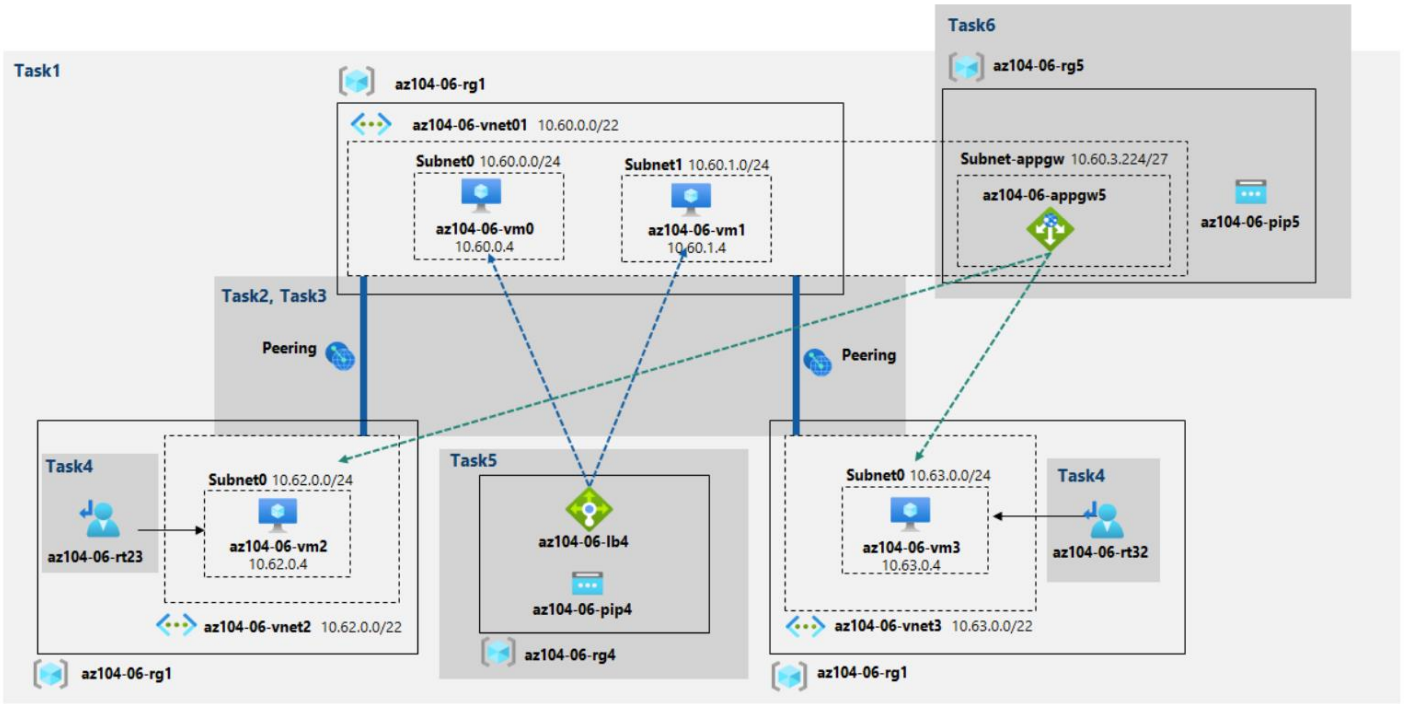
A5-Implement Traffic Management Project

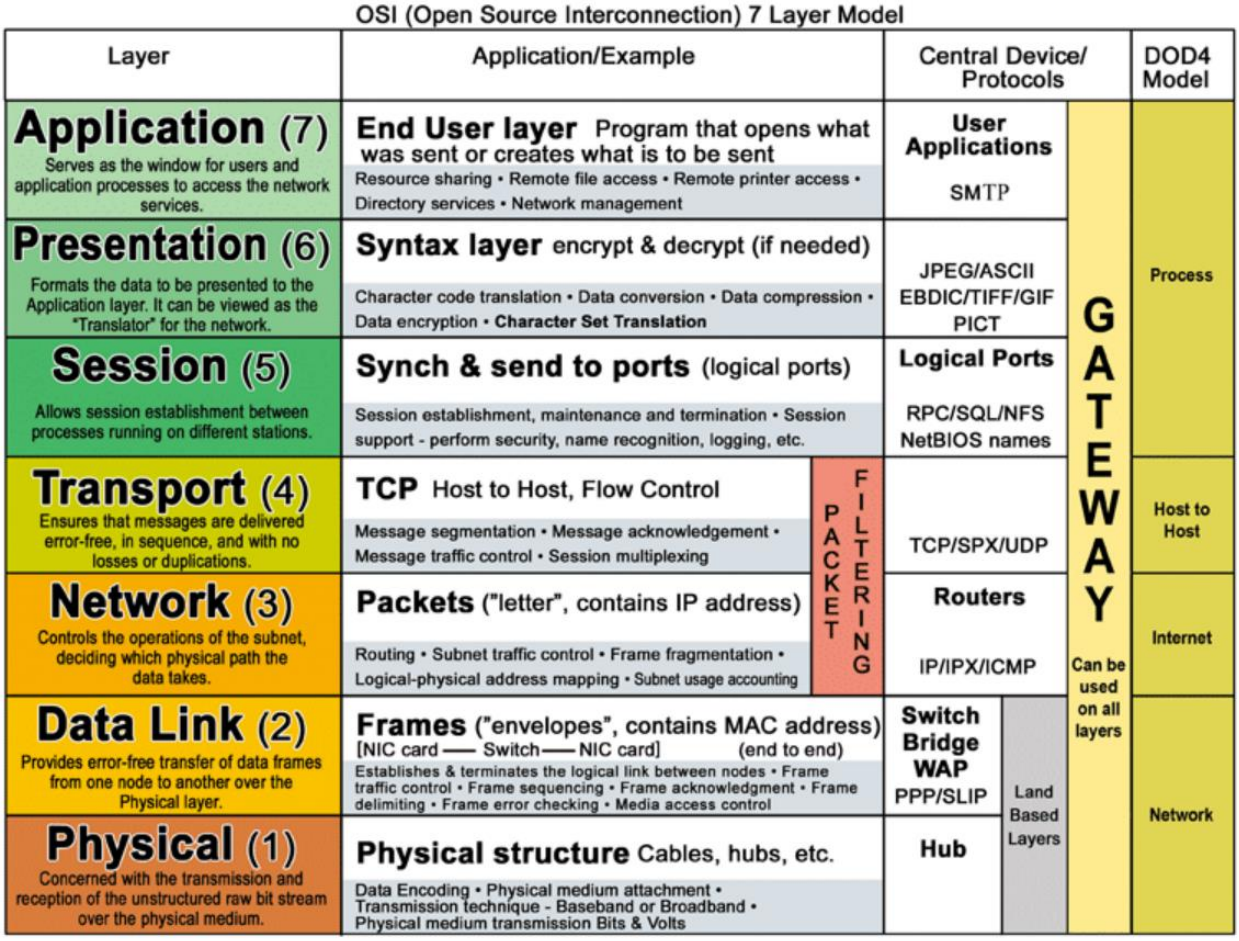
My tasks:

1. Provision the environment
2. Configure hub and spoke network topology
3. Test transitivity of virtual networking peering
4. Configure routing in the hub and spoke topology
5. Implement Azure Load Balancer
6. Implement Azure Application Gateway

Architecture diagram of the implementing Traffic Management

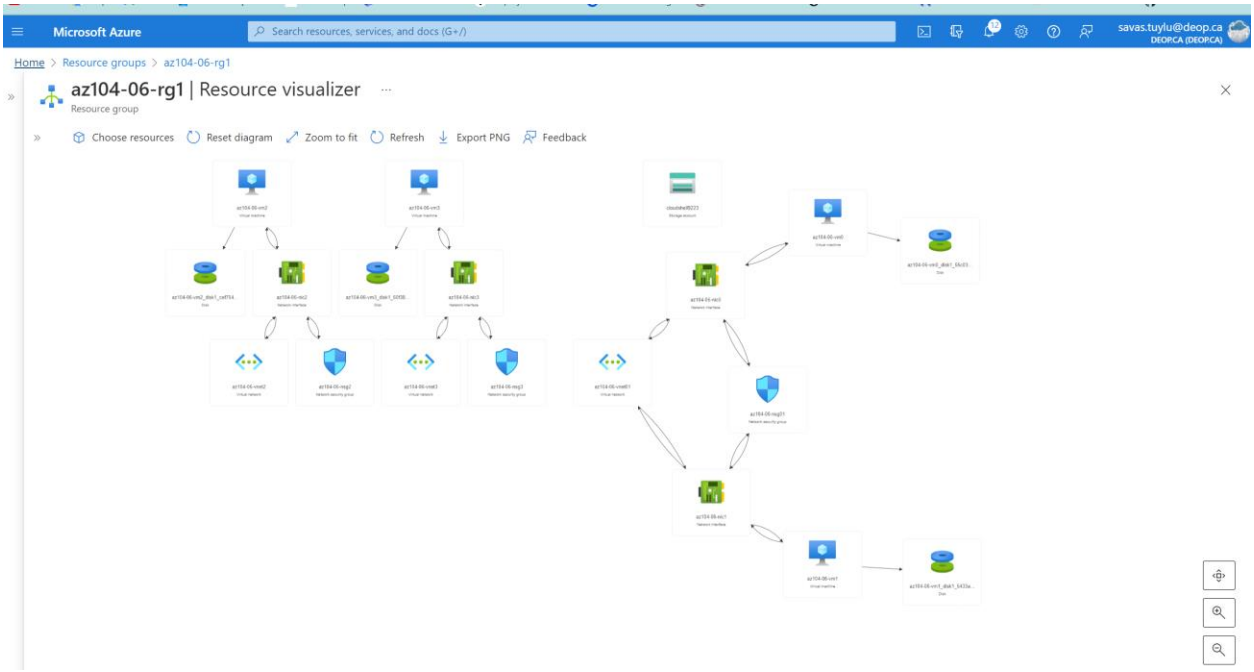


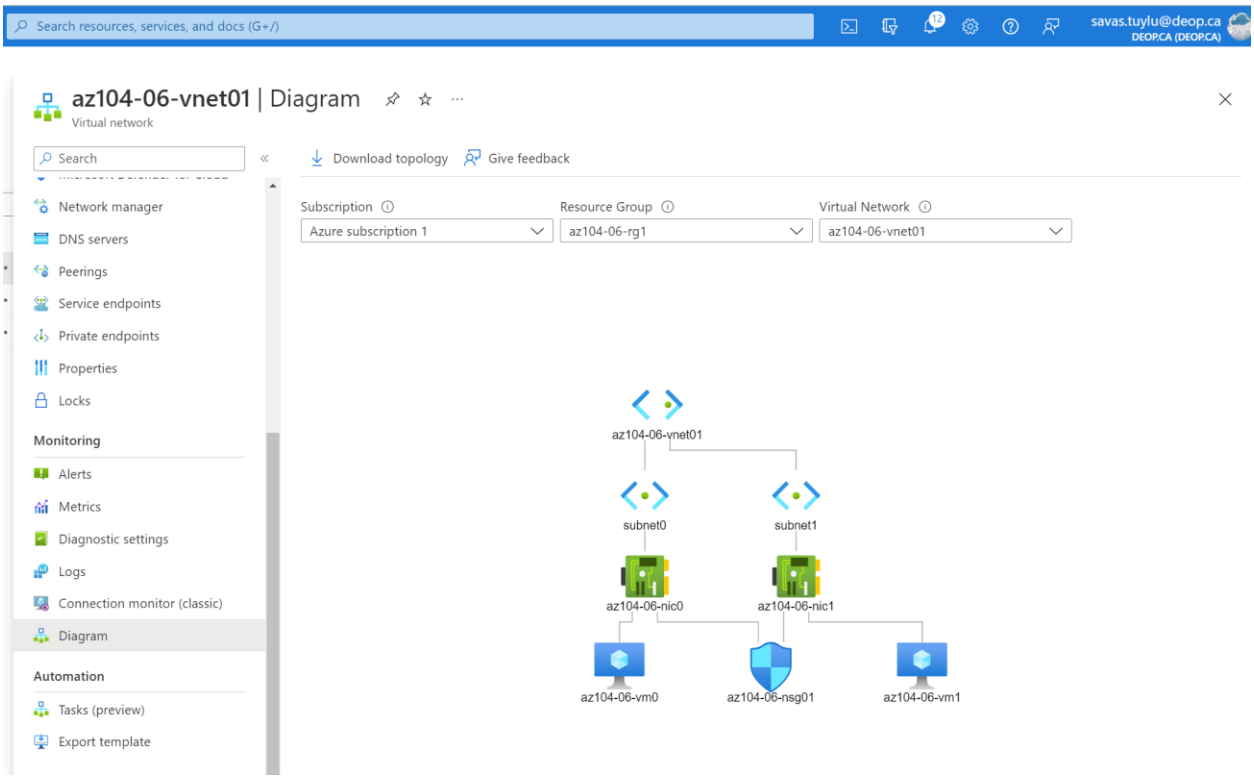
I tested managing network traffic targeting Azure virtual machines in the hub and spoke network topology, which Contoso considers implementing in its Azure environment. My approach needs to include implementing connectivity between spokes by relying on user defined routes that force traffic to flow via the hub, as well as traffic distribution across virtual machines by using layer 4 and layer 7 load balancers. For this purpose, I intend to use Azure Load Balancer (layer 4) and Azure Application Gateway (layer 7).

