

Helping you create a
digitally secure future.

Presentation Title

John McDonough / Srija Reddy Allam / Robert Reris / Jeff Kopko
Fortinet Cloud CSE

Azure Virtual WAN

Azure Networking and Routing

Azure Routing

Other than Default Routing

User Defined

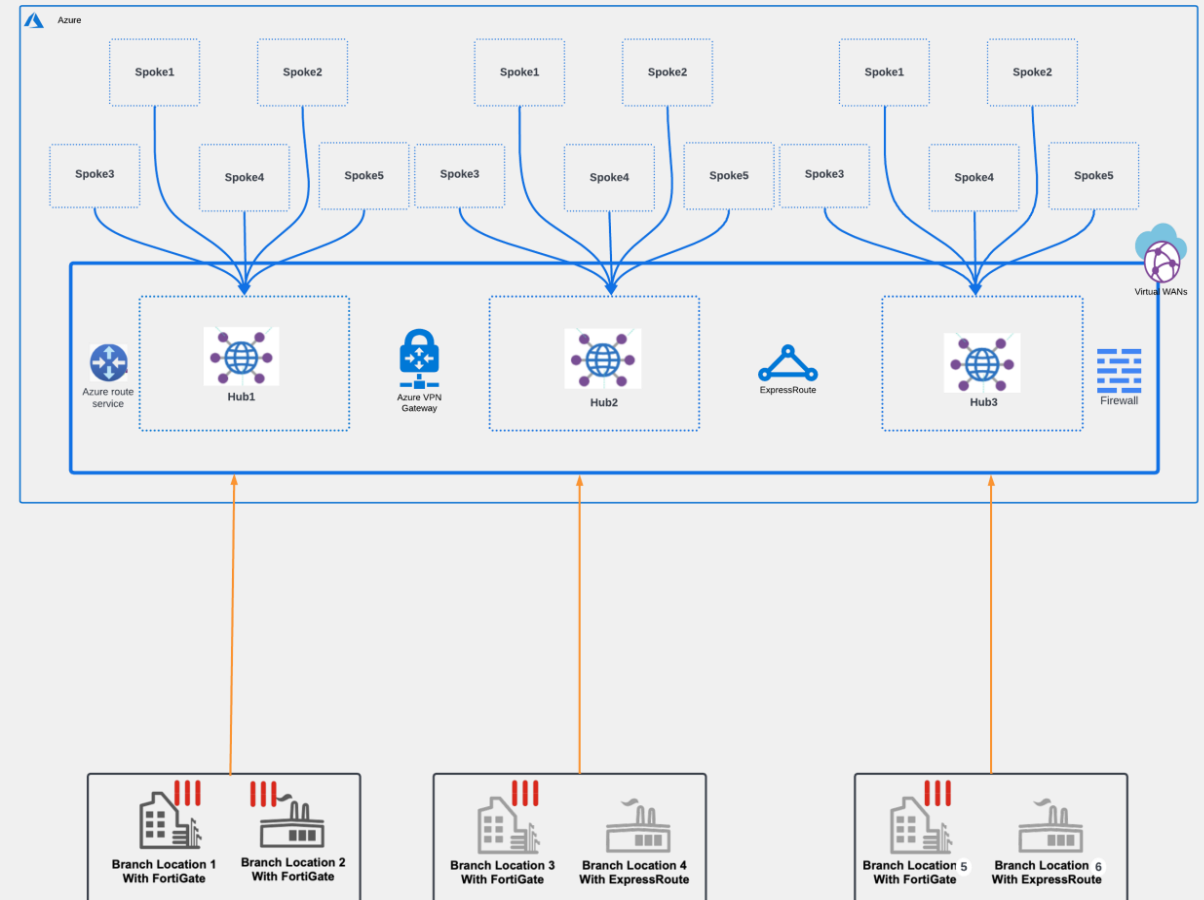
Azure Route Server

Azure Virtual WAN



What is Azure Virtual WAN

