



The bridge to possible

Cisco Digital Learning eBook Courses and Descriptions

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Cisco Digital Learning By Technology

Note: This section includes all Cisco Digital Learning courses and their descriptions. Here, they are organized [by technology](#). To see courses organized by certification levels, use the [By Certification](#) section of this ebook.

The course titles in this section are hyperlinked to detailed course outlines. To access these outlines, you need to be logged in to your Cisco.com account.

60 CLCs



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Technology Bundle = 40 CLCs

[Understanding Cisco Collaboration Foundations \(CLFNDU\)](#) 15 CLCs

This course gives you the skills and knowledge needed to administer and support simple, single-site Cisco® Unified Communications Manager (CM) solution with Session Initiation Protocol (SIP) gateway. The course covers initial parameters, management of devices including phones and video endpoints, management of users, management of media resources, and Cisco Unified Communications solutions maintenance and troubleshooting tools. In addition, you will learn the basics of SIP dial plans including connectivity to Public Switched Telephone Network (PSTN) services, and how to use class-of-service capabilities.

[Implementing and Operating Cisco Collaboration Core Technologies \(CLCOR\)](#) 15 CLCs

This course helps prepare you for advanced-level roles that focus on implementation and operation of Cisco collaboration solutions. You will gain the knowledge and skills needed to implement and deploy core collaboration and networking technologies, including infrastructure and design, protocols, codecs, endpoints, Cisco Internetwork Operating System (IOS) XE gateway and media resources, call control, Quality of Service (QoS), and additional Cisco collaboration applications.

[Implementing Cisco Collaboration Applications \(CLICA\)](#) 10 CLCs

This course provides you with the knowledge and skills to streamline communication protocol, strengthen compliance measures, and enhance your communication systems and devices. You will learn about Single sign-on (SSO), Cisco Unified IM and Presence, Cisco Unity Connection, Cisco Unity Express, and Application clients. Through a combination of lessons and hands-on training, you will acquire the skills to maximize the agility of robust management systems.



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[Implementing Cisco Advanced Call Control and Mobility Services \(CLACCM\)](#) 10 CLCs

This course covers advanced call control and mobility services. You will learn how to use Cisco Unified Communications Manager (UCM) features to consolidate your communications infrastructure into a scalable, portable, and secure collaboration solution. Through a combination of lessons and hands-on labs, you will explore numerous features including Globalized Call Routing, Global Dial Plan Replication, Cisco Unified Mobility, Cisco Extension Mobility, Device Mobility, Session Initiation Protocol Uniform Resource Identifier (SIP/URI) call routing, Call Admission Control, Cisco UCM Express and Survivable Remote Site Telephony (SRST) gateway technologies.

[Implementing Cisco Collaboration Cloud and Edge Solutions \(CLCEI\)](#) 10 CLCs

This course provides you with knowledge and skills of Cisco Expressway Series solutions. You will learn how to configure and troubleshoot Cisco Expressway Series, Cisco Unified Communications Manager (UCM), business-to-business (B2B) calls, Cisco mobile, and remote access. Through a combination of lessons and hands-on labs, you learn how to leverage collaborative technology to access secure, collaborative work supports, including video, voice, content, and remote workloads.

[Implementing Cisco Collaboration Conferencing \(CLCNF\)](#) 10 CLCs

This course focuses on Cisco® on-premises conferencing architecture and solutions. You will gain knowledge and skills to design and implement common conferencing deployment scenarios of Cisco Meeting Server, its integration with call control features such as Cisco Unified Communications Manager and Cisco Expressway, and other Cisco collaboration conferencing devices.

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Technology Bundle = **44** CLCs

[Understanding Cisco Data Center Foundations \(DCFNDU\)](#)

15 CLCs

This course helps prepare you for data center roles. You will learn the foundational knowledge and skills needed to configure Cisco Data Center technologies including networking, virtualization, storage area networking, and unified computing. You also be introduced to Cisco Application Centric Infrastructure (ACI) automation and cloud computing. Through a combination of lessons and hands-on experiences, you will learn to configure features on the Cisco Nexus Operating System (NX-OS) and Cisco Unified Computing System (UCS).



[Implementing Cisco Data Center Core Technology \(DCCOR\)](#)

20 CLCs

This course helps you master the skills and technologies you need to implement data center compute, LAN and SAN infrastructure. You will also learn the essentials of automation and security in data centers. Through a combination lessons and hands-on experiences, you will learn to deploy, secure, operate, and maintain Cisco Data Center infrastructure, including Cisco MDS and Nexus switches, Cisco Unified Computing System (UCS) B-Series Blade Servers, and Cisco UCS C-Series Rack Servers.

[Implementing Cisco Application Centric Infrastructure \(DCACI\)](#)

15 CLCs

This course shows you how to deploy, configure, and manage the Cisco Nexus 9000 Series switches in Cisco Application Centric Infrastructure (ACI) mode. You will learn how to connect the Cisco ACI fabric to external networks and services and explore fundamentals of Virtual Machine Manager (VMM) integration. Through a combination of lessons and hands-on practice, you will learn to implement key capabilities, such as fabric discovery, policies, connectivity, VMM integration, and more.

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[Configuring Cisco MDS 9000 Series Switches \(DCMDS\)](#) 15 CLCs

This course shows you how to implement, manage, and troubleshoot Cisco® MDS 9000 Series Switches, to build highly available, scalable storage networks. Through expert instruction and extensive hands-on practice, you will learn how to deploy and use capabilities such as Virtual Storage Area Networks (VSANs), Role-Based Access Control (RBAC), N-Port Virtualization (NPV) fabric security, zoning, automation with NX-API, Slow Drain Analysis, SAN analytics, Fibre Channel over TCP/IP (FCIP) tunnels, and more.

[Designing Cisco Data Center Infrastructure \(DCID\)](#) 15 CLCs

This course helps you master the design and deployment options of Cisco Data Center solutions and technologies across network, compute, virtualization, storage area networks, automation, and security. You will learn design practices for the Cisco Unified Computing System (UCS) solution based on Cisco UCS B-Series and C-Series servers, Cisco UCS Manager, and Cisco Unified Fabric.

[Troubleshooting Cisco Data Center Infrastructure \(DCIT\)](#) 15 CLCs

This course shows you how to troubleshoot LAN, SAN, Cisco® Data Center Unified Fabric, Cisco Unified Computing System™ (Cisco UCS®), and Cisco Application-Centric Infrastructure (Cisco ACI®). You will learn methodologies and tools to identify issues that may occur in data center network architecture. You will get extensive hands-on practice troubleshooting installation, configuration and interconnectivity issues on Cisco Multilayer Director Switch (MDS) switches, Cisco Nexus® switches, Cisco Fabric Extenders (FEXs), Cisco UCS, Cisco ACI, and more.

[Implementing Cisco Application Centric Infrastructure - Advanced \(DCACIA\)](#) 15 CLCs

This course shows you how to integrate the capabilities of the Cisco® Nexus® 9000 Series Switches in Cisco Application Centric Infrastructure (Cisco ACI®) mode. You will learn how to configure and manage Cisco Nexus 9000 Series Switches in ACI mode for enhanced management and policy framework, along with protocols used in the underlying fabric. Through lessons and hands-on practice, you will learn how to use Cisco ACI as a policy-driven solution that combines software and hardware, and how to implement Cisco ACI Multi-Pod and Multi-Site deployments.

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[Managing SAN Infrastructure with Cisco Data Center Network Manager \(DCNMS\)](#)

8 CLCs

This course provides product training that teaches you to deploy, operate, and maintain the Cisco Data Center Network Manager (DCNM) SAN solutions. You will learn to configure, monitor, and troubleshoot Cisco storage networking infrastructure using Cisco DCNM.

[Introducing Cisco Unified Computing System \(DCIUCS\)](#)

8 CLCs

This is an introductory course that shows you how to deploy, secure, operate, and maintain the Cisco Unified Computing system (Cisco UCS®) B-Series blade servers, Cisco UCS C-Series and S-Series rack servers, and Cisco HyperFlex™ product family for use in data centers. You will gain hands-on practice on basic Cisco UCS server configuration, performing backup and restoring activities.

[Configuring Cisco Unified Computing System \(DCCUCS\)](#)

10 CLCs

This course shows you how to deploy, secure, operate, and maintain Cisco Unified Computing System™ (Cisco UCS®) B-series blade servers, Cisco UCS C-Series, and S-Series rack servers for use in data centers. You will learn how to implement management and orchestration software for Cisco UCS and gain the hands-on practice configuring and implementing key features of Cisco UCS, Cisco UCS Director, Cisco UCS Manager and Cisco Intersight™.

