

MICROSOFT AZURE ARCHITECT DESIGN (AZ-301) PRACTICE EXAM (SAMPLE)

STUDY GUIDE



Prepare with structure. Pass with confidence



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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. Which tool provides a graphical interface for managing Azure resources?**
 - A. Azure Portal
 - B. Azure CLI
 - C. Azure PowerShell
 - D. Azure SDK
- 2. Which of the following is NOT a valid method to perform load balancing for authentication components in an Azure environment?**
 - A. Azure Application Gateway and Basic Load Balancer
 - B. Traffic Manager and Standard Load Balancer
 - C. Azure Application Gateway and Standard Load Balancer
 - D. Traffic Manager with Basic Load Balancer
- 3. What solution should you recommend to ensure that group owners are emailed monthly about their group memberships in Azure AD?**
 - A. Azure AD Identify Protection
 - B. Tenant Restrictions
 - C. Azure AD access reviews
 - D. Conditional access policies
- 4. Which component is crucial to configure for the validation of JWT claims in Azure API Management to ensure secure access to web APIs?**
 - A. Azure AD
 - B. Azure API Management
 - C. The web APIs
 - D. A User-Assigned Managed Service Identity
- 5. Where can diagnostics data be reviewed?**
 - A. Azure Analysis Service
 - B. Azure Application Insights
 - C. SQL Health Check
 - D. Azure SQL Analytics

- 6. What approach would minimize changes to the codebase while modernizing an IIS-based web application?**
- A. Adopt serverless architecture
 - B. Use Azure Container Services
 - C. Implement microservices architecture
 - D. Shift to a traditional VM deployment
- 7. Which action is required when migrating a SQL Server database to Azure?**
- A. Provision an Azure Storage account
 - B. Use a Data Transfer Service
 - C. Replicate the database to an on-premises server
 - D. Create a new SQL Server instance in Azure
- 8. In what scenario would you typically use Azure Functions?**
- A. For automatically deploying virtual machines
 - B. For executing code based on event triggers
 - C. For creating complex infrastructure architectures
 - D. For migrating databases to Azure
- 9. What is the maximum recovery time for virtual machines backed up with the specified policy?**
- A. 90 days
 - B. 26 weeks
 - C. 12 months
 - D. 36 months
- 10. Which Azure service would you utilize to simulate user transactions for performance issue identification?**
- A. Azure Load Testing
 - B. Azure Application Insights
 - C. Azure Network Watcher
 - D. Azure Service Fabric Health Monitoring

Answers

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

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Explanations

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1. Which tool provides a graphical interface for managing Azure resources?

- A. Azure Portal**
- B. Azure CLI
- C. Azure PowerShell
- D. Azure SDK

The Azure Portal is a web-based application that offers a graphical user interface for managing Azure resources. It enables users to interactively create, configure, and monitor their Azure services through a user-friendly dashboard. The Azure Portal provides rich visualizations, allows easy navigation through resources, and offers various features such as templates for deployments, dashboards for custom views, and the ability to manage subscriptions and billing. On the other hand, the other tools serve different purposes. Azure CLI and Azure PowerShell are command-line tools designed for users who prefer scripting and automation. They provide a powerful way to manage Azure resources but do so without the graphical elements that characterize the Azure Portal. The Azure SDK is a set of development tools and libraries that allow developers to build applications that interact with Azure services, but it does not include a graphical management interface for Azure resources. Therefore, for users seeking a visual and interactive way to manage their Azure environment, the Azure Portal is the go-to tool.

2. Which of the following is NOT a valid method to perform load balancing for authentication components in an Azure environment?

- A. Azure Application Gateway and Basic Load Balancer
- B. Traffic Manager and Standard Load Balancer
- C. Azure Application Gateway and Standard Load Balancer
- D. Traffic Manager with Basic Load Balancer**

The option that is noted as not a valid method for load balancing authentication components in an Azure environment is the combination of Traffic Manager with a Basic Load Balancer. Traffic Manager is a DNS-based traffic load balancer that allows you to distribute traffic to various regions and services based on latency, performance, or other routing methods. It operates at a higher level, directing client requests for the authentication components to the most appropriate endpoint. In contrast, the Basic Load Balancer is designed for use within a single Azure region and can only operate at the transport layer (Layer 4). It doesn't support advanced features such as SSL termination or application-layer (Layer 7) routing, which are typically necessary for managing authentication workflows effectively. The other combinations, such as Azure Application Gateway with either Basic Load Balancer or Standard Load Balancer, and Traffic Manager with Standard Load Balancer, involve traffic management methods that integrate better with authentication processes. The Application Gateway, for example, can handle HTTP/HTTPS traffic specifically and provides more robust features relevant to web applications, including SSL termination and cookie-based session affinity. In summary, Traffic Manager paired with the Basic Load Balancer lacks the necessary functionality to effectively handle the complexities of load balancing for authentication components, making this pairing an unsuitable

3. What solution should you recommend to ensure that group owners are emailed monthly about their group memberships in Azure AD?

