

Overview

Contoso is an online training provider.

Existing Environment

The existing environment for Contoso currently consists of the following resources

- An on-premise data centre that hosts an Active Directory forest named Contoso.com
- The Active Directory contains users from different departments - IT, Finance, HR
- The following table shows the On-premise infrastructure. All servers are running in a virtualized environment

On-premise server name	Type of Virtualization	Virtual Machine name
Contoso-ser1	VMware vCenter server	demovm
Contoso-ser2	Hyper-V host	demovm-test

- There are 2 web applications that are hosted on the On-premise environment. The overall details of the web applications are given below
 - Programming Language - .Net
 - Average memory used for each application – 1 GB

Proposed Environment

- Contoso is looking towards purchasing an Azure subscription and setting up their environment in Azure
- The 2 web applications are going to be containerized using Docker. They are going to be deployed to Kubernetes clusters on Azure.
- A Kubernetes cluster with the name of “contosocluster” is to be setup in Azure.
- Active Directory users need to be synched onto Azure AD
- The following Virtual Networks and subnets are going to be setup in Azure

Virtual Network name	Address space
Contoso-net1	10.0.0.0/16
Contoso-net2	10.1.0.0/16

Subnet name	Virtual Network name	Address space
SubnetA	Contoso-net1	10.0.1.0/24
SubnetB	Contoso-net2	10.1.1.0/24

Requirements

- Ensure security is implemented across all Azure based deployments.

- Minimize costs wherever possible
- There should be an encrypted connection between the On-premise data centre and the Virtual Network Contoso-net2
- Incoming Network packets for a virtual machine created in SubnetA need to be captured.
- Users who log into the Azure Portal from untrusted locations need to authenticate using Multi-factor authentication