

Best Practice - Switch to a Static Internal IP Address in Microsoft Azure

<https://campus.barracuda.com/doc/41116357/>

By default, the internal IP addresses in the Azure cloud are dynamically assigned via DHCP. Azure offers reserved internal IP addresses, which allows you to use a static (eth0) interface instead of the dynamic (dhcp) interface on the Barracuda NG Firewall. This allows you to use the static address as a gateway for the other internal Azure VMs. Reserve the IP address in the Azure cloud and then switch to a static interface on the Barracuda NG Firewall.

You also have the option of setting the static internal address by using a web interface when deploying your Barracuda NG Firewall via the new Azure portal: <https://portal.azure.com>

It is not possible to add a static internal IP address to an already existing VM via the Azure web interface.

The Azure virtual machine will automatically reboot when assigning the static IP address.

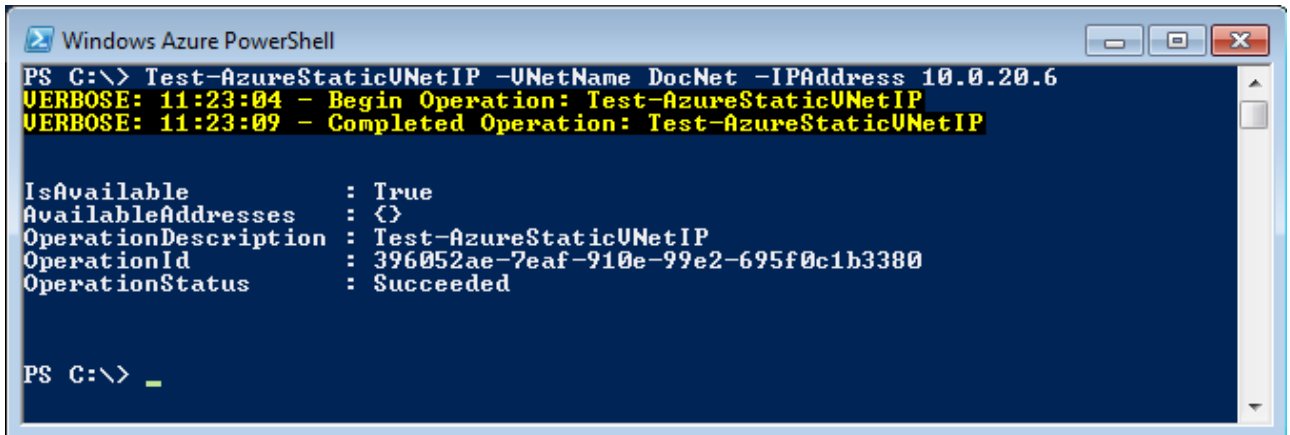
Before you Begin

- [Deploy a Barracuda NG Firewall in the Microsoft Azure Cloud.](#)
- Download and install the latest version of [Azure PowerShell](#).

Step 1. Reserve a Static Internal IP Address

By default, the internal IP addresses are assigned via DHCP in the internal Azure network. Choose a free IP address in the Virtual Network for the Barracuda NG Firewall. It must be different from the IP addresses already assigned to the virtual machine.

1. Open a Windows Azure PowerShell.
2. Check if the chosen IP address is available by entering:
`Test-AzureStaticVNetIP -VNetName <your Azure virtual network name> -
IPAddress <your chosen static internal IP address>`



