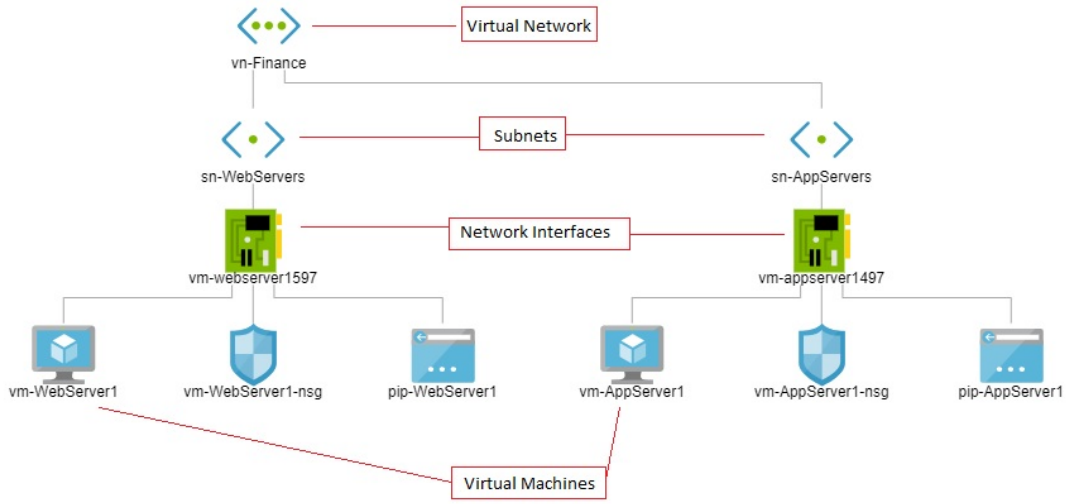
Azure Network Service Tutorial

In this tutorial I'm going to show how to:

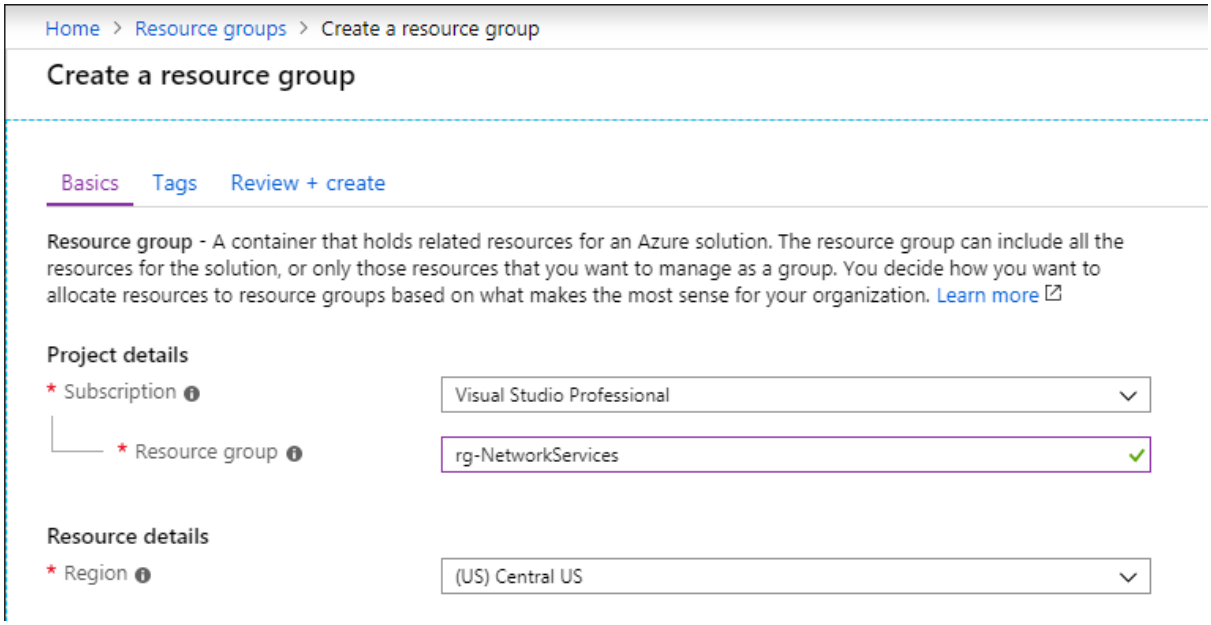
- Create new Resource Group
- Create a Virtual Network and associate it with Resource Group
- Add Subnet to Virtual Network
- Add Virtual Machines to the Virtual Network
- Remote in to a Virtual Machine

At the end of this tutorial we will be ending up with a network topology which will look something like bellow.

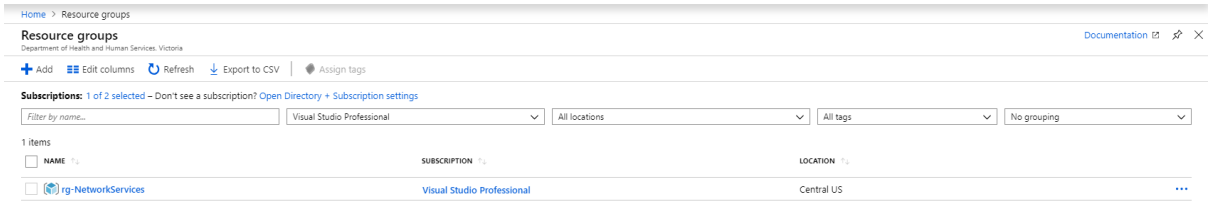


Step 01: Create a new Resource Group

- Give it name: rg-NetworkServices
- Select region: (US) Central US



We can see the newly created Resource Group.



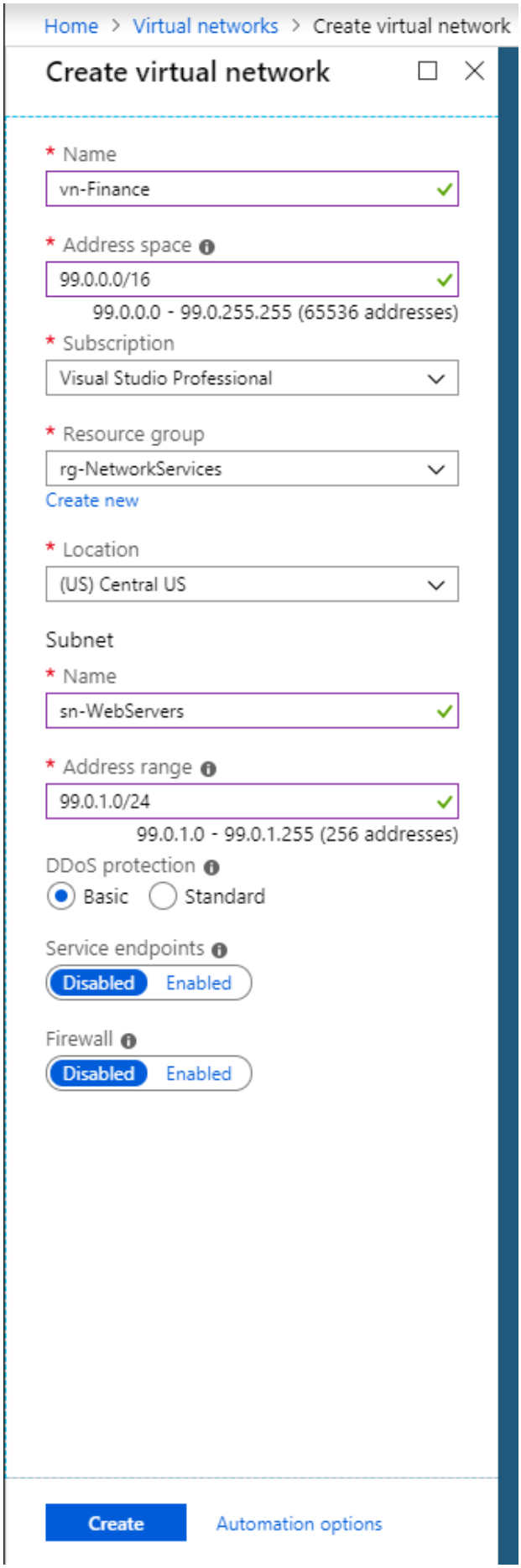
Step 02: Create a new Virtual Network

Under this Virtual Network we are going to create 2 Subnets.

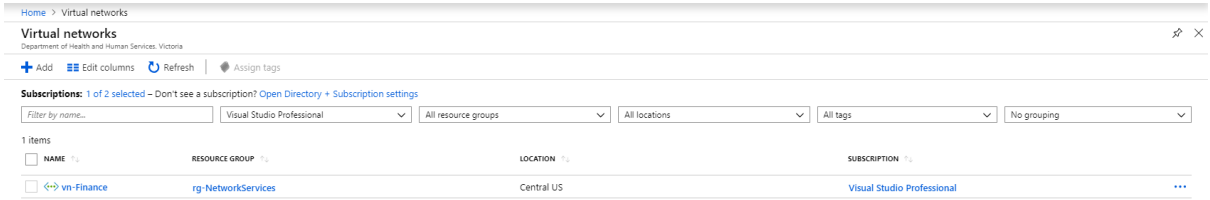
1st Subnet is for Web Servers and the 2nd Subnet for App Servers.

