# Design and Implement an Azure Virtual WAN Architecture



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#### Overview



**Understand Azure Virtual WAN** 

Design and deploy an Azure Virtual WAN architecture

Configure gateways, NVAs, and routing

#### Relevant Exam AZ-700 Skills

# Exam AZ-700: Designing and Implementing Microsoft Azure Networking Solutions – Skills Measured

Design and Implement Core Networking Infrastructure (20–25%)

Design and implement an Azure Virtual WAN architecture

- design an Azure Virtual WAN architecture, including selecting SKUs and services
- connect a VNet gateway to Azure Virtual WAN
- create a hub in Virtual WAN
- create a network virtual appliance (NVA) in a virtual hub
- configure virtual hub routing
- create a connection unit



# Understand Azure Virtual WAN

# Azure Virtual WAN



Managed virtual networking service that enables a global transit network architecture

A "composite" service like Azure Front Door

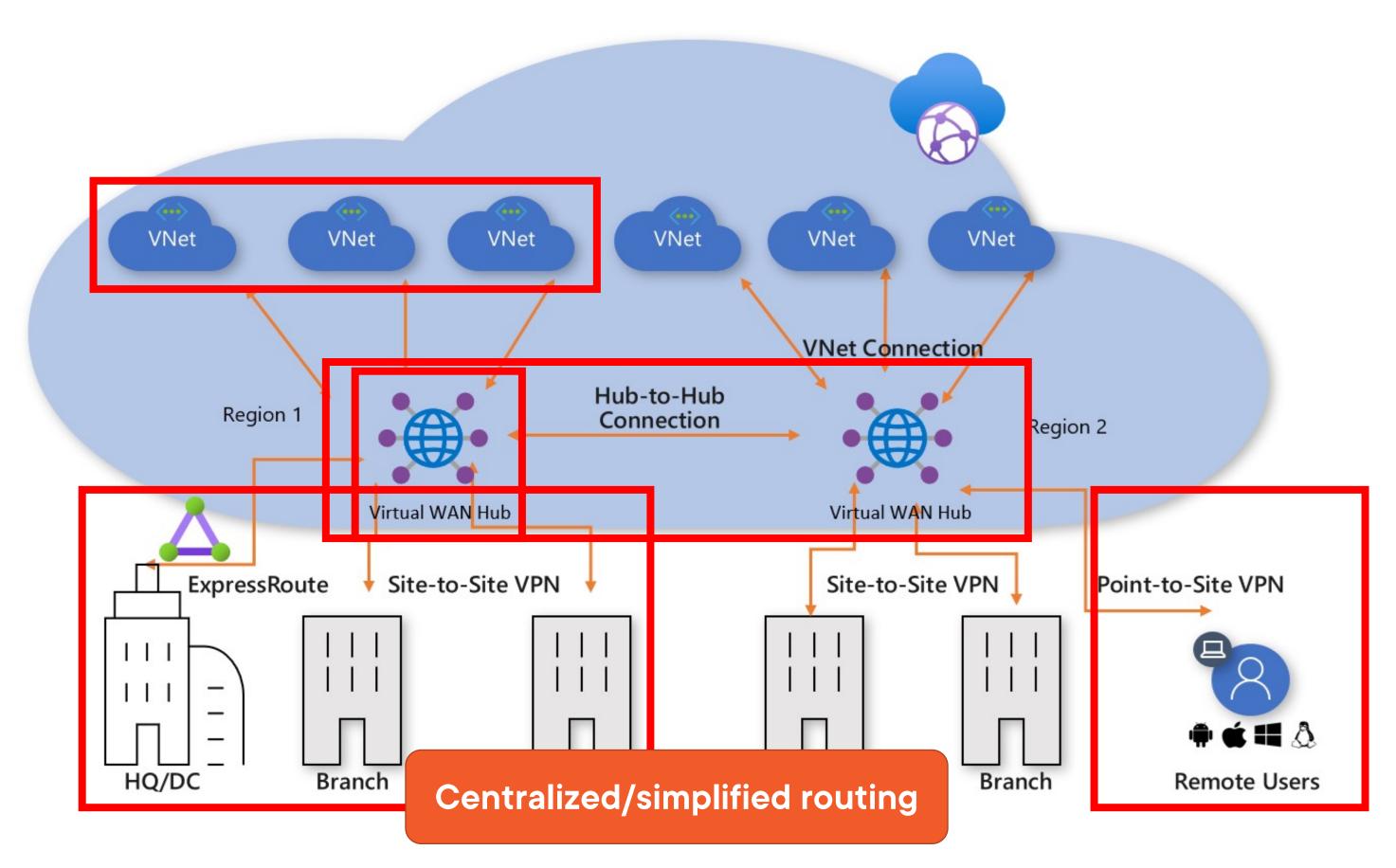
Makes complex hub-and-spoke architectures easier to implement and manage

