

# Barracuda WAF on Azure: Post Deployment Configuration Guide

## Overview

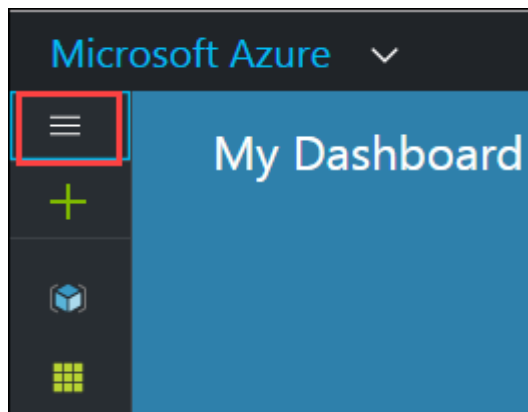
This document will help you in configuring the Barracuda Web Application firewall hosted on Azure for publishing IIS Based websites.

## Prerequisites

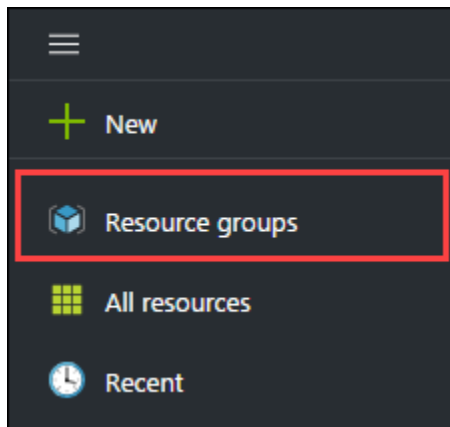
- Microsoft Azure Subscription with admin credentials.
- Azure Quick-start template **Barracuda-waf-solution** needs to be deployed successfully in the subscription

## Instructions

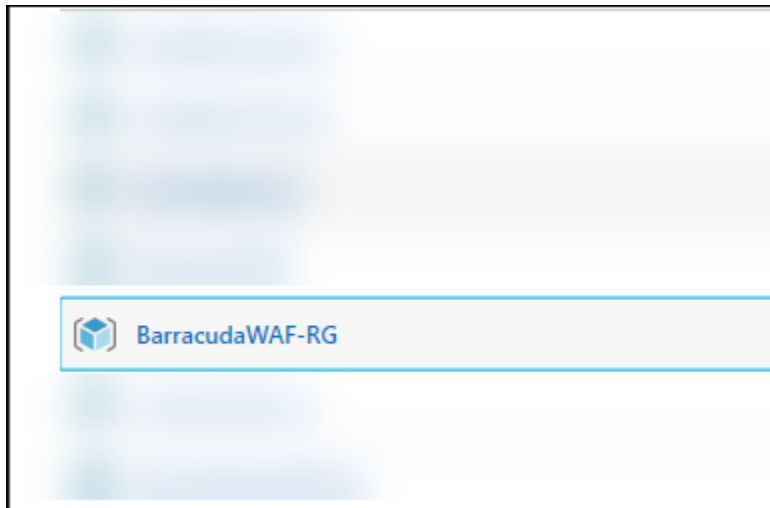
1. **Launch** a browser and **Navigate** to <https://portal.azure.com>. **Login** with your Microsoft Azure credentials.
2. To toggle **show/hide** the Portal menu options with icon, **Click** on the **Show Menu** button.



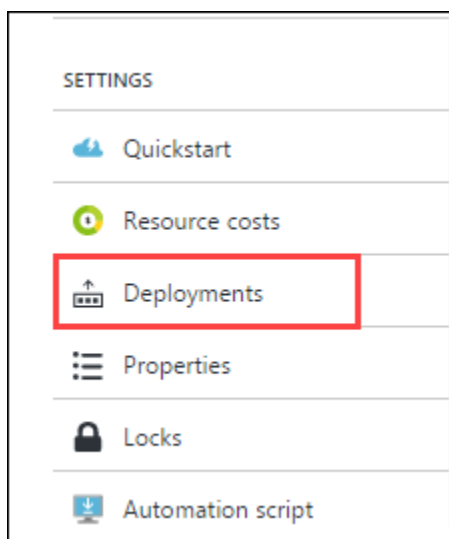
3. **Click** on the **Resource groups** button in the **Menu navigation** bar, to **view** the Resource groups blade.



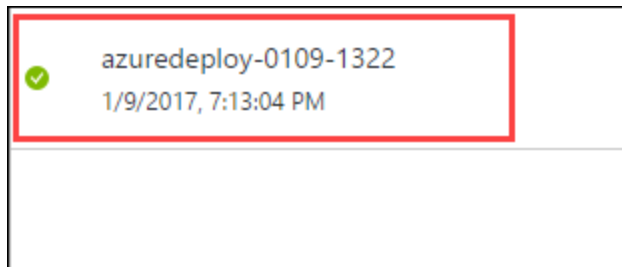
4. **Select** the Resource Group in which you deployed the quick start template.



