How to Configure Azure Route Table Rewriting for HA Clusters using ASM

https://campus.barracuda.com/doc/47579392/

Azure User Defined Routing allows you to use the NextGen Firewall F-Series high availability cluster in the frontend subnet as the default gateway for all your VMs running in the backend networks. You must enable IP forwarding for the F-Series VMs and create and apply an Azure routing table to the backend networks. Using a management certificate and the Azure subscriber ID, the F-Series VMs can change the Azure routing table on the fly when the virtual server fails over from one VM to the other. Azure UDR only works when using an HA cluster with one network interface. Azure Multi NIC is not supported.

In this article:

Before You Begin

- Deploy your F-Series firewall, and configure Azure UDR using **Azure Service Manager**. For more information, see How to Configure Azure Route Tables (UDR) in Azure using PowerShell and ASM.
- Install Azure PowerShell.
- Verify that a DNS server is configured. For more information, see How to Configure DNS Settings

Step 1. Create the Azure Management Certificate

For the firewall to be able to connect to the Azure backend, you must create and upload a management certificate. The certificate must be valid for at least one year.

1. Log into the NextGen Firewall F-Series via ssh.
2. Create the certificate:
   openssl req -x509 -nodes -days 730 -newkey rsa:2048 -keyout mycert.pem -out mycert.pem
   `openssl req -x509 -nodes -days 365 -newkey rsa:2048 -keyout mycert.pem -out mycert.pem`
3. Answer the questions at the prompt. The **Common Name** is used to identify this certificate in the Azure web interface.
4. Convert the certificate to CER, as required by Azure:
   openssl x509 -inform pem -in mycert.pem -outform der -out mycert.cer
   `openssl x509 -inform pem -in mycert.pem -outform der -out mycert.cer`

If you are using an OpenSSL version that generates PKCS#8 keys, you must extract the RSA key separately:

```
openssl rsa -in mycert.pem -out mycert.key.pem
```

In this case, upload mycert.pem as the Azure **Management Certificate** and mycert.key.pem as the **Management Key** on the firewall.

You now have two certificates: mycert.pem and mycert.cer.

Step 3. Upload the Azure Management Certificate

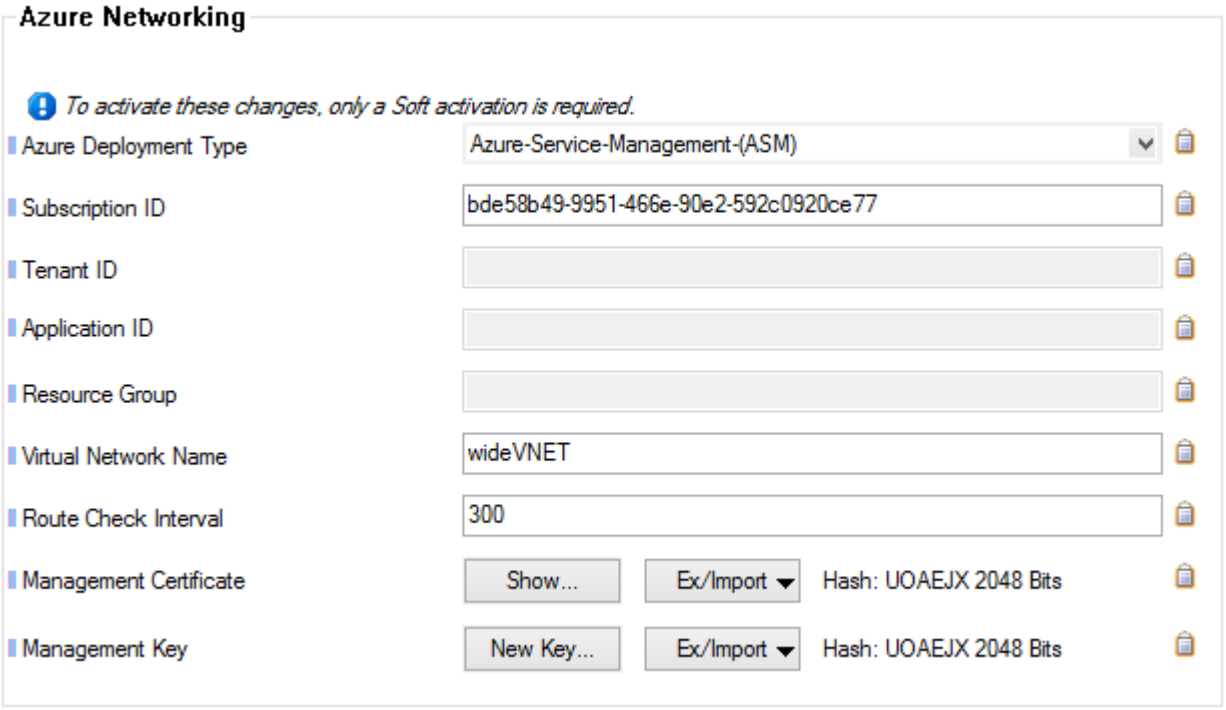
1. Log into the Microsoft Azure Management Portal (https://manage.windowsazure.com).
2. On the bottom of the left menu, click on **SETTINGS**.
3. In the top navigation, click on **MANAGEMENT CERTIFICATES**.
4. On the bottom, click **UPLOAD.**
5. Select the *mycert.cer* certificate created in Step 2, and click **OK**.

