# Catalyst 9800, Catalyst (DNA) Center Onboarding and Assurance Training

Duration: **4 Day**

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The 4-day Hands-on Workshop on **Understanding, Configuring, and Managing the 9800 series Controllers** and **integrating them into Cisco Catalyst Center** focuses on providing participants with practical knowledge and skills to effectively deploy and operate Cisco's 9800 series Controllers as a standalone and within a Cisco Catalyst environment.

The workshop begins with an overview of the Cisco 9800 series Controllers and their capabilities, highlighting the benefits of using Cisco Catalyst Center for centralized management and automation. Participants learn about the key features and architecture of the 9800 series Controllers, including advanced capabilities such as security, and high availability.

The workshop then delves into the configuration and management aspects of the 9800 series Controllers. Participants gain hands-on experience in configuring various aspects of the 9800 Controllers, such as VLANs, security policies, WLANs, Policy, TAGS and Troubleshooting

Another major focus of the workshop is the integration of the 9800 series Controllers into Cisco Catalyst Center. Participants explore the capabilities of Cisco Catalyst Center for network provisioning, monitoring, and troubleshooting. They learn how to use Cisco Catalyst Center intuitive interface to deploy and manage the Controllers efficiently, ensuring consistent network policies and configurations across the infrastructure.

Throughout the workshop, participants engage in practical lab exercises and real-world scenarios to reinforce their understanding of the concepts and technologies. They also have the opportunity to troubleshoot common network issues and explore best practices for maintaining a reliable and scalable network infrastructure.

## Prerequisites

- Network Basics
- Wireless fundamentals at the level of the Understanding Cisco Wireless Foundations (WLFNDU) course
- Basic knowledge of routing and switching
- Troubleshooting Basics

## What You Will Learn

By the end of the 4-day workshop, participants will have acquired a comprehensive understanding of configuring and managing the 9800 series Controllers as a standalone and within a Cisco Catalyst Center environment. They will be equipped with the knowledge and skills needed to effectively deploy, operate, and troubleshoot networks leveraging Cisco's cutting-edge technologies for wireless networking.

## Training Outline

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**Day 1:**

**Module 1: Introduction to Cisco 9800 Controller**

- Overview of Cisco 9800 Controller
- Controller Models – Physical/Cloud Private and Public/Embedded
  - Design and Implementation
- AP Models – New Models

**Module 2: Cisco 9800 Controller Architecture**

- Understanding the hardware components
- Control plane and data plane functions

**Module 3: High Availability and Redundancy**

- Understanding failover and redundancy options
- Configuring Stateful Switchover (SSO)
- Implementing redundant port connections
- Verifying and testing high availability setup
- Software upgrades and image management
- Rolling AP Upgrades

**Module 4: Initial Configuration**

- Preparing for the initial setup
- Connecting to the controller
- Basic configuration steps
- Managing administrative access

**Module 5: Wireless LAN Configuration**

- IOS-XE New Configuration Model
- Creating wireless networks (SSIDs)
- Creating Policies

**Day 2:**

**Module 6: Device Management**

- Deep dive and best practices with TAGS
- Managing access points (APs) – Local vs Flex
- Troubleshooting common AP issues

**Module 7: User Authentication and Authorization**

- Integration with RADIUS servers
- Configuring 802.1X authentication
- Guest access using web authentication
- Certificate-based authentication

**Module 8: Monitoring and Troubleshooting**

- Understanding controller logs and alarms
- Configuring syslog and SNMP traps

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- Backup and Restore
- Analysing client connectivity issues
- Troubleshooting wireless performance problems
- Cisco Wireless Tools
- Rogue AP Management

**Module 9: Advanced Wireless Features**

- Migrating from AireOS to 9800

**Day 3 - Catalyst Center**

- Introduction to Catalyst Center
- Catalyst Center Architecture
- Catalyst Center Installation
- Catalyst Center High Availability
- Catalyst Center Software Updates
- Catalyst Center Validation Tool
- Catalyst Center Onboarding Wired and Wireless Device
  - PnP
  - Manual
  - Discovery
- Manage the Wired and Wireless Inventory including troubleshooting tools
- Templates and Wireless Configuring within Catalyst Center
- C9800 High Availability setup within Catalyst Center
- SWIM
  - Software updates
  - C9800 ISSU
- Command Runner
- Application Polices
- Onboarding Access Points
  - PnP
  - Maps
  - Flex

**Day 4 - Assurance**

- Assurance for Wired and Wireless
- AI/Machine Learning (ML) Assurance
  - Insight using Assurance for both Wired and Wireless devices and clients
  - Using Assurance to troubleshoot both Wired and Wireless devices and clients
- Application Experience
  - Deploy
  - Monitor Application Health
  - ThousandEyes Integration
- Wireless Capture
  - Intelligent Capture
  - Spectrum View
  - OTA Sniffer
- Cisco AI-Enhanced RRM
- Integration with ISE
- Endpoint Analytics
- Rouge Devices

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- AWiPS
- Endpoint Analytics
- StealthWatch with Catalyst Center
- Cisco Spaces with Catalyst Center