1. OBJETIVO:

Delinear passos para criar e configurar uma VNET e uma SUBNET no AZURE.

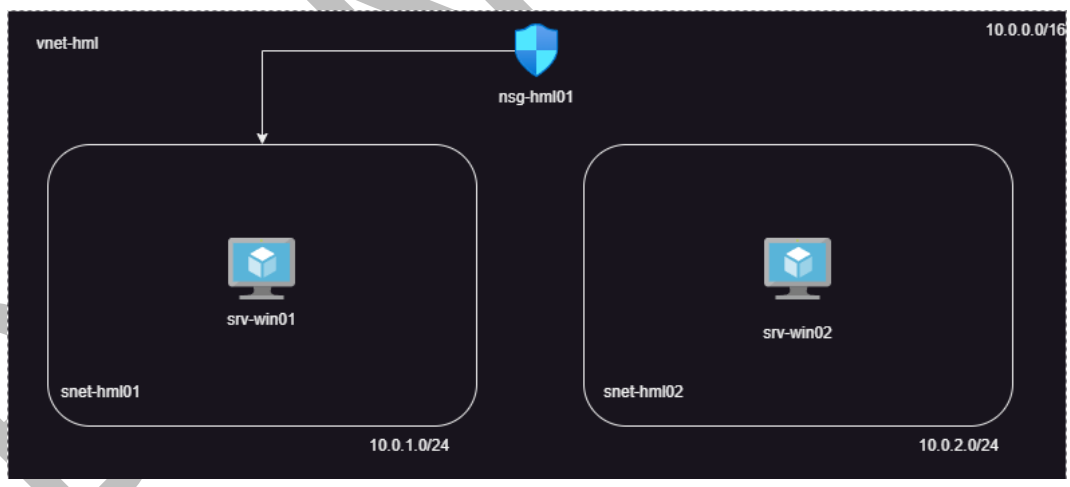
Laboratório 01 – Modulo 04 – Virtual Network.

2. ATIVIDADES:

1) Planejando a VNET.

- Nome da VNET: vnet-hml.
- Address Space: 10.0.0.0/16.
- Nome da Subnet: snet-hml01 | 10.0.1.0/24.
- Nome e IP da Subnet: snet-hml-02 | 10.0.2.0/24.
- Nome do NSG: nsg-hml01.
- Nome da VM 01: srv-win01.
- Nome da VM 02: srv-win02.

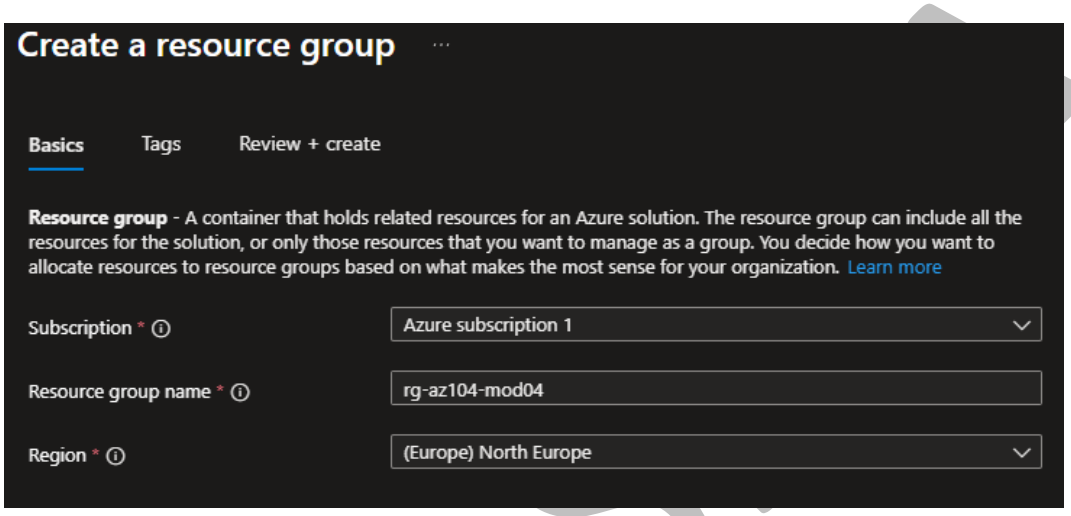
Inicialmente o NSG será associado a subnet ***snet-hml01***.



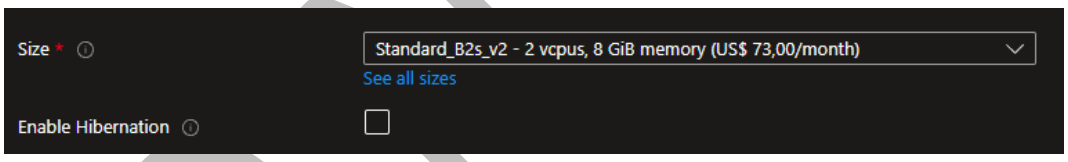
FÁBIO SILVA

2) Criando a infraestrutura no AZURE. **A VNET precisa ser criada na mesma região onde será criada as máquinas virtuais.*

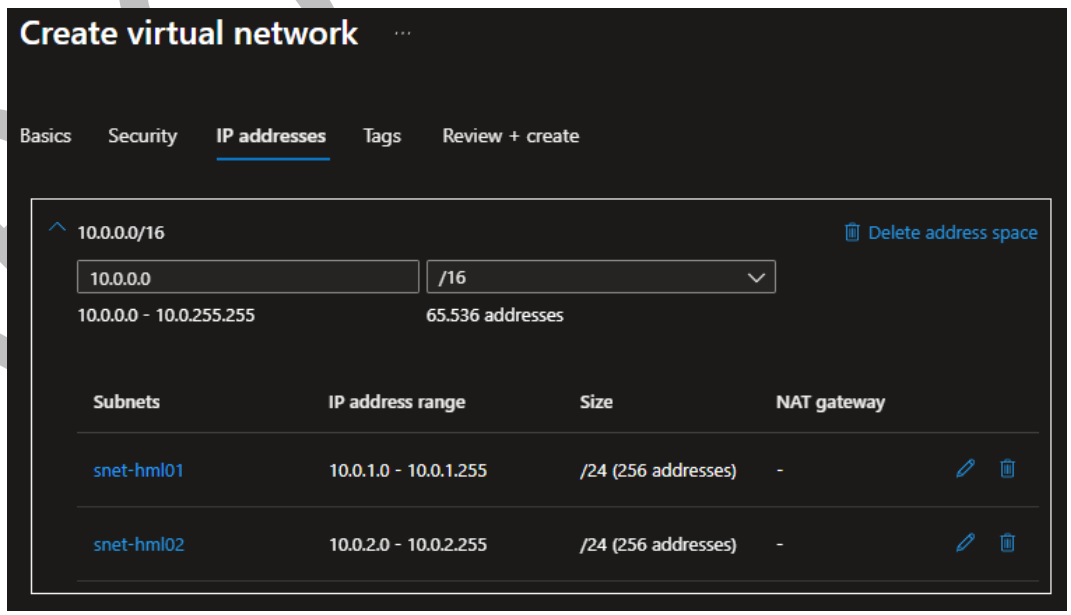
- Criando um Resource Group – *rg-az104-mod04*.



