Networking Lab 13

Azure Firewall

Inbound NAT

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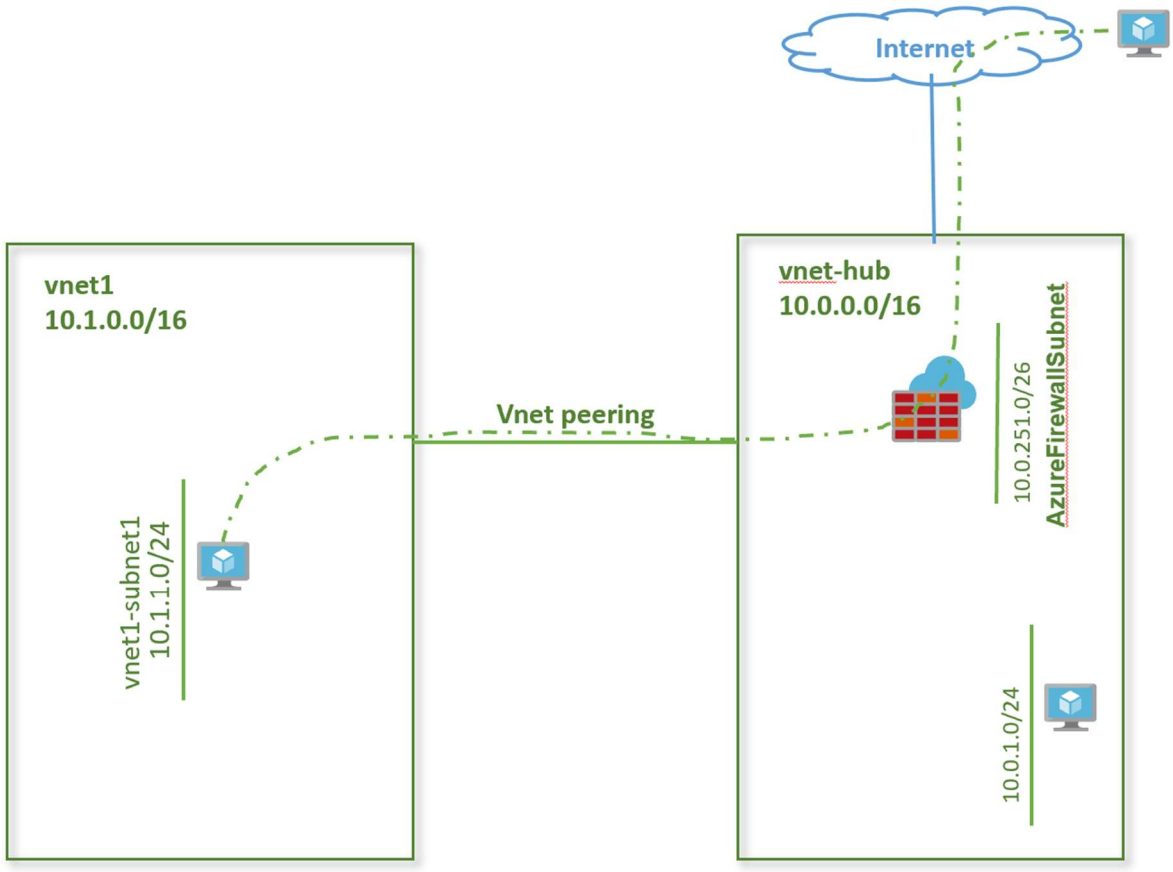
Lab Overview

In this lab, we will configure inbound NAT via Azure firewall.

Lab Diagram



Lab setup

From the previous firewall lab, we have a firewall deployed in the hub virtual network vnet-hub. We have a spoke vnet, vnet1 configured. We will configure an inbound NAT to be able to ssh to virtual machine in virtual network vnet1

Configure a NAT rule

1. From the Azure portal, go to the firewall **vnet-hub-fw**.
2. On the firewall **vnet-hub-fw** page, under **Settings**, click **Rules**.
3. Click **Add NAT rule collection**.
4. For **Name**, type **inboundNAT**.
5. For **Priority**, type **200**.
6. Under **Rules**, for **Name**, type **NatRule1**.
7. For **Protocol**, select **TCP**.
8. For **Source Addresses**, type *.
9. For **Destination Addresses** type the firewall's public IP address. To get the firewall's public IP address go to the firewall's page and click on **Public IP configuration** under Settings.
10. For **Destination ports**, type **8022**.
11. For **Translated Address** type the private IP address virtual machine vnet1-vm-mgmt1.
12. For **Translated port**, type **22**.
13. Click **Add**.

Verify the NAT function

1. Start a SSH session to firewall public IP address.

   ssh azureuser@52.137.90.68 -p 8022
   azureuser@52.137.90.68's password:
   Welcome to Ubuntu 18.04.3 LTS (GNU/Linux 5.0.0-1023-azure x86_64)

    * Documentation: https://help.ubuntu.com
    * Management: https://landscape.canonical.com
    * Support: https://ubuntu.com/advantage
     System information as of Sat Nov 16 11:14:23 UTC 2019
     System load: 0.0   Processes: 117
     Usage of /:   4.2% of 28.90GB   Users logged in: 0

```
  Memory usage: 4%                IP address for eth0: 10.1.1.4
  Swap usage:   0%
...

azureuser@vnet1-vm-mgmt1:~$ sudo ifconfig
[sudo] password for azureuser:
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.1.1.4  netmask 255.255.255.0  broadcast 10.1.1.255
        inet6 fe80::20d:3aff:fec3:4c5f  prefixlen 64  scopeid 0x20<link>
        ether 00:0d:3a:c3:4c:5f  txqueuelen 1000  (Ethernet)
        RX packets 12710  bytes 9369406 (9.3 MB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 9599  bytes 2096002 (2.0 MB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 2132  bytes 255548 (255.5 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 2132  bytes 255548 (255.5 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

azureuser@vnet1-vm-mgmt1:~$
```

You are now able to successfully connect to the virtual machine **vnet1-vm-mgmt1** using the firewall inbound NAT rule.