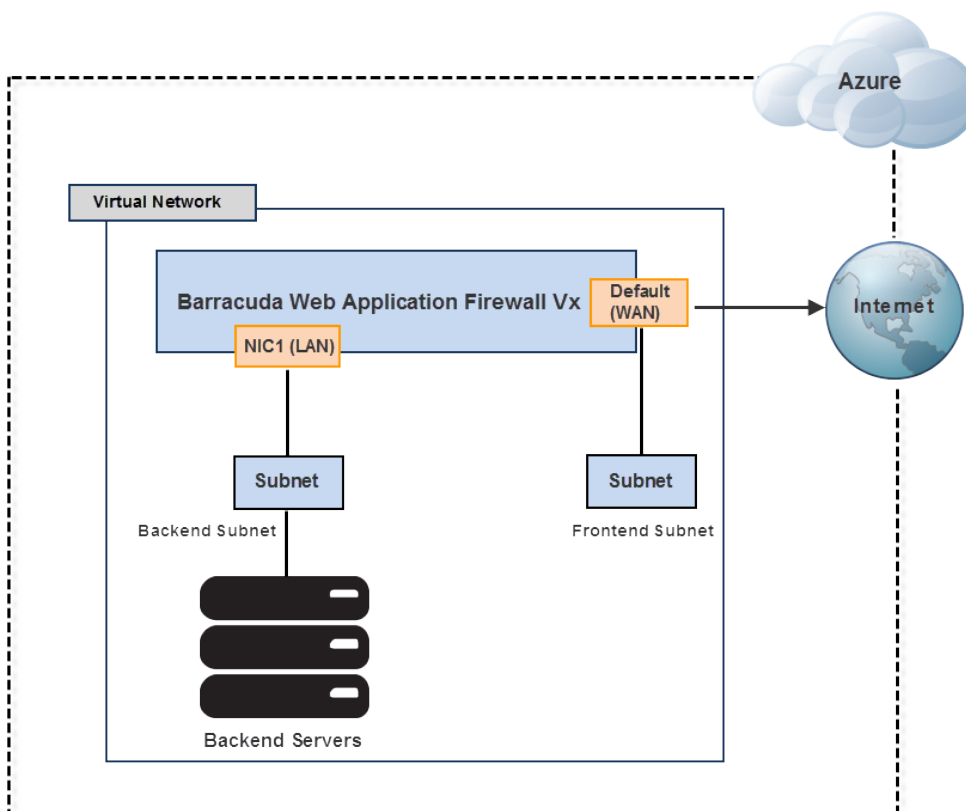


Configuring the Barracuda CloudGen WAF with Multiple NIC's

<https://campus.barracuda.com/doc/73007328/>

You can deploy the Barracuda CloudGen WAF instances in Microsoft Azure and attach multiple network interface controllers (NICs) to it. Multiple NIC is a requirement for network appliances and the virtual machines that forward the traffic from one subnet to another. Multiple NICs also provide more network traffic management functionality, including isolation of traffic between a front-end NIC and a back-end NIC. Using Multiple NICs you can separate the data (WAN) traffic from the backend server (LAN) traffic i.e. the servers can reside in the LAN network. For more information, refer to the [Create a VM with multiple NICs](#) article in the Microsoft Azure documentation.

You can deploy the Barracuda CloudGen WAF instance(s) with **Single NIC and Multi IP** or **Multi NIC and Multi IP** on Microsoft Azure using the Azure Resource Manager (ARM) template. See [Configuring Multiple IP Addresses for the Barracuda CloudGen WAF Instance in Azure Resource Manager](#).