[Implementing Cisco NX-OS Switches and Fabrics in the Data Center \(DCNX\)](#)

15 CLCs

This course gives you a detailed understanding of the Cisco® Nexus switch platform and teach you how to install, configure, and manage Cisco Nexus® switch platforms in a scalable, highly available environment. Through a combination of lectures and hands-on labs, you will learn how to describe various aspects of the Cisco Nexus product families and platforms, including implementation, management, security, programmability and storage.

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[Implementing Cisco Nexus 9000 Switches in NX-OS Mode - Advanced \(DCNXA\)](#) 15 CLCs

This course provides advanced training in applying and managing the Cisco Nexus® 9000 Series Switches in NX-OS mode. The Cisco® NX-OS platform deploys Virtual Extensible LAN (VXLAN) and Ethernet VPN (EVPN) using Cisco Data Center Network Manager (DCNM), implements Multi-Site VXLAN EVPN, and integrates L4-L7 services into the fabric providing external connectivity, utilizing advanced tenant features. You will also learn how to implement Cisco NX-OS Enhanced Policy-Based Redirect (ePBR) and Intelligent Traffic Director (ITD) features.

[Implementing Cisco HyperFlex \(DCIHX\)](#) 15 CLCs

This course shows you how to deploy and use the Cisco HyperFlex data platform to support multicloud workloads. You will become familiar with HyperFlex components and learn how to install, design, manage, and troubleshoot Cisco HyperFlex to support highly scalable and resilient multicloud implementations. In addition, you gain hands-on experience focused on installation, management, maintenance, and native replication. You also explore cluster technologies and Cisco Intersight.

[Cisco Application Centric Infrastructure Operations \(DCACIO\)](#) 10 CLCs

This course shows you how to manage, monitor, and troubleshoot Cisco® Nexus® 9000 Series Switches in Application-Centric Infrastructure (ACI) mode. Through expert instruction and hands-on practice, you will learn about operational tools, best practices, caveats, and practice troubleshooting common issues on a live fabric.

[Troubleshooting Cisco Application Centric Infrastructure \(DCACIT\)](#) 8 CLCs

This course teaches you the key components and procedures needed to manage, monitor, and troubleshoot Cisco® Nexus® 9000 Series Switches in Application Centric Infrastructure (ACI) mode, a solution to simplify, optimize, and accelerate infrastructure deployment and governance.

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[Introducing Automation for Cisco Solutions \(CSAU\)](#) 3 CLCs

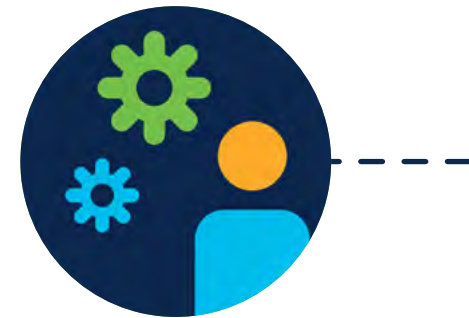
This course gives you a broad overview of network automation skills. Through a combination of lecture and hands-on labs, you will learn the fundamentals of automation such as working on model-driven programmability solutions with Representational State Transfer Configuration Protocol (RESTCONF) and Network Configuration Protocol (NETCONF) protocols. The course also covers data formats and types, including Extensible Markup Language (XML), JavaScript Object Notation (JSON), Yaml Ain't Markup Language (YAML), and Yet Another Next Generation (YANG), and their value in network automation, along with DevOps tools such as Ansible and Git.

[Developing Applications and Automating Workflows using Cisco Core Platforms \(DEVASC\)](#) 8 CLCs

This course prepares you for Cisco® DevNet Associate certification and associate-level, network automation engineer roles. You will learn how to implement basic network applications using Cisco platforms as a base, and how to implement automation workflows across network, security, collaboration, and computing infrastructure. The course gives you hands-on experience solving real world problems using Cisco Application Programming Interfaces (APIs) and modern development tools.

[Developing Applications Using Cisco Core Platforms and APIs \(DEVCOR\)](#) 8 CLCs

This course helps you prepare for Cisco DevNet Professional certification and for professional-level network automation engineer roles. You will learn how to implement network applications using Cisco® platforms as a base, from initial software design to diverse system integration, as well as testing and deployment automation. The course gives you hands-on experience solving real world problems using Cisco Application Programming Interfaces (APIs) and modern development tools. This course helps you prepare to take the **350-901 Developing Applications Using Cisco Core Platforms and APIs (DEVCOR)** exam.



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[Developing Solutions using Cisco IoT and Edge Platforms \(DEVIOT\)](#) 10 CLCs

This course prepares you to develop Internet of Things (IoT) applications for Cisco® IoT edge compute and network architecture. Through a combination of lessons and hands-on experience, you will learn to implement and deploy Cisco IOx applications using Cisco Field Network Director and Cisco Kinetic. This course covers designing, deploying, and troubleshooting edge applications, and understanding the use of management tools, enabling you to control your industrial network and connected devices at scale. This course will prepare you for the **300-915 Developing Solutions Using Cisco IoT and Edge Platforms (DEVIOT)** exam.

[Implementing DevOps Solutions and Practices using Cisco Platforms \(DevOps\)](#) 10 CLCs

This course teaches you how to automate application deployment, enable automated configuration, enhance management, and improve scalability of cloud microservices and infrastructure processes on Cisco® platforms. You will also learn how to integrate Docker and Kubernetes to create advanced capabilities and flexibility in application deployment. This course prepares you for the **300-910 Implementing DevOps Solutions and Practices Using Cisco Platforms (DEVOPS)** certification exam.

[Developing Applications for Cisco Webex and Webex Devices \(DEVWBX\)](#) 10 CLCs

This course prepares you to use the programmability features of Webex® Cisco® enterprise solution for video conferencing, online meetings, online training, webinars, web conferencing, cloud calling, and collaboration. Through a combination of lessons and hands-on labs, you will learn about Webex Application Programming Interface (API) Foundation, meetings, devices, teams, messaging, embedding Cisco Webex, administration, and compliance. You will learn how to leverage Webex APIs to extend the functionalities of teams, meetings, and devices, and explore how these APIs can help automate, administer, and enforce compliance. This course prepares you for the **300-920 Developing Applications for Cisco Webex and Webex Devices (DEVWBX)** exam.

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[Implementing Automation for Cisco Enterprise Solutions \(ENAI\)](#) **8 CLCs**

This course teaches you how to integrate programmability and automation in the Cisco®-powered Enterprise Campus and Wide Area Network (WAN) using programming concepts, orchestration, telemetry, and automation tools to create more efficient workflows and more agile networks.

Through a combination of lessons and hands-on labs, you will gain knowledge and skills for using Cisco Internetworking Operating System (Cisco IOS®-XE) for device-centric automation, Cisco Digital Network Architecture (Cisco DNA™) Center for the intent-based enterprise network, Cisco Software-Defined (SD) WAN, and Cisco Meraki™. You will study software development toolkits, industry-standard workflows, tools, and Application Programming Interface (APIs), such as Python, Ansible, and Git. This course prepares you for the **300-435 Automating Cisco Enterprise Solutions (ENAUTO)** certification exam.

[Implementing Automation for Cisco Collaboration Solutions \(CLAUI\)](#) **3 CLCs**

This course teaches you how to implement Cisco® Collaboration, the automated, programmable solutions for voice, video, collaboration, and conferencing on-premises or in the cloud. Through a combination of lessons and hands-on labs, you will combine tools and processes to tackle communication challenges using key platforms including Cisco Unified Communications Manager, Cisco IP Phone Services, Cisco Unity® Connection, Cisco Finesse®, Cisco Collaboration Endpoints, Cisco Webex Teams™, and Cisco Webex® Meetings.

You will also learn how to use Application Programming Interfaces (APIs) interfaces such as Representational State Transfer (REST), parsing data in Extensible Markup Language (XML) and leverage frameworks such as Python. This course prepares you for the **300-835 Automating and Programming Cisco Collaboration Solutions (CLAUTO)** certification exam.

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[Implementing Automation for Cisco Data Center Solutions \(DCAUI\)](#) **8** CLCs

This course teaches you how to implement Cisco® Data Center automated solutions including programming concepts, orchestration, and automation tools. Through lessons and hands-on practice, you will learn the benefits of programmability and automation in the Cisco-powered Data Center. You will examine Cisco Application Centric Infrastructure (Cisco ACI®), Software-Defined Networking (SDN) for data center and cloud networks, Cisco Nexus® (Cisco NX-OS) platforms for device-centric automation, and Cisco Unified Computing System (Cisco UCS®) for Data Center compute.

