Microsoft Azure IoT Developer (AZ-220T00)

ID AZ-220T00 **Price** 2,690.— € (excl. tax) **Duration** 4 days

This course is retired since 31 July 2023.

Course Overview

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.

Who should attend

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.

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.

If you are new to Azure and cloud computing consider one of the following resources:

- Free online: Azure Fundamentals
- Instructor-led course: Microsoft Azure Fundamentals (AZ-900T00)

Course Content

- Examine the architecture of an IoT solution
- Examine the components of an IoT solution
- Explore the Azure portal
- Explore Azure IoT services
- Examine IoT Hub properties
- Examine IoT device lifecycle concepts
- Examine the IoT developer tools
- Explore device configuration and communication
- Examine Device Provisioning Service terms and concepts
- Examine Device Provisioning Service coding tools and access
- Examine device provisioning lifecycle tasks
- Explore individual enrollment tasks
- Explore group enrollment tasks
- Examine IoT Hub message routing
- Consider message processing options and constraints
- Get started with cloud storage for IoT
- Examine Azure Stream Analytics and Azure Functions
- Explore message processing tasks
- Examine business integration for IoT solutions
- Examine Azure Time Series Insights
- Examine data visualizations with Power BI
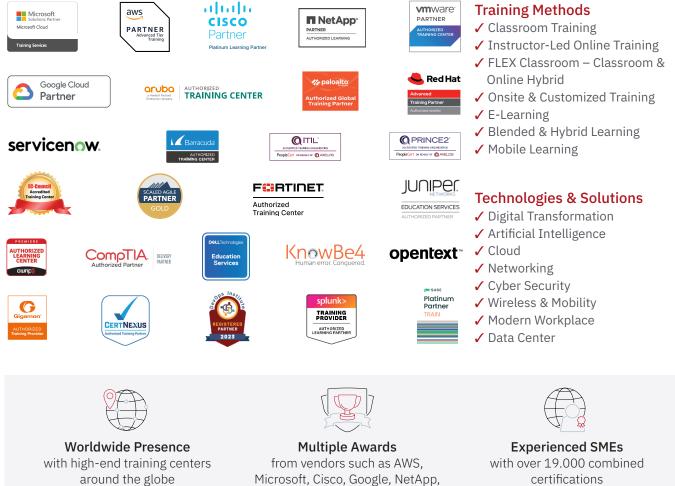- Explore Event Grid integration

- Explore Time Series Insights integration
- Examine the Azure IoT Edge environment
- Examine IoT Edge device deployment
- Examine IoT Edge gateway device configuration
- Explore IoT Edge module deployment
- Explore IoT Edge gateway configuration
- Examine IoT Edge module development
- Examine offline and local storage capabilities
- Explore custom module development for IoT Edge
- Explore IoT Edge offline support
- Examine device management concepts and methods
- Examine device management tools
- Examine approaches to device management at scale
- Explore device management with device twins and direct methods
- Explore IoT Hub automatic device management
- Examine Azure IoT solution monitoring and logging
- Troubleshoot device connections and communication
- Explore IoT Hub monitoring
- Examine security fundamentals for IoT
- Examine Microsoft Defender for Cloud and Microsoft Defender for IoT
- Examine Microsoft Defender for IoT security agents
- Explore Microsoft Defender for IoT implementation
- Examine the components of an Azure Digital Twins solution
- Examine the Azure Digital Twins solution development tools and processes
- Monitor and troubleshoot ADT
- Explore Azure Digital Twins implementation
- Intro to IoT Central
- Create and manage Device Templates
- Manage devices in Azure IoT Central
- Configure business integration

About Fast Lane

Fast Lane is a global, award-winning specialist in technology and business training as well as consulting services for digital transformation. As the only global partner of the three cloud hyperscalers- Microsoft, AWS and Google- and partner of 30 other leading IT vendors, Fast Lane offers qualification solutions and professional services that can be scaled as needed. More than 4,000 experienced Fast Lane professionals train and advise customers in organizations of all sizes in 90 countries worldwide in the areas of cloud, artificial intelligence, cyber security, software development, wireless and mobility, modern workplace, as well as management and leadership skills, IT and project management.

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✓ FLEX Classroom – Classroom & Online Hybrid
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✓ E-Learning
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