CISCO COURSES

ICND 1

This course focuses on providing the skills and knowledge required to install, operate, configure, and verify a basic IPv4 and IPv6 network,including configuring a LAN switch, configuring an IP router, connecting to a WAN, and identifying basic security threats. At the end of this course students should be able to complete the configuration, implementation and troubleshooting of a small branch network under supervision.

The knowledge and skills that a learner must have before attending this course are as follows:

a. Basic Windows navigation and keyboard literacy skills
b. Basic Internet usage skills
c. Basic IP addressing knowledge

ICND2

This course provides entry-level network administrators, network support, and help desk technicians with the knowledge and skills needed to install, configure, operate, and troubleshoot a small enterprise network. ICND2 v2.0 focuses on understanding redundant topologies, troubleshooting common networking issues, configuring EIGRP and multiarea OSPF in both IPv4 and IPv6, understanding WAN technologies, and becoming familiar with device management and Cisco licensing. There are more labs and troublshooting scenarios included in this version of ICND2.

Prerequisites:

Understand network fundamentals and be able to :

a. Implement local area networks
b. Implement Internet connectivity
c. Manage network device security
d. Implement WAN connectivity
e. Implement basic IPv6 connectivity

All of these requirements can be met by attending ICND1. v2.0.

IMPLEMENTING CISCO IP ROUTING (ROUTE)

This 5 day course is designed to provide professionals working with medium to large networks with the skills and knowledge required to incorporate advanced routing concepts when implementing scalability for Cisco routers that are connected to LANs and WANs. Delegates will be able to dramatically increase the number of routers and sites using these techniques instead of redesigning the network when additional sites or wiring configurations are added.

Who needs to attend?

Network engineers, technical support personnel, and help desk technicians. Anyone involved in implementing, configuring, and verifying routing protocols in enterprise networks.

Prerequisites:

a. ICND1 Interconnecting Cisco Network Devices Part 1
b. ICND2 Interconnecting Cisco Network Devices Part 2

IMPLEMENTING CISCO SWITCHED NETWORKS (SWITCH)

This is a five-day course designed to help students prepare to plan, configure, and verify the implementation of complex enterprise switching solutions for campus environments using the Cisco Enterprise Campus Architecture. Hands-on labs are incorporated along with lab debrief sessions to ensure delegates obtain the full benefit from the practice scenarios.

Who needs to attend?

Network engineers with at least one year of professional work experience who are ready to advance their skills and work independently on complex network solutions.

Network engineers, technical support personnel, or help desk technicians who will need to correctly implement and/or support switch-based solutions.
Prerequisites:

a. ICND1 Interconnecting Cisco Network Devices Part 1
b. ICND2 Interconnecting Cisco Network Devices Part 2

TROUBLESHOOTING AND MAINTAINING CISCO IP NETWORKS (TSHOOT)
In the Troubleshooting and Maintaining Cisco IP Networks (TSHOOT) course, networking professionals who work in complex network environments will gain the skills needed to maintain their networks and to diagnose and resolve network problems quickly and effectively. You will learn to troubleshoot and maintain particular technologies, and you will learn procedural and organizational aspects of the troubleshooting and maintenance process. A large part of the course consists of practicing these skills and reinforcing the concepts by putting them to use in a controlled environment.
At the end of the course, you will have increased your skill level and developed a set of best practices that are based on your experience and the experiences of other students and that you can take back to your organization. This course is a component of the CCNP curriculum and assists the network professional in preparing for Cisco CCNP certification.
To gain the prerequisite skills and knowledge, Cisco strongly recommends the knowledge of the following courses:

a. Interconnecting Cisco Networking Devices Part 1 (ICND1)
b. Interconnecting Cisco Networking Devices Part 2 (ICND2)
c. Implementing Cisco IP Routing (ROUTE)
d. Implementing Cisco IP Switched Networks (SWITCH)

CISCO ASA EXPRESS SECURITY (SAEXS)
In this course, you will learn about Cisco's Adaptive Security Appliance (ASA) solution portfolio and how to successfully configure various aspects of the Cisco ASA components.
Prerequisites

a. Cisco ASA Overview (SAAOV) v1.0 (available as e-Learning via PEC)
b. Firewall knowledge

IMPLEMENTING CORE CISCO ASA SECURITY (SASAC)
Learn the essential skills required to work with the Cisco ASA 5500-X Next Generation Firewall features. This enhanced course contains added depth to the standard labs, using a topology that simulates a typical production network. You'll use ASA 5515 appliances to work through configuring access control to and from your network.
Additionally, the PC systems and server systems are an integral part of the lab environment. Here you will use Windows 8, Windows Server 2012, and Kali Linux to manage, test, and even attack your lab network using real-world operating systems and applications.
Prerequisites

a. Knowledge of the Cisco ASA
b. IINS 2.0 - Implementing Cisco IOS Network Security

IMPLEMENTING CISCO SECURE MOBILITY SOLUTIONS (SIMOS)
This course is also available in our new Virtual Classroom Fit format: Two, three-hour instructor-led sessions per week over four weeks for your convenience. This course is part of the curriculum path leading to the Cisco Certified Network Professional Security (CCNP Security) certification. It prepares network security engineers

with the knowledge and skills needed for protecting data traversing a public or shared infrastructure, such as the Internet, by implementing and maintaining Cisco VPN solutions. You will gain hands-on experience with configuring and troubleshooting remote access and site-to-site VPN solutions using Cisco ASA adaptive security appliances and Cisco IOS routers.
Prerequisites

a. Cisco Certified Network Associate (CCNA®) certification
b. Cisco Certified Network Associate (CCNA®) Security certification
c. Knowledge of Microsoft Windows operating system

IMPLEMENTING CISCO SECURE ACCESS SOLUTIONS (SISAS)
This course is part of the curriculum path leading to the Cisco Certified Network Professional Security (CCNP Security) certification. Additionally, it is designed to prepare security engineers with the knowledge and hands-on experience for deploying the Cisco Identity Services Engine (ISE) and 802.1X secure network access. You will acquire the foundational knowledge and capabilities to implement and managed network access security by utilizing Cisco ISE appliance product solution. You will gain hands-on experience with configuring various advance Cisco security solutions for mitigating outside threats and securing devices connecting to the network. At the end of the course, you will be able to reduce the risk to your IT infrastructures and applications using the Cisco ISE appliance feature and provide operational support identity and network access control.
Prerequisites

a. Cisco Certified Network Associate (CCNA®) certification
b. Cisco Certified Network Associate (CCNA®) Security certification
c. Knowledge of Microsoft Windows operating system

IMPLEMENTING CISCO THREAT CONTROL SOLUTIONS (SITCS)
This course is part of the curriculum path leading to the Cisco Certified Network Professional Security (CCNP Security) certification. Additionally, it is designed to prepare security engineers with the knowledge and hands-on experience so that they can deploy Cisco's Next Generation Firewall (NGFW) as well as web security, email security and cloud web security. You will acquire the foundational knowledge and capabilities to implement and manage security on Cisco ASA firewalls utilizing Cisco Next Generation product solution, which integrates Cisco Prime Security Manager for managing identity policies. You will gain hands-on experience with configuring various advance Cisco security solutions for mitigating outside threats and securing traffic traversing the firewall. At the end of the course, you will be able to reduce the risk to your IT infrastructures and applications using Cisco's Next Generation Firewall security appliance feature and provide operational support for intrusion prevention systems, email security, and web-based security appliances.
Prerequisites

a. Cisco Certified Network Associate (CCNA®) certification
b. Cisco Certified Network Associate (CCNA®) Security certification
c. Knowledge of Microsoft Windows operating system

IMPLEMENTING ADVANCED CISCO ASA SECURITY (SASAA)
This course provides advanced training on the key Cisco ASA 9.x features including the following:

a. Features of Cisco ASA 5500-X Series Next-Generation Firewalls, ASASM, ASA 1000V Cloud Firewall and Cisco ASAv
b. Install and set up the Cisco ASAv
c. Implement Cisco ASA Identity Firewall policies by using Cisco CDA and Cisco ASA
d. Install and set up the Cisco SFR (FirePOWER Services)
e. Implement Cisco ASA and Cisco Cloud Web Security integration
f. Implement a Cisco ASA cluster

g. Install and set up the Cisco CX (NGFW Services)
h. IPv6 features in Cisco ASA Software Release 9.0
i. Multicontext enhancements in Cisco ASA 9.0
j. SGFW support in Cisco ASA 9.0
k. CoA support

Prerequisites

a. SASAC - Implementing Core Cisco ASA Security v1.0

IMPLEMENTING CATALYST 6500 SERIES SWITCHES (RSCAT6K)

The Catalyst 6500 Switch has been a core component of a Cisco network for many years and this course has been specifically designed for system and field engineers, consulting system engineers, technical solutions architects,Cisco integrators and Cisco Partners who install and implement the Cisco Catalyst 6500 Series Switches. The course covers the key components and procedures that are needed to install, configure, manage, and troubleshoot the Cisco Catalyst 6500 Series Switches in the network environment.

Prerequisites:

a. Cisco CCNA® level knowledge is recommended - either ICND1 and ICND2 or CCNABC

ADVANCED ROUTING AND SWITCHING FOR SYSTEM ENGINEERS (ARSFE)

The Advanced Routing and Switching for System Engineers (ARSFE) 2.0 course helps learners to configure and monitor advanced routing and switching services in Cisco devices. The course starts with an overview of advanced technologies such as security, bandwidth and application optimization and quality of service (QoS) as implemented in Cisco devices. The main families of Cisco routers and switches are described with respect to their hardware and software characteristics. The course then focuses on some advanced aspects of network management, including secure management access (Secure Shell [SSH]) and network monitoring with Syslog, Network Time Protocol (NTP), and Netflow services. High availability on Layer 2 (EtherChannel and Rapid Spanning Tree [RSTP]) and on Layer 3 (Hot Standby Router Protocol [HSRP], Virtual Router Redundancy Protocol [VRRP], and Gateway Load Balancing Protocol [GLBP]) is presented through configuration examples, followed by description of hardware and software redundancy on high-end modular switches. The course concludes with extensive explanation of Multiprotocol Label Switching (MPLS) Virtual Private Networks (VPNs), with special attention to troubleshooting aspects of this technology.