You will study their current ecosystem of Application Programming Interfaces (APIs), software development toolkits, and relevant workflows along with open industry standards, tools, and APIs, such as Python, Ansible, Git, JavaScript Object Notation (JSON). This course prepares you for the **300-635 Automating Cisco Data Center Solutions (DCAUTO)** certification exam.

[Implementing Automation for Cisco Security Solutions \(SAUI\)](#) **7** CLCs

This course teaches you how to design advanced automated security solutions for your network. Through a combination of lessons and hands-on labs, you will master the use of modern programming concepts, RESTful Application Program Interfaces (APIs), data models, protocols, firewalls, web, Domain Name System (DNS), cloud, email security, and Cisco® Identity Services Engine (ISE) to strengthen cybersecurity for your web services, network, and devices. You will learn to work within the following platforms: Cisco Firepower® Management Center, Cisco Firepower Threat Defense, Cisco ISE, Cisco pxGrid, Cisco Stealthwatch® Enterprise, Cisco Stealthwatch Cloud, Cisco Umbrella®, Cisco Advanced Malware Protection (AMP), Cisco Threat grid, and Cisco Security Management Appliances.

This course will teach you when to use the API for each Cisco security solution to drive network efficiency and reduce complexity. This course prepares you for the **300-735 Automating and Programming Cisco Security Solutions (SAUTO)** certification exam.

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[Implementing Automation for Cisco Service Provider Solutions \(SPAUI\)](#) **8** CLCs

This course prepares you to implement and support automation solutions in a Service Provider network infrastructure, using network programmability principles, protocols, tools, and mechanisms. Through a combination of lessons and hands-on labs, you will learn to deploy, configure, monitor, and operate Service Provider network environments using modern data models. These models allow you to represent operational data and new network management protocols in order to administer hundreds or thousands of devices in a single operation, replacing traditional, time-consuming, error-prone, device-by-device Command Line Interface (CLI) management. The course also introduces powerful automation solutions that can streamline network operations.



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[Implementing and Administering Cisco Solutions \(CCNA\)](#) **8 CLCs**

This course gives you a broad range of fundamental knowledge for all IT careers. Through a combination of lecture and hands-on labs, you learn how to install, operate, configure, and verify basic IPv4 and IPv6 networks.

You also learn how to configure network components, such as switches, routers, and wireless LAN controllers; manage network devices, identify basic security threats and obtain a foundation in network programmability, automation, and software-defined networking.

[Understanding Cisco Wireless Foundations \(WLFNDU\)](#) **8 CLCs**

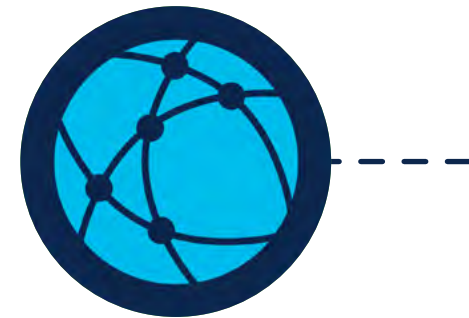
This course helps you obtain the knowledge and skills you need to position, plan, implement, operate, and manage a Cisco wireless LAN (WLAN) network. You will learn how to design, install, configure, monitor, and conduct basic troubleshooting tasks on a Cisco WLAN network of any size.

[Implementing and Operating Cisco Enterprise Network Core Technologies \(ENCOR\)](#) **10 CLCs**

This course gives you the knowledge and skills needed to configure, troubleshoot, and manage enterprise wired and wireless networks. You'll also learn to implement security principles within an enterprise network and how to overlay network design by using solutions such as SD-Access and SD-WAN.

This course helps you prepare to take the **350-401 Implementing Cisco® Enterprise Network Core Technologies (ENCOR)** exam, which is part of four new certifications:

- CCNP® Enterprise
- CCIE® Enterprise Infrastructure
- CCIE Enterprise Wireless
- Cisco Certified Specialist – Enterprise Core



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[Implementing Cisco Enterprise Advanced Routing and Services \(ENARSI\)](#) 10 CLCs

This course gives you the knowledge and skills you need to install, configure, operate, and troubleshoot an enterprise network. You learn about advanced routing and infrastructure technologies. The course expands on topics covered in the **Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)** course.

[Implementing Cisco SD-WAN Solutions \(ENSDWI\)](#) 8 CLCs

This course gives you training about how to design, deploy, configure, and manage your Cisco® Software-Defined WAN (SD-WAN) solution in a large-scale live network, including how to migrate from legacy WAN to SD-WAN. You will learn best practices for configuring routing protocols in the data center and the branch, as well as how to implement advanced control, data, and application-aware policies. The course also covers SD-WAN deployment and migration options, placement of controllers, how to deploy WAN Edge devices, and how to configure Direct Internet Access (DIA) breakout.

[Designing Cisco Enterprise Networks \(ENSLD\)](#) 8 CLCs

This course gives you the knowledge and skills you need to design an enterprise network and delivers a detailed look into enterprise network design and expands the topics covered in the **Implementing and Operating Cisco® Enterprise Network Core Technologies (ENCOR)** course.

This course also helps you prepare to take the exam, **Designing Cisco Enterprise Networks (ENSLD 300-420)**, which is part of the **CCNP® Enterprise and Cisco Certified Specialist - Enterprise Design** certifications.

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[Designing Cisco Enterprise Wireless Networks \(ENWLSD\)](#) **8** CLCs

This course gives you the knowledge you need to design Cisco® wireless networks. The course covers design specifics from scenario design concepts through the installation phase and into post-deployment validation.

This course, including the self-paced material, helps prepare you to take the exam, **300-425 Designing Cisco Enterprise Wireless Networks (ENWLSD)**, which leads to the new **CCNP® Enterprise and Cisco Certified Specialist – Enterprise Wireless Design** certifications.

[Implementing Cisco Enterprise Wireless Networks \(ENWLSI\)](#) **8** CLCs

This course gives you the knowledge and skills needed to secure wireless network infrastructure and troubleshoot any related issues. You will learn how to implement and secure a wireless network infrastructure and use Cisco Identity Services Engine (ISE), Cisco Prime Infrastructure (PI), and Connected Mobile Experiences (CMX) to monitor and troubleshoot network issues. The course provides hands-on labs to reinforce concepts, including deploying Cisco PI Release 3.5, Cisco Catalyst 9800 Wireless Controller, Cisco IOS XE Gibraltar 16.10, and Cisco Digital Network Architecture (Cisco DNA).

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[Engineering Cisco Meraki Solutions Part 1 \(ECMS1\)](#) 2 CLCs

This is an introductory course that equips you with the technical knowledge and skills to confidently operate Cisco Meraki solutions as a unified management system of an entire network from a centralized dashboard. Through a full day of instruction including live demos and guided lab practice, you will learn how to implement core configurations for a full stack solution in the Meraki Dashboard and leverage essential Meraki Dashboard tools to enforce device security policies, deploy software and apps, and perform remote, live troubleshooting on managed devices.

[Engineering Cisco Meraki Solutions Part 2 \(ECMS2\)](#) 5 CLCs

This course elevates your knowledge of Cisco® Meraki™ technology suite. In this advanced technical training course, you'll learn how to plan for network deployments and integrations using the Cisco Meraki platform. Through practical hands-on instruction and experiences, you will learn how to operate Meraki networks and troubleshoot complex network incidents using the Meraki Dashboard and analytics. You will also learn how to design Meraki architectures for redundancy, high-density, and scalability by implementing comprehensive Meraki product features to meet design objectives.

[Understanding Cisco SDA Fundamentals \(SDAFND\)](#) 6 CLCs

This course introduces you to Cisco® Software-Defined Access and teaches you, through a combination of lectures, labs, and simulations how to implement simple, single-site fabric networks.

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[Implementing Cisco SD-WAN Security and Cloud Solutions \(SDWSCS\)](#)

5 CLCs

This course is an advanced training course focused on Cisco® SD-WAN security and cloud services. Through a series of labs and lectures you will learn about on-box security services, including application-aware enterprise firewall, intrusion prevention, URL filtering, malware protection, and Transport Layer Security (TLS) or Secure Socket Layer (SSL) decryption. You will also learn about cloud integration with multiple cloud services providers and multiple use cases.

