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# Microsoft AZ-220

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**Microsoft Azure IoT Developer Certification Questions & Answers**

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Exam Summary – Syllabus – Questions

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**AZ-220**  
**Microsoft Certified - Azure IoT Developer Specialty**  
**40-60 Questions Exam - 700/1000 Cut Score - Duration of 120 minutes**

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## Know Your AZ-220 Certification Well:

The AZ-220 is best suitable for candidates who want to gain knowledge in the Microsoft Azure. Before you start your AZ-220 preparation you may struggle to get all the crucial Azure IoT Developer materials like AZ-220 syllabus, sample questions, study guide.

But don't worry the AZ-220 PDF is here to help you prepare in a stress free manner. The PDF is a combination of all your queries like-

- What is in the AZ-220 syllabus?
- How many questions are there in the AZ-220 exam?
- Which Practice test would help me to pass the AZ-220 exam at the first attempt?

Passing the AZ-220 exam makes you Microsoft Certified - Azure IoT Developer Specialty. Having the Azure IoT Developer certification opens multiple opportunities for you. You can grab a new job, get a higher salary or simply get recognition within your current organization.

## Microsoft AZ-220 Azure IoT Developer Certification Details:

|                     |   |
|---------------------|---|
| Exam Name           | Microsoft Certified - Azure IoT Developer Specialty               |
| Exam Code           | AZ-220  |
| Exam Price          | \$165 (USD)   |
| Duration            | 120 mins  |
| Number of Questions | 40-60   |
| Passing Score       | 700 / 1000  |
| Books / Training    | <a href="#">Course AZ-220T00-A: Microsoft Azure IoT Developer</a> |
| Schedule Exam       | <a href="#">Pearson VUE</a>                                       |
| Sample Questions    | <a href="#">Microsoft Azure IoT Developer Sample Questions</a>    |
| Practice Exam       | <a href="#">Microsoft AZ-220 Certification Practice Exam</a>      |

## AZ-220 Syllabus:

| Topic  | Details  |
|--|--|
| <b>Set up the IoT Solution Infrastructure (10-15%)</b> |  |
| Create and configure an IoT Hub                        | <ul style="list-style-type: none"> <li>- create an IoT Hub</li> <li>- register a device</li> <li>- configure a device twin</li> <li>- configure IoT Hub tier and scaling</li> </ul>  |
| Build device messaging and communication               | <ul style="list-style-type: none"> <li>- build messaging solutions by using SDKs (device and service)</li> <li>- implement device-to-cloud communication</li> <li>- implement cloud-to-device communication</li> <li>- configure file upload for devices</li> <li>- optimize message size and scaling</li> <li>- connect to IoT Hub using TLS server certificates</li> </ul>   |
| Configure physical IoT devices                         | <ul style="list-style-type: none"> <li>- recommend an appropriate protocol based on device specifications</li> <li>- configure device networking, topology, and connectivity</li> </ul>  |
| <b>Provision and Manage Devices (15-20%)</b>           |  |
| Set up an IoT Hub Device Provisioning Service (DPS)    | <ul style="list-style-type: none"> <li>- create a DPS instance</li> <li>- create a new enrollment in DPS</li> <li>- link an IoT Hub to the DPS instance</li> </ul>   |
| Manage the device lifecycle                            | <ul style="list-style-type: none"> <li>- provision a device by using DPS</li> <li>- deprovision an autoenrollment</li> <li>- decommission (disenroll) a device</li> </ul>  |
| Manage IoT devices by using IoT Hub                    | <ul style="list-style-type: none"> <li>- manage the devices list in the IoT Hub device registry</li> <li>- modify device twin tags and properties</li> <li>- configure a set of devices by using IoT Hub Automatic Device Management</li> <li>- trigger an action on a set of devices by using IoT Hub Jobs and Direct Methods</li> <li>- implement a device firmware update process by using device management primitives</li> <li>- configure module identities</li> </ul> |
| Manage IoT devices by using Azure IoT Central          | <ul style="list-style-type: none"> <li>- create a custom device template by using Azure IoT Central</li> <li>- configure rules and actions in IoT Central</li> <li>- customize the operator view</li> <li>- add and manage devices from IoT Central</li> <li>- troubleshoot device connections and data mapping</li> <li>- create an application based on an app template for an</li> </ul>  |

