

MICROSOFT AZURE ARCHITECT DESIGN (AZ-304) PRACTICE TEST (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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- 1. When implementing a solution that configures a routing table with forced tunneling, which architecture is commonly advised to utilize?**
 - A. Hybrid network architecture
 - B. Serverless architecture
 - C. Microservices-based architecture
 - D. Event-driven architecture

- 2. Which deployment option should you choose to design a highly available Azure SQL database with no data loss during failover?**
 - A. Azure SQL Database Standard
 - B. Azure SQL Database Business Critical
 - C. Azure SQL Database Managed Instance Business Critical
 - D. Azure SQL Database Basic

- 3. Does including Azure Data Lake Storage in the design for on-premises storage with built-in replication to Azure meet the requirement?**
 - A. Yes
 - B. No
 - C. Only for structured data
 - D. Only under certain conditions

- 4. Which tool is essential for ensuring that SQL Server Integration Services packages can successfully connect to Azure SQL Database instances post-migration?**
 - A. SQL Server Management Studio
 - B. Azure Data Factory
 - C. Azure Data Migration Service
 - D. Azure DevOps

- 5. Which solution meets the requirements for monitoring request charges in Azure Cosmos DB and generating alerts?**
 - A. Create a search query for duration_s exceeding 20 and requestCharge_s exceeding 50.
 - B. Create a search query to trigger alerts when requestCharge_s exceeds 50 and a threshold of 20 for a period of 15 minutes.
 - C. Create a search query for requestCharge_s exceeding 20 with evaluation set for a period of 15.
 - D. Create a search query for when duration_s exceeds 20 with a general alert setup.

- 6. What should be used to prevent an Azure AD group from changing role assignments while allowing resource creation?**
- A. Create a new Azure subscription for the group
 - B. Assign a custom role with specific permissions
 - C. Use Azure Policy to enforce restrictions
 - D. Utilize the existing Project1 subscription roles
- 7. Which Azure storage tier is best for data that needs to be readily accessible but will be accessed infrequently?**
- A. Cool
 - B. Archive
 - C. Hot
 - D. Standard
- 8. What is the primary purpose of installing and configuring an on-premises Active Directory Federation Services (AD FS) server in an Azure environment?**
- A. To establish a trust relationship with Azure AD
 - B. To manage user authentication entirely on-premises
 - C. To improve on-premises performance
 - D. To migrate all resources to Azure
- 9. For deploying a .NET Core web application depending on an SQL Server database, should the application be hosted in a Premium App Service plan with VNET Integration?**
- A. Yes
 - B. No
 - C. Only if the database moves to Azure
 - D. Depends on the number of users
- 10. When migrating virtual machines from an on-premises Hyper-V cluster to Azure, what solution ensures the machines remain available during disk migration?**
- A. Implement an Azure Storage account with a file service and a blob service, and use the Data Migration Assistant.
 - B. Implement an Azure Storage account and run AzCopy.
 - C. Implement a Recovery Services vault and use Azure Site Recovery.
 - D. Implement Disk Snapshots for backup during migration.

Answers

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1. A
2. A
3. B
4. B
5. B
6. B
7. A
8. A
9. A
10. B

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Explanations

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1. When implementing a solution that configures a routing table with forced tunneling, which architecture is commonly advised to utilize?

- A. Hybrid network architecture**
- B. Serverless architecture
- C. Microservices-based architecture
- D. Event-driven architecture

Utilizing a hybrid network architecture when implementing a solution that configures a routing table with forced tunneling is advisable because a hybrid architecture often combines both on-premises resources and cloud services. In scenarios where organizations require secure connectivity for data traffic between their on-premises network and the cloud, forced tunneling is essential. It ensures that all traffic destined for the internet is routed through a specific gateway, allowing organizations to enforce security policies and maintain compliance. Hybrid architectures facilitate the integration of on-premises infrastructure with cloud capabilities, enabling effective management of traffic flows. Understanding that organizations may have existing data centers that they want to connect securely to their cloud resources, forced tunneling helps in enforcing strict governance and security measures. This approach can be particularly important for enterprises that handle sensitive data and need to monitor and manage all outbound traffic to comply with regulatory requirements. In contrast, other architectures such as serverless, microservices, or event-driven architectures focus more on application design and deployment rather than the underlying network routing mechanisms. While they may have specific advantages in scalability, efficiency, and responsiveness, they do not inherently address the complexities of secure network traffic management in the same way that a hybrid network architecture does.

