

## External (Public Facing) Load Balancer

Step – To Setup Public Facing Load Balancer we need to create 2 Virtual Machines, WebVM-1 and WebVM-2 and we need to install IIS Web Server in that both machines, First Login to Azure Portal and Create Windows 2016 Server OS Vms.

The image shows two screenshots from the Azure Portal. The top screenshot is the 'New' page, which displays the Azure Marketplace. A red box highlights the 'Windows Server 2016 VM' option under the 'Popular' section. The bottom screenshot is the 'Create virtual machine' wizard, specifically the 'Basics' tab. A red box highlights the 'Name' field, which contains 'WebVM-1'. Other fields in the 'Basics' tab include 'VM disk type' (HDD), 'User name' (demouser), 'Password', 'Confirm password', 'Subscription' (Visual Studio Enterprise), 'Resource group' (VMRG), and 'Location'. The 'OK' button is visible at the bottom.

Microsoft Azure New

New

Search the Marketplace

Azure Marketplace See all Popular

Get started

Compute

Networking

Storage

Web + Mobile

Databases

Data + Analytics

AI + Cognitive Services

Internet of Things

Windows Server 2016 VM Quickstart tutorial

Ubuntu Server 16.04 LTS VM Quickstart tutorial

Web App Quickstart tutorial

SQL Database Quickstart tutorial

Cosmos DB

Create virtual machine

Basics

1 Basics Configure basic settings

2 Size Choose virtual machine size

3 Settings Configure optional features

4 Purchase Windows Server 2016 Datacent...

\* Name WebVM-1

VM disk type HDD

\* User name demouser

\* Password

\* Confirm password

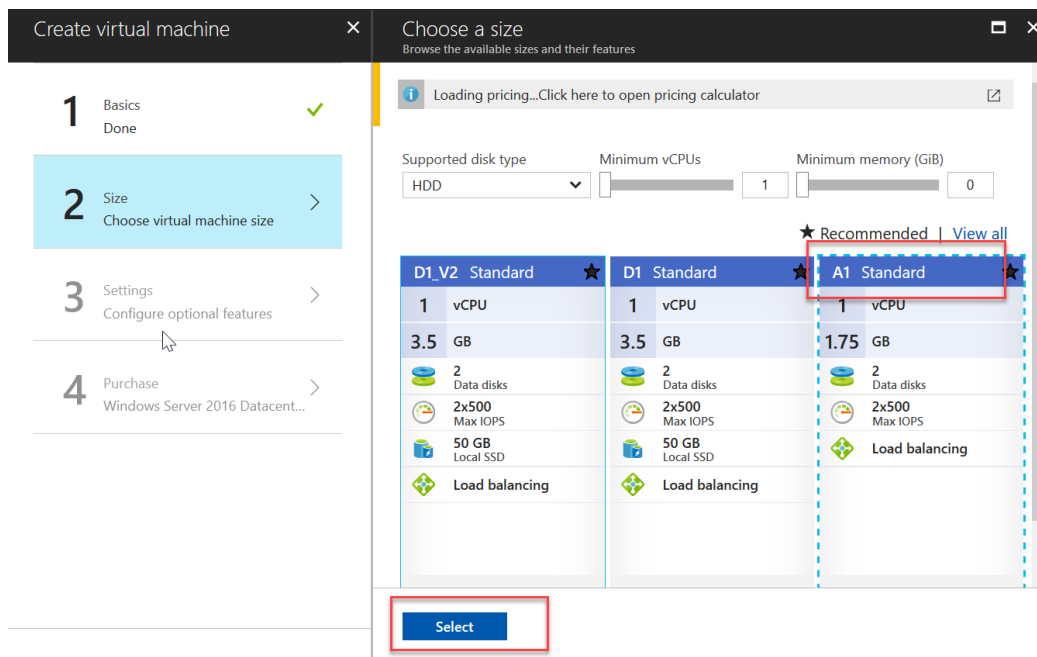
Subscription Visual Studio Enterprise

\* Resource group Create new Use existing VMRG

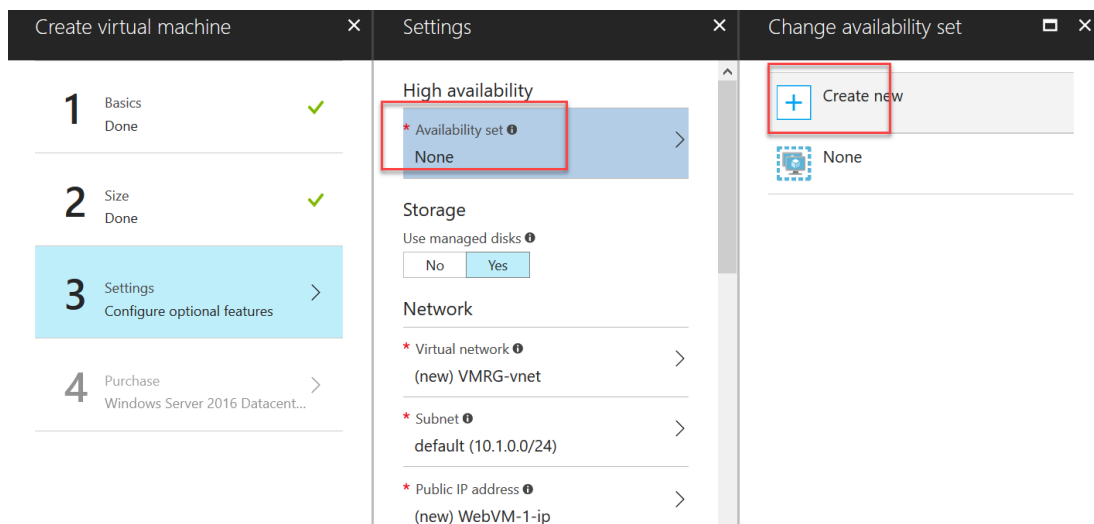
\* Location

OK

Select Standard A1



