Implementing & Administering Cisco Catalyst Center for Assurance

Duration: 5 Days **Course Code: N1_IACCCA** **Version: 3.x**

Overview:

Cisco Catalyst Center (formerly DNA Center) is the next-generation intent-based networking platform, providing centralized automation and assurance for enterprise networks. Version 3.1.3 introduces advanced AI-driven analytics, improved telemetry, Energy Management capabilities, and deeper integrations with Cisco Secure Access DNS Security and Splunk for observability. This 5-day course focuses on Catalyst Center Assurance, enabling proactive, predictive, and real-time monitoring of network, client, and application health. Catalyst Center Assurance delivers significant business value by reducing operational complexity, accelerating troubleshooting, and enabling proactive network management. By leveraging AI-driven insights, predictive analytics, and real-time telemetry, organizations can ensure optimal application and client experience, minimize downtime, and align network performance with business intent. This approach transforms IT operations from reactive to predictive, improving efficiency and resilience.
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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:

- Upon completing this course, the learner will be able to meet these overall objectives:
- Explain Catalyst Center architecture, features, and workflows (Design, Policy, Provision, Assurance)
- Install and configure Catalyst Center appliance
- Discover and provision devices using Catalyst Center templates and profiles
- Implement Assurance services for network, client, and application health, including Energy Management
- Integrate Catalyst Center with Cisco ISE, Cisco Secure Access DNS Security, ThousandEyes, and Splunk
- Utilize AI Analytics and ML capabilities for predictive insights
- Perform maintenance tasks including reporting, backup, and software image management (SWIM)

Prerequisites:

Participants should have:

- Practical experience with LAN/WAN management
- Familiarity with Cisco IOS-XE concepts

Testing and Certification

- N/A

Follow-on-Courses:

- None Recommended

Content:

Course Outline

Module 1: Introduction to Cisco Catalyst Center Assurance

- Catalyst Center architecture and components
- Intent-based networking principles
- Catalyst Center Assurance use cases
- Integration with Cisco ISE
- Energy Management overview and benefits

Module 2: Design

- Enterprise hierarchy and site design
- Network settings and IPAM
- Software Image Management (SWIM) workflows
- Wireless profiles and guest portals
- AAA, SNMP, Syslog configuration
- Energy Management configuration in design phase

Module 3: Discovery and Provision

- Device discovery protocols (CDP, LLDP, SNMP)
- Plug and Play onboarding
- Template-based provisioning (Day-0 and Day-N)
- Assigning devices to sites and applying profiles
- Energy telemetry activation during provisioning

Module 4: Monitoring Device, Client, and Application Health

- Telemetry and Assurance dashboards
- Wired/wireless client health analysis
- Application performance monitoring
- Energy Management telemetry and reporting
- Custom health score tuning

Module 5: Application Visibility and Cisco Secure Access DNS Security Integration

- Application visibility workflows
- Cisco Secure Access DNS Security overview
- Integration steps and policy mapping
- Use cases for DNS-layer protection

Module 6: Troubleshooting and Insights

- Detecting issues and trends
- Root cause analysis with Assurance
- Integration with external monitoring tools

Module 7: Assurance Troubleshooting Tools

- Sensor tests and configuration
- Intelligent Capture workflows
- Spectrum Analysis for RF troubleshooting

Module 8: Catalyst Center and ThousandEyes

- ThousandEyes integration for end-to-end visibility
- Application path visualization
- Use cases for SaaS and WAN monitoring

Module 9: AI Analytics and Machine Learning

- Predictive insights and anomaly detection
- Endpoint Analytics enhancements
- AI-driven recommendations for remediation

Module 10: Splunk Integration for Assurance

- Catalyst Center API integration with Splunk
- Telemetry export and visualization
- Dashboards and alerting in Splunk
- Use cases for advanced observability

Module 11: Catalyst Center Maintenance

- Reports and compliance
- Backup and restore procedures
- SWIM operations and image compliance
- System health checks and upgrade planning

Lab Outline

- Lab 1: Navigate Catalyst Center GUI and dashboards
- Lab 2: Integrate Cisco ISE with Catalyst Center
- Lab 3: Design network hierarchy and configure settings
- Lab 4: Discover and provision wired devices
- Lab 5: Plug and Play onboarding with templates
- Lab 6: Configure Catalyst 9800 WLC and wireless SSIDs
- Lab 7: Apply Assurance telemetry profiles
- Lab 8: Monitor application traffic and visibility
- Lab 9: Cisco Secure Access DNS Security integration
- Lab 10: ThousandEyes integration for application visibility
- Lab 11: AI Endpoint Analytics and predictive insights
- Lab 12: Energy Management telemetry configuration
- Lab 13: Splunk integration and dashboard creation
- Lab 14: SWIM image upgrade/downgrade
- Lab 15: Backup Catalyst C

Further Information:

For More information, or to book your course, please call us on Head Office Tel.: +974 40316639

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