Deploying the Barracuda Web Application Firewall Virtual Machine Scale Sets (VMSS) - PAYG Instance in Microsoft Azure

https://campus.barracuda.com/doc/73700426/

Before proceeding with deploying the Barracuda Web Application Firewall (WAF) VMSS, do the following:

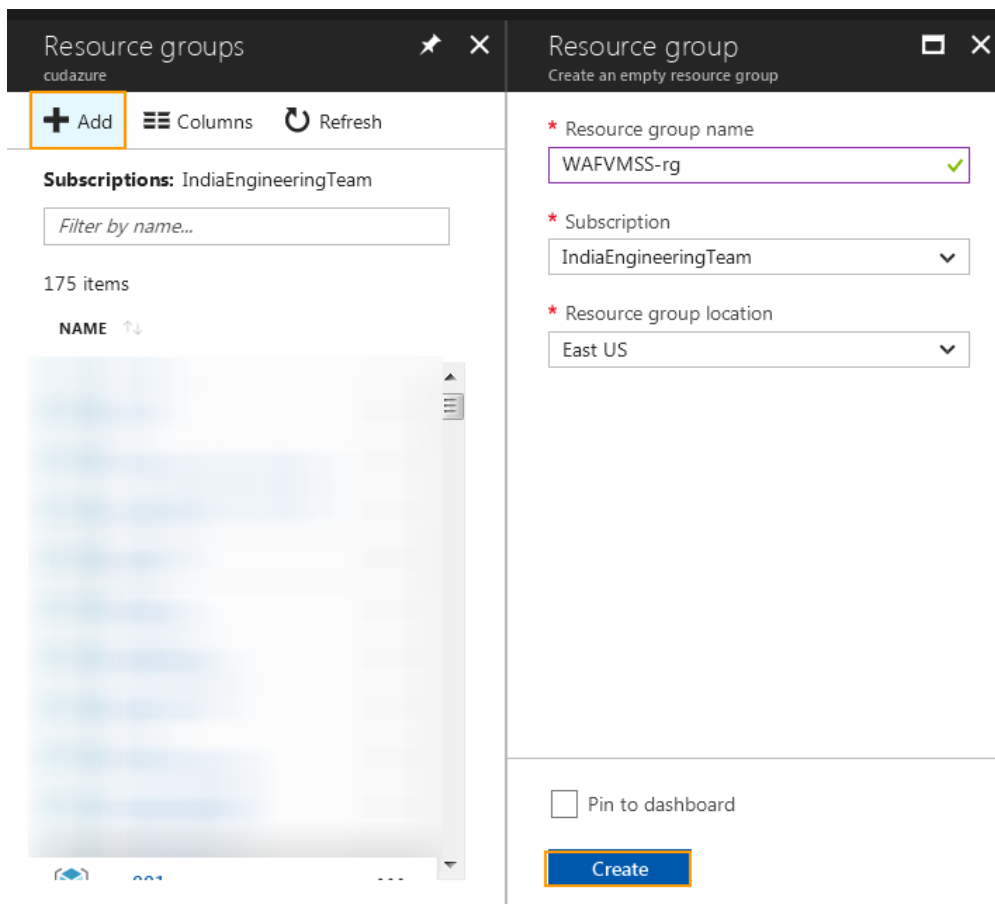- Step 1. Create a Resource Group
- Step 2. Create a Storage Account

Step 1. Create a Resource Group

To create a resource group, perform the following steps:

1. Log into the Microsoft Azure Portal.
2. Click **Resource groups** in the left panel.
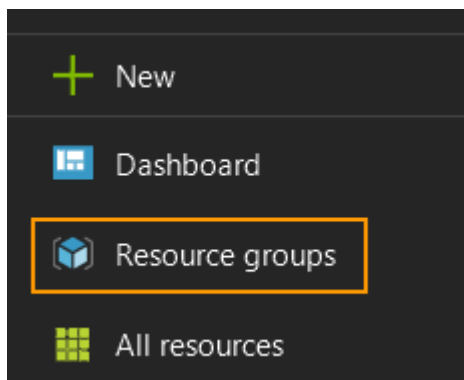
3. In the **Resource groups** page, click **Add** and specify values for the following:
    1. **Resource group name**: Enter a name for the resource group.
    2. **Subscription**: Select the subscription in which you want to create the resource group.
    3. **Resource group location**: Select a location for the resource group.
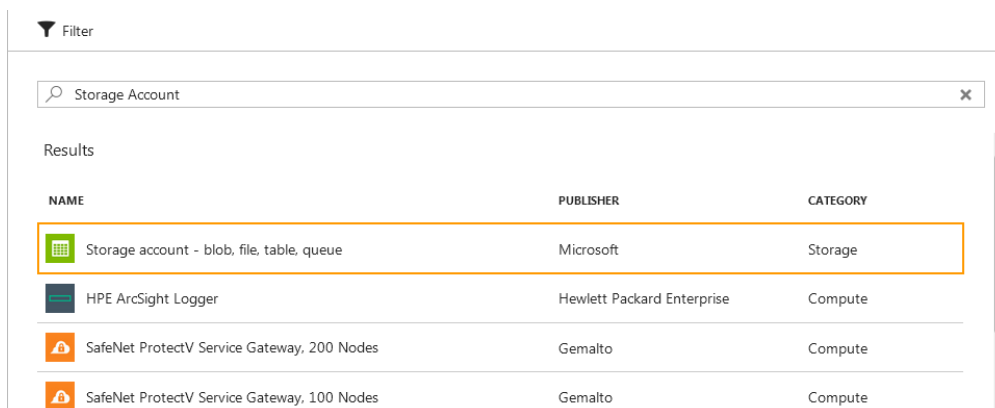   4. Click **Create**.