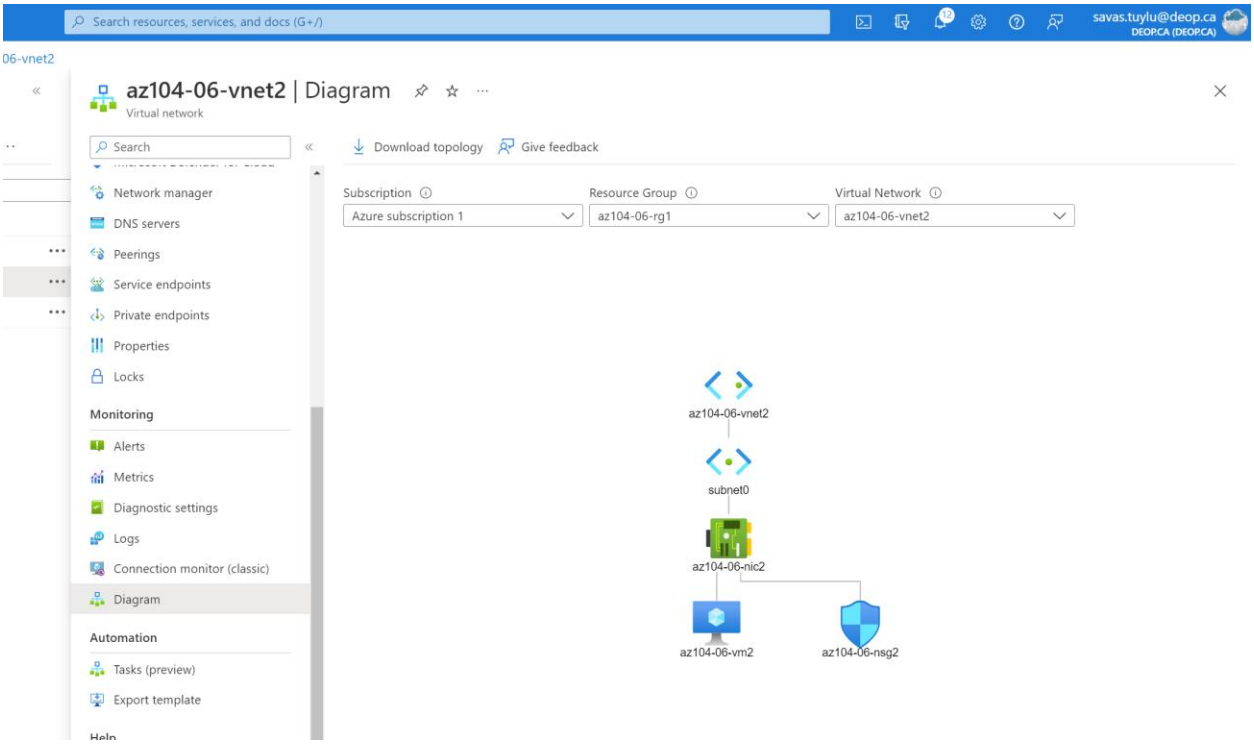


Task 1: Provision the environment

In this task, you will deploy four virtual machines into the same Azure region. The first two will reside in a hub virtual network, while each of the remaining two will reside in a separate spoke virtual network.



