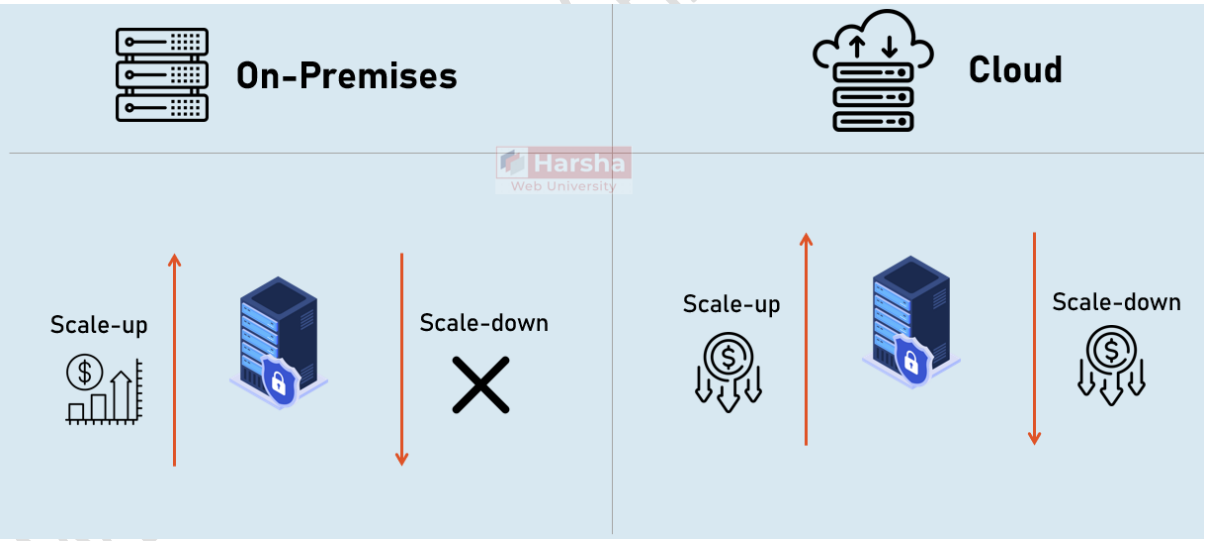
.NET Core Microservices – True Ultimate Guide

Section 12 – Azure – Cheat Sheet

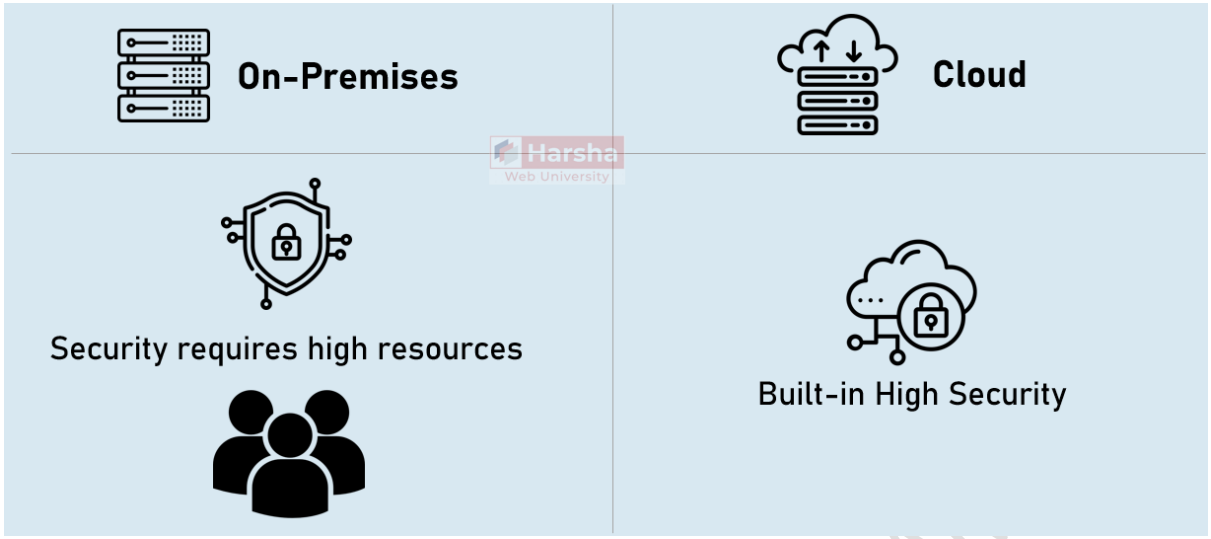
Introduction to Cloud Computing

Cloud computing refers to the delivery of computing services — including servers, storage, databases, networking, software, and analytics — over the internet.

