Implementing Cisco Data Center AI Infrastructure (DCAI) 1.0

Duration: 40 HRS

Description

The **Implementing Cisco Data Center AI Infrastructure (DCAI)** training is designed to equip professionals with the skills to support, secure, and optimize AI workloads within modern data center environments. This comprehensive program delves into the unique characteristics of AI/ML applications, their influence on infrastructure design, and best practices for automated provisioning. Participants will gain in-depth knowledge of security considerations for AI deployments and master day-2 operations, including monitoring and advanced troubleshooting techniques such as log correlation and telemetry analysis. Through hands-on experience, including practical application with tools like Splunk, learners will be prepared to efficiently monitor, diagnose, and resolve issues in AI/ML-enabled data centers, ensuring optimal uptime and performance for critical organizational workloads.

How You'll Benefit

This training will help you:

- Acquire comprehensive skills to support, secure, and optimize AI workloads within modern data center environments
- Understand the design, implementation, and advanced troubleshooting of AI infrastructure, including network challenges and specialized hardware
- Gain in-depth knowledge of AI/ML concepts, generative AI, and their practical application in network management and automation
- Apply hands-on techniques for monitoring, diagnosing, and resolving issues, leveraging tools like Splunk and utilizing AI for enhanced productivity in network operations
- Prepare for the 300-640 DCAI v1.0 exam
- Earn 38 CE credits toward recertification

Who Should Enroll

- Network Designers
- Network Administrators
- Storage Administrators
- Network Engineers
- Systems Engineers
- Data Center Engineers
- Consulting Systems Engineers
- Technical Solutions Architects

Course Prerequisites

There are no prerequisites for this training. However, the knowledge and skills you are recommended to have before attending this training are:

- Cisco UCS compute architecture and operations
- Cisco Nexus switch portfolio and features
- Data Center core technologies

These skills can be found in the following Cisco Learning Offerings:

- Introducing Cisco Unified Computing System (DCIUCS)
- Implementing Cisco NX-OS Switches and Fabrics in the Data Center (DCNX)
- Cisco Data Center Nexus Dashboard Essentials (DCNDE)
- Implementing Cisco Data Center Core Technologies (DCCOR)

Course Outline

- Fundamentals of AI
- Generative AI
- AI Use Cases
- AI-ML Clusters and Models
- AI Toolset—Jupyter Notebook
- AI Infrastructure

- AI Workloads Placement and Interoperability
- AI Policies
- AI Sustainability
- AI Infrastructure Design
- Key Network Challenges and Requirements for AI Workloads
- AI Transport
- Connectivity Models
- AI Network
- Architecture Migration to AI/ML Network
- Application-Level Protocols
- High-Throughput Converged Fabrics
- Building Lossless Fabrics
- Congestion Visibility
- Data Preparation for AI
- AI/ML Workload Data Performance
- AI-Enabling Hardware
- Compute Resources
- Compute Resource Solutions
- Virtual Resources
- Storage Resources
- Setting Up AI Cluster
- Deploy and Use Open Source GPT Models for RAG
- AI Infrastructure Operations and Monitoring
- Troubleshooting AI Infrastructure
- Troubleshoot Common Issues in AI/ML Fabric

Lab Outline

- AI Toolset—Jupyter Notebook
- AI/ML Workload Data Performance
- Setting Up AI Cluster
- Deploy and Use Open Source GPT Models for RAG
- Troubleshoot Common Issues in AI/ML Fabric