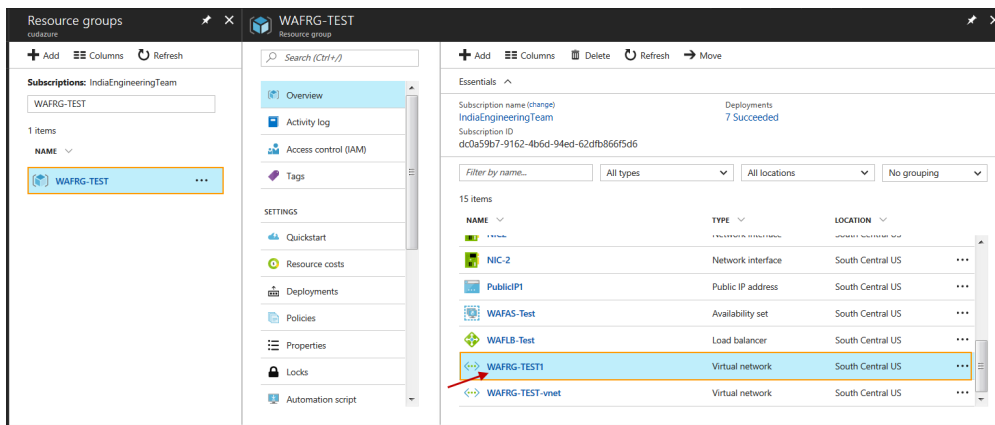


This article provides information on how to deploy the Barracuda CloudGen WAF instance with multiple NICs using Azure Resource Manager (ARM).

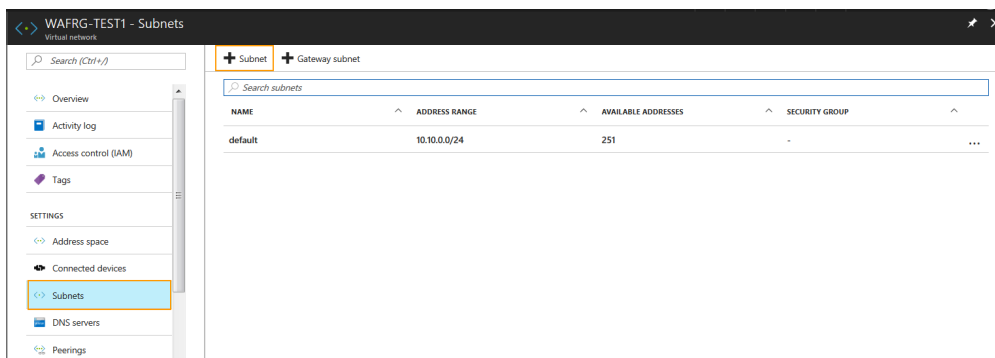
Prerequisite

To configure the Barracuda CloudGen WAF with multiple NICs, the virtual network should include two subnets i.e., one for the WAN traffic and the other for the LAN traffic. When the Barracuda CloudGen WAF instance is deployed in Microsoft Azure, the virtual network is associated with a single subnet (i.e. for WAN traffic). To add another subnet, perform the following steps:

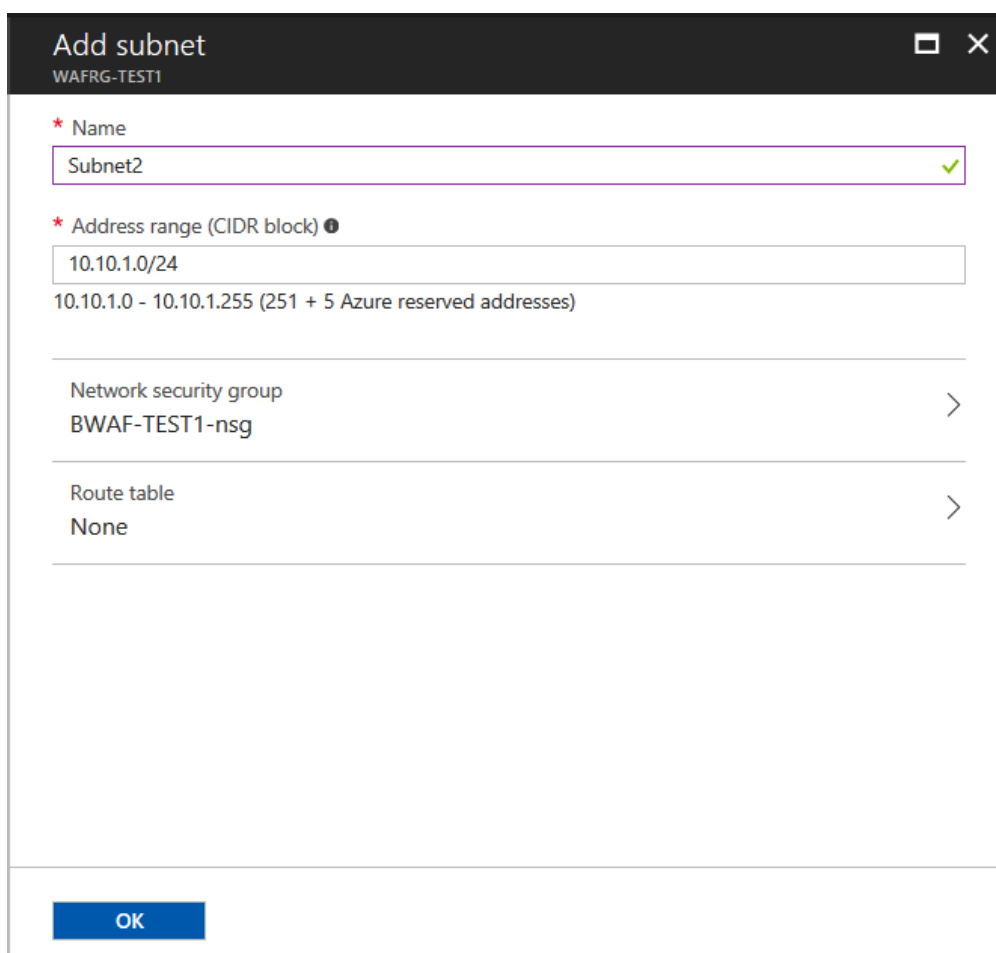
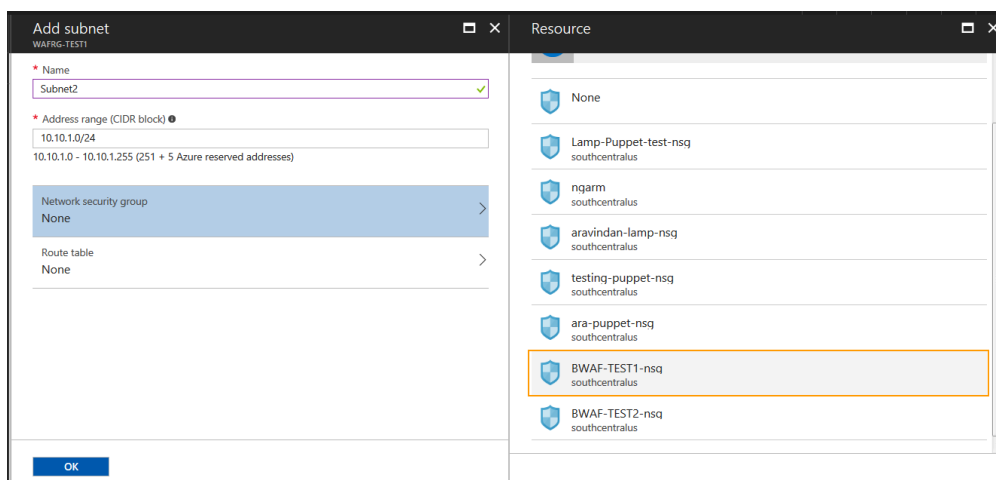
1. Log into the **Microsoft Azure** portal, click **Resource groups** on the left panel.
2. In the **Resource groups** list, locate and click on the resource group to which the Barracuda CloudGen WAF instance is associated.
3. On the resource group page, locate and click on the virtual network associated with the resource group.