The Knowledge and skills required to sit this course are as follows:

a. Delegates must hold a valid CCNP or Comparable experience to participate on this course.

IMPLEMENTING CISCO IOS NETWORK SECURITY (IINS)

This is a five-day instructor-led course that focuses on the design, implementation, and monitoring of a comprehensive security policy, using Cisco IOS security features and technologies as examples. The course covers security controls of Cisco IOS devices as well as a functional introduction to the Cisco ASA adaptive security appliance. Using instructor-led discussion, lecture, and hands-on lab exercises, this course provides delegates with the knowledge and skills required to perform the basic tasks to secure a small branch office network using Cisco IOS security features that are available through web-based GUIs (Cisco Configuration Professional) and the CLI on Cisco routers, switches, and ASA appliances.

Prerequisites:

a. ICND1 - Interconnecting Cisco Network Devices Part 1 is recommended

SECURING NETWORKS WITH CISCO ROUTERS AND SWITCHES (SECURE)
This is a five-day instructor-led course helps learns to secure switches, including advanced Layer 2 security and Identity-Based Networking Services (IBNS) based on IEEE 802.1x. You will cover network platform security, VPN, Firewall, and IPS, and you will learn to secure a router's control, plane, and management planes.
Prerequisites:

a. IINS - Implementing Cisco IOS Network Security

THE DEPLOYING CISCO ASA FIREWALL SOLUTIONS (FIREWALL)
This course aims to provide network security engineers with the knowledge and skills needed to implement and maintain Cisco ASA adaptive security appliance-based perimeter solutions.
Delegates will be able to reduce risk to the IT infrastructure and applications using Cisco ASA adaptive security appliance features, and provide detailed operations support for the Cisco ASA adaptive security appliance.
The knowledge and skills that a learner must have before attending this course are as follows:

a. CCNA Certification
b. CCNA Security Certification
c. Working knowledge of Microsoft Windows OS is an advantage

To gain the prerequisite skills and knowledge, Cisco strongly recommends the knowledge of the following courses:

a. Interconnecting Cisco Networking Devices Part 1 (ICND1)
b. Interconnecting Cisco Networking Devices Part2 (ICND2)
c. Implementing Cisco IOS Network Security (IINS)

DEPLOYING CISCO ASA VPN SOLUTIONS (VPN)
This five-day instructor-led course is aimed at providing network security engineers with the knowledge and skills that they need to implement and maintain Cisco ASA adaptive security appliance-based perimeter solutions. Delegates should be able to use Cisco ASA features to reduce the risk to the IT infrastructure and applications and to provide detailed operations support for the Cisco ASA security appliance.
Prerequisites:

a. CCNA Security Certification ICND1 and IINS Required.
b. FIREWALL attendance recommended

IMPLEMENTING CISCO INTRUSION PREVENTION SYSTEM (IPS)
In this course you will gain the skills required to deploy Cisco's network-based Intrusion Prevention System (IPS). You will get an introduction to Cisco IPS platforms and managers, including:

a. 4200 Series Sensors
b. Catalyst 6000 Series Intrusion Detection Module 2 (IDSM-2)
c. Advanced Inspection and Prevention Security Services Module (AIP-SSM)
d. IPS Device Manager (IDM) GUI
e. IPS Manager Express (IME)

Our labs take the mystery out of the sensor, allowing you to understand how signatures are implemented and what causes them to trigger and making you comfortable with the technology. In our labs, signatures are triggered via realistic intrusion attempts, not just arbitrary methods, and you'll learn why particular signatures are triggered when attack conditions are initiated, whether through using a network attack tool or entering a suspicious request in a web browser.
Prerequisite:

a. IINS - Implementing Cisco IOS Network Security

INTRODUCTION TO 802.1X OPERATIONS FOR CISCO SECURITY PROFESSIONALS (802.1X)
The Introduction to 802.1X Operations for Cisco Security Professionals (802.1X) course is designed to prepare Cisco Channel Partners, systems engineers, and implementers with the knowledge and hands-on experience to prepare them to configure Cisco TrustSec solutions based on Cisco Identity Services module, Cisco Catalyst switches, and Cisco Wireless LAN Controllers.
The goal of the course is to provide students with foundational knowledge in the capabilities and functions of the IEEE 802.1X protocol and the ability to configure the Cisco Identity Services Engine (ISE) for 802.1X operation.
The course will introduce the architecture, components, and features of a Cisco TrustSec network designed around the IEEE 802.1X and RADIUS protocols
The knowledge and skills that a learner must have before attending this course are as follows:

a. Knowledge of Microsoft Windows Server 2008 Active Directory
b. Knowledge of Cisco wireless LAN controllers and lightweight access points
c. Knowledge of basic command-line configuration of Cisco Catalyst switches
d. Attendance of Securing Networks with Routers and Switches (SNRS) or equivalent knowledge

IMPLEMENTING CISCO NETWORK ADMISSION CONTROL (NAC)
This course will introduce delegates to Network Access Devices (NADs) Switch (layer 2): NAC Phase 2 Network devices that enforce admission control policy on switches. This devices demand host security "credentials" and relay this information to policy servers, where network admission control decisions are made. Based on customer-defined policy, the network will enforce the appropriate admission control decision, permit, deny, quarantine, or restrict.
The skills and knowledge required from a delegate looking to attend this course are as follows:

a. Certification as a CCSP or the equivalent knowledge
b. Basic knowledge of the Microsoft Windows operating system
c. Familiarity with networking and security terminology and concepts

IMPLEMENTING CISCO NETWORK ADMISSION CONTROL (CANAC)
This course is designed to teach delegates how to design & implement a Cisco NAC Appliance solution to suit your network. You will learn basic configuration tasks such as NAM and NAS deployment modes, authentication (including Windows SSO), role-based access control, posture assessment, and remediation.
The knowledge and skills that a learner must have before attending this course are as follows:

a. Fundamental knowledge of implementing network security or CCSP or Cisco Security CSQ
b. SNRS or working knowledge of digital certificates
c. BCSI or working knowledge of HSRP.

MANAGING ENTERPRISE SECURITY WITH CISCO SECURITY MANAGER (SSECMGT)
Cisco Security Manager (CSM) is an enterprise-class management application designed to configure:

a. Firewalls: ASA and router based
b. VPNs: DMVPN, GET, IPsec, and SSL
c. IPS security services: IOS IPS and appliance-based IPS

CSM can be used in networks of all sizes-from small networks to large networks consisting of thousands of devices-by using policy-based management techniques. Training on this core management system is a vital part of any Security Operations Center and any type of organization where device policies must be consistent.

Our enhanced and exclusive CSM labs go beyond the standard Cisco course material to address the top issues and features that you will face in a real-world production environment. You won't find these feature-rich add-ons in the standard Cisco course offerings:

a. The latest software version on the CSM
b. Live network devices running the latest code set, not "virtual devices"
c. Using a Cisco IPS and Cisco MARS to explore signatures and cross-launch capabilities
d. Role-based authorization using the Cisco ACS
e. AnyConnect 3.0 included in our SSL VPN lab

Prerequisites

a. CCNP Security certification
b. CCNP-level understanding of networking and routing
c. Understanding of different VPN technologies (such as DMVPN, GET VPN, and SSL VPN)
d. At least six months of practical experience configuring Cisco Security products
e. Familiarity with implementing network security policies and with the following networking components and concepts:
    i. Security technologies: NAT, PAT, ASA, VPN, IPS, ACS, MARS (optional), IOS integrated router and switch security, and security management software
    ii. Security protocols: AAA, IPsec, IKE, and various tunneling protocols
    iii. Application protocols: HTTP, HTTPS, ICMP, SSH, SSL, NTP, FTP, TFTP, DNS, etc.

IMPLEMENTING CISCO SECURE ACCESS CONTROL SYSTEM (ACS)

In the Implementing Cisco Secure Access Control System (ACS) course is designed to teach delegates to provide secure access to network resources using the Cisco Secure Access Control System (ACS) 5.2. They will examine how the ACS has grown by leaps and bounds since 4.x., discover new features, and learn how the 4.x configurations map to 5.x configurations. The students will also get a look into future ACS technologies. The delegates will learn about the role and importance of ACS in Cisco TrustSec, whether TrustSec is deployed as an appliance-based overlay solution or as a network-integrated 802.1x solution. Students will learn about user authentication and authorization, posture assessment, device profiling, guest access, data integrity and confidentiality, centralized policy, collaborative monitoring, troubleshooting, and reporting in Cisco TrustSec solutions.

The knowledge and skills that a learner must have before attending this course are as follows:

a. CCNA certification or the equivalent knowledge and experience
b. Working knowledge of Microsoft Windows
c. CCNA Security certification or the equivalent knowledge and experience is recommended

To gain the prerequisite skills and knowledge, Cisco strongly recommends the knowledge of the following courses:

a. Interconnecting Cisco Networking Devices Part 1 (ICND1)
b. Interconnecting Cisco Networking Devices Part2 (ICND2)
c. Implementing Cisco IOS Network Security (IINS)

IMPLEMENTING CISCO MPLS (MPLS)

This course is designed to introduce to MPLS concepts, installation, migration, operation, inspection, and troubleshooting. The students will start with an overview of MPLS and MPLS operation, after which they will concentrate on MPLS Virtual Private Network (VPN) deployment. The MPLS fundamentals covered in this class will provide the theory and hands-on knowledge to implement, integrate, and deploy an MPLS infrastructure. The MPLS VPN lecture and labs will cover the models, diversity, implementation, troubleshooting, and flexibility of MPLS VPNs.

