Microsoft Certified: Azure IoT Developer Specialty (AZ-220) Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

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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

1. **What does the 'az iot hub configuration show-metric' command return?**

   A. The command will return once the configuration has been applied to all devices.

   B. The command will return immediately with the current status.

   C. The command will show error logs only.

   D. It does not return any output.

2. **Which statement is true regarding direct methods in Azure IoT?**

   A. They can be run exclusively on the device itself.

   B. They require parameters to be specified by the back-end app.

   C. They are automatically synchronized with device twins.

   D. They do not require a back-end app to function.

3. **When setting up a Device Twin Property field, what must prefix the value?**

   A. properties.reported

   B. properties.desired

   C. properties.tags

   D. deviceId

4. **Is IoT Hub an Azure service that allows back-end developers to build remote device-management solutions?**

   A. True

   B. False

   C. Only for IoT devices

   D. Only for mobile applications

5. **How can a bearer token be generated in Azure IoT Central?**

   A. Using the IoT Central UI

   B. Through the Azure portal

   C. Using the az account get-access-token CLI command

   D. By configuring at the device level

6. In IoT Hub metrics, what defines an action group?

A. A collection of actions of the same type

B. A collection of metrics and logs

C. A collection of unrelated actions

D. A collection of actions, not necessarily of the same type

7. Given the values 6, 4, 5, 0, 12, -1, -2, 0, 4, 2, what is the average of these metrics?

A. 3.3

B. 3

C. 2.5

D. 4

8. To send a command to a device such as requesting it to reboot, you must:

A. Update a device property

B. Send a command

C. Retrieve device details

D. Delete the device

9. What is the purpose of the Automatic Device Management feature in Azure IoT Hub?

A. Simplifies device configuration and monitoring

B. Increases the processing power of IoT devices

C. Enhances physical security of IoT devices

D. Creates user interfaces for IoT solutions

10. Which Azure service provides support for event ingestion from IoT devices?

A. IoT Hub

B. Cosmos DB

C. Time Series Insights

D. Azure Functions

Answers

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

Explanations

1. What does the 'az iot hub configuration show-metric' command return?

A. The command will return once the configuration has been applied to all devices.

B. The command will return immediately with the current status.

C. The command will show error logs only.

D. It does not return any output.

The 'az iot hub configuration show-metric' command is designed to provide immediate feedback on the current configuration metrics related to an Azure IoT Hub. When you execute this command, it delivers real-time information about the status of the configuration across the devices connected to the IoT Hub. This immediate response is important for developers and administrators working with IoT solutions, as it allows them to quickly assess whether the configurations applied to devices were successful or if there are any ongoing issues that need to be addressed. The ability to obtain current status information helps in managing and monitoring devices effectively within the IoT ecosystem. In contrast, some of the other choices imply a longer wait time for feedback or focus solely on error logs, which do not accurately represent the functionality of this command. The command is meant to reflect the current metrics, rather than waiting for a configuration to propagate to all devices or only providing error details. Ultimately, this makes option B the most accurate representation of the command's behavior.

2. Which statement is true regarding direct methods in Azure IoT?

A. They can be run exclusively on the device itself.

B. They require parameters to be specified by the back-end app.

C. They are automatically synchronized with device twins.

D. They do not require a back-end app to function.

Direct methods in Azure IoT are a powerful way for back-end applications to invoke commands on IoT devices. The correct choice highlights that direct methods require parameters to be specified by the back-end application to function. This is essential because direct methods often carry specific commands or data that need to be sent to the device for it to perform a certain action. Without these parameters, the device wouldn't know what it is being instructed to do, which demonstrates the necessity of precise command structure from the back-end app. The other options do not accurately represent how direct methods operate. They aren't exclusive to the device itself, as they are explicitly initiated by back-end applications. Additionally, while direct methods can interact with device twins, they are not automatically synchronized with them; any synchronization needs to be managed separately. Lastly, back-end applications are indeed necessary for direct methods, contradicting the notion that they can function independently.

