SmartTekLearning

AZ-305:DESIGN MICROSOFT AZURE INFRASTRUCTURE SOLUTIONS

LEVEL	ADVANCED	ROLE	SOLUTION ARCHITECT
DURATION	4 DAY	PRODUCT	AZURE

OVERVIEW

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.

AUDIENCE PROFILE

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:

- 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

In this course, you will learn how to:

- Gain end-to-end knowledge of Azure architectural best practices for enterprise workloads.
- Learn to design secure, high-performing, and cost-optimized cloud solutions using proven frameworks.
- Develop practical skills for implementing governance, identity, and security at scale.
- Master HA/DR, backup, and resiliency strategies to keep workloads running without interruption.
- Build advanced data storage and integration architectures for both operational and analytical needs.
- Be able to apply the Azure Well-Architected Framework to improve any workload across reliability, security, cost, operations, and performance.

Course Prerequisites:

Before attending this course, students must have previous experience deploying or administering Azure resources and conceptual knowledge of:

- Microsoft Entra.
- Azure compute technologies such as VMs (Virtual Machines), 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.

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Designing Azure Infrastructure Solutions Training Outline

Learning Objectives

Core Azure Architecture

- Understand Azure's physical and management infrastructure.
- Explore compute options including VMs, containers, functions, and hosting services.
- Configure networking: virtual networks, VPNs, ExpressRoute, and DNS.
- Work with Azure storage services, redundancy, migration, and file movement.
- Manage identity, access, and security with Microsoft Entra ID, Conditional Access, and Microsoft Defender for Cloud.

Cloud Adoption & Governance

- Apply the Microsoft Cloud Adoption Framework to plan, migrate, modernize, govern, and secure workloads.
- Use the Azure Well-Architected Framework to guide reliable, secure, cost-optimized, and high-performance solutions.
- Design governance models using management groups, subscriptions, resource groups, tags, policies, and RBAC.

Security, Authentication & Authorization

- Plan and implement IAM solutions with Microsoft Entra ID, B2B/B2C, conditional access, identity protection, and managed identities.
- Secure secrets with Azure Key Vault.
- Apply Zero Trust and defense-in-depth strategies.

Monitoring, Logging, and Operations

- Design solutions using Azure Monitor, Log Analytics, Workbooks, and Network Watcher.
- Establish operational excellence with DevOps culture, automation, observability, and safe deployment practices.

Business Continuity & Disaster Recovery

- Plan HA/DR strategies using RTO/RPO guidelines.
- Implement backup and recovery for VMs, files, blobs, SQL databases, and hybrid workloads.
- Design for resiliency and recovery across IaaS, PaaS, and hybrid scenarios.

Data Solutions & Integration

- Design non-relational and relational storage with redundancy, performance, and security considerations.
- Implement Azure SQL Database, Managed Instance, Cosmos DB, Blob, Files, and managed disks.
- Plan data integration with Azure Data Factory, Data Lake, Databricks, Synapse Analytics, and Stream Analytics.

Azure Well-Architected Framework Deep Dive

- Reliability: Design for resilience, recovery, and operational stability.
- Security: Protect confidentiality, integrity, and availability.
- Cost Optimization: Reduce waste and maximize ROI.
- Operational Excellence: Standardize practices, automate, and monitor effectively.
- Performance Efficiency: Scale to demand and optimize resource usage.

Further Information:

For More information, or to book your course

Course AZ-305: Design Microsoft Azure Infrastructure Solutions

https://smartteklearning.com/Course/az-305-designing-microsoft-azure-infrastructure/

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