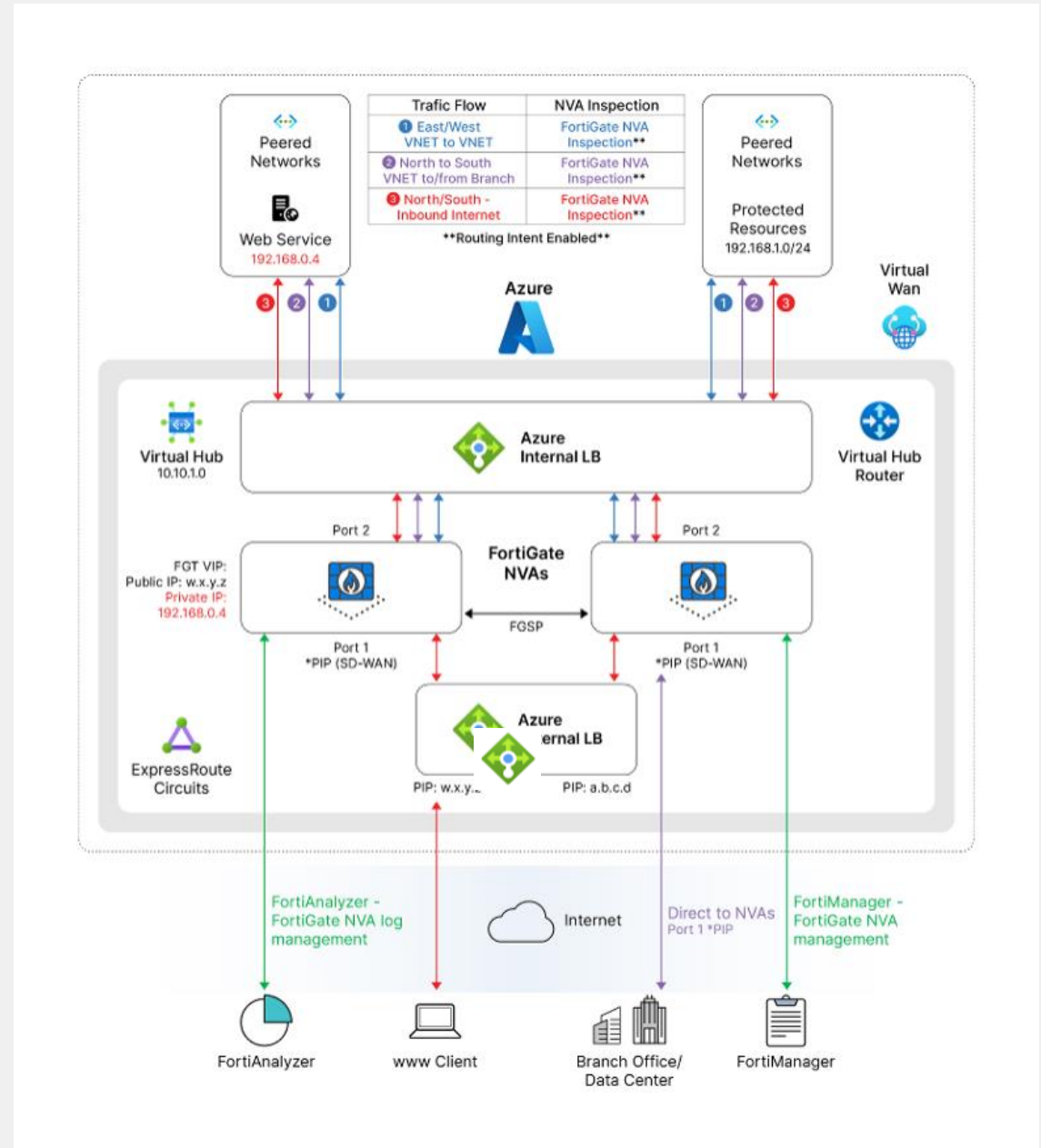
- Simplifies management hub and spoke deployments
- Large-scale branch connectivity with VPN and Express Route
- Unified network and policy management
- Optimized routing with Microsoft global network
- Advanced Routing – BGP and Routing Intent
- Integrates with Fortinet FortiGate solutions providing SD-WAN and NGFW services