Step 2. Create a Storage Account

Perform the following steps to create a storage account:

1. Log into the Microsoft Azure Portal.
2. Click **New** in the left panel, and type *Storage Account* in the **Search** field.
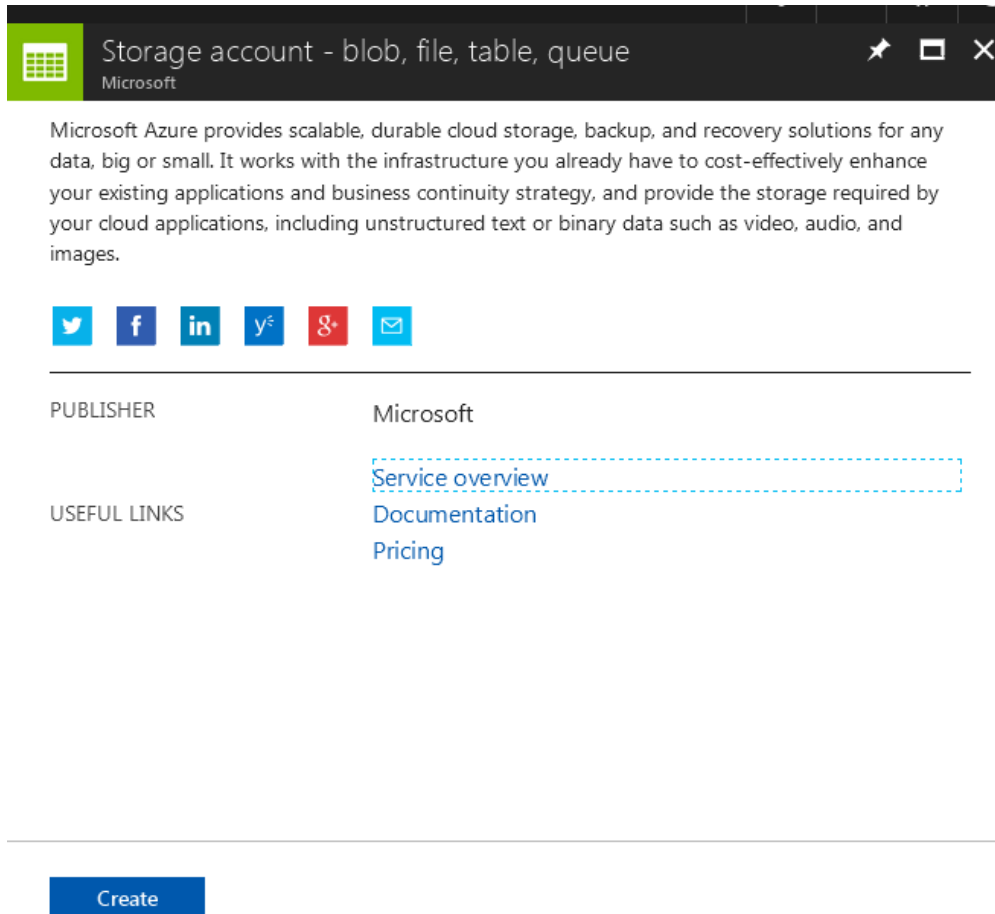3. In the search results, select **Microsoft Storage account**.
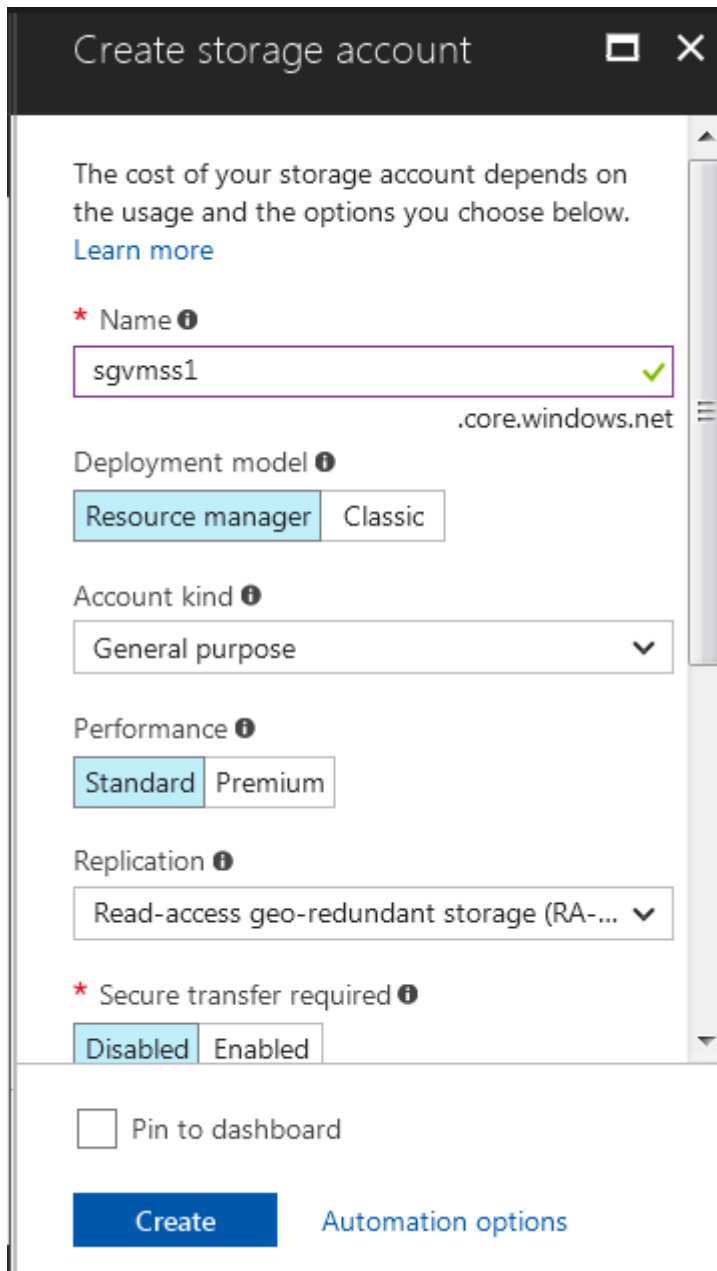
4. In the **Storage account – blob, file, table, queue** page, click **Create**.

