

AZURE LOAD BALANCER

Azure load balancer is a layer 4 load balancer that distributes incoming traffic among healthy virtual machine instances. Load balancers use a hash-based distribution algorithm.

Goto -> Search -> Load Balancers -> Select -> Add

The screenshot shows the Azure portal search results for the term 'load'. The search bar at the top contains 'load'. Below the search bar, there are four main sections: Services, Marketplace, Documentation, and Resource Groups. The Services section is expanded, showing a list of services including 'Load balancers' (highlighted in yellow), 'Load balancing - help me choose (Preview)', 'CloudAMQP', 'CloudMonix', 'Workload Insights', 'CloudSimple Nodes', 'CloudSimple Services', 'CloudTest Images', 'CloudTest Pools', and 'Cloud services (classic)'. The Marketplace section shows a list of products including 'LoadMaster Load Balancer ADC Content Swit', 'Advanced Load Balancer / ADC', 'Gatling FrontLine - Load Testing', and 'KoçSistem Azure Load Balancer Management'. The Documentation section has links to 'Azure Load Balancer portal settings | Microsoft C', 'Outbound rules Azure Load Balancer | Microsoft', 'Insights for Azure Load Balancer | Microsoft Doc', and 'Azure security baseline for Azure Load Balancer'. The Resource Groups section shows 'No results were found.'.

[Home](#) > [Load balancers](#) >

Create load balancer

destination port, protocol type) hash to map traffic to available servers. Load balancers can either be internet-facing where it is accessible via public IP addresses, or internal where it is only accessible from a virtual network. Azure load balancers also support Network Address Translation (NAT) to route traffic between public and private IP addresses. [Learn more.](#)

Project details

Subscription *

Resource group *

Instance details

Name *

Region *

Type * ☐ Internal ☒ Public

SKU * ☒ Basic ☐ Standard

Tier ☒ Regional ☐ Global

Public IP address

Public IP address * ☒ Create new ☐ Use existing

Public IP address name *

Public IP address SKU Basic

IP address assignment * ☒ Dynamic ☐ Static

Add a public IPv6 address ☒ No ☐ Yes

[Review + create](#)

[< Previous](#)

[Next : Tags >](#)

[Download a template for automation](#)

Resource group : RG
Name : RG-TESTLB
Region : West US
Public IP address : Create new

REST ALL LEAVE AS DEFAULTS AND CLICK REVIEW & CREATE.

Now we will add Backend Pool to connect VMs,

Name : BACKEND-POOL
Associated to : Virtual Machines

REST ALL LEAVE AS DEFAULTS AND CLICK ADD.

Now we will add health probe to monitor the traffic,

Name : HEALTH-PROBE
Protocol : TCP
Port : 80
Interval : 5
Unhealthy threshold : 2
and click add.

After creating Backend Pool and Health Probe, we need to set Load balancing rules to allow traffic to HTTP (80).

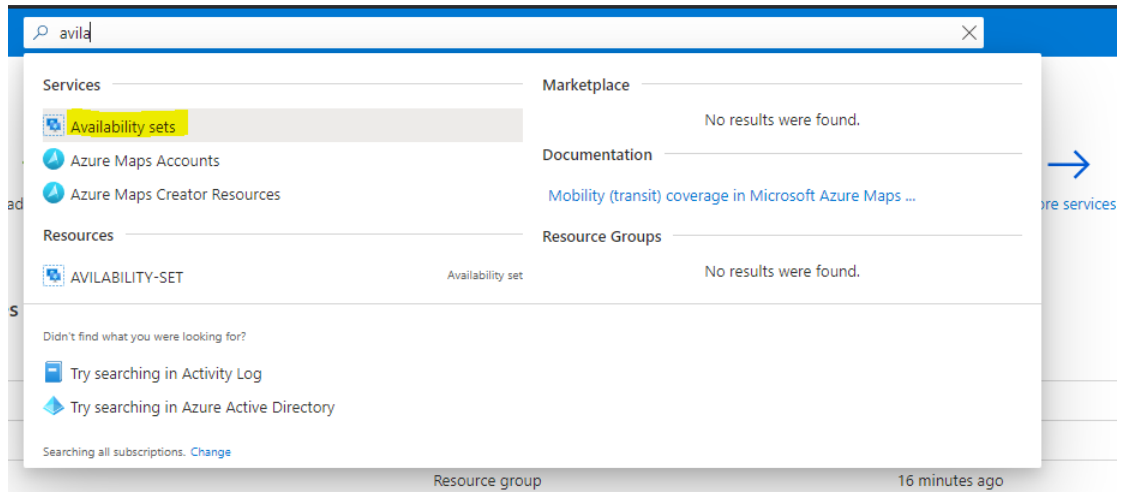
Name : RG-TESTLB-HTTP-RULE
IP Version : IPv4
Frontend IP address : LoadBalancerFrontEnd
Protocol : TCP
Port : 80
Backend port : 80
Backend pool : BACKEND-POOL
Health probe : HEALTH-PROBE
Idle timeout : 5