*Criando uma VM de teste para verificar se a região "North Europe" tem máquinas virtuais com SKUS *Standard_b2s e VCPUS *2 vcpus disponíveis.*

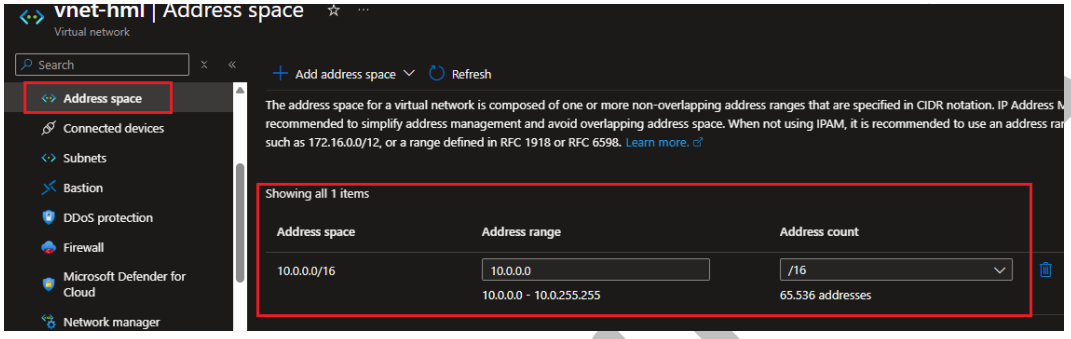


- Criando a infraestrutura de rede – Virtual Network *VNET*.



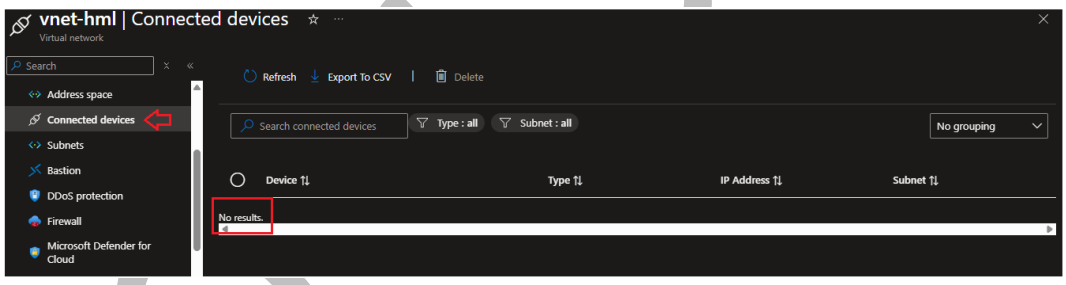
Pergunta:

É possível alterar o ADDRESS SPACE de uma virtual network – VNET?

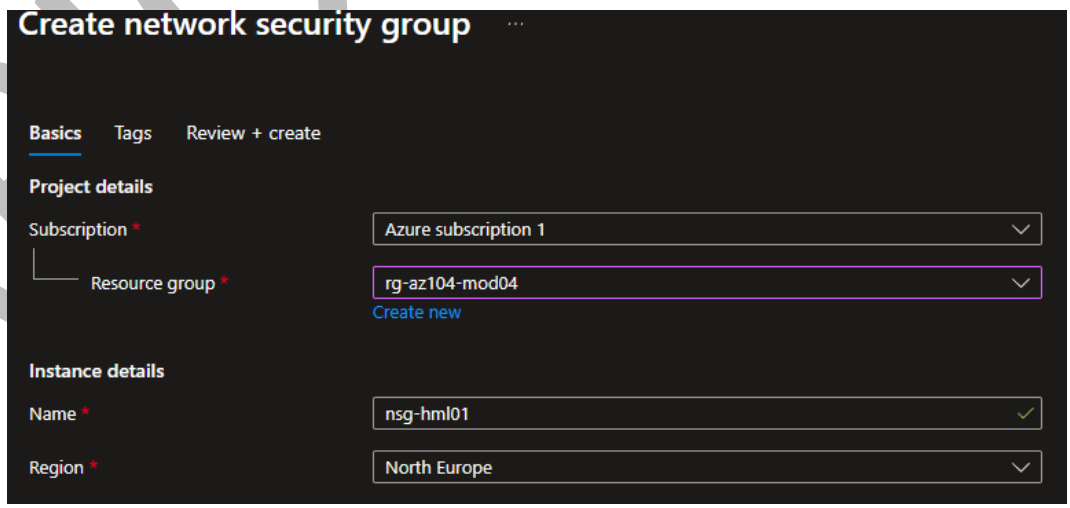


Sim, desde que **não tenha nenhum** item/dispositivo ou recurso atrelado a essa VNET.

Clique em **Connected Devices** e verifique se existe algum dispositivo ou recurso associado a essa VNET.



- Criando um NSG – Network Security Group.



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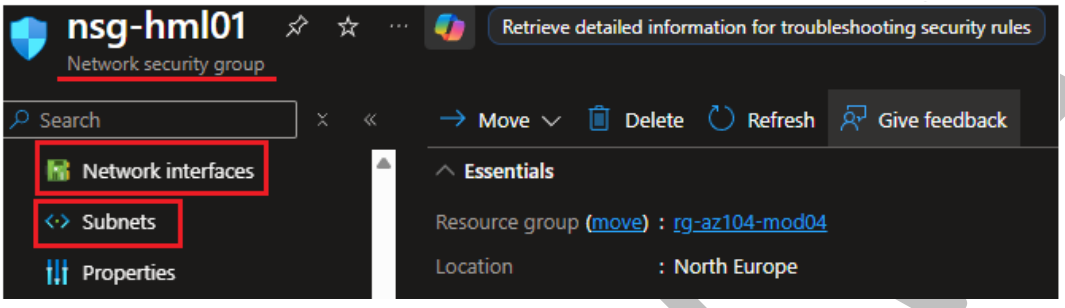
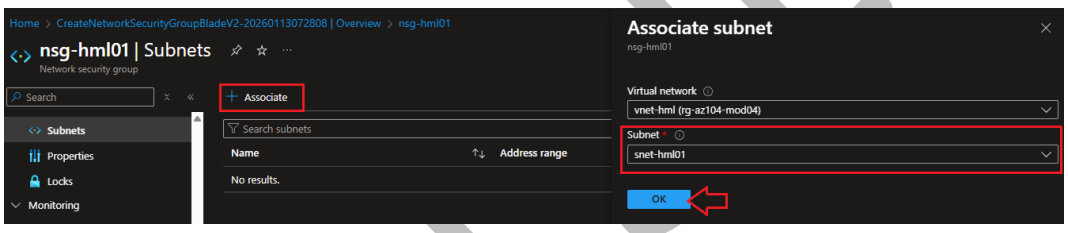
Pergunta: Aonde o **NSG – Network Security Group** pode ser associado?

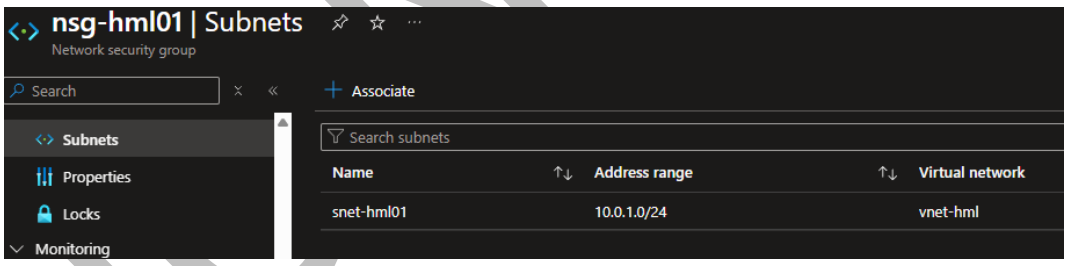
Resposta: Na *NIC – Network Interface Card / Placa de rede* da VM e nas *Subnets*.



