Cloud Computing

LAB 5

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Abstract

- Load Balancer
- LB on Virtual Machine
- LB on Cloud

Why use Load Balancer?

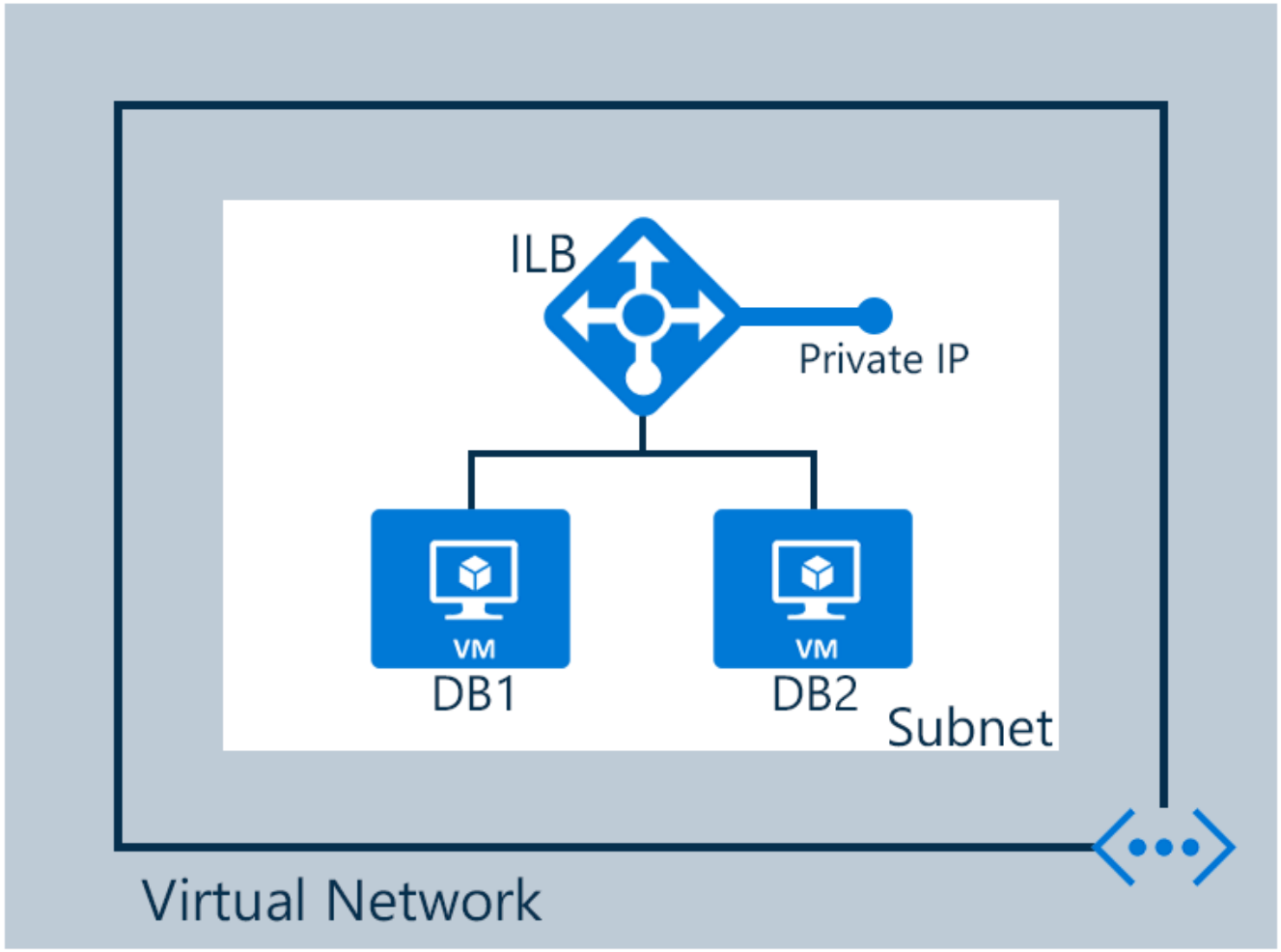
Load Balancer can be used to:

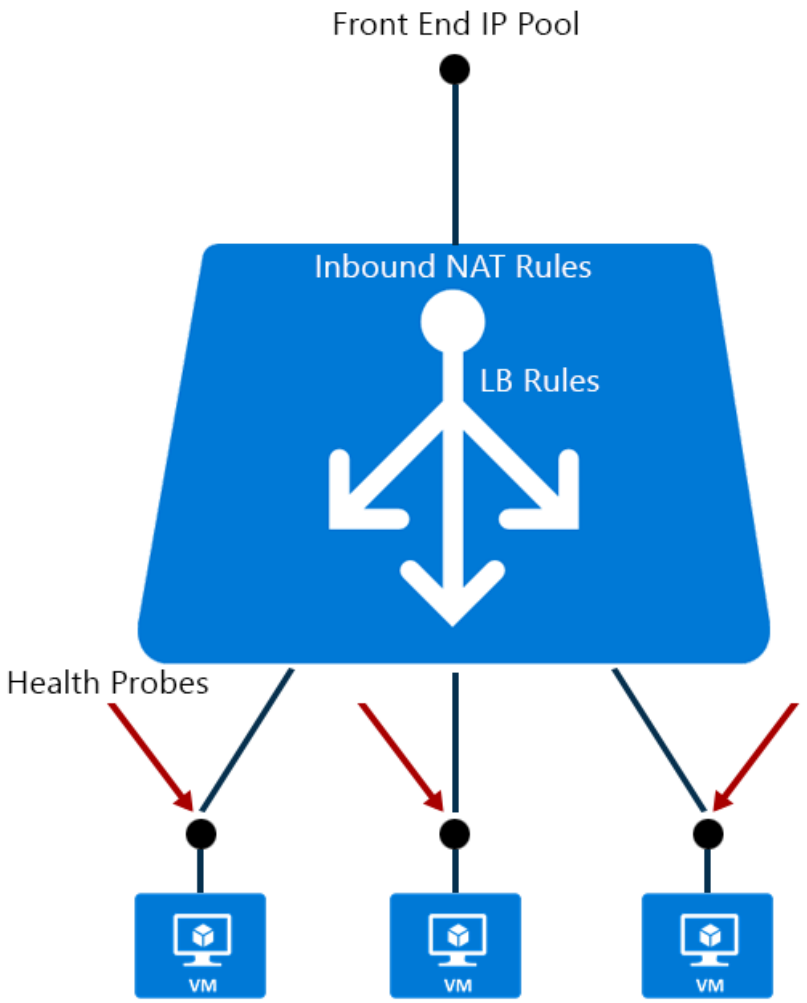
- Load balance incoming Internet traffic to virtual machines. This configuration is known as a public Load Balancer.
- Load balance traffic between virtual machines inside a virtual network. You can also reach a Load Balancer frontend from an on-premises network in a hybrid scenario. Both of these scenarios use a configuration that is known as an internal Load Balancer.
- Port forward traffic to a specific port on specific virtual machines with inbound Network address translation (NAT) rules.
- Provide outbound connectivity for virtual machines inside your virtual network by using a public Load Balancer.

What is Load Balancer

A Load Balancer resource can exist as either a public Load Balancer or an internal Load Balancer. The Load Balancer resource's functions are expressed as a frontend, a rule, a health probe, and a backend pool definition. Virtual machines are placed into the backend pool by specifying the backend pool from the virtual machine.

Load Balancer resources are objects within which you can express how Cloud Service should program its multi-tenant infrastructure to achieve the scenario you wish to create. There is no direct relationship between Load Balancer resources and actual infrastructure; creating a Load Balancer doesn't create an instance and capacity is always available.


ILB
Private IP
VM
DB1
VM
DB2
Subnet
Virtual Network


Front End IP Pool
Inbound NAT Rules
LB Rules
Health Probes
VM
VM
VM

Advantages of deploying a load balancer

- Easier deployment because you do not have to set up a network of web servers and then configure the web server plug-ins.

- More load balancing algorithm alternatives are available. Load balancers often offer more algorithms than the ones provided by web server plug-ins, including advanced load-based balancing strategies that monitor usage levels on individual computers.

Disadvantages of deploying a load balancer

- Additional configuration is required. You must perform additional configuration to maintain persistent connections between clients and servers (web server plug-ins handle persistent connection maintenance automatically). Also, you must re-configure the load balancer whenever the downstream cluster topology changes (for example, when a node is added or removed).

- Hardware-based load balancers typically cost more.

DEMO
Configure LB on Cloud

Thank You!