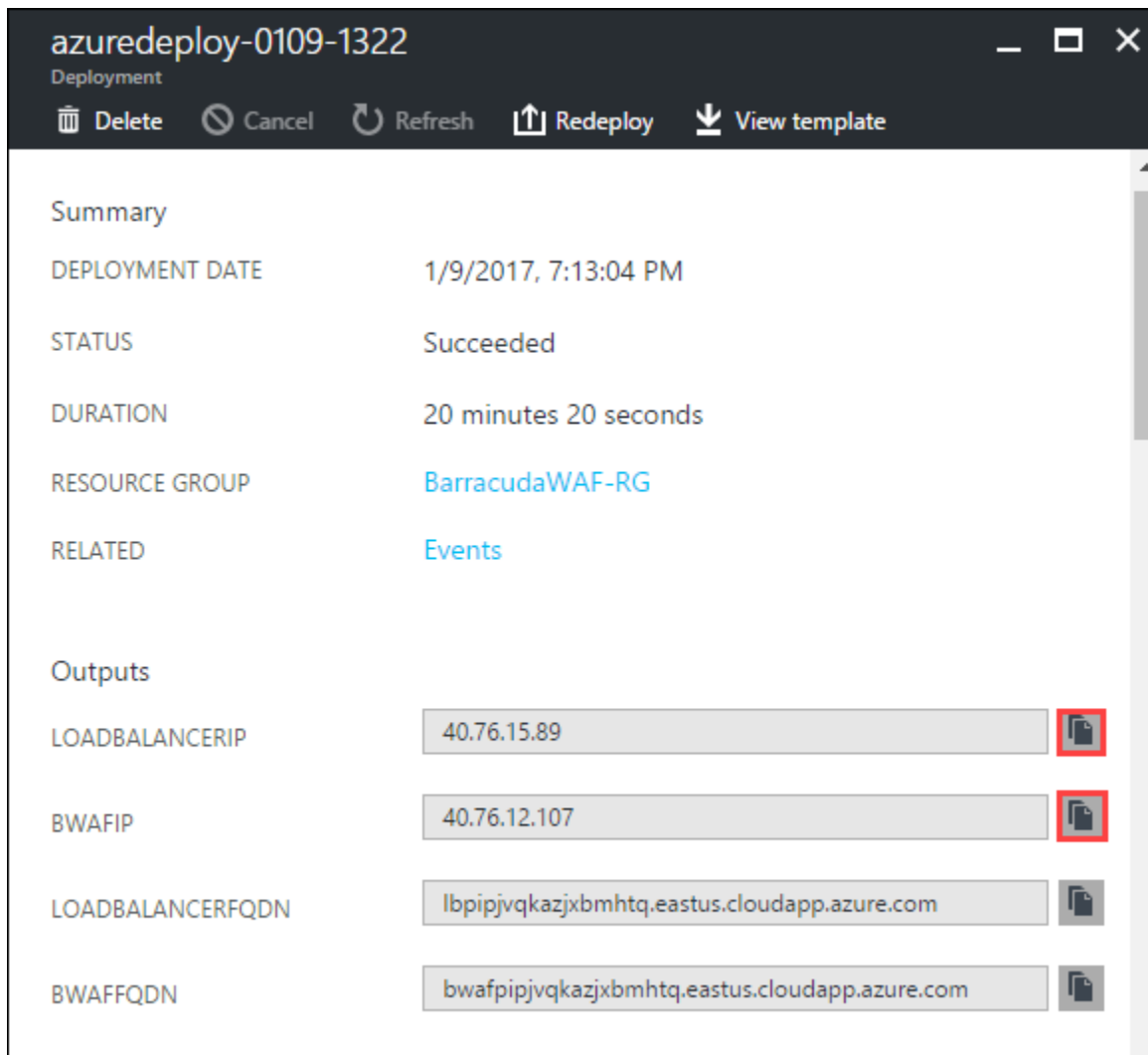
5. From **Settings**, select **Deployments**.



6. Select the latest **deployment** available on this resource group.



7. In the **Deployment** blade, scroll down to the **Outputs** section. You will see the **Public IP address** of **Barracuda WAF VM** and **Load Balancer**.



8. Click the **Copy icon** to copy the **Public IP address**. Create a new text document in **Notepad** and paste both IP addresses to it as **Load Balancer Public Ip** and **Barracuda WAF Public IP**.