2. Which deployment option should you choose to design a highly available Azure SQL database with no data loss during failover?

- A. Azure SQL Database Standard**
- B. Azure SQL Database Business Critical
- C. Azure SQL Database Managed Instance Business Critical
- D. Azure SQL Database Basic

To design a highly available Azure SQL database with no data loss during failover, the best choice is Azure SQL Database Business Critical. This tier offers features like in-memory OLTP and high availability through Always On availability groups, ensuring that your database remains available and consistent even during failover scenarios. Its architecture is specifically designed to handle high transaction volumes while providing low latency and resiliency against hardware failures. The Business Critical tier's capabilities make it ideal for scenarios where the database must not only be available but also protect against any potential data loss during failover processes. Choices like Azure SQL Database Standard or Basic do not provide the same level of high availability or durability, making them less suitable for ensuring no data loss in critical applications. Managed Instance Business Critical is also a solid option, but the focus here is on Azure SQL Database as a standalone service. Choosing the Business Critical tier effectively combines both high availability and high performance, aligning with the requirement for an Azure SQL Database solution designed for maximum uptime and data integrity.

3. Does including Azure Data Lake Storage in the design for on-premises storage with built-in replication to Azure meet the requirement?

- A. Yes
- B. No**
- C. Only for structured data
- D. Only under certain conditions

Including Azure Data Lake Storage in the design for on-premises storage with built-in replication to Azure does not meet the requirement as it typically emphasizes the need for a fully integrated and efficient replication strategy rather than just the inclusion of a service. Data Lake Storage is primarily designed for big data analytics and is most suitable for storing large volumes of structured, semi-structured, and unstructured data. When considering on-premises storage replication to Azure, key factors include the architecture, network connectivity, and consistency requirements. While Data Lake Storage offers robust capabilities for data analytics, it may not fulfill specific requirement criteria like data synchronization, data access speeds, or efficient handling of transactional workloads that a more traditional storage solution would provide. In scenarios where seamless integration and high availability are critical, relying solely on Data Lake Storage may not optimize these aspects fully. Solutions that ensure comprehensive integration, performance, and support for various data types – beyond just the capabilities of Data Lake Storage – are often necessary for meeting those complex requirements.

4. Which tool is essential for ensuring that SQL Server Integration Services packages can successfully connect to Azure SQL Database instances post-migration?

- A. SQL Server Management Studio
- B. Azure Data Factory**
- C. Azure Data Migration Service
- D. Azure DevOps

The selection of Azure Data Factory as the essential tool for ensuring that SQL Server Integration Services (SSIS) packages can successfully connect to Azure SQL Database instances post-migration is based on its specific capabilities tailored for data integration and transformation. Azure Data Factory is designed to facilitate the orchestration and monitoring of data workflows. It provides services that enable the migration of data, including data movement, data transformation, and data load operations into various Azure services. Importantly, Azure Data Factory has built-in support for Azure SQL Database, allowing SSIS packages to seamlessly connect to these cloud-based databases. Furthermore, it includes a rich set of connectors that can easily handle data access and integration tasks across multiple data sources, effectively bridging on-premises and cloud resources. In contrast, other options, while useful in their respective contexts, do not directly address the need to ensure SSIS packages connect to Azure SQL Database instances after migration. SQL Server Management Studio is primarily used for managing SQL Server databases and performing database management tasks, lacking specific features for migrating or connecting SSIS packages to Azure services. Azure Data Migration Service focuses on migrating databases but does not assist with the ongoing execution and management of SSIS workflows. Azure DevOps is geared towards software development and project management rather than data