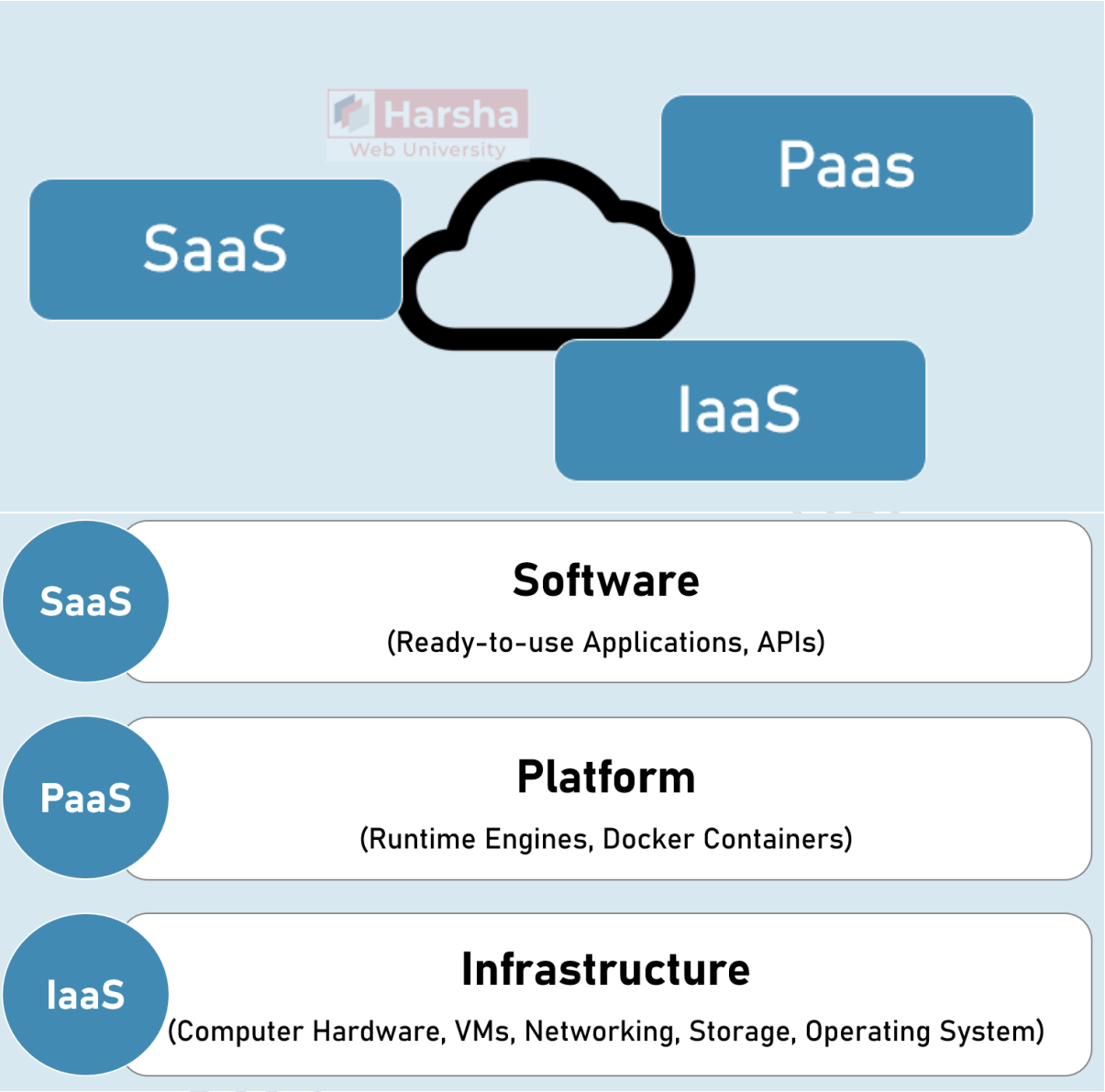
On-premises vs Cloud - Scaling



On-premises vs Cloud - Security

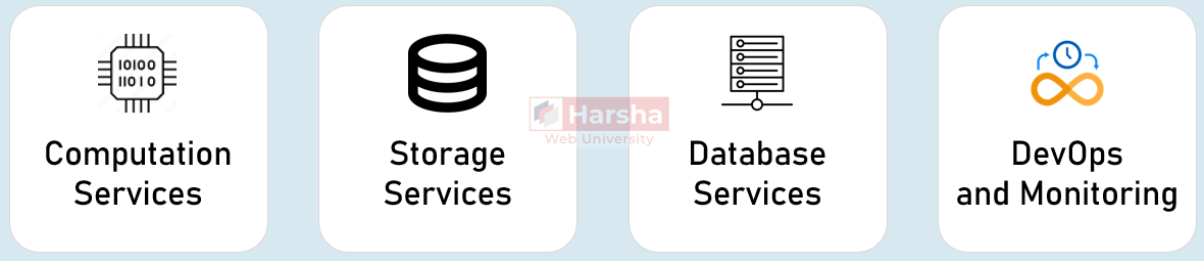


Cloud Service Models



Introduction to Azure

Azure is Microsoft's cloud platform offering a wide range of services for building, deploying, and managing applications globally, established as a leading provider since its launch in 2010.