Initially we are going to create a Virtual Network associating Web Server Subnet. As the 2nd step we are adding another App Server Subnet to same Virtual Network.

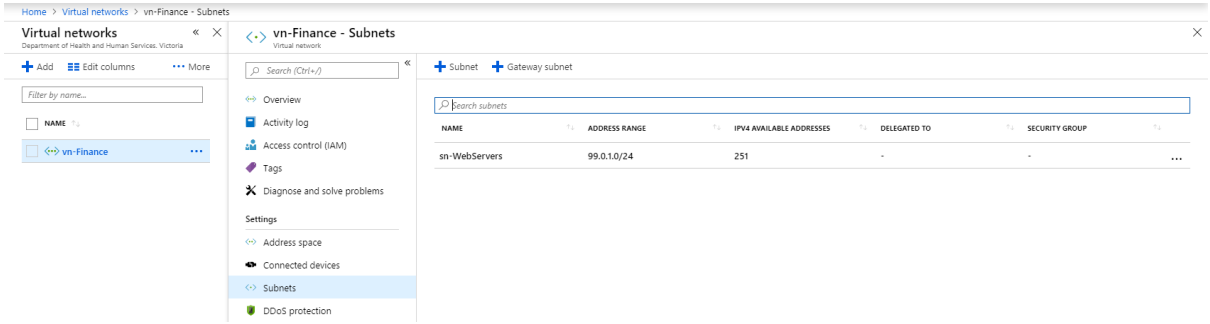
- Give it name: vn-Finance
- Address space: 99.0.0.0/16
- Resource group: rg-NetworkServices (the resource group we created earlier)
- Subnet name: sn-WebServers
- Address range: 99.0.1.0/24


Home > Virtual networks > Create virtual network
Create virtual network
* Name
vn-Finance
* Address space
99.0.0.0/16
99.0.0.0 - 99.0.255.255 (65536 addresses)
* Subscription
Visual Studio Professional
* Resource group
rg-NetworkServices
Create new
* Location
(US) Central US
Subnet
* Name
sn-WebServers
* Address range
99.0.1.0/24
99.0.1.0 - 99.0.1.255 (256 addresses)
DDoS protection
Basic
Standard
Service endpoints
Disabled
Enabled
Firewall
Disabled
Enabled
Create
Automation options

We can see the newly created Virtual Network.



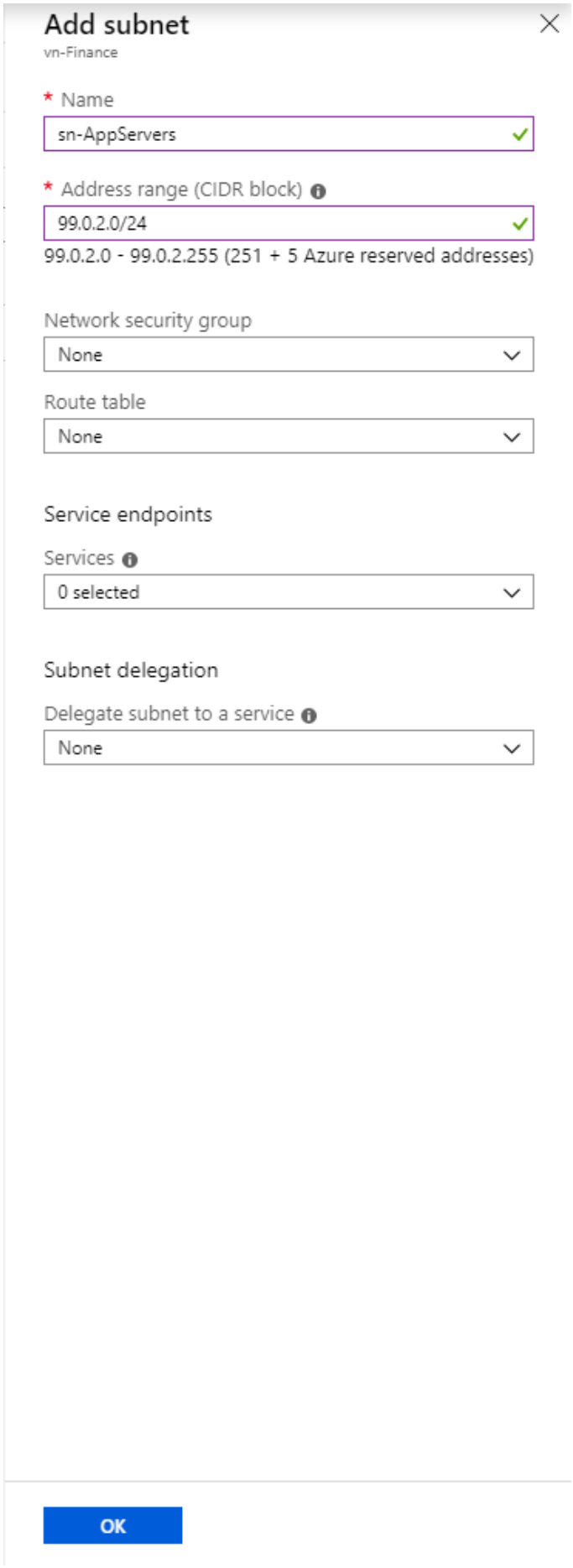
Click on “vn-Finance” Virtual Network and go in to it. Under Subnets we can see the new sub net we created: sn-WebServers



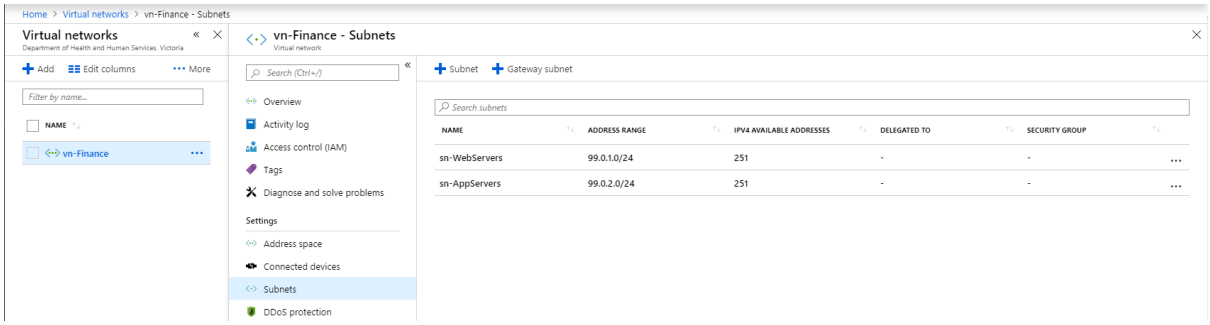
Now we are going to add the 2nd Subnet.

Click “+ Subnet” button and add another Subnet.

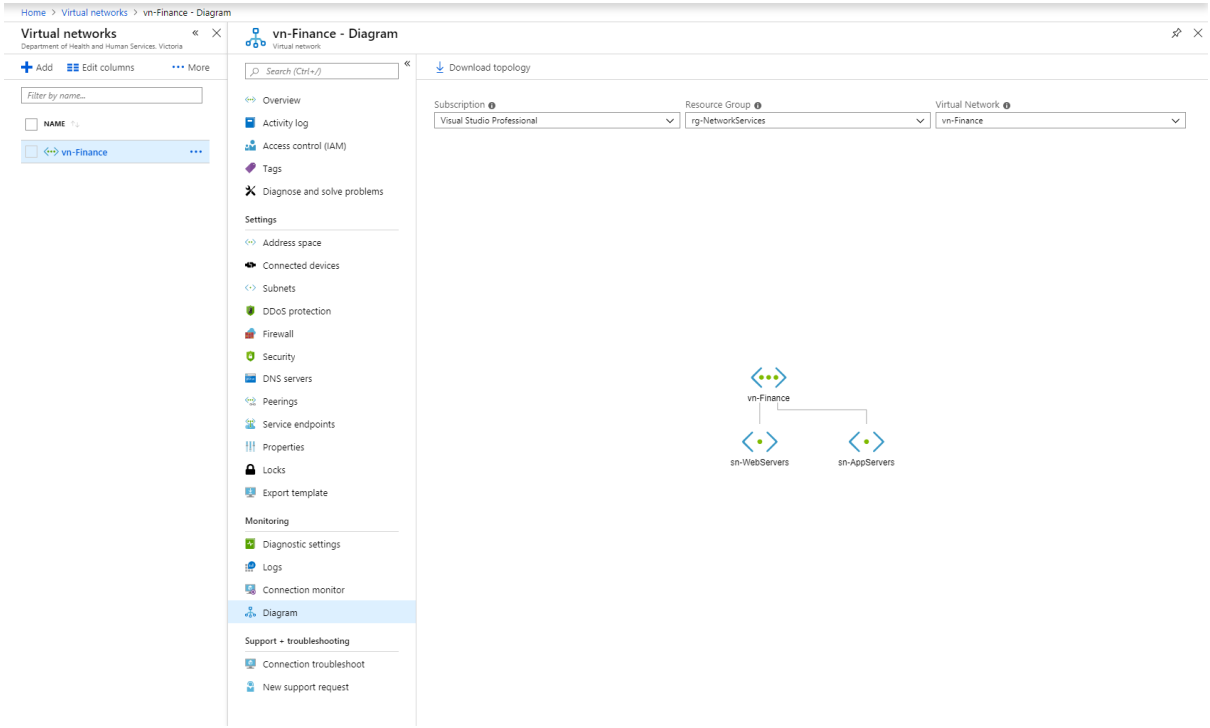
- Subnet name: sn-AppServers
- Address range: 99.0.2.0/24


Add subnet
vn-Finance
* Name
sn-AppServers
* Address range (CIDR block)
99.0.2.0/24
99.0.2.0 - 99.0.2.255 (251 + 5 Azure reserved addresses)
Network security group
None
Route table
None
Service endpoints
Services
0 selected
Subnet delegation
Delegate subnet to a service
None
OK

We can see the both Subnets now.