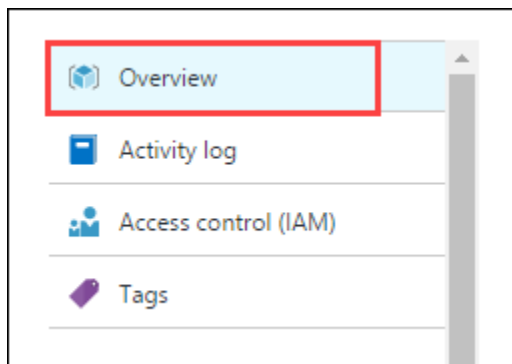
Load Balancer Public IP  
40.76.15.89

Barracuda WAF Public IP  
40.76.12.107

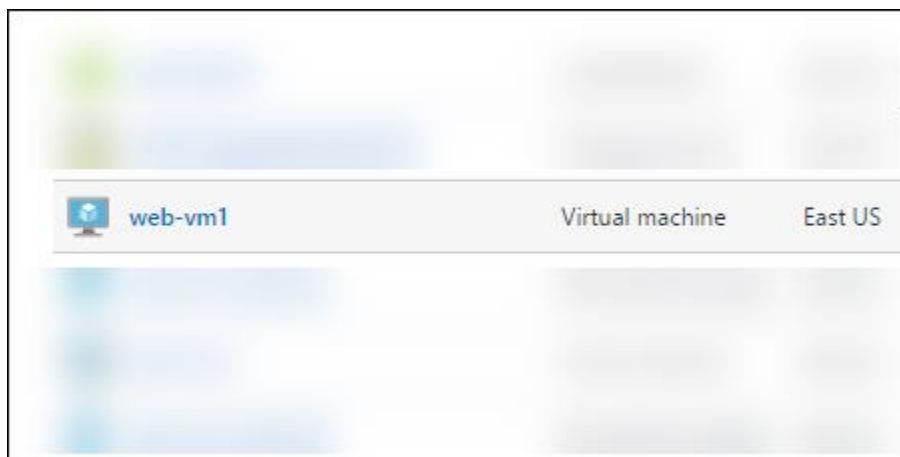
9. Navigate back to the **Resource groups**.

**Resource groups** > BarracudaWAF-RG - Deployments > azuredeploy-0109-1322

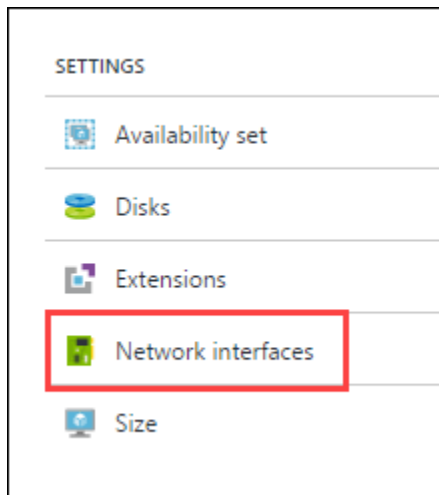
10. Click on **Overview**.



11. **Select** the **web-vm1** virtual machine from the resource list.



12. In the upcoming blade, select **Network Interfaces**



13. In the Network Interfaces blade, you can see the **Private IP address** of **web-vm1**. Save this IP address to the notepad as **web-vm1 private IP**.

A screenshot of the Azure portal's 'Network interfaces' blade. It features a search bar at the top and a table below. The table has columns for 'NAME', 'PUBLIC IP ADDRESS', 'PRIVATE IP ADDRESS', and 'SECURITY GROUP'. The first row shows 'web-vm-nic1' with a public IP of '-' and a private IP of '10.0.1.4', which is highlighted with a red box. The security group is also '-'.

NAME	PUBLIC IP ADDRESS	PRIVATE IP ADDRESS	SECURITY GROUP
web-vm-nic1	-	10.0.1.4	-

14. **Repeat** steps **11** to **13** to obtain the **Private IP address** of **web-vm2** as well by selecting **web-vm2** in step **11**. Now, you will have all the following IP addresses in your notepad.

A screenshot of a notepad application with the following text:

```
Load Balancer Public IP
40.76.15.89

Barracuda WAF Public IP
40.76.12.107

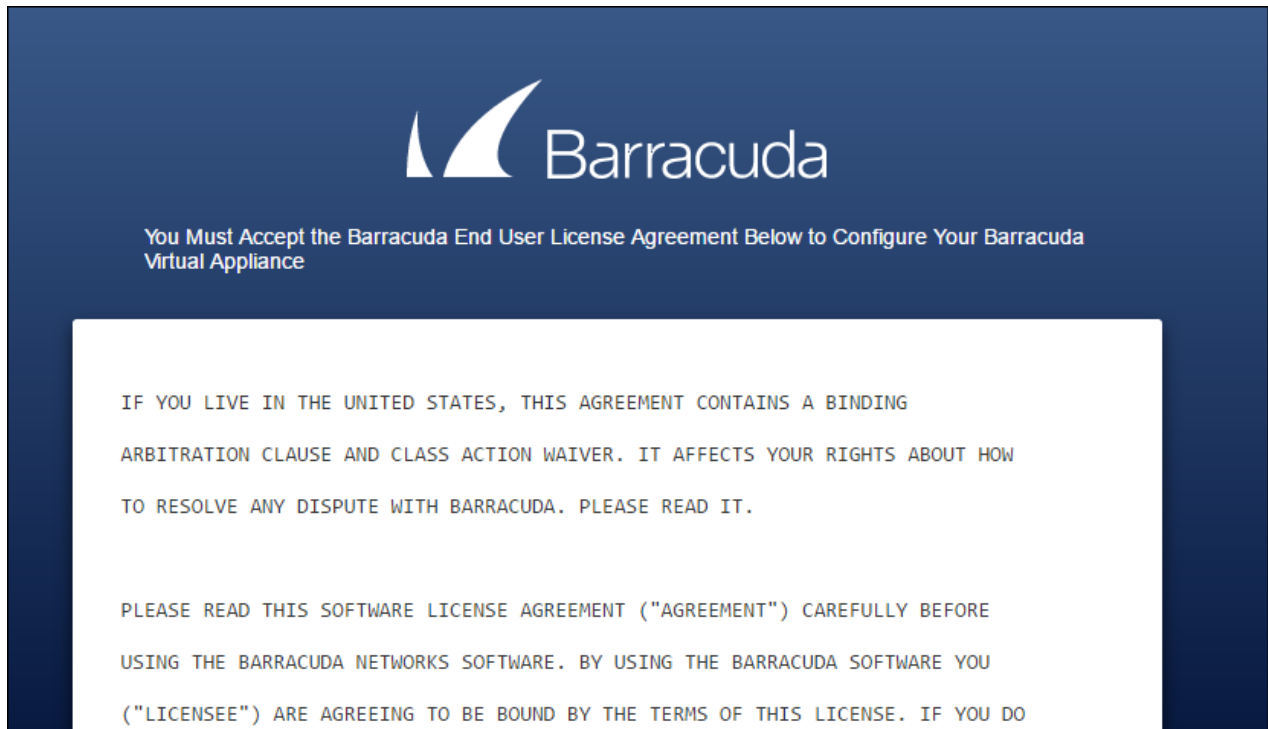
web-vm1 Private IP
10.0.1.4

web-vm2 Private IP
10.0.1.5
```