FortiGate Integration with Azure VWAN

The industry's first fully Integrated network virtual appliance providing **Secure SDWAN AND Next Generation Firewall Services**

- Simple and structured deployment model
 - Deployed via Azure portal – Managed service
 - SDWAN and/or NGFW deployment options
- High Availability and Resiliency
 - Active-Active – up to 5 FortiGates (NGFW)
- Performance and Scale
- Dynamic Routing Capabilities
- Single management interface – FortiManager – Appliance / VM
- Centralized logging – FortiAnalyzer – Appliance / VM
- Flexible licensing options
 - BYOL / FortiFlex
 - PAYG – New in Q2 2024



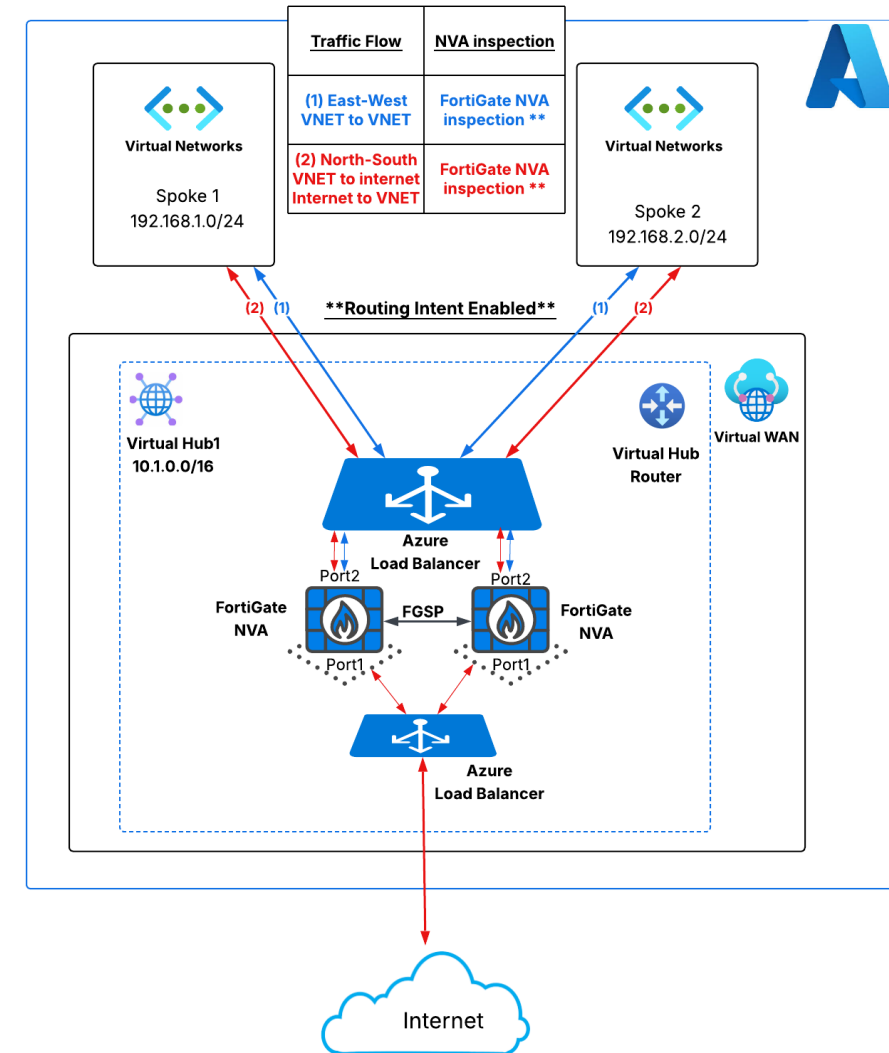
Azure Marketplace Plan

- NGFW
- SD-WAN & NGFW

NGFW Only - Option

- Inspects East-West and Internet bound traffic
 - Network inspection across VNETs connected to the Virtual WAN
 - Internet bound traffic inspection
- High Availability and resiliency
 - Active-Active - supports up to 5 VMs and 80 Gbps
- Performance and Scale
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 - PAYG