You can view the network diagram from the Diagram tab.



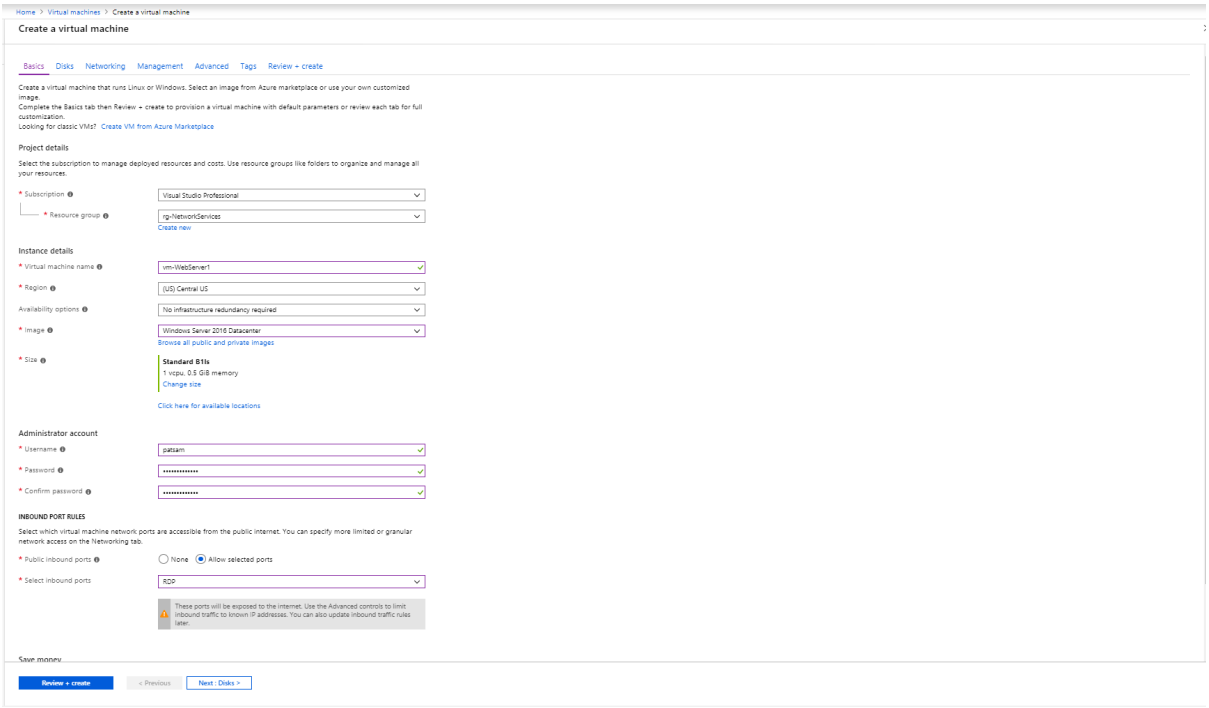
Step 03: Add a new Virtual Machine

We are going to create 2 Virtual Machines.

1st Virtual Machine by the name vm-WebServer1 under sn-WebServers Subnet and 2nd Virtual Machine by the name of vm-AppServer1 under the sn-AppServers subnet.

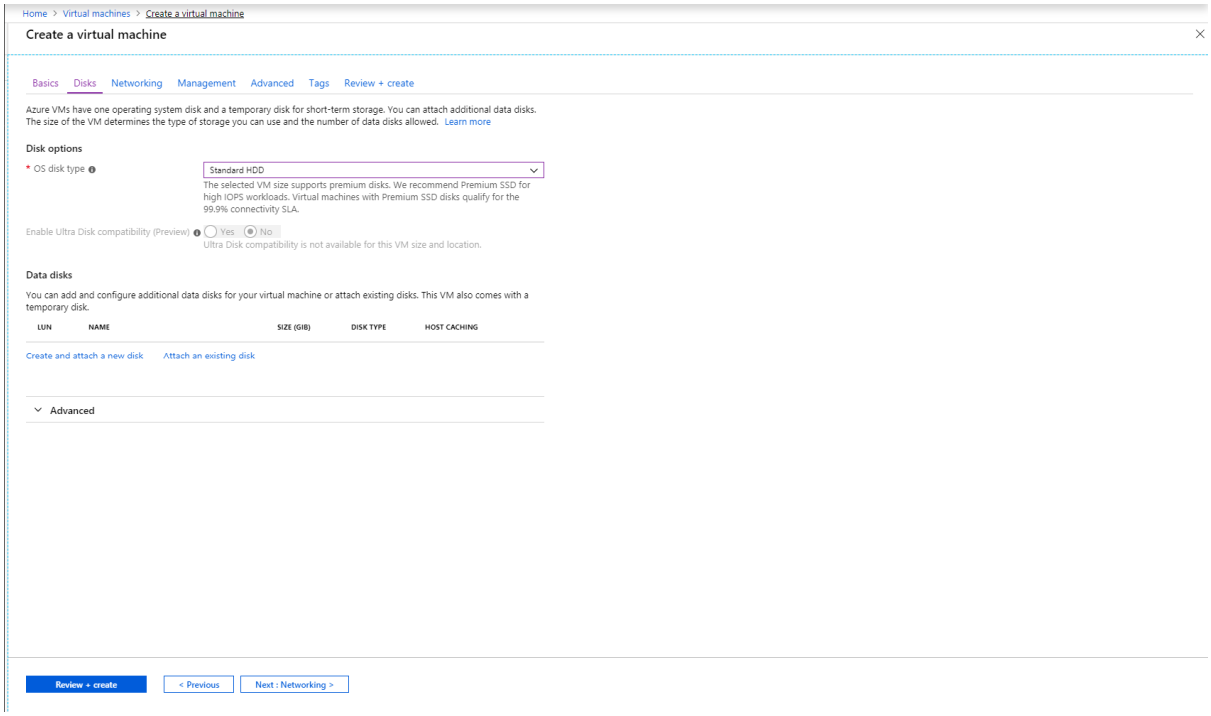
Create the 1st Virtual Machine.

- Resource Group: rg-NetworkServices
- Give it name: vm-WebServer1
- Region: (US) Central US
- Image: Windows Server 2016 Datacentre
- Size: Standard B1ls
- Username/password (we are going to remote in to this machine later on)
- Public inbound ports: Allow selected ports (*important – set this option to remote in)
- Selected inbound ports: RDP (*important – set this option to remote in)



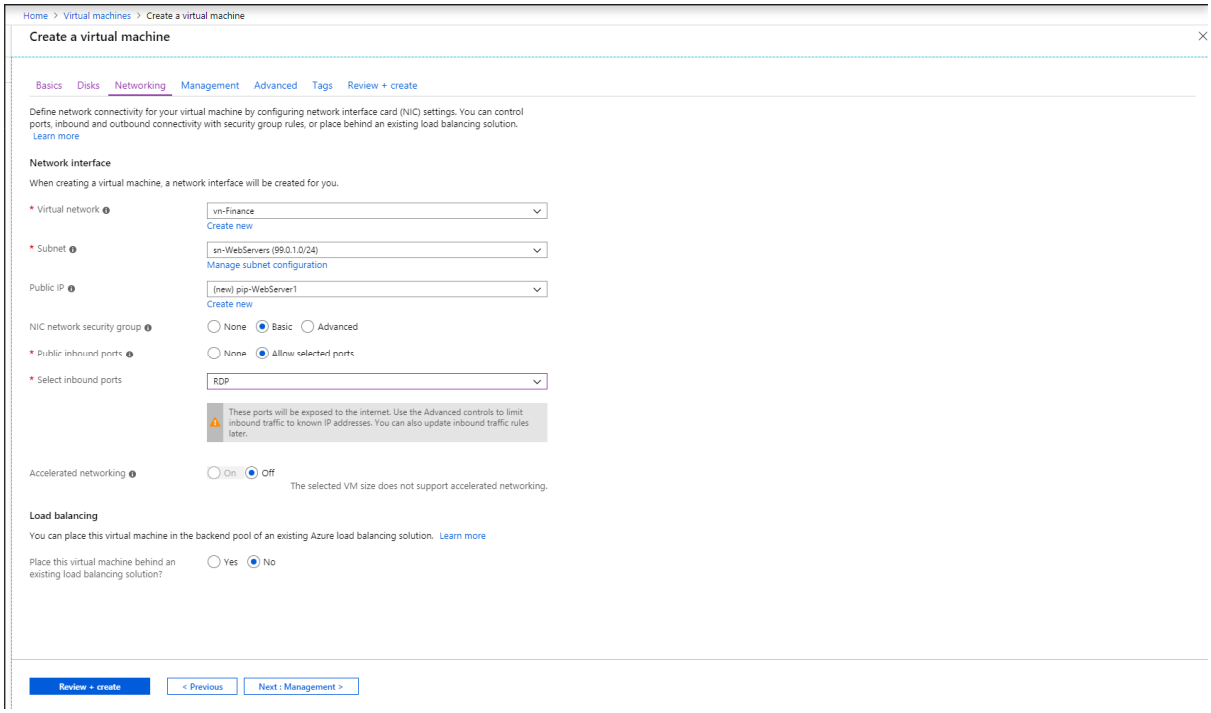
Click Next: Disks button.

