Implementing and Administering DNA Center for Assurance

Duration: 5 Days   Course Code: N1_IADNACA   Version: 2.0   Delivery Method: Virtual Learning

Overview:

In this workshop you will learn why we are implementing Assurance, what it looks like and key features. We will also discuss the Cisco DNA Center appliance and workflow and tasks associated with an implementation.

Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

The primary audience for this course is as follows: IT Solution Architects Network Security Architects Networking Admin and Operations Networking Field Engineers

Objectives:

- **After completing this course you should be able to:**

- Know and understand Cisco DNA Center concepts, features, benefits, role, terminology and the way this solution innovates common administrative tasks on today's networks

- Be familiar with workflow approach in DNA Center, DNA Center dashboard and its 4 Steps: Design, Policy, Provision and Assurance

- List, describe and use the tools provided by Cisco DNA Center

- Prepare, Install and Setup a Cisco DNA Center Appliance

- Use DNA Center for network discovery, design and provision telemetry profiles

- Realize the concepts, benefits and capabilities of DNA Center Assurance

- Implement Assurance Services on Cisco DNA Center

- Use DNA Center to monitor, troubleshoot and assure network, client and applications health

- Use DNA Center to Integrate with ThousandEyes and Umbrella

- Use DNA Center to for AI and Analytics and Machine Learning (ML)

Prerequisites:

Attendees should meet the following pre-requisites:

- Practical network and LAN or WAN management experience
- Cisco Inter-network Operating System (IOS) concepts

Testing and Certification

Recommended as preparation for the following exams:

- There are no exams currently aligned with this course

Content:

Day 1:

Module 1: Introduction to Cisco DNA Center Assurance

- Introduction to DNA Center
- System Architecture
- Key Features and Use Cases
- Introduction to Cisco ISE and DNAC-ISE integration

Module 2: Design

- Network design options
- Sites
- Creating Enterprise and Sites Hierarchy
- Configuring General Network Settings
- Loading maps into the GUI
- IP Address Management
- Software Image Management – Lab on Day 5
- Network Device Profiles
- AAA
- SNMP
- Syslog
- IP address pools
- Creating Enterprise and Guest SSIDs – Lab on Day 2
- Creating the wireless RF Profile
- Cresting the Guest Portal for the Guest SSIDs
- Network profiles – Lab on Day 2
- Authentication templates

Module 3: Discovery and Provision

- Device Discovery and Protocols
- Devices Onboarding
- Assigning Devices to a site
- Provisioning device with profiles
- Plug and Play
- Templates
- Templates for Day-0
- Templates for Day-N operations

Day 2:

Module 3: Discovery and Provision

- Device Discovery and Protocols
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- Templates
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- Templates for Day-N operations

Day 3:

Module 4: Monitoring Device, Client, and Application Health

- DNAC Telemetry
- Monitoring Network Device Health and Performance
- Monitoring Wired and Wireless Client Health and Performance
- Monitoring Application Health and Performance

Module 5: Application Visibility and DNAC Integration with Umbrella

- Monitoring Application Visibility in DNA Center
- Umbrella Introduction
- DNA Center Umbrella Integration and Use Cases

Module 6: Troubleshooting Issues, Observing Insights and Trends

- Detect Issues, Insights, and Trends in the Network
- DNA Center Integration with other tools for Monitoring and Management

Day 4:

Module 7: Troubleshooting using Cisco DNA Center Assurance Tools

- DNAC Assurance Troubleshooting Tools
- Using Sensor Tests
- Using Intelligent Capture
- Spectrum Analysis

Module 8: DNAC and Thousand Eyes

- Introduction to ThousandEyes
- ThousandEyes Use Cases
- DNA Center and ThousandEyes Integration

Day 5:

Module 9: AI Analytics and Machine Learning in DNA Center

- Overview of AI Analytics and ML (Machine Learning)
- DNA Center AI and ML Use Cases

Module 10: DNA Center Maintenance

- DNA Center Reports
- DNA Center Backup and Restore

Lab Outline:

Labs are designed to assure learners a whole practical experience, through the following practical activities:

- Lab 1: Navigate the Cisco DNA Center GUI
- Lab 2: Integrate Cisco ISE with Cisco DNA Center –Instructor Demo
- Lab 3: Design the Network Hierarchy and Configure Network Settings
- Lab 4: Discover Wired Manually in the Inventory, Assign to Site, and Provision
- Lab 5: Discover Wired Device using Plug and Play(PnP) using Template Editor
- Lab 6: Discover and Provision C9800 WLC, Configure Wireless SSIDs and Network Profiles
- Lab 7: Configure C9800 WLC using Template Editor
- Lab 8: Configure Cisco DNA Center Assurance Telemetry Profiles and Apply to Devices
- Lab 9: Generate and Monitor Application Traffic on DNAC for Clients
- Lab 10 : Application Visibility and Generate Client Traffic to Monitor Top Applications on DNAC
- Lab 11: DNAC Umbrella Integration for DNS or SIG(Secure Internet Gateway)
- Lab 12: Assurance Dashboards – Health, Issues and Wi-Fi 6 on DNAC
- Lab 13: Intelligent Packet Capture and Spectrum Analysis
- Lab 14: 1800s AP as Sensor – Instructor Demo
- Lab 15: Application Visibility With ThousandEyes and DNAC
- Lab 16: AI Endpoint Analytics on DNAC

- Lab 17: Reporting on Cisco DNAC
- Lab 18: IOS-XE Device Upgrade / Downgrade using SWIM via DNAC
- Lab 19: DNAC Configuration Backup on External Server – Instructor Demo

Further Information:

For More information, or to book your course, please call us on 0800/84.009

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