Prerequisites

a. BGP - Configuring BGP on Cisco Routers v3.2

IMPLEMENTING CISCO MPLS TRAFFIC ENGINEERING & OTHER FEATURES (MPLST)

This course will enable customers to gather information from the technology basics to some of the more updated features and functions such as Traffic Engineering. The focus of the course is on the implementation of Traffic Engineering on an existing MPLS network. Customized training is available to emphasize the specific requirements of the customer's network and business demands. The course is delivered in a balance of lectures and hands-on labs.

Prerequisites:

a. CCNA or equivalent knowledge
b. BSCI - Building Scaleable Cisco Internetworks course
c. BGP - Configuring BGP on Cisco Routers Course
d. QoS - Implementing Cisco Quality of Service
e. MPLS - Implementing MPLS
f. or have equivalent knowledge.
g. Practical experience with deploying and operating networks based
h. on Cisco IOS and network devices is strongly recommended

CONFIGURING BGP ON CISCO ROUTERS STUDENT (BGP)

The Configuring BGP on Cisco Routers (BGP) v3.1 course provides students with in-depth knowledge of BGP, the routing protocol that is one of the underlying foundations of the Internet and new-world technologies such as Multi-protocol Label Switching (MPLS). This curriculum covers the theory of BGP, configuration of BGP on Cisco IOS routers, detailed troubleshooting information and hands-on exercises that provide students with the skills needed to configure and troubleshoot BGP networks in customer environments. Different service solutions in the curriculum cover BGP network design issues and usage rules for various BGP features preparing students to design and implement efficient, optimal and trouble free BGP networks.

Prerequisites

a. Valid CCNA
b. Valid BSCI

IPV6 FUNDAMENTALS, DESIGN AND DEPLOYMENT (IP6FD)

This five-day course provides network engineers and technicians who are working in the enterprise sector with the knowledge and skills that are needed to study and configure the IP version 6 (IPv6) features of Cisco IOS Software. This course provides an overview of IPv6 technologies; covers IPv6 design and implementation; describes IPv6 operations, addressing, routing, services, and transition; and describes the deployment of IPv6 in enterprise and service provider networks. Hands-on labs and case studies are used to provide possible deployment scenarios.

Prerequisites:

a. Cisco CCNA® certification. ICND1 and ICND2 or CCNABC required
b. A CCNP level understanding of networking and routing is required -ROUTE is recommended although no formal certification at CCNP level is required.
c. Working knowledge of the Microsoft Windows operating system.

IMPLEMENTING CISCO QUALITY OF SERVICE (QOS)

This Implementing Cisco Quality of Service (QOS) course provides learners with an in-depth knowledge of QoS requirements, conceptual QoS models such as best effort, IntServ, and DiffServ are all reviewed along

with the best practices for a QoSi mplementation on Cisco platforms. The curriculum covers the theory of QoS, design issues, and configuration of various QoS mechanisms to facilitate the creation of effective administrative policies providing QoS.
Case studies and lab exercises included in the course help learners to apply the concepts from the individual modules to real-life scenarios.Learners are provided with design and usage rule for advanced QoS features, giving them the opportunity to design and implement efficient, optimal, and trouble-free multiservice networks.
Prerequisites:

a. Valid CCNA (ICND1 and ICND2 or CCNAX)

IP TRANSFER POINT (ITP)
This course enables learners to use appropriate technologies to build a scalable SS7 signaling network, to create and deploy an SS7 over IP signaling network, and to implement basic troubleshooting techniques in environments that use the Cisco ITP. The ITP v3.0 course also enables students to improve traffic flow, reliability, redundancy, and performance in the signaling network.
Prerequisites

a. Basic IPS skills
b. Basic SS7 knowledge
c. Basic TCP/IP knowledge

IMPLEMENTING CISCO MULTICAST (MCAST)
Implementing Cisco Multicast is a five-day instructor-led course designed to provide technical solutions for simple deployments of IP multicast within a provider or customer network. This course covers the fundamentals of IP multicasting including multicast applications, sources, receivers, group management, and IP multicast routing protocols (such as Protocol Independent Multicast [PIM]) used within a single administrative domain (intradomain). The issues of switched LAN environments and reliable IP multicasting have also been incorporated.
The labs incorporated in this course provide delegates with hands-on experience of the configuration and troubleshooting guidelines for implementing IP multicast on Cisco routers.
Prerequisites:

a. ICND1 - Interconnecting Cisco Network Devices Part 1
b. ICND2 - Interconnecting Cisco Network Devices Part 2
   Or
c. CCNABC - Cisco CCNA Certification Fast Track Programme
   Plus
d. ROUTE - Implementing Cisco IP Routing

ADMINISTERING CISCO UNIFIED COMMUNICATIONS MANAGER(ACUCM)
This entry-level course begins with the basic concepts of IP telephony and very quickly moves the learner forward into an understanding of the Cisco Unified Communication Manager concepts: clustering, route plans, digit manipulation,media resource, and Cisco Unified Communication Manager features, all of which are important in supporting IP telephony in the enterprise network.
This course is designed for individuals that will be using and managing the system and performing administration at Level 1 and Level 2 support levels. Level 1 supports phone users, makes moves, adds, and changes to the desktop phone environment. Level 2 supports changes in the organization, such as opening new office locations or relocating departments. This course does not cover issues of initial deployment, new cluster deployment or international deployments, orissues with the underlying network that involve routers, switches, or Cisco IOS software configuration.

This course includes lab exercises that allow to apply what was learned in each preceding lesson. Labs begin with a newly installed publisher and subscriber. The only element that is preconfigured is two MGCP gateways, for the headquarters (HQ) and branch (BR), and an intercluster trunk pointing to the neighbor's pod. Thus allowing the student to become familiar with all the various concepts through configuration of the elements in the lab environment.
The course focus is on Cisco Unified Communications Manager version 8.x .
Delegates should meet the following prerequisites:

a. Basic knowledge of IP and networking is suggested, but not required
b. Basic knowledge of the Windows desktop environment

INTRODUCING CISCO VOICE AND UNIFIED COMMUNICATIONS ADMINISTRATION (ICOMM)
This course introduces the architecture, components, functionalities, and features of Cisco Unified Communications solutions and describes how daily job tasks, such as system monitoring, moves, adds, and changes are performed on Cisco Unified Communications Manager, Cisco Unified Communications Manager Express, Cisco Unity Connection, and Cisco Unified Presence.
Prerequisites:

a. Working knowledge of converged voice and data networks
b. Basic knowledge of Cisco IOS gateways
c. Basic knowledge of Cisco Unified Communications Manager and Cisco Unity Connection
d. Prior attendance of ICND1 is required

IMPLEMENTING CISCO VOICE COMMUNICATIONS AND QOS WITH APPENDIX (CVOICE)
This course will provide delegates with knowledge of voice gateways, the characteristics of VoIP call legs, dial plans and their implementation, plus the basic implementation of IP phones in a Cisco Unified Communications Manager Express environment, as well as essential information about gatekeepers and Cisco Unified Border Element.Voice-related QoS mechanisms required in a Cisco Unified Communications network are also incorporated into this class.
Prerequisites:

a. Working knowledge of fundamental terms and concepts of computer networking to include LANs, WANs, and IP switching and routing
b. Ability to configure and operate Cisco IOS routers in an IP environment at CCNA Level. ICND1 or CCNABC is recommended
c. Basic knowledge of traditional voice, converged voice, and data networks at the CCNA Voice Level. ICOMM is recommended

IMPLEMENTING CISCO UNIFIED COMMUNICATIONS MANAGER, PART 1 WITH APPENDIX (CIPT1)
This course prepares delegates for implementing a Cisco Unified Communications Manager solution at a single-site environment. This course focuses primarily on Cisco Unified Communications Manager Version 8.0, which is the call routing and signaling component for the Cisco Unified Communications solution.
Delegates will perform post-installation tasks, configure Cisco Unified Communications Manager, implement Media Gateway Control Protocol (MGCP) and H.323 gateways, and build dial plans to place on-net and off-net phone calls. You will also implement media resources, Cisco IP Phone Services, Cisco Unified Communications Manager native presence, and Cisco Unified Mobility.
Prerequisites:

a. Working knowledge of fundamental terms and concepts of computer networking, including LANs, WANs, and IP switching and routing
b. Ability to configure and operate Cisco routers and switches and to enable VLANs and DHCP

c. Basics of digital interfaces, PSTN, and VoIP
d. Fundamental knowledge of converged voice and data networks
e. Ability to configure Cisco IOS gateways with traditional and VoIP call legs
f. Prior attendance of the following is recommended: ICND1 and ICND2 or CCNABC, ICOMM and CVOICEV8 or CVOICEV6

