Course Outline

Developing Solutions Using Cisco IoT and Edge Platforms
Course DEVIOT: 5 days Instructor Led

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About this course
This 5-day course, Developing Solutions Using Cisco IoT and Edge Platforms (DEVIOT) v1.0, prepares you to develop Internet of Things (IoT) applications for Cisco® IoT edge compute and network architecture. Through a combination of lessons and hands-on experience, you will learn to implement and deploy Cisco IOx applications using Cisco Field Network Director and Cisco Kinetic. This course covers designing, deploying, and troubleshooting edge applications, and understanding the use of management tools, so you can control your industrial network and connected devices at scale. This course will prepare you for the 300-915 Developing Solutions Using Cisco IoT and Edge Platforms (DEVIOT) exam.

This course will help you:

- Use network programmability and automation to streamline applications to reduce data size and complexity and strengthen security protocols.
- Gain hands-on experience in maximizing MQ Telemetry Transport (MQTT) protocol for lower power usage, faster data transmission, and more agility in device usage.
- Prepare for the 300-915 DEVIOT exam

Audience profile

- Network engineer
- Systems engineer
- Consulting systems engineer
- Technical solutions architect
- Network administrator
- IoT Designer
- Network manager
- Sales engineer

At course completion
After completing this course, students will be able to:

- Explain the fundamentals of Cisco IoT and list common devices involved
- List the common protocols, standards, and data flows of IoT
- Explain the Cisco IoT, common needs, and the corresponding solutions
- Explain how programmability can be used to automate and make operations, deployment, and support of Cisco IoT more effective
- Describe common Cisco IoT applications and how they apply to Cisco IoT use cases
- Explain the functions and use cases for Cisco security applications and Cisco IoT

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Defining Cisco IoT

- Describe Cisco IoT and the motivations behind it, as well common standards and protocols used in IoT and Cisco IoT

IoT Networking and Other Devices

- List common devices used with Cisco IoT

Examining IoT Protocols

- List the common protocols used with IoT

Examining IoT Standards

- Describe Cisco IoT common standards and protocols used in Cisco IoT

Recognizing Cisco IoT Needs and Solutions

- Describe the fundamentals of Cisco IoT operations

Using Programmability with Cisco IoT

- Explain how programmability can be used to automate and make operations, deployment, and support of Cisco IoT more effective

Describing Cisco IoT Applications

- Describe common Cisco IoT applications and how they apply to Cisco IoT use cases

Defining Cisco Security Applications

- Describe Cisco security applications that form a foundation for Cisco IOT security design considerations

Lab Outline

- Use an MQTT Consumer to Subscribe to Sensor Data
- Use Cisco IOx Applications to Receive and Process Sensor Data
- Troubleshoot a Sensor Connection
- Use and Interpret Freeboard Data
- Use and Interpret Grafana Data
- Use and Interpret Kibana Data
- Cisco IOx Familiarity Lab
- Develop and Deploy a Cisco IOx Application
- Troubleshoot Cisco IOx
- Navigate Cisco Field Network Director
- Explore Cisco Field Network Director API