Integrates with Azure Firewall Manager and third-party solutions



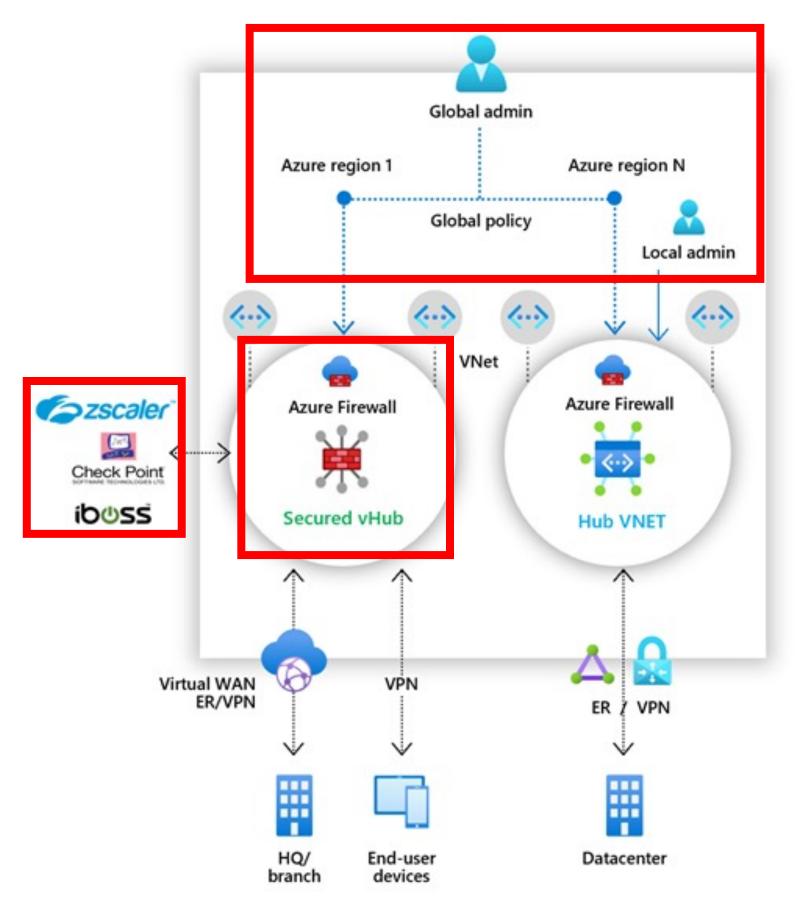
# Design and Deploy Azure Virtual WAN

#### Azure Virtual WAN Architecture

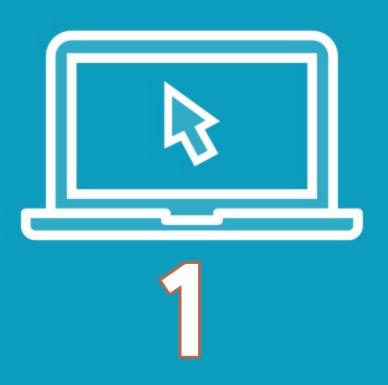




### Secured Virtual Hub Architecture



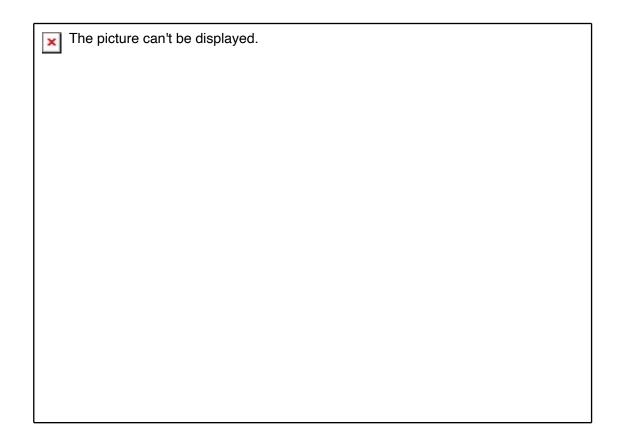




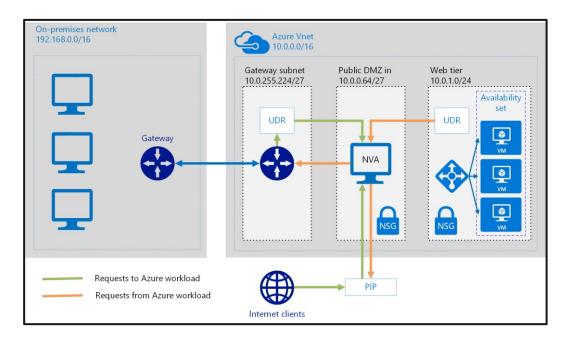
Deploy Virtual WAN hub
Set up spoke Vnets
Azure Firewall?