| Topic  | Details   |
|--|---|
|  | industry vertical <ul style="list-style-type: none"> <li>- export a custom application template</li> <li>- create and manage a new application based on a custom application template</li> <li>- upgrade and version a device template</li> <li>- run IoT Central jobs</li> <li>- interact with IoT Central devices using the REST APIs</li> </ul>  |
| <b>Implement IoT Edge (15-20%)</b>             |   |
| Set up an IoT Edge device                      | <ul style="list-style-type: none"> <li>- create a device identity in IoT Hub</li> <li>- set up an IoT device for IoT Edge</li> <li>- select and install container runtime on IoT devices</li> <li>- implement module access to the host system</li> <li>- update IoT Edge runtime</li> <li>- provision IoT Edge devices by using DPS</li> </ul>   |
| Deploy an IoT Edge device                      | <ul style="list-style-type: none"> <li>- create and implement a deployment manifest</li> <li>- create a deployment for a single IoT Edge device</li> <li>- create a deployment to target multiple devices</li> <li>- create a continuous deployment by using Azure DevOps</li> </ul>  |
| Develop IoT Edge modules                       | <ul style="list-style-type: none"> <li>- create and customize an IoT Edge module</li> <li>- deploy a custom IoT Edge module to an IoT Edge device</li> <li>- deploy an IoT Edge module from Azure Marketplace to an IoT Edge device</li> <li>- publish an IoT Edge module to Azure Container Registry</li> <li>- define module configuration</li> <li>- configure IoT Edge module routing</li> <li>- configure environment for IoT Edge development; debug IoT Edge modules in the development environment</li> </ul> |
| Configure an IoT Edge device                   | <ul style="list-style-type: none"> <li>- select an appropriate gateway pattern</li> <li>- deploy an IoT gateway by using IoT Hub and IoT Edge</li> <li>- configure IoT Edge certificates</li> <li>- implement and configure offline support (including local storage)</li> <li>- create a layered hierarchy of IoT Edge devices</li> </ul>  |
| <b>Implement Business Integration (5-10%)</b>  |   |
| Integrate with upstream and downstream systems | <ul style="list-style-type: none"> <li>- set up input and output connections</li> <li>- set up IoT Hub routing for triggering workflows</li> <li>- test data interface integration</li> <li>- integrate third-party solutions</li> <li>- configure workflows, including rules and alerts</li> </ul>   |

| Topic   | Details   |
|---|---|
| Develop Azure Digital Twins solutions                             | <ul style="list-style-type: none"> <li>- create Azure Digital Twins models and digital twins</li> <li>- map IoT device data to Azure Digital Twins models and relationships</li> <li>- ingest IoT device messages and translate messages to Azure Digital Twins</li> <li>- configure routes and endpoints to trigger business logic and data processing</li> <li>- query the Azure Digital Twins graph</li> <li>- update properties on Azure Digital Twins entities in the graph</li> <li>- monitor and troubleshoot Azure Digital Twins</li> </ul> |
| <b>Process and manage data (15-20%)</b>                           |   |
| Configure message routing in Azure IoT Hub                        | <ul style="list-style-type: none"> <li>- implement message enrichment in IoT Hub</li> <li>- implement routing of IoT device messages to endpoints</li> <li>- define and test routing queries</li> <li>- configure IoT Hub as an Azure Event Grid source</li> <li>- reconfigure the default Azure Event Hubs endpoint when there are multiple endpoints</li> </ul>   |
| Configure stream processing of IoT data                           | <ul style="list-style-type: none"> <li>- create Azure Stream Analytics for data and stream processing of IoT data</li> <li>- process and filter IoT data by using Azure Functions</li> <li>- write user-defined functions and aggregations in Stream Analytics</li> <li>- consume Azure Machine Learning functions in Stream Analytics</li> <li>- configure Stream Analytics outputs</li> </ul>   |
| Create Azure Stream Analytics queries                             | <ul style="list-style-type: none"> <li>- write a Stream Analytics query that runs in IoT Edge</li> <li>- write a Stream Analytics query that runs in the cloud</li> </ul>   |
| Process real-time data by using Azure Time Series Insights        | <ul style="list-style-type: none"> <li>- create a Time Series Insights environment</li> <li>- connect IoT Hub and the Time Series Insights environment</li> <li>- create a reference data set for a Time Series Insights environment by using the Azure portal</li> <li>- implement Time Series model hierarchies, types, and instance fields</li> <li>- consume data by using Time Series Expression syntax</li> </ul>   |
| <b>Monitor, troubleshoot, and optimize IoT solutions (15-20%)</b> |   |
| Configure health monitoring                                       | <ul style="list-style-type: none"> <li>- configure metrics in IoT Hub</li> <li>- set up diagnostics logs for IoT Hub</li> <li>- configure IoT Hub scaling (SKU/unit) programmatically</li> <li>- query and visualize tracing by using Azure Monitor</li> </ul>  |

