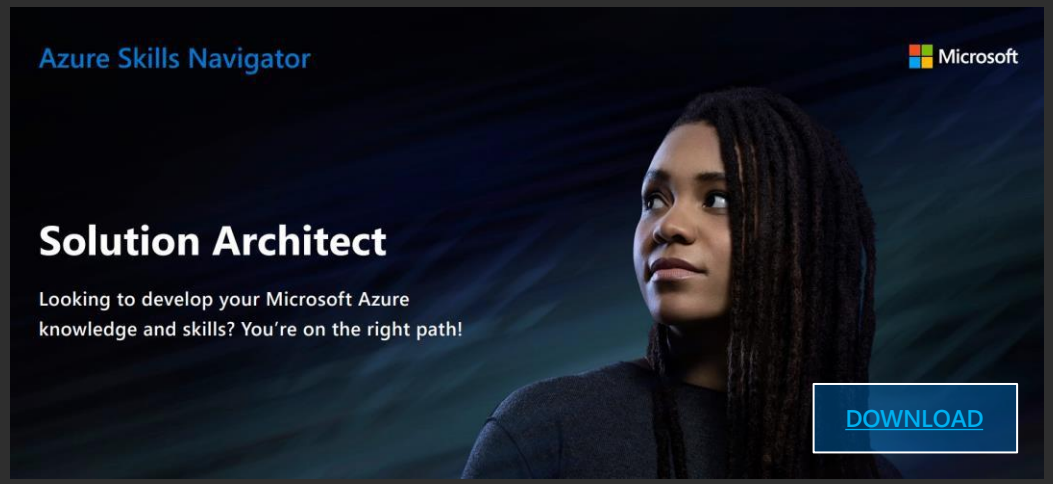
Azure Solutions Architect Certification Pathway

Getting Started



This Azure learning journey is designed for Solution Architects defining the design and implementation of technology solutions in Microsoft Azure. Using the understanding of an organization's business requirements and developer capabilities, these IT professionals use building blocks of different technology components to create robust, optimized architectures.

Foundational Learning

Microsoft Learn

- Architecture Center Home
- Browse Azure Architectures
- Explore Cloud Best Practices
- Assess, optimise and review your workload
- See what's new
- Best Practices and patterns for building applications on Azure
- Explore Architectures and guides for different technologies

Azure Architecture Documentation

Well Architected Framework

Microsoft Learn

- Azure Fundamentals
- Data Fundamentals
- AI Fundamentals
- Architect secure infrastructure in Azure
- Architect network infrastructure in Azure
- Architect infrastructure operations in Azure
- Architect compute infrastructure in Azure
- Architect storage infrastructure in Azure
- Architect migration, business continuity, and disaster recovery in Azure
- Architect a data platform in Azure
- Architect modern applications in Azure
- Architect API integration in Azure
- Microsoft Azure Well-Architected Framework

Continuing your learning

Design identity, governance, and monitoring solutions

- Azure Monitor Logs overview
- Azure Diagnostic Logs
- Enable diagnostics logging for apps in Azure App Service
- Create diagnostic setting to collect platform logs and metrics in Azure
- Azure security logging and auditing
- Azure Monitor Overview
- Best practices for monitoring cloud applications
- What is Microsoft Sentinel?
- Assign Azure roles using the Azure portal
- What is Azure role-based access control (Azure RBAC)?
- Quickstart: Check access for a user to Azure resources
- What are managed identities for Azure resources?
- Use a Windows VM system-assigned managed identity to access Resource Manager
- What are Azure AD access reviews?
- What is Identity Protection?
- Secure your management ports with just-in-time access
- What is Azure AD Privileged Identity Management?
- What are the Azure Management areas?
- What are Azure management groups?
- What is Azure Policy?
- Tutorial: Create and manage policies to enforce compliance
- What are managed identities for Azure resources?
- Use a Windows VM system-assigned managed identity to access Resource Manager
- About Azure Key Vault
- Azure Key Vault keys, secrets and certificates overview
- Tutorial: Register a web application in Azure Active Directory B2C
- Configure how users consent to applications

Design Data Storage Solutions

- Azure SQL Database service tiers
- General purpose service tier – Azure SQL Database
- Scalability
- Azure Data Encryption at rest
- Azure encryption overview
- Transparent data encryption for SQL Database and Azure Synapse
- What is Azure Data Factory?
- What is Azure Databricks?
- What is Azure Data Lake Storage Gen1
- Introduction to Azure Data Lake Storage Gen2
- What is dedicated SQL pool (formerly SQL DW) in Azure Synapse Analytics?
- Understand data store models
- What is SQL Server on Windows Azure Virtual Machines?
- What is Azure SQL Database?
- What is Azure SQL Managed Instance?
- What is Azure Database for PostgreSQL?
- What is Azure Database for MariaDB?
- What is Azure Database for MySQL?
- Welcome to Azure Cosmos DB
- Understand data store models
- Non-relational data and NoSQL
- What is Apache HBase in Azure HDInsight
- Azure Cache for Redis
- Table storage
- Azure Time Series Insights
- Azure Blob Storage
- Azure Data Lake Storage
- Azure Files
- Azure Cognitive Search
- Non-relational data and NoSQL
- Core Azure Storage services
- Access control model in Azure Data Lake Storage Gen2
- Data protection overview