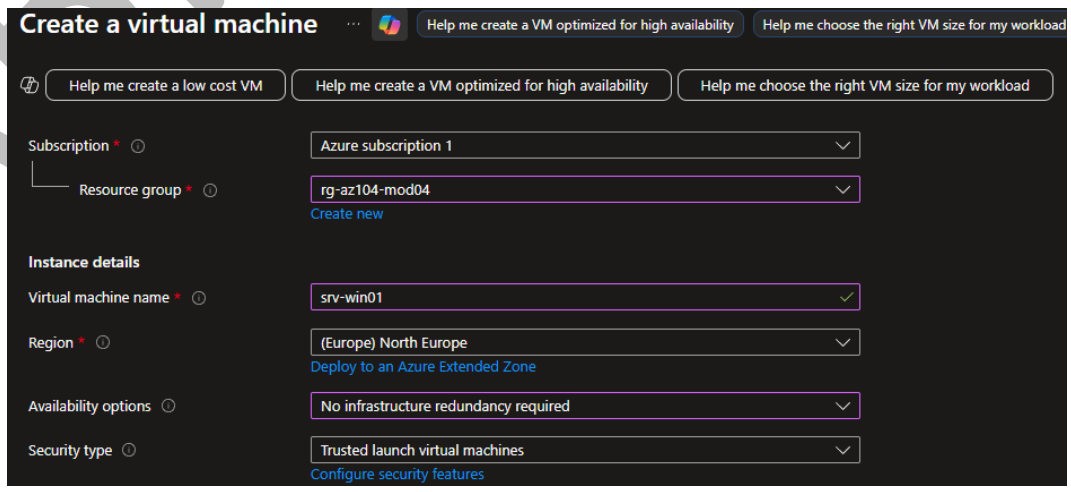
- Associando o NSG a uma **Subnet** (subnets > Associate).



NSG foi associado a SUBNET *snet-hml01*.

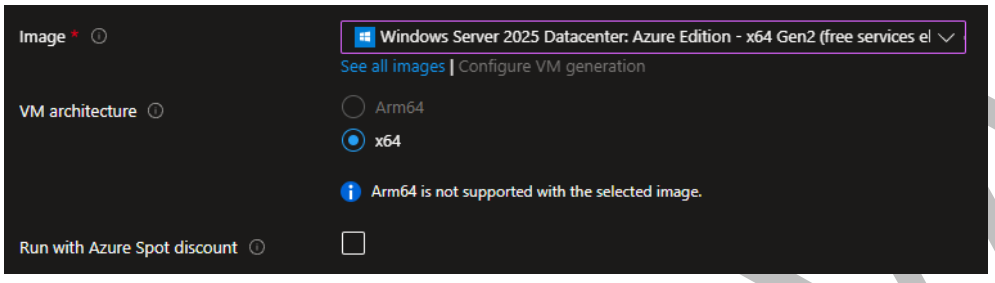


- Criando a máquinas virtual que usará no NSG. **As VMS devem estar na mesma região onde foi criada a VNET.*

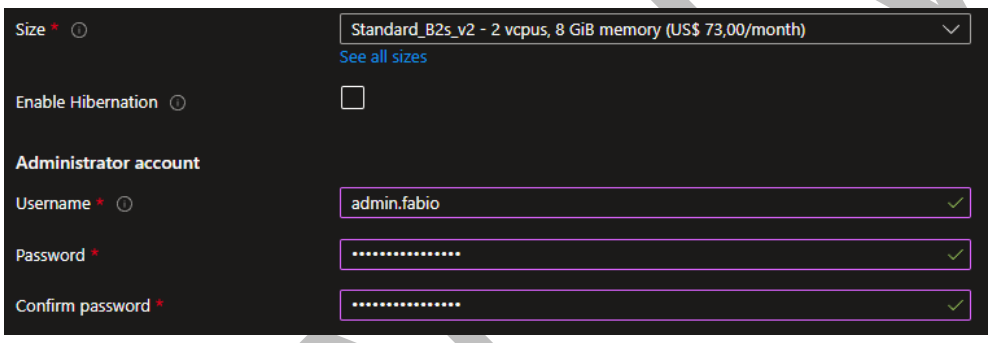


FÁBIO SILVA

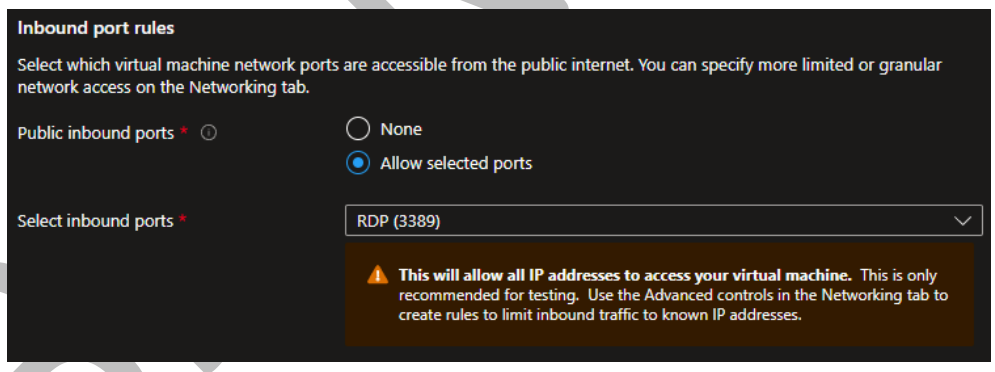
Imagem da VM escolhida.



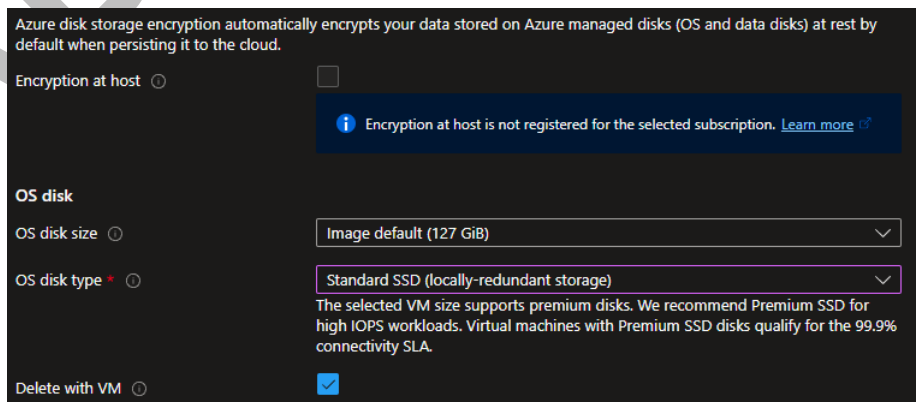
Escolhido o tamanho da virtual machine.



Em regras internas (portas públicas de entrada), foi mantida a porta RDP 3389.

