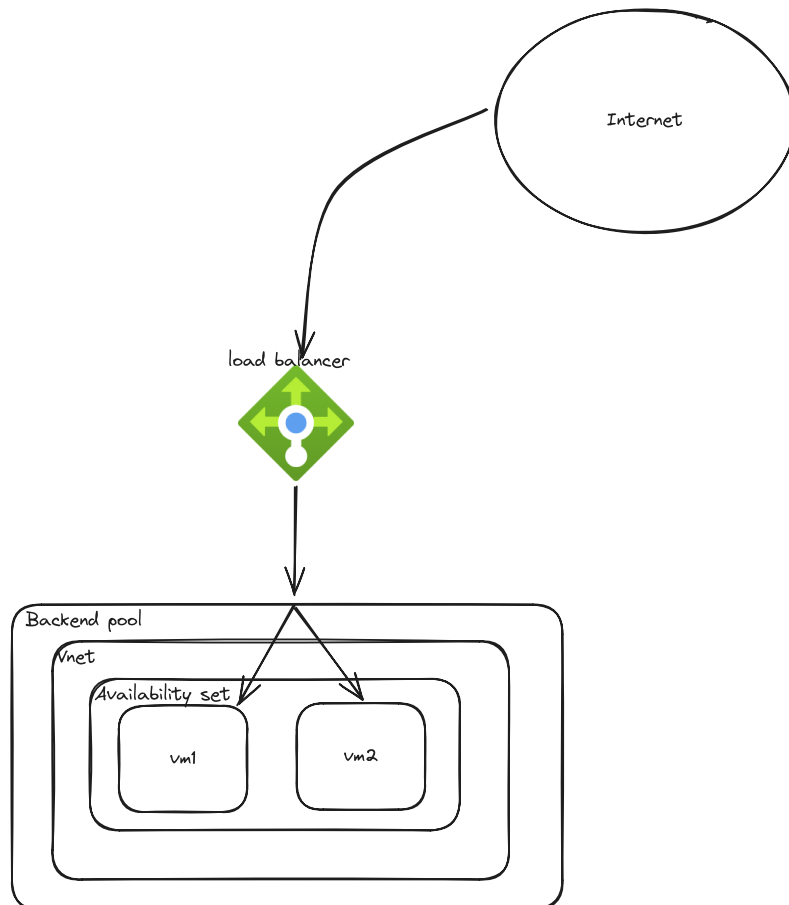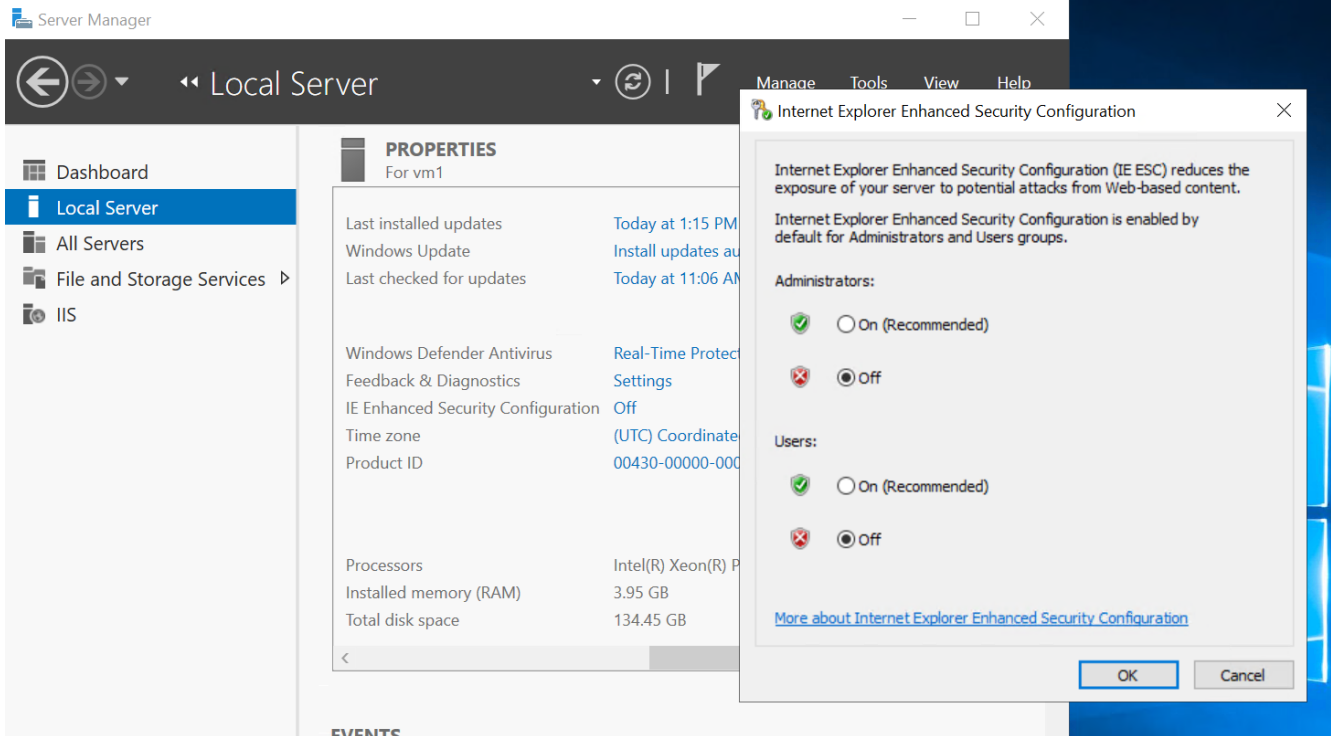# public-Load-balancers