- OS disk type: Standard HDD



Click Next: Networking button.

- Virtual network: vn-Finance (the Virtual Network we created earlier)
- Since this is a web server, we need to add it under sn-WebServers. Select sn-WebServers for Subnet option.
- Public inbound ports: Allow selected ports (*important – set this option to remote in)
- Selected inbound ports: RDP (*important – set this option to remote in)

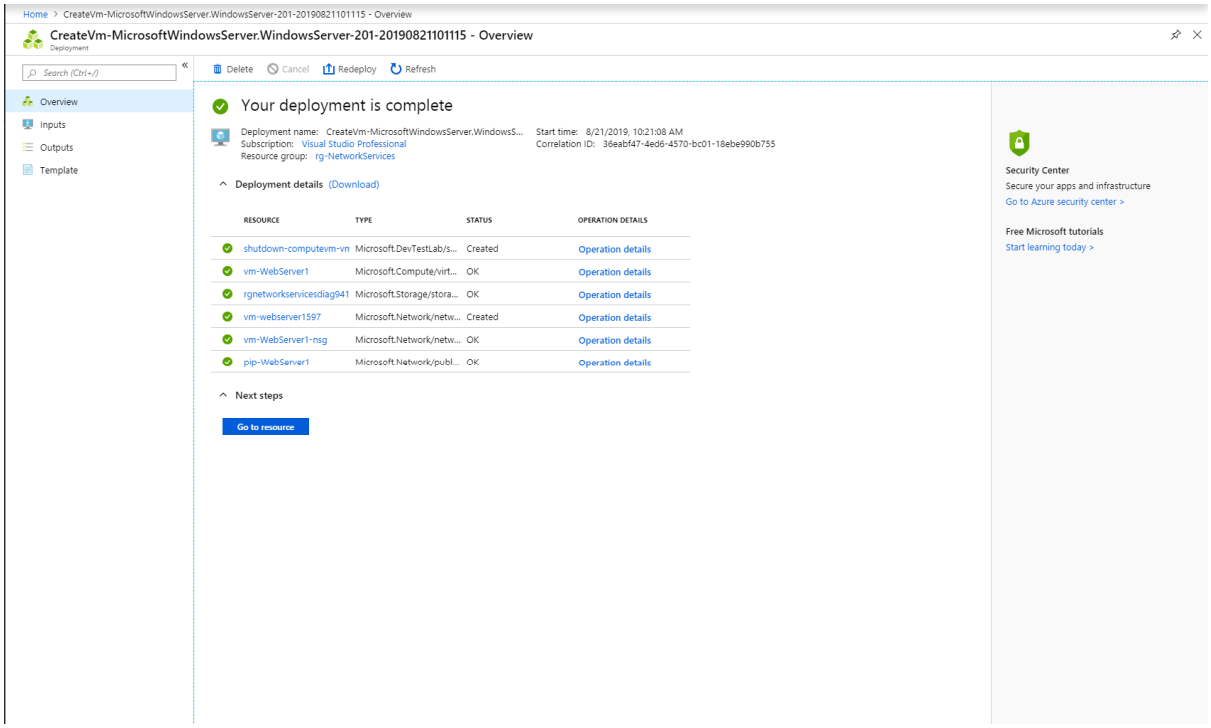


To create a new Public IP, click on Create New

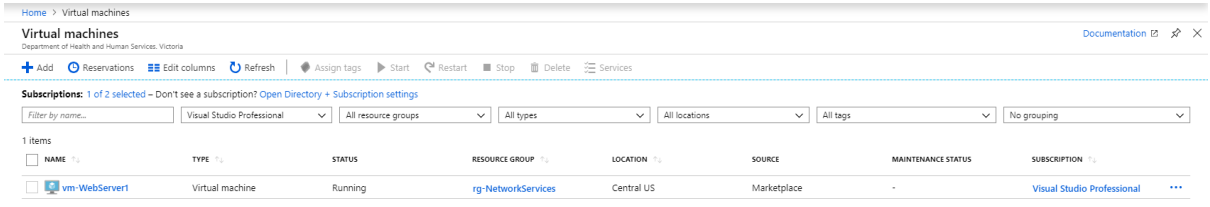
- Name: pip-WebServer1


Create public IP address
* Name
pip-WebServer1
SKU
Basic
Standard
Assignment
Dynamic
Static
OK

Click Review + Create button.



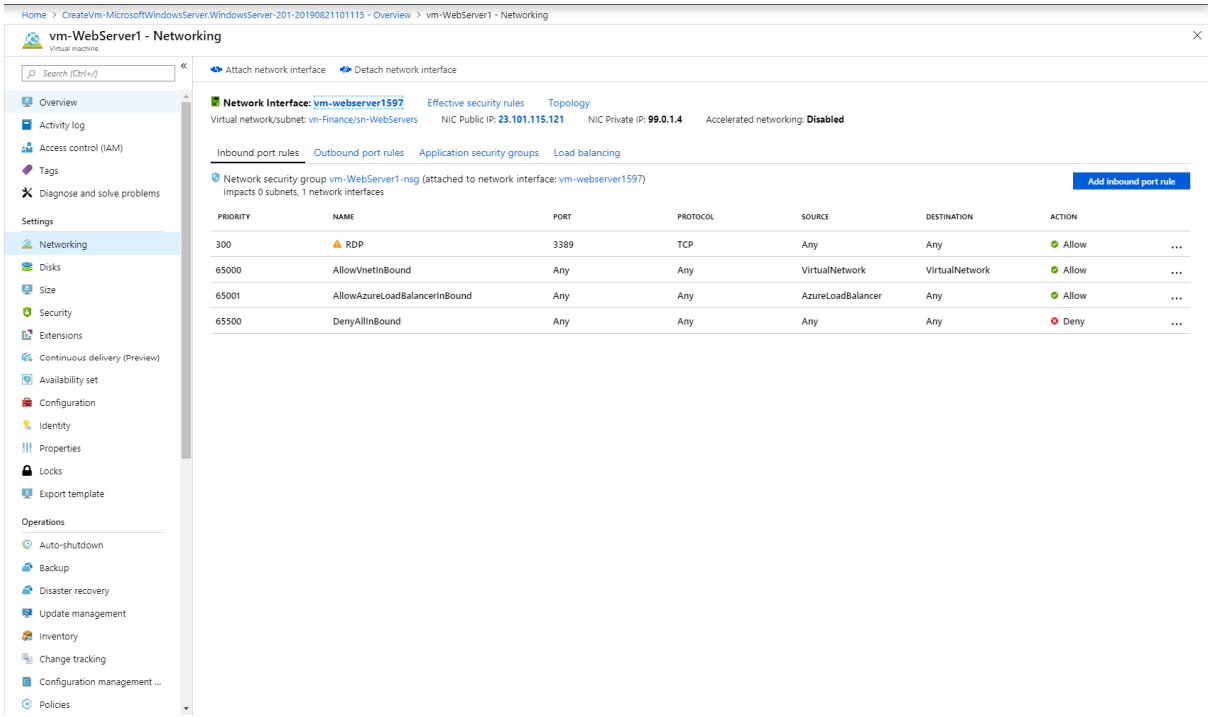
We can see the newly created Virtual Machine.



Click on the newly created Virtual Machine.