5. In the **Create storage account** page:
   1. **Name**: Enter a name for the storage account.
   2. **Deployment model**: Ensure the deployment model is set to **Resource Manager**.
   3. **Account kind**: Select the type of storage account that needs to be created. **Default**: General purpose
   4. **Performance**: Select the performance tier as required.
   5. **Replication**: Select the replication option for the storage account.
   6. **Secure transfer required**: Select **Enabled** if you want to transfer the data into or out of storage account. Default: Disabled.
   7. **Subscription**: Select the subscription in which you want to create the storage account. **Note**: Ensure that the subscription for the storage account and the resource group is same.
   8. **Resource group**: Select the resource group created in **Step 1. Create a Resource Group**.
   9. **Location**: Select the location for the storage account. **Note**: Ensure that the location for the storage account and the resource group is same.
   10. Click **Create**.
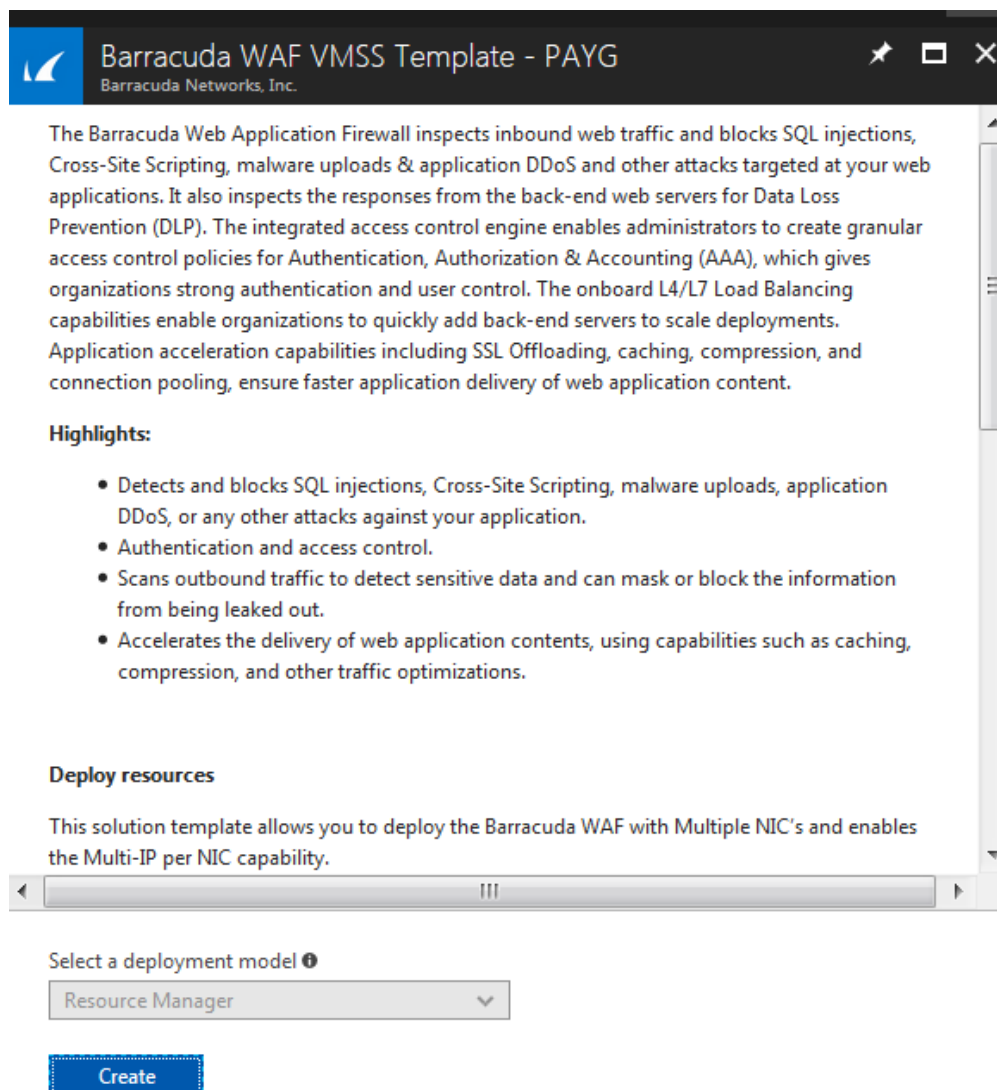
Deploying the Barracuda WAF VMSS

