# Designing and Implementing Enterprise Network Assurance

**Durée: 4 Jours** **Réf de cours: ENNA** **Version: 1.1** **Méthodes d'apprentissage: Classe à distance**

## Résumé:

The **Designing and Implementing Enterprise Network Assurance** course is designed to enrich and expand your knowledge and skills in the realm of enterprise network assurance and management. This training is structured into four different tracks, collectively encompassing a broad spectrum of network assurance and monitoring aspects. As a participant, you will first overview different Cisco assurance products, followed by two tracks focused on Cisco ThousandEyes solution, and one dedicated to Meraki Insight. You will acquire the skills not just to utilize these solutions effectively, but also to deploy, configure, and manage them in your network environments. This includes learning about the initial setup, fine-tuning for optimal performance, and conducting day-to-day operations that ensure continuous, seamless network assurance.

**This course will help you:**
Position different assurance products from Cisco portfolio
Install, configure, and manage Cisco ThousandEyes solution
Utilize Cisco ThousandEyes to perform network troubleshooting
Configure and leverage Meraki Insight and available dashboard tools to manage network assurance in Meraki environments
Prepare for the 300-445 ENNA exam

**This course is worth 32 Continuing Education (CE) credits toward recertification.**

Classe à Distance - site Client

Cette formation peut être suivie à distance en synchrone depuis n'importe quel site pourvu d'une connexion internet (2 Mb/s en symétrique recommandés). Le programme (théorie et pratique) suit le même déroulé pédagogique qu'en présentiel. La solution technologique adoptée permet aux apprenants à distance de suivre les présentations faites au tableau, de voir et d'entendre l'instructeur et les participants en temps réel, mais également d'échanger avec eux.

## Public visé:

Individuals utilizing Cisco ThousandEyes or Meraki Insight to manage network assurance.

## Objectifs pédagogiques:

- **After completing this course you should be able to:**
- Describe enterprise network assurance
- Describe how to monitor health and performance with Cisco Catalyst Center Assurance
- Introduce Cisco AppDynamics, Cisco Catalyst SD-WAN Assurance, and Cisco ThousandEyes
- Describe different Enterprise Agent deployment options, requirements, and procedures for agent deployment
- Describe different ThousandEyes test types
- Compare ThousandEyes web layer tests
- Describe, deploy, and configure an Endpoint Agent
- Describe how to perform system administration
- Utilize ThousandEyes when performing the root cause analysis
- Describe Internet Insights
- Explain alerts and dashboards configuration
- Explain monitoring solutions
- Describe Cisco Meraki Network Assurance
- Showcase Cisco Meraki Insights

## Pré-requis:

**Attendees should meet the following prerequsites:**

## Test et certification

**Recommended as preparation for the following exams:**

- Basic understanding of network fundamentals
- Basic understanding of Internet Control Message Protocol (ICMP), User Datagram Protocol (UDP), Transmission Control Protocol (TCP), Hypertext Transfer Protocol Secure (HTTPS), Secure Sockets Layer (SSL), and Domain Name System (DNS) protocol
- Basic familiarity with Cisco Catalyst SD-WAN, Cisco Catalyst Center and Cisco Meraki
- CCNA - Mettre en oeuvre et administrer des solutions réseaux Cisco
- ENCOR - Mise en oeuvre et opérations des technologies réseaux Cisco Enterprise

- **300-445** - Designing and Implementing Enterprise Network Assurance

Passing the 300-445 Exam will give you the Cisco Certified Specialist - Enterprise Network Assurance accreditation and will also count as the concentration requirement for the Cisco CCNP Enterprise Certification.

## Contenu:

Enterprise Network Assurance Overview

- Modern Network Challenges
- Network Visability in the Past
- Active and Passive Monitoring
- Modern IT Visibility Architecture
- Use Cases
- Cisco Enterprise Assurance Portfolio

Introduction to Cisco Catalyst Center Assurance

- Cisco Catalyst Center Assurance Overview
- Cisco Catalyst Center Assurance Health Scores
- Cisco Catalyst Center Assurance Dashboard Time Ranges Concepts
- Network Device Health and Device 360 View
- Client Health and Client 360 View
- Application Health and Application 360 View
- Issues Operations

Introduction to Splunk AppDynamics

- Splunk AppDynamics Introduction
- Monitor Applications with Splunk AppDynamics
- Business Analytics and Custom Dashboards
- Troubleshoot Performance Problems with Splunk AppDynamics

Introduction to Cisco Catalyst SD-WAN Assurance

- Cisco Catalyst SD-WAN
- Cisco Catalyst SD-WAN Monitoring
- Cisco Catalyst SD-WAN Troubleshooting
- Cisco Catalyst SD-WAN Analytics Overview

Introduction to Cisco ThousandEyes

- Cisco ThousandEyes Visibility
- How Cisco ThousandEyes Does It
- Cisco ThousandEyes Cloud Agents
- Cisco ThousandEyes Enterprise Agents
- Cisco ThousandEyes EndPoint Agents
- Cisco ThousandEyes Tests
- Agent Test Capabilities
- Agent Locations

Enterprise Agents Deployment

- Enterprise Agent Operation
- Enterprise Agent Firewall Requirements
- Enterprise Agent Network Utilization
- Enterprise Agent Deployment Options
- Enterprise Agent on Cisco Platforms
- Virtual Appliance Setup
- Custom Virtual Appliance
- Embedded Enterprise Agent CLI Deployment
- Enterprise Agent Deployment with Cisco Catalyst Center

