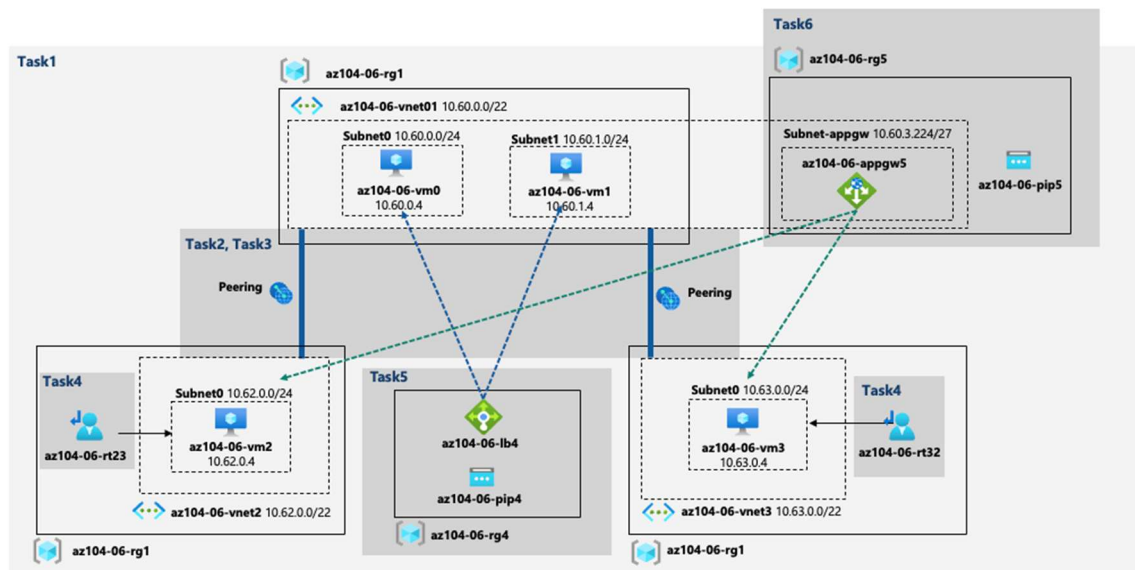


## Architect of the **Implement Traffic Management**



## Solution of the **Implement Traffic Management**

### 1. Provision the Environment

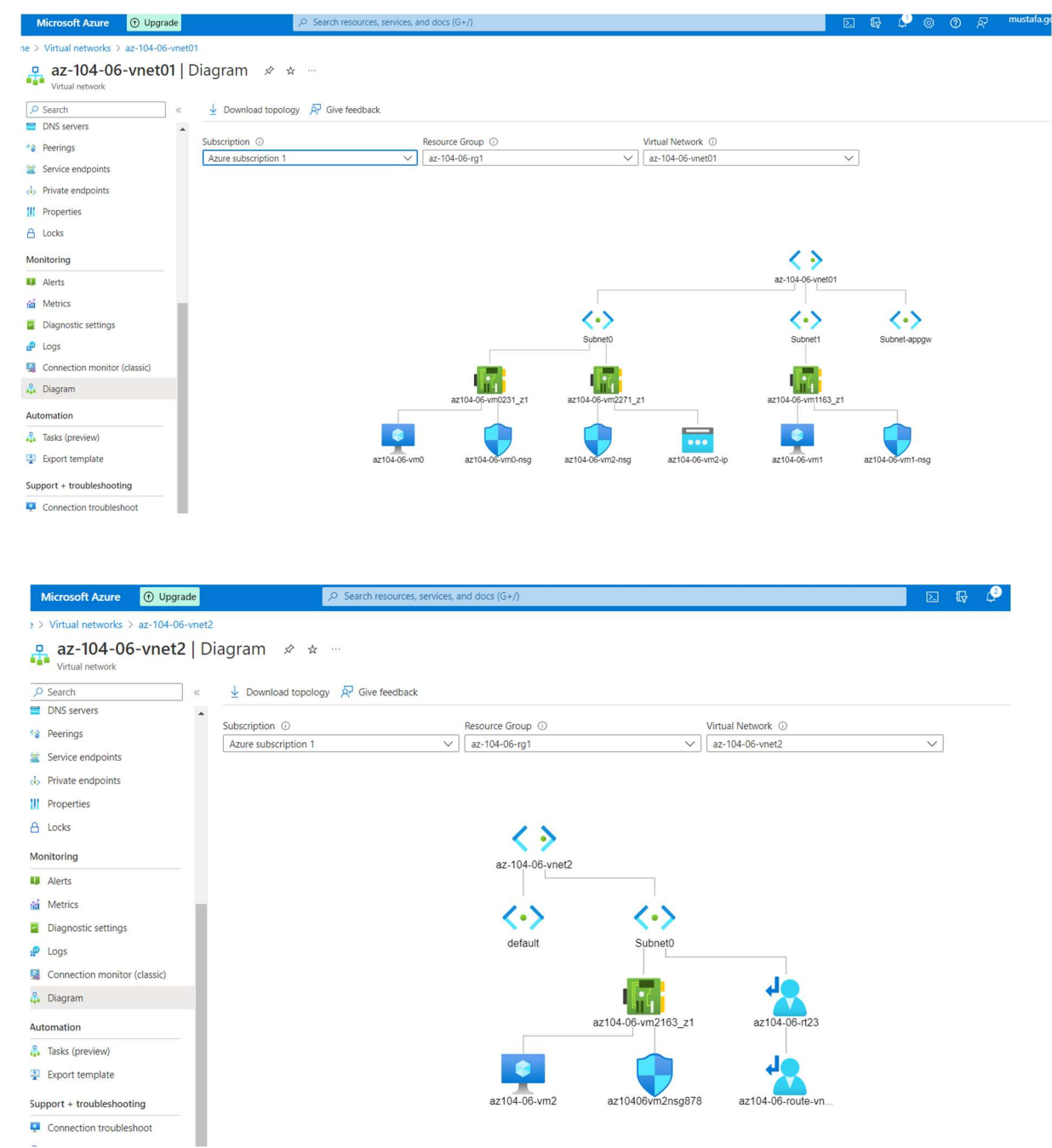
- Deployment of the Resource Groups, Vnets and Virtual Machines;

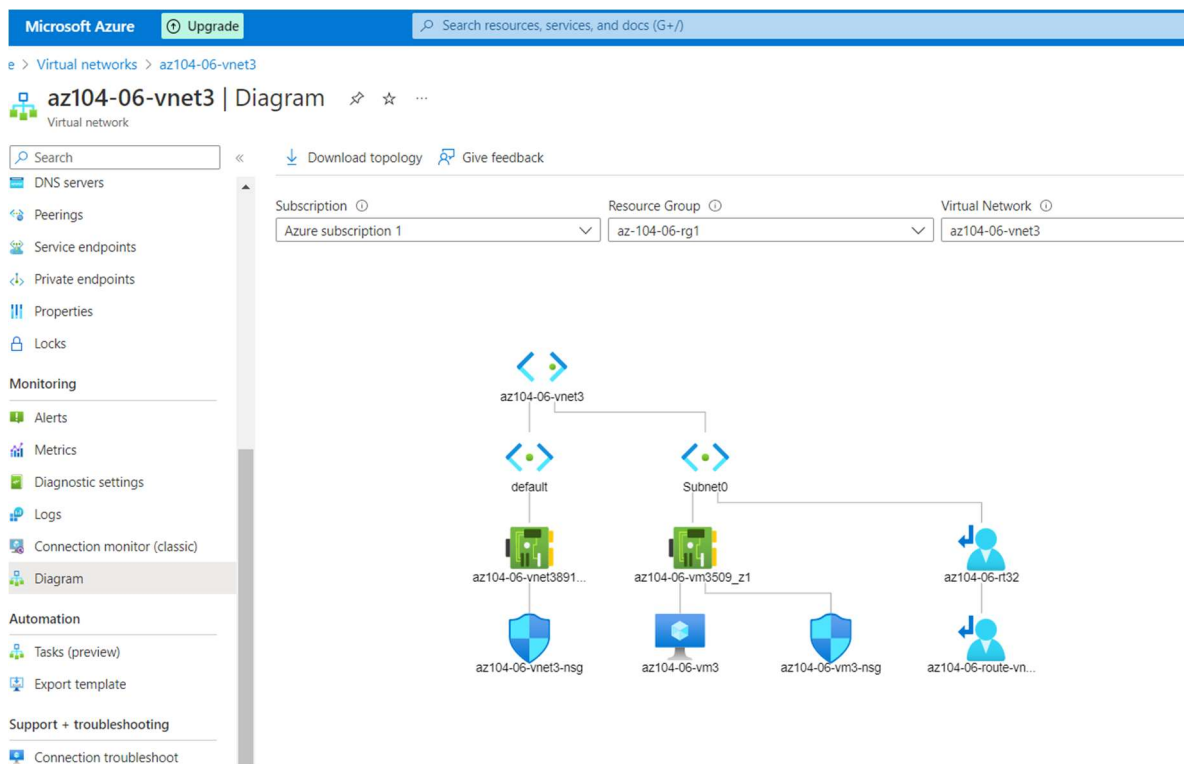
Name ↑↓	Subscription ↑↓	Location ↑↓
<input checked="" type="checkbox"/> az-104-06-rg1	Azure subscription 1	East US
<input checked="" type="checkbox"/> az-104-06-rg4	Azure subscription 1	East US
<input checked="" type="checkbox"/> az-104-06-rg5	Azure subscription 1	East US
<input checked="" type="checkbox"/> NetworkWatcherRG	Azure subscription 1	East US