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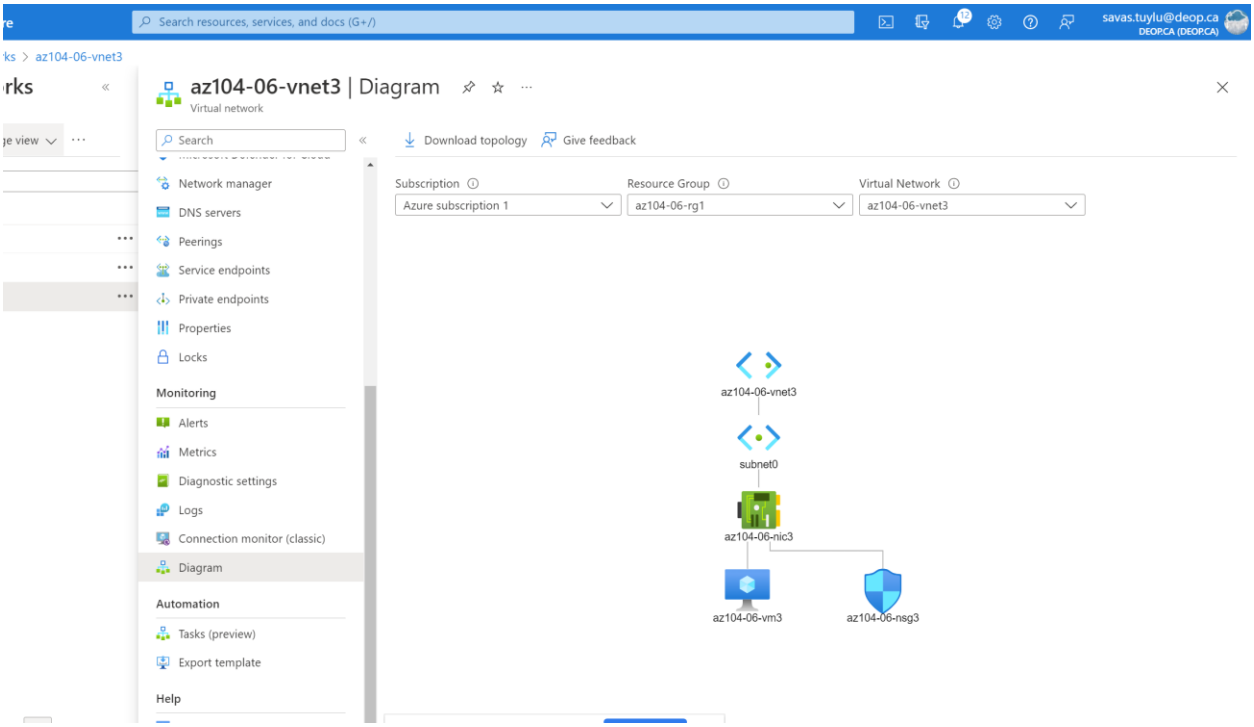
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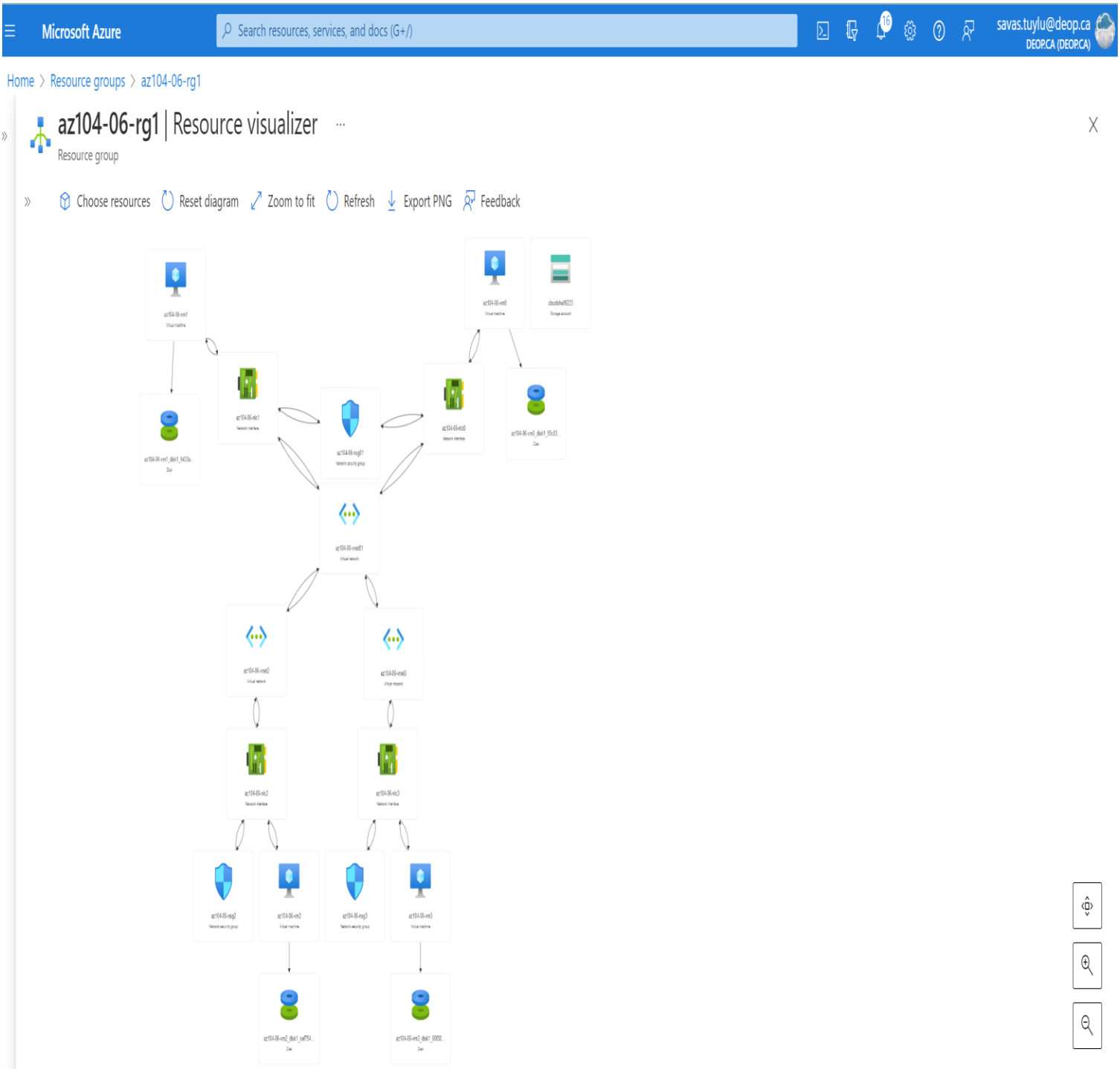
az104-06-vm3
az104-06-nsg3

Task 2-3: Configure hub and spoke network topology & Test transitivity of virtual networking peering

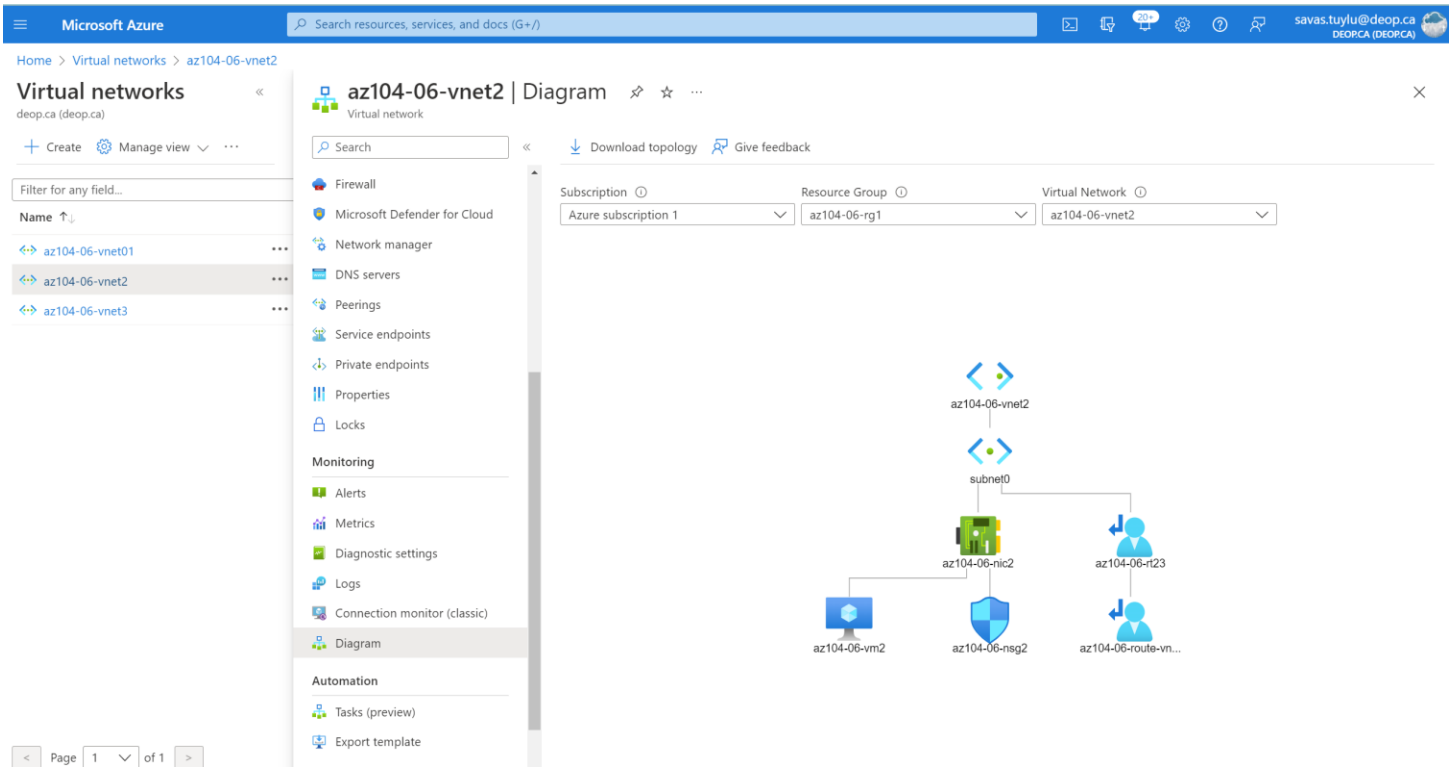
First of all, I configured local peering between the virtual networks I deployed in the previous tasks in order to create a hub and spoke network topology.