# Configure Azure Virtual WAN

#### Virtual WAN Partners



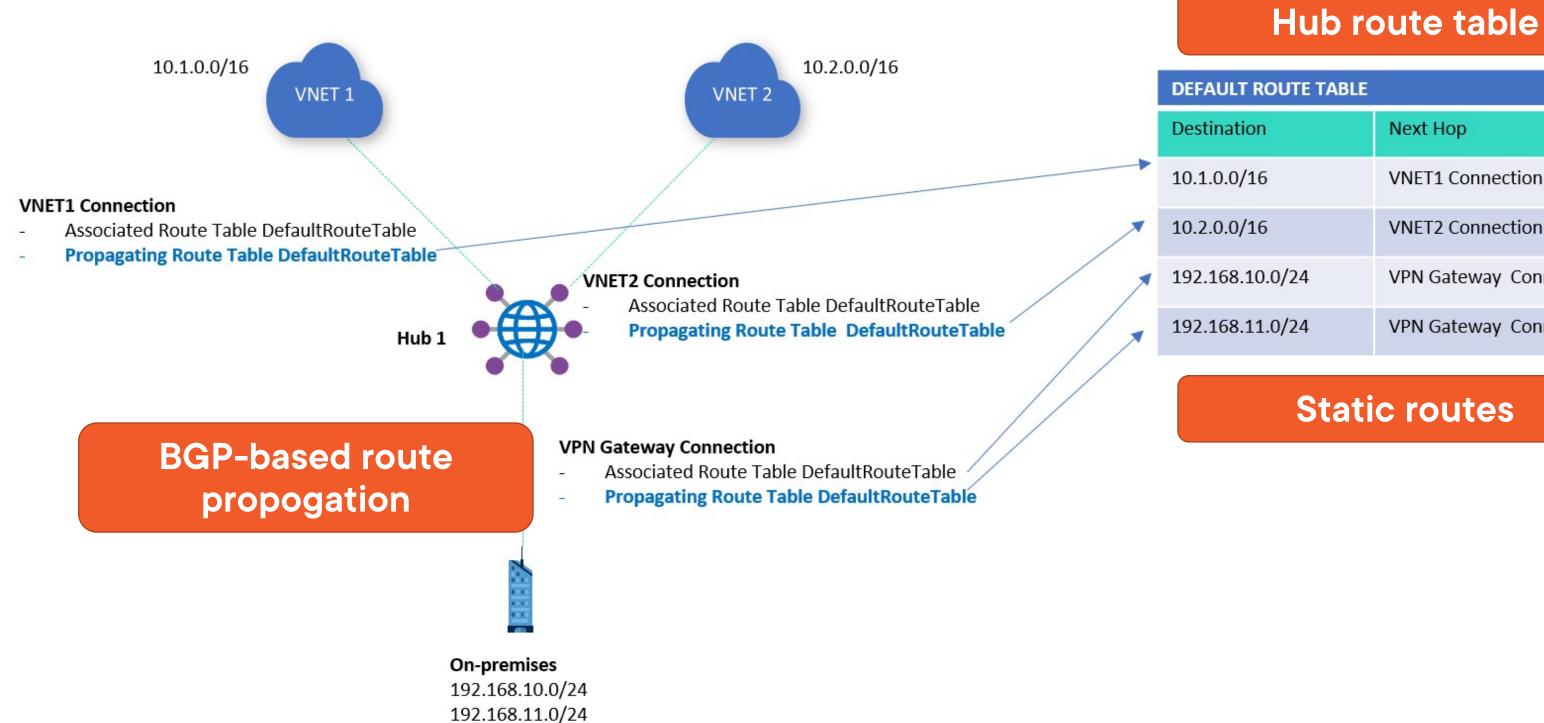
**Branch Device Partner (CPE)** 



**Branch Device Partner (NVA)** 



# Virtual WAN Routing





DEFAULT ROUTE TABLE	
Destination	Next Hop
10.1.0.0/16	VNET1 Connection
10.2.0.0/16	VNET2 Connection
192.168.10.0/24	VPN Gateway Connection
192.168.11.0/24	VPN Gateway Connection



# A Wee Bit on Virtual WAN Pricing

Scale unit (aggregate capacity)

S2S VPN scale unit (500 Mbps)

**ExpressRoute scale** 

unit (2 Gbps)

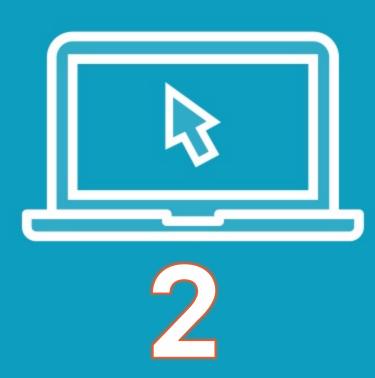
Connection unit (gateway endpoint)

**S2S Branch connection** 

**ExpressRoute circuit** 

**P2S User connection** 





Configure and test different connections

Configure and test routing

#### Summary



You may not need products like Virtual WAN and Front Door if you already have skilled staff and a need for administrative flexibility

Microsoft realizes networking is a "heavy lift" for many customers

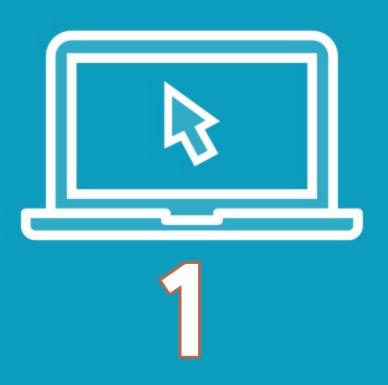
Thanks so much!

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Set up spoke Vnets with Bicep and ARM

**Deploy Virtual WAN hub** 

Make a secured virtual hub



Configure and test different connections

Configure and test routing