[Implementing Cisco Crosswork Network Controller \(SPCNCI\)](#)

8 CLCs

This course introduces you to the Cisco® Crosswork Network Controller (CNC) and its installation. Through a series of lectures and labs you will learn to use Cisco CNC to streamline, manage, and automate service lifecycle functions spanning across service provisioning, visualization, monitoring, and optimization.

[Implementing and Troubleshooting Networks Using Cisco ThousandEyes \(ENTEIT\)](#)

5 CLCs

This course is designed to introduce you to and familiarize you with Cisco® ThousandEyes. Through a combination of lectures and hands-on experience, you will learn to implement and configure the Cisco ThousandEyes solution. You will also learn to install and configure the Cisco ThousandEyes agents with different test types. This solution will also enable you to perform root cause analysis when troubleshooting.

[Cisco Common Services Platform Collector Fundamentals \(CSPCF\)](#)

4 CLCs

This course is a series of modules used to educate you on the Cisco® Common Services Platform Collector (CSPC). You will learn how the CSPC discovers and collects information, and how the information can be used to provide inventory reports, alerts, configuration best practices, technical service coverage, lifecycle information, and other detailed reports and analytics for both hardware and OS software.

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[Transforming to a Cisco Intent-Based Network \(IBNTRN\)](#) 15 CLCs

This course teaches you how the functionality of Cisco® SD-Access fits into Cisco Digital Network Architecture (Cisco DNA™). Through a combination of lessons and hands-on learning, you will practice operating, managing, and integrating Cisco DNA Center, programmable network infrastructure, and Cisco SD-Access fundamentals. You will learn how Cisco delivers intent-based networking across the campus, branch, WAN, and extended enterprise and ensures that your network is operating as intended.

[Leveraging Cisco Intent-Based Networking Cisco DNA Assurance \(DNAAS\)](#) 10 CLCs

This course provides you with the skills to monitor and troubleshoot a traditional brownfield network infrastructure by using Cisco® Digital Network Architecture (Cisco DNA™) Assurance. The course focuses on highlighting issues rather than on monitoring data. The advanced artificial intelligence and machine learning features within Cisco DNA Assurance enable you to isolate the root cause of a problem and to take appropriate actions to quickly resolve issues. Cisco DNA Assurance can be used to perform the work of a Level 3 support engineer.

[Implementing Cisco Enterprise SD-Branch \(ENSDBI\)](#) 5 CLCs

This course is designed to teach you to understand the Cisco® Software-Defined (SD)-Branch architecture and Cisco Enterprise Network Functions Virtualization (ENFV) solution. Through a series of in-person or e-learning lectures and labs, you will learn about the supported hardware platforms with a focus on the components, installation, and upgraded workflows of the Cisco Enterprise Network Compute System (ENCS) 5400 series. Additionally, this course will help you build your skills on Virtual Network Functions (VNF) deployment and orchestration solutions on Cisco ENCS.

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[Implementing Converged SDN Transport Solutions \(SPSDNTP\)](#)

8 CLCs

This course introduces you to Software-Defined Networking (SDN)-ready architecture. This architecture evolves traditional Metro network design into an SDN-enabled programmable network capable of delivering all services (residential, business, 5G mobile backhauling, video, and IoT) on the premise of simplicity, full programmability, and cloud integration with guaranteed service level agreements (SLAs).

[Implementing Cisco Catalyst 9000 Switches \(ENC9K\)](#)

10 CLCs

This course provides insight into Cisco Catalyst 9000 Series Switches and its solution components. Cisco Catalyst 9000 Series Switches are the next generation in the Cisco Catalyst family of enterprise LAN access, aggregation, and core switches. The switches integrate the new realities of the digital era. The switches are twice as fast, with double the capacity, providing end-to-end security, and automation using centralized management in the Cisco DNA Center.

[ASR 5000 xGSN Administration and Configuration \(ASR5000 xGSN\)](#)

This course provides detailed instruction on the flexibility of the Cisco ASR 5000 to function as a Serving GPRS Support Node (SGSN) or a Gateway GPRS Support Node (GGSN) in a Universal Mobile Telecommunications Service (UMTS) network environment to scale, streamline, and build the most efficient network. With this course, you gain practical knowledge and an understanding of initial system configuration, system parameters, services configuration, software upgrades and user license application, hardware and software troubleshooting.

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[Cisco Optical Technology Advanced \(OPT300\)](#)

8 CLCs

This course gives you the skills you need to deploy advanced features of the **Cisco® Optical Networking Services (ONS) 15454 Multiservice Transport Platform (MSTP)** and Cisco Network Convergence System (NCS) 2000 Series. In this course you'll learn to how to use the Cisco Transport Planner Design Tool to create network topologies and advanced network topologies. You will learn how to use advanced Dense Wavelength Division Multiplexing (DWDM) features such as G.709 encapsulation, generic framing protocol G.7041, Layer 1 circuits, Quality of Service (QoS), crossponder networks using T1 over Ethernet, and encryption.

The course also covers the following cards: Cisco ONS 15454 80-Channel Wavelength Cross-Connect (WXC), 100-Gbps transponder, 10-Gbps muxponder and transponder, 10-Gbps enhanced data multiplexer, any-rate muxponder and crossponder, 10-Gigabit Ethernet Xponders 10GE-XP and enhanced GEXP, 100-Gbps and 200-Gbps transponder and muxponder, 10-Gbps network encryption cards, and the Cisco NCS 2000 400 Gbps Xponder Card.



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[Cisco Optical Technology Intermediate \(OPT200\)](#) **8** **CLCs**

This course provides you with the skills necessary to deploy Cisco Optical Networking System (ONS) 15454 Multiservice Transport Platform (MSTP) and Cisco Network Convergence System (NCS) 2000 Series Dense Wavelength-Division Multiplexing (DWDM) networks. You learn about installation, configuration, circuit protection, maintenance, and basic troubleshooting using the Cisco Transport Controller for the Cisco ONS 15454 M6 and M12 shelves and the Cisco NCS 2015 shelf.

You also explore DWDM terminology and components, the available chassis and cards, and hardware installation. You learn how to use the Cisco Transport Controller server software to connect to the nodes, perform network turn-up and circuit creation, deploy linear and Single-Module ROADM (SMR) DWDM multishelf topologies, configure Raman amplifiers and Any Rate cards, and configure protected and unprotected circuits. The course covers a variety of card options: controllers, transponders, multiplexer- demultiplexer, add/drop, Raman amplifiers, and Cisco Any Rate muxponder cards.

In addition, you learn about the various cards to configure terminal, amplifier, mesh, split, Optical Service Channel (OSC) regenerator, and Reconfigurable Optical Add/Drop Multiplexer (ROADM) nodes. Lastly, you learn how to use many of the tools and features available with the Cisco Transport Controller to perform maintenance, testing, and basic troubleshooting of an optical network.

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[Implementing Cisco MPLS \(MPLS\)](#) 8 CLCs

This course is designed to introduce you to Multiprotocol Label Switching (MPLS) concepts, installation, and configuration. Multiprotocol Label Switching (MPLS) is a high-performance method for forwarding packets through a network. MPLS enables routers at the edge of a network to apply simple labels to packets. This practice allows the edge devices—ATM switches or existing routers in the center of the service provider core to switch packets according to labels, with minimal lookup overhead. MPLS integrates the performance and traffic-management capabilities of data link Layer 2 with the scalability and flexibility of network Layer 3 routing. This integrated approach improves scalability, performance, better bandwidth utilization, reduced network congestion and a better end-user experience.

[Implementing Segment Routing on Cisco IOS XR \(SEG RTE201\)](#) 8 CLCs

This course covers the fundamental concepts of Segment Routing (SR) including how to configure and verify segment routing within an Interior Gateway Protocol (IGP), and the interworking of Label Distribution Protocol (LDP) with segment routing. Through lessons and hands-on practice, you will learn how to implement Topology-Independent Loop-Free Alternate (TI-LFA) using segment routing, and how to identify and verify segment routing traffic engineering policies.

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[Introduction to Cisco IOS XR \(IOSXR100\)](#) **8** CLCs

This course introduces you to the features and functions of the Cisco® Internetwork Operating System (Cisco IOS®) XR Software operating system. You will learn the central concepts on which the operating system is based and Cisco IOS XR basic operations, system administration, and troubleshooting.

Through a combination of lecture and hands-on lab exercises, you gain an understanding of all major aspects of the operating system, including the architecture, high-availability components, scalability features, configuration basics, basic software operations, configuration file overview, Authentication, Authorization, and Accounting (AAA) services, Network Time Protocol (NTP) configuration, packet filtering, and management plane protection.