REST ALL LEAVE AS DEFAULTS AND CLICK OK.

Backend pool	Virtual machine	Virtual machine status	Network interface	Private IP address	Availability zone
> BACKEND-POOL (3 virtual machines)					

+ Add					
Search probes					
Name	↑↓	Protocol	↑↓	Port	↑↓
HEALTH-PROBE		TCP		80	RG-TESTLB-HTTP-RULE
Name	↑↓	Load balancing rule	↑↓	Backend pool	↑↓
RG-TESTLB-HTTP-RULE		RG-TESTLB-HTTP-RULE (TCP/80)		BACKEND-POOL	HEALTH-PROBE

Goto -> Search -> Availability sets -> Select -> create



Resource group : RG

Name : AVILABILITY-SET

Region : West US

REST ALL LEAVE AS DEFAULTS AND CLICK REVIEW & CREATE.

Home > Availability sets >

Create availability set

Basics Advanced Tags Review + create

An Availability Set is a logical grouping capability for isolating VM resources from each other when they're deployed. Azure makes sure that the VMs you place within an Availability Set run across multiple physical servers, compute racks, storage units, and network switches. If a hardware or software failure happens, only a subset of your VMs are impacted and your overall solution stays operational. Availability Sets are essential for building reliable cloud solutions. [Learn more about availability sets.](#)

