

Designing Microsoft Azure Infrastructure Solutions

Exam Ref AZ-305

Ashish Agrawal Gurvinder Singh Avinash Bhavsar Shamed Sabir Sopariwala



Exam Ref AZ-305 Designing Microsoft Azure Infrastructure Solutions

Ashish Agrawal Gurvinder Singh Avinash Bhavsar Mohamed Sabir Sopariwala

Exam Ref AZ-305 Designing Microsoft Azure Infrastructure Solutions

Table of Contents

| _ | ` | _ | | _ | |
|---|---|----|---|------------------|---|
| l | , | () | v | \boldsymbol{e} | r |

Title Page

Copyright Page

Contents at a glance

Contents

Introduction

Organization of this book

Microsoft certifications

Quick access to online references

Errata, updates, & book support

Stay in touch

About the authors

Chapter 1 Design identity, governance, and monitoring solutions

Skill 1.1: Design a solution for logging and monitoring

Design a log routing solution

Recommend an appropriate level of logging

Recommend monitoring tools for a solution

Skill 1.2: Design authentication and authorization solutions

Recommend a solution for securing resources with role-based access control

Recommend an identity management solution

Recommend a solution for securing identities

Skill 1.3: Design governance



Table of Contents

Recommend an organizational and hierarchical structure for Azure resources

Recommend a solution for enforcing and auditing compliance

Skill 1.4: Design identities and access for applications

Recommend solutions to allow applications to access Azure resources

Recommend a solution that securely stores passwords and secrets

Recommend a solution for integrating applications into Azure Active Directory (Azure AD)

Recommend a user consent solution for applications

Chapter summary

Thought experiment

Thought experiment answers

Chapter 2 Design data storage solutions

Skill 2.1: Design a data storage solution for relational data

Recommend database service tier sizing

Recommend a solution for database scalability

Recommend a solution for encrypting data at rest, data in transmission, and data in use

Skill 2.2: Design data integration

Recommend a solution for data integration

Recommend a solution for data analysis

Skill 2.3: Recommend a data storage solution

Recommend a solution for storing relational data

Recommend a solution for storing semi-structured data

Recommend a solution for storing nonrelational data

Skill 2.4: Design a data storage solution for nonrelational data

Recommend access control solutions to data storage

Recommend a data storage solution to balance features, performance, and cost

Design a data solution for protection and durability

Chapter summary

Thought experiment



Table of Contents

Thought experiment answers

Chapter 3 Design business continuity solutions

Skill 3.1: Design a solution for backup and disaster recovery

Recommend a recovery solution for Azure, hybrid, and on-premises workloads that meets recovery objectives (recovery time objective [RTO], recovery level objective [RLO], recovery point objective [RPO])

Understand the recovery solutions for containers

Recommend a backup and recovery solution for compute

Recommend a backup and recovery solution for databases

Recommend a backup and recovery solution for unstructured data

Skill 3.2: Design for high availability

Identify the availability requirements of Azure resources

Recommend a high-availability solution for compute

Recommend a high-availability solution for non-relational data storage

Recommend a high-availability solution for relational databases

Chapter summary

Thought experiment

Thought experiment answers

Chapter 4 Design infrastructure solutions

Skill 4.1: Design a compute solution

Recommend a virtual machinebased compute solution

Recommend an appropriately sized compute solution based on workload requirements

Recommend a container-based compute solution

Recommend a serverless-based compute solution

Skill 4.2: Design an application architecture

Recommend a caching solution for applications

Recommend a messaging architecture

Recommend an event-driven architecture



Table of Contents

Recommend an alication configuration management solution

Recommend an automated deployment solution for your application

Recommend a solution for API integration

Skill 4.3: Design migrations

Evaluate a migration solution that leverages the Cloud Adoption Framework for Azure

Assess and interpret on-premises servers, data, and applications for migration

Recommend a solution for migrating applications and VMs

Recommend a solution for migration of databases

Recommend a solution for migrating unstructured data

Skill 4.4: Design network solutions

Recommend a network solution based on workload requirements

Recommend a connectivity solution that connects Azure resources to the internet

Recommend a connectivity solution that connects Azure resources to on-premises networks

Recommend a solution to optimize network performance for applications

Recommend a solution to optimize network security

Recommend a solution for load balancing and traffic routing

Chapter summary

Thought experiment

Thought experiment answers

Index