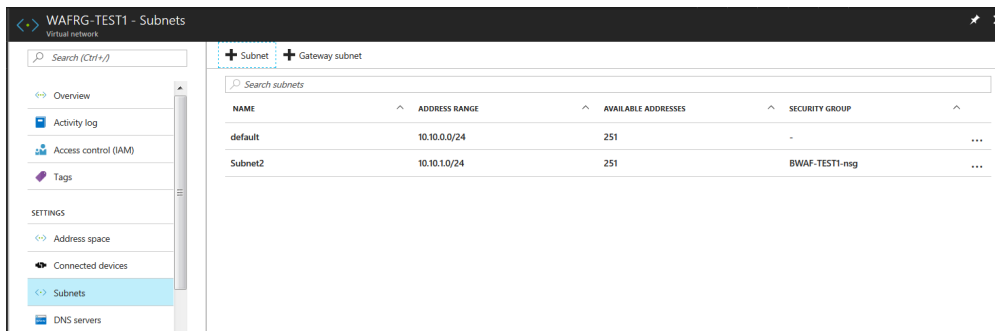
4. On the virtual network page, select **Subnets** under **SETTINGS** and click **Subnet**.



5. On the **Add Subnet** page:
 1. **Name:** Enter a name for the subnet.
 2. **Address range (CIDR block):** Enter the IP address for the subnet. The IP address should be within the address space of the virtual network.
 3. **Network security group:** Select the network security group associated with the resource group selected in step 2.
 4. Click **OK**.



6. The new subnet gets displayed in the **Subnets** list.



To configure the Barracuda CloudGen WAF with multiple NICs, perform the following steps:

Step 1. Deploy the Barracuda CloudGen WAF Instance

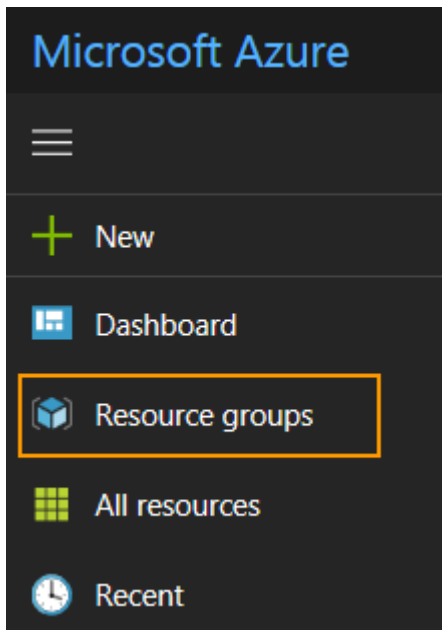
Follow the steps mentioned in [Deploying and Provisioning the Barracuda CloudGen WAF in the New Microsoft Azure Management Portal](#) or [Deploying and Provisioning the Barracuda CloudGen WAF in the Classic Microsoft Azure Management Portal](#).

Step 2. Set the Private IP Address of the Instance to Static

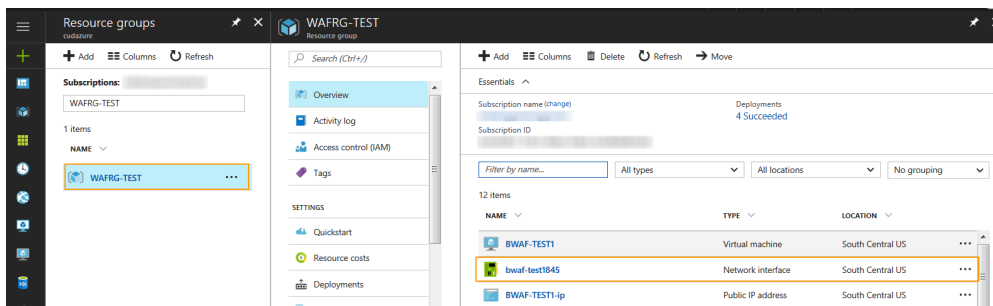
After the instance is deployed, set the private IP address to static by following the steps below:

The IP address should be changed to static to ensure that the system retains the same IP address even after the system reboots.