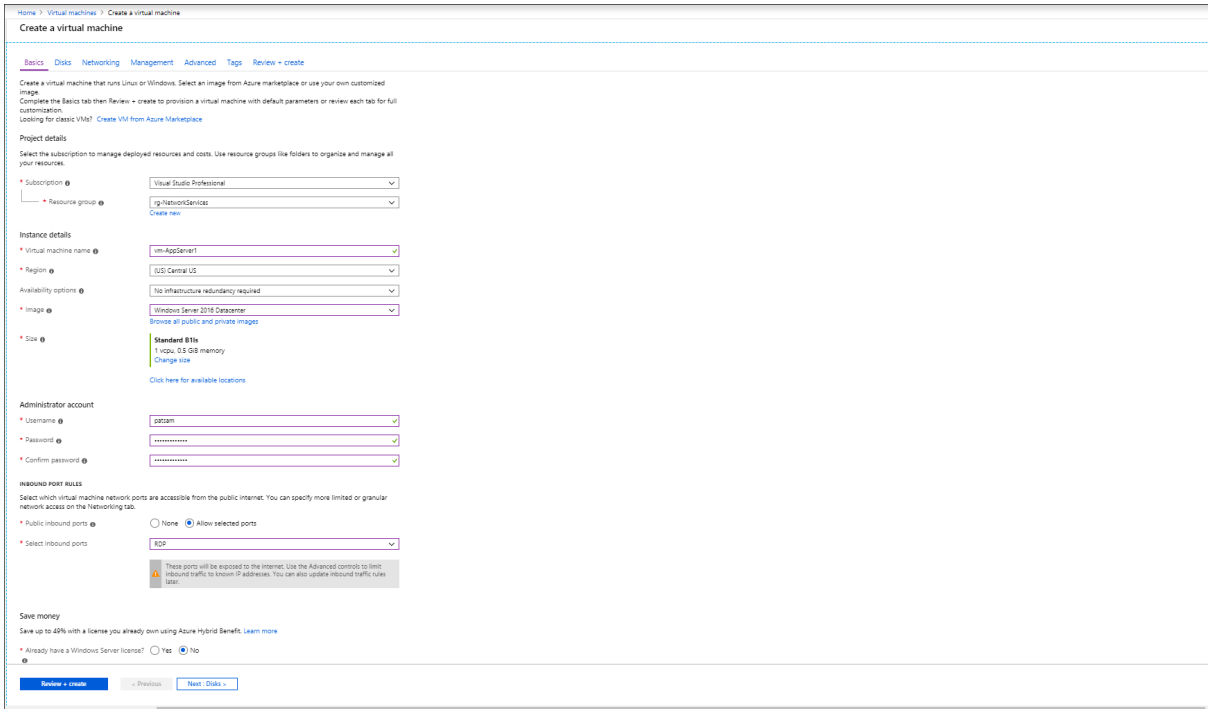
We can view the important details relating to vm-WebServer1 under Networking tab.

- Network Interface: vm-webserver1597
- NIC Public IP: 23.101.115.121



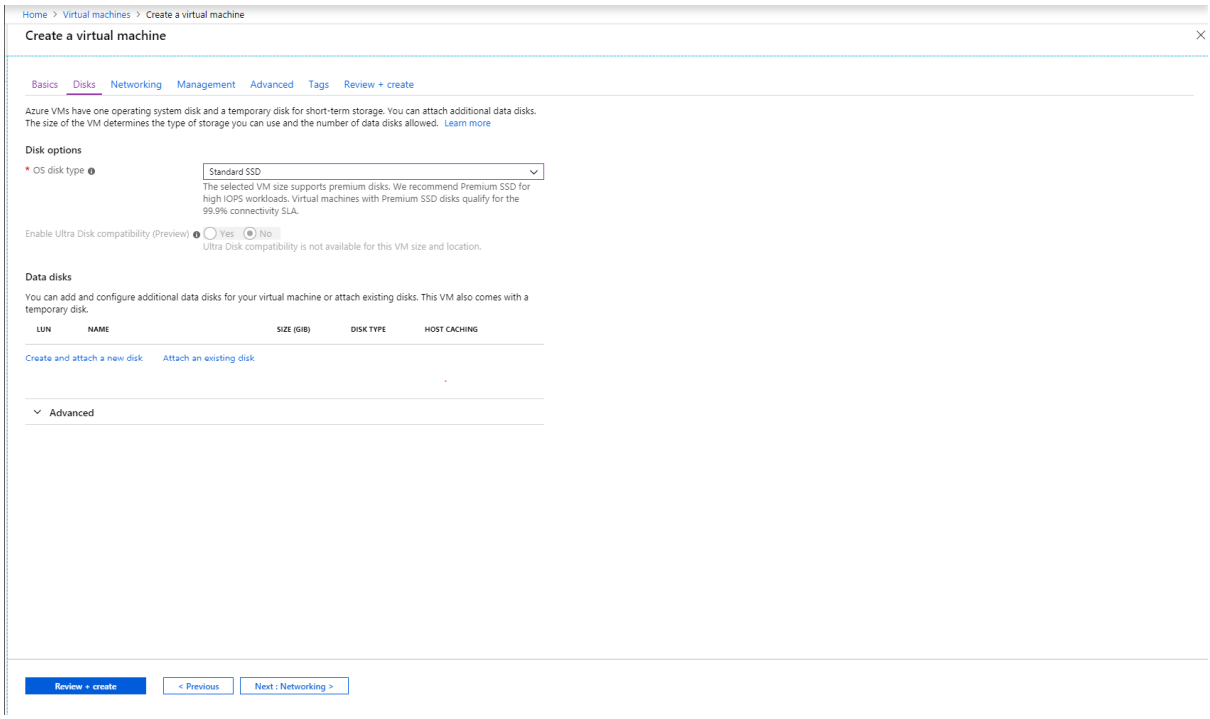
Same way creates the 2nd Virtual machine.

- Resource Group: rg-NetworkServices
- Give it name: vm-AppServer1
- Region: (US) Central US
- Image: Windows Server 2016 Datacentre
- Size: Standard B1ls
- Username/password (we are going to remote in to this machine later on)
- Public inbound ports: Allow selected ports (*important – set this option to remote in)
- Selected inbound ports: RDP (*important – set this option to remote in)



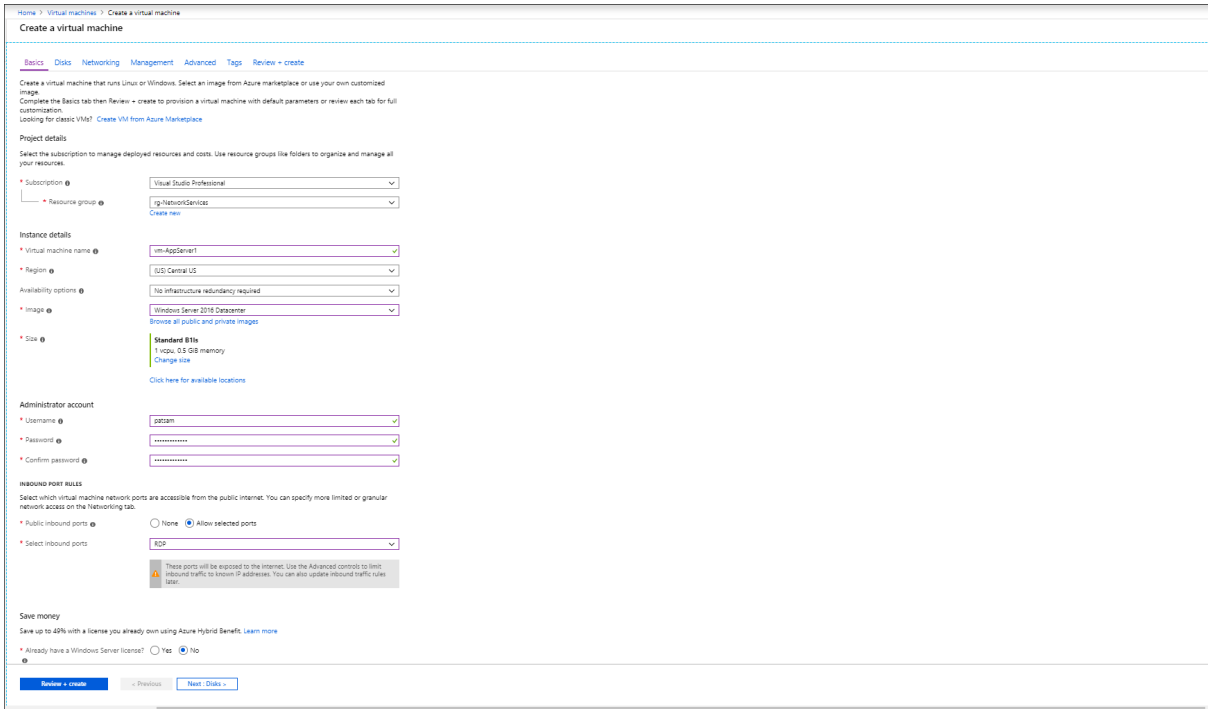
Click Next: Disks button.

- OS disk type: Standard HDD



Click Next: Networking button.