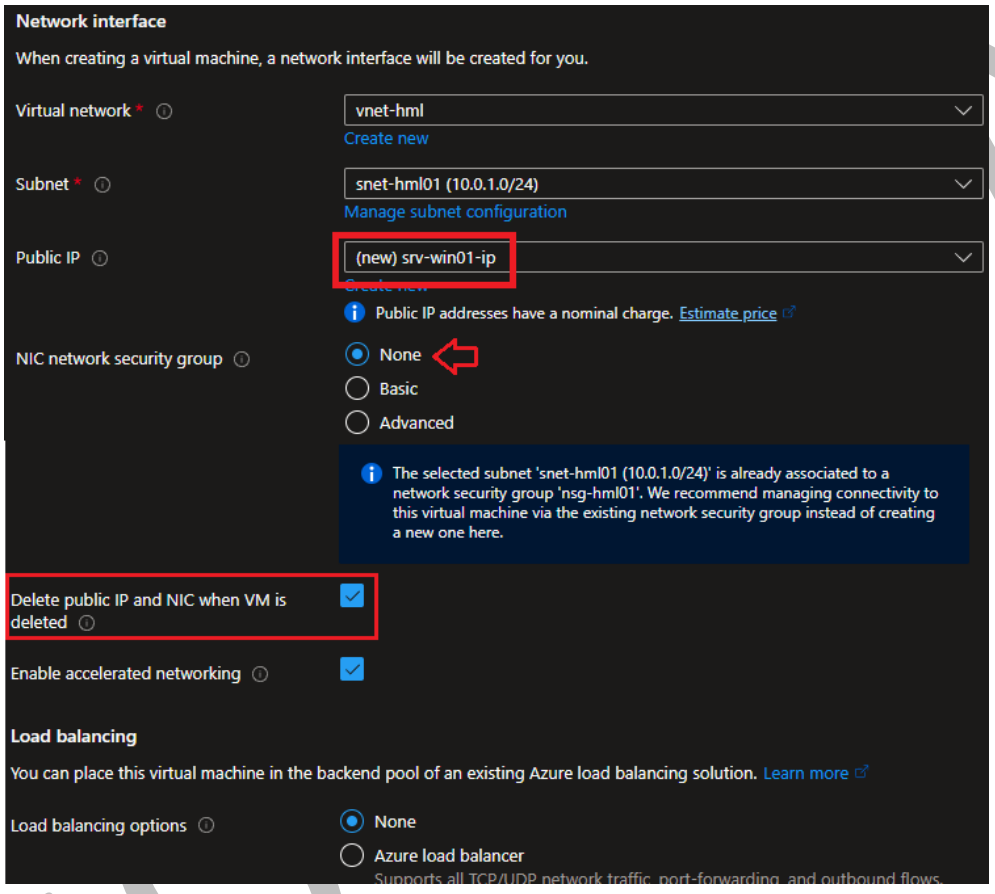


Em disco, altere para “standard SSD” para diminuir custos.



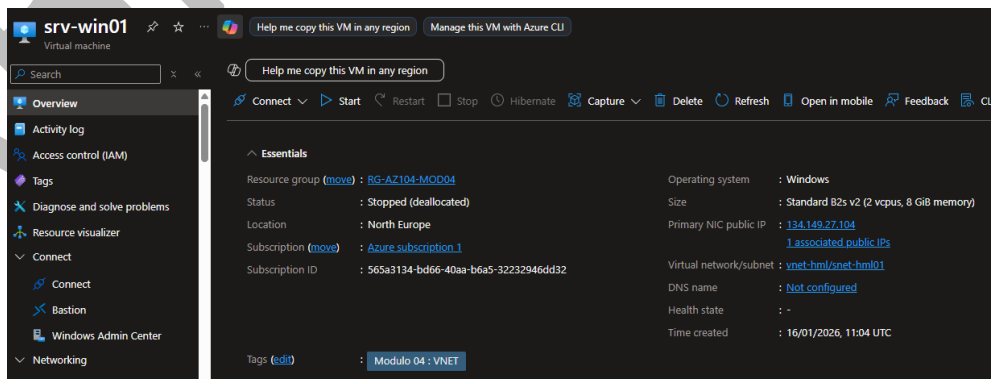
FÁBIO SILVA

Na parte de NETWORKING: **É necessário criar um IP público*. Foi escolhida outra SUBNET **A que está associada ao NSG*.



Não foram realizadas alterações nas guias Management, Monitority, Advanced e Tags.

Criação da VM realizada.



FÁBIO SILVA

- Criando a segunda VM que não usará o NSG.

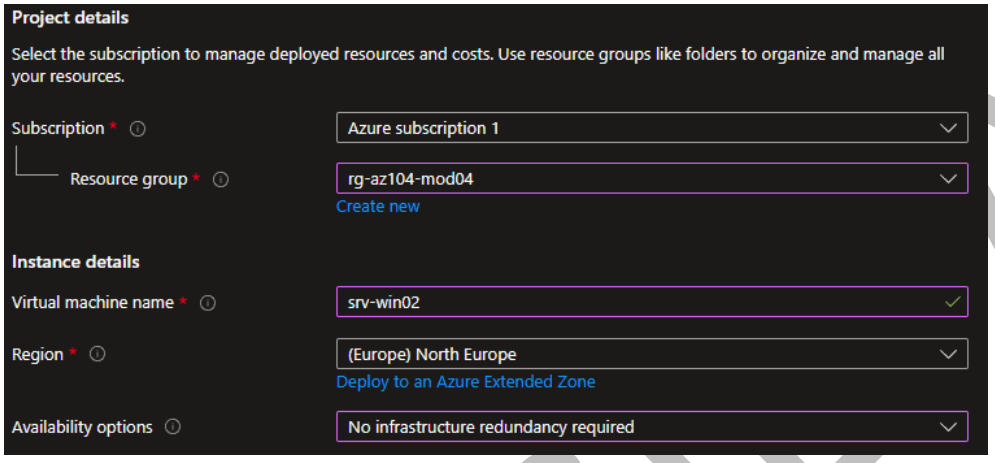
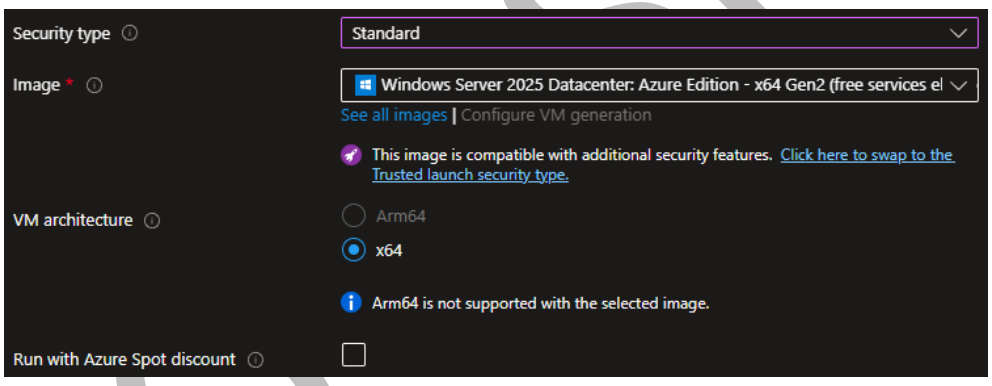
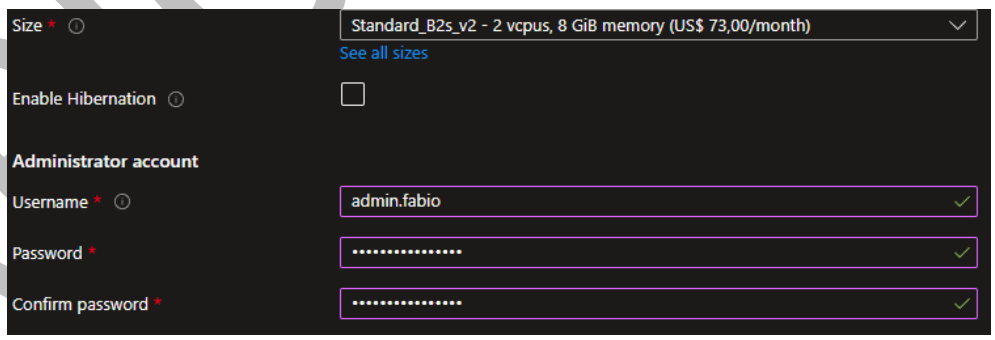


Imagem escolhida.