15. Open a new tab in the browser and paste the **Barracuda WAF Public IP** from the notepad. Append a **colon** and the port number **8000** to the ip address as shown below. This port is used by the **BWAF** management web interface. Press **Enter** key.



16. A page as shown below will appear.



This is the **Barracuda End User License Agreement**.

17. Scroll down to the bottom of the page. Fill the text boxes with appropriate values.

**Type Your Name/Company and Click "Accept" to Agree to License**

Name	<input type="text" value="Demo User"/>
Email Address	<input type="text" value="sample@abc.com"/>
Company (if applicable)	<input type="text" value="None"/>
<input type="button" value="Accept"/>	

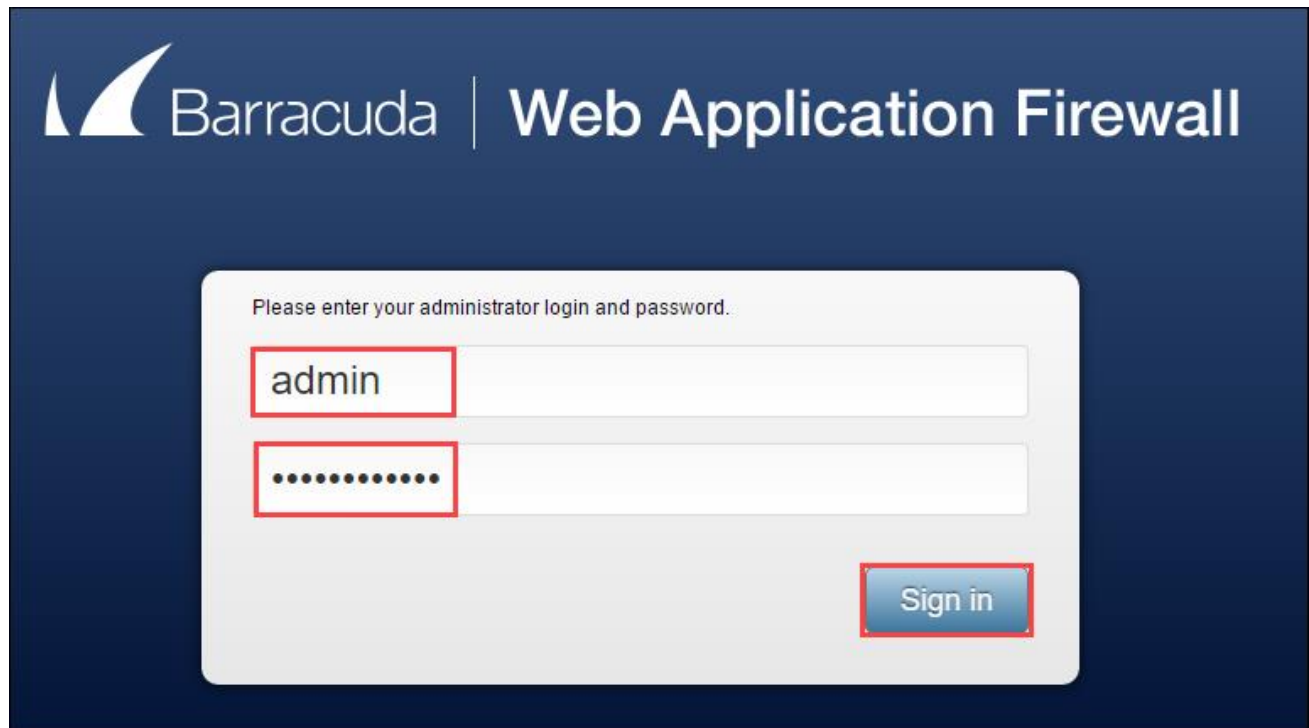
Click **Accept**.

