

# Architecting Microsoft Azure Solutions

## Description

This course is intended for architects who have experience building infrastructure and applications on the Microsoft Azure platform. Students should have a thorough understanding of most services offered on the Azure platform. The students typically work for organizations that have an active solution on Azure and are planning to enhance existing solutions or deploy more solutions to the Azure platform.

### Delegates will learn how to

- Describe Azure architecture components, including infrastructure, tools, and portals.
  - Create and deploy Azure Resource Manager (ARM) templates for various all-up solutions.
  - Compare and contrast various infrastructure, serverless, database and communication services; such as App Services, Virtual Machine Scale Sets, Azure Cosmos DB, SQL Database, and Container Service in Azure.
  - Incorporate various Azure platform services, such as Cognitive Services and Media Services into an overall Azure solution.
  - Secure, monitor and backup solutions deployed to Azure.
  - Create automated DevOps solutions using a combination of ARM templates, configuration management utilities, Azure CLI, and the Cloud Shell.
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# Outline

## **Module 1: Application Architecture Patterns in Azure**

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

## **Module 2: Deploying Resources with Azure Resource Manager**

- ARM Templates
- Role-Based Access Control (RBAC)
- Resource Policies
- Security
- Building Blocks

## **Module 3: Building Azure IaaS-Based Server Applications**

- High Availability
- Templated Infrastructure
- Domain-Connected Machines

## **Module 4: Creating Managed Server Applications in Azure**

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

## **Module 5: Authoring Serverless Applications in Azure.**

- Azure Web App
- Azure Functions
- Integration
- High Performance

## **Module 6: Backing Azure Solutions with Azure Storage.**

- Pricing
- Blob Storage
- Files
- StorSimple

### **Module 7: Comparing Database Options in Azure**

- Relational
- NoSQL Services
- Azure Cosmos DB
- Data Storage
- Data Analysis

### **Module 8: Networking Azure Application Components**

- VNETs
- Load Balancing
- External Connectivity
- Hybrid Connectivity

### **Module 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

### **Module 10: Integrating SaaS Services Available on the Azure Platform**

- Cognitive Services
- Bot Services
- Machine Learning
- Media Services

### **Module 11: Integrating Azure Solution Components using Messaging Services**

- Event Messaging
- Integration
- IoT

## **Module 12: Monitoring and Automating Azure Solutions**

- Application Monitoring
- Platform Monitoring
- Network Monitoring
- Alerting
- Backup
- Azure Automation
- Config Management
- Auto-Scale

## **Prerequisites**

Basic knowledge of IT architecture.