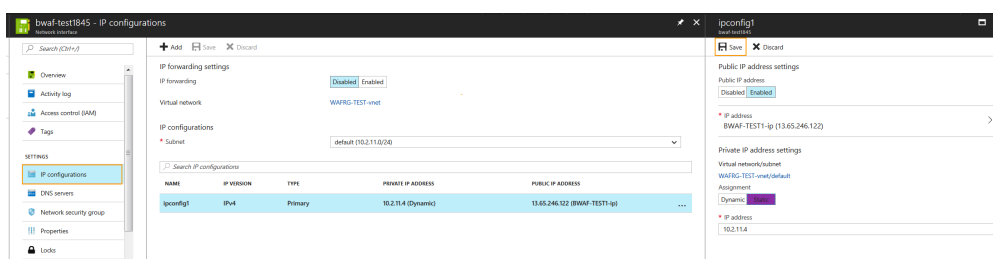
1. In the Microsoft Azure portal, click **Resource groups** on the left panel.



2. In the **Resource groups** list, locate and click on the resource group to which the Barracuda CloudGen WAF instance is associated.
3. On the resource group page, select the network interface (NIC) of the deployed Barracuda CloudGen WAF instance.



4. On the instance Network interface page, select **IP configuration** under **Settings**.
5. Select the **Private IP Address** under **IP configurations**.
6. Set **Assignment** to **Static** under **Private IP address settings** and click **Save**.



Step 3. Create a Network Interface (NIC)

By default, the Barracuda CloudGen WAF instance is deployed with a single NIC. You can add an

additional NIC for LAN either through Azure Portal or Azure CLI.

Creating a NIC Using Azure Portal

1. Log into the Microsoft Azure portal.
2. Click **Marketplace** in the left panel and type *Network Interface* in the **Search Everything** field.
3. Select *Microsoft Network interface* from the search results.
4. On the **Network interface** page, click **Create**.
5. On the **Create network interface** page:
 1. **Name**: Enter a name for the network interface. Example: LAN
 2. **Virtual network**: Select the virtual network for network interface. Ensure that the virtual network exists in the same subscription and location as that of network interface.
 3. **Subnet**: Select a subnet within the virtual network.
 4. **Private IP address assignment**: Set to **Static**.
 5. **Private IP address**: Enter an IP address that belongs to the configured subnet.
 6. **Network security group**: Select an existing network security group, or create a network security group.
 7. **Subscription**: Select the subscription from the drop-down list.
 8. **Resource group**: Select Use existing and select the resource group to which the Barracuda CloudGen WAF instance is associated.
 9. **Location**: Select the location. Ensure that the network interface location and the location specified for the Barracuda CloudGen WAF instance are same.
6. Click **Create**.

Creating a NIC Using Azure CLI

To create a network interface using Azure CLI, perform the steps below:

1. Install Azure CLI by following the steps mentioned in [Install Azure 2.0 CLI](#).
2. To authenticate to your Azure account, run the azure login command and follow the instructions.

az login

This displays a message as: *"To sign in, use a web browser to open the page <https://aka.ms/devicelogin> and enter the code ***** to authenticate."*

```
$ az login
WARNING: To sign in, use a web browser to open the page https://aka.ms/devicelogin and enter the code ***** to authenticate.
```

3. Copy the URL and paste it in the web browser.
4. Enter the **Code** in the text field and click **Continue**.

Device Login

Enter the code that you received from the application on your device

Microsoft Azure Cross-platform Command Line Interface

Application publisher:

Click Cancel if this isn't the application you were trying to sign in to on your device.

Continue

Cancel

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5. Enter your Microsoft account username and password.
6. After a successful authentication, you can use the Azure CLI to perform actions on your Azure account.

Microsoft Azure Cross-platform Command Line Interface

You have signed in to the Microsoft Azure Cross-platform Command Line Interface application on your device. You may now close this window.