3. When setting up a Device Twin Property field, what must prefix the value?

A. properties.reported

B. properties.desired

C. properties.tags

D. deviceId

In Azure IoT, a Device Twin is a JSON document that stores data about the device, and it has two main sections for properties: "desired" and "reported." When setting up a Device Twin Property field, you are adding a desired property that defines the intended state of the device. This is where the device is informed about what configurations or commands it should adopt. By prefixing the value with "properties.desired," you indicate that the property being set reflects the desired state defined by the cloud application. This is crucial for the bi-directional communication model that IoT solutions employ, allowing cloud applications to specify settings the device should follow, while the device can report its current state back through the "properties.reported" field. The other prefixes listed are not relevant in this context. "properties.reported" is used for attributes that the device sends back to the cloud to indicate its current state rather than what is desired. "properties.tags" is used for organizing devices but does not hold the desired configuration or state. "deviceId" pertains to identifying the specific device but does not prefix property values in the context of Device Twins. Understanding this structure is key for managing device configurations and ensuring effective communication between devices and the cloud in Io

4. Is IoT Hub an Azure service that allows back-end developers to build remote device-management solutions?

A. True

B. False

C. Only for IoT devices

D. Only for mobile applications

IoT Hub is indeed an Azure service designed to facilitate remote device management, making it particularly valuable for back-end developers working with Internet of Things (IoT) applications. This service acts as a central message hub, enabling bi-directional communication between IoT devices and the cloud. It allows developers to manage devices, monitor their status, and push commands or updates to devices efficiently. IoT Hub supports various features essential for remote device management, such as device registration, authentication, and configuration, providing developers with a robust toolset to create and maintain device fleets. Thus, it serves a critical function in the ecosystem of IoT by ensuring reliable communication and management capabilities. The other options suggest limitations or contexts that do not accurately reflect the capabilities of IoT Hub. While it is focused on IoT devices, the assertion that it solely serves that function is misleading. The service is also built to integrate with various software solutions, not limited to mobile applications, thereby expanding its usability for different back-end architectures. Hence, selecting that IoT Hub is a service for building remote device-management solutions is a valid assertion, aligning well with its intended functionality.

5. How can a bearer token be generated in Azure IoT Central?

A. Using the IoT Central UI

B. Through the Azure portal

C. Using the az account get-access-token CLI command

D. By configuring at the device level

A bearer token in Azure IoT Central can be generated using the Azure CLI command `az account get-access-token`. This command is part of the Azure CLI toolset, which provides a way to interact with Azure services from the command line. When executed, it retrieves an OAuth 2.0 access token that you can use for authentication when making REST API calls or accessing resources in Azure IoT Central. This method is particularly useful for developers and administrators who need to programmatically obtain tokens without manual authentication processes. The access token generated contains all necessary claims and permissions to access resources, making it a secure way to authenticate requests. The other methods for generating a bearer token, while they may offer user interfaces or configuration options, do not directly correspond to the standard practice of obtaining tokens through command-line interfaces designed for automation and scripting. Thus, the command-line approach stands out as a more versatile and efficient way to manage access tokens in Azure IoT Central.

6. In IoT Hub metrics, what defines an action group?

A. A collection of actions of the same type

B. A collection of metrics and logs

C. A collection of unrelated actions

D. A collection of actions, not necessarily of the same type

An action group in Azure IoT Hub metrics is defined as a collection of actions that can be triggered by specific alerts or conditions. The key aspect of an action group is that it can include various types of actions, and these actions can be diverse, ranging from sending emails and SMS notifications to invoking webhooks or triggering Azure Functions. This flexibility is critical because it allows developers and administrators to create tailored responses to different alert conditions. For instance, if a certain metric indicates a potential issue, an action group can execute multiple notifications or workflows, ensuring the appropriate personnel or systems are alerted based on the nature of the alert. The definition acknowledges the variety of response mechanisms available, which is essential in ensuring that alerting and response strategies are comprehensive and effective. This capacity for a diverse range of actions distinguishes an action group from other potential definitions, reinforcing its role in robust IoT solutions.

