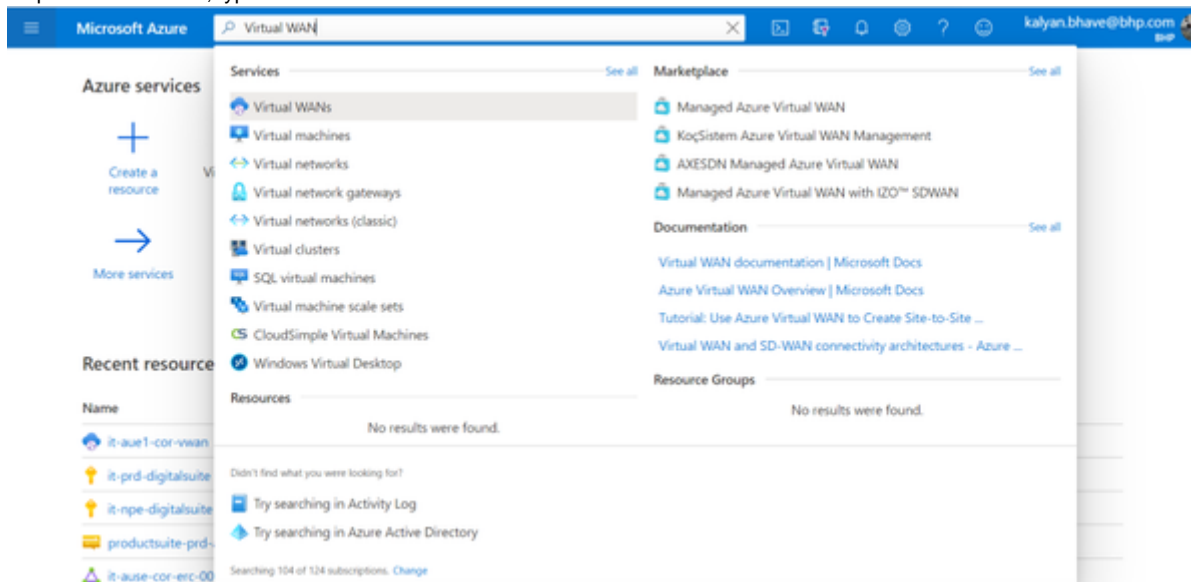| Related Platform	Component
Azure	Azure Virtual WAN

Problem

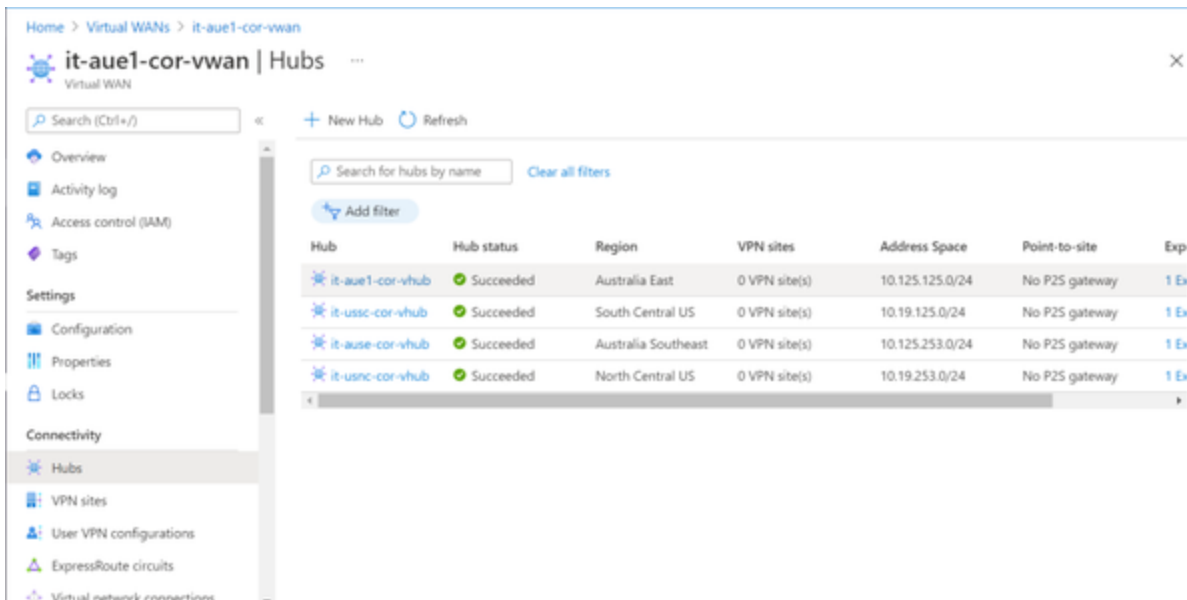❌ How to add Azure Virtual WAN?