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ Free Trial ▼

Resource group * ⓘ Create new ▼

Instance details

Name * ⓘ

Region * ⓘ (US) West US ▼

Fault domains ⓘ 2

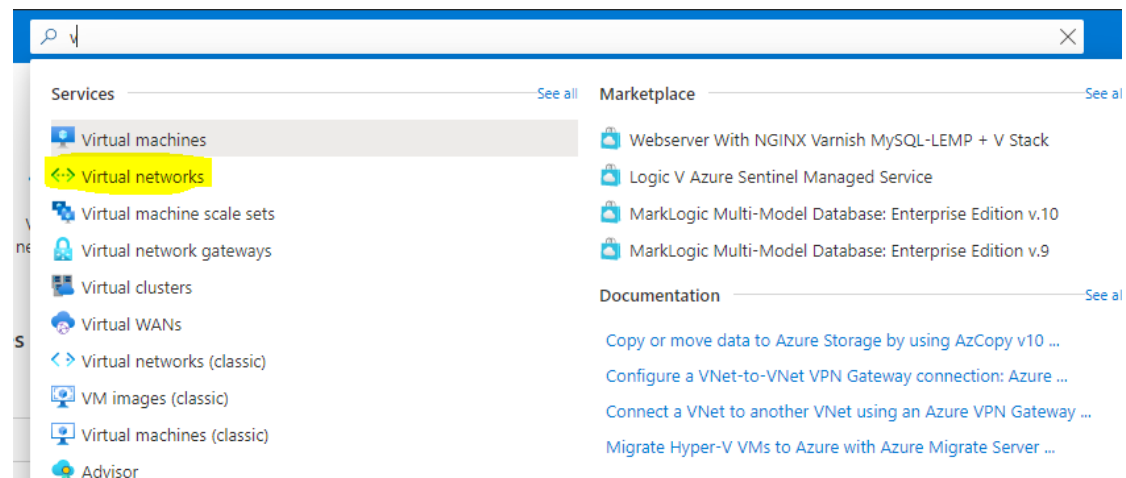
Update domains ⓘ 5

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

Review + create < Previous Next : Advanced >

Now we will create VNet,

Goto -> Search -> Virtual Networks -> Select -> create



Resource group : RG

Name : VNET

Region : West US

Subnet name : MY-BACKEND-SUBNET

Subnet address range : 10.1.0.0/24

BastionHost : Enable

Bastion name : MY-BASTION-HOST

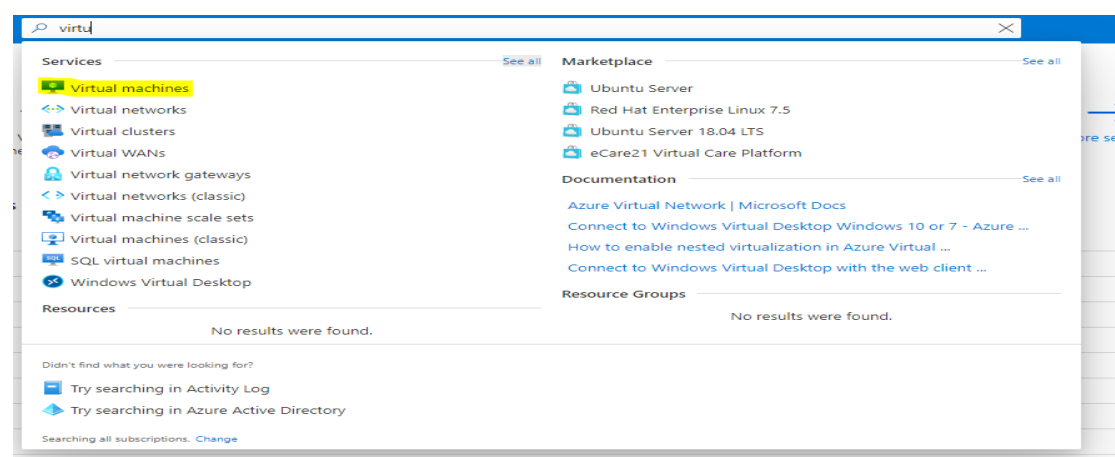
AzureBastionSubnet address space : 10.1.1.0/24

Public IP address : RG-BASTION-PUBIP

REST ALL LEAVE AS DEFAULTS AND CLICK REVIEW & CREATE.

Now we will create VMs

Goto -> Search -> Virtual Machines -> Select -> create



Name : VM1
Region : West US
Availability options : Availability set
Image : Windows Server 2019 Datacenter
Username : USERNAME OF YOUR CHOICE
Password : PASSWORD OF YOUR CHOICE
Virtual network : VNET
NIC network security group : Advanced
Configure network security group : Create new
Name : NSG
Inbound rules : +Add an inbound rule
Destination Port : 80
Priority : 100
Name : HTTP-RULE

REST ALL LEAVE AS DEFAULTS AND CLICK REVIEW & CREATE.

Create VM2 & VM3 using above process.

After creating VMs, go to load balancer RG-TESTLB -> Backend pools ->
Click on backend pool we've created earlier ->
Click on +Add under Virtual Machines -> Select VM1, VM2 & VM3 -> Add

Now remote login into servers one by one via RDP, and install ISS web server using below commands in powershell.