Architecture

---

pre requisites

1. created a *virtual network*

2. 3 VM's in one *Availability set*

3. inside VM

1.

2. Go to `manage` > `Add roles and Features` > Next > `Install web server (IIS)` > next > install

3. Go to `Tools` > `Internet Information Service Manager`

4. modified HTML page.

4. Created a `public Load balancer`

5. Created a backend pool

6. Add the vm's to the `backend-pool`

7. created a Health probe

8. In the health probe, the `interval` is used as a <u>wait time in seconds</u> for sending a `message` to the VM for the health acknowledgement.

9. The `Un-healthy threshold` is the number of times the `message` to be sent if any unexpected occurs to the VM.

10. configure the load balancer to connect the backend pool to the frontend configuration.

11. As the load balancer is used to route `HTTP` traffic. configure the port number 80 in load balancer rule.

- The public ip address of VM will be the same as public ip of Load balancer. It doesn't mean the public ip of vms are de-allocated.

load-balancer

Add front-end configuration

Add frontend IP configuration
lb

Name *	Frontend IP configuration name	
IP version	⦿ IPv4 ○ IPv6	
IP type	⦿ IP address ○ IP prefix	
Public IP address *	Choose public IP address ⌄	
	Create new	
Gateway Load balancer ⓘ	None ⌄	

+ Add ↻ Refresh 🗨 Give feedback

🔍 Filter by name...

Name ↑↓	IP address ↑↓	Rules c
lb-frontend	20.253.55.74 (frontend-ip)	1

create a back-end pool and attach the VM's to it.

Backend pools ☆ ⋯   ✕
alancer

+ Add ↻ Refresh

The backend pool is a critical component of the load balancer. The backend pool defines the group of resources that will serve traffic for a given load-balancing rule. Learn more. ↗

🔍   ▽ Add

	Backend pool	Resource Name	IP address	Network interface	Availability zone	Rules count	Resource Status
⌄	backend-pool (3) 🗑						
	backend-pool	vm1	10.0.0.4	vm1698	-	1	Running
	backend-pool	vm2	10.0.0.5	vm2363	-	1	Running
	backend-pool	vm3	10.0.0.6	vm392	-	1	Running

Add a health probe

Add health probe ⋯
lb

ⓘ Health probes are used to check the status of a backend pool instance. If the health probe fails to get a response from a backend instance then no new connections will be sent to that backend instance until the health probe succeeds again.

Name *	Health Probe Name
Protocol *	TCP ⌄
Port * ⓘ	80
Interval (seconds) * ⓘ	5
Used by * ⓘ	Not used

+ Add ↻ Refresh 🗨 Give feedback

🔍 Type to start filtering ...

Name	Protocol	Port	Path	Used By
hr	Tcp	80	-	rule1

Add load-balancer rules

rule1 ...
lb

A load balancing rule distributes incoming traffic that is sent to a selected IP address and port combination across a group of backend pool instances. Only backend instances that the health probe considers healthy receive new traffic.

Name *   rule1   *

IP Version *   ● IPv4

                                        ○ IPv6

Frontend IP address * ⓘ   lb-frontend (20.253.55.74)   ⌄

Backend pool * ⓘ   backend-pool   ⌄

Protocol   ● TCP

                                        ○ UDP

Port *   80

Backend port * ⓘ   80

Health probe * ⓘ   hr (TCP:80)   ⌄
                                        Create new

Session persistence ⓘ   None   ⌄

Idle timeout (minutes) * ⓘ   4

Enable TCP Reset   ☐

Enable Floating IP ⓘ   ☐

Outbound source network address   ● (Recommended) Use outbound rules to provide backend pool members
translation (SNAT) ⓘ   access to the internet. Learn more. ⧉

                                        ○ Use default port allocation to provide backend pool members with a minimal
                                          set of SNAT ports. This is not recommended because it can cause SNAT port
                                          exhaustion. Learn more. ⧉