

AZ-220T00-A

Microsoft Azure IoT Developer

32 horas

Azure

Microsoft

INTRODUÇÃO

This course provides students with the skills and knowledge required to successfully create and maintain the cloud and edge portions of an Azure IoT solution. The course includes full coverage of the core Azure IoT services such as IoT Hub, Device Provisioning Services, Azure Stream Analytics, Time Series Insights, and more. In addition to the focus on Azure PaaS services, the course includes sections on IoT Edge, device management, monitoring and troubleshooting, security concerns, Azure Digital Twins, and Azure IoT Central.

OBJETIVO DO CURSO

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PÚBLICO-ALVO

Audience Profile

The Azure IoT Developer is responsible for the implementation and the coding required to create and maintain the cloud and edge portion of an IoT solution. In addition to configuring and maintaining devices by using Azure IoT services and other Microsoft tools, the IoT Developer also sets up the physical devices and is responsible for maintaining the devices throughout the life cycle. The IoT Developer implements designs for IoT solutions, including device topology, connectivity, debugging and security. For Edge device scenarios, the IoT Developer also deploys compute/containers and configures device networking, which could include various edge gateway implementations. The IoT Developer implements designs for solutions to manage data pipelines, including monitoring and data transformation as it relates to IoT. The IoT Developer works with data engineers and other stakeholders to ensure successful business integration. IoT Developers should have a good understanding of Azure services, including data storage options, data analysis, data processing, and the Azure IoT PaaS versus SaaS options. IoT Developers should have basic programming skills in at least one Azure-supported language, including C#, Node.js, C, Python, or Java.

PRÉ-REQUISITOS

Prerequisites

To be successful in this course, learners should have the following:

- Cloud Solution Awareness: Students should have experience using the Azure Portal and a basic understanding of PaaS, SaaS, and IaaS implementations.
- Software Development Experience: Software development experience is a prerequisite for this course, but no specific software language is required, and the experience does not need to be at a professional level.
- Data Processing Experience: General understanding of data storage and data processing is a recommended but not required

Course outline

- Module 1: Create Azure IoT services in the Azure portal
- Module 2: Implement IoT device communication by using the Azure IoT SDKs
- Module 3: Provision IoT devices at scale by using the Device Provisioning Service
- Module 4: Implement device message processing and data analytics
- Module 5: Develop data insights and business integrations
- Module 6: Deploy Azure IoT Edge devices and modules
- Module 7: Develop and deploy custom IoT Edge modules
- Module 8: Manage IoT devices by using IoT Hub and apps
- Module 9: Monitor and troubleshoot an IoT solution by using Azure Monitor
- Module 10: Enhance IoT solution security by using Microsoft Defender for IoT
- Module 11: Extend IoT solutions by using Azure Digital Twins
- Module 12: Build low touch IoT solutions by using Azure IoT Central