install IIS server role

Install-WindowsFeature -name Web-Server -IncludeManagementTools

remove default htm file

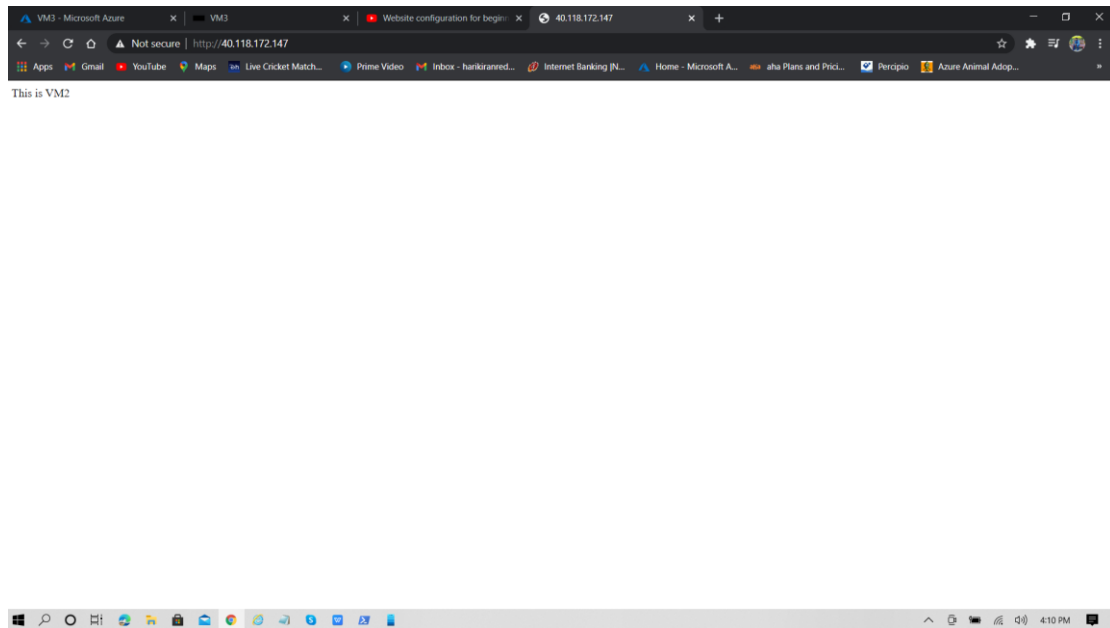
remove-item C:\inetpub\wwwroot\iisstart.htm

Add a new htm file that displays server name

Add-Content -Path "C:\inetpub\wwwroot\iisstart.htm" -Value \$("Hello World from " + \$env:computername)