- Virtual network: vn-Finance (the Virtual Network we created earlier)
- Since this is an app server, we need to add it under sn-AppServers. Select sn-AppServers for Subnet option.
- Public inbound ports: Allow selected ports (*important – set this option to remote in)
- Selected inbound ports: RDP (*important – set this option to remote in)

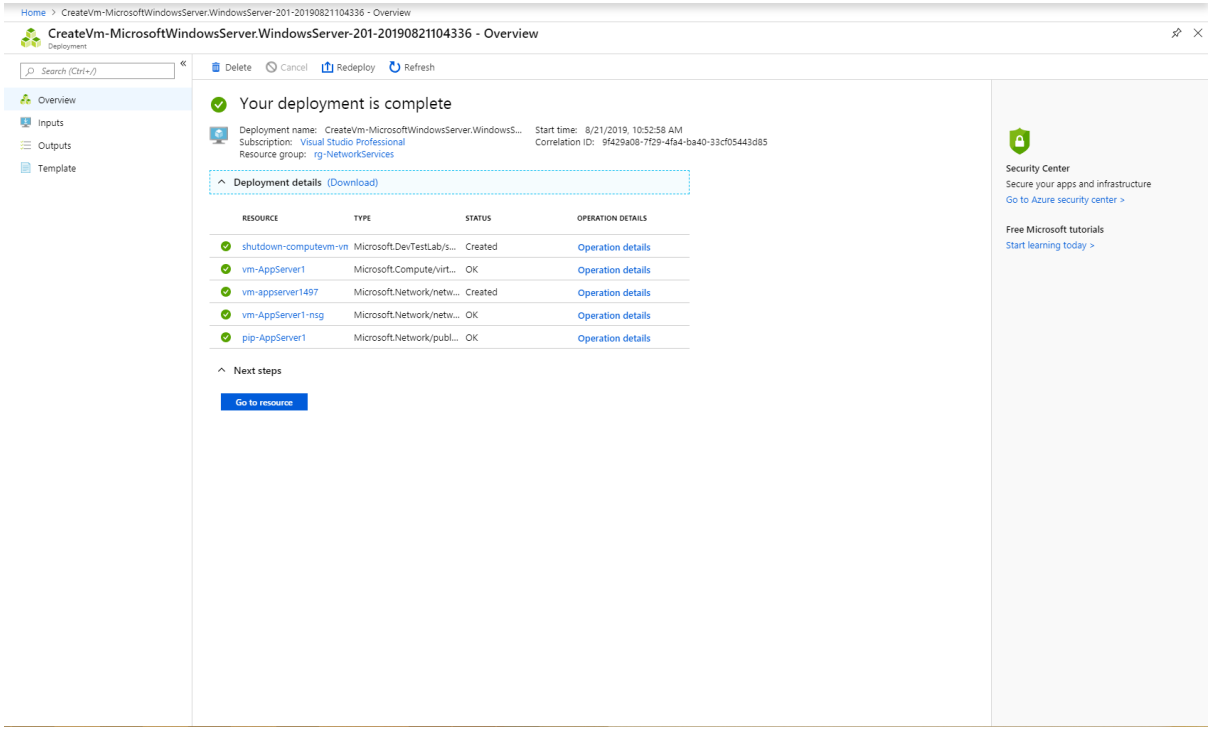


To create a new Public IP, click on Create New

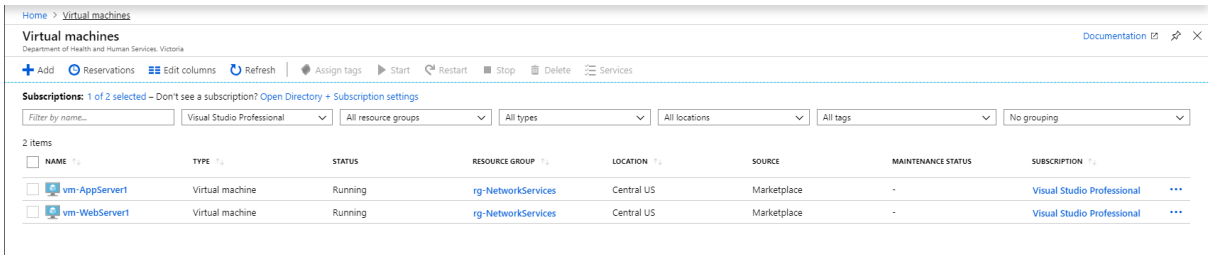
- Name: pip-AppServer1


Create public IP address
* Name
pip-AppServer1
SKU
Basic
Standard
Assignment
Dynamic
Static
OK

Click Review + Create button.



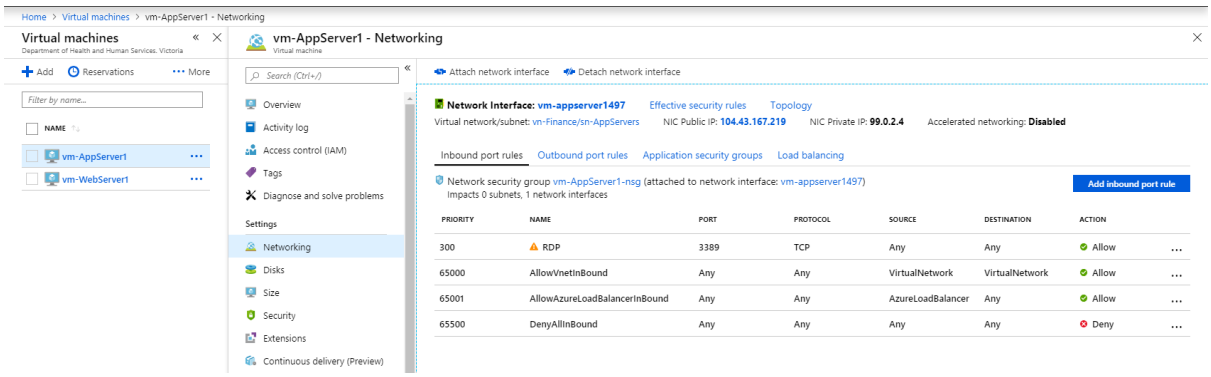
We can see both the Virtual Machines now.



Click on virtual machine: vm-AppServer1

We can view the important details relating to vm-WebServer1 under Networking tab.

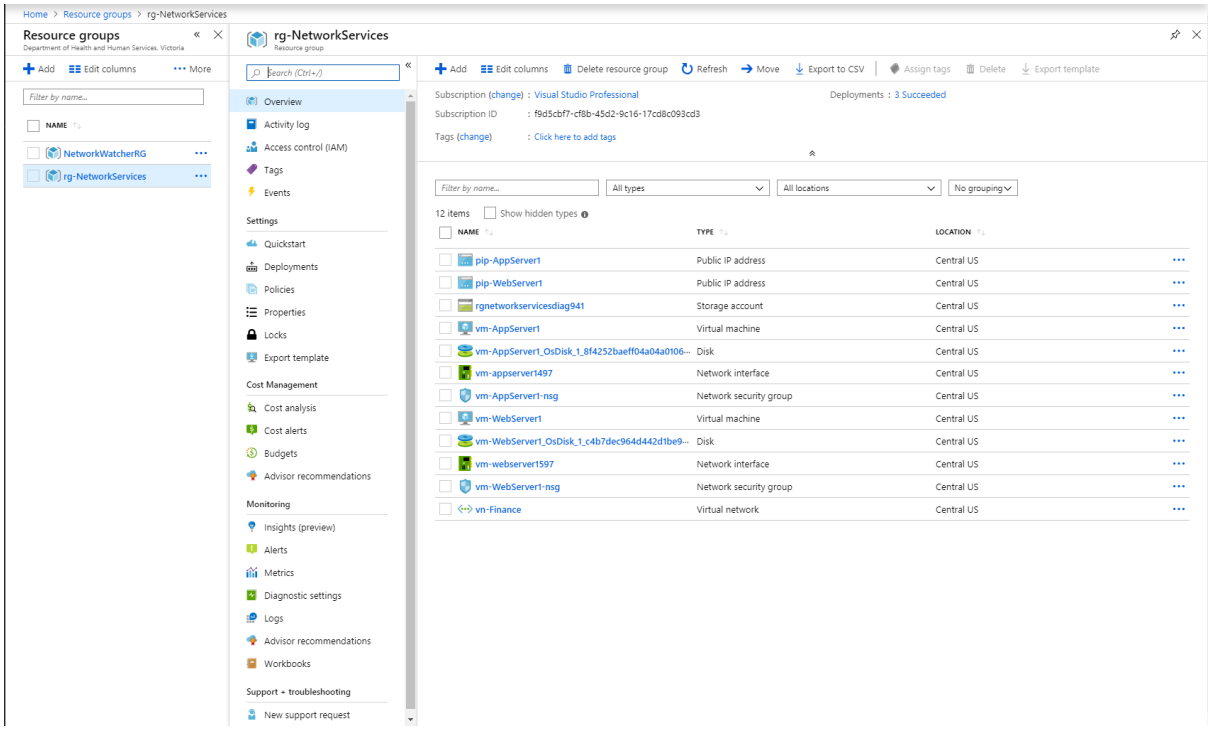
- Network Interface: vm-appserver1497
- NIC Public IP: 104.43.167.219



