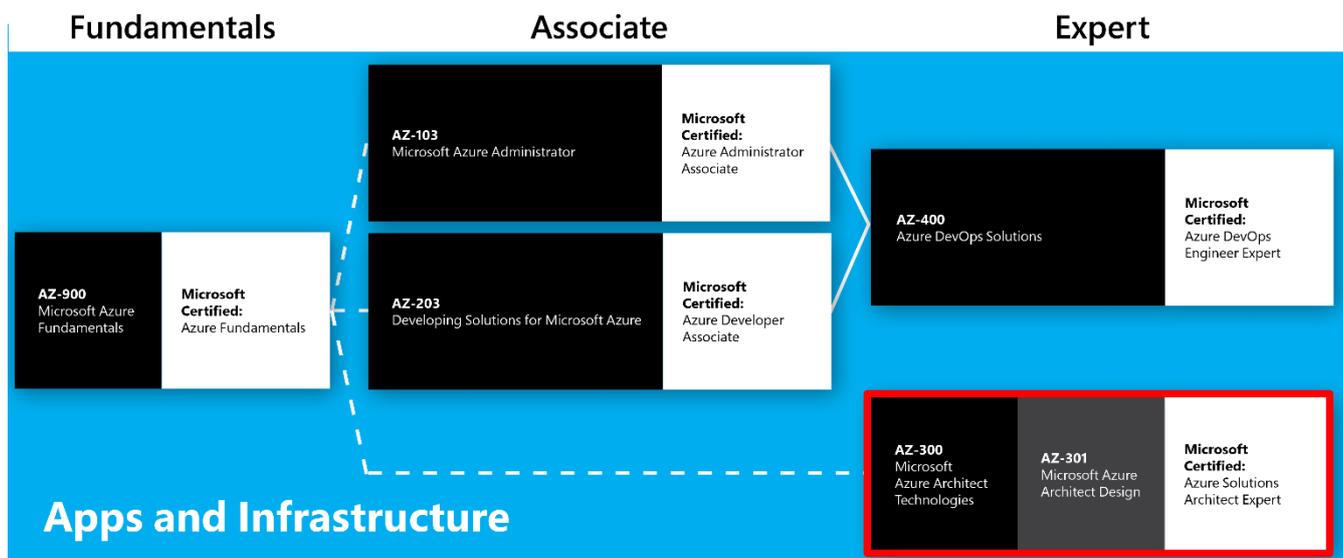


AZ-300-301 - Microsoft Certified: Azure Architect Technologies

These 2 courses composed of modules are designed for IT Professionals who will learn about how to manage their Azure resources, including deployment and configuration of virtual machines, virtual networks, storage accounts, and Azure AD that includes implementing and managing hybrid identities.

These courses help prepare for the exams « AZ-300 - Microsoft Azure Architect Technologies » and « AZ-301: Microsoft Azure Architect Design » to obtain the title « Microsoft Certified: Azure Solutions Architect Expert ».



1. AZ-300 – Microsoft Certified: Azure Architect Technologies

Overview

This course is divided into 5 complementary parts:

1.1. Deploying and Configuring Infrastructure

This part teaches IT Professionals how to manage their Azure resources, including deployment and configuration of virtual machines, virtual networks, storage accounts, and Azure AD that includes implementing and managing hybrid identities. Students will also learn how cloud resources are managed in Azure through user and group accounts, and how to grant access to Azure AD users, groups, and services using Role-based access control (RBAC).

They will learn about the different storage accounts and services as well as basic data replication concepts and available replication schemes. Students are also introduced to Storage Explorer as a convenient way to work with Azure storage data. Students also learn the types of storage and how to work with managed and custom disks.

Azure blob storage is how Azure stores unstructured data in the cloud, and they will work with blobs and blob containers. In addition to blob storage, the part covers Table and Queue storage as storage options for structured data.

Students will learn how to create and deploy virtual machines in Azure, using the Azure portal, PowerShell, and ARM templates. The part includes instruction on deploying custom images and Linux virtual machines. They will see how to configure the networking and storage components of virtual machines. Deploying highly available virtual machines is critical for planned and unplanned events, and they will learn how to use availability sets to ensure that virtual machine resources are available during downtime.

Students will learn the monitoring tools and capabilities provided by Azure, including Azure Alerts and Activity Log. In addition to alerts and logs, they will be introduced to Log Analytics as an effective data analytics solution for understanding your system status and health. And perhaps the most exciting thing you will learn is how to use the Azure Resource Manager deployment model to work with resources, resource groups, and ARM templates.

1.2. Implementing Workloads and Security

This part teaches IT professionals how to discover, assess, plan and implement a migration of on-premises resources and infrastructure to Azure. Students will learn how to use Azure Migrate to perform the discovery and assessment phase that is critical to a successful migration. Students will also learn how to use Azure Site Recovery for performing the actual migration of workloads to Azure. The course focuses primarily on using ASR on a Hyper-V infrastructure to prepare and complete the migration process.

Also, they will learn how to deploy serverless computing features like Azure Functions, Event Grid, and Service Bus. You will learn how Azure Multi-Factor Authentication helps safeguard access to data and applications, helping to meet customer demand for a simple sign-in process. Also, how to use Azure Active Directory Privileged Identity Management to manage, control, and monitor access to Azure resources within their organization.