## Create Availability Set



Create new

\* Name  
webAVSET ✓

Fault domains ⓘ  
2

Update domains ⓘ  
5

Use managed disks ⓘ  
No (Classic) Yes (Aligned)

OK

## Create Virtual Network and App Subnet

Create virtual machine

1 Basics Done ✓

2 Size Done ✓

3 Settings Configure optional features >

4 Purchase Windows Server 2016 Datacent... >

Settings

High availability

\* Availability set ⓘ  
(new) webAVSET >

Storage

Use managed disks ⓘ  
No Yes

Network

\* Virtual network ⓘ  
(new) VMRG-vnet >

\* Subnet ⓘ  
default (10.1.0.0/24) >

\* Public IP address ⓘ  
(new) WebVM-1-ip >

\* Network security group (firewall) ⓘ  
(new) WebVM-1-nsg >

OK

Choose virtual network


These are the virtual networks in the selected subscription and location 'Southeast Asia'.

+ Create new

AzureCourseVNET LBRG

## Create VNET and App Subnet

Create virtual network



The address space '10.0.0.0/16' overlaps with '10.0.0.0/16' in virtual network 'AzureCourseVNET'.

\* Name

AzureCourseVNET1

✓

\* Address space

10.0.0.0/16

✓

10.0.0.0 - 10.0.255.255 (65536 addresses)

\* Subnet name

Apps

✓

\* Subnet address range ⓘ

10.0.0.0/24

✓

10.0.0.0 - 10.0.0.255 (256 addresses)

OK

## Add HTTP Inbound Rule in NSG

Create virtual machine

Settings

Choose network security group...

1 Basics  
Done

2 Size  
Done

3 Settings  
Configure optional features

4 Purchase  
Windows Server 2016 Datacent...

Storage

Use managed disks ⓘ  

No Yes

Network

\* Virtual network ⓘ  
(new) AzureCourseVNET1

\* Subnet ⓘ  
Apps (10.0.0.0/24)

\* Public IP address ⓘ  
(new) WebVM-1-ip

\* Network security group (firewall) ⓘ  
(new) WebVM-1-nsg

Extensions

Extensions ⓘ  
No extensions

OK

These are the network security groups in the selected subscription and location 'Southeast Asia'.

