



NIL
LEARNING



The Network. Intuitive for Field Engineers (TNIFE)



Cisco is rewriting the networking playbook with an intent-based network, powered by Cisco Digital Network Architecture (DNA), that will fundamentally change your business.

The objective of *The Network. Intuitive for Field Engineers (TNIFE)* training is to ensure you are confident in installing and configuring intent-based networks, built on Cisco DNA.

The TNIFE training is a 4-day instructor-led course that provides an information on how to automate and assure services within enterprises using Cisco DNA. The training provides information on how to use DNA Center, how to deploy Software-Defined Access (SD-Access) using DNA Center and Cisco Identity Services Engine (ISE), how to detect and mitigate threats using StealthWatch and Encrypted Traffic Analytics (ETA) and how to deploy SD-WAN.

Objectives

Upon completing this course, you will be able to understand how to position and configure the following solutions:

- DNA Center
- SD-Access
- Cisco ISE
- StealthWatch and Encrypted Traffic Analytics (ETA)
- SD-WAN

Outline

The course contains these components:

- **DNA Center Automation, Assurance, and Programmability**
 - Overview
 - Introduction
 - TNI and DNA introduction
 - DNA Center overview
 - DNA Center deployment
 - DNA Center Automation
 - DNA Center design, discovery, and inventory
 - Plug and Play
 - Standard changes automation
 - SD-Access underlay automation
 - Application Policies automation
 - DNA Center Assurance
 - Device telemetry
 - Assurance
 - Analytics
 - ITSM Integration in context of assurance
 - DNA Center Platform
 - DNA Center Platform overview
 - DNA Center integrations (ISE, IPAM, ITSM, reporting)
 - DNA Center APIs
 - DNA Center device SDK

- IOS XE programmability
- **Wired SD-Access**
 - Overview:
 - SD-Access wired architecture
 - Controller fundamentals
 - DNA Center and ISE integration using pxGrid
 - Network Design
 - Roles and terminology
 - SD-Access overlay
 - Fabric wired operations
 - SD-Access fabric border design
 - SD-Access for distributed campus
 - Configuring wired SD-Access
- **Module 3: Wireless SD-Access and DNA Security**
 - Overview:
 - Wireless SD-Access architecture
 - Network Design
 - Fabric wireless operations
 - Wireless Over The Top
 - SD-Access wireless design
 - Configuring Wireless SD-Access
 - Guest Design
 - Design guest services with SD-Access
 - Legacy vs. SD-Access solution
 - Configuring Wireless Guest using SD-Access
 - High Availability in SD-Access Wireless
 - Control plane redundancy
 - WLC redundancy with SSO
 - SD-Access Scalability
 - DNA Security
 - Cisco Trustworthy systems
 - StealthWatch and Encrypted Traffic Analytics overview
 - NetFlow overview
 - ETA deployment modes
 - StealthWatch and ISE integration using pxGrid

- Configuring ETA
- **SD-WAN**
 - Architecture Overview.
 - Evolution of WAN
 - SD-WAN solution overview
 - Orchestration plane
 - SD-WAN deep dive
 - Architecture including leveraging NFVIS/ENCS for vEdge Cloud
 - Scaling of the solution and components
 - Key concept such as OMP, VPN, Templates and Policies
 - Design, deploy and provision
 - Deployment scenarios
 - How to deploy/provision Management and Control Plane.
 - How to deploy/provision Data Plane
 - Deployment Common issues
 - How to manage
 - NAT typical issues
 - Control and Data Tunnel establishment failures
 - Templates typical mistakes
 - Policy and Assurance
 - How to use Policies for the typical scenarios
 - How to use vManage for Assurance

Lab Outline

Attendees get an option for hands-on labs:

- **TNI, DNA, DNA Center Programmability, Automation, Analytics**
 - *Lab 1: Configure DNA Center Design*
 - *Lab 2: Automate Network Using DNA Center*
 - *Lab 3: DNA Center Telemetry Collection and REST API*
- **Wired SD-Access**
 - *Lab 1: Integrate ISE with Active Directory*
 - *Lab 2: Configure Corporate Wired Access using SD-Access and Segmentation*