See how to manage and maintain the infrastructure for the core web apps and services that developers build and deploy. Students will learn how Azure App Service is used as a Platform as a Service (PaaS) offering for deploying cloud apps for web and mobile environments.

Lastly, they will get a glimpse of how to implement advanced networking features like Application Gateway and how to configure load balancing. Learn to integrate on-premises networks with Azure virtual networks and to use Network Watcher to monitor and troubleshoot issues.

1.3. Understanding Cloud Architect Technology Solutions

This course teaches IT professionals how operations are done in parallel and asynchronously. And, how their whole enterprise system must be resilient when failures occur, and just as importantly, how deployments can be automated and predictable. By using the Azure Application Architecture Guide and Azure reference architectures as a basis, students will understand how monitoring and telemetry are critical for gaining insight into the system.

They will dive into the cloud design patterns that are important, such as partitioning workloads where a modular application is divided into functional units that can be integrated into a larger application. In such cases, each module handles a portion of the application's overall functionality and represents a set of related concerns.

Also, load balancing where the application traffic, or load, is distributed among various endpoints by using algorithms. Load balancers allow multiple instances of their website to be created so they can behave in a predictable manner. In Azure, it is possible to use virtual load balancers, which are hosted in virtual machines, if a company requires a very specific load balancer configuration.

Also, transient fault handling which helps define the primary differences between developing applications on-premises and in the to handle transient errors. Transient errors are errors that occur due to temporary interruptions in the service or to excess latency.

Lastly, a discussion of hybrid networking that provides an overview of site-to-site connectivity, point-to-site connectivity, and the combination of the two.

1.4. Creating and Deploying Apps

This course teaches IT Professionals how to build Logic App solutions that integrate apps, data, systems, and services across enterprises or organizations by automating tasks and business processes as workflows. Logic Apps is cloud service in Azure that simplifies how students design and create scalable solutions for app integration, data integration, system integration, enterprise application integration (EAI), and business-to-business (B2B) communication, whether in the cloud, on premises, or both.

They will also see how Azure Service Fabric is a distributed systems platform that makes it easy to package, deploy, and manage scalable and reliable microservices and containers. Service Fabric also addresses the significant challenges in developing and managing cloud native applications. Developers and administrators can avoid complex infrastructure problems and focus on implementing mission-critical, demanding workloads that are scalable, reliable, and manageable. Service Fabric represents the next-generation platform for building and managing these enterprise-class, tier-1, cloud-scale applications running in containers.

Lastly, they'll see how Azure Kubernetes Service (AKS) makes it simple to deploy a managed Kubernetes cluster in Azure. AKS reduces the complexity and operational overhead of managing Kubernetes by offloading much of that responsibility to Azure. As a hosted Kubernetes service, Azure handles critical tasks like health monitoring and maintenance for them.

1.5. Developing for the Cloud

Students learn how to configure a message-based integration architecture, develop for asynchronous processing, create apps for autoscaling, and better understand Azure Cognitive Services solutions.

Target Audience :

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

Objectives :

After completing this course, students will be able to:

- Managing Azure Subscriptions and Resources
- Implementing and Managing Storage
- Deploying and Managing VMs
- Configuring and Managing Virtual Networks
- Managing Identities using Azure Active Directory
- Evaluating and Performing Server Migration to Azure
- Implementing and Managing Application Services
- Implementing Advanced Virtual Networking.
- Securing Identities using Azure AD.
- Design and Connectivity Patterns
- Hybrid Networking
- Address Durability of Data and Caching
- Measure Throughput and Structure of Data Access
- Use shell commands to create an App Service Web App
- Create Background Tasks
- Use Swagger to document an API
- Create a reliable service
- Create a Reliable Actors app
- Hands-on with Reliable collections
- Understand the Azure Container Registry
- Use Azure Container instances
- How to configure a message-based integration architecture
- Understand how to Develop for Asynchronous Processing
- Begin creating apps for Autoscaling
- Understand Azure Cognitive Services Solutions

2. AZ-301 – Microsoft Certified: Azure Architect Design

Overview

This course is divided into 4 complementary parts :

2.1. Designing for Identity and Security

Students learn how to manage security and identity within the context of Azure. Also, students will be introduced to multiple SaaS services available in Azure that for integration into existing Azure solutions.

2.2. Designing a Data Platform Solution

Students learn to Compare and contrast various database options on Azure, identify data streaming options for large-scale data ingest, and identify longer-term data storage options.

2.3. Designing for Deployment, Migration, and Integration

Students learn 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.

2.4. Designing an Infrastructure Strategy

Students learn how to Describe DNS and IP strategies for VNets in Azure, 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.

Target Audience :

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

Objectives :

After completing this course, students will be able 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.

Duration and Price

Courses - Modules	Jours	CHF	CHF/j
AZ-300 - Microsoft Azure Architect Technologies	5	3'750.-	750.-
AZ-301 - Microsoft Azure Architect Design	4	3'000.-	750.-

selon conditions générales. Le prix comprend toute la documentation distribuée.

Les cours se déroulent de 9 h 00 à 12 h 00 et 13 h 30 à 17 h 00

* Remise de 5 % au membre ADI, GRI, au diplômé(e) ISEIG CPF, titulaire du BFI, DFI ou certifié(e) MCSA, MCSE, MCSD formé(e) à l'ISEIG