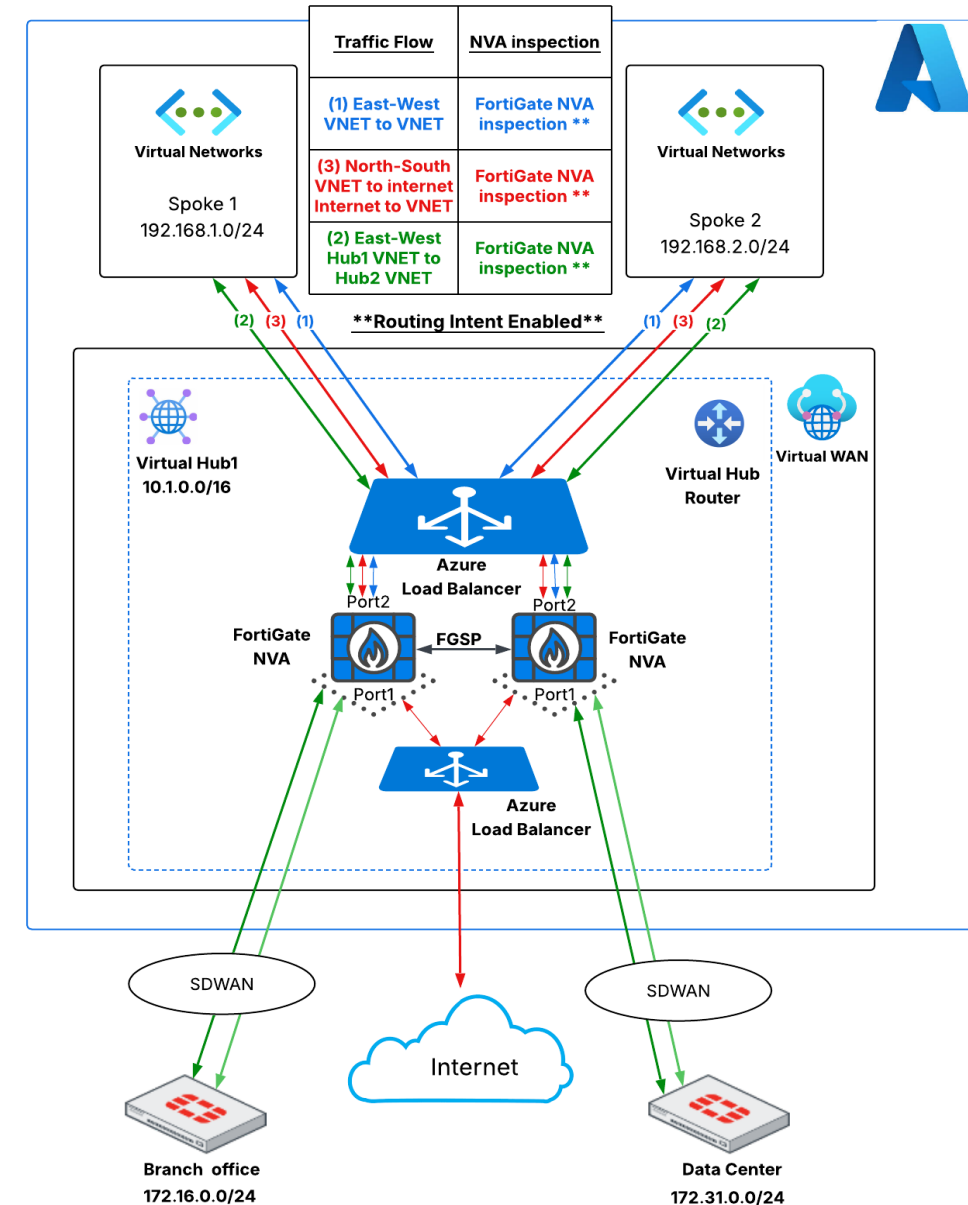
Azure vWAN-Single Hub



SDWAN & NGFW - Option

- North-South inspection for traffic destined to the Internet or the SDWAN connected networks. (See red & green traffic flows on the diagram)
- Inspection across vNETs connected to the virtual WAN (See blue traffic flow on the diagram)
- High Availability and resiliency
 - Active-Active – supports 2 VMs up to 10Gbps
- Performance and Scale
- Dynamic Routing Capabilities
- Single management interface – FortiManager – Appliance / VM
- Centralized logging – FortiAnalyzer – Appliance / VM
- Flexible licensing options
 - BYOL / FortiFlex
 - PAYG

Azure vWAN-Single Hub



Order Types in VWAN

NGFW Only – Scale Units

The following table summarizes FortiGate vWAN license options:

| Scale units | Bandwidth | Suggested license SKU | Security service (support included) | Instance count |
|-------------|-----------|-----------------------|-------------------------------------|----------------|
| 2 | 1 Gbps | FortiGate-VM (2 CPU) | UTP Bundle | 2 |