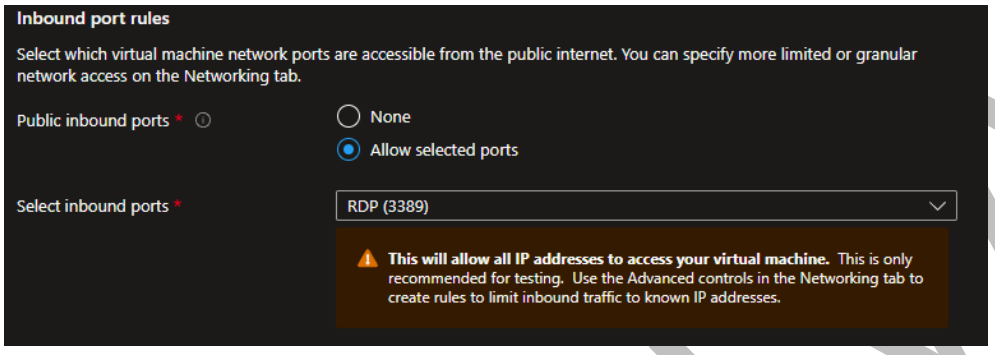


Tipo da VM.



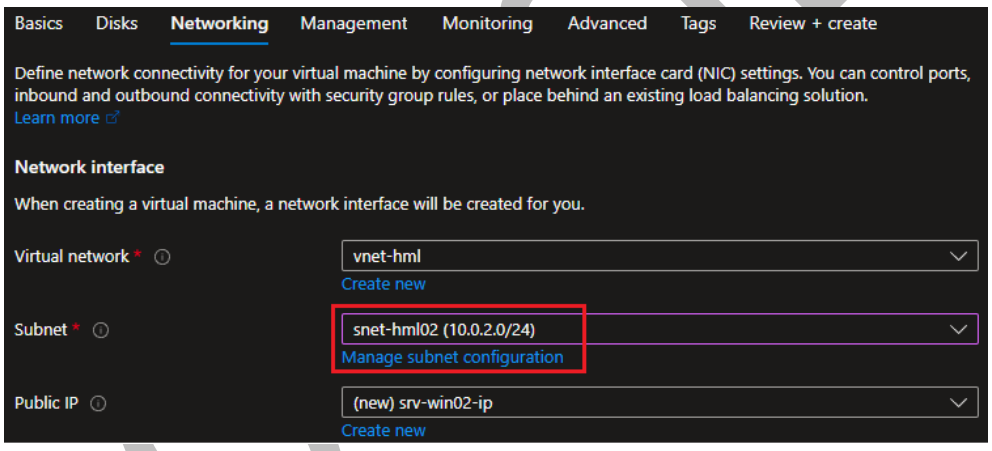
FÁBIO SILVA

Em regras de entrada, mantenha a porta RDP 3389 selecionada.

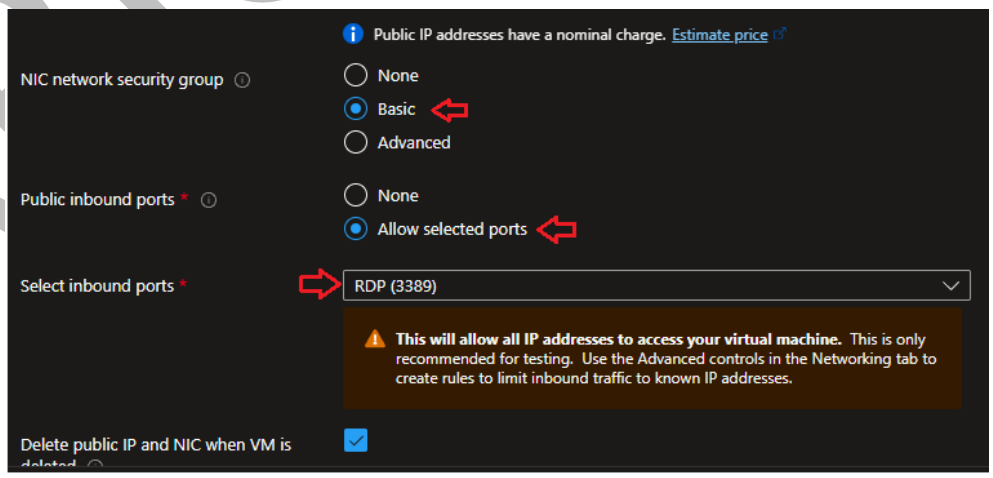


Em NETWORKING:

Foi escolhida outra SUBNET **A que não está associada ao NSG*.

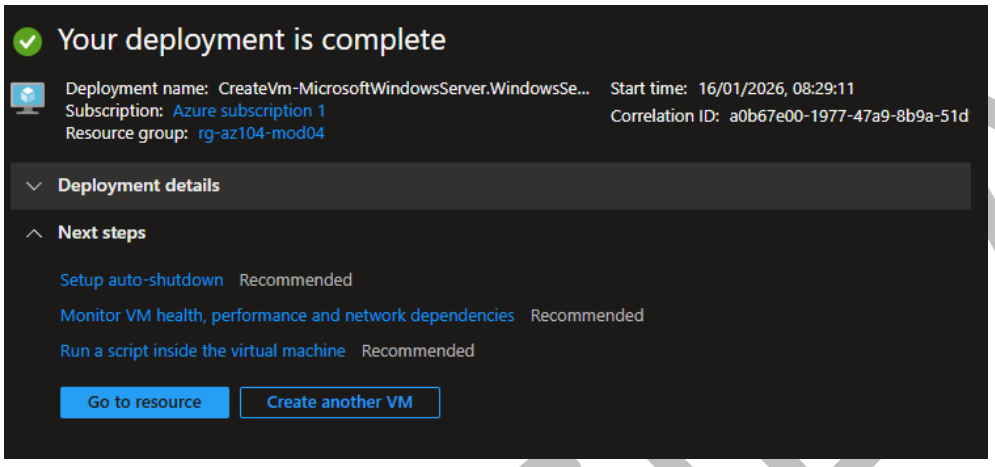


Em seguida habilite a NIC na placa de rede, onde será criado um NSG local exclusivo para regras da VM.



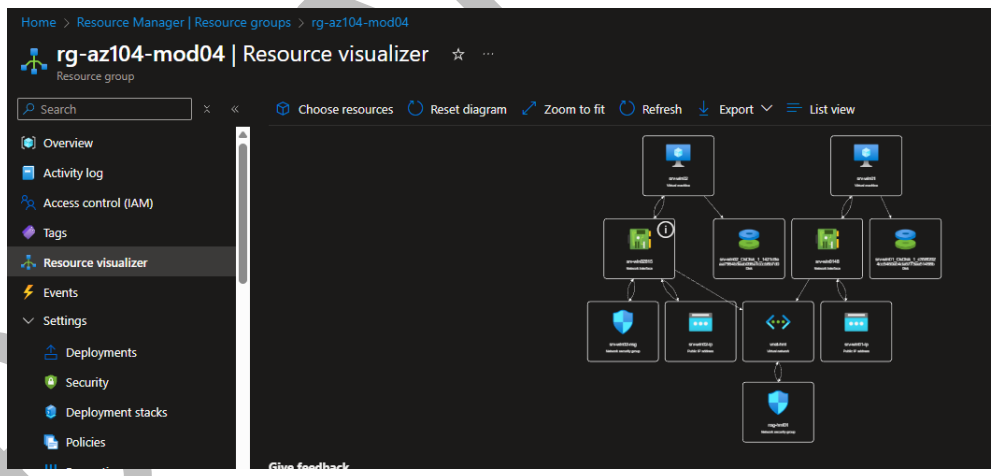
FÁBIO SILVA

VM criada com sucesso.