IMPLEMENTING CISCO UNIFIED COMMUNICATIONS MANAGER, PART 2 WITH APPENDIX (CIPT2)
This course follows on from Implementing Cisco Unified Communications Manager, Part1 (CIPT1) v8.0 and prepares delegates for implementing a Cisco Unified Communications solution in a multisite environment. It covers globalized call routing, Cisco Service Advertisement Framework (SAF) and Call Control Discovery (CCD), tail-end hop-off (TEHO), Cisco Unified Survivable Remote Site Telephony (SRST), and mobility features such as Cisco Device Mobility and Cisco Extension Mobility.
Delegates will apply a dial plan for a multisite environment including TEHO, configure survivability for remote sites during WAN failure and implement solutions to reduce bandwidth requirements in the IP WAN.Delegates will also enable Call Admission Control (CAC) including Session Initiation Protocol (SIP) Preconditions and automated alternate routing (AAR).
Prerequisites:

a. Working knowledge of converged voice and data networks
b. Working knowledge of the MGCP, SIP, and H.323 protocols and their implementation on Cisco IOS gateways
c. Ability to configure and operate Cisco routers and switches
d. Ability to configure and operate Cisco Unified Communications Manager in a single-site environment
e. Prior attendance of CVOICE plus CIPT1 is required

TROUBLESHOOTING CISCO UNIFIED COMMUNICATIONS(TVOICE)
This course provides delegates with the knowledge and skills that are required to troubleshoot Cisco Unified Communications systems and solutions in enterprise, midmarket, and commercial deployments in single-site and multisite environments. The course teaches troubleshooting methodology, triage, resources, tools, and fixes at the integrated system or solution level for Cisco Unified Communications Manager.
Prerequisites:

a. Working knowledge of converged voice and data networks
b. Working knowledge of the MGCP, SIP, and H.323 and their implementation on Cisco IOS gateways
c. Working knowledge of Cisco Unified Communications Manager, Cisco Unified Communications features and applications, and Cisco IOS voice gateways in a single-site and multisite environment.
d. Prior attendance of CVOICE, CIPT1 and CIPT2 is required

INTEGRATING CISCO UNIFIED COMMUNICATIONS APPLICATIONS WITH APPENDIX (CAPPS)
This course provides delegates with an understanding of the integration options of Cisco Unified Presence, Cisco Unity Express, and Cisco Unity Connection. It describes voice messaging deployment scenarios, Cisco Unified Presence features, and troubleshooting mechanisms as well as Cisco Unified Presence and Cisco Unified Personal Communicator integration options with Cisco Unified Communications Manager.
Prerequisites::

a. Accelerated Working knowledge of converged voice and data networks
b. Basic Knowledge of Cisco IOS Gateways
c. Working knowledge of Cisco Unified Communications Manager and Cisco Unity Connection
d. Prior attendance of ICOMM and CIPT1 is recommended

UCS DIRECTOR IMPLEMENTATION FUNDAMENTALS (UCSDF)

UCS Director is a centralized management solution that enables IT departments to experience the full benefits of their converged infrastructure investment by continuing to reduce TCO and save staff time with transparent unified management for the industry's leading converged infrastructure solutions. UCS Director supports netapp flexpod and expresspod, EMC VSPEX, and Virtual Computing Environment (VCE) vblock systems, based on the Cisco UCS and Cisco Nexus platforms. UCS Director enables organizations to build their own internal private clouds as well as manage public clouds. With UCS Director, organizations achieve faster service delivery, greater IT agility, and substantial cost savings. UCS Director significantly improves service levels and operational efficiencies by providing service-centric IT management with end-to-end automation capabilities.

The goal of this two-day training is to describe the fundamental capabilities and implementation details of the UCS Director platform. Since this course covers the fundamentals for UCS Director it is may not cover every detail of your installation. Therefore, the recommendation is to combine this course with additional training or services. This could be installation and knowledge transfer services from a VAR or a Firefly mentored installation or a mentored operations engagement.

Prerequisites:

a. Required: General data center skills related to design, deployment, and operations of vmware vsphere, Cisco UCS servers, Cisco Nexus switches, and data center storage solutions.
b. Recommended: Design, deployment, and operations experience with netapp storage.
c. Optional: Design, deployment, and operations experience with Microsoft Hyper-V and EMC VNX or EMC VMAX storage.

IMPLEMENTING CISCO UNIFIED COMMUNICATIONS SECURITY (UCSEC)

This course is designed to provide you with the necessary knowledge and skills to implement security features in a Cisco Unified Communications environment.

Prerequisites

a. Working knowledge of converged voice and data networks
b. Working knowledge of Cisco IOS gateways, Cisco Unified SRST gateways, and Cisco Unified Border Element
c. Working knowledge of Cisco Unified Communications Manager and Cisco Unified Communications Manager Express
d. CCNP® Voice certification recommended
e. Knowledge of network security fundamentals
f. Knowledge of Cisco IOS Firewall and Cisco ASA adaptive security appliance firewalls
g. Knowledge of IPsec or SSL VPNs or both
h. CCNA® Security certification is recommended
i. CVOICE - Implementing Cisco Unified Communications Voice over IP and QoS v8.0
j. CIPT1 - Implementing Cisco Unified Communications IP Telephony Part 1 v8.0
k. CIPT2 - Implementing Cisco Unified Communications IP Telephony Part 2 v9.x
l. IINS 2.0 - Implementing Cisco IOS Network Security

DEPLOYING CISCO UNIFIED CONTACT CENTER EXPRESS (UCCX)

This course provides students with hands-on experience and knowledge of tasks typically performed during contact center deployment. This includes the deployment of Cisco Unified Contact Center Express (CCX) and Cisco Unified IP Interactive Voice Response (IVR) as contact center solutions. Tasks include planning, installation and configuration, scripting, and troubleshooting.

Prerequisites:

a. Internetworking Fundamentals (ICND1 and ICND2 Or CCNABC) recommended.
b. Basic IP telephony concepts (ICOMM) recommended.
c. Cisco Unified Communication Manager deployments (CIPT1V8) recommended.
d. Cisco IP Phones, Cisco IP Communicator
e. Contact Center Operations
f. Microsoft Windows 2000, 2003, XP
g. MS SQL 2000, MSDE Databases

CISCO UNIFIED CUSTOMER VOICE PORTAL IMPLEMENTATION (CVPI)
This course will be delivered using v9.0 software, giving the delegate an enhanced experience. Additional hand-out and labs will be provided to supplement the standard Cisco training materials (currently on v8.0). This course is also suitable for those on earlier versions of the software.
This course defines the tasks necessary for the Operation, Administration, Management and Provisioning of Cisco Unified Customer Voice Portal as it is installed in a comprehensive Cisco Unified Intelligent Contact Management Enterprise environment.
Prerequisites;.

a. CCNA - ICND1 and ICND2
b. CVOICE - Cisco Voice Over IP
c. CIPT1 - Implementing Cisco Unified Communications Manager, Part 1
d. UCCEFT- Fast Track : Administering and Deploying Cisco Unified Contact Center Enterprise
e. IPCAS - Cisco IPCC Enterprise Advanced Scripting

IMPLEMENTING CISCO UNIFIED E-MAIL AND WEB INTERACTION MANAGER ENTERPRISE (UEIME)
This course is intented for installation engineers, system administrators, database administrators, sales engineers, and others who are responsible for installing and maintaining the Cisco Unified Web and E-Mail Interaction Manager installation, which includes a common platform and one or both of the following applications: Cisco Unified E-Mail Interaction Manager (EIM) and Cisco Unified Web Interaction Manager (WIM).
Prerequisites:

a. Working knowledge of Windows 2003 Server and Windows XP
b. Basic knowledge of Microsoft SQL Server 2000
c. Basic knowledge of WebLogic and WebLogic domains
d. Basic knowledge of Microsoft Internet Information Services (IIS)
e. Cisco Unified CCE version 7.x

DEPLOYING CISCO UNIFIED INTELLIGENCE CENTER (DUIC)
This course will be delivered using v9.0 software, giving delegates an enhanced experience. Additional hand-out will be provided to supplement the standard Cisco training materials (currently based on v8.0). This course is also suitable for those on earlier versions ofCUIC.
This three-day instructor-led course is designed to provide attendees with the knowledge and skills required to make the most of Cisco's Unified Intelligence Center 8.0.4 solution. Cisco's Unified Intelligence Center is a comprehensive, end-to-end reporting solution designed to make the task of creating reports and managing disparate data sources easier for the customer and, at the same time, present a consistent user interface and a common tool to access the varied data across multiple Cisco product families.
Prerequisites:

a. A working knowledge of Cisco Unified Contact Center Enterprise is desirable. AUCCE or DUCCE
b. A working knowledge of contact center operations is desirable.

ADMINISTERING CISCO UNIFIED CONTACT CENTER ENTERPRISE PART 1 (ACUCM1)
This 5 day instructor-led course is designed for system engineers and customers involved with the support of a UCCE solution deployed in a CVP comprehensive environment. This course describes the requirements, resources and tools needed to perform routine adds, moves and changes in the inbound/outbound UCCE environment.
Prerequisites:

a. Basic knowledge of networking (Windows A/D, SQL) and components (servers, routers, switch) is helpful but not required
b. Working knowledge of a Windows computer including a mouse and the simultaneous use of the Alt-Tab keys is required
c. Working knowledge of Unified Communications Manager and Voice Gateways
d. Basic understanding of contact center operations

ADMINISTERING CISCO UNIFIED CONTACT CENTER ENTERPRISE PART 2 (AUCCE2)
This is a 5 day instructor-led course for system engineers and customers who will be involved with "Day2" support of a UCCE solution deployed in a CVP comprehensive environment. This course gives the learner an understanding of the requirements, resources and tools required to perform complex adds, moves and changes in the inbound/outbound UCCE environment. This course is intended for those performing advanced administration of the solution, or who may be responsible for Level 2-3 support.
Prerequisites:

a. Attendance of AUCCE Part 1 or equivalent real world experience is a requirement to attend this course
b. Working knowledge of Unified Communications Manager and Voice Gateways would be very helpful

DEPLOYING CISCO UNIFIED CONTACT CENTER ENTERPRISE (DUCCE)
This course will be delivered using v9.0 software, giving delegates an enhanced experience. Additional hand-out will be provided to supplement the standard Cisco training materials (currently based on v8.0). This course is also suitable for those on earlier versions of CCE and CUIC.
This is an instructor-led course aimed at system engineers and customers involved in day-to-day interaction with the Cisco Unified Contact Center Enterprise (CCE) product. This course will give you an understanding of the Cisco Unified CCE system, the Intelligent Contact Management (ICM) routing application, and Cisco Outbound Option. You will accomplish this by configuring the Cisco Unified CCE software, use the ICM routing software to route calls from Cisco Unified IP IVR and from Cisco Unified Communications Manager. Additionally, you will configure the Cisco Outbound Option and use various ICM utilities to aid you in locating configuration errors .
Attendees should meet the following prerequsites:

a. Familiarity with call center operations
b. Microsoft Active Directory
c. Microsoft Windows 2003
d. Microsoft SQL Server 2005

ADMINISTERING CISCO UNITY CONNECTION (AUC)
This course is designed to provide administrators with the necessary skills to perform day-to-day job functions using the Cisco Unity Connection version 8.x system. Delegates will gain an understanding of the administration features, options and configuration settings available to them.