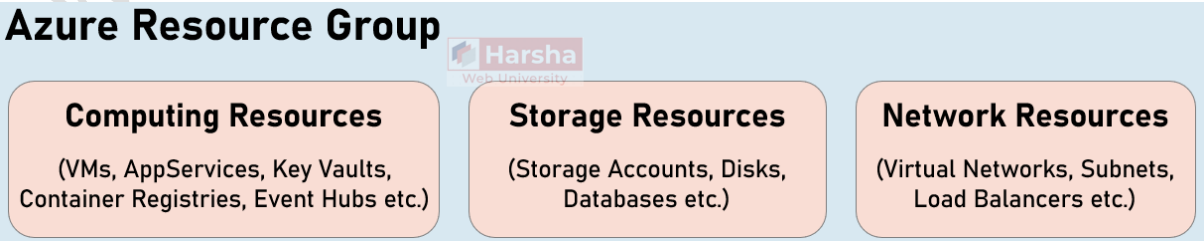
Azure CLI

The Azure CLI is a cross-platform tool for managing Azure resources via the command line.

It allows you to create, configure, and automate Azure tasks using simple commands on Windows, macOS, and Linux.

Azure Resource Groups

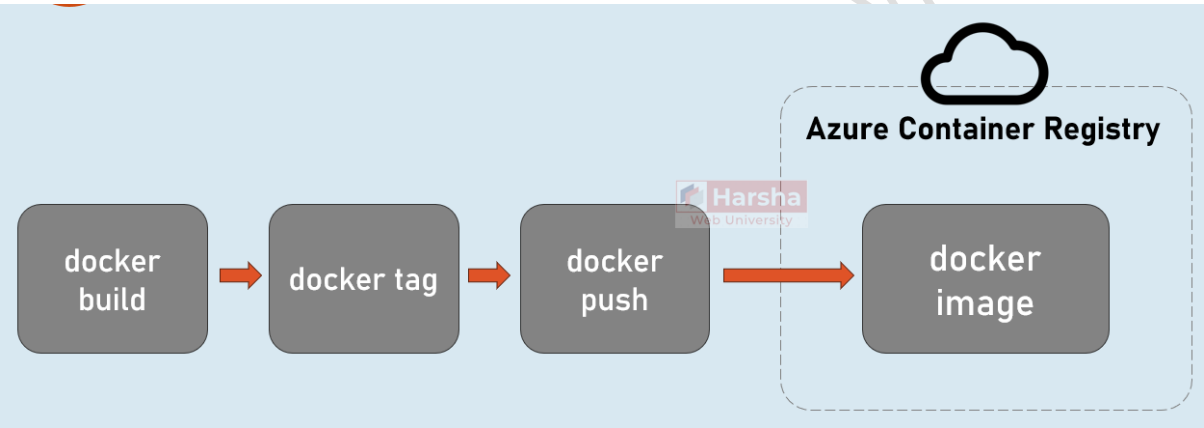
An Azure Resource Group is a logical container for grouping related Azure resources, simplifying management and deployment.



Azure Container Registry

Azure Container Registry (ACR) is a managed service for storing, managing, and deploying container images privately within Azure.

ACR – How does it work?



ACR – Why to use it?

Security and Access Control

Performance

Integration with other Azure Resources

AppService vs Azure Container Apps AKS

AppService [vs] Azure Container Apps [vs] AKS

AppService

1. Supports both Web Apps and Web APIs.
2. Actually made for both compiled code but supports containers also.
3. Easy to scale up / out.
4. Not suitable for microservices.

Container Apps

1. Serverless.
2. Auto-Scaling.
3. Supports both stateless and stateful containers.
4. Designed for simple microservices.

1. **AKS**
2. Best for medium to high complex microservice architecture.
3. Supports all features of Kubernetes.
4. Supports scalability.
5. Deep control on containers.

AppService

Azure App Service is a fully managed platform-as-a-service (PaaS) offering that enables developers to build, deploy, and scale web applications without managing the underlying infrastructure.

It provides a scalable, secure, and reliable environment for hosting web apps and RESTful APIs (either directly compiled source code or containers).

Limitations of AppService

- Limited Container Support
- No Support for Orchestration
- Not Microservice-Friendly

Azure Container Apps

Azure Container Apps is a serverless platform for running containerized applications without managing underlying infrastructure. It offers automatic scaling, efficient resource utilization, and simplified deployment for modern cloud-native applications.