AZ 220T00 Microsoft Azure IoT Developer

Course Duration: 4 Days

Class times: 9am-4pm

Course Level: intermediate

Language: English

Mode of Training: Virtually Instructor-Led

Prerequisites

Job Role: Developer

Related Exam: AZ-220

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

Course Outline

**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

2.**Devices and Device Communication**

IoT Hub and Devices

IoT Developer Tools

Device Con guration and Communication

**3.Device Provisioning at Scale**

Device Provisioning Service Terms and Concepts

Con gure and Manage the Device Provisioning Service

Device Provisioning Tasks

**4.Message Processing and Analytics**

Messages and Message Processing

Data Storage Options

Azure Stream Analytics

**5.Insights and Business Integration**

Business Integration for IoT Solutions Data Visualization with Time Series Insights

Visualization with Time Series Insights

Data Visualization with Power BI

**6.Azure IoT Edge Deployment Process**

Introduction to Azure IoT Edge

Edge Deployment Process Edge Gateway Devices

**7.Azure IoT Edge Modules and Containers**

Develop Custom Edge Modules offline and Local Storage

www.cttl.net
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**8.Device Management**

Introduction to IoT Device Management

Manage IoT and IoT Edge Devices

Device Management at Scale

**9.Solution Testing, Diagnostics, and Logging**

Monitoring and Logging

Troubleshooting

**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

**11.Build an IoT Solution with IoT Central**

Introduction to IoT Central

Create and Manage Device Templates

Manage Devices in Azure IoT Central