Design business continuity solutions

- Site Recovery | General questions
- VMware to Azure replication
- Hyper-V to Azure disaster recovery
- What is the Azure Backup service?
- Azure Backup architecture and components
- Azure Backup server protection matrix
- Best practices for business continuity and disaster recovery in Azure Kubernetes Service (AKS)
- Azure Backup architecture and components
- An overview of Azure VM backup
- About SQL Server Backup in Azure VMs
- Azure Database for PostgreSQL backup
- Regions and availability zones
- Azure services that support availability zones
- Availability options for Azure Virtual Machines
- Build solutions for high availability using availability zones
- Azure Storage redundancy
- Achieve high availability with Cosmos DB
- Build solutions for high availability using availability zones
- High availability for Azure SQL Database and SQL Managed Instance

Keep going.....

Continue to page 2 for additional resources and exam details

Azure Solutions Architect Certification Pathway

Additional Study

Design Infrastructure Solutions

- Virtual machines in Azure
- What is Azure Virtual Desktop?
- Choose an Azure compute service
- App Service documentation
- Azure Kubernetes Service
- What is Azure Container Instances?
- Introduction to private Docker container registries in Azure
- Introduction to Azure Functions
- Caching guidance
- Azure CDN Documentation
- CDN guidance
- Create an Azure CDN endpoint
- What is Azure Front Door?
- About Azure Cache for Redis
- Choose between Azure messaging services - Event Grid, Event Hubs, and Service Bus
- What is Azure Service Bus?
- Use Azure portal to create a Service Bus namespace and a queue
- Get started with Azure Service Bus queues (.NET)
- What is Azure Event Grid?
- Event-Driven Architecture in the Cloud with Azure Event Grid
- Route custom events to web endpoint with the Azure portal and Event Grid
- Tutorial: Monitor virtual machine changes by using Azure Event Grid and Logic Apps
- Features and terminology in Azure Event Hubs
- Quickstart: Create an event hub using Azure portal
- Tutorial: Stream data into Azure Databricks using Event Hubs

Design Infrastructure Solutions

- Use infrastructure automation tools with virtual machines in Azure
- About API Management
- Cloud migration in the Cloud Adoption Framework
- About Azure Migrate
- Migrate a SQL Server database to Azure
- What is Azure Database Migration Service?
- Storage Migration Service overview
- What is Azure Data Box?
- Azure Networking architecture documentation
- What is Azure Firewall?
- What is VPN Gateway?
- What is Azure ExpressRoute?
- Optimize network throughput for Azure virtual machines

Role Based Certification
Microsoft Certified: Azure Administrator
(prerequisite for AZ-305)

AZ-104: Microsoft Azure Administrator

Skills measured:

- Manage Azure identities and governance (15-20%)
- Implement and manage storage (15-20%)
- Deploy and manage Azure compute resources (20-25%)
- Configure and manage virtual networking (25-30%)
- Monitor and back up Azure resources (10-15%)

Please see the Azure Administrator Learning Pathway for more details.

Role Based Certification
Microsoft Certified: Solutions Architect

AZ-305: Designing Microsoft Azure Infrastructure Solutions

Skills measured:

- Design identity, governance, and monitoring solutions
- Design data storage solutions
- Design business continuity solutions
- Design infrastructure solutions

Exam Page | Course Page | GitHub Labs

- Microsoft Azure Architect Design Prerequisites
- Design identity, governance and monitor solutions
- Design business continuity solutions
- Design data storage solutions
- Design infrastructure solutions
- Build great solutions with Microsoft Azure Well-Architected Framework
- Accelerate cloud adoption with the Microsoft Cloud Adoption Framework for Azure

Microsoft Azure Well-Architected Framework

The Azure Well-Architected Framework is a set of guiding tenets that can be used to improve the quality of a workload. The framework consists of five pillars of architectural excellence. Start with the >> overview <<

Pillar	Description
Reliability	The ability of a system to recover from failures and continue to function.
Security	Protecting applications and data from threats.
Cost Optimization	Managing costs to maximize the value delivered.
Operational Excellence	Operations processes that keep a system running in production.
Performance Efficiency	The ability of a system to adapt to changes in load.

Microsoft Cloud Adoption Framework for Azure

The Microsoft Cloud Adoption Framework for Azure is guidance that's designed to help you create and implement business and technology strategies for the cloud. It provides best practices, documentation, and tools. Cloud architects, IT professionals, and business decision makers use this information to achieve their cloud adoption goals. By using the Cloud Adoption Framework for Azure best practices, organizations can better align their business and technical strategies to ensure success.

Microsoft Cloud Adoption Framework for Azure

John Savill's Technical Training

AZ-104 Azure Administrator SUPER Study Cram

AZ-305 Solutions Architect Certification Path and Exam