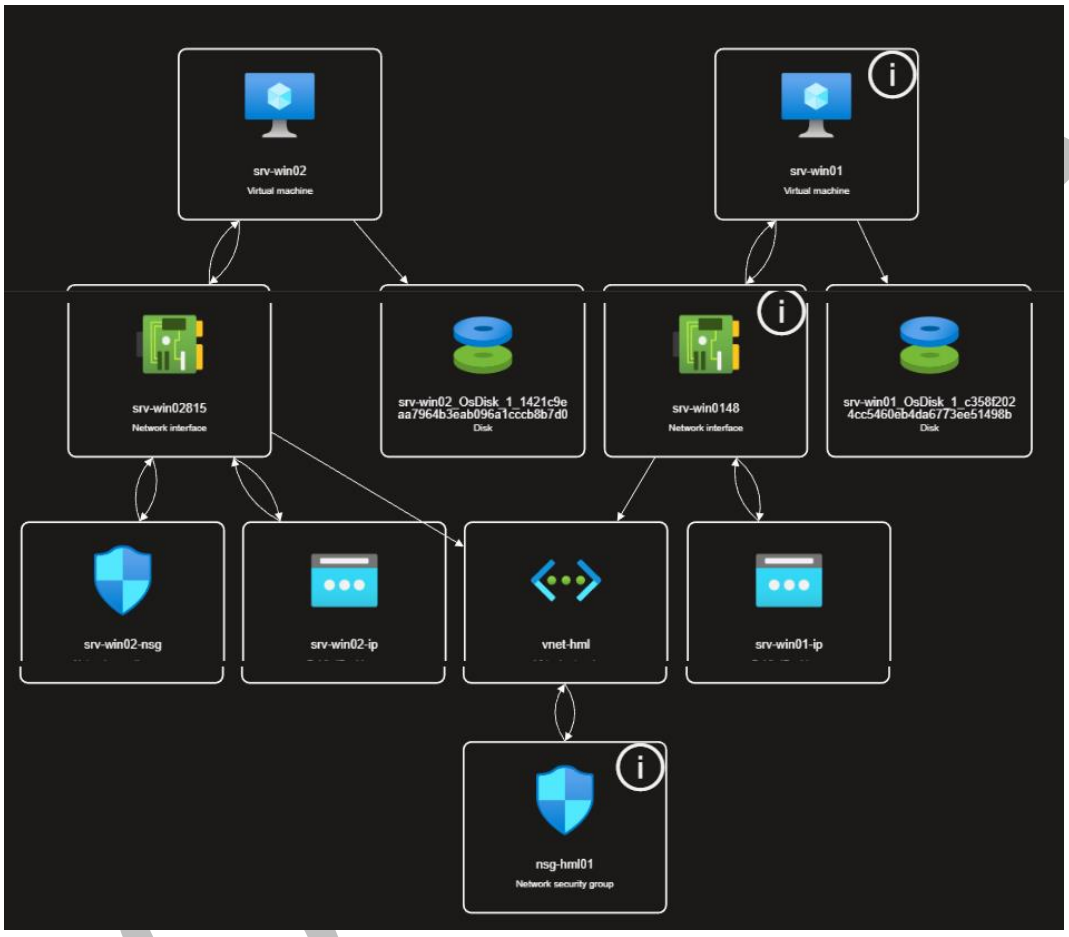
3) Visualização dos recursos.

- No **resource Group** que foi criado, clique em *Resource Visualizer* onde será mostrado um mini diagrama da estrutura que foi criada.



FÁBIO SILVA

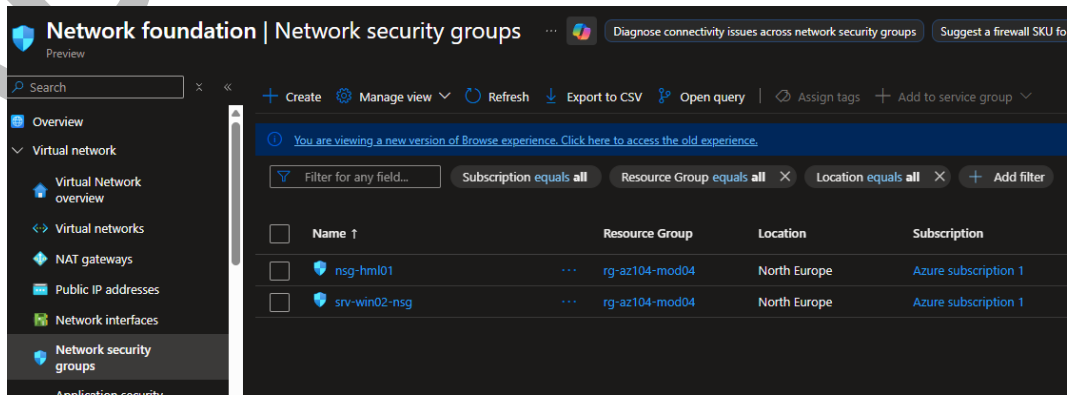
Estrutura ampliada.



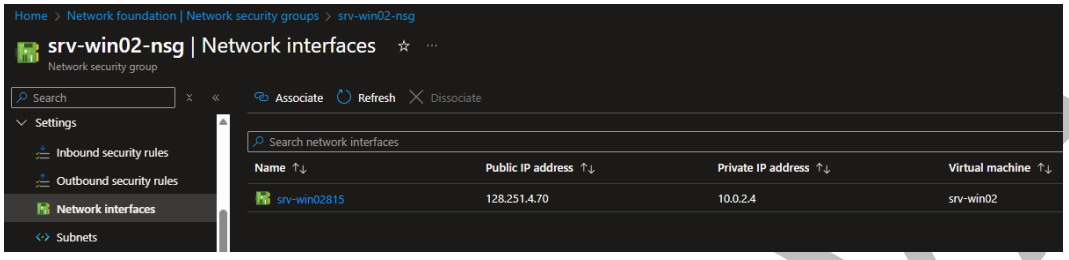
- A VM 2 está com a placa de rede ligada a NSG diretamente.
- A VM 1 não tem NSG ligada a placa de rede, mais sim na estrutura de SUBNET.

4) Visualizando os NSG[S]

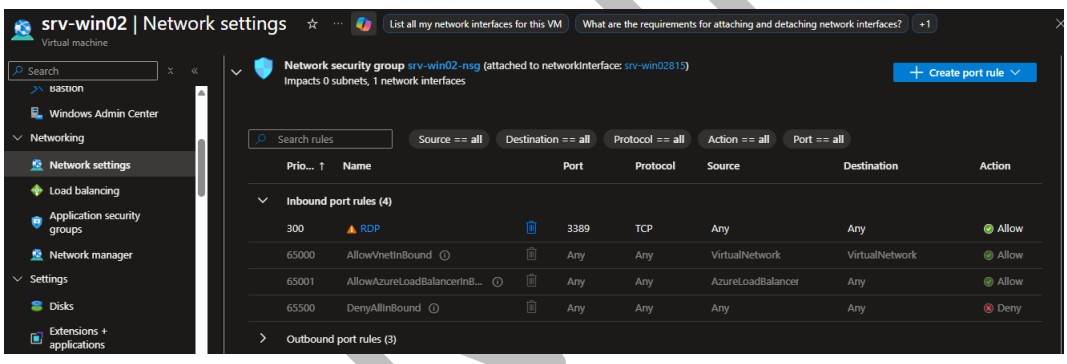
Na busca por NSG clicando em Network security Group existem dois NSGS.