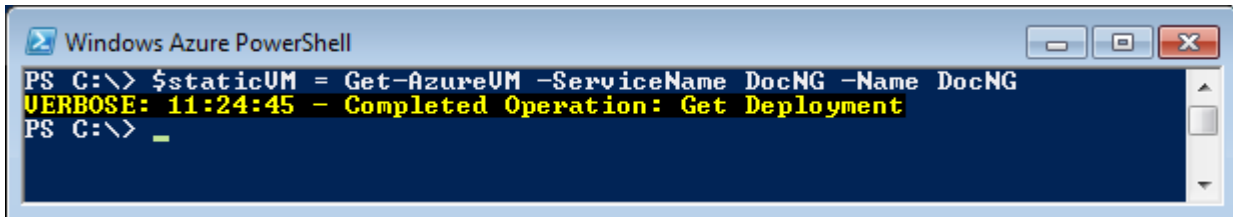
```
Windows Azure PowerShell
PS C:\> Test-AzureStaticUNetIP -UNetName DocNet -IPAddress 10.0.20.6
VERBOSE: 11:23:04 - Begin Operation: Test-AzureStaticUNetIP
VERBOSE: 11:23:09 - Completed Operation: Test-AzureStaticUNetIP

IsAvailable           : True
AvailableAddresses    : {}
OperationDescription  : Test-AzureStaticUNetIP
OperationId           : 396052ae-7eaf-910e-99e2-695f0c1b3380
OperationStatus       : Succeeded

PS C:\> _
```

3. Save the virtual machine to a local variable.

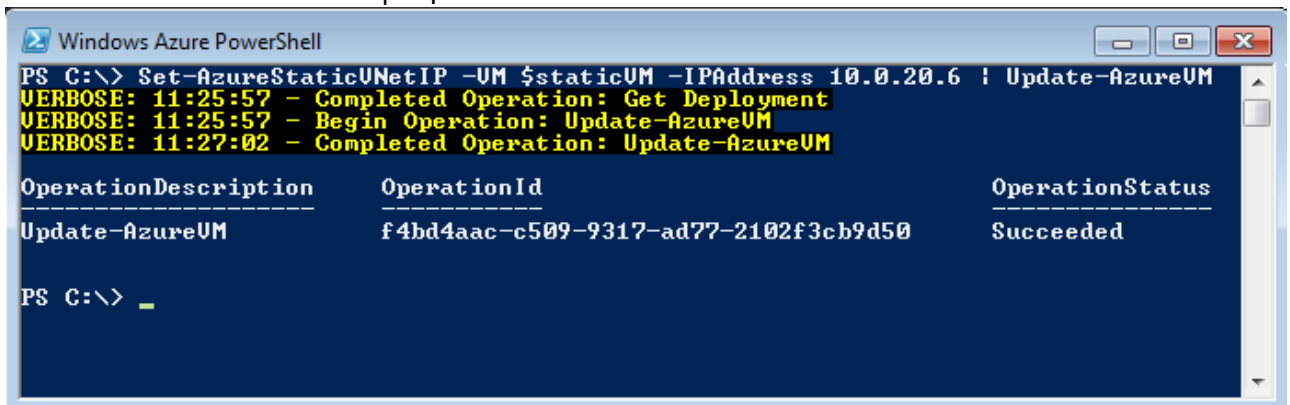
```
$staticVM = Get-AzureVM -ServiceName <Cloud Service name of your NG> -
Name <virtual machine name>
```



```
Windows Azure PowerShell
PS C:\> $staticVM = Get-AzureVM -ServiceName DocNG -Name DocNG
VERBOSE: 11:24:45 - Completed Operation: Get Deployment
PS C:\> _
```

4. Change the internal IP address of the virtual machine from dynamic to static.

```
Set-AzureStaticVNetIP -VM $staticVM -IPAddress <your chosen static
internal IP address> | Update-AzureVM
```



```
Windows Azure PowerShell
PS C:\> Set-AzureStaticVNetIP -VM $staticVM -IPAddress 10.0.20.6 | Update-AzureVM
VERBOSE: 11:25:57 - Completed Operation: Get Deployment
VERBOSE: 11:25:57 - Begin Operation: Update-AzureVM
VERBOSE: 11:27:02 - Completed Operation: Update-AzureVM

OperationDescription      OperationId                OperationStatus
-----
Update-AzureVM            f4bd4aac-c509-9317-ad77-2102f3cb9d50  Succeeded

PS C:\> _
```

The Barracuda NG Firewall automatically reboots.