Solution

Step 1: Login with BHP credentials to Azure portal https://portal.azure.com/#home

Step 2: In search box, type Virtual WANs and select the same.

Step 3: Select **it-aue1-cor-vwan** only Virtual WAN.

Step 4: Under "**Connectivity**"- Select "**Hubs**"- We have 4 Hubs for each region.

it-aue1-cor-vwan | Hubs
Virtual WAN

×

🔍 Search (Ctrl+/)   «   + New Hub   ⟳ Refresh

● Overview
■ Activity log   🔍 Search for hubs by name   Clear all filters
🔑 Access control (IAM)
● Tags   🔻 Add filter

Settings
                                                | Hub | Hub status | Region | VPN sites | Address Space | Point-to-site | Exp |
■ Configuration | --- | --- | --- | --- | --- | --- | --- |
⫿ Properties | ☀ it-aue1-cor-vhub | ✔ Succeeded | Australia East | 0 VPN site(s) | 10.125.125.0/24 | No P2S gateway | 1 Ex |
🔒 Locks | ☀ it-ussc-cor-vhub | ✔ Succeeded | South Central US | 0 VPN site(s) | 10.19.125.0/24 | No P2S gateway | 1 Ex |
                                                | ☀ it-ause-cor-vhub | ✔ Succeeded | Australia Southeast | 0 VPN site(s) | 10.125.253.0/24 | No P2S gateway | 1 Ex |
Connectivity | ☀ it-usnc-cor-vhub | ✔ Succeeded | North Central US | 0 VPN site(s) | 10.19.253.0/24 | No P2S gateway | 1 Ex |

☀ Hubs
▦ VPN sites
👤 User VPN configurations
△ ExpressRoute circuits
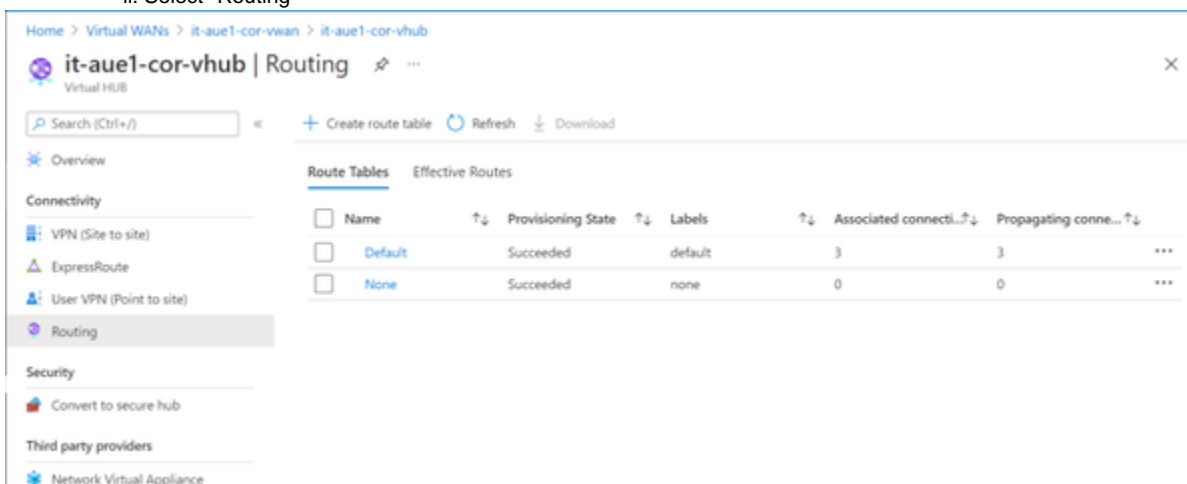⟐ Virtual network connections

Step 5: If we have a request to add a new CIDR range in any Hub then: -

    a. We must change all in all the four hubs.