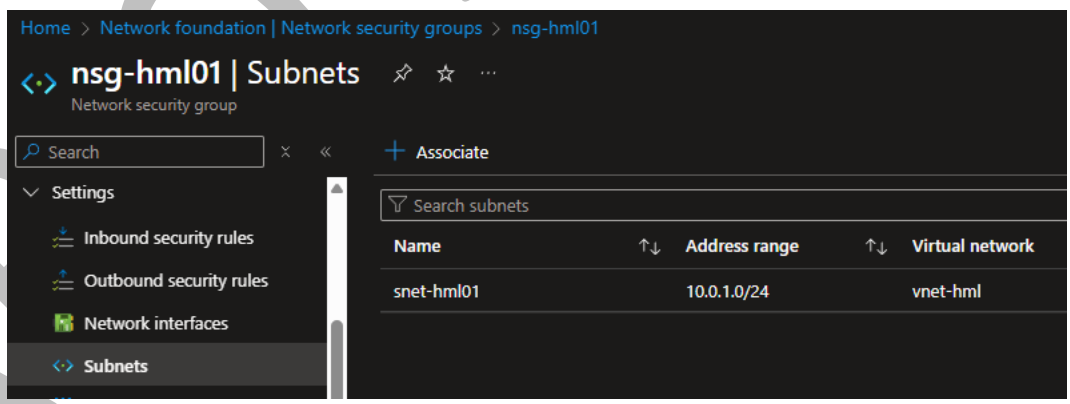
- Na máquina virtual SRV-WIN02 “srv-win02-nsg” este NSG está associado a placa de rede da VM.



Na máquina virtual SRV-WIN02 possui uma regra de acesso RDP direto no NSG da placa de rede.

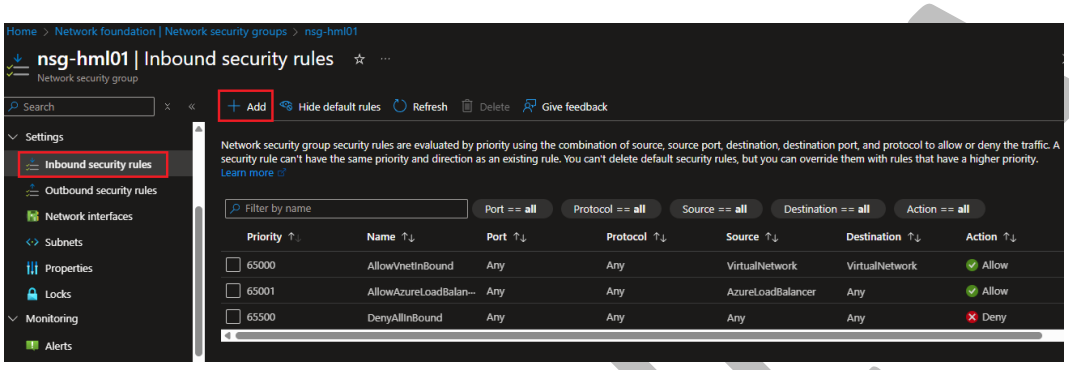


- No NSG que está ligado a SUBNET “nsg-hml01” em subnets é possível verificar que está associado a snet-hml01.

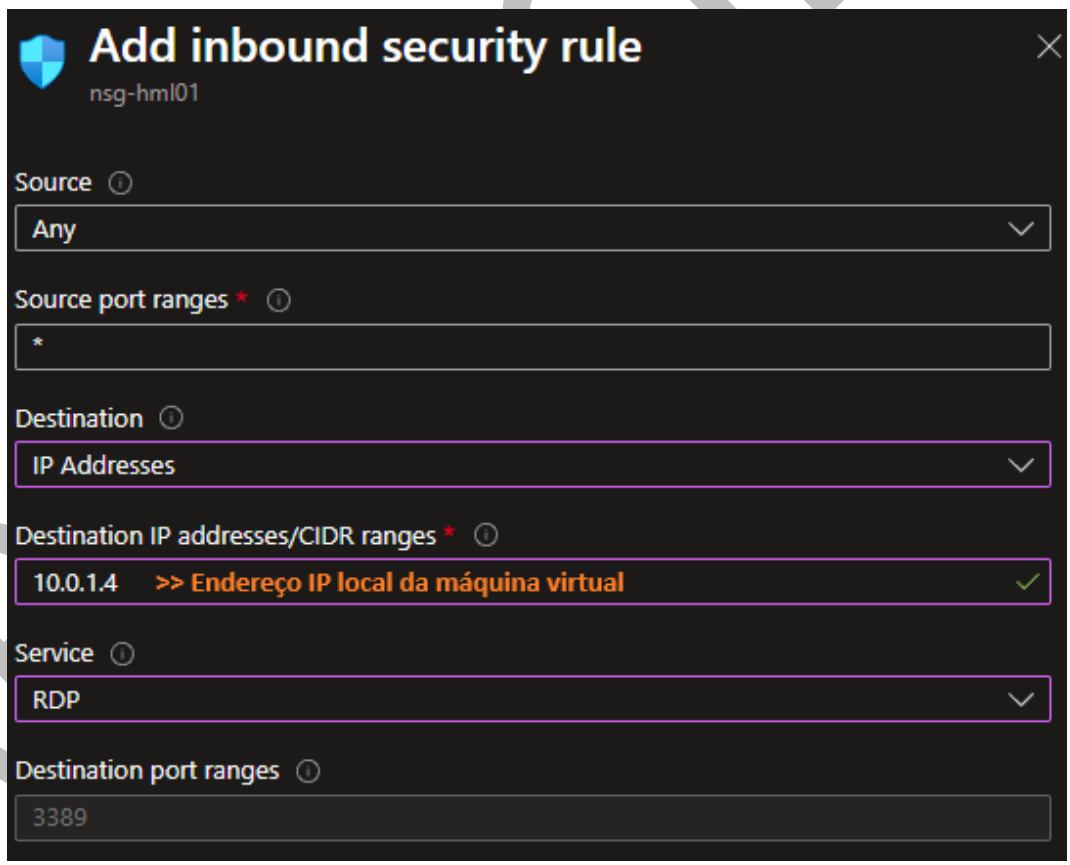


5) Liberando regra de acesso RDP para VNET – snet-hml01 para acessar a VM srv-win01.