The Barracuda NG Firewall VM is now using a static internal IP address:

STATUS

Running

DNS NAME

doc.cloudapp.net

HOST NAME

docNG

PUBLIC VIRTUAL IP (VIP) ADDRESS

137.117.200.1

INTERNAL IP ADDRESS

10.0.20.6

Step 2. Change the Network Configuration on the NG Firewall to Use the Static Internal IP Address

Change the network configuration to use a static network interface.

Step 2.1 Reconfigure the Network Interface

Change the network interface type from dynamic to static.

1. Open the **Network** page (**Config > Full Config**).
2. In the left menu, click on **xDSL/DHCP/ISDN**.
3. Click **Lock**.
4. Delete the **DHCP01** entry in the **DHCP Links** list.
5. Select **No** from the **DHCP Enabled** dropdown list.
6. Click **Send Changes**.
7. In the left menu, click on **IP Configuration**.
8. In the **Management IP and Network** section in the **Interface Name** line, untick the **Other** checkbox.
9. Select **eth0** from the **Interface Name** list.
10. Enter the static internal IP address from [Step 1](#) as the **Management IP (MIP)**.
E.g., 10.0.20.6

Management IP and Network

Interface Name	<input checked="" type="checkbox"/> eth0	<input type="checkbox"/> Other
Management IP (MIP)	<input checked="" type="checkbox"/> 10.0.20.6	
Associated Netmask	24-Bit	
Responds to Ping	yes	
Use for NTPd	yes	
Advertise Route	no	

Step 2.2 Create the Default Route

Add the default route. The default gateway in Azure subnets is always the first IP in the subnet. E.g., 10.0.20.1 if the subnet is 10.0.20.0/24

1. In the left menu, click on **Routing**.
2. Click **+** in the **Routes** table and configure the following settings:
 - **Target Network Address** - Enter 0.0.0.0/0
 - **Route Type** - Select **gateway**.
 - **Gateway** - Enter the first IP address of the subnet the Barracuda NG Firewalls reside in. E.g., 10.0.20.1 if the IP addresses of the Barracuda NG Firewalls are 10.0.20.6 and 10.0.20.7
 - **Trust Level** - Select **Unclassified**.

Route Configuration	
Target Network Address	<input type="text" value="0.0.0.0/0"/>
Route Type	<input type="text" value="gateway"/>
Interface Name	<input type="text" value=""/>
Gateway	<input type="text" value="10.0.20.1"/>
Route Metric	<input type="text" value=""/>
Source Address	<input type="text" value=""/>
Trust Level	<input type="text" value="Unclassified"/>

3. Click **OK**.
4. Click **Send Changes** and **Activate**.

Step 2.3 Activate the Network Changes

Activate the changes to the network configuration.

1. Open the **Box** page (**Control**).
2. In the **Network** section of the left menu, click on **Activate new network configuration**.
3. Click **Failsafe**.

Open **CONTROL > Network**. Your interface and IP address are now static.

Interface/IP	Label	Ping	MAC of duplicate IP	Info
eth0				
10.0.20.6/24	net1	ok	-	
lo				

Interfaces/IPs	IPs	Interfaces	Proxy ARPs	ARPs	Statistics	OSPF	RIP	BGP	Switch Info
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TABLES

Table / Src Filter	State	Type	Interface	Src IP	Pref	Gateway	Name
Table main, From all							
10.0.20.0/24	up	direct-k...	eth0	10.0.20.6	0	-	IPAD01
127.0.0.0/24	up	direct-b...	lo	127.0.0.2	0	-	boxnet
Table default, From all							
0.0.0.0/0	up	gateway...	eth0	10.0.20.6	0	10.0.20.1	ROUT01

Figures

1. AzureHA01.png
2. AzureHA02.png
3. AzureHA03.png
4. AzureHA04.png
5. AzureHA08.png
6. Azure_default_route.png
7. AzureHA11.png

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