Students that require skills beyond administration where engineering, integration, and networking skills are required should consider the Implementing Cisco Unity Connection (IUC) course.
Prerequisites:

a. Basic understanding of the fundamental terms and concepts of computer networking, including LANs, WANs, and IP switching and routing. GK3150 or ICND1 and ICND2 Recommended
b. Basic knowledge of traditional PSTN operations and technologies, including PBX and voice-mail administration task
c. Basic understanding of Cisco Unified Communications Manager.

IMPLEMENTING CISCO UNITY CONNECTION (IUC)
This course,reviews the Cisco Unity Connection architecture, components, functionality, features and capabilities. This course describes the features available for Cisco Unity Connection using the GUI and CLI interfaces available, as well as, specific tools and reports using the Remote Port Status Monitor and Real-Time Monitoring Tools. This course is based on V8.0 of Cisco Unity Connection.
Prerequisites:

a. Basic understanding of fundamental terms and concepts of computer networking, including LANs, WANs, and IP switching and routing GK3150 or ICND1 and ICND2 Recommended
b. Basic knowledge of traditional public switched telephone network (PSTN) operations and technologies, including PBX and voice-mail administration tasks
c. Basic understanding of Cisco Unified Communications Manager or legacy PBX implementations

IMPLEMENTING CISCO UNITY CONNECTION (ACUCM)
This course,reviews the Cisco Unity Connection architecture, components, functionality, features and capabilities. This course describes the features available for Cisco Unity Connection using the GUI and CLI interfaces available, as well as, specific tools and reports using the Remote Port Status Monitor and Real-Time Monitoring Tools. This course is based on V8.0 of Cisco Unity Connection.
Prerequisites:

a. Basic understanding of fundamental terms and concepts of computer networking, including LANs, WANs, and IP switching and routing GK3150 or ICND1 and ICND2 Recommended
b. Basic knowledge of traditional public switched telephone network (PSTN) operations and technologies, including PBX and voice-mail administration tasks
c. Basic understanding of Cisco Unified Communications Manager or legacy PBX implementations

ADMINISTERING CISCO UNIFIED MESSAGING (AUM)
The aim of the Administering Cisco Unified Messaging (AUM) course is to produce competent administrators of the Cisco Unity product. By the end of this course, learners will be able to perform system setup and customization; add, delete, and modify subscribers; and monitor and maintain the Cisco Unity system. It is the initial course in a two-course series; the other is Implementing Cisco Unified Messaging (IUM). As such, it lays a successful foundation for participation in the engineering-level course because a learner must understand the product features and how to use them before being able to install, configure, maintain, and troubleshoot the features.
Prerequisites:

a. Working knowledge of Microsoft Windows 2000 or 2003
b. Working knowledge of the Microsoft Exchange 2000, Microsoft Exchange 2003, or IBM Lotus Domino messaging environment
c. Working knowledge of the features, benefits, and programming of at least one manufacturer's PBX (Cisco Unified CallManager or Cisco Unified Communications Manager preferred)

IMPLEMENTING CISCO UNIFIED WIRELESS NETWORKING ESSENTIALS (IUWNE)

The Implementing Cisco Unified Networking Essentials is a five day ILT course, designed to help students prepare for the CCNA Wireless certification,an associate level certification specialising in the wireless field. The goal of IUWNE is to provide students with the information and practice activities necessary to prepare them for designing, installing, configuring, monitoring and conducting basic troubleshooting tasks on a Cisco WLAN in SMB and Enterprise installations. This is an associate level course and as such aims to provide only entry level information, and does not specialise in any of the advanced features of the Cisco WLAN networks solutions.

Prerequisites:

a. Prior Attendnce of ICND1 - Interconnecting Cisco Network Devices Part 1 is recommended
b. It is also recommended that before attending this training delegates would have a basic knowledge of Cisco lifecycle deployment, SONA, Wireless standards (IEEE), wireless regulator environment (FCC, ETSI, etc) and wireless certification organisation (WIFI alliance).

CISCO WIRELESS LAN ADVANCED TOPICS (CWLAT)

This 4 day hands on Instructor led course is designed to give delegates a firm understanding of the components, features and proper deployment of the Cisco Unified Wireless Network. The course focuses on advanced WLAN design, integrating Cisco wireless components into a wired infrastructure. Deployment topics include managing the WLAN by using the Cisco Wireless Control System (WCS) to manage the advanced feature set and using the CiscoWorks Wireless LAN Solutions Engine (WLSE) to manage the core feature set. Security topics focus on integrating WLAN security using the WLAN controllers and lightweight access points as well as the autonomous access points in conjunction with the Cisco Secure ACS, and Network Access Controller (NAC). Security also includes Cisco WCS and CiscoWorks WLSE Intrusion Detection Systems. Troubleshooting the WLAN is also included.

All delegates should have a working knowledge of:

a. CWLF Attendance

CISCO WIRELESS LAN FUNDAMENTALS (CWLF)

This four-day course examines the fundamentals of Cisco's wireless LAN technology. Topics include the concepts of autonomous and lightweight access points and controllers, network management solutions and security. After completing this course, learners will be able to discuss configuration, and management of both autonomous and lightweight wireless networks.

Prerequisites:

a. Basic Computer Literacy
b. Knowledge of fundamental networking components and terminology
c. Knowledge of the Open Systems Interconnection (OSI) reference model
d. Knowledge of basic LAN components and functions

CISCO WIRELESS MESH NETWORKS (CWMN)

The Cisco Wireless Mesh Networking (CWMN) course introduces the Cisco Lightweight Outdoor Mesh Access Point. The course provides a technology overview, design and deployment options, and product configuration with hands on labs.

To gain the prerequisite skills and knowledge, Cisco strongly recommends knowledge of the following courses:

a. Cisco Unified Wireless Networks (CUWN)
b. Cisco Wireless LAN Fundamentals (CWLF)
c. Cisco Wireless LAN Advanced Topics (CWLAT)

CISCO UNIFIED WIRELESS NETWORKING (CUWN)

This course enables a network administrator to deploy a wireless LAN (WLAN) enterprise solution through the identification and successful implementation of site-appropriate hardware and software features in a Cisco Unified Wireless Network.

Prerequisites:

a. Cisco CCNA® or equivalent work experience- ICND1 and ICND2 or CCNABC
b. Familiarity with Windows and Windows networking
c. Prior attendanceof IUWNE recommended but not required

IMPLEMENTING CISCO UNIFIED WIRELESS MOBILITY SERVICES (IUWMS)

In the Implementing Cisco Unified Wireless Mobility Services (IUWMS) course, you'll learn to integrate mobility services into the network, tune and troubleshoot the wireless LAN (WLAN), and implement indoor enterprise mesh networks. Hand-on labs reinforce lecture material and ensure that you thoroughly understand how to implement mobility services in the wireless network.

The knowledge and skills that a learner must have before attending this course are as follows:

a. Wireless standards
b. Wireless regulator environment
c. Wireless certification organization
d. Basic computer literacy, including the use of general office software such as Microsoft Word and Microsoft Excel
e. Basic Windows navigation and keyboard literacy skills
f. Basic Internet usage skills
g. Basic e-mail usage skills

To gain the prerequisite skills and knowledge, Cisco strongly recommends the knowledge of the following courses:

a. Interconnecting Cisco Networking Devices Part 1 (ICND1)
b. Interconnecting Cisco Networking Devices Part2 (ICND2)
c. Implementing Cisco Unified Wireless Networking Essentials (IUWNE)

IMPLEMENTING ADVANCED CISCO UNIFIED WIRELESS SECURITY (IAUWS)

In this course designed to help you prepare for the professional-level CCNP Wireless certification, you will learn to secure wireless networks from security threats using appropriate security policies and best practices. The implementation of security standards and the configuration of security components are a major component of this course and the hands-on labs are incorporated to help underline the concepts, policies, and practices that are necessary for securing a wireless network.

Prerequisites:

a. CCNA in Wireless (ICND1 and IUWNE)

IMPLEMENTING CISCOWORK (CWLMS)

This course is designed to provide delegates with the knowledge required to manage their network using the CiscoWorks\Cisco Prime LAN Management Solution (LMS). The focus is on finding the correct tools within CiscoWorks to document the network inventory, manage device configurations, control software updates, monitor performance, troubleshoot faults, and simplify the deployment of new Cisco technologies.