The management certificate is now listed with the **Common Name** of the certificate used as the **Name**.

Step 4. Configure User Defined Routing

You must enter your Azure SubscriptionId, VNET name, and the management certificate to allow the firewall to change the Azure User Defined Routing Table.

1. Go to **CONFIGURATION > Configuration Tree > Box > Network**.
2. Click **Lock**.
3. In the left menu, expand the **Configuration Mode** section and click on **Switch to Advanced View**.
4. In the left menu, click **Azure Networking**.
5. Select **Azure Service Management (ASM)** from the **Azure Deployment Type** drop-down list.
6. Enter your Azure **Subscription ID**. Use `Get-AzureSubscription` in Azure PowerShell to display your SubscriptionId.
7. Enter the **Virtual Network Name**.
8. Next to **Management Certificate,** click **Ex/Import** and select **Import from PEM File**. The **File browser** window opens.
9. Select the *mycert.pem* certificate created in Step 2, and click **Open**.
10. Next to **Management Key** click **Ex/Import** and select **Import from File**. The **File browser** window opens.
    Select the *mycert.pem* certificate created in Step 2, and click **Open**.
    If you are using an OpenSSL version that generates PKCS#8 keys, import the *mycert.key.pem* file as the **Management Key** on the firewall.



11. Click **Send Changes** and **Activate**.

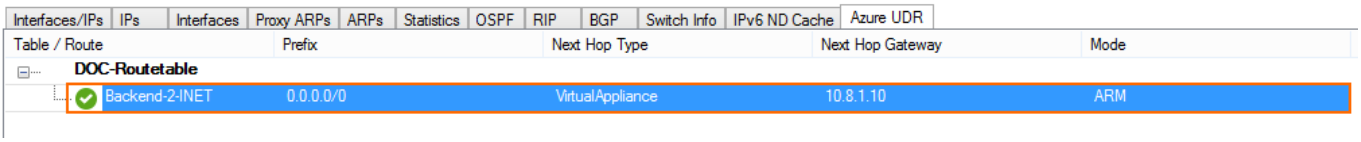
Step 5. Perform a Soft Network Activation

1. Go to **CONTROL > Box**.
2. In the left menu, expand the **Network** section and click **Activate new network configuration**.
3. Click **Soft**.

The Azure routing table is now updated every time the virtual server fails over.

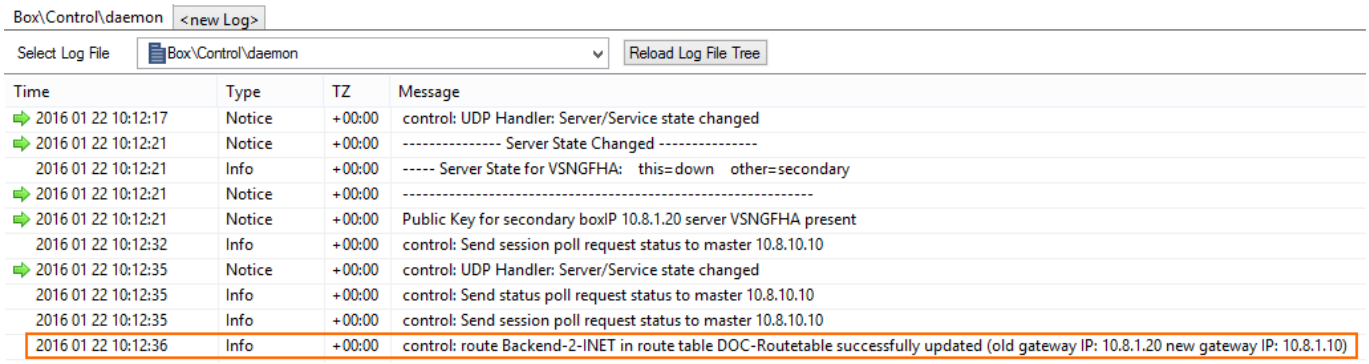
Monitoring

Go to **NETWORK > Azure UDR** to see the UDR Routing table for all subnets in the firewalls VNET. A green status icon before the route where the destination is a F-Series firewall. A UDR HA failover is progress is visualized by a red icon.



Log File

All activity is logged to the **Box\Control\daemon** log file



Figures

1. UDR_HA_ASM.png
2. ARM-UDR_01.png
3. ARM-UDR_02.png