

**Course Code** DEVIOT  
**Duration** 5 days

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## Overview

The Developing Solutions Using Cisco IoT and Edge Platforms course prepares you to develop Internet of Things (IoT) applications for Cisco® IoT edge compute and network architectures. 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.

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## Audience

Network and software engineers who are interested in learning about automation and programmability.

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## Learning Objectives

By actively participating in this course, you will learn about the following:

- Explaining the fundamentals of Cisco IoT and listing common devices involved.
  - Listing the common protocols, standards, and data flows of IoT.
  - Explaining the Cisco IoT, common needs, and the corresponding solutions.
  - Explaining how programmability can be used to automate and make operations, deployment, and support of Cisco IoT more effective.
  - Describing common Cisco IoT applications and how they apply to Cisco IoT use cases.
  - Explaining the functions and use cases for Cisco security applications and Cisco IoT.
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## Pre-Requisites

- 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 understanding 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)

## Recommended courses:

- DEVASC - Developing Applications and Automating Workflows using Cisco Platforms
- DEVCOR - Developing Applications Using Cisco Platforms and APIs



## Course Contents

### 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

### Labs

- ▶ 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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## Exam Details

This course leads to the 300-915 - Developing Solutions Using Cisco IoT and Edge Platforms (DEVIOT) exam.

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## Further Information

For more information or to book this course, please contact our Course Enquiries Team on **01752 227330** (Option 2) or email us at [enquiries@skilltec.co.uk](mailto:enquiries@skilltec.co.uk).