Prerequisites:

a. Knowledge of basic Cisco IOS configuration, TCP/IP, routing and switching, Microsoft Windows, and Internet browser navigation. CCNA recommended (ICND1 and ICND2 or CCNABC)

IMPLEMENTING THE APPLICATION CONTROL ENGINE SERVICE MODULE (ACESM)
This is a instructor-led, lecture / lab course that teachers delegates how to design, deploy and optimize intelligent network services using the Cisco (ACE) Application Control Engine Module for the Catalyst 6500 Switch. All key features of the ACE 2.0 software, including resource virtualisation and management, server load balancing (Layer 2-4 and Layer 7), SSL termination and offload, and security features like application-layer inspection and fix-ups.
The knowledge and skills that a learner must have before attending this course are as follows:

a. TCP / IP protocol
b. HTTP and SSL protocols
c. N-tier application architecture
d. Server load-balancing

IMPLEMENTING THE CISCO APPLICATION CONTROL ENGINE APPLIANCE (ACEAP)
Implementing the Cisco ACE Appliance is a four-day, instructor-led, lecture and lab course. You will learn how to deploy and configure the Cisco Catalyst 4710 Application Control Engine (ACE) Appliance. This course covers all of the key features of the Cisco ACE appliance, including resource virtualization and management, server load balancing (Layer 2-4 and Layer 7), Secure Sockets Layer (SSL) termination and offload, and security features like application-layer inspection and fixups.
Prerequisites:

a. TCP/IP protocol
b. HTTP and SSL protocols
c. N-tier application architecture
d. Server load balancing

CISCO WIDE-AREA APPLICATION SERVICE (CWAAS)
This instructor led course is designed to teach delegates how to design and deploy a solution that improves application performance over the WAN whilst enabling infrastructure consolidation. Delegates will learn to fully appreciate the optimization and application acceleration features of Cisco WAAS enabling them to incorporate these capabilities into their design and integrate with this network.Troubleshooting has been incorporated both theoretically and through hands-on labs.
Prerequisites:

a. Fundamental knowledge of Microsoft Windows networking technologies
b. Fundamental knowledge of WAN optimization
c. Fundamental knowledge of VMware server virtualization technologies
d. CCNA is Recommended. ICND1 and ICND2 or CCNABC

IMPLEMENTING CISCO DATA CENTER UNIFIED FABRIC (DCUFI)
This five-day hands-on course is an enhanced version of Cisco's DCUFI, designed for systems and field engineers, consulting systems engineers, technical solutions architects, and Cisco integrators and partners who install and implement the Cisco Nexus 7000, 6000, and 5000 Switches, Cisco MDS, and the Cisco Nexus 2000 Fabric Extender. The course covers the key components and procedures needed to install, configure, manage, and troubleshoot the Cisco Nexus 7000 and 5000 Switches in the network and SAN environment.
Prerequisites

a. Good understanding of networking protocols - Recommended CCNA Certification.
b. Good understanding of the Fibre Channel protocol and the SAN environment - Recommended attendance of a Fibre Channel protocol class or equivalent experience.

c. Recommended attendance of the Implementing Cisco Storage Network Solutions (ICSNS) class or equivalent experience.

DATA CENTER UNIFIED FABRIC DESIGN (DCUFD)
This course isaimed at providing data center designers with the knowledge and skills needed to design scalable, reliable, and intelligent data center unified fabrics, and virtualization solutions based on the Cisco Fabric Extenders (FEXs), Fibre Channel over Ethernet (FCoE), Cisco FabricPath, and equipment and link virtualization technologies. The course describes the Cisco Data Center Unified Fabric solutions, and explains how to evaluate existing data center infrastructure, determine the requirements, and design the Cisco Data Center Unified Fabric solution based on Cisco products and technologies.
Prerequisites:

a. CCNA Data Center Certification (DCICN and DCICT)
b. Knowledge that is covered in the Cisco Nexus product family courses (DCUFI)
c. Knowledge that is covered in the Designing for Cisco Internetwork Solutions (DESGN) course
d. Knowledge that is covered in the Designing Cisco Storage Networking Solutions (DCSNS) course

CISCO DATA CENTER APPLICATION CENTRIC INFRASTRUCTURE (DCAC9K)
This course is a five-day training program designed for systems and field engineers who manage and implement the Cisco Nexus 9000 Switches in ACI mode. In this course, you will learn the key components and procedures that you need to know to configure and manage Cisco Nexus 9000 Switches in ACI mode, and how to connect the ACI Fabric to external networks and services.
If you're looking for in depth knowledge in 9K NXOS Mode, VXLAN, and Cisco's onePK - then we recommend that you take DCINX9K before taking this course.
Prerequisites:

a. Good understanding of the VMware environment
b. Good understanding of networking protocols (CCNA Certification or equivalent knowledge is recommended)

INTRODUCING CISCO DATA CENTER NETWORKING (DCICN)
In this course, you will be given the foundational knowledge and a broad overview of networking and the Cisco Nexus Operating System. This course provides skills that are needed to configure the Cisco Nexus Switches and verify their operation.
Prerequisites

a. There are no prerequisites for this course.

INTRODUCING CISCO DATA CENTER TECHNOLOGIES (DCICT)
In this course, you will be given the foundational knowledge and a broad overview of Cisco Data Center products and their operation. The course covers the architecture, components, connectivity, and features of a Cisco Data Center network. You will gain practical experience configuring the initial setup of Cisco Nexus 7009, Cisco Nexus 5548UP, Cisco Unified Computing System (UCS) 6120XP, and Cisco MDS 9124 Multilayer Fabric Switch. You will also learn to verify the proper operation of a variety of features such as Overlay Transport Virtualization (OTV), Cisco FabricPath, Port Channels, virtual Port Channels (vPCs), and Cisco Nexus 1000V Distributed Virtual Switch for VMware ESXi.
Prerequisites

a. DCICN - Introducing Cisco Data Centers Networking v1.0 or equivalent knowledge

DATA CENTER UNIFIED COMPUTING SYSTEM TROUBLESHOOTING (DCUCTS)
This is a 4-day hands-on course which focuses entirely on the knowledge and skills required to troubleshoot Level 2 UCS, N1k and C-series integration issues.
Prerequisites:

a. Prerequisites:
b. Internetworking fundamentals ICND1 and ICND2 recommended
c. Attendance of Data Center Unified Computing Implementation DCUCI required

CONFIGURING DATA CENTER UNIFIED COMPUTING (DCUCS)
The Configuring Data Center Unified Computing course is designed to familiarize data center engineers, architects and Cisco partners with the Cisco UCS B-series and C-series products. This course prepares individuals for implementing and maintaining Cisco UCS hardware with a strong emphasis on best practices. The Configuring Data Center Unified Computing course also addresses relevant additional features added by Version 2.1 Cisco UCS Software Release.
Prerequisites:

a. DCUCTS

TROUBLESHOOTING CISCO DATA CENTER UNIFIED COMPUTING (DCUCT)
In this course, you will gain the knowledge and hands-on experience to properly troubleshoot Cisco UCS B-Series and C-Series servers operating in standalone and integrated modes.
Through hands-on labs, you will learn the proper configuration procedures, and become familiar with common troubleshooting scenarios and recommended solutions.
Prerequisites

a. DCUCI - Implementing Cisco Data Center Unified Computing or equivalent knowledge
b. Familiarity with server virtualization (VMware vSphere and Microsoft Hyper-V)
c. Familiarity with administration of common operating systems (Linux and Windows)
d. DCUCI - Data Center Unified Computing Implementation v5.0

CONFIGURING CISCO NEXUS 7000 SWITCHES (DCNX7K)
The Configuring Cisco Nexus 7000 Switches (DCNX7K) course covers the key components and procedures that students need to know to configure, manage, and troubleshoot the Cisco Nexus 7000 switch platform.
The knowledge and skills that a learner must have before attending this course are as follows:

a. A solid understanding of data center networking as well as some light exposure to Storage Area Networks (SAN) is preferred

To gain the prerequisite skills and knowledge, Cisco strongly recommends the knowledge of the following courses:

a. Interconnecting Cisco Networking Devices Part 1 (ICND1)
b. Interconnecting Cisco Networking Devices Part2 (ICND2)
c. Implementing Cisco IP Routing (ROUTE)
d. Implementing Cisco IP Switched Networks (SWITCH)

CONFIGURING CISCO NEXUS 5000 SWITCHES (DCNX5K)
This course is specifically designed for engineers involved in the implementation, installation and maintenance of the Cisco Nexus 5000 Switch and Cisco Nexus 2000 Fabric Extender. The key components and procedures required to successfully install, configure, manage and troubleshoot the Cisco Nexus 5000 Series Switch and the Cisco Nexus 2000 Fabric Extenders in a LAN/SAN and unified fabric environment are covered in this course.
Attendees should meet the following prerequisites

a. Good understanding of networking protocols ICND1 and ICND2 or CCNABC recommended .
b. Good understanding of the Fibre Channel protocol and the SAN environment.DCMDS recommended.