+ Create new

None

Create network security group

\* Name

WebVM-1-nsg

Inbound rules

1000: default-allow-rdp

Any

RDP (TCP/3389)

+ Add an inbound rule

Outbound rules

No results

+ Add an outbound rule

OK

Add inbound security rule

Advanced

Service

HTTP

\* Port ranges

80

\* Priority

100

\* Name

HTTP

Description

OK

Create virtual machine

1 Basics Done

2 Size Done

3 Settings Done

4 Purchase Windows Server 2016 Datacent... >

Purchase

Validation passed

Offer details

Standard A1

by Microsoft

Terms of use | privacy policy

3.9658 INR/hr

Pricing for other VM sizes

Azure resource

You may use your Azure monetary commitment funds or subscription credits for these purchases. Prices presented are retail prices and may not reflect discounts associated with your subscription.

Summary

Terms of use

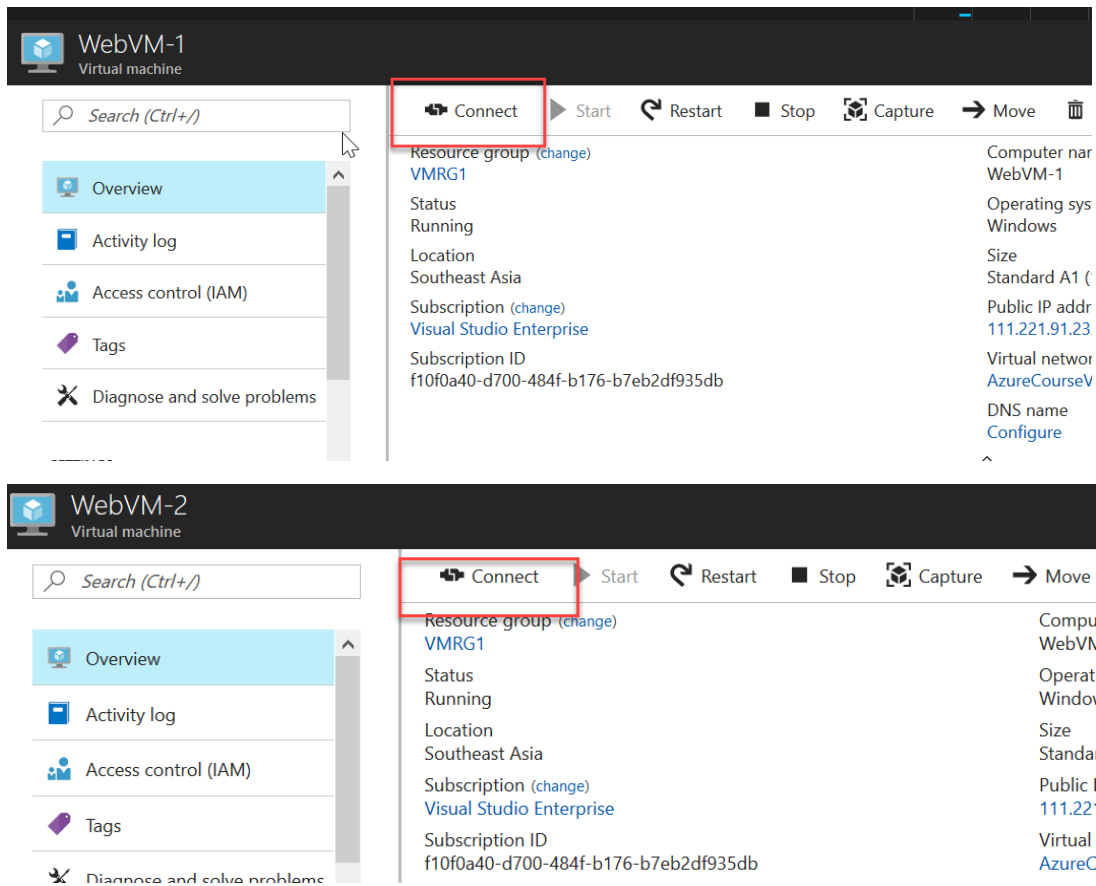
By clicking "Purchase", I (a) agree to the legal terms and privacy statement(s) associated with each Marketplace offering above, (b) authorize Microsoft to charge or bill my current payment method for the fees associated with my use of the offering(s), including applicable taxes, with the same billing frequency as my Azure subscription, until I discontinue use of the offering(s), and (c) agree that Microsoft may share my contact information and transaction details (including usage volume associated with the offering) with the seller(s) of the offering(s) for transactional purposes. Microsoft does not provide rights for third-party products or services. See the Azure

Purchase

Download template and parameters

Like same as WebVM – 1, Start Creating WebVM-2 Windows Server 2016 OS and WebVM-2 should be in same Availability Set and Same VNET and Same App Subnet. Also in NSG add inbound rule HTTP.

