

## Week 1: Introduction to Azure Cloud

Begin your journey with a deep dive into the fundamentals of Azure, its architecture, and its global reach.

Key Training Components:

- **What is Azure?:** Overview of Azure and its role in modern cloud computing.
- **Azure Global Infrastructure:** Understand regions, availability zones, and resource groups.
- **Shared Responsibility Model:** Learn security responsibilities in Azure.
- **Azure Pricing and Cost Management:** Explore pricing calculators, cost management tools, and subscription models.

## Week 2: Azure Account Setup and Governance

Learn how to create and manage your Azure account while maintaining governance and security.

Key Training Components:

- **Azure Portal:** Navigate and utilize the Azure portal effectively.
- **Azure Resource Manager (ARM):** Understand ARM templates for infrastructure as code.
- **Azure Policy and Blueprints:** Implement governance policies and standardized environments.
- **Role-Based Access Control (RBAC):** Manage permissions and access control.

## Week 3: Compute Services with Azure Virtual Machines (VMs)

Dive into Azure compute services to deploy, manage, and scale virtual machines.

Key Training Components:

- **Azure Virtual Machines:** Provision and manage Linux and Windows VMs.
- **VM Scaling:** Configure scale sets for high availability and fault tolerance.
- **Azure Bastion:** Securely manage VMs without public IPs.
- **Azure Load Balancer:** Distribute traffic across multiple VMs.

## Week 4: Azure Storage and Content Delivery

Explore Azure's robust storage solutions and methods for delivering content globally.

Key Training Components:

- **Azure Storage:** Understand Blob, Table, Queue, and File storage services.
- **Azure Storage Explorer:** Manage and interact with Azure Storage.
- **Azure CDN:** Accelerate content delivery using the Content Delivery Network.
- **Data Lifecycle Management:** Implement tiering and retention policies for cost optimization.

## Week 5: Networking in Azure

Master Azure networking services to build and secure virtual networks.

## Key Training Components:

- **Azure Virtual Network (VNet):** Create and configure VNets, subnets, and network interfaces.
- **Networking Tools:** Use Network Security Groups (NSGs), Application Gateways, and Azure Firewall.
- **Hybrid Networking:** Set up VPNs and ExpressRoute for hybrid connectivity.
- **Azure DNS:** Manage custom domains and DNS records.

## Week 6: Databases in Azure

Learn how to deploy, manage, and optimize databases using Azure's managed services.

## Key Training Components:

- **Azure SQL Database:** Deploy and manage relational databases in Azure.
- **Cosmos DB:** Use Azure's globally distributed NoSQL database.
- **Azure Database for MySQL/PostgreSQL:** Set up and optimize open-source databases.
- **Data Migration Services:** Migrate on-premises databases to Azure.

## Week 7: Monitoring and Logging

Understand how to monitor Azure resources and analyze logs for performance and security.

## Key Training Components:

- **Azure Monitor:** Set up metrics, alerts, and dashboards.
- **Azure Log Analytics:** Collect and query log data for insights.
- **Azure Security Center:** Monitor and enhance security across Azure resources.
- **Network Watcher:** Troubleshoot and analyze network performance.

## Week 8: Application Deployment and Automation

Discover tools and techniques for deploying and automating applications in Azure.

## Key Training Components:

- **Azure App Services:** Deploy web apps and APIs with ease.
- **Azure Functions:** Build serverless applications and automate tasks.
- **Azure DevOps:** Set up CI/CD pipelines for application deployment.
- **Azure Automation:** Automate infrastructure management using runbooks and DSC.

## Week 9: Security and Compliance in Azure

Explore Azure tools and best practices to secure resources and ensure compliance.

## Key Training Components:

- **Azure Active Directory (AAD):** Centralize identity and access management.
- **Azure Key Vault:** Manage and protect secrets and encryption keys.
- **DDoS Protection:** Safeguard applications against distributed denial-of-service attacks.
- **Compliance Manager:** Maintain compliance with regulatory standards.

## Week 10: Capstone Project

Apply your knowledge by designing and implementing a complete Azure-based solution.

Key Training Components:

- **Project Planning:** Define requirements and create a design for a scalable, secure solution.
- **Implementation:** Use Azure services to deploy and configure your project.
- **Monitoring and Optimization:** Test and optimize for performance, security, and cost.
- **Presentation:** Showcase your solution, detailing its architecture and Azure integrations.