| 4 | 2 Gbps | FortiGate-VM (4 CPU) | UTP Bundle | 2 |
| 10 | 5 Gbps | FortiGate-VM (8 CPU) | UTP Bundle | 2 |
| 20 | 10 Gbps | FortiGate-VM (16 CPU) | UTP Bundle | 2 |
| 40 | 20 Gbps | FortiGate-VM (16 CPU) | UTP Bundle | 3 |
| 60 | 30 Gbps | FortiGate-VM (16 CPU) | UTP Bundle | 4 |
| 80 | 40 Gbps | FortiGate-VM (16 CPU) | UTP Bundle | 5 |



Scale units cannot change dynamically. If you want to use a different scale unit after deploying the NVAs, you must redeploy the NVAs.

SDWAN & NGFW – Scale Units

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Lab Overview



5x columns

Paragraph Text



Overview

- Connect to Azure Environment
- Review Resources



Deploy

- Deploy FortiGate NVAs in Azure VWAN Hub
- Deploy 2nd vWAN
- Deploy Linux VMs



Configure

- Configure FortiGates
- Configure FGSP
- Firewall Policies
- Configure VNET peering



Route

- Configure FortiGate Static Routes
- Ensure BGP peering
- Configure Azure Routing Intent
- Configure Internet Ingress