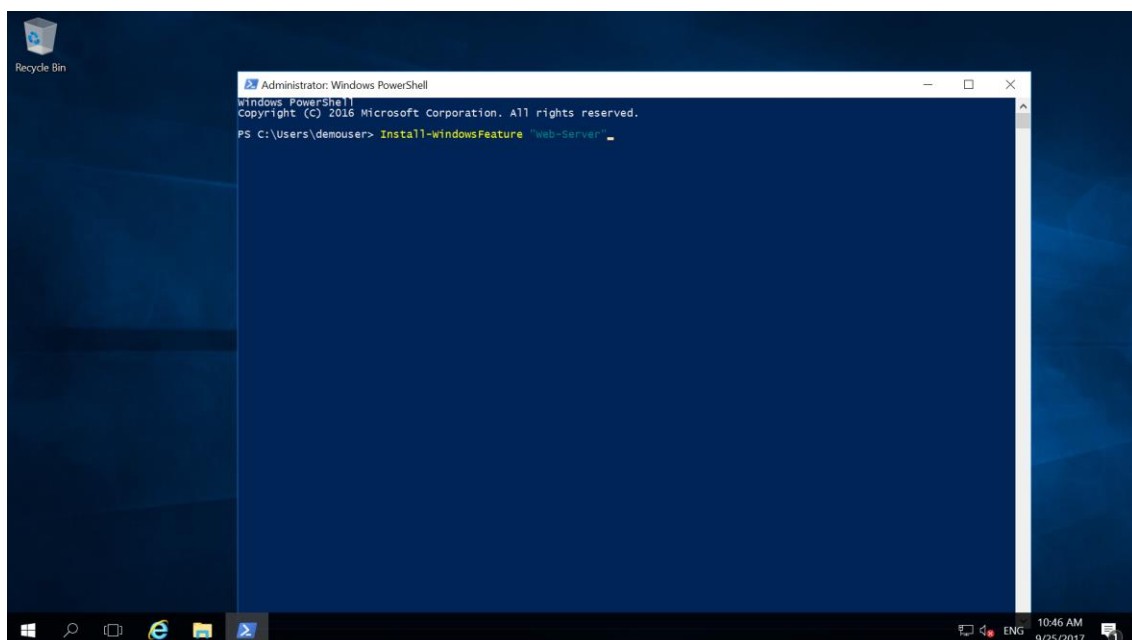
Now Download RDP files of both WebVM-1 and WebVM-2 and Remotely access both the VMs and Open PowerShell and Install Web Server (IIS).



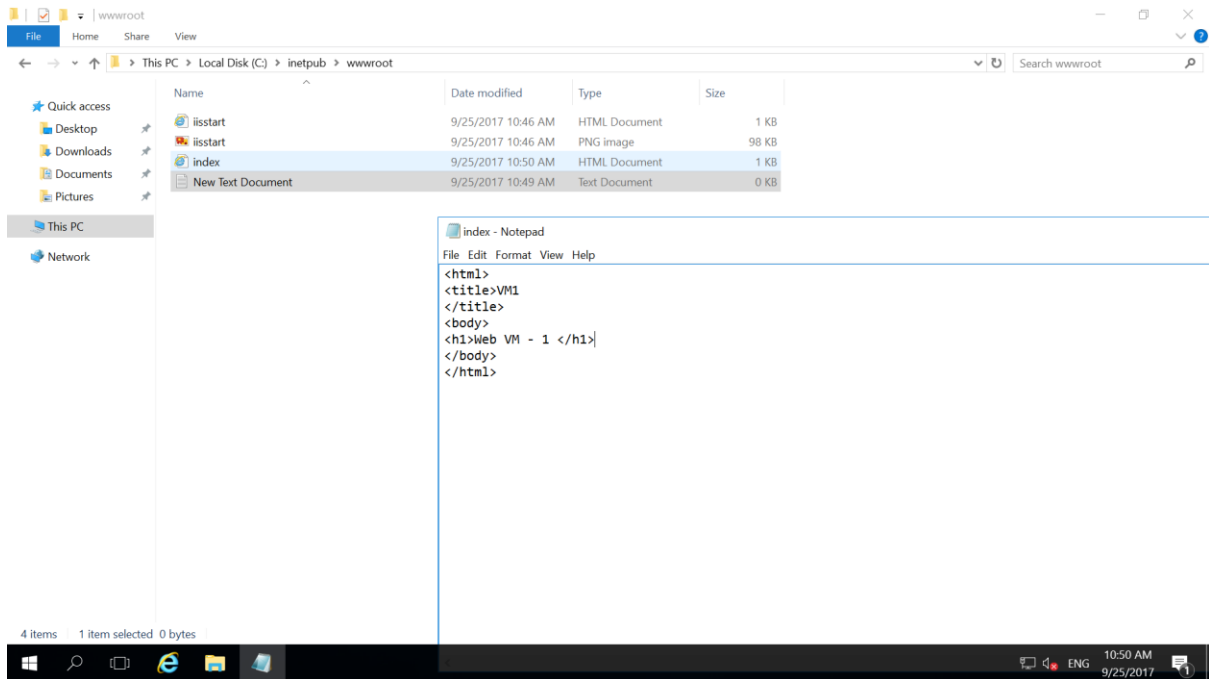
Open PowerShell and Type Following Command :