CONFIGURING THE CISCO NEXUS 1000V(DCNX1K)
This course is designed for systems and field engineers who install and implement the Cisco Nexus 1000V Switch.The course covers the key components and procedures you need to know to install, configure, manage, and troubleshoot the Cisco Nexus 1000V Switch.
Prerequsities:

a. Good understanding of networking protocols. ICND1 and ICND2 or CCNABC Recommended
b. Good understanding of the VMware environment. VSICM recommended.
c. Data Center Unified Computing Design (DCUCD)

IMPLEMENTING CISCO DATA CENTER UNIFIED COMPUTING (DCUCI)
Data Center Unified Computing Implementation (DCUCI) is designed to serve the needs of engineers and technicians who implement Cisco Unified Computing System (UCS) B-Series Blade Servers and Cisco UCS C-Series Rack-Mount Servers.
The knowledge and skills that a learner must have before attending this course are as follows:

a. Server operating systems, hypervisor and virtualization familiarity

To gain the prerequisite skills and knowledge, Cisco strongly recommends knowledge of the following courses:

a. Implementing Cisco Storage Networking Solutions (ICSNS)
b. Implementing Cisco Data Center Unified Fabric (DCUFI)

DEPLOYING CISCO SERVICE PROVIDER ADVANCED NETWORK ROUTING (SPADVROUTE)
In this course, the students will focus on using Cisco routers that are typically found in the service provider network. they will cover various technologies that are used to offer different services to customers, and they will learn to configure, verify, and troubleshoot advanced Border Gateway Protocol (BGP) configuration, IP multicasting, and IPv6 transition mechanisms. Through hands-on labs, students will gain practical skills deploying Cisco IOS/IOS XE and Cisco IOS XR features to operate and support service provider network.
Prerequisites :

a. Basic computer literacy
b. Basic Microsoft Windows navigation skills
c. Basic Internet usage skills
d. Basic knowledge of networking concepts and Cisco IOS/IOS XE and Cisco IOS XR software configuration
e. Skills and knowledge that are equivalent to those gained in:
f. SPNGN1 - Building Cisco Service Provider Next-Generation Networks, Part 1
g. SPNGN2 - Building Cisco Service Provider Next-Generation Networks, Part 2
h. SPROUTE - Deploying Cisco Service Provider Network Routing

IMPLEMENTING CISCO SERVICE PROVIDER NEXT-GENERATION CORE NETWORK SERVICES (SPCORE)
In this course, the students will be introduced to the concepts of Multiprotocol Label Switching (MPLS) and its implementation. They will learn about the MPLS Traffic Engineering (MPLS TE) services built on the MPLS technology, and they will learn to use the principles of quality of service (QoS) and QoS with MPLS to implement advanced features and functions.

The students will focus on the technology issues of MPLS, the best practices for implementing QoS from the service provider perspective, and how to configure those features and functions in an existing routed environment. Through hands-on labs, the students will gain practical skills on deploying Cisco IOS/IOS XE and Cisco IOS XR features to operate and support service provider networks.
Prerequisites

a. Intermediate to advanced knowledge of Cisco IOS, IOS XE, and Cisco IOS XR software configuration
b. SPNGN1 - Building Cisco Service Provider Next-Generation Networks, Part 1
c. SPNGN2 - Building Cisco Service Provider Next-Generation Networks, Part 2
d. SPROUTE - Deploying Cisco Service Provider Network Routing
e. SPADVROUTE - Deploying Cisco Service Provider Advanced Network Routing v1.0

IMPLEMENTING CISCO SERVICE PROVIDER NEXT-GENERATION EDGE NETWORK SERVICES (SPEDGE)
In this course, the students will learn how to implement Virtual Private Networks (VPNs) within their networks and how to enable service provider point of presence (POP) to provide Layer 2 and Layer 3 VPNs. Through hands-on labs, they will gain practical skills on deploying Cisco IOS/IOS XE and Cisco IOS XR features to operate and support service provider network.
Prerequisites
Intermediate to advanced knowledge of Cisco IOS, IOS XE, and Cisco IOS XR software configuration

a. SPNGN1 - Building Cisco Service Provider Next-Generation Networks, Part 1
b. SPNGN2 - Building Cisco Service Provider Next-Generation Networks, Part 2
c. SPROUTE - Deploying Cisco Service Provider Network Routing
d. SPADVROUTE - Deploying Cisco Service Provider Advanced Network Routing v1.0
e. SPCORE - Implementing Cisco Service Provider Next-Generation Core Network Services v1.0

BUILDING CISCO SERVICE PROVIDER NEXT-GENERATION NETWORKS, PART 1 (SPNGN1)
In this course, network engineers and technicians will cover the fundamentals of networking as it relates to service providers (SPs). They will learn how networks and network components function, and will learn about major network components and the OSI reference model. If students are are interested in attaining a CCNA Service Provider certification, they should also complete SPNGN2.
Prerequisites

a. Familiarity with binary
b. Familiarity with IP subnetting
c. Basic knowledge of the OSI model
d. Basic idea of the operation of TCP/IP
e. Basic knowledge of Ethernet
f. Basic knowledge of WAN
g. Understanding Networking Fundamentals

BUILDING CISCO SERVICE PROVIDER NEXT-GENERATION NETWORKS, PART 2 (SPNGN2)
In this course, network engineers and technicians will gain the knowledge and skills necessary to implement and support a service provider network. You will focus on using Cisco switches and Cisco routers that are connected in LANs and WANs, and are typically found in the service provider network. You will learn to configure, verify, and troubleshoot the various Cisco networking devices. Through hands-on labs, you will gain practical skills on deploying Cisco IOS/IOS XE and Cisco IOS XR features to operate and support service provider network.

Prerequisites

a. Basic computer literacy
b. Basic Microsoft Windows navigation skills
c. Basic Internet usage skills
d. Basic knowledge of networking concepts
e. Basic knowledge of Cisco IOS/IOS XE and Cisco IOS XR software configuration
f. Skills and knowledge equivalent to Building Cisco Service Provider Next-Generation Networks, Part 1 (SPNGN1)
g. SPNGN1 - Building Cisco Service Provider Next-Generation Networks, Part 1

DEPLOYING CISCO SERVICE PROVIDER NETWORK ROUTING(SPROUTE)

In this course, network engineers will learn how to use advanced routing techniques to implement scalability for Cisco routers that are connected to LANs and WANs.

Prerequisites

a. Intermediate knowledge of Cisco IOS/IOS XE and Cisco IOS XR software configuration
b. Basic computer literacy
c. Basic Microsoft Windows navigation skills
d. Basic Internet skills
e. SPNGN1 - Building Cisco Service Provider Next-Generation Networks, Part 1
f. SPNGN2 - Building Cisco Service Provider Next-Generation Networks, Part 2

IMPLEMENTING CISCO VIDEO NETWORK DEVICES, PART 1 AND 2

In this course, the students will learn the best practices for videoconferencing and prepare for the CCNA Video credential.

The e-Learning portion of this course (VIVND1) provides with the necessary knowledge to describe characteristics of video solutions and assess requirements for a successful implementation of a video solution. The students will learn the characteristics of a video solution and how to evaluate the general requirements for video deployments, including coding options, media formats, protocols, network impact, high-level architectural components and their interactions, and requisites to the environment.

The classroom portion of this course (VIVND2) is designed to provide with the necessary knowledge and skills to implement various Cisco Video endpoints in converged Cisco video infrastructures. The students will learn Cisco business video solutions and how to implement and troubleshoot Cisco Unified Communication and Collaboration, TelePresence, and Digital Media Player in different Cisco business video solution architectures.

Prerequisites

a. Working knowledge of basic IP networking
b. ICND1 v2.0 - Interconnecting Cisco Networking Devices, Part 1
c. ICND2 v2.0 - Interconnecting Cisco Networking Devices, Part 2

IMPLEMENTING Cisco TelePresence Video Solutions, Part 1 (VTVS1)

This e-learning course provides field engineers with information regarding the features, functions, design, and planning for deployment of the Cisco TelePresence® Video Express Authorized Technology Provider (ATP) solution. This training focuses on solution features and benefits, and deployment planning, including design and support to prepare the learner for the TelePresence Video Field Engineer for Express Exam (500-007).

The course runs on PC or Mac computers and is supported with the following browsers: Safari (v5.x), Chrome (v21.x), or Firefox (v16.x and above) with Flash (v9.x and above). The training will not work with other browsers, including Internet Explorer.

MANAGING Unified Access Networks with Cisco Prime Infrastructure (WMUAPI)
In this course, you will learn about configuration design and deployment, as well as network management and monitoring using real-world scenarios supported by practical laboratory exercises. This course provides hands-on labs that cover controller firmware release 7.6 MR1 as well as Cisco Prime Infrastructure software release 2.1. The course has a network management perspective and addresses the common tasks and goals as required by personnel working within an enterprise. The lab work in this course will reinforce the instructor led material on configuration and the use Cisco Prime Infrastructure.
Prerequisites

a. Experience in wired and wireless network management
b. Familiarity with wired and wireless network management terminology
c. Completed the Introducing Prime Infrastructure v2.0 E-Learning course

DEPLOYING Cisco Basic Wireless LANs (WDBWL)
This course provides you with the skills and resources required to successfully plan, install, configure, troubleshoot, monitor, and maintain basic Cisco Wireless LAN solutions in a customer-enterprise environment. You will learn about pre-deployment planning considerations, configuration of autonomous, unified, and FlexConnect architectures, configuration of all base features, including wireless security, the administration of the WLAN network, and maintenance and troubleshooting wireless network issues. The course is written at software code level 7.5. Please be advised that this course does not go into the Cisco Prime Infrastructure (PI). The PI is covered completely in the follow up course Managing Cisco Wireless LANs (WMNGI).
With this course, you will also be given access to an e-Learning product called Defining Cisco Wireless LAN Essentials, which lays the groundwork for learning about Cisco wireless LANs. It briefly reviews base networking concepts and then explains wireless terms, concepts, deployment architectures, portfolio components, key features, and other considerations unique to wireless networks. It is useful for anyone new to Cisco wireless LAN technology.
This course is also offered in combination with WDAWL - Deploying Advanced Cisco Wireless LANs v1.1 as a five-day course about Cisco Wireless LANs called CWL - Deploying Cisco Basic and Advanced Wireless LANs v1.1.
Prerequisites

a. There are no prerequisites for this course.

