Developing Solutions using Cisco IoT and Edge Platforms (DEVIOT) v1.0

What you'll learn in this course

The **Developing Solutions Using Cisco IoT and Edge Platforms (DEVIOT)** v1.0 course 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.

Course duration

- Instructor-led training: 5 days in the classroom
- Virtual instructor-led training: 5 days of web-based classes
- E-Learning: Equivalent to 5 days of classroom instruction

How you'll benefit

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.
- Earn 40 CE credits toward recertification.
- Prepare for the **300-915 DEVIOT** exam and join the DevNet Class of 2020.

What to expect in the exam

The **300-915 DEVIOT** exam certifies your knowledge and skills related to IoT application development as it pertains to Cisco IoT edge compute and network architecture, including Cisco IOx and Cisco Edge and Fog Processing Module (EFM), IoT Data Visualization, and security methods.

After you pass **300-915 DEVIOT**, you earn the **Cisco Certified DevNet Specialist - IoT** certification, and you satisfy the concentration exam requirement for the **Cisco Certified DevNet Professional** certification.

Who should enroll

This course is designed primarily for network and software engineers who are interested in learning about automation and programmability and hold the following job roles:

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

How to enroll

E-learning

- To buy a single e-learning license, visit the Cisco Learning Network Store.
- For more than one license, or a learning library subscription, contact us at learning-bdm@cisco.com.

Instructor-led training

- Find a class at the Cisco Learning Locator.
- Arrange training at your location through Cisco Private Group Training.

Technology areas

- Network automation

Course details

Objectives

After taking this course, you should 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

Prerequisites

Before taking this course, you should have the following knowledge and skills:

- General software development or coding skills
- Basic functional and object-oriented programming skills
- Basic understanding of where applications live and how they are deployed in real-world scenarios

- Basic understand of how networking works
- Basic Linux OS skills: installing code language dependencies, installing code libraries, and general scripting
- Understanding of how to store code using git or another Version-Control System (VCS)

Outline

- Defining Cisco IoT
- IoT Networking and Other Devices
- Examining IoT Protocols
- Examining IoT Standards
- Recognizing Cisco IoT Needs and Solutions
- Using Programmability with Cisco IoT
- Describing Cisco IoT Applications: Cisco IOx
- Describing Cisco IoT Applications: Cisco Kinetic and Cisco Field Network Director
- Defining Cisco Security Applications

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

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