**Install-WindowsFeature "Web-Server"**

In Both the VMs







Html code –

```
<html>
```

```
<title>VM1
```

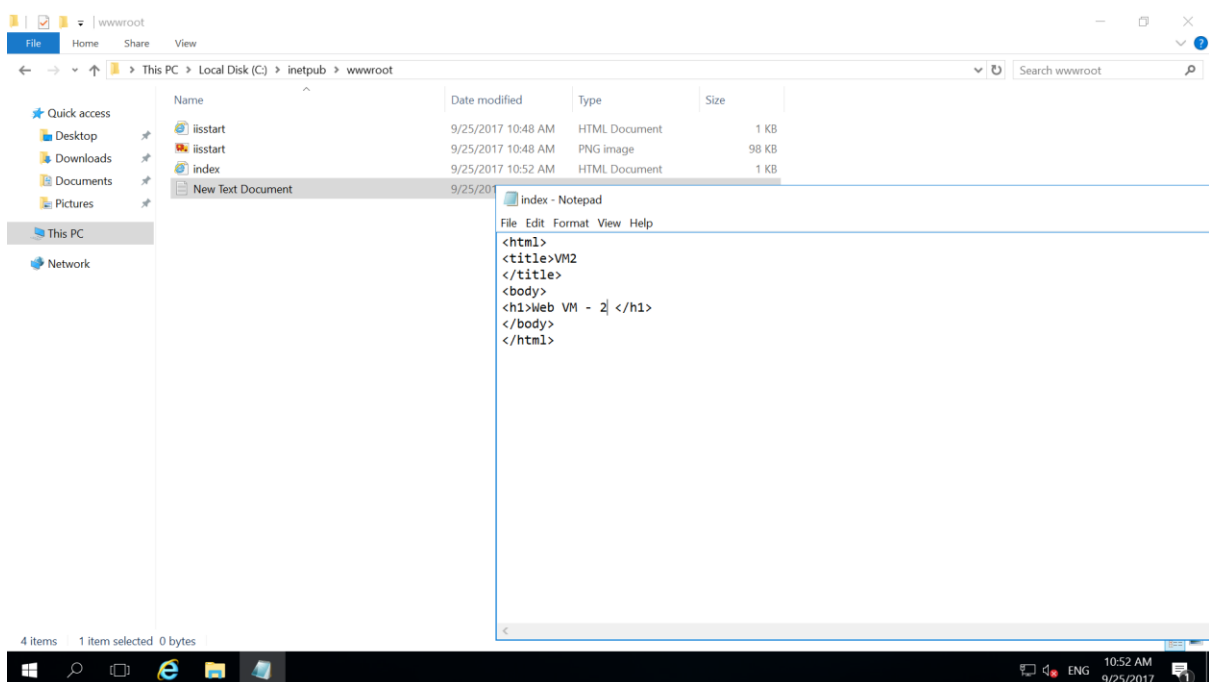
```
</title>
```

```
<body>
```

```
<h1>Web VM - 1 </h1>