        i. Click the respected "Hub" (I am choosing "**it-aue1-cor-vhub**" Australia East Hub for example).

        ii. Select "Routing"

it-aue1-cor-vhub | Routing 📌 ⋯
Virtual HUB

×

🔍 Search (Ctrl+/)   «   + Create route table   ⟳ Refresh   ⬇ Download

☀ Overview
                                                Route Tables   Effective Routes
Connectivity
▦ VPN (Site to site) | ☐ Name | Provisioning State | Labels | Associated connecti... | Propagating conne... |
△ ExpressRoute | --- | --- | --- | --- | --- |
👤 User VPN (Point to site) | ☐ Default | Succeeded | default | 3 | 3 | ⋯ |
⊙ Routing | ☐ None | Succeeded | none | 0 | 0 | ⋯ |

Security
🛡 Convert to secure hub

Third party providers
☀ Network Virtual Appliance

        iii. Elect for "Default"

        iv. Under "Basics" tab – Look for the "Route name" and copy the "Destination prefix" IP address in notepad.

        v. Add the new range of CIDR and paste back to Azure portal under the "Destination prefix".

        e.g.,10.125.112.0/21,10.125.120.0/22,10.125.15.0/24,10.125.16.0/24,10.125.18.0/23,10.125.25.0/24,10.125.31.0/24,10.125.46.0/23, 10.125.48.0/20,10.125.64.0/19,10.125.7.0/24,10.125.8.0/24,10.125.96.0/20,10.160.0.0/17,10.161.0.0/17,10.162.0.0/17,10.163.0.0 /17, 10.164.0.0/17
        Note:- Highlights section is the new CIDR range added and make sure you update one Hub at a time.

        vi. Repeat the same for all the "Route name".

    b. We have to repeat the same steps of 5(i-vi) for all the other remaining "Hubs" :-

        i. it-ussc-cor-vhub

        ii. it-ause-cor-vhub

        iii. it-usnc-cor-vhub

Step 6: Go back to "Virtual HUBs", Under "**Connectivity**" select "**Virtual network connections**".

it-aue1-cor-vwan | Virtual network connections ···

Virtual WAN

🔍 Search (Ctrl+/)   «   + Add connection   ↻ Refresh

Configuration

Properties

🔒 **Locks**

Connectivity

☀ **Hubs**

VPN sites

User VPN configurations

⚠ **ExpressRoute circuits**

Virtual network connections

Hub	Hub region	Virtual network	Virtual network con...	Virtual network con...	Associated to Route...	Prop
it-aue1-cor-vhub	Australia East	∨ Virtual networks (1)		Succeeded (1)		
		it-aue1-cor-vnt...	it-aue1-cor-vhub-to-...	Succeeded	defaultRouteTable	def
it-ause-cor-vhub	Australia Southeast	> Virtual networks (1)		Succeeded (1)		
it-usnc-cor-vhub	North Central US	> Virtual networks (1)		Succeeded (1)		
it-ussc-cor-vhub	South Central US	> Virtual networks (1)		Succeeded (1)		

a. You see four virtual hub connections and under each connection there is an option to edit.

b. Under the "Destination prefix", you need to populate the routes again which you entered earlier in step 5(v).

it-aue1-cor-vwan | Virtual network connections ···

Virtual WAN

»   + Add connection   ↻ Refresh

Hub	Hub region	Virtual network	Virtual...	Virtual network c...	Associated to Route ...	Propagating to Route...	Propagating to label(...	
it-aue1-cor-vhub	Australia East	∨ Virtual networks (1)		Succeeded (1)				···
		it-aue1-cor-vnt-...	it-aue1...	Succeeded	defaultRouteTable	defaultRouteTabl	✎ Edit virtual network con...	···
it-ause-cor-vhub	Australia Southeast	> Virtual networks (1)		Succeeded (1)			🗑 Delete virtual network c...	···
it-usnc-cor-vhub	North Central US	> Virtual networks (1)		Succeeded (1)				···
it-ussc-cor-vhub	South Central US	> Virtual networks (1)		Succeeded (1)				···

c. Update in all regions only if its asked.

FYI:- Most of the infrastructure is deployed via Terraform. Hubs are not supported by Terraform. Hubs were deployed using templates- Static Route table maintained by Azure Squad and we can streamline this by CLI scripts.