Perform the following steps to deploy the Barracuda WAF VMSS instance:

1. Log into the Microsoft Azure Portal.
2. Click **Marketplace** at the bottom of the screen.
3. In the **Everything** page, type *Barracuda WAF VMSS Template* in the **Search** text field.
4. In the search results, select **Barracuda WAF VMSS Template - PAYG.**
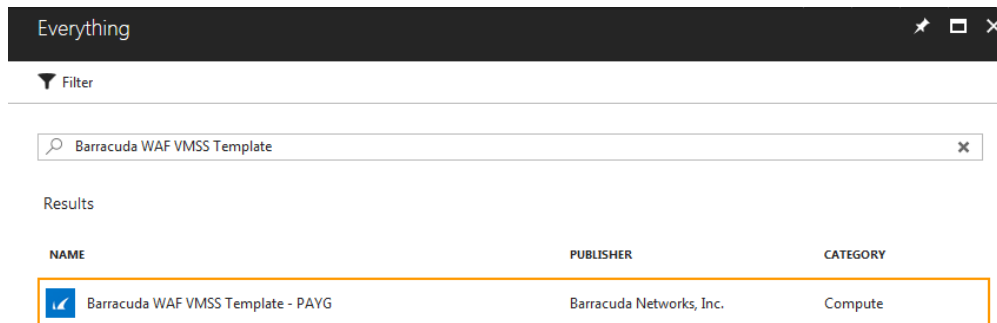
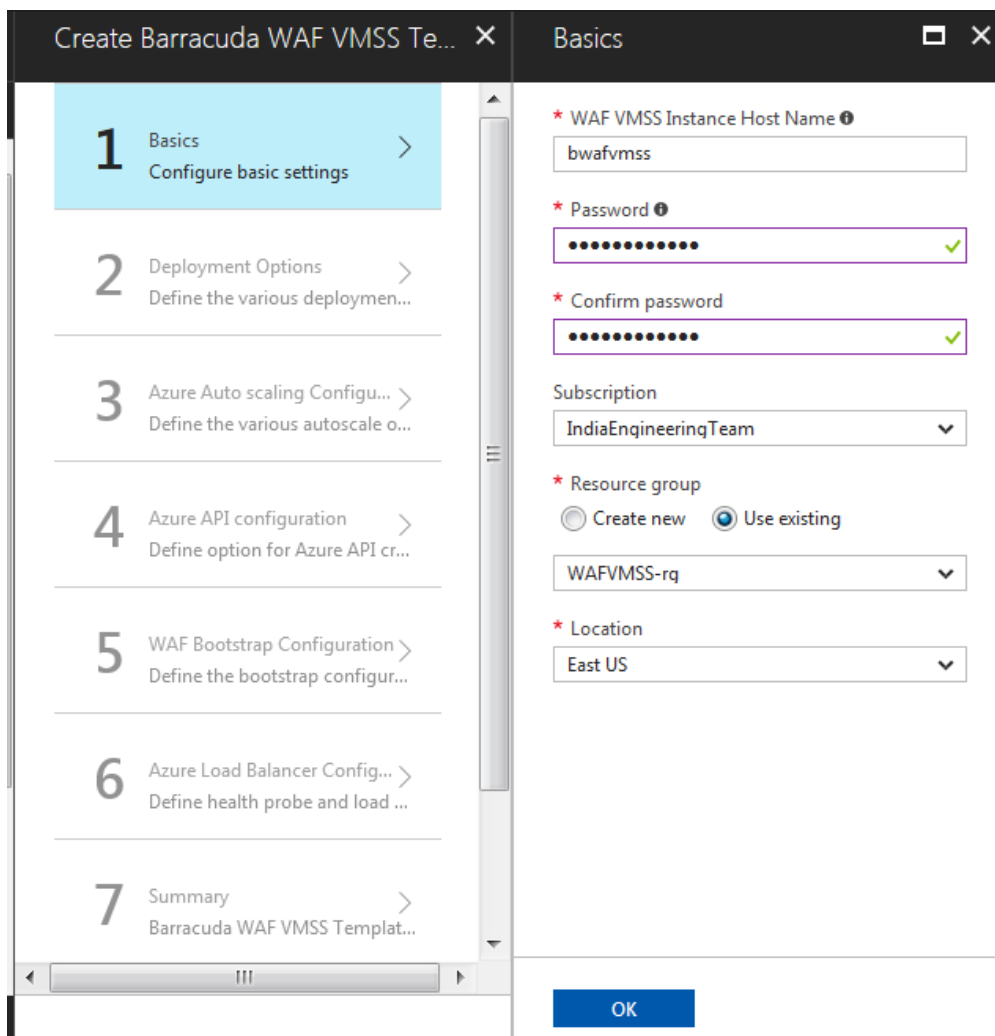5. In the **Barracuda WAF VMSS Template - PAYG** page:
    1. Read the product overview.
    2. Click **Create**.