BGP, Network, DNS, and Voice Tests Configuration

- Unified Test Overview
- Routing BGP Test
- BGP Test - Configuration
- Network Tests
- Agent-to-Server Network Test - Data Collection
- Network Test - Path Visualization View
- Agent-to-Server Network Test - Configuration
- DNS Tests
- DNS Tests - Metrics
- DNS Tests - Configuration
- Voice Tests
- Voice Tests - Metrics
- Voice Tests - Configuration

Web Layer Tests Configuration

- Web Layer Tests
- HTTP Server Test - Metrics
- HTTP Server Test - Configuration
- Page Load Test - Metrics
- Page Load Test - Configuration
- Web Authentication Methods
- Transaction Test - Metrics
- Transaction Test - Configuration
- Transaction Test - Cisco ThousandEyes Recorder
- API Tests
- Web Layer Tests - Proxy Metrics

Endpoint Agent

- Endpoint Agent Overview
- Endpoint Agent Use Cases
- Collected Data
- System Requirements and Installation
- Agent Settings
- Monitoring Settings
- Endpoint Agent Views

System Administration

- Role-Based Access Control
- Account Groups
- User Account Settings
- Organization Settings
- Time Zone Settings
- Activity Log
- Cisco ThousandEyes Billing
- Unit Calculator

Network Troubleshooting with Cisco ThousandEyes

- Troubleshooting Scenario A
- Troubleshooting Analysis - Scenario A
- Troubleshooting Scenario B
- Troubleshooting Analysis - Scenario B
- Troubleshooting Scenario C

Alerts and Dashboards Configuration

- Alerts Overview
- Alert Rule Configuration
- Alert Views
- Integration with Splunk HTTP Event Collector
- Alert Suppression Window
- Enterprise Agent Notifications
- Notification Triggers
- Data Retention
- Dashboards
- Dashboard Snapshots
- Baseline Metrics
- Data Aggregation
- Widget Configuration
- Dashboard Examples
- Integrations and Data Export
- Adaptive Alerting

Monitoring Solutions

- Monitoring Cisco Webex Meetings
- Monitoring Microsoft 365
- Monitoring Microsoft Teams
- Monitoring Cisco SD-WAN
- WAN Insights

Cisco Meraki Network Assurance

- Wireless Health
- Switch Traffic Analysis
- Cisco Meraki SD-WAN Monitoring
- Security Center
- Logging Capabilities
- Supported Alerts

Cisco Meraki Insights

- Cisco Meraki Insight Overview
- Web Application Health
- Web Application Health Configuration
- WAN Health
- VoIP Health
- VoIP Health Configuration
- Alert Management
- Internet Outages
- Cisco Meraki Insight Licensing

Labs:

- Discovery Lab 1: Troubleshoot the Health of Network Devices
- Discovery Lab 2: Explore Cisco Catalyst SD-WAN Analytics
- Discovery Lab 3: Schedule a Test
- Discovery Lab 4: Deploy Enterprise Agent
- Discovery Lab 5: Configure Network, DNS, and Voice Tests
- Discovery Lab 6: Configure Web Server Tests
- Discovery Lab 7: Configure Transaction Tests

- Enterprise Agent Deployment with Cisco Catalyst SD-WAN Manager
- Enterprise Agent Deployment with Meraki Dashboard
- Enterprise Agent Docker Deployment
- Enterprise Agent Deployment in Proxy Environemnts
- Agent Labels
- Enterprise Agent Utilization
- Enterprise Agent Clusters
- Troubleshooting Analysis - Scenario C
- Troubleshooting Scenario D
- Troubleshooting Analysis - Scenario D
- Share Links and Saved Events
- Multi-Service Views

Internet Insights

- Challenges with Internet Monitoring
- Internet Insights Overview
- Internet Insights Packages
- Internet Insights Dashboard and Views
- Cloud Insights
- Discovery Lab 8: Deploy and Configure an Endpoint Agent
- Discovery Lab 9: Configure Account Administration
- Discovery Lab 10: Utilize Device Layers
- Discovery Lab 11: Examine Internet Insights
- Discovery Lab 12: Configure Alerts
- Discovery Lab 13: Build a Dashboard
- Discovery Lab 14: Implementing Network Assurance with Cisco Meraki
- Discovery Lab 15: Examine Cisco Meraki Insights

## Autres moyens pédagogiques et de suivi:

• Compétence du formateur : Les experts qui animent la formation sont des spécialistes des matières abordées et ont au minimum cinq ans d'expérience d'animation. Nos équipes ont validé à la fois leurs connaissances techniques (certifications le cas échéant) ainsi que leur compétence pédagogique.
• Suivi d'exécution : Une feuille d'émargement par demi-journée de présence est signée par tous les participants et le formateur.
• En fin de formation, le participant est invité à s'auto-évaluer sur l'atteinte des objectifs énoncés, et à répondre à un questionnaire de satisfaction qui sera ensuite étudié par nos équipes pédagogiques en vue de maintenir et d'améliorer la qualité de nos prestations.

Délais d'inscription :

• Vous pouvez vous inscrire sur l'une de nos sessions planifiées en inter-entreprises jusqu'à 5 jours ouvrés avant le début de la formation sous réserve de disponibilité de places et de labs le cas échéant.
• Votre place sera confirmée à la réception d'un devis ou """"booking form""""" signé. Vous recevrez ensuite la convocation et les modalités d'accès en présentiel ou distanciel.
• Attention, si cette formation est éligible au Compte Personnel de Formation, vous devrez respecter un délai minimum et non négociable fixé à 11 jours ouvrés avant le début de la session pour vous inscrire via moncompteformation.gouv.fr.

Accueil des bénéficiaires :

• En cas de handicap : plus d'info sur globalknowledge.fr/handicap
• Le Règlement intérieur est disponible sur globalknowledge.fr/reglement