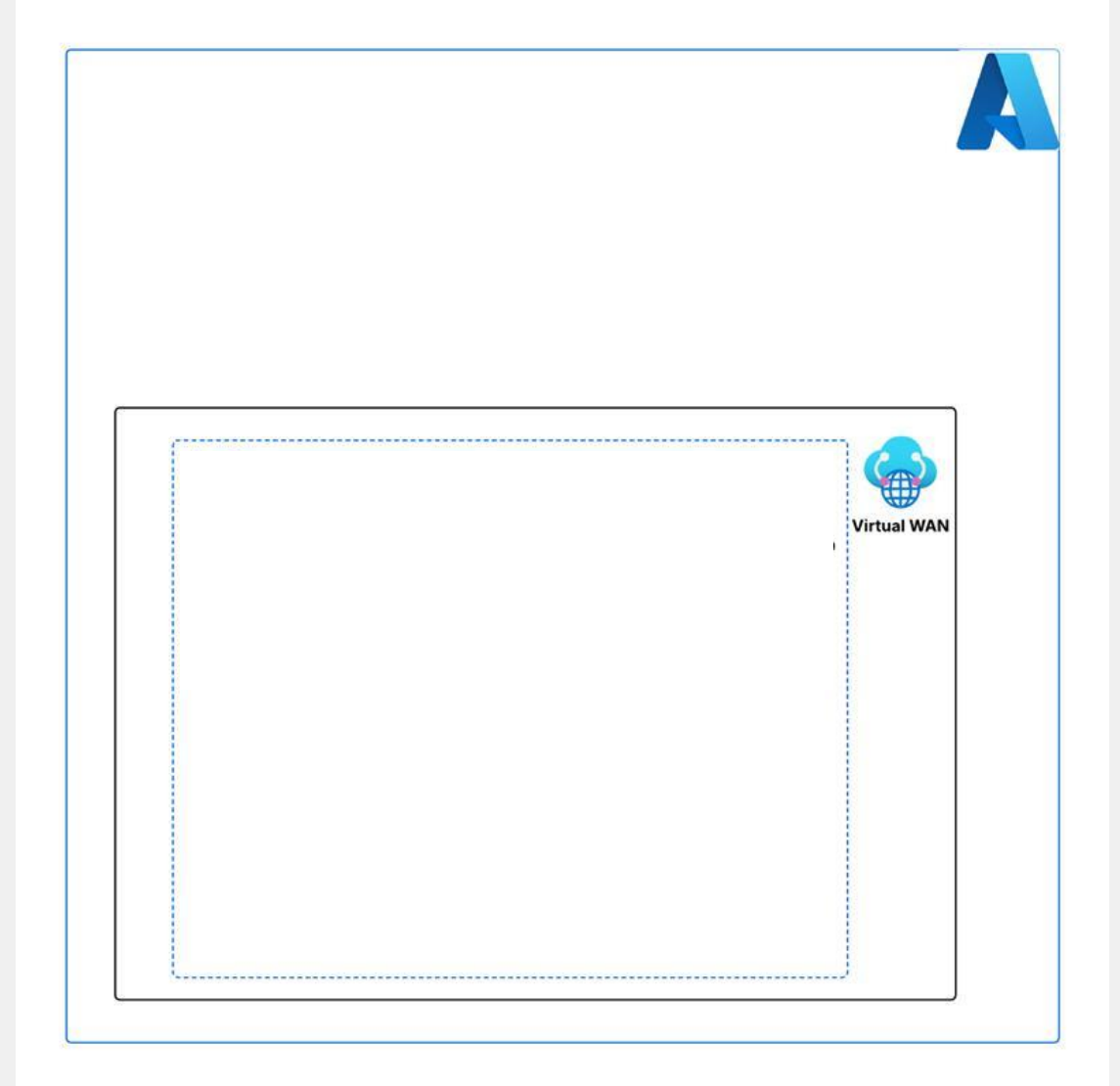
Verify

- Verify Spoke to Spoke
- Verify Spoke to Internet
- Verify Internet to Spoke
- Verify Hub to Hub

Virtual WAN Components – Virtual WAN

- Managed Service deployed from Azure portal
- Simple deployment template
 - Name
 - Region
 - Resource Group
 - Type (connectivity options)
 - Standard
 - Basic

