

# 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:** Materiale didattico ufficiale Microsoft in formato digitale

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

**Natura del corso:** Operativo (previsti lab su PC)