```

```
</body>
```

```
</html>
```





```
<html>

<title>VM2

</title>

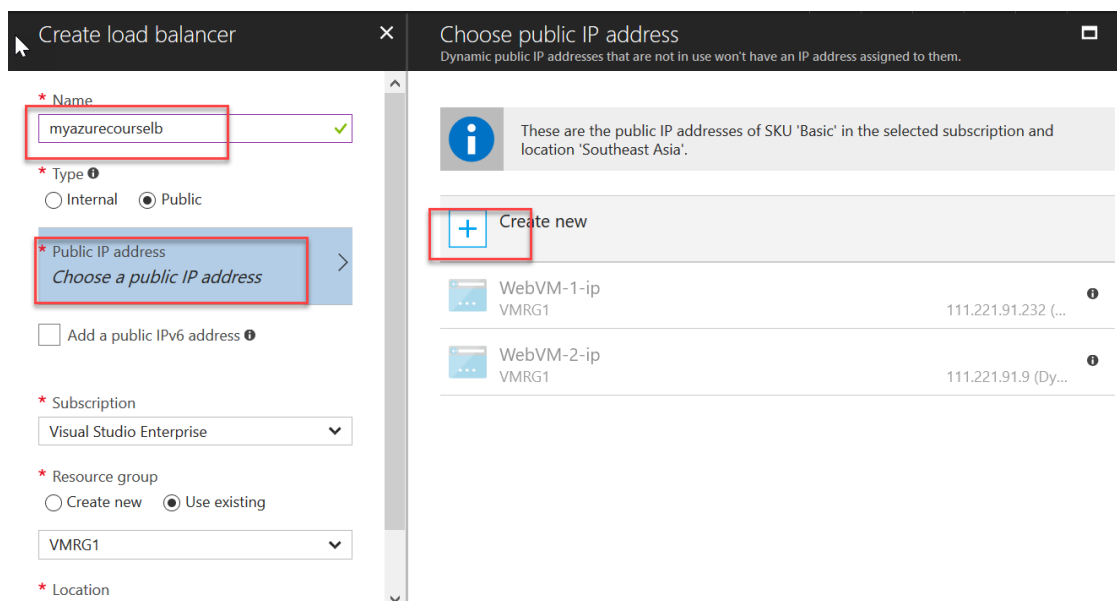
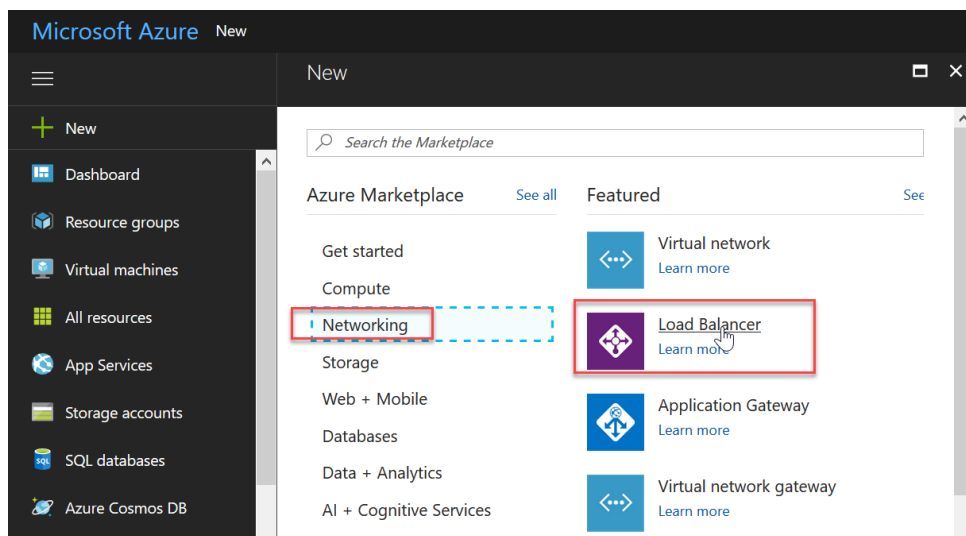
<body>

<h1>Web VM - 2 </h1>

</body>

</html>
```

