

# Microsoft Azure Architect Design (AZ-301)

Level: Advanced

Prepare for the official Microsoft Azure Architect Design certification exam AZ-301 and work toward your Microsoft Azure Solutions Architect Expert certification in this Azure training course. In this four-part course, we cover how to manage security and identity within the context of Azure, how to identify data streaming options for large-scale data ingest, and identify longer-term data storage options, how to deploy an ARM template to a resource group, author a complex deployment using the Azure Building Blocks tools, and integrate an API or Logic App with the API Management service, and how to compare connectivity options for ad-hoc and hybrid connectivity, distribute network traffic across multiple loads using load balancers, and design a hybrid connectivity scenario between cloud and on-premise.

## Key features of this Azure Architect Design Training:

- Prepare for Microsoft AZ-301 certification exam
- Microsoft Official Course content
- After-course instructor coaching benefit
- Eligible to use with your [Microsoft Software Assurance Training Vouchers \(SATVs\)](#)

## You Will Learn How To:

- Integrate their existing solutions with external identity providers using Azure AD B2B or B2C.
- Design a hybrid identity solution.
- Determine when to use advanced features of Azure AD such as Managed Service Identity, MFA and Privileged Identity Management.
- Secure application secrets using Key Vault.
- Secure application data using SQL Database and Azure Storage features.
- Detail the various APIs available in Cognitive Services.
- Identify when to use the Face API, Speech API or Language Understanding (LUIS) service.
- Describe the relationship to Bot Framework and Azure Bot Services.
- Determine the ideal pricing option for Azure Storage based on a solution's requirements.
- Identify performance thresholds for the Azure Storage service.
- Determine the type of Storage blobs to use for specific solution components.
- Use the Azure Files service for SMB operations.
- Identify solutions that could benefit from the use of StorSimple physical or virtual devices.
- Compare and contrast monitoring services for applications, the Azure platform, and networking.
- Design an alert scheme for a solution hosted in Azure.
- Select the appropriate backup option for infrastructure and data hosted in Azure.
- Automate the deployment of future resources for backup recovery or scaling purposes.
- Create a resource group.
- Add resources to a resource group.
- Deploy an ARM template to a resource group
- Integrate an API or Logic App with the API Management service.
- Design an App Service Plan or multi-region deployment for high performance and scale.
- Integrate an API or Logic App with the API Management service.
- Design an App Service Plan or multi-region deployment for high performance and scale.
- Describe various patterns pulled from the Cloud Design Patterns.
- Distribute network traffic across multiple loads using load balancers.
- Design a hybrid connectivity scenario between cloud and on-premise.
- Design an availability set for one or more virtual machines.
- Describe the differences between fault and update domains.
- Author a VM Scale Set ARM template.

## Choose the Training Solution That Best Fits Your Individual Needs or Organizational Goals

### Live, Instructor-Led - In Class & Live, Online Training

PRODUCT #8522 - \$2990

- 4-day instructor-led training course
- One-on-one after course instructor coaching

- Pay later by invoice -OR- at the time of checkout by credit card

## Training At Your Site - Team Training

PRODUCT #8522 - \$2990

- Bring this or any training to your organization
- Full - scale program development
- Delivered when, where, and how you want it
- Blended learning models
- Tailored content
- Expert team coaching

### In Class & Live, Online Training

## Instructor-Led Course Information

- **Software/Tools**

- Managed Service Identity, MFA and Privileged Identity Management
- Relational databases (Azure SQL Database, MySQL, and PostgreSQL)
- Non-relational databases (Azure Cosmos DB, Storage Tables)
- VNets in Azure

- **Recommended Experience**

This course is for an experienced solutions architect

- **Who Should Attend**

Successful Cloud Solutions Architects begin this role with practical experience with operating systems, virtualization, cloud infrastructure, storage structures, billing, and networking.

- **Microsoft Exam Information**

This course can help you prepare for the following Microsoft role-based certification exam — [AZ-301: Microsoft Azure Architect Design](#)

## Instructor-Led Course Outline

- **Part 1: AZ-301T01: Designing for Identity and Security**

**Module 1: Managing Security & Identity for Azure Solutions**

This module discusses both security and identity within the context of Azure. For security, this module reviews the various options for monitoring security, the options available for securing data and the options for securing application secrets. For identity, this module focuses specifically on Azure Active Directory (Azure AD) and the various features available such as Multi-Factor Authentication (MFA), Managed Service Identity, Azure AD Connect, ADFS and Azure AD B2B/B2C.

**Module 2: Integrating SaaS Services Available on the Azure Platform**

This module introduces multiple SaaS services available in Azure that are available for integration into existing Azure solutions. These services include Cognitive Services, Bot Service, Machine Learning and Media Services.

- **Part 2: AZ-301T02: Designing a Data Platform Solution**

**Module 1: Backing Azure Solutions with Azure Storage**

This module describes how many Azure services use the Azure Storage service as a backing store for other application solution in Azure. The module dives into critical considerations when using Azure Storage as a supplemental service for an all-up Azure solution.

After completing this module, students will be able to:

- Determine the ideal pricing option for Azure Storage based on a solution's requirements.
- Identify performance thresholds for the Azure Storage service.
- Determine the type of Storage blobs to use for specific solution components.
- Use the Azure Files service for SMB operations.
- Identify solutions that could benefit from the use of StorSimple physical or virtual devices.