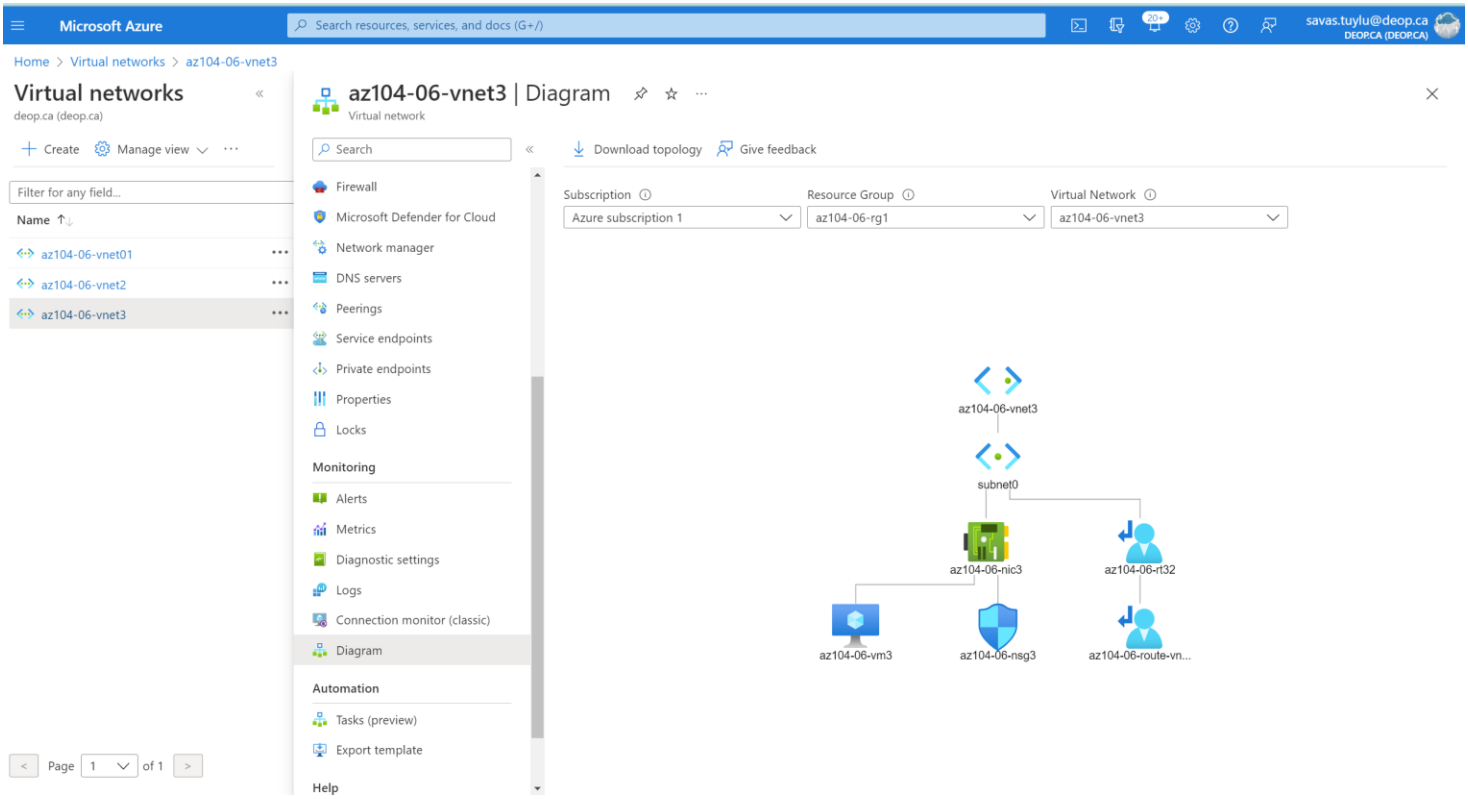
Last, you tested transitivity of virtual network peering by using Network Watcher.