18. In the Sign-In page of **Barracuda**, use the following credentials:

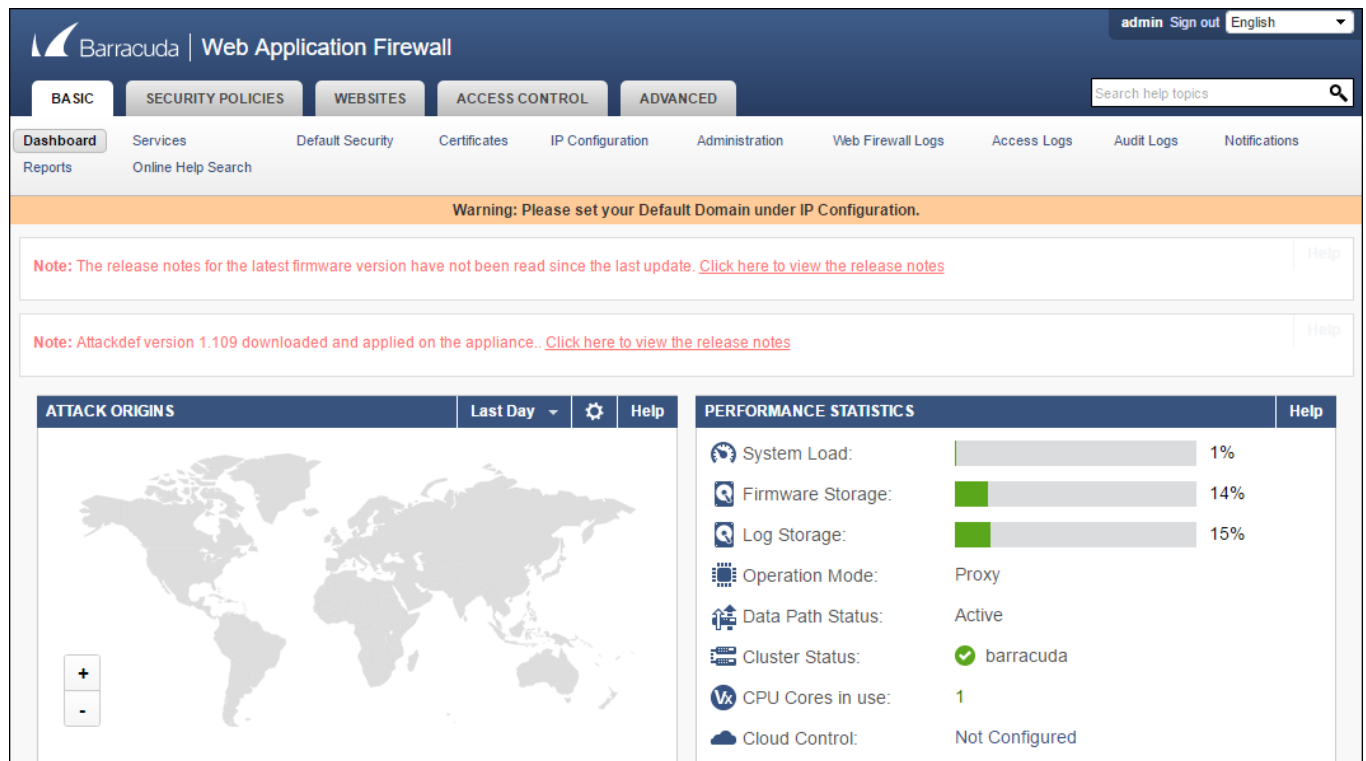
*Username* : **admin**

*Password* : The password you provided when deploying the quickstart template.

Click on **Sign in**.



19. Now, you will be able to see the management portal of **Barracuda**.



20. Click on **Services** in the **Basic** menu.



21. In the **ADD NEW SERVICE** section, configure as below:

*Service Name* : **Demo-Websites (Or your custom service name)**

*Type* : **HTTP**

*Virtual IP Address* : Leave the default. (This is the private IP address of **bwaf-vm1** VM.)

*Port* : Leave the default

*Real Servers* : Copy and paste **web-vm1 Private IP** from the notepad.

*Create Group* : Leave the default

*Service Groups* : Leave the default

After configuration, click **Add**.

22. Now, you can see that the **Services** section is updated with the configuration you provided. Click on **Edit** against **Server\_10.0.1.4\_80**.

SERVICES											More Actions	Preferences	Help
Name	Status	IP Address	Port	Domain	URL	Type	Mode	Policy	Add				
default													
default													
Demo-Websites	✓	10.0.0.4	80			HTTP	Passive	default	Server   Rule	Edit	Delete	Disat	
Server_10.0.1.5_80	✓	10.0.1.5	80							Edit	Delete	Disat	

23. In the **Server Configuration** page, provide the **Server Name** as **web-vm1**. Click on **Save**.



Save
Cancel

---

SERVER CONFIGURATION

Help

Server Name:

web-vm1

Server Name

IP Address:

10.0.1.4

Port:

80

Status:

In Service

Keep the default setting of **In Service**, or click the drop-down list and select one of the out-of-service settings as required.

Backup server:

☐ Yes
☒ No

Set this server would be used as a "backup appliance", in other words, a last resort server if all other servers fail or found to be out of service.

Weight:

1

Weight of this server to be used when the Load Balancing algorithm is *Weighted Round Robin*.

Comments:

24. The page will be refreshed, and the web server **Server\_10.0.1.4\_80** will be renamed as **web-vm1**. Now, **click** on **Server** against the **Demo-Websites** service.

SERVICES										More Actions	Prefer
	Name	Status	IP Address	Port	Domain	URL	Type	Mode	Policy	Add	
<input type="checkbox"/>	default										
<input type="checkbox"/>	default										
<input type="checkbox"/>	Demo-Websites	✓	10.0.0.4	80			HTTP	Passive	default	Server	Rule Edit
<input type="checkbox"/>	web-vm1	✓	10.0.1.4	80							Edit

25. In the window that appears, configure as follows:

*Server Name* : **web-vm2**

*IP Address* : **10.0.1.5**

Keep the default for others and click **Add**.