## **Module 2: Comparing Database Options in Azure**

This module compares the various relational and non-relational data storage options available in Azure. Options are explored as groups such as relational databases (Azure SQL Database, MySQL, and PostgreSQL on Azure), non-relational (Azure Cosmos DB, Storage Tables), streaming (Stream Analytics) and storage (Data Factory, Data Warehouse, Data Lake).

## **Module 3: Monitoring & Automating Azure Solutions**

This module covers the monitoring and automation solutions available after an Azure solution has been architected, designed and possibly deployed. The module reviews services that are used to monitor individual applications, the Azure platform, and networked components. This module also covers automation and backup options to enable business-continuity scenarios for solutions hosted in Azure.

# **• Part 3: AZ-301T03: Designing for Deployment, Migration, and Integration**

## **Module 1: Deploying Resources with Azure Resource Manager**

This module establishes a basic understanding of Azure Resource Manager and the core concepts of deployments, resources, templates, resource groups, and tags. The module will dive deeply into the automated deployment of resources using ARM templates.

## **Module 2: Creating Managed Server Applications in Azure**

This module describes how solutions can leverage serverless application hosting services in Azure to host web applications, REST APIs, integration workflows and HPC workloads without the requirement to manage specific server resources. The module focuses on App Services-related components such as Web Apps, API Apps, Mobile Apps, Logic Apps, and Functions.

## **Module 3: Authoring Serverless Applications in Azure**

This module describes how solutions can leverage serverless application hosting services in Azure to host web applications, REST APIs, integration workflows and HPC workloads without the requirement to manage specific server resources. The module focuses on App Services-related components such as Web Apps, API Apps, Mobile Apps, Logic Apps, and Functions.

# **• Part 4: AZ-301T04: Designing an Infrastructure Strategy**

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

This module introduces, and reviews common Azure patterns and architectures as prescribed by the Microsoft Patterns & Practices team. Each pattern is grouped into performance, resiliency, and scalability categories and described in the context of similar patterns within the category.

After completing this module, students will be able to:

- Locate and reference the Cloud Design Patterns documentation.
- Locate and reference the Azure Architecture Center.
- Describe various patterns pulled from the Cloud Design Patterns.

## **Module 2: Building Azure IaaS-Based Server Applications (ADSK)**

This module identifies workloads that are ideally deployed using Infrastructure-as-a-Service services in Azure. The module focuses on the VM Scale Sets and Virtual Machine services in Azure and how to best deploy workloads to these services using best practices and features such as Availability Sets.

## **Module 3: Networking Azure Application Components**

This module describes the various networking and connectivity options available for solutions deployed on Azure. The module explores connectivity options ranging from ad-hoc connections to long-term hybrid connectivity scenarios. The module also discusses some of the performance and security concerns related to balancing workloads across multiple compute instances, connecting on-premise infrastructure to the cloud and creating gateways for on-premise data.

## **Module 4: Integrating Azure Solution Components Using Messaging Services**

This module describes and compares the integration and messaging services available for solutions hosted on the Azure platform. Messaging services described include Azure Storage Queues, Service Bus Queues, Service Bus Relay, IoT Hubs, Event Hubs, and Notification Hubs. Integration services include Azure Functions and Logic Apps.

## **Azure Architect Design Training FAQs**

### **• What is required to achieve the Azure Solutions Architect certification?**

To achieve the role-based certification, you must pass the following exams:

- AZ-300: Microsoft Azure Architect Technologies
- AZ-301: Microsoft Azure Architect Design

Upon passing both exams, the individual will be Microsoft Certified: Azure Developer Associate.

### **• What do I receive if I pass just one of the two exams required for certification?**

Individuals who pass one of the two required exams for certification will receive an achievement badge.

- **Does this new AZ-301 exam and certification replace any existing Azure exams?**

Yes. Microsoft will be retiring the following exam on December 31, 2018:

- Exam 70-535: Architecting Microsoft Azure Solutions

The replacement for Exam 70-535 is the Azure Solutions Architect Expert certification (consisting of exams AZ-300 and AZ-301).

- **Will this change affect requirements for competencies?**

Yes. It will affect the Cloud Platform and Cloud Business Applications competencies.

- Cloud Platform: Exams 70-532, 70-533, and 70-535 are among the requirement options.
- Cloud Business Applications: Exam 70-535 is among the requirement options.

Exams 70-535 will retire on December 31, 2018, but will be valid for competencies until December 31, 2019. The new requirements will go into effect on January 1, 2019.

## Team Training



## Schedule of events

### In the Classroom — OR — Live, Online

Tuition — Standard: \$2990 Government: \$2659

Feb 18 - 21 Herndon, VA / Online (AnyWare)\*\* (4 Days)

Mar 3 - 6 San Francisco / Online (AnyWare) (4 Days)

May 12 - 15 New York / Online (AnyWare) (4 Days)

May 26 - 29 Seattle / Online (AnyWare) (4 Days)

Jun 9 - 12 Toronto / Online (AnyWare) (4 Days)

Aug 11 - 14 Herndon, VA / Online (AnyWare) (4 Days)

Sep 1 - 4 San Francisco / Online (AnyWare) (4 Days)

Nov 10 - 13 New York / Online (AnyWare) (4 Days)

Dec 1 - 4 Seattle / Online (AnyWare) (4 Days)