6. In the **Create Barracuda WAF VMSS Template - PAYG > 1 Basics** page:
    1. **Barracuda WAF VMSS Set Name**: Enter a name for the Barracuda WAF VMSS.
    2. **Password**: Enter a password for authentication. This will be your password to access the Barracuda WAF web interface.

3. **Confirm Password**: Re-enter the password for confirmation.
4. **Billing Method**: Select **Pay as You Go (Hourly Billing)** form the drop-down list as your billing method.
5. **Firmware Version**: From the drop-down list, select the firmware version on which your instance is deployed.
6. **Subscription**: Select the subscription from the drop-down list.
7. **Resource group**: Create a new resource group or select a resource group that is empty from the existing **Resource group** list.
8. **Location**: Select a location for the Barracuda WAF VMSS.
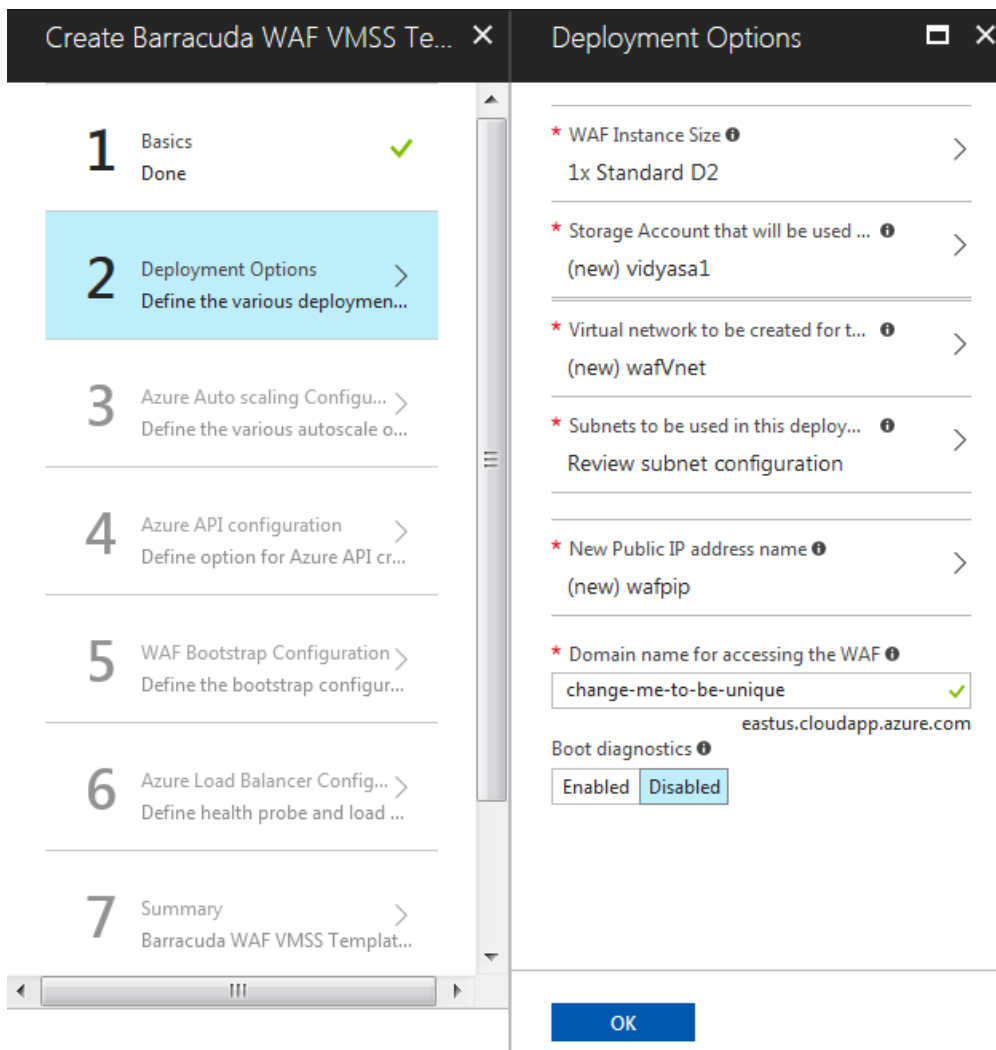9. Click **OK**.