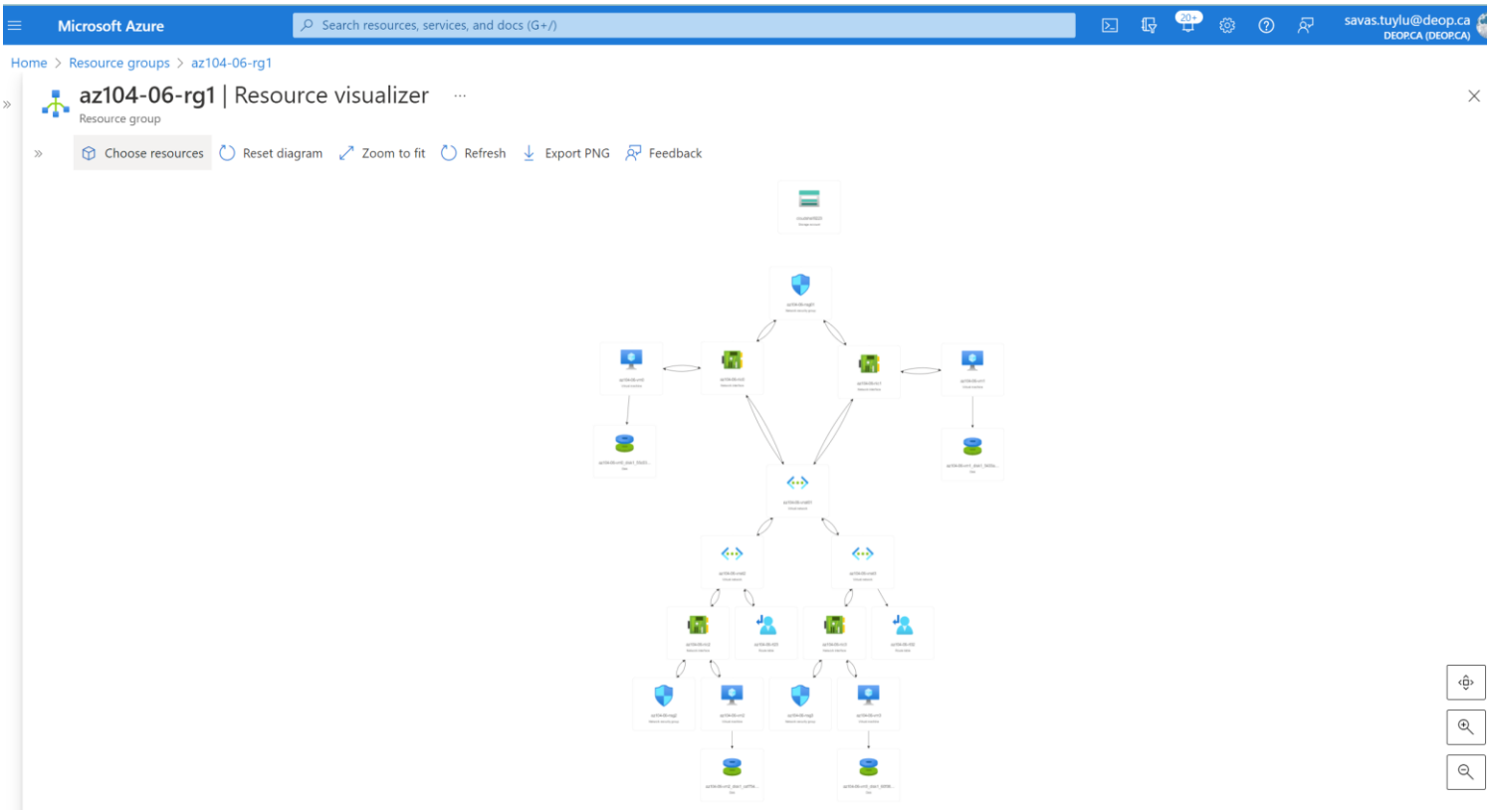


Task 4: Configure routing in the hub and spoke topology

In this task, I configured and tested routing between the two spoke virtual networks by enabling IP forwarding on the network interface of the **az104-06-vm0** virtual machine, enabling routing within its operating system, and configuring user-defined routes on the spoke virtual network.