- A. Azure AD Identify Protection
- B. Tenant Restrictions
- C. Azure AD access reviews**
- D. Conditional access policies

Recommending Azure AD access reviews is the right solution for ensuring that group owners receive monthly emails regarding their group memberships in Azure Active Directory (Azure AD). Access reviews allow administrators to review and manage user access to groups, applications, and other resources within Azure AD effectively. When setting up access reviews, administrators can define review frequency—monthly in this case—thereby generating automated notifications for group owners about their group's membership. This not only helps in maintaining proper access governance but also ensures that group owners have the latest information on who belongs to their groups and can make informed decisions regarding access rights. Moreover, Azure AD access reviews facilitate compliance and security by allowing group owners to verify that the right users have access and that those who no longer need access can be removed in a timely manner. This process inherently includes communication with group owners, aligning perfectly with the requirement for monthly updates via email. The other options do not provide the same targeted solution for monitoring and reporting group membership. For instance, Azure AD Identity Protection focuses more on risk management and user risk evaluation rather than group membership. Tenant Restrictions are used to set policies regarding where applications can be accessed but do not manage group memberships. Conditional access policies are about controlling how and when users comply with security.

4. Which component is crucial to configure for the validation of JWT claims in Azure API Management to ensure secure access to web APIs?

- A. Azure AD
- B. Azure API Management**
- C. The web APIs
- D. A User-Assigned Managed Service Identity

The key component to configure for the validation of JWT (JSON Web Token) claims in Azure API Management is the API Management service itself. This service acts as a gatekeeper that ensures only authenticated and authorized requests are processed. When working with JWT tokens in Azure API Management, the service needs to be set up to validate the claims contained within the tokens, such as issuer, audience, and expiry times. By configuring the API Management to properly validate these claims, you can control access to your web APIs, making sure that only tokens issued by trusted identity providers are accepted. This validation step is crucial in protecting APIs from unauthorized access and ensuring that the requests made to the web APIs are coming from authenticated users or services. Azure AD, the web APIs, and a User-Assigned Managed Service Identity, while they may play roles in broader security architectures or identity management, do not directly handle the JWT claim validation within the context of Azure API Management. Instead, they are complementary components or layers that may provide identity and access management but do not perform the JWT validation themselves in the API Management context. Thus, focusing on the configuration of Azure API Management ensures the security of API access based on JWT claims.

5. Where can diagnostics data be reviewed?

- A. Azure Analysis Service
- B. Azure Application Insights
- C. SQL Health Check**
- D. Azure SQL Analytics

The correct choice for reviewing diagnostics data is Azure Application Insights. This service is designed to monitor the performance of applications, offering extensive capabilities for tracking metrics, requests, failures, dependencies, and custom events. Azure Application Insights also provides rich insights through telemetry data, making it easier for developers and IT professionals to understand how applications are performing in real time. This service integrates seamlessly with various platforms and programming languages, allowing for end-to-end monitoring of applications deployed in Azure or in on-premises environments. The data reviewed through Azure Application Insights can include user behavior, application exceptions, and performance metrics, thus providing a comprehensive overview of the application's health and usage. While Azure SQL Analytics and other options may offer some level of monitoring or health reports, they are more specialized and not as versatile in scope as Azure Application Insights when it comes to reviewing broad diagnostics data across applications.

6. What approach would minimize changes to the codebase while modernizing an IIS-based web application?

- A. Adopt serverless architecture
- B. Use Azure Container Services**
- C. Implement microservices architecture
- D. Shift to a traditional VM deployment

Minimizing changes to the existing codebase while modernizing an IIS-based web application is best achieved by using Azure Container Services. This approach allows you to package your existing application code into containers, which can encapsulate the application and its dependencies, ensuring it runs consistently in various environments. By employing containerization, you can leverage existing IIS configurations and dependencies without requiring significant restructuring of the application code. Containers also facilitate a more agile deployment process. This means you can maintain your application's core functionality while gaining the benefits of modern cloud-native environments, such as scalability, ease of management, and improved deployment workflows. In contrast, adopting a serverless architecture would entail rewriting parts of the application to fit the serverless model, which could introduce significant changes to the code. Implementing a microservices architecture also typically involves breaking down the application into smaller, independently deployable services, likely requiring substantial modification of the existing code. Shifting to a traditional VM deployment, while keeping the application largely the same, does not provide the modern benefits of scalability and resource optimization that come with containerization, as it operates much like the current architecture without the enhancements available through cloud services.