ADD REAL SERVER

Help

Server Name:

web-vm2

Specify a name to identify the server on the Barracuda Web Application Firewall.

IP Address:

10.0.1.5

Specify the IPv4 or IPv6 address of the server.

Port:

80

Specify the new server port.

Status:

In Service

Keep the default setting of **In Service**, or click the drop-down list and select one of the out-of-service settings as required.

Backup server:

☐ Yes
☒ No

Set this server would be used as a "backup appliance", in other words, a last resort server if all other servers fail or found to be out of service.

Weight:

1

Weight of this server to be used when the Load Balancing algorithm is Weighted Round Robin.

Comments:

Add

26. Again, the page will be refreshed and **web-vm2** will be added to the service **Demo-Websites**.

SERVICES											More Actions	Preferences
	Name	Status	IP Address	Port	Domain	URL	Type	Mode	Policy	Add		
	default											
	default											
	Demo-Websites	✓	10.0.0.4	80			HTTP	Passive	default	Server   Rule	Edit	Delete
	web-vm2	✓	10.0.1.5	80							Edit	Delete
	web-vm1	✓	10.0.1.4	80							Edit	Delete

27. Now, to configure load balancing of **web-vm1** and **web-vm2**, click on **Edit** against **Demo-Websites**.

SERVICES											More Actions	Preferences
	Name	Status	IP Address	Port	Domain	URL	Type	Mode	Policy	Add		
	default											
	default											
	Demo-Websites	✓	10.0.0.4	80			HTTP	Passive	default	Server   Rule	Edit	Delete
	web-vm2	✓	10.0.1.5	80							Edit	Delete
	web-vm1	✓	10.0.1.4	80							Edit	Delete

28. In the window that comes up, **scroll down** to see the **Load Balance** section. You can choose the Load Balancing **Algorithm**, **Persistence Method** and **Failover Method**.

For more details, go to the link

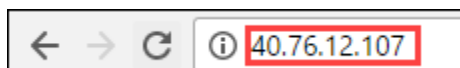
<https://campus.barracuda.com/product/webapplicationfirewall/article/WAF/ConfigLoadBalancing/>

LOAD BALANCE		Help
Algorithm	Round Robin ▼ <small>Select the algorithm to be used to distribute incoming requests for the service.</small>	
Persistence Method	None ▼ <small>Choose one of the Persistence Methods if a client must maintain the connection to the same server after session initiation.</small>	
Failover Method	Load Balance ▼ <small>Select the action to be taken when a persistent session exists for a server which is currently "out-of-service", and a request is made for that session.</small>	

29. Click on **Save** after any configuration change.



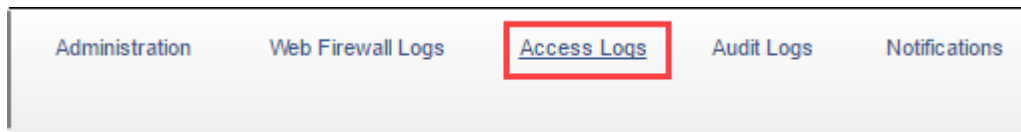
30. Open a new tab in the browser. Copy **Barracuda WAF Public IP** from the notepad and paste it in the URL box. Press **Enter** key. By default, this use port **80**.



31. As you can see, the request will be forwarded to the backend web servers as configured.



32. Now, navigate back to the **Management portal** of **Barracuda Web Application Firewall**.  
Click on **Access Logs**.



33. You should see that the request you made to the firewall is logged. Click on **Details** to see more about the request.

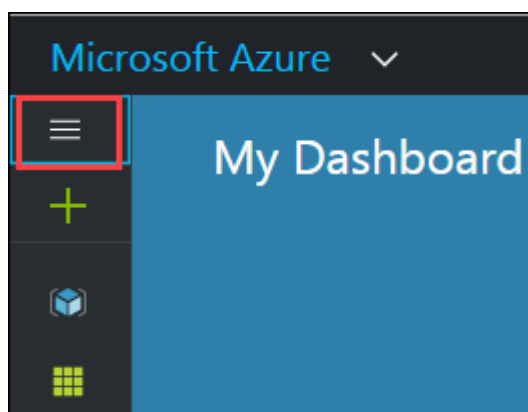
ACCESS LOGS					Generate CSV File	Show: 20 logs per page	Help
-Select Filter-	is equal to		+	Apply Filter	Save Filter		
Page 1 of 1 < 1 >							
Time	Event Details		Client Details		Service Details		Details
Time 07:02:41.936	URL	/					
Date 2017-01-09	Status	200 - OK	Client IP		Service Name	demo-websites	Details
ID 15983c0b60d-4c851a63	Method	GET	Country		Service IP	10.0.0.4	

34. Now you can update the website at the backend servers as per your requirements and configure similar services via Barracuda. Follow Barracuda documentation to learn more about configuring Barracuda web application firewall  
<https://campus.barracuda.com/product/webapplicationfirewall>