[Network Convergence System 5500 Series Router \(NCS5500HW\)](#) **8** CLCs

This course focuses on the Cisco Network Convergence System (NCS) 5500 Series hardware which teaches you about the features and functions of the NCS 5501, NCS 5502, and NCS 5508 series routers features such as extremely high port densities, deep packet buffering, and forwarding hardware optimized for these types of deployments. Through a combination of lessons and hands-on practice, you will learn how to identify and describe the various types of line cards supported in the NCS 5500 Series routers. In addition, you will explore the various types of optical interfaces supported in the NCS 5500 Series routers and the about environmental monitoring of chassis components, required power monitoring and control, the Cisco IOS XR 64-bit architecture designed for operational efficiency, optimized utilization, and service agility.

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[SD-Access 1.2 Update Supplement \(A-SDA-12UPDT\)](#) 8 CLCs

This course is a supplement to the CUST-SDA-FUND course and includes videos that highlight new features and functions available with SD-Access 1.2. The Cisco Software-Defined Access (SD-Access) solution guides you through building the SD-Access solution for wired and wireless campus networks, as well as adding advanced functionality such as micro-segmentation and multicast. The lessons start with how to integrate Cisco Identity Services Engine (ISE) and Cisco DNA Center™ and ends with troubleshooting and using Cisco DNA™ Assurance to monitor and troubleshoot endpoint and fabric issues. The course is organized in an à la carte way so that you can focus on content that interests you with each topic presented by lead engineers who work extensively with the new functionality.

[Cisco Aggregation Services Router 9000 Series Essentials \(ASR9KE\)](#) 10 CLCs

This course introduces you to the features and functions of the Cisco ASR 9000 Series Aggregation Services Routers platform. Through a combination of video, lecture, and hands-on labs, you gain an understanding of all major aspects of the platform, including hardware; Layer 2 and Layer 3 services and multicast; routing protocols; segment routing; quality of service (QoS) features; and network virtualization. In addition, you explore Cisco IOS XR 64-Bit Linux-based feature parity in the environment and how to install IOS XR 64-Bit software packages.

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[Cisco SD-WAN Operation and Deployment \(SDWFND\)](#) 8 CLCs

This course shows you how to deploy, manage, and operate a secure extensible network using the Cisco Software-Defined Wide Area Network (SD-WAN) products. You will explore an overview of the SD-WAN solution, the function of SD-WAN components, and how to deploy and monitor a secure, extensible network. Through a combination of lessons and hands-on experiences, you will learn how to deploy vEdge Cloud router devices, understand secure data plane operations, identify the various services provided by cloud deployments, configure and operate overlay routing in the secure extensible network.

[Preparing the Identity Services Engine \(ISE\) for SD-Access \(For Customers\) \(CUST-SDA-ISE\)](#) 10 CLCs

This course provides a focused look at ISE operation and group-based policy configuration as they apply to SD-Access. You will learn how to implement Authentication, Authorization, and Accounting (AAA) for secured access to the fabric, policy-based segmentation, and micro-segmentation. You will also explore how to make intelligent policy decisions. Additionally, you will learn key ISE concepts and best practices related to deploying ISE within the Cisco Digital Network Architecture (Cisco DNA) center.

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[Planning and Deploying SD-Access Fundamentals for Customers \(CUST-SDA-FUND\)](#) 20 CLCs

This course focuses on deploying the SD-Access solution beginning with how to integrate ISE (Identity Services Engine) and Cisco DNA (Cisco Digital Network Architecture) Center and concludes with troubleshooting and using Cisco DNA Center Assurance to monitor and troubleshoot endpoint and fabric issues.

Cisco solution experts teach you how to build the SD-Access solution for a wired and wireless campus network, as well as how to add advanced functionality such as micro-segmentation and multicast. First you will explore the solution overview, then how to build the underlay and basic campus fabric and host onboarding. After you build the basic structure, you will add micro-segmentation, wireless support, and multicast support. Finally, you will learn how to perform end-to-end testing and how to use Cisco DNA Center Assurance to determine the health of the fabric.

[Cisco ASR 9000 Series IOS XR 64-Bit Software Migration and Operational Enhancements \(IOSXR211\)](#) 15 CLCs

This course teaches you how to migrate from classic IOS XR software to IOS XR 64-Bit software. You will learn about the IOS XR 64-Bit software architecture, boot process, and auto-provisioning. Through a combination of lessons and hands-on practice, you will also explore how to install Cisco IOS XR and third-party software packages, data models and how to implement telemetry, model-driven programmability, and application hosting services.

[Introduction to 802.1X Operations for Cisco Security Professionals \(802.1X\)](#) 2 CLCs

This course shows you how to configure and prepare to deploy Cisco Identity-Based Networking Services (IBNS) solutions based on Cisco Identity Services Engine (ISE), Cisco Catalyst switches, and Cisco Wireless LAN Controllers. You will learn the fundamentals of the 802.1X protocol, configuring access for non-hardware/software devices, Cisco ISE deployment options, architectural components, considerations with 802.1X, and more. In addition, you gain hands-on experience configuring 802.1X-based network services using the Cisco Identity Services Engine and a Cisco catalyst switch.

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[Programming for Network Engineers \(PRNE\)](#) 5 CLCs

This course teaches you the fundamental skills of Python programming and how to automate repetitive networking tasks and explore useful programming tools to use in your daily work. Through lessons and hands-on experiences, you will learn how to manage a network more efficiently with network programmability.

[Cisco IOS XR Broadband Network Gateway Implementation and Verification \(IOSXR304\)](#) 3 CLCs

This course teaches you how to deploy, configure, operate, maintain, and support a Cisco IOS XR Broadband Network Gateway (BNG) as a broad routing solution. Through lessons and hands-on practice, you will learn how to implement and verify subscriber management functions, including authentication, authorization, and accounting (AAA) for subscriber sessions, address assignment, security, policy management, and QoS (Quality of Service).



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[Introducing IP Fundamentals of Cisco Fabric for Media \(IPFMFD\)](#)

5

CLCs

This course introduces you to Internet Protocol (IP) technologies including ethernet functions and standards, the basic principles of IP, Transmission Control Protocol/Internet Protocol (TCP/IP) stack, and other technologies used in modern networks. Through lesson and lab exercises, you will learn how to configure basic IP functionality on switches and servers.

[Operating Cisco IP Fabric for Media Solution \(IPFMSN\)](#)

5

CLCs

This course introduces you to the Cisco IP Fabric for Media (IPFM) solution. The course is designed for broadcast engineers who use IP technologies to replace Serial Digital Interface (SDI)-based deployments for a flexible and scalable IP-based infrastructure to meet the evolving demand for more content and rich media experiences. Cisco IP Fabric for Media is based on Cisco Nexus® 9000 Series Switches, with Data Center Network Manager (DCNM) acting as a Software-Defined Networking (SDN) network controller.

[Cisco Network Service Orchestrator \(NSO\) Essentials for Programmers and Network Architects \(NSO201\)](#)

8

CLCs

This course introduces you to the NSO product so you can gain an understanding of NSO as a network-automation solution and master basic components of the product. You will also learn about service packages, network element drivers, different application programming interfaces, and general architecture of NSO. Through lessons and lab exercises, you will learn to configure and install NSO, creating a service design, and using Device Manager. You're also introduced to programming with Python for NSO and manipulating NSO through its REST (Representational State Transfer) northbound API (Application Programming Interface).

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[NSO Advanced for Python Programmers \(NSO300\)](#) 8 CLCs

This course continues the learning journey of the **NSO Essentials for Programmers and Network Architects (NSO201)** course with NSO to include customizing templates with Python programming, Docker deployment, and Nano services. You will learn to create advanced services using the NSO application framework and Python scripting with both new and existing Layer 3 Multiprotocol Label Switching (MPLS) VPN services. You will also learn how to manage and scale these services to reduce operation consumption, and increase both security and available physical space, since virtualized network functions (VNFs) replace physical hardware.

[NSO Administration and DevOps \(NSO303\)](#) 6 CLCs

This course continues the learning journey of the **NSO Essentials for Programmers and Network Architects (NSO201)** and **NSO Advanced for Python Programmers (NSO300)** courses by introducing you to the system administration and DevOps focusing on NSO; the robust bridge linking network automation and orchestration tools, examining the development, operation, and administration task functions. You will learn how to set up, configure, deploy, and maintain a Cisco Network Services Orchestrator solution, and learn best practices for using DevOps.