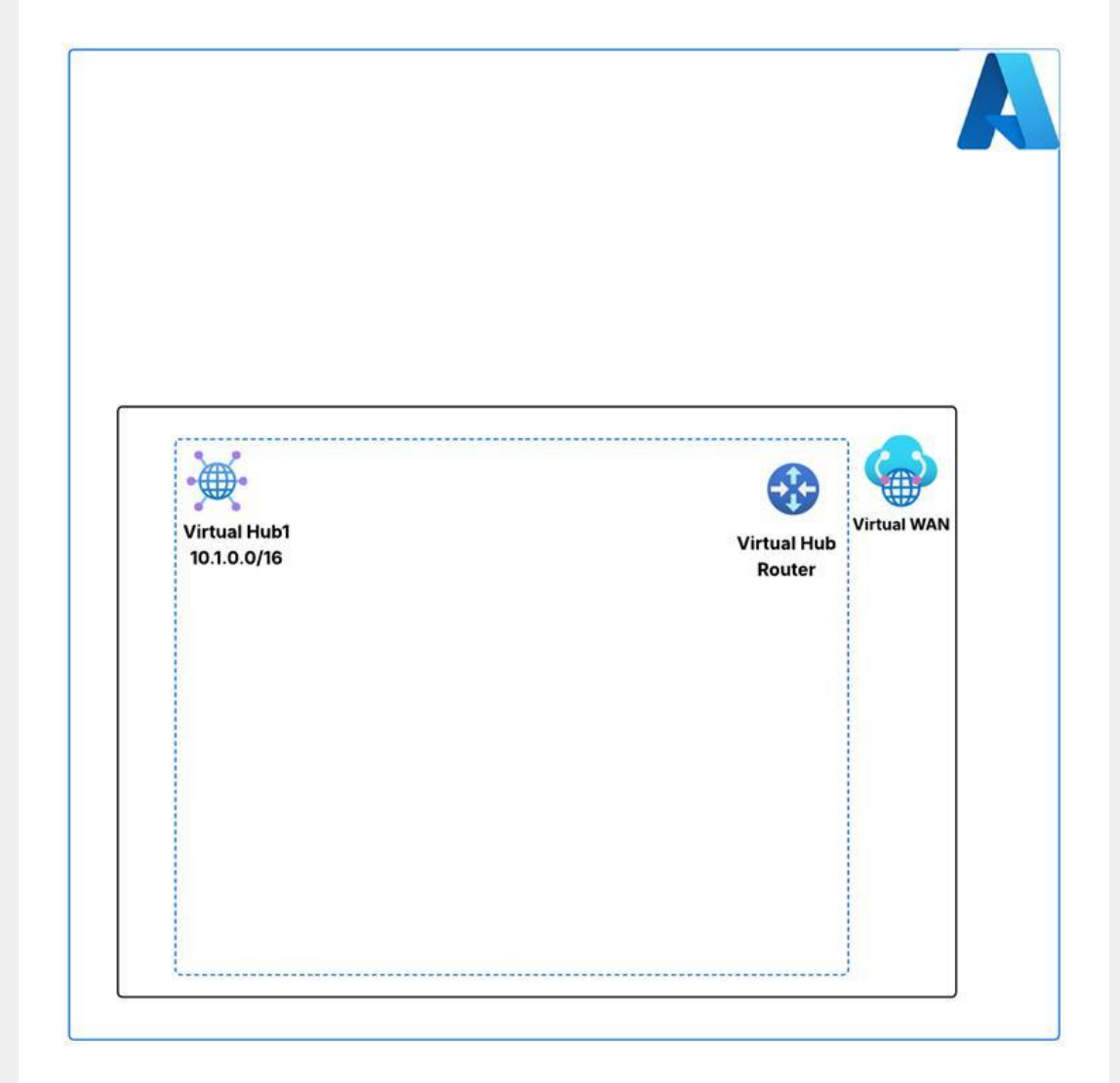
**Already deployed



Virtual WAN Components – Virtual Hub

- Managed Service deployed from Azure portal
- Simple deployment template
 - Name
 - Region
 - Resource Group
 - Address space
 - Capacity (Scale Units)
 - Routing Preference
 - AS Path
 - Express Route
 - VPN
 - Additional Services

**Already deployed



Virtual WAN Components – Virtual Networks

- VNETS deployed from Azure portal
- Comprehensive deployment template
 - Name
 - Region
 - Resource Group
 - Address space
 - Subnets
 - Additional Services
 - Virtual Machines

