Celebal Assignment-6

Step 1: Set Up Backend Servers

1. Create Virtual Machines (VMs)

- **Open the Azure portal.**
- **Navigate to "Virtual machines."**
- **Click on "Add" to create a new VM.**
- **Choose your subscription, resource group, and give your VM a name.**
- **Select the region and image (e.g., Windows Server or Ubuntu).**
- **Choose the VM size.**
- **Configure the authentication type and username/password.**
- **Add inbound port rules for HTTP/HTTPS.**
- **Review and create the VM.**
- **Repeat the steps to create additional VMs as needed.**

Step 2: Create an External Load Balancer

1. Create a Public Load Balancer

- **In the Azure portal, navigate to "Create a resource."**
- **Search for and select "Load Balancer."**
- **Click on "Create" and choose "Load Balancer."**
- **Select the subscription and resource group.**
- **Enter the name for the load balancer.**
- **Select "Region" and "SKU."**
- **Choose "Public" for the type.**
- **Create a new public IP address or select an existing one.**
- **Review and create the load balancer.**

2. Configure Backend Pool

- **Navigate to the created load balancer.**
- **Under "Settings," select "Backend pools."**
- **Click on "Add" and enter the name.**
- **Select the virtual network and add the VMs to the backend pool.**

3. Configure Health Probes

- **Under "Settings," select "Health probes."**
- **Click on "Add" and enter the name.**
- **Choose the protocol, port, and other settings.**
- **Click "OK" to create the health probe.**

4. Configure Load Balancing Rules

- **Under "Settings," select "Load balancing rules."**
- **Click on "Add" and enter the name.**

- Select the frontend IP, protocol, and port.
- Choose the backend pool and health probe.
- Configure session persistence and idle timeout settings.
- Click "OK" to create the load balancing rule.

Step 3: Create an Internal Load Balancer

1. Create an Internal Load Balancer

- In the Azure portal, navigate to "Create a resource."
- Search for and select "Load Balancer."
- Click on "Create" and choose "Load Balancer."
- Select the subscription and resource group.
- Enter the name for the load balancer.
- Select "Region" and "SKU."
- Choose "Internal" for the type.
- Select the virtual network and subnet.
- Review and create the load balancer.

2. Configure Backend Pool

- Navigate to the created load balancer.
- Under "Settings," select "Backend pools."
- Click on "Add" and enter the name.
- Select the virtual network and add the VMs to the backend pool.

3. Configure Health Probes

- Under "Settings," select "Health probes."
- Click on "Add" and enter the name.
- Choose the protocol, port, and other settings.
- Click "OK" to create the health probe.

4. Configure Load Balancing Rules

- Under "Settings," select "Load balancing rules."
- Click on "Add" and enter the name.
- Select the frontend IP, protocol, and port.
- Choose the backend pool and health probe.
- Configure session persistence and idle timeout settings.
- Click "OK" to create the load balancing rule.

Step 4: Verify the Setup

1. External Load Balancer

- Obtain the public IP address of the external load balancer from the Azure portal.
- Open a web browser and navigate to the IP address.
- You should see responses from your backend VMs.

2. Internal Load Balancer

- **SSH into a VM within the same virtual network as the internal load balancer.**
- **Use curl or a web browser on that VM to access the internal IP address of the load balancer.**
- **You should see responses from your backend VMs.**

 # For the external load balancer, use its public IP address

curl http://<external-load-balancer-public-IP>

 # For the internal load balancer, use its internal IP address

curl http://<internal-load-balancer-internal-IP>