# IIE2K (IMPLEMENTING AND MANAGING CISCO IE 2000 AND IE 3000 INDUSTRIAL ETHERNET SWITCHES) 1.0

## Objetivo

The Cisco® course—Implementing and Managing Cisco IE 2000 and IE 3000 Switch version 1.0—is a lab intensive course that introduces you to the Cisco Industrial Ethernet 2000 and 3000 switches. It is an instructor-led class offered by Learning Services HighTouch Delivery. In this class, you will learn about the components, features, and services of the Cisco IE 2000 and IE 3000 Switches in the industrial environment. The goal is to provide students with a comprehensive overview of a complete facilities network, so you can gain familiarity and move forward with more targeted learning. The class is targeted to both automation-related students as well as non-automation audiences. This course combines lecture materials and hands-on labs throughout to make sure that you are able to successfully use the Cisco IE 2000 and IE 3000 switches in an industrial environment. Upon completion of this course, you should be able to: • Define the key hardware elements and supporting protocols required to implement a network of the Cisco IE 2000 and IE 3000 switches in an automated industrial environment. • Demonstrate discovery of basic hardware and software features of the Cisco IE 2000 and IE 3000 switches using Resilient Ethernet Protocol • Recognize various Cisco switch management tools and explain their specific uses • Demonstrate use of these tools while managing a network with a Cisco IE 2000 and an IE 3000 switch in an industrial environment • Understand relevant Cisco IOS® capabilities, and the configuration parameters required to implement them in an industrial environment • Demonstrate how to design and configure these items • Outline specific Cisco IE 2000 and IE 3000 switch features and supporting protocols, and demonstrate the configuration of these features • Explain general troubleshooting best practices and the tools used • Using diagnostic tools, demonstrate how to successfully troubleshoot a Cisco IE 2000 and IE 3000 switched network in an industrial environment

## Público Alvo

This course is designed for technical professionals who need to understand and use the components, features, and services of the Cisco IE 2000 and IE 3000 switches in your industrial environment. The primary audience for this course includes: • IT and operational technology (OT) professionals in the automation industry • IT and OT professionals in the building or transportation technology environments that utilize the IE 2000 and 3000 family of switches • Engineers and administrators of vendors and partners who build and sell solutions that use Cisco IE 2000 and IE 3000 technology.

## Pré-Requisitos

• Industrial automation experience with a basic understanding of networking technology • Preferably CCNA certification or equivalent in skills and knowledge

## Carga Horária

24 horas (3 dias).

## Conteúdo Programático

- Module 1: Solution Overview – Architecture of a Cisco IE 2000 and IE 3000 Switch Network Environment
- Module 2: Device Administration and Management Feature
- Module 3: Cisco IOS Switching in Industrial Environments
- Module 4: Cisco IE 2000 and IE 3000 Switch Features
- Module 5: Troubleshooting

- Lab 1-1: Platform Discovery of Cisco IE 2000 and Cisco IE 3000 Series Switches
- Lab 2-1: Using Express Setup
- Lab 2-2: Using Cisco Network Assistant
- Lab 2-3: Configuring Switch-Based Authentication
- Lab 3-1: Configuring Basic Network Parameters
- Lab 3-2: Configuring Quality of Service (QoS)
- Lab 4-1: Configuring Resilient Ethernet Protocol
- Lab 4-2: Configuring Precision Time Protocol
- Lab 4-3: Configuring Network Address Translation
- Lab 4-4: Configuring Common Industrial Protocol
- Lab 4-5: Configuring PROFINET
- Lab 4-6: Configuring Alarms
- Lab 5-1: Using Troubleshooting Tools
- Lab 5-2: Troubleshooting Cisco IE 2000 and 3000 Switched Networks in an Industrial Environment