- *Lab 3: Configure SD-Access Overlay*
- **Wireless SD-Access and DNA Security**
 - *Lab 1: Provision the WLC to the SD-Access Fabric*
 - *Lab 2: Provision SSID and Verify Wireless Connectivity*
 - *Lab 3: Create a VN for Guest Internet Access*
 - *Lab 4: Examine DNA Center Assurance*
 - *Lab 5: Verify Hardware and Software Integrity*
 - *Lab 6: Detect Malware inside Encrypted Traffic*
- **Day 4: SD-WAN**
 - *Lab 1: Installing and Configuring SD-WAN Controllers*
 - *Lab 2: Using Configuration Templates*
 - *Lab 3: Implementing Control Policy*
 - *Lab 4: Implementing Data Policy*
 - *Lab 5: Implementing AAR Policy*

Course Duration

The TNIFE course is offered as 4-day instructor-led training.

Audience

The primary audience for this course is system engineers, network engineers, technical architects, technical support personnel, and channel partners and resellers.

Prerequisite Knowledge

The knowledge and skills that a learner should possess before attending this course are as follows:

- Students should have an understanding of network routing and switching principles equivalent to the [Cisco CCNA certification](#) level
- Basic understanding of Cisco ISE, 802.1x and Cisco TrustSec operation
- Basic familiarity with SD-Access concepts
- Basic familiarity with SD-WAN concepts.

NIL – More than Just a Training Company

NIL Learning gives you knowledge and skills that accelerate the growth of your competencies. You'll gain direct benefits from our theoretical expertise and practical experiences. We provide proven competencies and long tradition, along with insight into present and future challenges and trends.

NIL Learning delivers leading-edge **Cisco, CWNP, ipSpace & other technical training** to IT professionals and companies around the globe. Through field-proven experts - **each is an active engineer, content developer and instructor** - we enhance the standard learning curriculum with real-life experience to maximize the client's training investment.

Leading Cisco Learning Partner for over 25 years

Since 1992, NIL has been at the forefront of advanced contributors to strategic partner Cisco's technologies, learning curriculum and value-added solutions deployed to clients around the globe. For our training achievements, contribution to Cisco training portfolio and highest customer satisfaction, we were also awarded with [Cisco Global Learning Partner of the Year](#) and [Cisco EMEAR Learning Partner of the Year](#) titles. NIL holds [Cisco Platinum Learning Partner](#) status and [Cisco Business Learning Partner](#) status.

NIL Learning is part of [NIL Ltd](#), a leading global IT solutions and services provider. NIL is headquartered in Slovenia, with regional offices and representatives in Croatia, India, Macedonia, Morocco, Saudi Arabia, Serbia, South Africa, United Arab Emirates and the U.S.

Why learn at NIL LEARNING?

- You will gain relevant and job-ready skills.
- You will get more than just standard content – our instructors augment the courses with practical and useful examples from real-life situations.
- You can attend a training onsite or remotely; and save time and money on accommodation and travelling.

- You can choose from a full range of standard and advanced Cisco courses.
- We can customize a training to your specific needs or develop it for you.
- Worldwide training delivery.
- High customer satisfaction.
- All NIL LEARNING instructors are **field-proven experts** - each both active engineer and instructor.
- 75% of NIL LEARNING engineers hold CCSI certifications, and 20 have already achieved the respected CCIE rank.
- NIL LEARNING enhances the standard learning curriculum with real-life experience and helps clients to maximize their training investment.
- NIL has been a Cisco Training Partner since 1993; today NIL holds **Cisco Platinum Learning Partner** status and **Cisco Business Learning Partner** status.
- NIL was awarded the Cisco Most Business Relevant Learning Partner in MEA in 2010 and the most innovative learning partner in MEA.
- NIL received the **Innovation Award** for its Technology Led Training and its extensive contribution to Cisco learning solutions at the Cisco EMEAR Learning Partner Summit in 2012.
- NIL received the **Innovation Award** for its Technology Led Training and Advanced Engineer Program at the Cisco Global Learning Partner Summit in 2013.
- NIL LEARNING runs a centralized training schedule across the whole EMEAR region.
- NIL received Cisco Global Learning Partner of the Year Award in 2014
- NIL received Cisco EMEAR Learning Partner of the Year 2016.
- NIL received Cisco Global Learning Partner of the Year 2018 - Collaborator Award.

More Info

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