DEPLOYING ADVANCED CISCO WIRELESS LANS (WDAWL)
This course builds upon the basic deployments course by presenting you with more challenging real-world deployments such as client mobility between subnets, high-client density deployments, and mesh-network deployments. This course allows the instructor and students to share experiences, pitfalls, and best practices around challenging deployment scenarios. The course is written at software code level 7.5. Please be advised that this course does not go into the Cisco Prime Infrastructure (PI). The PI is covered completely in the follow up course, WMNGI - Managing Cisco Wireless LANs v1.2.
This course is also offered in combination with WDBWL - Deploying Cisco Basic Wireless LANs v1.1 as a five-day course about Cisco Wireless LANs called CWL - Deploying Cisco Basic and Advanced Wireless LANs v1.1.
Prerequisites

a. WDBWL - Deploying Cisco Basic Wireless LANs v1.1

MANAGING CISCO WIRELESS LANS (WMNGI)

This course instructs you on how to use the Cisco Unified Wireless Network (CUWN) management products and applications to configure, administer, manage, troubleshoot, and optimize the network. This course provides hands-on labs that cover controller firmware release 7.5 MR1 as well as Cisco Prime Infrastructure software release 1.4. All labs are accessed remotely using real Cisco gear.
The class begins with a high-level overview of the Cisco Prime Infrastructure (PI) product line, including product functions, components, capabilities, and features. You will learn where to locate installation procedures for both the access point (AP) and their associated Wireless LAN Controllers (WLCs) and properly install the PI hardware appropriate to site and use requirements. You will look at ways to administer CUWN, 802.11 security policies, and QoS appropriately to protect and optimize performance on the wireless network. You will configure and implement key PI security features to mitigate WLAN security threats. You will conclude training by learning how to utilize recommended troubleshooting methodology and the various tools available to gather and assess system data to isolate equipment failures and security threats.
For the classroom ILT version of this course, laptops are provided to participate in the hands-on labs. If you desire to use your own laptop, please bring a laptop computer with an Ethernet port as well as an internal wireless NIC, 802.11a/b/g/n. The laptop's operating systems must be Windows XP (SP3). If your operating system is Windows Vista or Windows 7, include a Terminal Emulator such as HyperTerminal. In addition, if your laptop does not contain Terminal Emulation, you will need administrator rights to the laptop to install software.
Prerequisites

a. WDBWL - Deploying Cisco Basic Wireless LANs v1.1

IMPLEMENTING CISCO IOS NETWORK SECURITY (IINS)
In this course, you will learn about the design, implementation, and monitoring of a comprehensive security policy, using Cisco IOS security features and technologies as examples. You will also learn about security controls of Cisco IOS devices as well as a functional introduction to the Cisco ASA adaptive security appliance. Using instructor-led discussion, lecture, and hands-on lab exercises, this course allows you to perform basic tasks to secure a small branch office network using Cisco IOS security features, which are available through web-based GUIs (Cisco Configuration Professional) and the CLI on Cisco routers, switches, and Cisco ASA appliances.
Prerequisites

a. Working knowledge of the Windows operating system
b. ICND1 v2.0 - Interconnecting Cisco Networking Devices, Part 1

IMPLEMENTING CISCO DATA CENTER UNIFIED FABRIC (DCUFI)
In this course, you will learn about the key components and procedures needed to install, configure, and manage the Cisco Nexus 7000, 5000, and 2000 Series switches and MDS Series switches in the network and SAN environment.
Our enhanced Cisco labs include extra exploration, configuration, and troubleshooting with a focus on NX-OS-specific features. Labs for this course are based on:
Nexus 7000 NX-OS version 6.1(2)
Nexus 5000 NX-OS version 5.2(1)
Data Center Network Manager version 6.1(2)
Prerequisites

a. CCNA Data Center certification is recommended
b. Understanding of and experience with the Fibre Channel protocol and the SAN environment

TROUBLESHOOTING CISCO DATA CENTER UNIFIED FABRIC V5.0 (DCUFT)

In this course, you will cover the key components and procedures needed to troubleshoot and resolve common issues with the Cisco Nexus 7000, 5000, MDS Switches, and the Nexus 2000 Fabric Extenders in the network and SAN environment.

Prerequisites

a. CCNA or CCNP certification
b. Experience with Fibre Channel Protocol
c. DCUFI - Implementing Cisco Data Center Unified Fabric
d. DCMDS v2.0 - Configuring Cisco MDS 9000 Series Switches
e. Attendance of Nexus 7000, 5000, and MDS courses
f. DCNX5K - Implementing the Cisco Nexus 5000 and 2000 v2.0
g. DCNX7K - Configuring Cisco Nexus 7000 Switches v2.0
h. DCUFI - Implementing Cisco Data Center Unified Fabric v5.0
i. DCMDS - Configuring Cisco MDS 9000 Series Switches v2.0
j. DCNX5K - Implementing the Cisco Nexus 5000 and 2000 v2.0

CONFIGURING CISCO MDS 9000 SERIES SWITCHES (DCMDS)

In this course, you will learn how to install, configure, and manage the Cisco MDS 9000 Series switch platform in a scalable, highly available environment.

You will learn about the features on each of the MDS 9000 Series product family of switches including the 9100, 9200, 9500, and 9700 models and the Fibre Channel, Fibre Channel over Ethernet (FCoE), and service modules supported. You will learn about SAN configuration for features such as interface configuration, Cisco N-Port Virtualizer (NPV), N-Port ID Virtualization (NPIV), virtual SAN (VSAN) and domain setup, SAN zoning, and SAN extension using FCIP and Inter-VSAN Routing (IVR). Topics introduced also include centralized SAN services using the Cisco MDS 9222i Multiservice Modular Switch and Cisco MDS 9250i Multiservice Fabric Switch for Cisco I/O Acceleration (IOA) and Cisco Data Mobility Manager (DMM), management security and role-based access control (RBAC) topics.

Prerequisites

a. Basic understanding of data storage hardware components and protocols, including SCSI and Fibre Channel
b. Basic understanding of network protocols, including Ethernet and IP
c. Cisco CCNA is recommended
d. CCNAX v2.0 - CCNA Routing and Switching Boot Camp

IMPLEMENTING Cisco Data Center Application Services (DCASI)

DCASI is a 5-day, instructor-led, lecture / lab course that teaches you how to design, deploy, and optimize intelligent network services using the Cisco Application Control Engine (ACE) Appliance, Service Module v2.0 and GSS. This course covers all of the key features of the ACE 2.0 software, including resource virtualization and management, server load balancing (Layer 2-4 and Layer 7), SSL termination and offload, and security features like application-layer inspection and fixups.

Prerequisites

a. TCP / IP protocol
b. HTTP and SSL protocols
c. N-tier application architecture
d. Server load-balancing

IMPLEMENTING IPV6 SOLUTIONS FOR SERVICE PROVIDERS (IPV6SPSE)
This exclusive course covers the range of Cisco Products and solutions pertinent to IPv6 in a Service Provider environment, including carrier grade NAT, global routing protocols (in particular, MPBGP) and the Nexus and CSR products. As this course is intended for SEs at Cisco Channel Partners and network engineers and architects at Service Providers, the focus is on designing and implementing the solutions, rather than administering and troubleshooting. While this course covers the fundamental issues, theories and skills relevant to IPv6 in general, it pays particular attention to the problem sets among service providers, and applies proven Cisco solutions to migrate networks from IPv4 to IPv6.
Prerequisites

a. CCNA or equivalent in experience. Students need a firm grasp of IPv4 routing, switching and related concepts.

CISCO DATA CENTER UNIFIED COMPUTING DESIGN (DCUCD)
This course enables engineers to choose and design scalable, reliable, and intelligent data center unified computing and virtualization solutions, based on the Cisco Unified Computing System (UCS) product portfolio as a centerpiece, integrated with contemporary virtualization solutions (for example, VMware vSphere, VMware View, Microsoft Hyper-V, Citrix XenServer, Citrix XenDesktop, Red Hat Kernel-Based Virtual Machine [KVM], and so on), operating systems (for example, Microsoft Windows and Linux), and applications (database, collaboration, and so on). The course describes the data center unified computing and virtualization solutions based on the Cisco data center unified computing product portfolio, explains how to evaluate existing data center computing solutions and determine the requirements, and design Cisco data center unified computing solutions.
Prerequisites:

a. CCNA Data Center certification (DCICN and DCICT)
b. Knowledge that is covered in the Cisco Nexus product family courses (DCUFI)
c. Knowledge that is covered in the Designing Cisco Data Center Unified Fabric (DCUFD) course
d. Knowledge that is covered in the Cisco MDS product family courses (ICSNS)
e. Knowledge of server and desktop virtualization (for example, VMware vSphere, Microsoft Hyper-V, VMware View, Citrix XenDesktop, and so on)
f. Operating system administration familiarity (for example, Linux and Windows)

DESIGNING CISCO NETWORK SERVICE ARCHITECTURES (ARCH)
This course is designed to enable students to perform the conceptual, intermediate, and detailed design of a network infrastructure that supports desired networks solutions over intelligent network services, to achieve effective performance, scalability, and availability. ARCH enables learners applying solid Cisco network solution models and recommended design practices to provide viable, stable enterprise internetworking solutions. The course presents concepts and examples necessary to design converged enterprise networks. Advanced network infrastructure technologies, such as Virtual Private Networks (VPNs) and wireless communications are also covered.
Prerequisites:

a. Before attending this course delegates must hold a valid CCNA and have taken and passed the DESGN course, attaining the CCDA.