

40 HORAS

INTRODUCTION

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. This course also is intended for architects who want to take the Microsoft Certification exam, 70-535, Architecting Microsoft Azure Solutions.

AUDIENCE

This course is intended for students 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.

For the interactive component, this course offers students the opportunity to deploy Azure solutions using built-in DevOps tools such as Azure Resource Manager templates, deployments, resource groups, tags and Role-Based Access Control.

This course does not require any direct experience writing application code or configuring server machines. This course focuses on the architectural comparisons between services and technical decision making needed to deploy well-designed solutions on the Azure platform. This course also prepares the students for the 70-535: Architecting Microsoft Azure Solutions certification exam.

The candidates targeted by this training have intermediate experience in designing, implementing and monitoring Azure solutions. Candidates are also proficient with the tools, techniques, and approaches used to build solutions on the Azure platform.

AT COURSE COMPLETION

After completing this course, students will be able 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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PREREQUISITES

Before attending this course, students must have the following technical knowledge:

- Create resources and resource group in Azure.
- Manage users, groups, and subscriptions in an Azure Active Directory instance.
- Build an Azure Virtual Machine with related resources.
- Manage containers and blobs stored in an Azure Storage account.
- Create App Service Plans and manage apps related to the plan.
- Configure an Azure Virtual Network and enable S2S and P2S connectivity.
- Protect networked application components using Network Security Groups.
- Automate everyday Azure resource tasks using Azure CLI or Azure PowerShell.
- Deploy an Azure SQL, MySQL, Postgres or Cosmos database instance.
- Monitor existing Azure solutions using built-in metrics, Application Insights, or Operational Insights.

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COURSE 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