5. Which solution meets the requirements for monitoring request charges in Azure Cosmos DB and generating alerts?

- A. Create a search query for duration_s exceeding 20 and requestCharge_s exceeding 50.
- B. Create a search query to trigger alerts when requestCharge_s exceeds 50 and a threshold of 20 for a period of 15 minutes.**
- C. Create a search query for requestCharge_s exceeding 20 with evaluation set for a period of 15.
- D. Create a search query for when duration_s exceeds 20 with a general alert setup.

The selected option is appropriate as it ensures that alerts are generated based on specified criteria that monitor the request charges effectively. By creating a search query that triggers alerts when the requestCharge_s exceeds 50, combined with a threshold of 20 for a duration of 15 minutes, it allows for a more nuanced approach to monitoring. This method ensures that the system evaluates requests over a defined period, reducing the likelihood of false positives that might arise from transient spikes in request charges. Monitoring request charges in Azure Cosmos DB is critical for managing costs and ensuring optimal performance. By specifying a condition that looks not just for a single instance of high request charges but requires that it persists over a certain period, it allows you to only get alerts for sustained high usage, which is more actionable for diagnosing issues or scaling needs. The other choices do not offer the same level of specificity or duration-based analysis. They either focus solely on immediate spikes without considering the time factor, which might result in too many alerts for short-lived incidents or lack the comprehensive requirement to monitor continuous performance. Thus, the chosen solution optimally aligns with effective monitoring and alerting practices for Cosmos DB.

6. What should be used to prevent an Azure AD group from changing role assignments while allowing resource creation?

- A. Create a new Azure subscription for the group
- B. Assign a custom role with specific permissions**
- C. Use Azure Policy to enforce restrictions
- D. Utilize the existing Project1 subscription roles

Assigning a custom role with specific permissions is the most effective way to prevent an Azure AD group from changing role assignments while still allowing them to create resources. By creating a custom role, you can tailor the permissions to include resource creation capabilities while explicitly excluding permissions related to role modification or assignment. This flexibility allows for fine-grained control over what actions the group can perform within Azure. In contrast, simply creating a new Azure subscription does not inherently manage role assignments; it might isolate the group's resources but does not provide the necessary permissions without broader implications. Utilizing Azure Policy could help enforce compliance and restrictions, but it does not offer the specificity required to selectively restrict role modification while allowing resource creation. Lastly, relying on existing subscription roles might not provide the necessary control or could lead to unintended permissions being granted, which would not meet the stated requirement effectively.

7. Which Azure storage tier is best for data that needs to be readily accessible but will be accessed infrequently?

- A. Cool**
- B. Archive
- C. Hot
- D. Standard

The Cool storage tier is designed specifically for data that is infrequently accessed but still needs to be readily accessible when required. It offers a balance between cost and access speed, making it ideal for scenarios where the data is not frequently accessed yet cannot be stored in a longer-term solution like the Archive tier. The Cool tier is less expensive than the Hot tier for storage costs, as it is optimized for scenarios where the data is expected to be accessed less than once a month. It ensures that data retrieval is straightforward and faster than that of archived data, which is specifically optimized for long-term storage where retrieval times can be significantly longer and more costly. When considering the other options, the Archive tier is designed for data that is rarely accessed and is intended for long-term storage with a much lower cost, but it has much slower access times and is unsuitable for data that needs to be readily accessible. The Hot storage tier, on the other hand, is optimized for data that is accessed frequently, which makes it more expensive for applications where access is infrequent. Lastly, Standard is not a specific storage tier but rather might refer to standard performance options across various resource types, which do not address the requirements of infrequent but readily accessible data. Thus, the Cool

8. What is the primary purpose of installing and configuring an on-premises Active Directory Federation Services (AD FS) server in an Azure environment?

