

# Introduction to 802.1X Operations for Cisco Security Professionals (802.1X) v2.0

## What you'll learn in this course

The **Introduction to 802.1X Operations for Cisco Security Professionals** (802.1X) v2.0 shows you how to configure and prepare to deploy Cisco® Identity-Based Networking Services (IBNS) solutions based on Cisco Identity Services Engine (ISE), Cisco Catalyst switches, and Cisco Wireless LAN Controllers. You will learn the fundamentals of the 802.1X protocol and configuration, Cisco IBNS, configuring access for non-suppliant devices, Cisco ISE deployment options, architectural components, considerations with 802.1X, and more. You will also gain hands-on experience configuring 802.1X-based network services using the Cisco Identity Services Engine and a Cisco Catalyst switch.

## Course duration

- E-learning: Equivalent of 2 days of instruction with videos, practice, and challenges

## How you'll benefit

This class will help you:

- Learn about and practice configuring Cisco Identity-Based Networking Services solutions at your own pace
- Build your skills using Cisco Identity-Based Networking Services (IBNS) to secure network connectivity and resources

## Who should enroll

- Security architects
- Design engineers
- Network engineers
- Cisco integrators and partners

## How to enroll

- For e-learning, visit the [Cisco Learning Network Store](#).
- For digital library access, visit [Cisco Platinum Learning Library](#).
- For e-learning volume discounts, email [ask\\_cp11@cisco.com](mailto:ask_cp11@cisco.com).

## Technology areas

- Networking
- Security

## Course details

### Objectives

After taking this course, you should be able to:

- Describe Cisco Identity-Based Networking Services (IBNS) for providing access control to corporate networks
- Describe Extensible Authentication Protocol (EAP) authentication types and methods, and the role of Remote Authentication Dial-In User Service (RADIUS) in EAP communications
- Describe how to configure Cisco Catalyst switches, Cisco Wireless LAN Controllers (WLCs), and Cisco ISE for 802.1X operation
- Describe how to configure access for non-suppliant devices in an 802.1X deployment
- Describe how to plan and deploy Cisco IBNS Networks with Cisco ISE and 802.1X

### Prerequisites

To fully benefit from this course, you should have knowledge of these topics:

- Cisco wireless LAN controllers
- Basic command-line configuration of Cisco Catalyst switches
- Microsoft Windows Server Active Directory

Here are some recommended Cisco learning offerings that can help you meet these prerequisites:

- Cisco CCNA<sup>®</sup> Security Certification training
- Cisco CCNA Routing and Switching Certification training
- Cisco CCNA Wireless Certification training

### Outline

- Describing Cisco Identity-Based Networking Services
  - Cisco IBNS Overview
  - Authentication, Authorization, and Accounting (AAA) Role in Cisco IBNS
  - Compare Cisco IBNS and Cisco ISE Solutions
  - Explore Cisco IBNS Architecture Components
  - Explore Cisco TrustSec
- Describing 802.1X EAP Authentication
  - Explore the IEEE 802.1X Standard
  - Explore 802.1X and EAP
  - Explain EAP Methods
  - Describe the Role of RADIUS in EAP Communications
- Configuring Devices for 802.1X Operation
  - Identify 802.1X Components and Topologies
  - Configure Cisco Catalyst Switch for 802.1X
  - Compare IBNS 1.0 and 2.0 on Cisco Catalyst Switch
  - Configure Cisco WLC for 802.1X

- Configure Cisco ISE for 802.1X
- Configure Supplicants for 802.1X Operation
- Configuring Access for Non-Supplicant Devices
  - Configure Cisco IBNS for Non-Supplicant Devices
  - Explore IBNS 2.0 for Non-Supplicant Devices
  - Configure Cisco Central Web Authentication for Guests
- Designing Cisco IBNS Networks with Cisco ISE and 802.1X
  - Cisco ISE Architectural Components
  - Introducing the Cisco ISE Bring Your Own Device (BYOD) Process
  - Identify Cisco ISE Deployment Options
  - Identify Component Compatibilities with 802.1X
  - Review 802.1X Design Considerations

### Lab outline

- Configure and Test 802.1X Operations



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