



## Azure

### AZ-305T00: Designing Microsoft Azure Infrastructure Solutions

\$2,595.00

- 4 Days

## Upcoming Dates

Feb 18 - Feb 21

## Course Description

This course teaches Azure Solution Architects how to design infrastructure solutions. Course topics cover governance, compute, application architecture, storage, data integration, authentication, networks, business continuity, and migrations. The course combines lecture with case studies to demonstrate basic architect design principles.

## Course Outline

### Modules 1: Design a governance solution

Lessons:

- Design for governance
- Design for management groups
- Design for Azure subscriptions
- Design for resource groups
- Design for resource tagging
- Design for Azure Policy and RBAC
- Design for Azure Landing Zones

Case Study:

- Cost and Accounting
- New development project

### Modules 2: Design a compute solution

Lessons:

- Choose a compute service
- Design for Azure virtual machine solutions
- Design for Azure Batch solutions
- Design for Azure App Services solutions
- Design for Azure Container Instances solutions
- Design for Azure Kubernetes Service solutions
- Design for Azure Function solutions
- Design for Azure Logic App solutions

Case Studies:

- Product and usage case (matching)
- Choose a compute service (drag and drop)
- Compute solutions

### **Modules 3: Design a non-relational storage solution**

Lessons:

- Design for data storage
- Design for Azure storage accounts
- Design for data redundancy
- Design for Azure blob storage
- Design for Azure files
- Design an Azure disk solutions
- Design for storage security

Case Study:

- Non-relational data

### **Modules 4: Design a relational storage solution**

Lessons:

- Design for data storage
- Design for Azure SQL databases
- Recommend a solution for database scalability
- Recommend a solution for database availability
- Design security for data at rest, data in transmission, and data in use
- Design for Azure SQL Edge
- Design for Azure Cosmos DB and tables

Case Study:

- Select a structured data product (activity)
- Relational Data

### **Modules 5: Design a data integration solution**

Lessons:

- Design a data integration solution with Azure Data Factory
- Design a data integration solution with Azure Data Lake
- Design a data integration and analytics solution with Azure Databricks

- Design a data integration and analytics solution with Azure Synapse Analytics
- Design Azure Stream Analytics solution for Data Analysis
- Design a strategy for hot/warm/cold data path

Case Study:

- None

### **Modules 6: Design an app architecture solution**

Lessons:

- Describe message and event scenarios
- Design a messaging solution
- Design an event solution (Event Hub and Event Grid)
- Design an application optimization solution

Case Study:

- Application architecture

### **Modules 7: Design authentication and authorization solutions**

Lessons:

- Design for identity and access management
- Design for Microsoft Entra ID
- Design for Microsoft Entra Business to Business
- Design for Microsoft Entra Business to Customer
- Design for conditional access
- Design for identity protection
- Design for access reviews
- Design service principals for applications
- Design for Azure key vault

Case Study:

- Authentication and authorization

### **Modules 8: Design a solution to log and monitor Azure resources**

Lessons:

- Design for Azure Monitor data sources
- Design for Log Analytics
- Design for Azure workbooks and Azure Insights
- Design for Azure Data Explorer

Case Study:

- Use Case Scenarios (activity)
- Fabrikam Residences case study – PM software

### **Modules 9: Design a network infrastructure solution**

Lessons:

- Recommend a network architecture solution based on workload requirements
- Design for Azure network connectivity services
- Design for on-premises connectivity to Azure virtual networks
- Design for application delivery services
- Design for application protection services

Case Study:

- BI enterprise application

## **Modules 10: Design a business continuity solution**

Lessons:

- Design for backup and recovery
- Design for Azure Backup
- Design for Azure blob backup and recovery
- Design for Azure Files backup and recovery
- Design for Azure virtual machine backup and recovery
- Design for Azure SQL backup and recovery
- Design for Azure Site Recovery

Case Study:

- None

## **Modules 11: Design a migration solution**

Lessons:

- Evaluate migration with the Cloud Adoption Framework
- Describe the Azure Migration Framework
- Assess your workloads
- Compare migration tools
- Migrate your databases
- Select an online storage migration tool
- Select an offline storage migration tool

Case Study:

- None

## **Audience**

Azure Solution Architects have subject matter expertise in designing cloud and hybrid solutions that run on Microsoft Azure, including compute, network, storage, monitor, and security. Remember there are other roles, such as DevOps and Solutions Architect.

## **Prerequisites**

Successful students have experience and knowledge in IT operations, including networking, virtualization, identity, security, business continuity, disaster recovery, data platforms, and governance. Students also have experience designing and architecting solutions. Before attending this course, students must have previous experience deploying or administering Azure resources and strong conceptual knowledge of:

- Microsoft Entra ID
- Azure compute technologies such as VMs, containers and serverless solutions.
- Azure virtual networking to include load balancers.
- Azure Storage technologies (unstructured and databases).
- General application design concepts such as messaging and high availability.

## **What You Will Learn**