7. In the **Create Barracuda WAF VMSS Template - PAYG > 2 Deployment Options** page:
   1. **Barracuda WAF Instance Size**: Select a size for the instance.
   2. **Storage Account**: Create a new storage account or select a storage account from the existing **Storage account** list.

      The storage account should be in the same region where the Barracuda WAF VMSS instance needs to be deployed.
   3. **Virtual network**: Create a new virtual network, or select a virtual network from the existing **Virtual network** list in which you want to deploy the Barracuda WAF VMSS.

4. **Subnets**: Review the subnet configuration and modify if required.
5. **New Public IP address name**: Enter a name for the public IP address associated with the Barracuda WAF VMSS.
6. **Domain name for accessing the Barracuda WAF**: Enter the domain for the Barracuda WAF VMSS.
7. **Boot diagnostics**: When **Enabled**, the boot up debug logs gets saved in the specified storage account.
8. Click **OK**.

8. In the **Create Barracuda WAF VMSS Template - PAYG > 3 Azure Auto Scaling Configuration** page:
   1. **Instance Count**
      1. **Initial Instances**: Enter the number of instances to be deployed initially to serve the traffic. **Default**: 2
      2. **Maximum Instances**: Enter the maximum number of instances to be scaled up to handle the traffic when required. **Default**: 5
      3. **Minimum Instances**: Enter the minimum number of instances to be scaled down when the traffic less. **Default**: 2
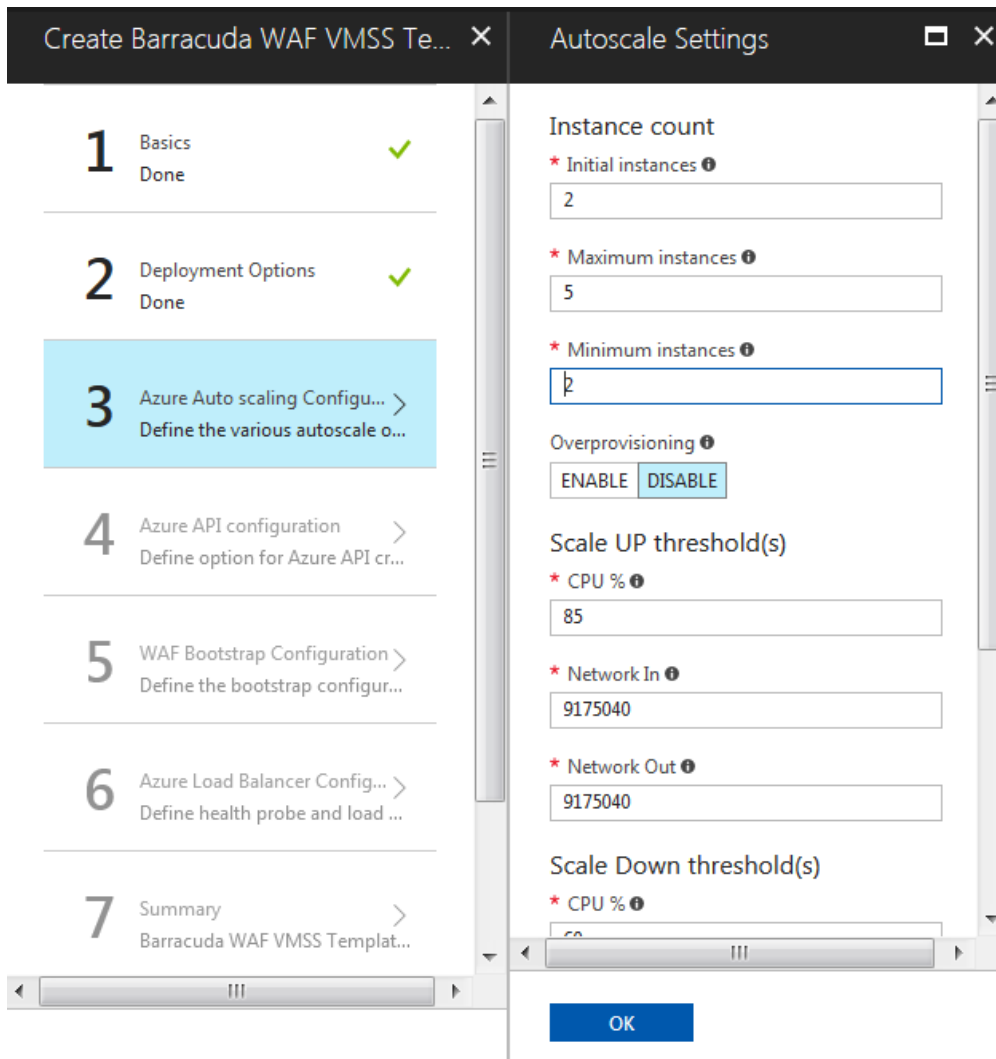   - Ensure that the **Minimum Instances** are lesser than or same as the **Initial**

> **Instances**.
> - If the **Initial Instances** value is less than the **Minimum Instances**, the deployment of instances will fail.

4. **Overprovisioning**: When set to **Enable**, the VMSS spins up more number of virtual machines than what is required to handle the traffic.

