

20535: Architecting Microsoft Azure Solutions

Course Details

Course Outline

1. Application Architecture Patterns in Azure

- Pattern Resources
- Performance Patterns
- Resiliency Patterns
- Scalability Patterns
- Data Patterns

2. Deploying Resources with Azure Resource Manager

- ARM Templates
- Role-Based Access Control (RBAC)
- Resource Policies
- Security
- Building Blocks
- Lab : Getting Started with Azure Resource Manager
 - Create Resource Groups
 - Deploy an Empty Template
 - Deploy a Simple Template
 - Cleanup Subscription

3. Building Azure IaaS-Based Server Applications

- High Availability
- Templated Infrastructure
- Domain-Connected Machines
- Lab : Deploying Infrastructure Workloads to Azure
 - Deploy a Virtual Machine using PowerShell DSC
 - Deploy a Virtual Machine Scale Set using PowerShell DSC
 - Cleanup Subscription

4. Creating Managed Server Applications in Azure

- Infrastructure-Backed Platform-as-a-Service (PaaS)
- High-Performance Compute (HPC)

- Migration
- Lab : Deploying Managed Server Workloads to Azure
 - Create Azure Container Service Cluster
 - Deploy Docker Image
 - Cleanup Subscription

5. Authoring Serverless Applications in Azure

- Azure Web App
- Azure Functions
- Integration
- High Performance
- Lab : Deploying Serverless Workloads to Azure
 - Create Web App
 - Deploy Web App Code
 - Deploy Function App and Code
 - Cleanup Subscription

6. Backing Azure Solutions with Azure Storage

- Pricing
- Blob Storage
- Files
- StorSimple
- Lab : Deploying Azure Storage to Support Other Workloads in Azure
 - Create Required Resources for a Virtual Machine
 - Create a VM With a Storage Account
 - Create a VM With a Managed Disk
 - Cleanup Subscription

7. Comparing Database Options in Azure

- Relational
- NoSQL Services
- Azure Cosmos DB
- Data Storage
- Data Analysis
- Lab : Deploying Database Instances in Azure
 - Deploy a CosmosDB Database Instance
 - Validate the REST API

- Cleanup Subscription

8. Networking Azure Application Components

- VNETs
- Load Balancing
- External Connectivity
- Hybrid Connectivity
- Lab : Deploying Network Components for Use in Azure Solutions
 - Create an ARM Template for a Linux VM
 - Duplicate the VM Resources
 - Create a Load Balancer Resource
 - Cleanup Subscription

9. Managing Security and Identity for Azure Solutions

- Security Monitoring
- Data Security
- Application Security Azure Active Directory (Azure AD)
- Hybrid Identity
- Azure AD Application Integration
- Lab : Deploying Services to Secure Secrets in Azure
 - Deploy Key Vault using ARM Template
 - Deploy Virtual Machine using Key Vault Secret
 - Cleanup Subscription

10. Integrating SaaS Services Available on the Azure Platform

- Cognitive Services
- Bot Services
- Machine Learning
- Media Services
- Lab : Deploying Service Instances as Components of Overall Azure Solutions
 - Deploy Function App and Cognitive Service using ARM Template
 - Cleanup Subscription

11. Integrating Azure Solution Components using Messaging Services

- Event Messaging
- Integration
- IoT

- Lab : Deploying Messaging Components to Facilitate Communication Between Azure Resources
 - Deploy Service Bus Namespace
 - Deploy Logic App
 - Cleanup Subscription

12. Monitoring and Automating Azure Solutions

- Application Monitoring
- Platform Monitoring
- Network Monitoring
- Alerting
- Backup
- Azure Automation
- Config Management
- Auto-Scale
- Lab : Deploying Configuration Management Solutions to Azure
 - Deploy a Chef Management Server using ARM
 - Configure Management Server
 - Deploy a VM Scale Set using Chef-Configured VMs
 - Cleanup Subscription