| Topic   | Details  |
|---|--|
|   | <ul style="list-style-type: none"> <li>- apply Azure Policy definitions for IoT Hub</li> <li>- gather IoT Edge metrics</li> <li>- retrieve diagnostics from IoT Edge</li> </ul>  |
| Troubleshoot device communication               | <ul style="list-style-type: none"> <li>- establish maintenance communication by using RDP or SSH</li> <li>- establish maintenance communication by using Azure Device Streams</li> <li>- verify device telemetry is received by IoT Hub</li> <li>- validate device twin properties, tags, and direct methods</li> <li>- troubleshoot device disconnects and connects</li> <li>- troubleshoot IoT Edge devices</li> </ul> |
| Ensure performance and availability             | <ul style="list-style-type: none"> <li>- identify and resolve bottlenecks</li> <li>- calculate capacity requirements for each service</li> <li>- troubleshoot message loss</li> <li>- test manual failover</li> </ul>  |
| <b>Implement security (10-15%)</b>              |  |
| Implement security for IoT devices and services | <ul style="list-style-type: none"> <li>- implement device and gateway security</li> <li>- ensure secure connections</li> </ul>   |
| Implement Azure Defender for IoT                | <ul style="list-style-type: none"> <li>- configure an Azure Defender for an IoT agent-based solution</li> <li>- implement Defender-IoT-micro-agents (security agents)</li> <li>- configure built-in and custom alerts for IoT Hub</li> </ul>   |

## Microsoft AZ-220 Sample Questions:

**Question: 1**

How should you complete the GROUP BY clause to meet the Streaming Analytics requirements?

- a) GROUP BY HoppingWindow(Second, 60, 30)
- b) GROUP BY TumblingWindow(Second, 30)
- c) GROUP BY SlidingWindow(Second, 30)
- d) GROUP BY SessionWindow(Second, 30, 60)

Answer: b

**Question: 2**

You plan to deploy an Azure IoT hub. The IoT hub must support the following:

- Three Azure IoT Edge devices
- 2,500 IoT devices

Each IoT device will send a 6 KB message every five seconds. You need to size the IoT hub to support the devices. The solution must minimize costs.

What should you choose?

- a) one unit of the S1 tier
- b) one unit of the B2 tier
- c) one unit of the B1 tier
- d) one unit of the S3 tier

**Answer: d**

**Question: 3**

You manage an Azure IoT hub. You need to ensure that telemetry data sent from IoT devices can be analyzed for performance statistics. Telemetry messages must be filtered based on message body content.

Which two actions should you take?

Each correct answer presents part of the solution.

- a) Set the message contentType to application/xml.
- b) Configure the Device Twin Change Events source.
- c) Route messages to an Event hub endpoint.
- d) Prefix queried message values with \$body.

**Answer: c, d**

**Question: 4**

You plan to deploy Azure Time Series Insights. What should you create on iothub1 before you deploy Time Series Insights?

