CODE IQ HUB

Microsoft Azure Cloud Services :

- Microsoft **Azure** is a **cloud computing platform** created by Microsoft.
- It provides a wide range of **services** (like servers, databases, networking, AI tools, and storage) over the internet instead of using physical hardware at your place.
- In simple words - **Azure lets you build, run, and manage applications or services in the cloud without worrying about buying and maintaining actual servers.**
- **Available in 60+ regions worldwide, ensuring fast and reliable access everywhere.**
- **Scalability & Flexibility → Resources can scale up or down instantly based on demand.**

8-Week Microsoft Azure Cloud Services Roadmap (2025)

Phase 1: Foundations (Weeks 1–2) :

🔹 Understand Cloud Basics

- What is Cloud Computing (IaaS, PaaS, SaaS)?
- Public vs Private vs Hybrid Cloud
- Azure Global Infrastructure → Regions, Availability Zones
- Shared Responsibility Model

Hands-on:

- Create a Free Azure Account
- Explore Azure Portal, Azure CLI, and Azure PowerShell
- Create your first Resource Group

Goal: Be ready for **AZ-900 (Azure Fundamentals)** exam.

Phase 2: Core Azure Services (Weeks 3–6) :

- Learn the backbone services that most companies use.

Compute :

- Virtual Machines (Windows/Linux)
- App Services (host websites)
- Azure Functions (serverless computing)
- Azure Kubernetes Service (basics)

Hands-on:

Launch a VM, deploy a sample app.

Networking :

- Virtual Networks (VNets), Subnets
- Network Security Groups (NSGs)
- VPN Gateway, Azure Bastion
- Load Balancer vs Application Gateway
- DNS & ExpressRoute basics

Hands-on:

Create a VNet with 2 subnets and secure access.

Storage :

- Blob Storage (hot, cool, archive)
- File Storage & Disk Storage
- Storage Accounts
- Azure Backup & Site Recovery

Hands-on:

Upload/download files in Blob Storage.

Databases :

- Azure SQL Database
- Cosmos DB (NoSQL)
- Azure Database for MySQL/PostgreSQL
- Basics of Azure Synapse

Hands-on:

Create an Azure SQL Database & connect to a VM.

Goal: Comfortably deploy apps with Compute + Storage + Networking.

Phase 3: Identity, Security & Monitoring (Weeks 7–8) :

- Learn how to protect and manage Azure resources.
  - Azure Active Directory (Users, Groups, RBAC)
  - Multi-Factor Authentication (MFA)
  - Azure Key Vault (manage secrets)
  - Microsoft Defender for Cloud
  - Azure Firewall & DDoS Protection
  - Azure Monitor, Log Analytics, and Alerts
  - Azure Policy & Cost Management

Hands-on:

- Create a new user in Azure AD & assign RBAC roles
- Set a budget alert
- Create a Cloud Monitor alert for VM CPU usage

Goal: Be ready for **AZ-104 (Administrator Associate)** exam.

Phase 4: Networking Specialization (Weeks 8–9) :

- Dive deeper into networking if you want to specialize.
  - Virtual WAN, Peering
  - Advanced Load Balancer configs
  - Application Gateway + Web Application Firewall
  - ExpressRoute (private connectivity)
  - Hybrid networking with VPNs
  - Azure Bastion for secure remote access

Hands-on:

Build a secure VNet with Load Balancer + Application Gateway.

Goal: Be ready for **AZ-700 (Network Engineer Associate)** exam.

Career After This Roadmap :

- **Azure Cloud Administrator (AZ-104)**
- **Azure Network Engineer (AZ-700)**
- **Cloud Support Engineer (AZ-900 + basics)**