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[Understanding Cisco Service Provider Network Foundations \(SPFNDU\)](#)

8 CLCs

This course is designed to provide you with foundational knowledge for the suite of Cisco CCNP Service Provider courses. The course expands upon information covered in the Implementing and Administering Cisco Solutions (CCNA) course, with a focus on practical knowledge you need for the service provider environment. Through a combination of lessons and hands-on labs, you will learn about architectures, protocols, software and hardware platforms, and solutions within the service provider realm.

Note: While this course does not lead directly to a certification exam, it does cover foundational knowledge critical to success in the Service Provider technology track.

[Implementing and Operating Cisco Service Provider Network Core Technologies \(SPCOR\)](#)

10 CLCs

This course teaches you how to configure, verify, troubleshoot, and optimize next-generation Service Provider IP network infrastructures. You will gain a deeper understanding of Service Provider technologies, including core architecture, services, networking, automation, quality of services, security, and network assurance.

[Implementing Cisco Service Provider VPN Services \(SPVI\)](#)

10 CLCs

This course teaches you how to manage end-customer Virtual Private Network (VPN) environments built over a common service provider Multiprotocol Label Switching (MPLS) backbone. You will learn about MPLS VPN fundamental concepts, benefits, and classification. You will also explore MPLS components, MPLS control plane and data plane operations, MPLS VPN routing using Virtual Routing and Forwarding (VRF), Layer 2 and Layer 3 MPLS VPNs, IPv6 MPLS VPN implementations, IP Multicast VPNs, and shared services VPNs. In addition, you will learn about solutions for deploying MPLS VPN crossing multiple service provider domains that improve the use of network bandwidth.



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[Implementing Cisco Service Provider Advanced Routing Solutions \(SPRI\)](#) 10 CLCs

This course teaches you theories and practices to integrate advanced routing technologies. You will learn routing protocols, multicast routing, policy language, Multiprotocol Label Switching (MPLS), and segment routing.

[Cisco Customer Success Manager \(DTCSM\)](#) 8 CLCs

This course provides a solid framework, and a core set of fundamental, proven skills to deliver immediate value to the vendor/customer relationship. You will gain knowledge through practical exercises using situations based on real-life case studies. You will explore how to fulfill core tasks using best-practice tools and methodologies. The course is based on the concept of the customer lifecycle and how to optimize that journey to increase the value realized by the customer and maximize your likelihood to maintain their loyalty and renew or expand their business opportunities.

[Operating and Implementing Cisco WAN Automation Engine \(SPWAE\)](#) 8 CLCs

This course teaches you, through a combination of lectures and labs, how to install the Cisco® WAN Automation Engine (WAE), builds your confidence with Cisco WAE configuration and basic troubleshooting, and enables you to practice designing and managing bandwidth and traffic engineering.

[Cisco 8000 Series Routers Essentials \(SP8KE\)](#) 8 CLCs

This course introduces you to the features and functions of the Cisco® 8000 Series router platforms. Through a combination of lectures and labs, you will gain an understanding of all major aspects of the platform, including hardware, software, Layer 2 and Layer 3 services, Quality of Service (QoS) features, network virtualization, and programmability.

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Security

Technology Bundle = 44 CLCs

[Understanding Cisco Cybersecurity Operations Fundamentals \(CBROPS\)](#) 8 CLCs

This course teaches you the security concepts, common network and application operations, attacks, and the types of data needed to investigate security incidents. In this course, you will learn how to monitor alerts and breaches, and how to understand and follow established procedures, and how to respond to alerts converted to incidents. Through a combination of lecture, hands-on labs, you will learn the essential skills, concepts, and technologies to be a contributing member of a cybersecurity operations center (SOC) including understanding the IT infrastructure, operations, and vulnerabilities. This course helps you prepare for the Cisco Certified CyberOps Associate certification and the role of a Junior or Entry-level cybersecurity operations analyst in a SOC.

[Performing CyberOps Using Cisco Security Technologies \(CBRCOR\)](#) 10 CLCs

This course covers cybersecurity operations fundamentals, methods, and automation. The knowledge you gain in this course will prepare you for the role of Information Security Analyst on a Security Operations Center (SOC) team. You will learn foundational concepts and their application in real-world scenarios, and how to leverage playbooks in formulating an Incident Response (IR). The course shows you how to use automation for security using cloud platforms and a SecDevOps methodology. You will learn the techniques for detecting cyberattacks, analyzing threats, and making appropriate recommendations to improve cybersecurity.



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[Conducting Forensic Analysis and Incident Response Using Cisco Technologies for CyberOps \(CBRFIR\)](#)

8 CLCs

This course prepares you to identify and respond to cybersecurity threats, vulnerabilities, and incidents. Additionally, you will be introduced to digital forensics, including the collection and examination of digital evidence on electronic devices and learn to build the subsequent response threats and attacks. Students will also learn to proactively conduct audits to prevent future attacks.

[Implementing and Operating Cisco Security Core Technologies \(SCOR\)](#)

5 CLCs

This course helps you prepare for the Cisco® CCNP® Security and CCIE® Security certifications, and senior-level security roles. In this course, you will master the skills and technologies needed to implement core Cisco security solutions to provide advanced threat protection against cybersecurity attacks. You will learn about security for networks, cloud and content, endpoint protection, secure network access, visibility, and enforcements. You will get extensive hands-on experience deploying Cisco Firepower® Next-Generation Firewall and Cisco Adaptive Security Appliance (ASA) Firewall; configuring access control policies, mail policies, 802.1X Authentication, and more. You will also get introductory practice on Cisco Stealthwatch® Enterprise and Cisco Stealthwatch Cloud threat detection features.

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[Securing Networks with Cisco Firepower Next Gen. Firewall \(SSNGFW\)](#) 10 CLCs

This course helps you develop the skills to configure and use Cisco Firepower Threat Defense technology, beginning with initial device setup and configuration. You will learn about routing, high availability, Cisco Adaptive Security Appliance (ASA) to Cisco Firepower Threat Defense migration, traffic control, and Network Address Translation (NAT). You will also learn how to implement advanced Next-Generation Firewall (NGFW) and Next-Generation Intrusion Prevention System (NGIPS) features, including network intelligence, file-type detection, network-based malware detection, and deep-packet inspection.

[Securing Networks with Cisco Firepower Next-Generation IPS \(SSFIPS\)](#) 10 CLCs

This course shows you how to deploy and use the Cisco Firepower Next-Generation Intrusion Prevention System (NGIPS). You will obtain the knowledge and skills to use the platform features, and you will explore firewall security concepts, platform architecture, and key features. You also learn about in-depth event analysis, including detection of network-based malware and file type; NGIPS tuning and configuration, including application control, security intelligence, firewall, and network-based malware and file controls. You will also study Snort rules language, file and malware inspection, security intelligence, network analysis policy configuration designed to detect traffic patterns, and configuration and deployment of related policies to take action based on events detected.

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[Implementing and Configuring Cisco Identity Services Engine \(ISE\)](#) **5** CLCs

This course shows you how to deploy and use Cisco Identity Services Engine (ISE). Cisco ISE is an identity and access-control policy platform that simplifies the delivery of consistent, highly secure access control across wired, wireless, and VPN connections. You will learn how to implement and use Cisco ISE, including policy enforcement, profiling services, web authentication and guest access services, BYOD, endpoint compliance services, and TACACS+ device administration. Through instruction and hands-on labs, you will explore how to use Cisco ISE to gain visibility into what is happening in your network, streamline security policy management, and contribute to operational efficiency.

[Securing Email with Cisco Email Security Appliance \(SESA\)](#) **8** CLCs

This course shows you how to deploy and use Cisco Email Security Appliance (ESA) to establish protection for your email systems against phishing, business email compromise, and ransomware, and to help streamline email security policy management. This hands-on course helps you learn the skills to implement, troubleshoot, and administer Cisco ESA, including key capabilities such as advanced malware protection, spam blocking, anti-virus protection, outbreak filtering, encryption, quarantines, and data-loss prevention.

[Securing the Web with Cisco Web Security Appliance \(WSA\)](#) **5** CLCs

This course shows you how to implement, use, and maintain Cisco Web Security Appliance (WSA), powered by Cisco Talos, to provide advanced protection for business email and control against web security threats. You will learn how to deploy proxy services, use authentication, and implement policies to control HTTPS traffic and access. Additionally, you will explore how to use the solution's anti-malware features, implement data security and data-loss prevention, and perform WSA administration and troubleshooting.