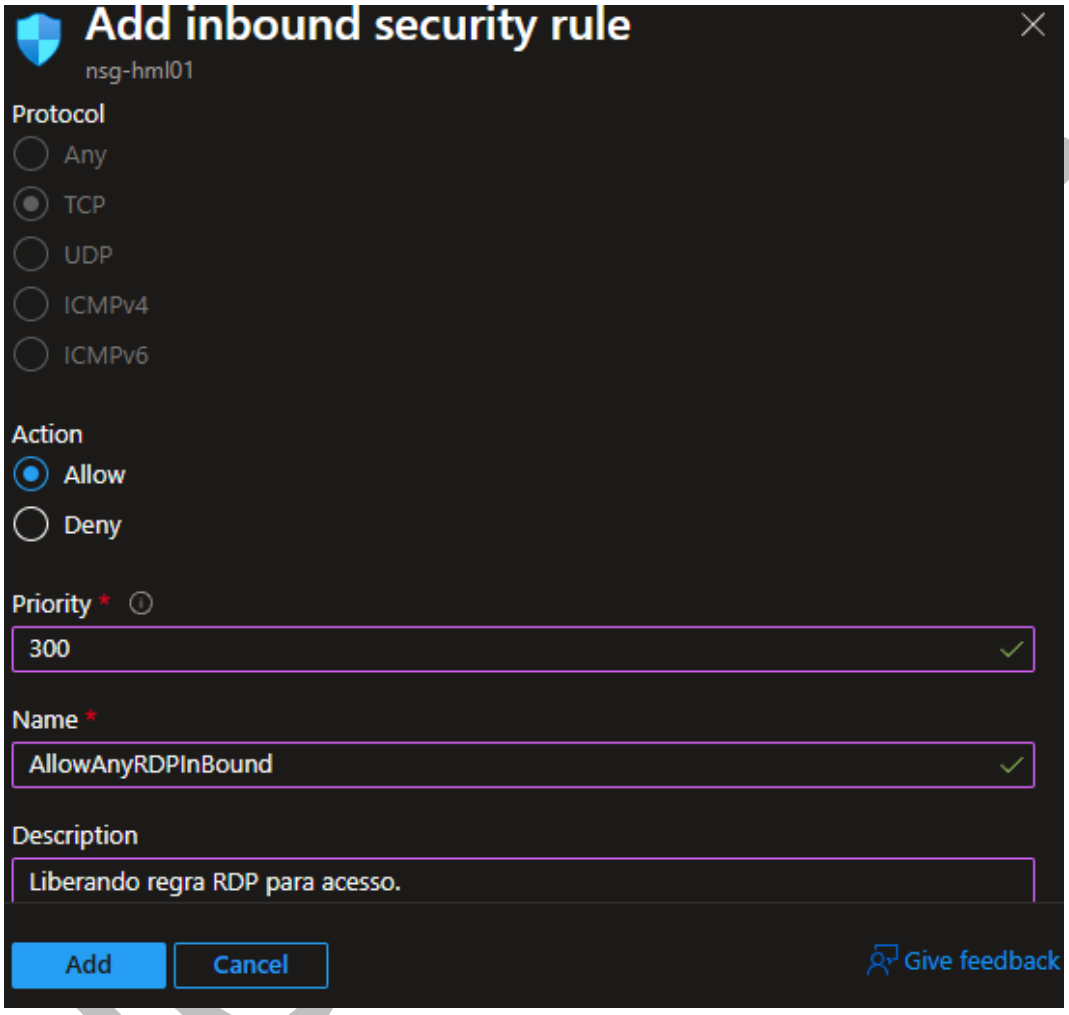
- No NSG da VNET foi adicionada uma regra de entrada.



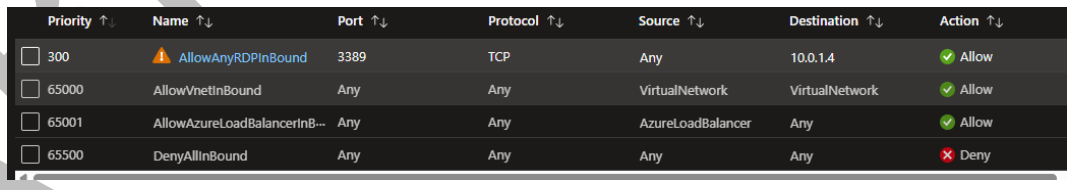
Configurando a regra de entrada.



Informando a prioridade da regra.



Regra adicionada com sucesso.



Priority	Name	Port	Protocol	Source	Destination	Action
300	AllowAnyRDPInBound	3389	TCP	Any	10.0.1.4	Allow
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowAzureLoadBalancerInB...	Any	Any	AzureLoadBalancer	Any	Allow
65500	DenyAllInBound	Any	Any	Any	Any	Deny

- Após o procedimento, o acesso remoto a VM será realizada.

FÁBIO

6) Testando a conectividade.

Após desabilitado *Ambiente de treinamento no firewall do Windows foram realizados os testes de PING entre as VMs.

- SRV-WIN01 para SRV-WIN02.

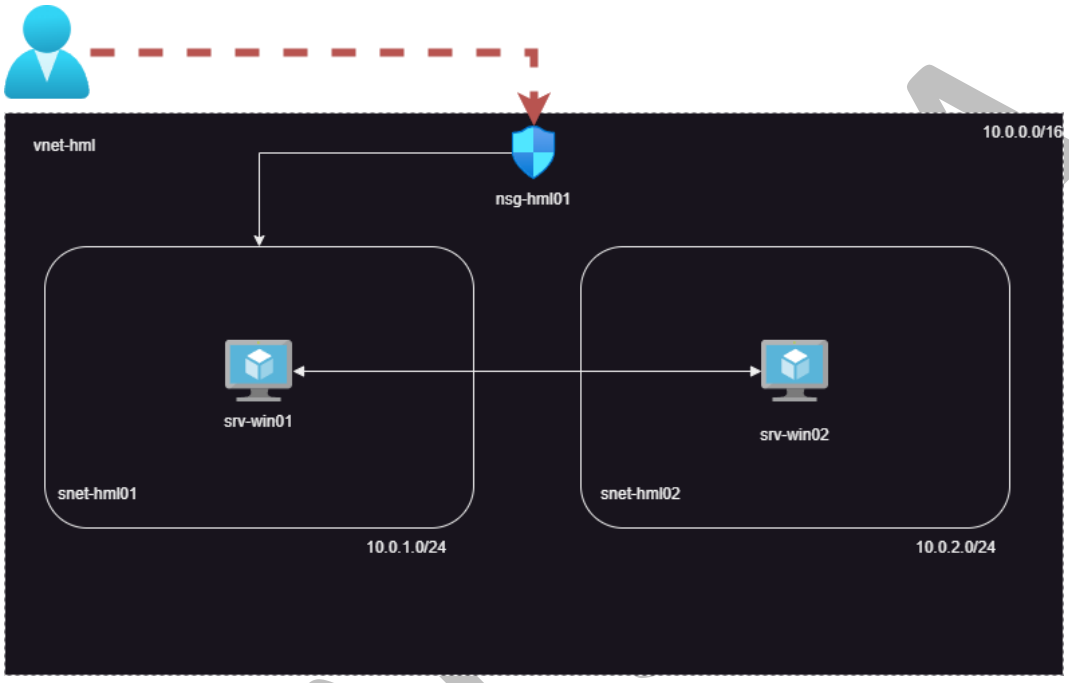
```
PS C:\Users\admin.fabio> ping 10.0.2.4

Pinging 10.0.2.4 with 32 bytes of data:
Reply from 10.0.2.4: bytes=32 time=1ms TTL=128
Reply from 10.0.2.4: bytes=32 time=9ms TTL=128
Reply from 10.0.2.4: bytes=32 time=1ms TTL=128
Reply from 10.0.2.4: bytes=32 time=1ms TTL=128

Ping statistics for 10.0.2.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 9ms, Average = 3ms
PS C:\Users\admin.fabio>
```

- SRV-WIN02 para SRV-WIN01.

```
Administrator: Windows Powe
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\admin.fabio> ping 10.0.1.4

Pinging 10.0.1.4 with 32 bytes of data:
Reply from 10.0.1.4: bytes=32 time=1ms TTL=128
Reply from 10.0.1.4: bytes=32 time=2ms TTL=128
Reply from 10.0.1.4: bytes=32 time<1ms TTL=128
Reply from 10.0.1.4: bytes=32 time=1ms TTL=128

Ping statistics for 10.0.1.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 2ms, Average = 1ms
PS C:\Users\admin.fabio>
```

FÁBIO SILVA

No diagrama o usuário externamente acessa pelo NSG a máquina virtual.



FÁBIO NUNES