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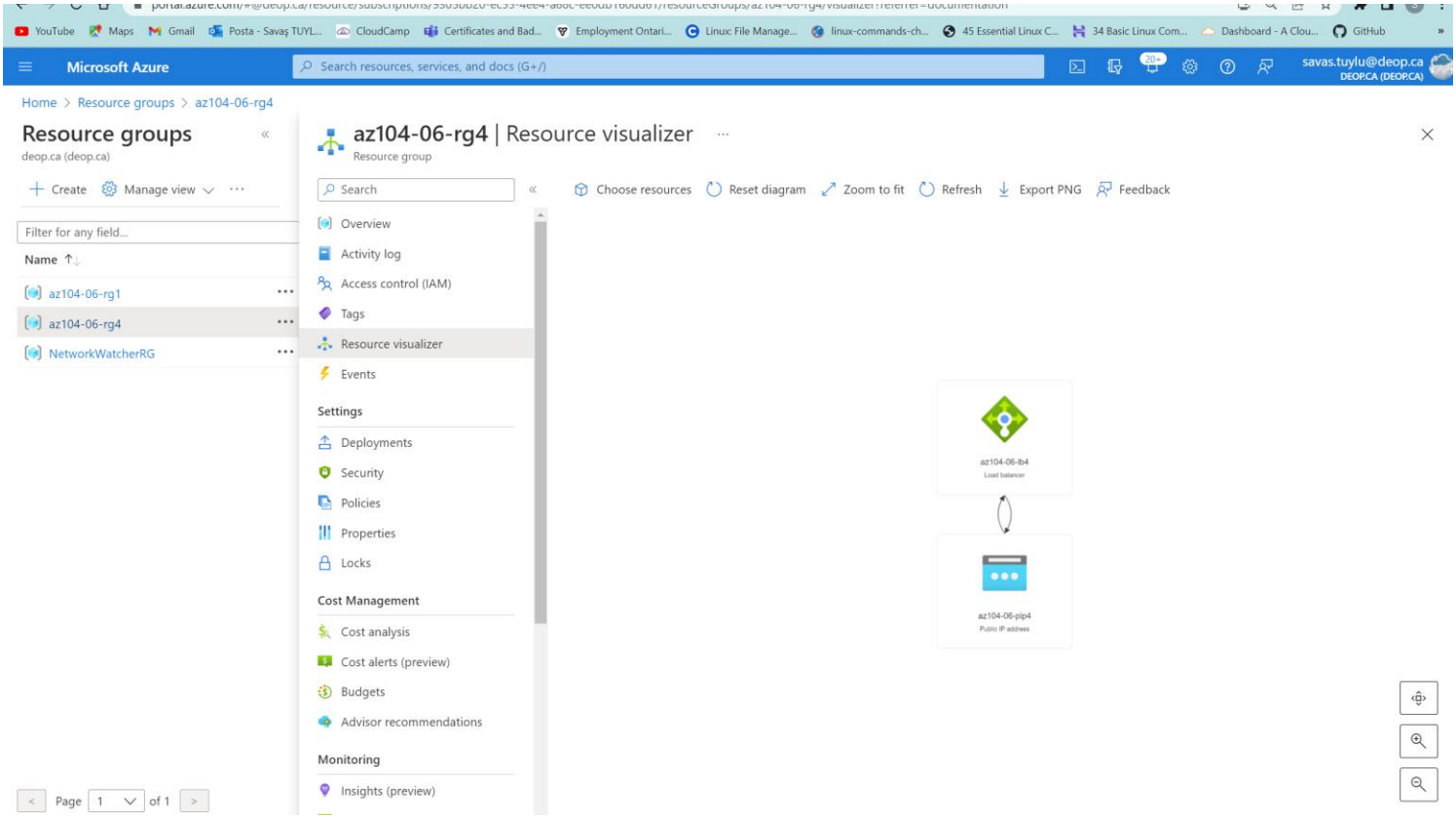
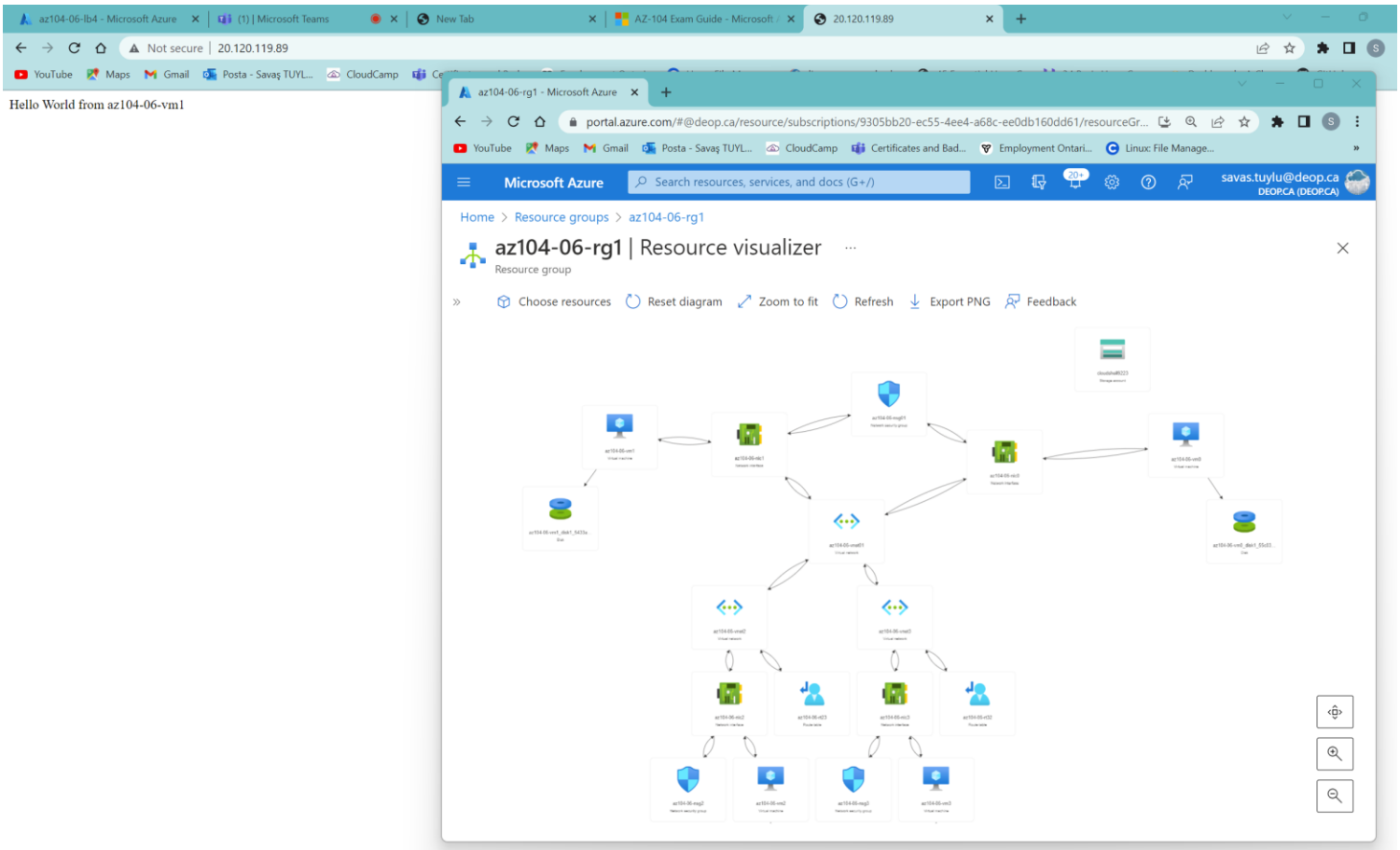
Task5: Implement Azure Load Balancer