7. Run the following command to create a NIC:

az network nic create --resource-group <Resource group name to which your Barracuda CloudGen WAF instance is associated> **--name** <Name for the new NIC> **--vnet-name** <Name of the virtual network to which this network interface needs to be created> **--subnet** <Name of the subnet> **--network-security-group** <Name of the network security group>

Example: az network nic create --resource-group WAFRG-TEST --name NIC-2 --vnet-name WAFRG-TEST-vnet --subnet default --network-security-group BWAFF-TEST1-nsg

```

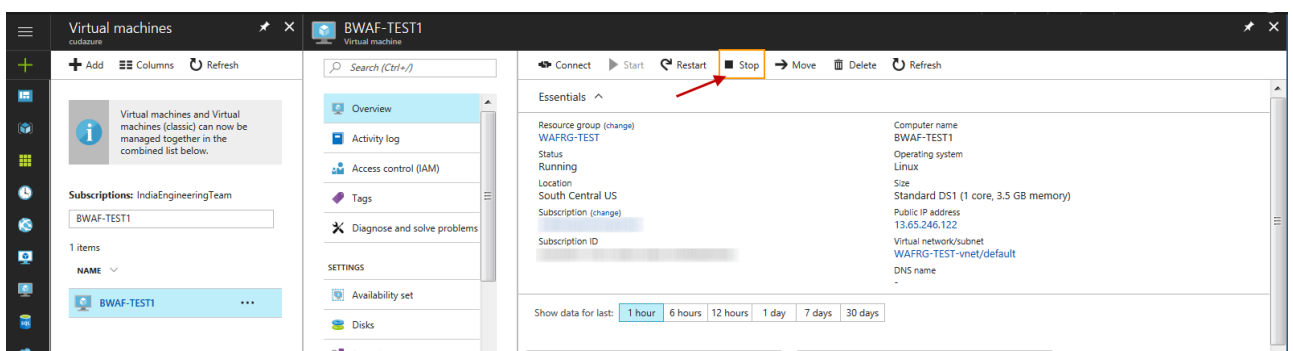
az network nic create --resource-group WAFRG-TEST --name NIC-2 --vnet-name WAFRG-TEST-vnet --subnet default --network-security-group BWAFF-TEST1-nsg
{
  "NewNIC": {
    "dnsSettings": {
      "dnsServers": [],
      "internalDomainNameSuffix": ".jx.internal.cloudapp.net",
      "internalNameLabel": null,
      "internalNameSuffix": null,
      "internalNtp": null
    },
    "enableAcceleratedNetworking": false,
    "enableTcpReset": false,
    "etag": "W/\"bd47be35-b011-444e-b772-5dbde8049899\"",
    "id": "/subscriptions/.../resourceGroups/WAFRG-TEST/providers/Microsoft.Network/networkInterfaces/NIC-2",
    "ipConfigurations": [
      {
        "applicationGatewayBackendAddressPools": null,
        "etag": "W/\"bd47be35-b011-444e-b772-5dbde8049899\"",
        "id": "/subscriptions/.../resourceGroups/WAFRG-TEST/providers/Microsoft.Network/networkInterfaces/NIC-2/ipConfigurations/ipconf
        ig1",
        "loadBalancerBackendAddressPools": null,
        "loadBalancerInboundNatRules": null,
        "name": "ipconfig1",
        "primary": true,
        "privateIpAddress": "10.2.11.7",
        "privateIpAddressVersion": "IPV4",
        "privateIpAllocationMethod": "dynamic",
        "provisioningState": "Succeeded",
        "publicIpAddress": null,
        "resourceGroup": "WAFRG-TEST",
        "subnet": {
          "addressPrefix": null,
          "etag": null,
          "id": "/subscriptions/.../resourceGroups/WAFRG-TEST/providers/Microsoft.Network/virtualNetworks/WAFRG-TEST-vnet/subnets/default",
          "ipConfigurations": null,
          "name": null,
          "networkSecurityGroup": null,
          "privateAccessServices": null,
          "provisioningState": null,
          "resourceGroup": "WAFRG-TEST",
          "resourceNavigationLinks": null,
          "routeTable": null
        }
      }
    ]
  },
  "location": "southcentralus",
  "macAddress": null,
  "name": "NIC-2",
  "networkSecurityGroup": {
    "defaultSecurityRules": null,
    "etag": null,
    "id": "/subscriptions/.../resourceGroups/WAFRG-TEST/providers/Microsoft.Network/networkSecurityGroups/BWAFF-TEST1-nsg",
    "location": null,
    "name": null,
    "networkInterfaces": null,
    "provisioningState": null,
    "resourceGroup": "WAFRG-TEST",
    "resourceId": null,
    "securityRules": null,
    "subnets": null,
    "tags": null,
    "type": null
  },
  "primary": null,
  "provisioningState": "Succeeded",
  "resourceGroup": "WAFRG-TEST",
  "resourceId": "0b61fac8-a809-4499-8071-a450a9a8f3db",
  "tags": null,
  "type": "Microsoft.Network/networkInterfaces",
  "virtualMachine": null
}

