

Introduction to 802.1X Operations for Cisco Security Professionals

Course Duration: 24 Hours (3 Days)

Overview

The "Introduction to 802.1X Operations for Cisco Security Professionals" course is designed to provide a comprehensive understanding of Cisco Identity-Based Networking Services (IBNS) and its deployment using 802.1X for secure Network access control. Over the equivalent of two days of instruction, learners will delve into configuring Cisco Catalyst switches, Cisco Wireless LAN Controllers (WLCs), and Cisco ISE for 802.1X operation. This course is ideal for security architects, design engineers, network engineers, and Cisco integrators and partners looking to enhance their skill set in network security. Participants will learn about different EAP authentication types, RADIUS's role in EAP, and how to manage access for non-suppliant devices. By the end of the course, learners will be equipped to design and deploy Cisco IBNS networks with Cisco ISE and 802.1X. Prerequisites include basic knowledge of Cisco wireless LAN controllers, Catalyst switch configuration, and Microsoft Windows Server Active Directory. For enrolment, interested individuals can reach out to the Cisco Learning Network Store or the Cisco Platinum Learning Library.

Audience Profile

The "Introduction to 802.1X Operations for Cisco Security Professionals" course is designed for IT professionals seeking expertise in Cisco security solutions.

- Security architects
- Design engineers
- Network engineers
- Cisco integrators and partners
- IT security specialists
- Network administrators
- Systems engineers
- Network security analysts
- Technical solutions architects
- Cisco certified individuals aiming to expand their skill set
- Professionals working with network access control and identity management
- IT consultants focusing on network security
- Network managers overseeing secure network infrastructure

Course Syllabus

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