7. Which action is required when migrating a SQL Server database to Azure?

- A. Provision an Azure Storage account**
- B. Use a Data Transfer Service
- C. Replicate the database to an on-premises server
- D. Create a new SQL Server instance in Azure

When migrating a SQL Server database to Azure, provisioning an Azure Storage account is often a crucial initial step, particularly if you're using certain services like Azure Blob Storage for backup files or staging data during the migration process. Azure Storage provides a scalable, cost-effective solution for storing large volumes of data, including backups and data files that need to be transferred to Azure. The migration process typically entails using various tools and services, which might include Azure Migrate, Azure Data Migration Service, or exporting the database to a backup file stored in Azure Blob Storage. This makes having a storage account ready a necessary prerequisite. While creating a new SQL Server instance in Azure is essential, it generally occurs after ensuring that data storage is established. Using a Data Transfer Service may be part of the migration strategy but is not a mandatory requirement for all migration types. Replicating the database to an on-premises server does not align with the common approaches for migrating to Azure, as the goal is to move the database to the cloud rather than keeping a replica on-premises.

8. In what scenario would you typically use Azure Functions?

- A. For automatically deploying virtual machines
- B. For executing code based on event triggers**
- C. For creating complex infrastructure architectures
- D. For migrating databases to Azure

Azure Functions is particularly well-suited for scenarios where you need to execute code in response to specific event triggers. This serverless compute service allows developers to run small pieces of code, or "functions," without having to manage the underlying infrastructure. It operates based on an event-driven model, meaning that you can set it up to respond to various events such as changes in data, HTTP requests, or messages from queues. For instance, if a new file is uploaded to Azure Blob Storage, an Azure Function can be triggered to process that file automatically, converting it into a different format or extracting data from it. This model is beneficial for developing applications that need to scale automatically and respond in real-time to various events, making Azure Functions a highly efficient solution for creating reactive architectures in modern cloud applications.

9. What is the maximum recovery time for virtual machines backed up with the specified policy?

- A. 90 days
- B. 26 weeks**
- C. 12 months
- D. 36 months

The maximum recovery time for virtual machines backed up with the specified policy is 26 weeks, which corresponds to a retention policy that allows data to be stored and recoverable for half a year. This means that in the event of a failure or data loss, the virtual machines can be restored from the backups taken within the last 26 weeks. Retention policies are critical for organizations as they help ensure data can be recovered within a specified time frame while also adhering to compliance and data management standards. The concept of backup retention is key to disaster recovery strategies. By having a policy that retains data for 26 weeks, organizations can effectively manage their data lifecycle and ensure they can meet regulatory requirements for data retention. Other choices indicate different retention periods that would not be applicable under the specified backup policy. For instance, 90 days is much shorter than the 26-week period, while 12 months and 36 months extend the retention time beyond what this specific policy offers. Therefore, the 26-week period correctly aligns with the maximum recovery time stipulated by the policy in question.

10. Which Azure service would you utilize to simulate user transactions for performance issue identification?

- A. Azure Load Testing
- B. Azure Application Insights**
- C. Azure Network Watcher
- D. Azure Service Fabric Health Monitoring

The best service for simulating user transactions to identify performance issues is Azure Load Testing. This service allows you to create and run load tests to analyze how your application performs under stress or heavy usage. By simulating a high volume of user transactions, Azure Load Testing helps pinpoint bottlenecks and performance issues in your applications, providing key metrics on scalability and reliability. Azure Application Insights, while it is excellent for monitoring application performance and tracking live metrics, is primarily focused on gathering telemetry data from your applications and providing insights into errors and performance issues based on real user interactions rather than simulating transactions. Therefore, it does not serve the purpose of simulating load or user transactions to diagnose performance issues in the same proactive way that Azure Load Testing does. Azure Network Watcher is intended for monitoring and diagnosing network issues in Azure, such as connectivity and performance. It is not designed for simulating user transactions and evaluating application performance. Azure Service Fabric Health Monitoring focuses more on monitoring the health of the services and applications running on Azure Service Fabric rather than simulating user transactions for performance assessment. Thus, Azure Load Testing stands out as the appropriate choice for simulating user transactions and effectively identifying performance issues within applications.

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.

Or visit your dedicated course page for more study tools and resources:

<https://az-301.examzify.com>

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

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