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[Implementing Secure Solutions with Virtual Private Networks \(SVPN\)](#) 5 CLCs

This course teaches you how to implement, configure, monitor, and support enterprise Virtual Private Network (VPN) solutions. Through a combination of lessons and hands-on labs, you will learn how to deploy and troubleshoot traditional Internet Protocol Security (IPsec), Dynamic Multipoint Virtual Private Network (DMVPN), FlexVPN, and remote-access VPN to create secure and encrypted data, remote accessibility, and increased privacy.

[Securing Cisco Networks with Open Source \(SSFSNORT\) Snort](#) 5 CLCs

This course shows you how to deploy Snort in small- to enterprise-scale implementations. You will learn how to install, configure, and operate Snort in the Intrusion Detection System (IDS) and Intrusion Prevention System (IPS) modes. In addition, you will explore how to use additional software tools, define rules to configure and improve the Snort environment, and more.

[Securing Cisco Networks with Snort® Rule Writing Best Practices \(SSFRULES\)](#) 10 CLCs

This course provides you with technical training to learn the concepts of Snort rule development and the Snort rule language. You will learn about standard and advanced rule options, OpenAppID, and how to tune Snort rules. In addition, you will learn how to identify essential commands and supporting applications, essential components and supporting applications, the rule development process, and the format and structure of rules. You will also explore the flow of traffic through Snort components, and learn about protected content rules, byte rule options, and file detection rules. Finally, you explore the OpenAppID preprocessor, events, and application.

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[Protecting Against Malware Threats with Cisco AMP for Endpoints \(SSFAMP\)](#) 10 CLCs

This course introduces you to the powerful features of Cisco AMP (Advanced Malware Protection) for Endpoints software. Through expert instruction and hands-on lab exercises, you will learn how to deploy and use the solution through several step-by-step scenarios. You will explore how to build and manage a Cisco AMP for Endpoints deployment, create policies for endpoint groups, and deploy connectors. In addition, you will analyze malware detections using powerful tools available in the AMP for Endpoints console.

[Securing Cloud Deployments with Cisco Technologies \(SECCLD\)](#) 15 CLCs

This course shows you how to implement Cisco cloud security solutions. You will explore how to secure access to the cloud, workloads in the cloud, and Software as a Service (SaaS) user accounts, applications, and data.

Through expert instruction and hands-on labs, you will obtain a wide range of skills and technologies that include how to use key Cisco cloud security solutions; detect suspicious traffic flows, policy violations, and compromised devices; implement security controls for cloud environments; and implement cloud security management.

[Introducing Cloud Consumer Security \(SECICC\)](#) 3 CLCs

This course gives you a technical overview of basic concepts and components of the cloud, and the Cisco® solutions used to provide wide-ranging security of your cloud-based environment. In this primarily lecture-based course, you'll learn the basics from a cloud consumer perspective including securing cloud and Software as a Service (SaaS) application environments. This introductory course teaches you how to use Cisco Stealthwatch™ Cloud, Cisco CloudLock, Cisco Umbrella™ and more to protect you when using cloud-based applications.

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Cisco Digital Learning By Certification



Note: This section includes some of the same courses listed in the By Technology section. Here, they are organized by certification levels. To see course descriptions, use the [By Technology](#) section of this ebook.

The course titles in this section are hyperlinked to detailed course outlines. To access these outlines, you need to be logged in to your Cisco.com account.

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CCNA

[Implementing and Administering Cisco Solutions \(CCNA\)](#)

8 CLCs

Associated Exam: [200-301 CCNA](#)

Associated Exam Review (Practice): [Cisco Exam Review: CCNA](#)

DevNet Associate

[Developing Applications and Automating Workflows using Cisco Core Platforms \(DEVASC\)](#)

8 CLCs

Associated Exam: [200-901 DEVASC](#)

CyberOps Associate

[Understanding Cisco Cybersecurity Operations Fundamentals \(CBROPS\)](#)

8 CLCs

Associated Exam: [200-201 CBROPS](#)



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Professional

Passing any professional-level certification exam also earns a [Cisco Certified Specialist certification](#).

CyberOps Professional

Note: To earn the Cisco Certified CyberOps Professional certification, you **must pass two exams**: the [350-201 CBRCOR core exam](#) and the [300-215 CBRFIR concentration exam](#).

[Performing CyberOps Using Cisco Security Technologies \(CBRCOR\)](#) **10** CLCs

Associated Core Exam: [350-201 CBRCOR](#)

[Conducting Forensic Analysis and Incident Response Using Cisco Technologies for CyberOps \(CBRFIR\)](#) **8** CLCs

Associated Concentration Exam: [300-215 CBRFIR](#)



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DevNet Professional

Note: To earn the **DevNet Professional** certification, you must pass **two exams**: the [350-901 DEVCOR](#) core exam and **one of the following concentration exams** of your choice:

- [300-435 ENAUTO](#)
- [300-835 CLAUTO](#)
- [300-635 DCAUTO](#)
- [300-535 SPAUTO](#)
- [300-735 SAUTO](#)
- [300-910 DEVOPS](#)
- [300-915 DEVIOT](#)
- [300-920 DEVWBX](#)

[Developing Applications Using Cisco Core Platforms and APIs \(DEVCOR\)](#) **8** CLCs

Associated Core Exam: [350-901 DEVCOR](#)

[Implementing Automation for Cisco Enterprise Solutions \(ENAU\)](#) **8** CLCs

Associated Concentration Exam: [300-435 ENAUTO](#)

[Implementing Automation for Cisco Collaboration Solutions \(CLAUI\)](#) **3** CLCs

Associated Concentration Exam: [300-835 CLAUTO](#)

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[Implementing Automation for Cisco Data Center Solutions \(DCAUI\)](#)

8 CLCs

Associated Concentration Exam: [300-635 DCAUTO](#)

[Implementing Automation for Cisco Service Provider Solutions \(SPAUI\)](#)

8 CLCs

Associated Concentration Exam: [300-535 SPAUTO](#)

[Implementing Automation for Cisco Security Solutions \(SAUI\)](#)

7 CLCs

Associated Concentration Exam: [300-735 SAUTO](#)

[Implementing DevOps Solutions and Practices using Cisco Platforms \(DevOps\)](#)

10 CLCs

Associated Concentration Exam: [300-910 DEVOPS](#)

[Developing Solutions using Cisco IoT and Edge Platforms \(DEVIOT\)](#)

10 CLCs

Associated Concentration Exam: [300-915 DEVIOT](#)

[Developing Applications for Cisco Webex and Webex Devices \(DEVWBX\)](#)

10 CLCs

Associated Concentration Exam: [300-920 DEVWBX](#)

By Technology

- Collaboration
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- Security

By Certification

Associate

Professional

Expert

Professional

CCNP Collaboration

Note: To earn the **CCNP Collaboration** certification, you must pass **two exams**: the [350-801 CLCOR](#) **core exam** and **one of the following concentration exams** of your choice:

- [300-810 CLICA](#)
- [300-815 CLACCM](#)
- [300-820 CLCEI](#)
- [300-825 CLCNF](#)
- [300-835 CLAUTO](#)

[Implementing and Operating Cisco Collaboration Core Technologies \(CLCOR\)](#) 15 CLCs

Associated Core Exam: [350-801 CLCOR](#)

Tip: The CLCOR 350-801 core exam is also the qualifying exam for the [CCIE Collaboration](#) certification.

[Implementing Cisco Collaboration Applications \(CLICA\)](#) 10 CLCs

Associated Concentration Exam: [300-810 CLICA](#)

[Implementing Cisco Advanced Call Control and Mobility Services \(CLACCM\)](#) 10 CLCs

Associated Concentration Exam: [300-815 CLACCM](#)

[Implementing Cisco Collaboration Cloud and Edge Solutions \(CLCEI\)](#) 10 CLCs

Associated Concentration Exam: [300-820 CLCEI](#)

[Implementing Cisco Collaboration Conferencing \(CLCNF\)](#) 10 CLCs

Associated Concentration Exam: [300-825 CLCNF](#)

[Implementing Automation for Cisco Collaboration Solutions \(CLAUI\)](#) 3 CLCs

Associated Concentration Exam: [300-835 CLAUTO](#)

By Technology

- Collaboration
- Data Center
- DevNet
- Networking
 - Service Provider
- Security

By Certification

Associate

Professional

Expert

Professional

CCNP Data Center

Note: To earn the **CCNP Data Center** certification, you must pass two exams: the [350-601 DCCOR](#) core exam and one of the following concentration exams of your choice:

- [300-610 DCID](#)
- [300-615 DCIT](#)
- [300-620 DCACI](#)
- [300-625 DCSAN](#)
- [300-630 DCACIA](#)
- [300-635 DCAUTO](#)

[Implementing and Operating Cisco Data Center Core Technologies \(DCCOR\)](#) 20 CLCs

Associated Core Exam: [350-601 DCCOR](#)

Tip: The DCCOR 350-601 core exam is also the qualifying exam for the [CCIE Data Center](#) certification.