Name ↑↓	Resource group ↑↓	Location ↑↓	Subscription ↑↓
<input checked="" type="checkbox"/> az-104-06-vnet01	az-104-06-rg1	East US	Azure subscription 1
<input checked="" type="checkbox"/> az-104-06-vnet2	az-104-06-rg1	East US	Azure subscription 1
<input checked="" type="checkbox"/> az-104-06-vnet3	az-104-06-rg1	East US	Azure subscription 1

Microsoft Azure Upgrade Search resources, services, and docs (G+)								
Home > Virtual machines								
<a href="#">+ Create</a> <a href="#">Switch to classic</a> <a href="#">Reservations</a> <a href="#">Manage view</a> <a href="#">Refresh</a> <a href="#">Export to CSV</a> <a href="#">Open query</a> <a href="#">Assign tags</a> <a href="#">Start</a> <a href="#">Restart</a> <a href="#">Stop</a> <a href="#">Delete</a> <a href="#">Services</a> <a href="#">Maintenance</a>								
Filter for any field...           Subscription equals all           Type equals all           Resource group equals all           Location equals all           Add filter           No grouping								
Name	Type	Subscription	Resource group	Location	Status	Operating system	Size	Public IP
az104-06-vm0	Virtual machine	Azure subscription 1	AZ-104-06-RG1	East US	Running	Linux	Standard_B1s	-
az104-06-vm1	Virtual machine	Azure subscription 1	az-104-06-rg1	East US	Running	Linux	Standard_B1s	-
az104-06-vm2	Virtual machine	Azure subscription 1	az-104-06-rg1	East US	Running	Linux	Standard_B1s	-
az104-06-vm3	Virtual machine	Azure subscription 1	az-104-06-rg1	East US	Running	Linux	Standard_B1s	-

Network Diagram





## 2. Configure hub and spoke network topology

After peering of VNETs, I tested the connection between two spoke networks.

Microsoft Azure Upgrade Search resources, services, and docs (G+)

Home > Network Watcher

### Network Watcher | Connection troubleshoot

Microsoft

Search

Overview Get started

Monitoring

Topology Connection monitor (classic) Connection monitor Network Performance Monitor

Network diagnostic tools

IP flow verify NSG diagnostics Next hop Effective security rules VPN troubleshoot Packet capture Connection troubleshoot

Metrics

Usage + quotas

Logs

Source

Subscription \* Azure subscription 1

Resource group \* az-104-06-rg1

Source type \* Virtual machine

\*Virtual machine

az104-06-vm0

Destination

☐ Select a virtual machine ☒ Specify manually

URI, FQDN or IP address \* 10.62.0.4

Probe Settings

Protocol TCP ICMP

Destination port \* 22

Advanced settings

Check

Microsoft Azure Upgrade Search resources, services, and docs (G+/I)