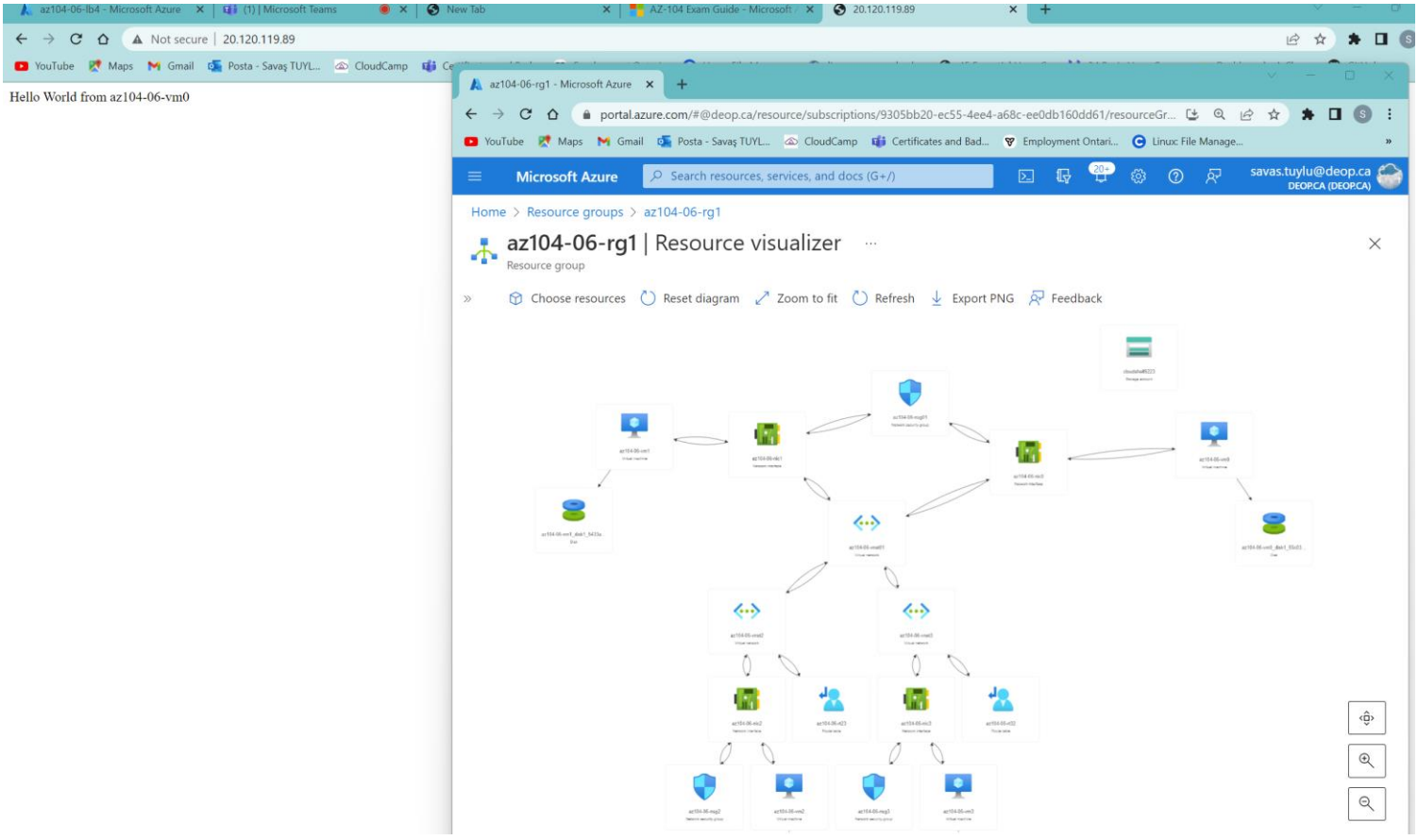
In this task, I implemented an Azure Load Balancer in front of the two Azure virtual machines in the hub virtual network.



Hello World from az104-06-vm1

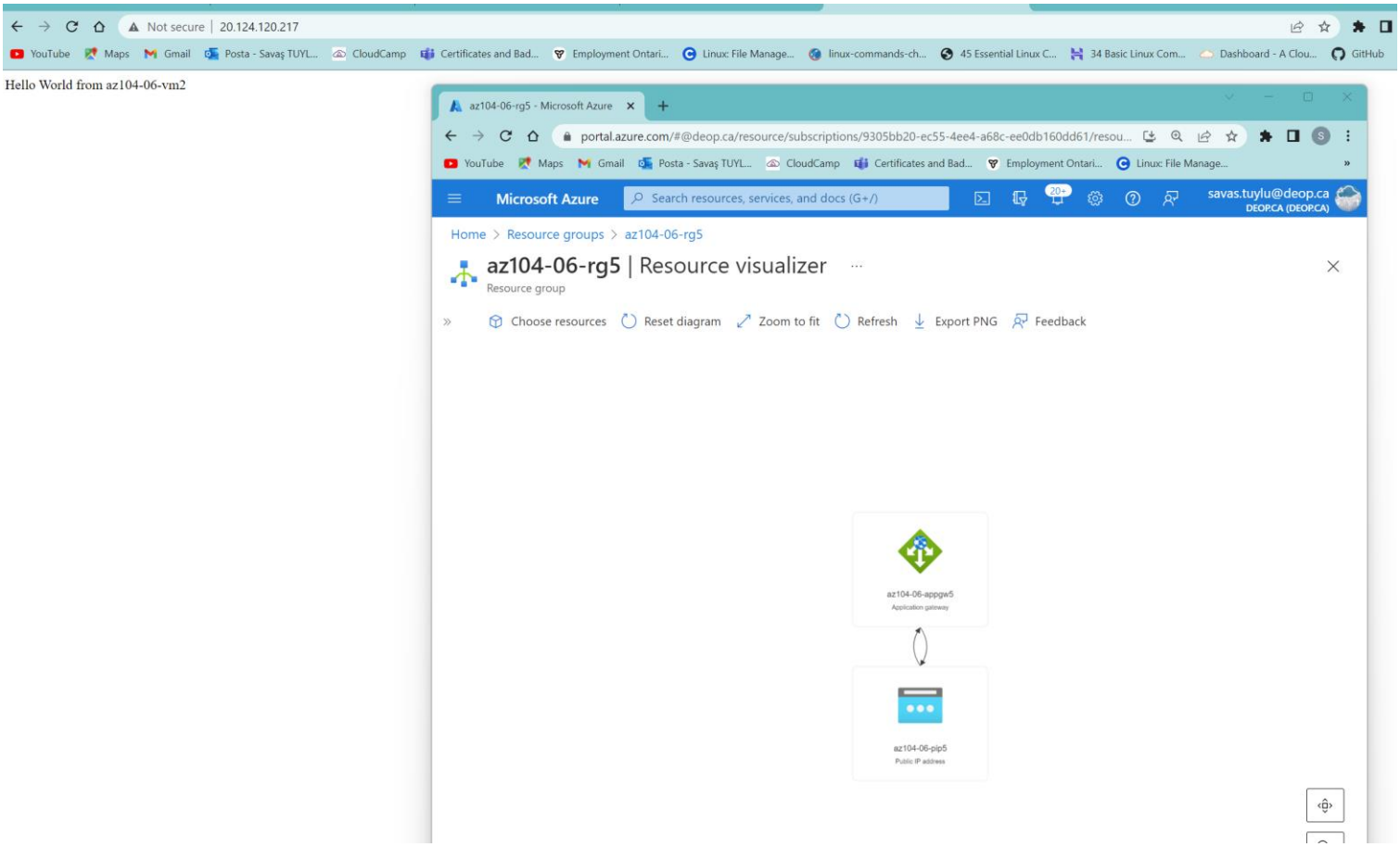


Hello World from az104-06-vm0



Task6: Implement Azure Application Gateway

In this task, l implemented an Azure Application Gateway in front of the two Azure virtual machines in the spoke virtual networks.



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Hello World from az104-06-vm3