## Create Load Balancer



Create public IP address

\* Name  
myazurecourselpip

Assignment  
☒ Dynamic ☐ Static

OK

myazurecourselp Load balancer

Search (Ctrl+/)

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

SETTINGS

Frontend IP configuration

Backend pools

Health probes

Load balancing rules

Move Delete Refresh

Essentials

Resource group (change)  
VMRG1

Location  
Southeast Asia

Subscription name (change)  
Visual Studio Enterprise

Subscription ID  
f10f0a40-d700-484f-b176-b7eb2df935db

Backend pool  
-

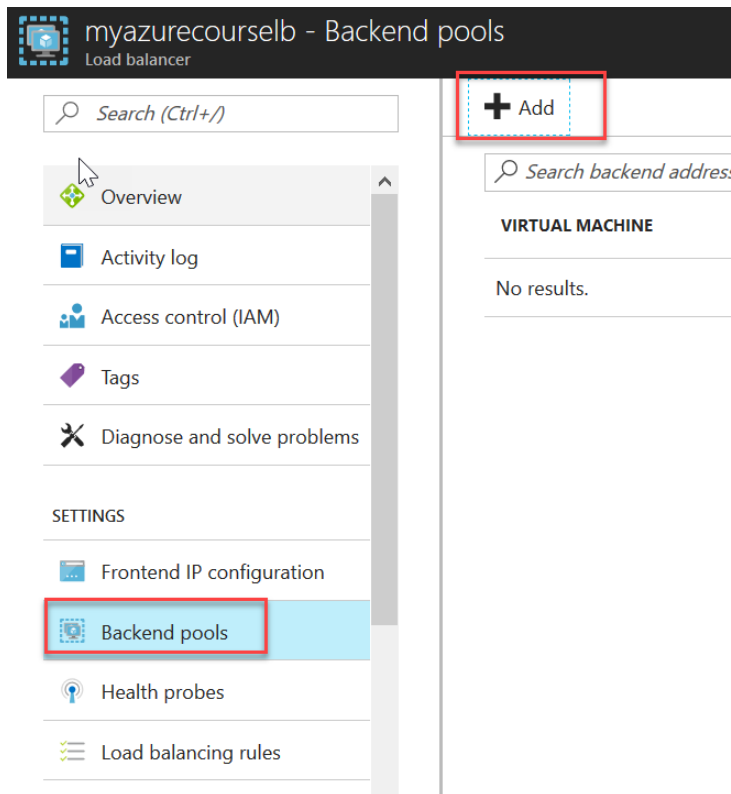
Health probe  
-

Load balancing rule  
-

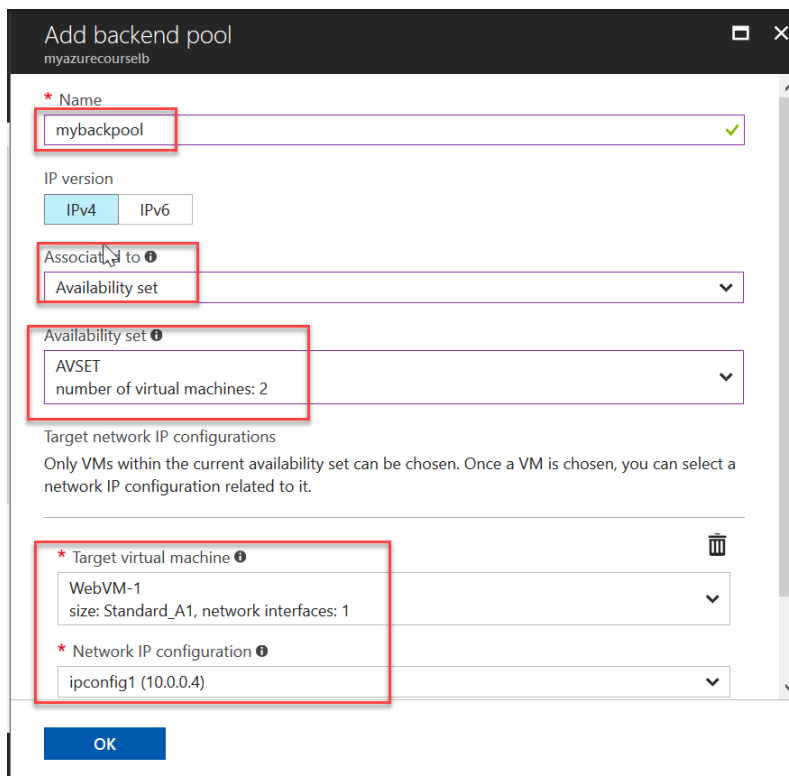
NAT rules  
-

Public IP address  
myazurecourselpip

Add Backend Pool (Both VMs)