2. **Scale Up Thresholds**
   1. **CPU%**: Enter the scale up threshold for CPU utilization. **Default**: 85%
   2. **Network In**: Enter the scale up threshold for NetworkIn throughput. **Default**: 9175040
   3. **Network Out**: Enter the scale up threshold for NetworkOut throughput. **Default**: 9175040

3. **Scale Down Thresholds**
   1. **CPU%**: Enter the scale down threshold for SPU utilization. **Default**: 60%
   2. **Network In**: Enter the scale down threshold for NetworkIn throughput. **Default**: 5242880
   3. **Network Out**: Enter the scale down threshold for NetworkOut throughput. **Default**: 5242880

4. **Notification Email ID(s) in CSV Format**: Enter the email address to which the auto scaling event notification emails needs to be sent.

5. Click **OK**.

9. In the **Create Barracuda WAF VMSS Template - PAYG > 4 Azure API Configuration** page:

10. **Authentication Method**: Select the authentication method to authenticate to Azure Active Directory (AAD).
    1. **Azure AD Credentials**
        1. **Azure User ID**: Enter the user name to authenticate to the AAD.
        2. **Azure User Password**: Enter the password associated with user.
        3. **Confirm Password**: Re-enter the password to confirm.
    2. **Azure Service Principal**
        1. **Client ID**: Enter the ID of the application in AAD.
        2. **Tenant ID**: Enter the ID of the Active Directory tenant.
        3. **Azure Secret Key**: Enter the secret key generated.
    3. Click **OK**.

12. In the **Create Barracuda WAF VMSS Template - PAYG > 5 Barracuda WAF Bootstrap Settings** page.
    1. **Cluster Shared Secret**: Enter a password to be used by the Barracuda WAF instances in the VMSS group.
    2. **Confirm Shared Secret**: Re-type the shared secret password.
    3. **Bootstrap Method**: Select the method (**NONE, BASIC** or **BACKUP**) for bootstrapping.
    4. **Basic Bootstrap Configuration**
       1. **WAF Service Name**: Enter a name for the service that needs to be created on the Barracuda WAF instances.
       2. **WAF Service Port**: Enter the port number on which the service is listening to.
       3. **Backend Servers (IP:PORT)**: Enter the IP address of the server followed by the port that needs to be protected by the Barracuda WAF. Use comma (,) as a separator to specify multiple server IP addresses.
    5. **Backup Bootstrap Configuration**
       1. **Azure Storage Account Name**: Enter the name of the storage account.
       2. **Azure Storage Account Key**: Enter the key of the storage account.
       3. **Azure Storage Blob Name**: Enter the name of the blob configured in the storage account.
       4. **Type of Backup File**: Select the appropriate backup file from the drop-down list

5. **Barracuda WAF Backup File Name**: Enter the name of the backup file that you want to use for bootstrapping the instances.
6. **OMS Workspace Details**
    1. **OMS Workspace ID**: Enter the workspace ID of the OMS server (if any).
    2. **OMS Workspace Primary Key**: Enter the primary key of the OMS server.
7. Click **OK**.