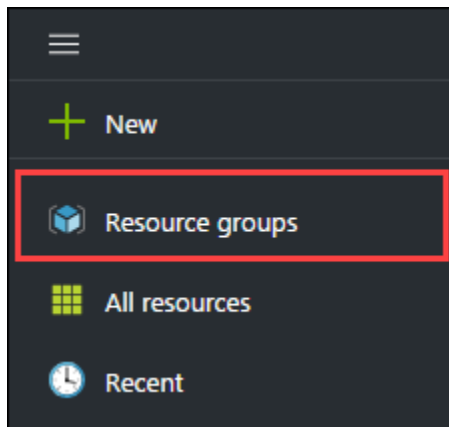
## Accessing Web VMs via RDP

### Instructions

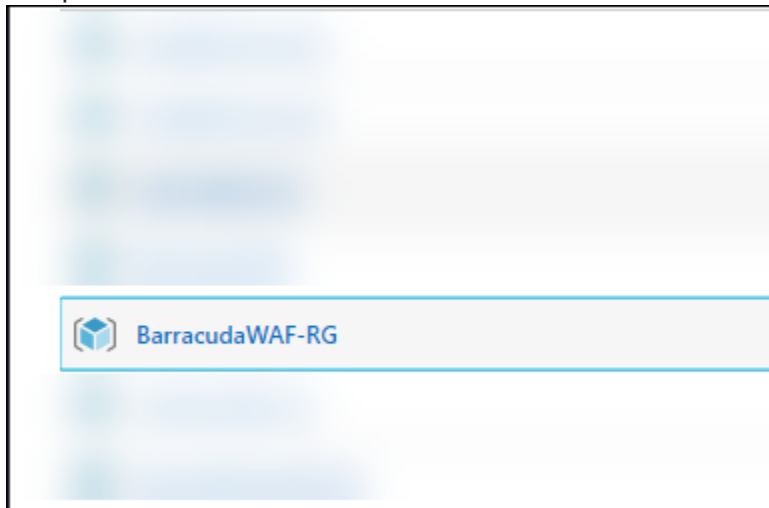
1. **Launch** a browser and **Navigate** to <https://portal.azure.com>. **Login** with your Microsoft Azure credentials.
2. To toggle **show/hide** the Portal menu options with icon, **Click** on the **Show Menu** button.



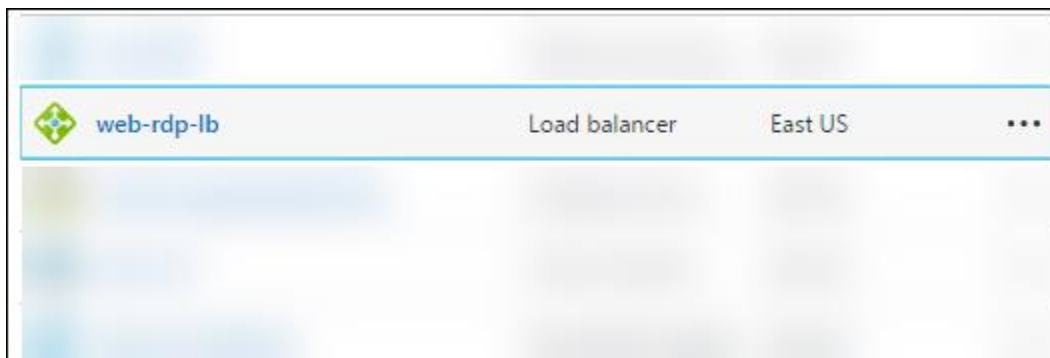
3. **Click** on the **Resource groups** button in the **Menu navigation** bar, to **view** the Resource groups blade.



4. **Select** the Resource Group in which you deployed **Barracuda-waf-Solution** quickstart template.









5. From the list of resources, select **web-rdp-lb**



6. In the **Overview** blade, you can see the **Public IP address** of the load balancer. This'd be the same public ip noted earlier from **Outputs** of the deployment.

Essentials ^	
Resource group (change)	Backend pool
BarracudaWAF-RG	loadBalancerBackEnd (2 virtual machines)
Location	Health probe
East US	-
Subscription name (change)	Load balancing rule
	-
Subscription ID	NAT rules
	2 inbound
	Public IP address
	40.76.15.89 (lb-pip)

- Click on **Inbound NAT rules** in **Settings**.

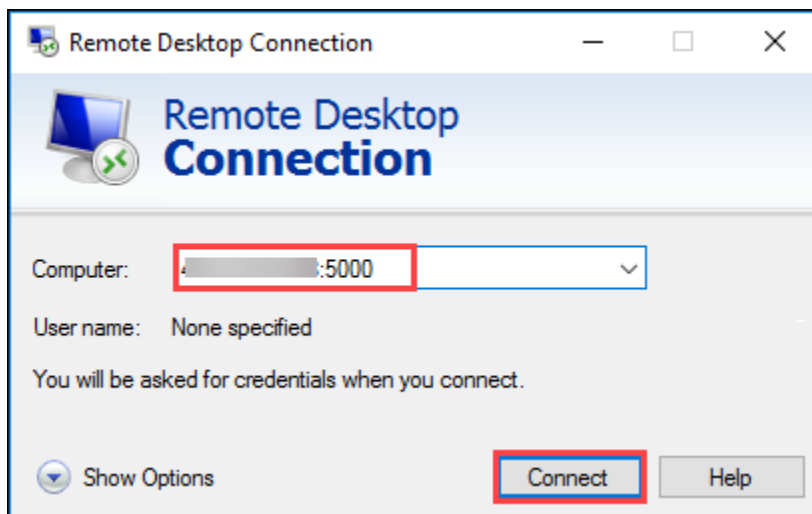
SETTINGS	
	Frontend IP pool
	Backend pools
	Health probes
	Load balancing rules
	Inbound NAT rules
	Properties

- Make a note of the NAT port number for the VM you'd want to access via RDP.