Add Both the VMs in Backend Pool



Add Second WebVM-2 by Clicking on Add a target network IP configuration

Virtual machine: WebVM-1  
Network IP configuration: webvm-1548/ipconfig1 (10.0.0.4)

\* Target virtual machine ⓘ  
WebVM-2  
size: Standard\_A1, network interfaces: 1

\* Network IP configuration ⓘ  
ipconfig1 (10.0.0.5)

+ Add a target network IP configuration

OK

Now create Health Probe

myazurecourselb - Health probes  
Load balancer

Search (Ctrl+/)

+ Add

Search probes

NAME

No results.

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

SETTINGS

Frontend IP configuration

Backend pools

Health probes

Load balancing rules

Inbound NAT rules

Add Health Probe

Add health probe

myazurecourselb

\*

Name

myhealthprb

✓

IP version

IPv4

Protocol

HTTP

TCP

\*

Port

80

\*

Path ⓘ

/

\*

Interval ⓘ

10

✓

seconds

\*

Unhealthy threshold ⓘ

2

consecutive failures

OK

Now Create Load Balancing Rules -> Add

myazurecourselb - Load balancing rules

Load balancer

Search (Ctrl+ /)

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

SETTINGS

Frontend IP configuration

Backend pools

Health probes

Load balancing rules

Inbound NAT rules

+ Add

Search load balancing rules

NAME	LOAD BALANCING RULE
No results.	

Add load balancing rule  
myazurecourselb

\* Name  
mylbrule ✓

\* IP Version  
☒ IPv4 ☐ IPv6

\* Frontend IP address ⓘ  
LoadBalancerFrontEnd

Protocol  
☒ TCP ☐ UDP

\* Port  
80

\* Backend port ⓘ  
80

Backend pool ⓘ  
mybackpool (2 virtual machines)

Health probe ⓘ  
myhealthprb (HTTP:80)

OK

Copy Public IP of Load Balancer and paste in deferent browsers to check LB is working or not?

myazurecourselb  
Load balancer

Search (Ctrl+/)

Overview  
Activity log  
Access control (IAM)  
Tags  
Diagnose and solve problems

SETTINGS  
Frontend IP configuration

Move Delete Refresh

Essentials ^

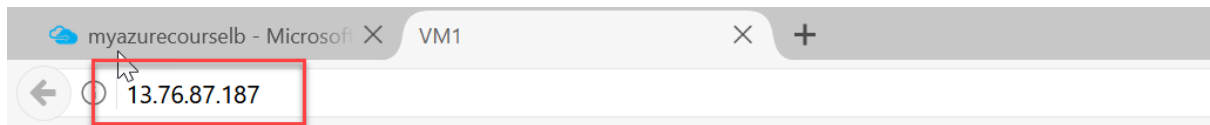
Resource group (change)  
VMRG1  
Location  
Southeast Asia  
Subscription name (change)  
Visual Studio Enterprise  
Subscription ID  
f10f0a40-d700-484f-b176-b7eb2df935db

Backend pool  
mybackpool (2 virtual machines)  
Health probe  
myhealthprb (HTTP:80)  
Load balancing rule  
mylbrule (TCP/80)  
NAT rules

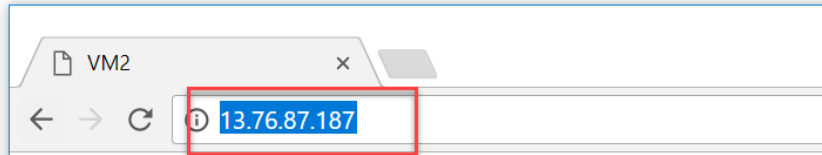
Public IP address  
13.76.87.187 (myazurecourselbpip)

Click to copy

Check LB is working



## Web VM - 1



## Web VM - 2