Azure Public and Private Load Balancer Setup

Prerequisites

- Azure subscription
- SSH key pair downloaded

Public Load Balancer Setup

1. Create Resources

- **Resource Group**: `LB`
- **Virtual Network**: `LBVNET`
- **Virtual Machines**: `VM1`, `VM2`
  - Ubuntu Server
  - Size: `Standard_D2s_v3`
  - NSG Rules: `HTTP-80`, `HTTPS-443`, `SSH-22`

2. SSH into Both VMs

```
cd Downloads
chmod 400 key.pem
ssh -i key.pem atul@20.51.112.68
ssh -i key.pem atul@48.221.120.162
```

3. Install Apache on Each VM

```
sudo apt update
sudo apt install apache2 -y
sudo systemctl start apache2
sudo systemctl enable apache2
cd /var/www/html
sudo rm index.html
sudo touch index.html
sudo nano index.html
```

- VM1 → `<h1>Webserver 1</h1>`

- VM2 → `<h1>Webserver 2</h1>`

4. Note Public IPs of VM1 & VM2

5. Create Public Load Balancer

- Azure Portal → **Load Balancers → Create → Standard → Public**

6. Configure

- **Frontend IP** → Create Public IP
- **Backend Pool** → `mybackendpool` (select VM1 & VM2 via VNet)
- **Health Probe** → `myhealthprobe` (Port `80`)
- **Load Balancing Rule** → Port `80 → 80`

7. Test

- Open the Load Balancer Public IP in browser → traffic should switch between VM1 & VM2

Private Internal Load Balancer Setup

1. Create VM3

- OS: **Windows Server 2025**
- **Login using RDP** → Open Edge/Chrome Browser

2. Create Internal Load Balancer

- Azure Portal → **Load Balancers → Create → Standard → Internal**

3. Configure

- **Frontend IP** → Create private IP allocation
- **Backend Pool** → `mybackendpool` (select VM1 & VM2)
- **Health Probe** → Port `80`
- **LB Rule** → `80 → 80`

4. Test

- From VM3, browse internal **Load Balancer IP** → Should load Webserver 1 & 2

Public LB = Internet-facing access **Private LB = Internal VNet-only access**

Let me know if you want **diagram, Terraform, or screenshot-based documentation next!**