```

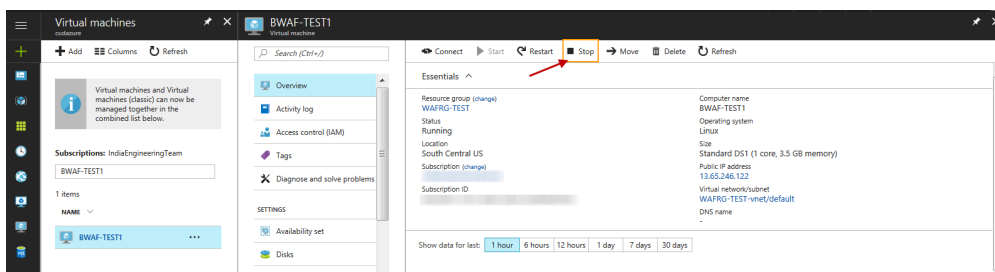

Step 4. Add the LAN Network Interface to the Barracuda CloudGen WAF Instance

To add the created network interface to the Barracuda CloudGen WAF instance, perform the following steps:

1. Log into the Microsoft Azure Portal.
2. Click **Virtual machines** in the left panel.



3. In the **Virtual machines** list, locate and click on the virtual machine to which the network interface needs to be added.
4. Click **Stop** to shut down the virtual machine.



5. After the virtual machine is stopped.
6. Go to the Microsoft Azure Command Line Interface, and run the following command:

az vm nic add--output json --vm-name <Name of the Barracuda CloudGen WAF instance to which the network interface needs to be added> **--resource-group** <Name of the resource group> **--nics** <Name of the network interface that needs to be added to the instance>

Example: az vm nic add --output json --vm-name BWAF-TEST1 --resource-group WAFRG-TEST --nics NIC-2

Step 5. Configure the LAN IP Address

The private IP address of the new NIC should be configured as the LAN IP address in the **BASIC > IP**

Configuration page.

1. Log into the Barracuda CloudGen WAF web interface.
2. Go to the **BASIC > IP Configuration** page.
3. In the **LAN IP Configuration** section:
 1. **IPv4 Address**: Enter the IP address of the second NIC that was added to the instance.
 2. **IPv4 Subnet Mask**: Enter the netmask associated with the IP address
 3. **Allow Administration Access**: Set to **No** to allow administration access.
4. Click **Save**.

LAN IP Configuration		Help
IPv4 Address:	<input type="text" value="10 . 2 . 11 . 7"/>	
	<small>The LAN IP address assigned to the LAN port on the Barracuda Web Application Firewall. This is required when the operation mode is set to Proxy.</small>	
IPv4 Subnet Mask:	<input type="text" value="255 . 255 . 255 . 0"/>	
VLAN ID:	<input type="text"/>	
	<small>Enter optional VLAN ID (value between 1 and 4094) to configure LAN IP on 802.1q VLAN tagged interface.</small>	
Allow Administration Access:	<input type="radio"/> Yes <input checked="" type="radio"/> No	
	<small>Regulates administration access through the LAN interface.</small>	

Figures

1. Multi_NIC.png
2. Select_VNET.png
3. Subnets.png
4. Add_subnet.png
5. NSG_Added.png
6. Subnet_Added.png
7. Resource_Group.png
8. Resource_Group1.png
9. IP_Config.png
10. Az_Login.png
11. Device_Login.png
12. Signed_In.png
13. Add_Network_Interface.png
14. Virtual_Machine.png
15. Virtual_Machine.png
16. LAN_IP_Config.png

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