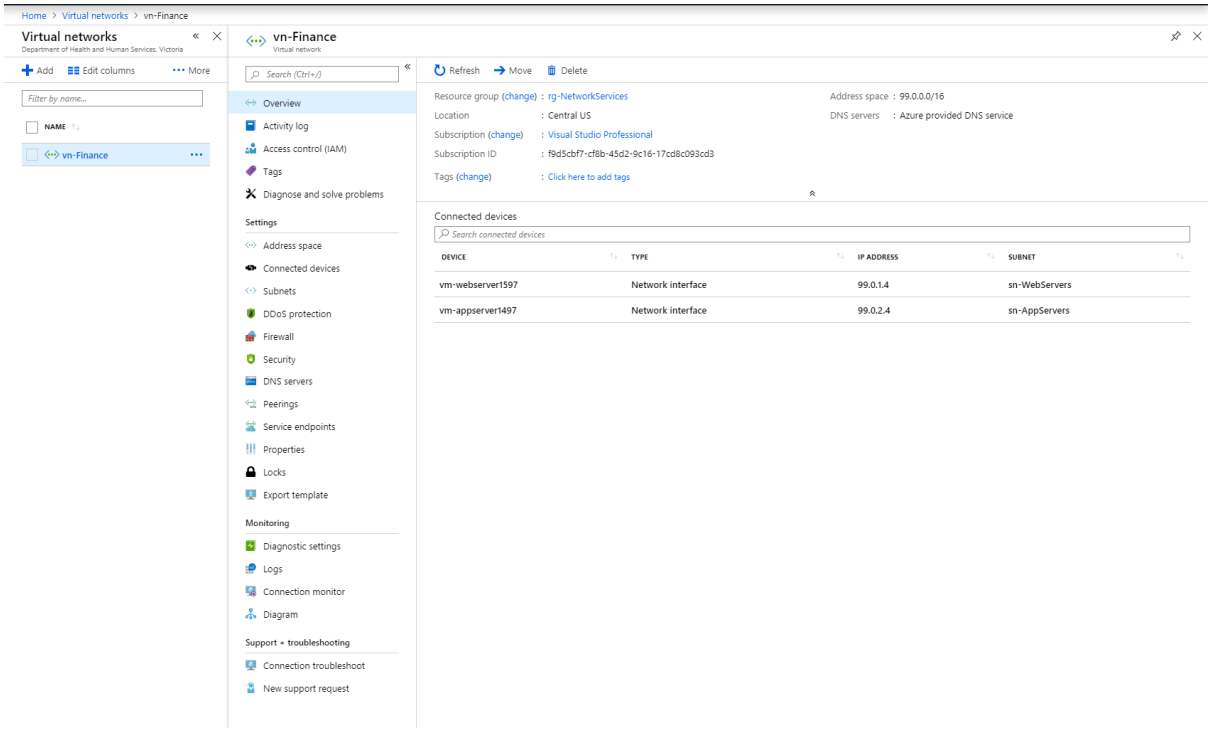
As a summary we'll look in to all the entities we created.

Resource Group: rg-NetworkServices

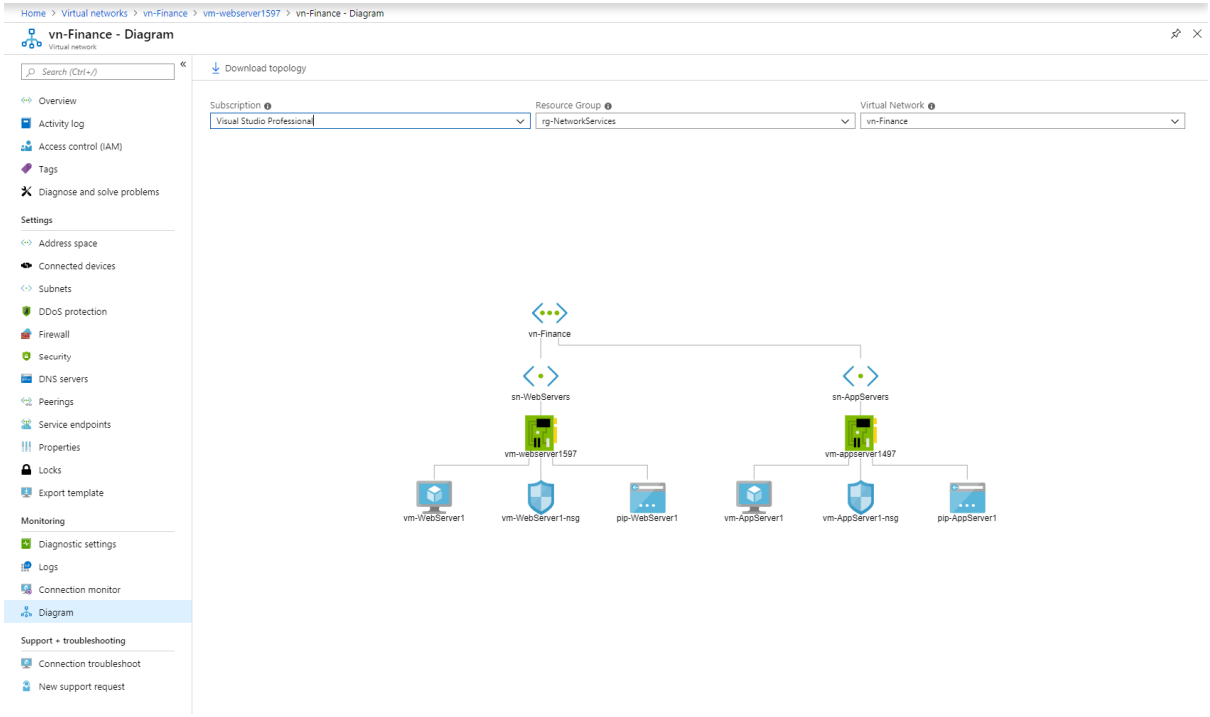
Mind you when we created the Virtual Machines, it automatically creates Network Interface and Network Security Group for each Virtual Machine.



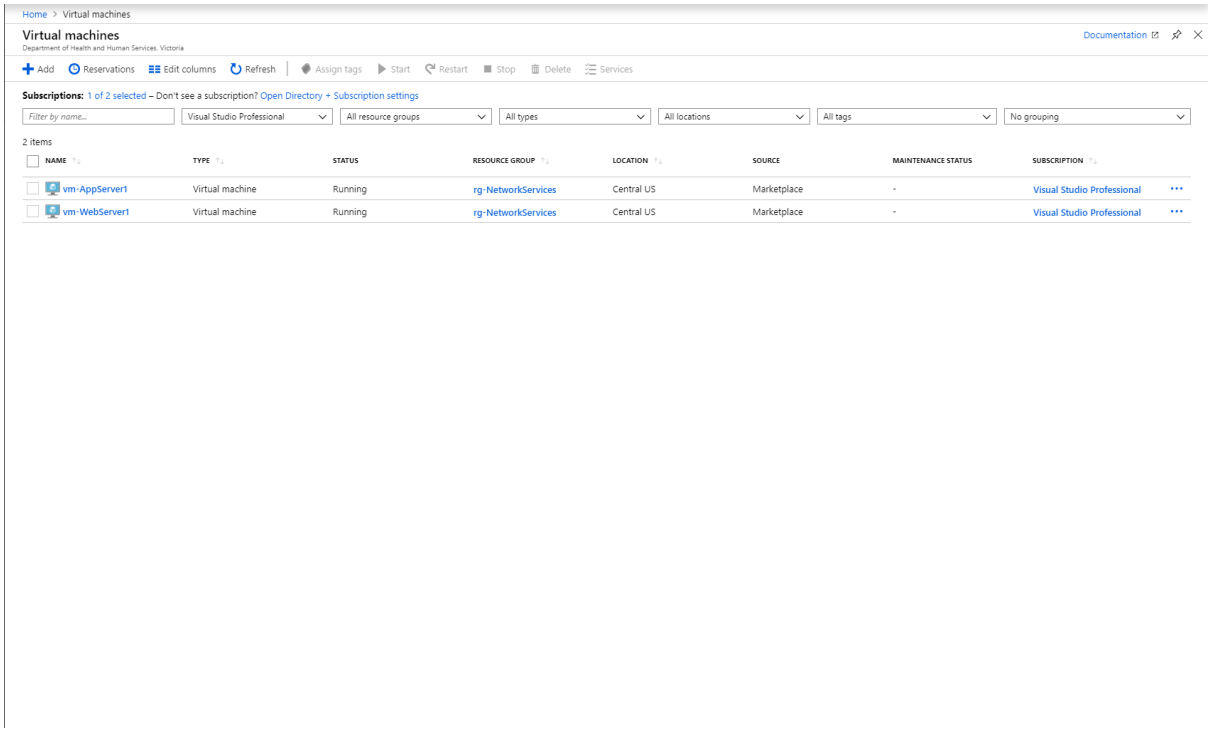
Virtual Networks: vn-Finance



Final Virtual Network diagram:

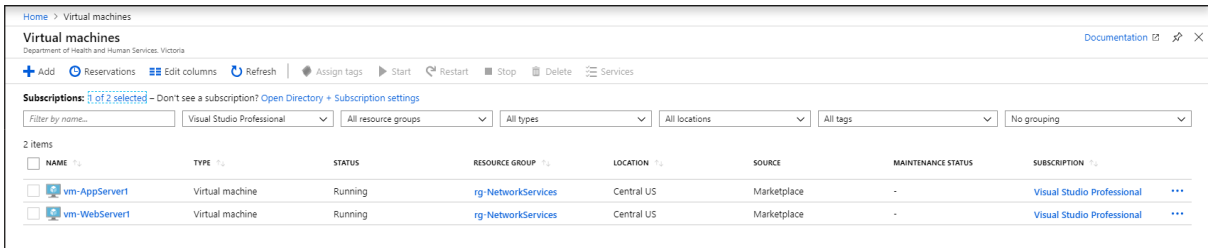


Virtual Machines: vm-AppServer1 and vm-WebServer1

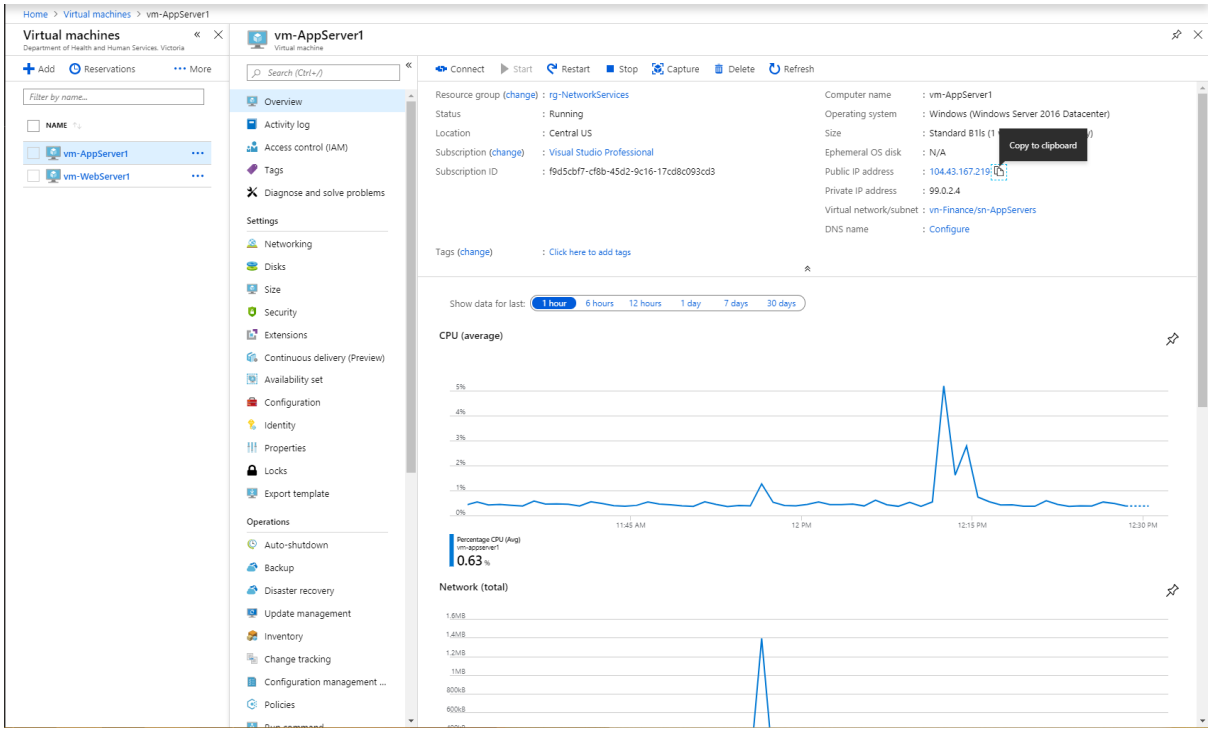


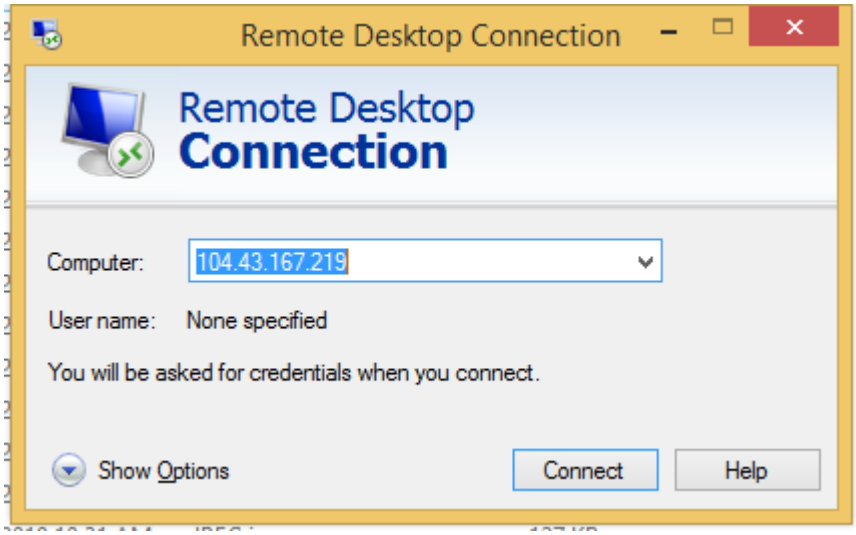
Step 04: Remote desktop to one of the Virtual Machine

Click on vm-AppServer1

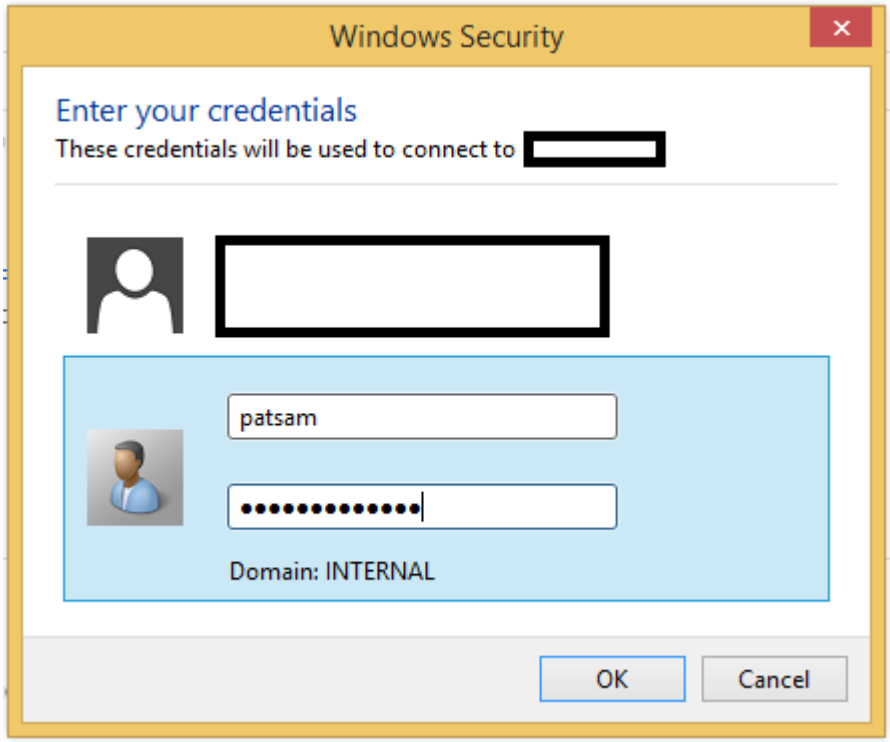


Get the Public IP Address copied - 104.43.167.219

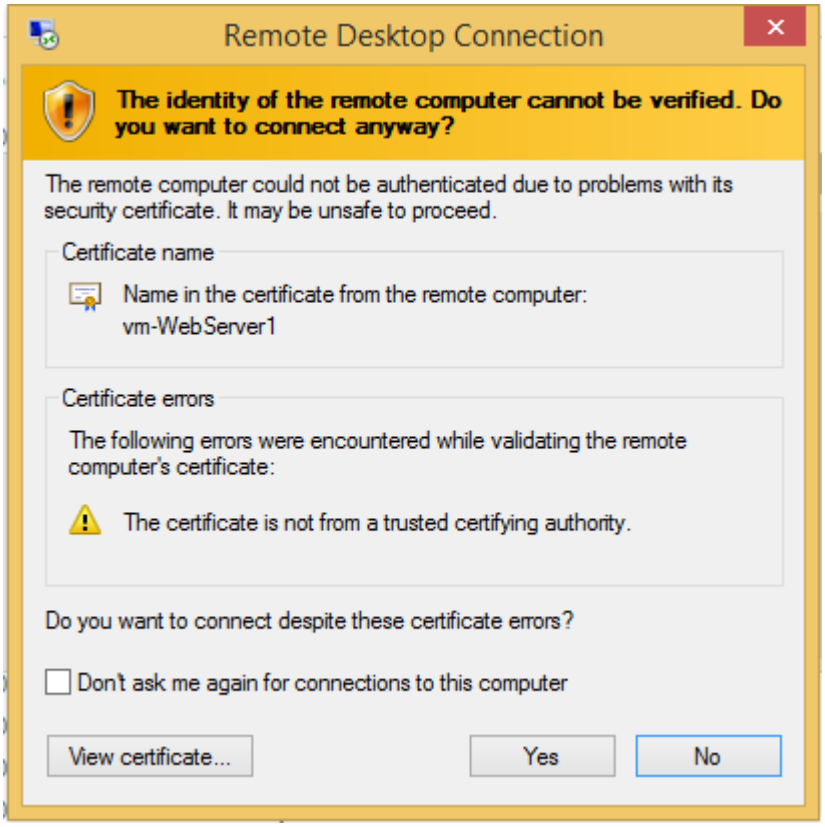




Enter the username/password which we used when creating the Virtual Machine.



To accept the certificate, click Yes.



You should be able to access the Virtual Machine.