Home > Network Watcher

## Network Watcher | Connection troubleshoot

Microsoft

Search

- Overview
- Get started
- Monitoring
  - Topology
  - Connection monitor (classic)
  - Connection monitor
  - Network Performance Monitor
- Network diagnostic tools
  - IP flow verify
  - NSG diagnostics
  - Next hop
  - Effective security rules
  - VPN troubleshoot
  - Packet capture
  - Connection troubleshoot
- Metrics
  - Usage + quotas

Status

- Reachable
- Agent extension version: 1.4
- Source virtual machine: az104-06-vm0

Grid view Topology view

Hops

Name	IP address	Status	Next hop IP address	RTT
az104-06-vm0	10.60.0.4	✓	10.62.0.4	1
az104-06-vm21...	10.62.0.4	✓	-	-

Average Latency in milliseconds: 1

Minimum Latency in milliseconds: 1

Maximum Latency in milliseconds: 2

Probes Sent: 66

Probes Failed: 0

### 3. Test transitivity of virtual networking peering

Vnets are peered as shown in the table below

Microsoft Azure Upgrade Search resources, services, and docs (G+/I)

Home > Virtual networks > az-104-06-vnet01

## az-104-06-vnet01 | Peerings

Virtual network

+ Add Refresh Sync

Filter by name... Peering status == all

Name	Peering status	Peer	Gateway transit
from-vnet01tovnet2	Connected	az-104-06-vnet2	Disabled
fromvnet01tovnet3	Connected	az104-06-vnet3	Disabled

### 4. Configure routing in the hub and spoke topology

Home >

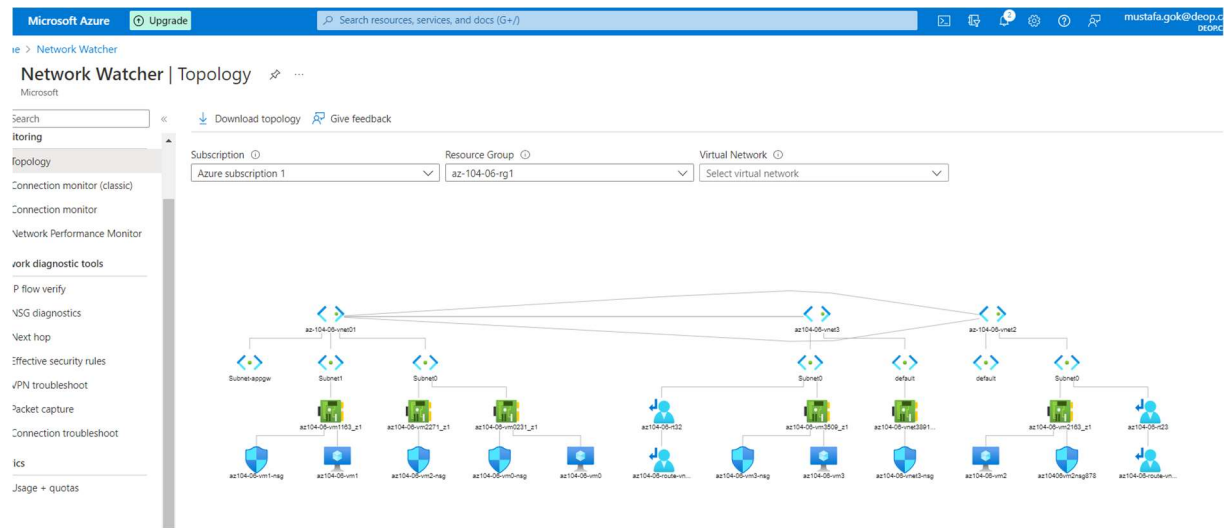
## Route tables

deop.ca

+ Create Manage view Refresh Export to CSV Open query Assign tags

Filter for any field... Subscription equals all Resource group equals all Location equals all Add filter

Name	Resource group	Location	Subscription
az104-06-rt23	az-104-06-rg1	East US	Azure subscription 1
az104-06-rt32	az-104-06-rg1	East US	Azure subscription 1



## 5. Implement Azure Load Balancer

- A load balancer and A public address are created (Frontend IP configuration)
- Backend pool added
- Load balancer rules set

## 6. Implement Azure Application Gateway

An application Gateway is created, with frontends and backends configuration