

Azure Architecture Description :

1. Resource Group

All components are organized within a single resource group for simplified management, cost tracking, and deployment control.

2. Virtual Network (VNet)

One virtual network is defined to provide secure, isolated communication between all resources.

3. Subnets

The VNet contains two subnets:

- subnet1 for web resources
- subnet2 for database resources

4. Web Subnet (subnet1)

- Contains **two virtual machines (VMs)** running Windows Server and IIS
- A **Load Balancer** distributes HTTP traffic between the two VMs
- The entire subnet is protected by a **Network Security Group (NSG)** to allow only specific traffic (e.g., HTTP & RDP)

5. Database Subnet (subnet2)

- Hosts an **Azure SQL Database**
- Access is restricted using a **Private Endpoint**, ensuring the database is only accessible from within the VNet

6. Private DNS Zone

- A Private DNS Zone (privatelink.database.windows.net) is linked to the VNet to resolve the SQL database via the private endpoint

7. Azure File Share

- A file share is created and **mounted to both VMs** in subnet1 as drive Z:, allowing shared access to files and logs

8. Monitoring and Alerts

- A **Log Analytics Workspace** is configured to collect metrics (e.g., CPU usage)
- An **Alert Rule** is created to notify when CPU usage exceeds 80% on any VM

9. Automation

- An **Azure Automation Account** is configured
- A **Runbook** is scheduled to shut down VMs every night at 11 PM (Montreal time), helping reduce cost during idle hours