

MAZR-65 - MOC AZ-220T00 - MICROSOFT AZURE IOT DEVELOPER

Categoria: **Azure**

INFORMAZIONI SUL CORSO



Durata:
4 Giorni



Categoria:
Azure



Qualifica Istruttore:
Microsoft Certified
Trainer



Dedicato a:
Sviluppatore



Produttore:
Microsoft

OBIETTIVI

After completing this course, students will be able to:

- Create, configure, and manage an Azure IoT hub.
- Provision devices by using IoT Hub and DPS, including provisioning at scale.
- Establish secure 2-way communication between devices and IoT Hub.
- Implement message processing by using IoT Hub routing and Azure Stream Analytics.
- Configure the connection to Time Series Insights and support business integration requirements.
- Implement IoT Edge scenarios using marketplace modules and various edge gateway patterns.
- Implement IoT Edge scenarios that require developing and deploying custom modules and containers.
- Implement device management using device twins and direct methods.
- Implement solution monitoring, logging, and diagnostics testing.
- Recognize and address security concerns and implement Azure Security Center for IoT.
- Build an IoT Solution by using Azure IoT Central and recognize SaaS opportunities for IoT.

PREREQUISITI

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.

Cloud Solution Awareness: Students should have a basic understanding of PaaS, SaaS, and IaaS implementations. Microsoft Azure Fundamentals (AZ-900), or equivalent skills, is recommended.

CONTENUTI

Module 1: Introduction to IoT and Azure IoT Services

- Business Opportunities for IoT
- Introduction to IoT Solution Architecture
- IoT Hardware and Cloud Services
- Lab Scenarios for this Course

Lab : Getting Started with Azure

Lab : Setting Started with Azure IoT Services

Module 2: Devices and Device Communication

- IoT Hub and Devices
- IoT Developer Tools
- Device Configuration and Communication

Lab : Setup the Development Environment

Lab : Connect IoT Device to Azure

Module 3: Device Provisioning at Scale

- Device Provisioning Service Terms and Concepts
- Configure and Manage the Device Provisioning Service
- Device Provisioning Tasks

Lab : Individual Enrollment of Devices in DPS

Lab : Automatic Enrollment of Devices in DPS

Module 4: Message Processing and Analytics

- Messages and Message Processing
- Data Storage Options
- Azure Stream Analytics

Lab : Device Message Routing

Lab : Filtering and Aggregating Message Data

Module 5: Insights and Business Integration

- Business Integration for IoT Solutions
- Data Visualization with Time Series Insights
- Data Visualization with Power BI

Lab : Integrate IoT Hub with Event Grid

Lab : Explore and Analyze Time Stamped Data with Time Series Insights

Module 6: Azure IoT Edge Deployment Process

- Introduction to Azure IoT Edge
- Edge Deployment Process
- Edge Gateway Devices

Lab : Introduction to IoT Edge

Lab : Set Up an IoT Edge Gateway

Module 7: Azure IoT Edge Modules and Containers

- Develop Custom Edge Modules

-Offline and Local Storage

Lab : Develop, Deploy, and Debug a Custom Module on Azure IoT Edge

Lab : Run an IoT Edge Device in Restricted Network and Offline

Module 8: Device Management

- Introduction to IoT Device Management
- Manage IoT and IoT Edge Devices
- Device Management at Scale

Lab : Remotely Monitor and Control Devices with Azure IoT Hub

Lab : Automatic Device Management

Module 9: Solution Testing, Diagnostics, and Logging

- Monitoring and Logging
- Troubleshooting

Lab : Configure Metrics and Logs in Azure IoT Hub

Lab : Monitor and Debug Connection Failures

Module 10: Azure Security Center and IoT Security Considerations

- Security Fundamentals for IoT Solutions
- Introduction to Azure Security Center for IoT
- Enhance Protection with Azure Security Center for IoT Agents

Lab : Implementing Azure Security Center for IoT

Module 11: Build an IoT Solution with IoT Central

- Introduction to IoT Central
- Create and Manage Device Templates
- Manage Devices in Azure IoT Central

Lab : Get Started with Azure IoT Central

Lab : Implementing IoT Solutions with Azure IoT Central

INFO

Esame: AZ-220 - Microsoft Azure IoT Developer

Manuale: Il Materiale Didattico Ufficiale per tutti i corsi Microsoft MOC può essere richiesto, se disponibile, in forma elettronica (DMOC) invece che cartacea e lo studente iscritto potrà scaricarlo dal sito Microsoft. Chi acquista un DMOC ha diritto a consultare tutte le versioni del manuale, sia quelle precedenti a quella che acquista sia quelle che usciranno successivamente, dove troverà corretti eventuali errori e/o le novità del prodotto.

Prezzo manuale: 210 € incluso nel prezzo del corso a Calendario

Natura del corso: Operativo (previsti lab su PC)