- A. To establish a trust relationship with Azure AD**
- B. To manage user authentication entirely on-premises
- C. To improve on-premises performance
- D. To migrate all resources to Azure

The primary purpose of installing and configuring an on-premises Active Directory Federation Services (AD FS) server in an Azure environment is to establish a trust relationship with Azure Active Directory (Azure AD). This integration allows for Single Sign-On (SSO) capabilities, enabling seamless access to both on-premises applications and cloud services. By leveraging AD FS, organizations can authenticate users against their existing on-premises Active Directory while enabling those users to access Azure resources without needing multiple sets of credentials. The trust relationship facilitates secure authentication and provides a federated identity solution that enhances user experience and streamlines identity management across hybrid environments. The other choices, while relevant to AD FS or Azure environments, do not capture the core function of establishing a trust relationship. Managing user authentication entirely on-premises diminishes the benefits of leveraging cloud services and can hinder users' access. Improving on-premises performance does not directly relate to the primary role of AD FS in a hybrid setup. Likewise, migrating all resources to Azure is a broader architectural decision that may not specifically pertain to the AD FS's function of federating identities and authentication.

9. For deploying a .NET Core web application depending on an SQL Server database, should the application be hosted in a Premium App Service plan with VNET Integration?

- A. Yes**
- B. No
- C. Only if the database moves to Azure
- D. Depends on the number of users

Hosting a .NET Core web application that relies on an SQL Server database in a Premium App Service plan with VNET Integration is indeed a suitable choice for several reasons. Using a Premium App Service plan offers enhanced performance, increased storage capabilities, and better scaling options compared to the Standard or Free plans. This is particularly important for applications that may require more resources to handle concurrent users or intensive operations, which is common with web applications communicating with a database. VNET Integration allows the application to securely access resources within a virtual network, enabling private communication with an SQL Server database deployed in Azure or on-premises. This adds a layer of security by ensuring that data transmitted between the application and the database does not traverse the public internet, thus protecting sensitive information. Furthermore, VNET Integration enables features like access to other Azure resources within the same virtual network, which can be crucial for complex architectures involving multiple services. In scenarios where the SQL Server database is hosted within Azure, leveraging VNET Integration ensures that the application can efficiently and securely connect to the database while also enabling advanced network features. Choosing this setup is particularly beneficial for organizations looking to adhere to compliance regulations, as secure networking is often a requirement in many industries. Overall, hosting a .NET Core application in

10. When migrating virtual machines from an on-premises Hyper-V cluster to Azure, what solution ensures the machines remain available during disk migration?

- A. Implement an Azure Storage account with a file service and a blob service, and use the Data Migration Assistant.
- B. Implement an Azure Storage account and run AzCopy.**
- C. Implement a Recovery Services vault and use Azure Site Recovery.
- D. Implement Disk Snapshots for backup during migration.

The choice that ensures virtual machines remain available during disk migration from an on-premises Hyper-V cluster to Azure involves using Azure Site Recovery. This service is designed to provide high availability and business continuity through replication and failover capabilities, allowing for the migration of VMs without downtime. Azure Site Recovery enables you to replicate and recover VMs seamlessly while they are still running. It orchestrates the entire migration process and ensures that the VM remains operational even as the disk migration takes place. This is crucial for businesses that cannot afford downtime or service interruptions during such transitions. In contrast, simply implementing an Azure Storage account and using AzCopy does not guarantee VM availability during migration. AzCopy is a tool for copying data and files to and from Azure storage, but does not provide the necessary orchestration or failover features required for live VM migrations, which is what makes Azure Site Recovery the superior choice. Implementing disk snapshots alone could provide a way to backup data, but it does not facilitate the active migration of VMs or provide the required continuity during the transfer process. Similarly, using the Data Migration Assistant is primarily designed for assessing and migrating databases and would not cater effectively to the ongoing availability of virtual machines during their migration.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

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We wish you the very best on your exam journey. You've got this!

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