- a) a new message route
- b) a new consumer group
- c) a new shared access policy
- d) an IP filter rule

**Answer: b**



**Question: 5**

You have an Azure IoT solution that includes an Azure IoT Hub named Hub1 and an Azure IoT Edge device named Edge1. Edge1 connects to Hub1. You need to deploy a temperature module to Edge1.

What should you do?

- a) From the Azure portal, navigate to Hub1 and select IoT Edge. Select Edge1, and then select Manage Child Devices. From a Bash prompt, run the following command: `az iot edge set-modules -device-id Edge1 -hub-name Hub1 -content C:\deploymentMan1.json`
- b) Create an IoT Edge deployment manifest that specifies the temperature module and the route to \$upstream. From a Bush prompt, run the following command: `az iot hub monitor-events-device-id Edge1 -hub-name Hub1`
- c) From the Azure portal, navigate to Hub1 and select IoT Edge. Select Edge1, select Device Twin, and then set the deployment manifest as a desired property. From a Bash prompt, run the following command `az iot hub monitor-events-device-id Edge1 -hub-name Hub1`
- d) Create an IoT Edge deployment manifest that specifies the temperature module and the route to \$upstream. From a Bush prompt, run the following command: `az iot edge set-modules -device-id Edge1 -hub-name Hub1 -content C:\deploymentMan1.json`

**Answer: d**

**Question: 6**

During the POV phase, telemetry from IoT Hub stops flowing to the hot path. The cold path continues to work. What should you do to restore the hot path?

- a) Disable the fallback route.
- b) Run the Test all routes action.
- c) Create an explicit route for the hot path.
- d) Modify cold-route to send only some telemetry data to the cold path.

**Answer: c**

**Question: 7**

You enable Azure Security Center for IoT. You need to onboard a device to Azure Security Center. What should you do?

- a) Add the azureiotsecurity module identity to the Azure IoT Hub device identity.
- b) Open incoming TCP port 8883 on the device.
- c) Modify the connection string of the device.
- d) Install an X.509 certificate on the hardware security module (HSM) of the device.

**Answer: a**

**Question: 8**

You need to enable telemetry message tracing through the entire IoT solution. What should you do?

- a) Monitor device lifecycle events.
- b) Upload IoT device logs by using the File upload feature.
- c) Enable the DeviceTelemetry diagnostic log and stream the log data to an Azure event hub.
- d) Implement distributed tracing.

**Answer: d**

**Question: 9**

You plan to deploy a standard tier Azure IoT hub. You need to perform an over-the-air (OTA) update on devices that will connect to the IoT hub by using scheduled jobs. What should you use?

- a) a device-to-cloud message
- b) the device twin reported properties
- c) a cloud-to-device message
- d) a direct method

**Answer: d**

**Question: 10**

You have an existing Azure IoT hub. You need to connect physical IoT devices to the IoT hub. You are connecting the devices through a firewall that allows only port 443 and port 80. Which three communication protocols can you use?

Each correct answer presents a complete solution. NOTE: Each correct selection is worth one point.

- a) MQTT over WebSocket
- b) AMQP
- c) AMQP over WebSocket
- d) MQTT
- e) HTTPS

**Answer: a, c, e**

## Study Guide to Crack Microsoft Azure IoT Developer AZ-220 Exam:

- Getting details of the AZ-220 syllabus, is the first step of a study plan. This pdf is going to be of ultimate help. Completion of the syllabus is must to pass the AZ-220 exam.
- Making a schedule is vital. A structured method of preparation leads to success. A candidate must plan his schedule and follow it rigorously to attain success.
- Joining the Microsoft provided training for AZ-220 exam could be of much help. If there is specific training for the exam, you can discover it from the link above.
- Read from the AZ-220 sample questions to gain your idea about the actual exam questions. In this PDF useful sample questions are provided to make your exam preparation easy.
- Practicing on AZ-220 practice tests is must. Continuous practice will make you an expert in all syllabus areas.

## Reliable Online Practice Test for AZ-220 Certification

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