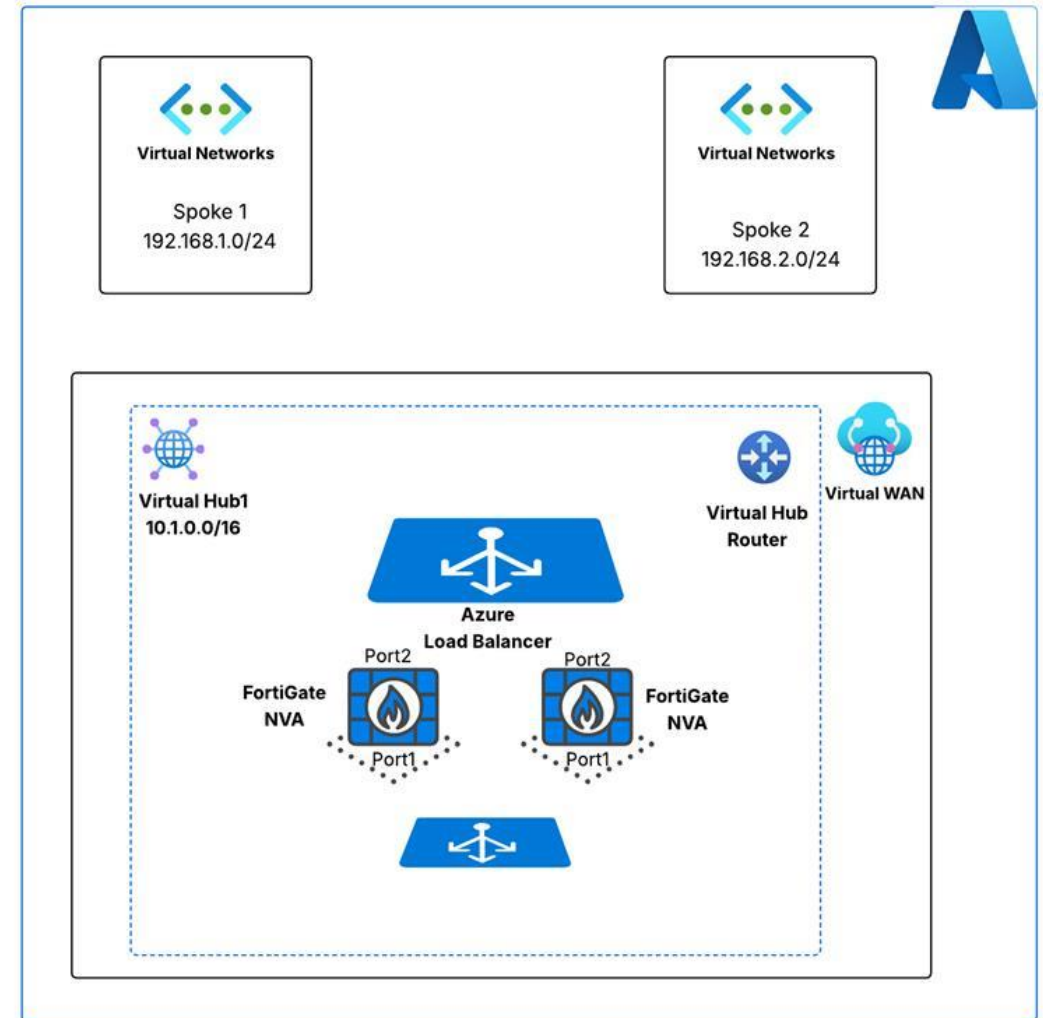
**Already deployed



Virtual WAN Components – FortiGate NVA

- FortiGate NVAs deployed from Azure portal - VWAN Hub page
- Simple deployment template
 - Name
 - Region
 - Resource Group
 - Address space
 - Subnets
 - Additional Services
 - Ingress Public IP
 - Ingress External Load Balancer
 - Virtual Machines

**Attendee will deploy



Questions

Getting Started

- Moderated by instructors
- Username assignments
- <https://fortinetcloudcse.github.io/azure-202-advanced>
- Review lab material



FORTINET

