**Documentation: Deploying Static Website using Load Balancer by ARM Template**

**1. Website Development**

A **static pet shop website** was created using HTML, CSS, and JavaScript.

**2. Uploading the Website to GitHub**

The frontend of the website was uploaded to a public GitHub repository: [Pet Shop Website] (<https://github.com/TaraiPriyanka/arm_template.git> ).

**3. Deploying Resources on Azure Using ARM Templates**

**Resource Group:** Created using Azure CLI to contain all resources.

**Virtual Network (VNet):** Defined in an ARM template with subnets for VM distribution.

**Network Security Group (NSG):** Configured to allow traffic on ports **\*\*22 (SSH) and 80 (HTTP)\*\***.

**4. Virtual Machines Setup**

**VM 1:** Deployed with networking configurations and an automated script to fetch website files.

**Custom Script:**

  #!/bin/bash

  sudo apt update

  sudo apt install nginx git -y

  cd /tmp && git clone <https://github.com/TaraiPriyanka/arm_template.git> mysitee

  sudo rm -rf /var/www/html/index.nginx-debian.html

  sudo cp -r /tmp/mysitee/\* /var/www/html/

**VM 2:** Deployed with identical configuration to VM 1.

**5. Load Balancer Configuration**

**Load Balancer:** Configured to distribute traffic between VM 1 and VM 2.

**Frontend IP Configuration:** Assigned a public IP for external access.

**Backend Pool:** Added both VMs to the backend pool.

**Load Balancing Rule:** Defined to balance HTTP traffic (port 80).

**Health Probe:** Set up to monitor VM health and ensure continuous availability.

**6. Testing and Accessing the Website**

The website was accessed through the **Load Balancer’s frontend IP**, ensuring load-balanced traffic distribution.

**How to Use the Pet Shop Website**

1. Browse the collection of pet products and services.

2. Read detailed product descriptions.

3. Add favourite items to the cart for purchase.

**Azure Services and Tools Used**

**Azure CLI** - For resource provisioning.

**Azure Resource Manager (ARM) Templates** - Infrastructure automation.

**Virtual Network (VNet)** - Secure networking.

**Network Security Group (NSG)**- Access control.

**Azure Virtual Machines (VMs)** - Hosting static content.

**Azure Load Balancer** - Ensuring high availability.

**Nginx** - Web server for serving static files.

**Git** - Cloning website files.

**Custom Script Extension** - Automating VM setup.

This project successfully demonstrates the deployment of a **highly available static pet shop website** using Azure’s infrastructure. By utilizing an **Azure Load Balancer** and **ARM templates**, we achieved **scalability, high availability, and automated deployments**. The project highlights the potential of **Infrastructure as Code (IaC)** in cloud computing.