[Designing Cisco Data Center Infrastructure \(DCID\)](#) 15 CLCs

Associated Concentration Exam: [300-610 DCID](#)

[Troubleshooting Cisco Data Center Infrastructure \(DCIT\)](#) 15 CLCs

Associated Concentration Exam: [300-615 DCIT](#)

[Implementing Cisco Application Centric Infrastructure \(DCACI\)](#) 15 CLCs

Associated Concentration Exam: [300-620 DCACI](#)

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[Configuring Cisco MDS 9000 Series Switches \(DCMDS\)](#)

15 CLCs

Associated Concentration Exam: [300-625 DCSAN](#)

[Implementing Cisco Application Centric Infrastructure - Advanced \(DCACIA\)](#)

15 CLCs

Associated Concentration Exam: [300-630 DCACIA](#)

[Implementing Automation for Cisco Data Center Solutions \(DCAUI\)](#)

8 CLCs

Associated Concentration Exam: [300-635 DCAUTO](#)

By Technology

- Collaboration
- Data Center
- DevNet
- Networking
 - Service Provider
- Security

By Certification

Associate

Professional

Expert

Professional

CCNP Enterprise

Note: To earn the **CCNP Enterprise certification**, you must pass two exams: the [350-401 ENCOR core exam](#) and **one of the following concentration exams** of your choice:

- [300-410 ENARSI](#)
- [300-415 ENSDWI](#)
- [300-420 ENSLD](#)
- [300-425 ENWLSL](#)
- [300-430 ENWLSI](#)
- [300-435 ENAUTO](#)

[Implementing and Operating Cisco Enterprise Network Core Technologies \(ENCOR\)](#)

10 CLCs

Associated Core Exam: [350-401 ENCOR](#)

Tip: The ENCOR 350-401 core exam is also the qualifying exam for the [CCIE Enterprise Infrastructure](#) certification.

[Implementing Cisco Enterprise Advanced Routing and Services \(ENARSI\)](#)

10 CLCs

Associated Concentration Exam: [300-410 ENARSI](#)

[Implementing Cisco SD-WAN Solutions \(ENSDWI\)](#)

8 CLCs

Associated Concentration Exam: [300-415 ENSDWI](#)

[Designing Cisco Enterprise Networks \(ENSLD\)](#)

8 CLCs

Associated Concentration Exam: [300-420 ENSLD](#)

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[Designing Cisco Enterprise Wireless Networks \(ENWLSD\)](#)

8 CLCs

Associated Concentration Exam: [300-425 ENWLSD](#)

[Implementing Cisco Enterprise Wireless Networks \(ENWLSI\)](#)

8 CLCs

Associated Concentration Exam: [300-430 ENWLSI](#)

[Implementing Automation for Cisco Enterprise Solutions \(ENAU\)](#)

8 CLCs

Associated Concentration Exam: [300-435 ENAUTO](#)

By Technology

- Collaboration
- Data Center
- DevNet
- Networking
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- Security

By Certification

Associate

Professional

Expert

Professional

CCNP Security

Note: To earn the **CCNP Security certification**, you must pass **two exams**: the [350-701 SCOR core exam](#) and **one of the following concentration exams** of your choice:

- [300-710 SNCF](#)
- [300-715 SISE](#)
- [300-720 SESA](#)
- [300-725 SWSA](#)
- [300-730 SVPN](#)
- [300-735 SAUTO](#)

[Implementing and Operating Cisco Security Core Technologies \(SCOR\)](#) **5 CLCs**

Associated Core Exam: [350-701 SCOR](#)

Tip: The SCOR 350-701 core exam is also the qualifying exam for the [CCIE Security](#) certification.

[Securing Networks with Cisco Firepower Next Generation Firewall \(SSNGFW\)](#) **10 CLCs**

and [Securing Networks with Cisco Firepower Next-Generation IPS \(SSFIPS\)](#) **10 CLCs**

Associated Concentration Exam: [300-710 SNCF](#)

[Implementing and Configuring Cisco Identity Services Engine \(SISE\)](#) **5 CLCs**

Associated Concentration Exam: [300-715 SISE](#)

[Securing Email with Cisco Email Security Appliance \(SESA\)](#) **8 CLCs**

Associated Concentration Exam: [300-720 SESA](#)

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[Securing the Web with Cisco Web Security Appliance \(SWSA\)](#)

5 CLCs

Associated Concentration Exam: [300-725 SWSA](#)

[Implementing Secure Solutions with Virtual Private Networks \(SVPN\)](#)

5 CLCs

Associated Concentration Exam: [300-730 SVPN](#)

[Implementing Automation for Cisco Security Solutions \(SAUI\)](#)

7 CLCs

Associated Concentration Exam: [300-735 SAUTO](#)

By Technology

- Collaboration
- Data Center
- DevNet
- Networking
 - Service Provider
- Security

By Certification

- Associate
- Professional**
- Expert

Professional

CCNP Service Provider

Note: To earn the **CCNP Service Provider** certification, you must pass two exams: the [350-501 SPCOR](#) core exam and one of the following concentration exams of your choice:

- [300-510 SPRI](#)
- [300-515 SPVI](#)
- [300-535 SPAUTO](#)

[Implementing and Operating Cisco Service Provider Network Core Technologies \(SPCOR\)](#) 10 CLCs

Associated Core Exam: [350-501 SPCOR](#)

Tip: The SPCOR 350-501 core exam is also the qualifying exam for the [CCIE Service Provider](#) certification.

[Implementing Cisco Service Provider Advanced Routing Solutions \(SPRI\)](#) 10 CLCs

Associated Concentration Exam: [300-510 SPRI](#)

[Implementing Cisco Service Provider VPN Services \(SPVI\)](#) 10 CLCs

Associated Concentration Exam: [300-515 SPVI](#)

[Implementing Automation for Cisco Service Provider Solutions \(SPAUI\)](#) 8 CLCs

Associated Concentration Exam: [300-535 SPAUTO](#)

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By Certification

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- Professional
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CCIE Collaboration

[Implementing and Operating Cisco Collaboration Core Technologies \(CLCOR\)](#)

15 CLCs

Associated Qualifying Exam: [350-801 CLCOR](#)

Associated Lab Exam: [CCIE Collaboration, Practical Exam](#)

CCIE Data Center

[Implementing and Operating Cisco Data Center Core Technologies \(DCCOR\)](#)

20 CLCs

Associated Qualifying Exam: [350-601 DCCOR](#)

Associated Lab Exam: [CCIE Data Center, Practical Exam](#)

CCIE Enterprise Infrastructure

[Implementing and Operating Cisco Enterprise Network Core Technologies \(ENCOR\)](#)

10 CLCs

Associated Qualifying Exam: [350-401 ENCOR](#)

Associated Lab Exam: [CCIE Enterprise Infrastructure, Practical Exam](#)

CCIE Enterprise Wireless

[Implementing and Operating Cisco Enterprise Network Core Technologies \(ENCOR\)](#)

10 CLCs

Associated Qualifying Exam: [350-401 ENCOR](#)

Associated Lab Exam: [CCIE Enterprise Wireless, Practical Exam](#)



By Technology

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- DevNet
- Networking
 - Service Provider
- Security

By Certification

- Associate
- Professional
- Expert**

Expert

CCIE Security

[Implementing and Operating Cisco Security Core Technologies \(SCOR\)](#)

5 CLCs

Associated Qualifying Exam: [350-701 SCOR](#)

Associated Lab Exam: [CCIE Security, Practical Exam](#)

CCIE Service Provider

[Implementing and Operating Cisco Service Provider Network Core Technologies \(SPCOR\)](#)

10 CLCs

Associated Qualifying Exam: [350-501 SPCOR](#)

Associated Lab Exam: [CCIE Service Provider, Practical Exam](#)

Cisco Certified DevNet Expert

Associated Qualifying Exam: [350-901 DEVCOR](#)

Associated Lab Exam: [DevNet Expert \(v1.0\) Lab Exam](#)

CCDE Design Expert

Associated Written Exam: [\(352-001\) CCDE Written Exam](#)

Associated Practical Exam: [CCDE Practical Exam](#)