13. In the **Create Barracuda WAF VMSS Template - PAYG > 6 Azure Load Balancer Configuration** page:
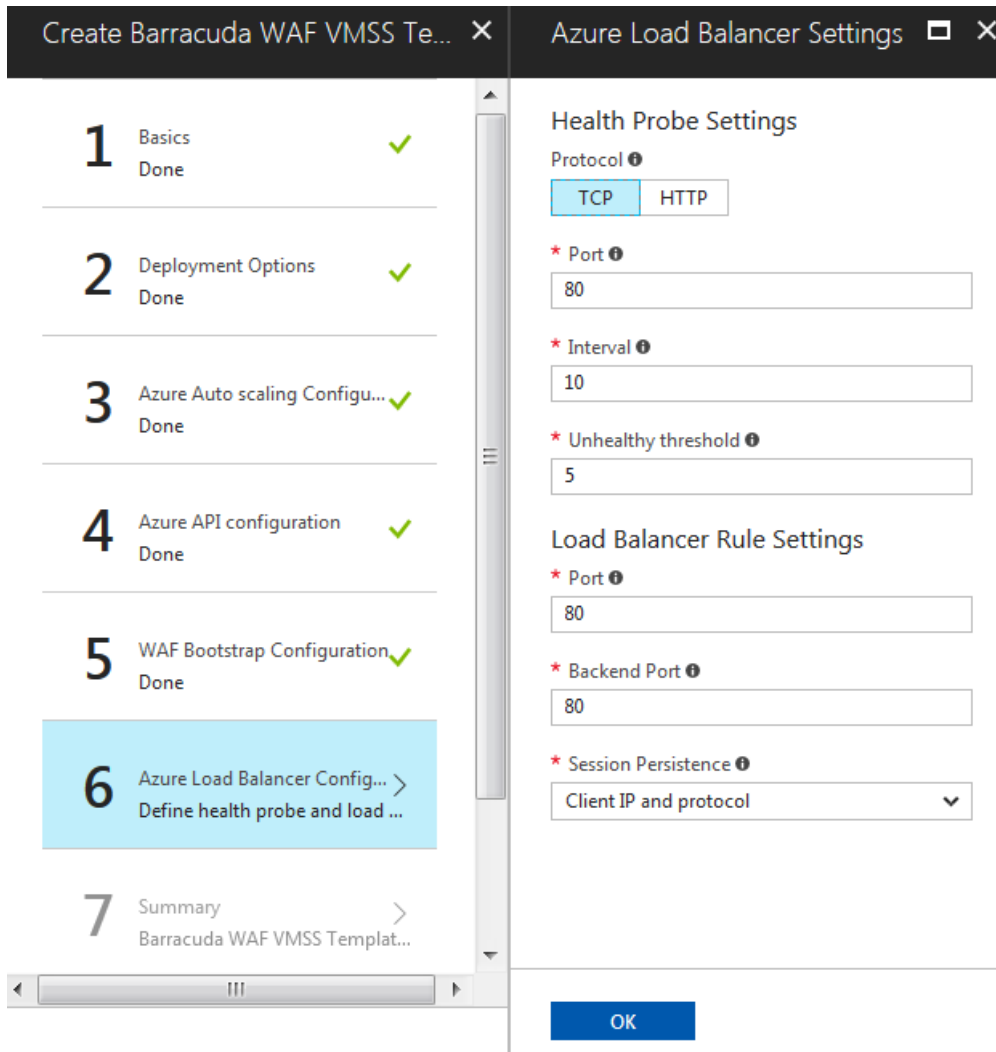   1. **Health Probe Settings**
        1. **Protocol**: Select **TCP** or **HTTP**. It is recommended to use the **TCP** protocol.
        2. **Port**: Enter the port to be used when probing the instance.
        3. **Interval**: Enter the interval time to probe the instance.
        4. **Unhealthy threshold**: Enter how many attempts can fail before the backend instance is marked as unhealthy.
    2. **Load Balancer Rule Settings**
        1. **Port**: Enter the port on which the load balancer is listening.
        2. **Backend Port**: Enter the port on which the Barracuda WAF is listening.
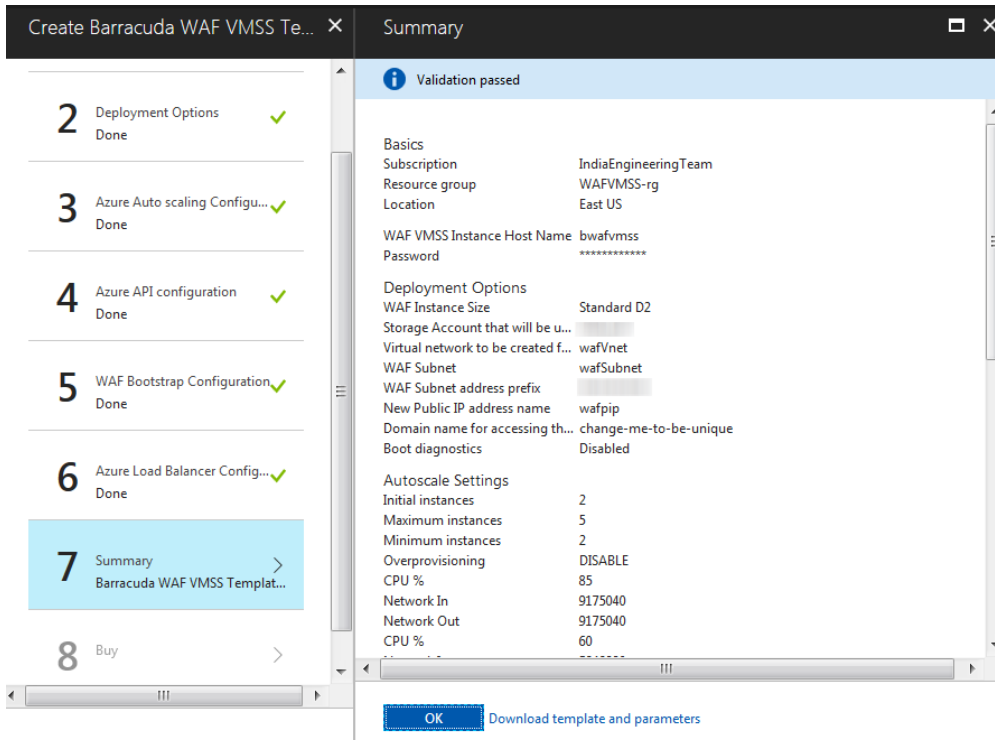
3. **Session Persistence**: Select the persistence type.
3. **EULA Acceptance Details**
   1. **User Name**: Enter the username of the user signing the EULA agreement.
   2. **Email ID**: Enter the Email ID of the user signing the EULA agreement.
   3. **Company Name**: Enter the user's company name.
   4. **Domain Name**: Enter the domain name for the Barracuda WAF VMSS.
4. Click **OK**.

14. In the **Create Barracuda WAF VMSS Template - PAYG > 7 Summary** page, verify the values you entered and click **OK**.

15. In the **Create Barracuda WAF VMSS Template - PAYG > 8 Buy** page, read the **Terms of use | privacy policy** and click **Create**.

Figures

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