Search inbound NAT rules				
NAME	DESTINATION	TARGET	SERVICE	
RDPVM1	40.76.15.89	web-vm1	Custom (TCP/5001)	...
RDPVM2	40.76.15.89	web-vm2	Custom (TCP/5002)	...

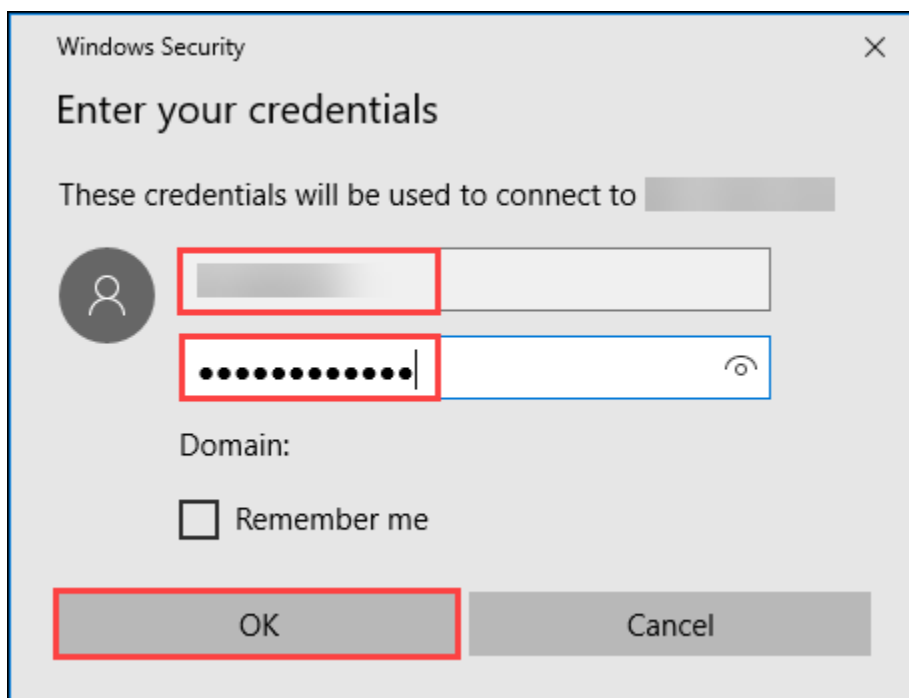
- In your PC, go to **Start Menu>Run**. Type **mstsc** and click **OK**. The **Remote Desktop Connection** window will appear. Copy **web-rdp-lb public IP** from the notepad and paste it in the text box against **Computer** followed by a **colon** and the port number noted from previous step.

Now, your **Remote Desktop Connection** window should look like this:

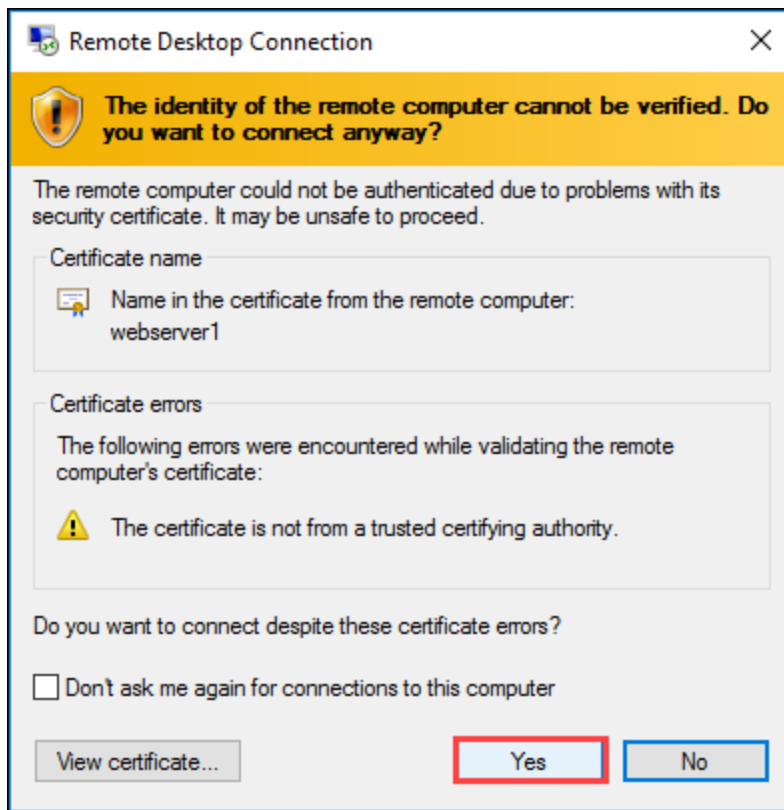


Click **Connect**.

10. In the following window, provide the username and password used while deploying the solution.. Click **OK**.



11. Click **Yes** in the security page.



12. This should open the remote desktop to the virtual machine.