7. Given the values 6, 4, 5, 0, 12, -1, -2, 0, 4, 2, what is the average of these metrics?

A. 3.3

B. 3

C. 2.5

D. 4

To find the average of the given values, you first need to sum all the numbers and then divide that sum by the count of the numbers. The given values are: 6, 4, 5, 0, 12, -1, -2, 0, 4, 2. First, calculate the sum of these numbers: 6 + 4 + 5 + 0 + 12 + (-1) + (-2) + 0 + 4 + 2 = 30. Next, count the total number of values, which is 10. Now, divide the sum by the count: 30 / 10 = 3. This calculation shows that the average of the provided metrics is indeed 3, which supports the chosen answer. Therefore, option B reflects the correct average for the set of values given. This average provides a central value of the dataset, giving a simple overview of these metrics.

8. To send a command to a device such as requesting it to reboot, you must:

A. Update a device property

B. Send a command

C. Retrieve device details

D. Delete the device

Sending a command is the correct approach when you want to issue instructions or specific requests to a device, such as requesting a reboot. In the Azure IoT framework, commands are used for remote operations that can trigger specific actions on the connected devices. This communication is typically done through direct methods or cloud-to-device messaging, which are specifically designed for this purpose. Using commands allows you to perform various operations on the device without needing to alter its properties or request its details. For instance, rebooting does not require you to retrieve existing device information or delete the device itself; it only necessitates a command to the device to execute the action. Thus, sending a command is the most appropriate and direct method to request the desired operation.

9. What is the purpose of the Automatic Device Management feature in Azure IoT Hub?

A. Simplifies device configuration and monitoring

B. Increases the processing power of IoT devices

C. Enhances physical security of IoT devices

D. Creates user interfaces for IoT solutions

The Automatic Device Management feature in Azure IoT Hub is primarily designed to simplify the configuration and monitoring of devices connected to the IoT network. This feature allows developers and administrators to automate various aspects of device management, such as setting configurations, updating device settings, and monitoring the health and status of devices seamlessly. With Automatic Device Management, users can manage devices at scale, ensuring that they remain compliant with the required configurations and security policies. This helps in reducing the operational overhead and easing the burden of manual device management processes, thus enabling organizations to focus on deploying IoT solutions efficiently. In contrast, the other options focus on aspects that are not directly related to device management. Increasing the processing power of IoT devices pertains more to hardware specifications than management features. Enhancing physical security is also outside the scope of device management as it typically involves securing the physical devices themselves rather than managing them within an IoT platform. Creating user interfaces for IoT solutions is related to the application layer and user experience rather than managing the devices directly.

10. Which Azure service provides support for event ingestion from IoT devices?

A. IoT Hub

B. Cosmos DB

C. Time Series Insights

D. Azure Functions

The most appropriate service for event ingestion from IoT devices in this context is IoT Hub. This service acts as a central hub for bi-directional communication between IoT applications and the devices it manages. It is specifically designed to connect, monitor, and control millions of IoT devices, providing robust features for device-to-cloud and cloud-to-device messaging. IoT Hub supports various protocols to facilitate the ingestion of telemetry data and events from devices, making it an ideal choice for handling data from IoT devices efficiently. It provides features such as device registration, device management, and secure communications, which are critical for IoT solutions. While Cosmos DB, Time Series Insights, and Azure Functions play important roles in the broader IoT ecosystem, they are not primarily meant for direct event ingestion. Cosmos DB is a globally distributed database service designed for storing and querying data, Time Series Insights is used for analyzing time-stamped data efficiently, and Azure Functions provides serverless computing capabilities, allowing you to run small pieces of code in response to events. However, these services complement IoT Hub rather than replace its core functionality in the context of event ingestion.

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://mscertifiedasureiotdecspecialty.examzify.com

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