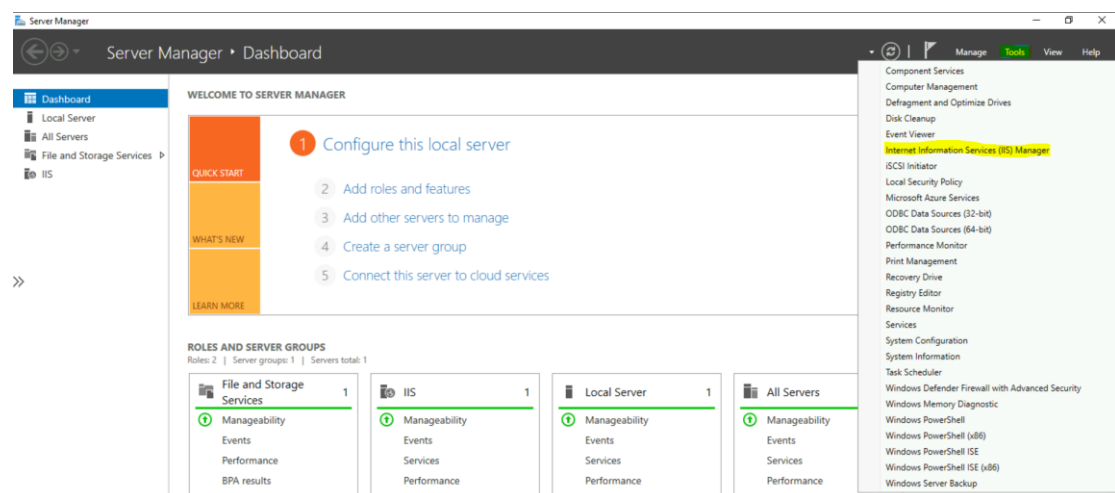
TESTING LOADBALANCER

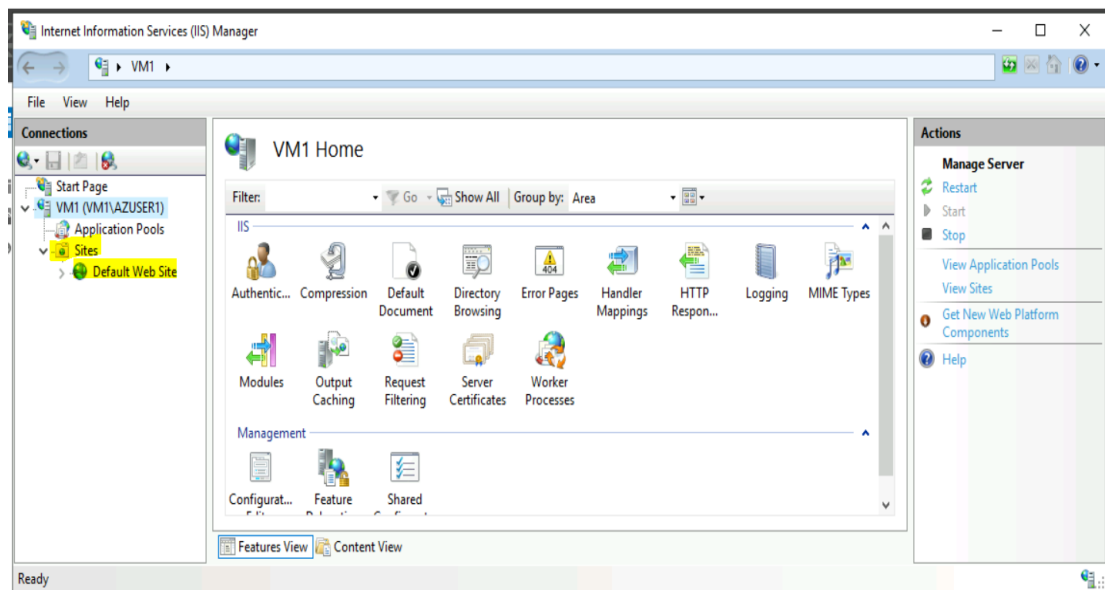
Copy the public ip address of Load Balancer and paste it in web browser. The default page of IIS Web server is displayed on the web browser. To see the load balancer distribute traffic across all three VMs, you can customize the default page of each VM's IIS Web server.



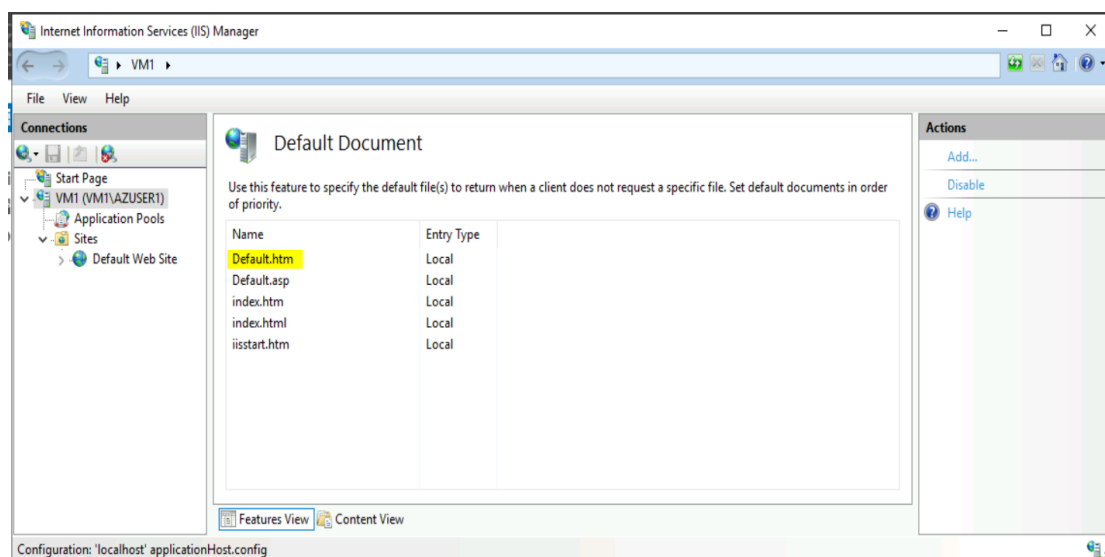
Customizing default page in ISS web server

Goto -> Tools -> Internet Information Service (IIS) Manager -> Sites





Double Click on Default Document and you can see default.htm file in 1st row.



Now goto File Explorer -> C: drive -> inetpub -> wwwroot -> delete the two files with name iisstart -> create new text file -> Type This is VM1 in text file -> save file as **default.htm** in same file path **C:\inetpub\wwwroot**.

Come back and check the default.htm is available in Internet Information Services (IIS) Manager as observed earlier.

Do the same process in VM2 & VM3 with customized default.htm files and paste the public ip address of load balancer in web browser and you should be able to observe the load balancing between virtual machines.

