**Azure**

**21-04-2025**

Devops is a combination of tools, practices, cultural philosophythat helps in delivering high quality software faster and more quality through automation and collaboration.

**Gate Management in Devops:** It acts as a control checkpoint. It has a gate where it checks whether the process can be moved to further stage or not.

**Different Cloud Service Models**

IaaS ( Infrastructure as a Service): It is a model where complete infrastructure is provided by the cloud provider such as virtual machines, storage, networks

Advantages:

**Complete Control**

**Access to any type of cloud resource**

**Pay as you go**

**Scalability**

**Elastic IP:** Assigned fixed public IP to a resource

**Self service provisioning:** It defines defining resources on our own

**Different ways to access and create resources in Azure:**

i) Azure ARM Template

ii) Azure Bicep

iii) Azure Portal

iv) Terraform

**Categories of Cloud:**

**Public:** Shared all over the world

**Private:** Shared across a organization or a group

**Hybrid:** Mix of Public and Private clouds

**PaaS ( Platform as a Service ):** It provides a platform to deploy and develop the applications. You can consider all NFRs can come under the PaaS.

**Advantages:**

Scalability

Deployment & Control

Ownership & control

Data & Application Responsibility

**SaaS ( Software as a Service ):** It provides software applications to ready use

Advantages of SaaS:

Web based access

Multi tenant architecture

Accessibility from anywhere

Lower upfront cost

Scalability

Flexibility

Accessibility

Usability

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Strategy- long term

Tactics - Short term steps taken to solve Non Functional Requirements

**Bastian Host:** Acts as a controlled intermediary that administrators or users can use to access internal virtual machines (VMs) without exposing those VMs directly to the internet.

**Zone:** Independent Data center in a region

**Vnet:** It is a network that spans across a region. Vnet is specific to account.

**Scaleset Service:** Autoscale the number of vms. We need to create load balancer infront of a scale set.

**Fault Domain:** Distribute VMs across multiple fault domains

**Azure Files:** It is a managed file share service in the cloud that uses the standard Server Message Block (SMB) protocol. It allows multiple clients to mount and share files concurrently.