2008 Course Catalog

Authorized NetApp

Authorized Cisco

Authorized Cisco Advanced Services

Authorized IronPort

Microsoft

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CISCO PARTNER
Learning Solutions

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IRONPORT

About Fast Lane

Experience

Fast Lane, with offices in more than 16 countries, has been providing advanced technology training and consulting since 1996. We offer multiple solutions to our customers and partners in the areas of Training Delivery, Education Services and Consulting. Our instructors, located around the globe, are real world practitioners of advanced technologies and not only teach in the classroom but also regularly provide advanced technology consulting services.

Fast Lane partners with important technology vendors to ensure you have access to the most comprehensive and effective training programs available today. Plus, we supplement vendor-authorized training with Fast Lane-developed advanced technology courses.

Authorized Training

Fast Lane, with the Americas division headquartered in Cary, NC is NetApp's only World Wide Authorized Learning Partner and the only Cisco Learning Solutions Partner (CLSP) in all eight of Cisco's regions. We are also pleased to announce our recent partnership with IronPort.

Private Courses

Fast Lane can deliver the enclosed courses as private on-site programs for your company. Contact us to discuss your specific training needs and we can customize the right program for you.

Registration

To register for any course offered by Fast Lane, visit www.flane.us and follow prompts to enroll. We accept multiple forms of payment including credit cards (Visa, MC and Amex), purchase orders, corporate checks, Cisco Learning Credits (CLC's), and NetApp Training Units (TU's). Please visit our website for complete terms and conditions.

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CISCO PARTNER
Learning Solutions

NetApp® Authorized Learning Partner

IRONPORT®

2008 Course Catalog

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NetApp Certifications

NetApp's comprehensive certifications give you the opportunity to validate your skills and knowledge as a trained NetApp technical professional. NetApp Partners required to maintain certified personnel on staff to keep their status with NetApp as well as individuals that want to differentiate themselves will be interested in pursuing NetApp Certifications.
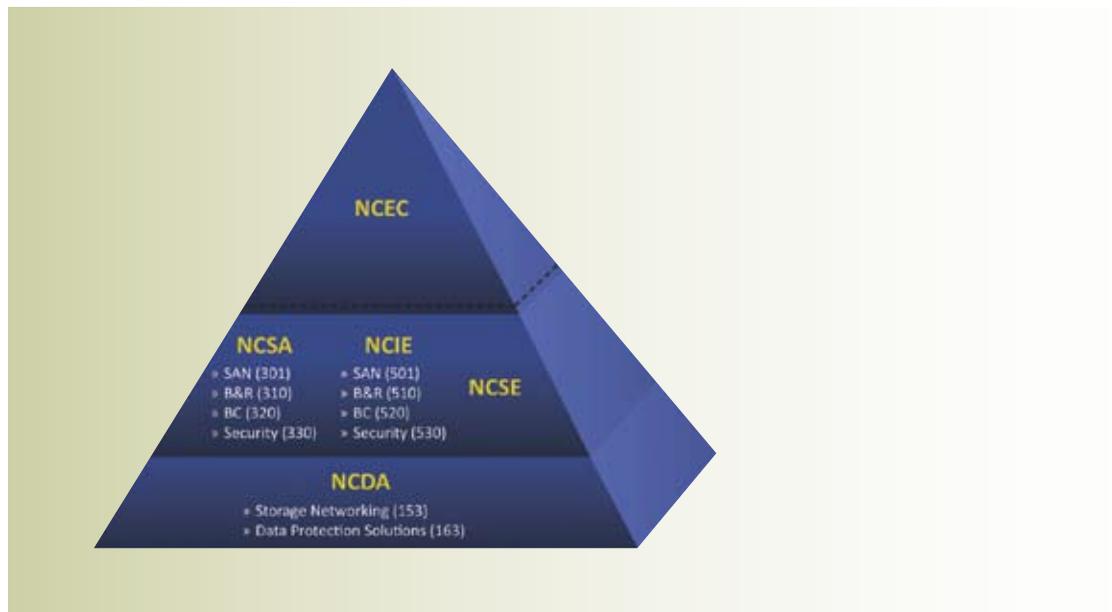
Fast Lane Can Help

Fast Lane delivers the courses you need to help you prepare for the NetApp Certification you desire. Review the certification pyramid above and contact us to help you determine the right certification for you.

Certification Benefits for Individuals

Technical Professionals will be recognized for receiving NetApp Certifications and the prestige they bring. NetApp Certification benefits for an individual include:

- Industry/Peer Recognition
- Career Advancement Recognition
- Marketable Credentials

Certification Benefits for Companies

NetApp Partners and End-user customers benefit from having NetApp Certified Technical Professionals. Having your staff certified on NetApp solutions ensures you are getting the optimum performance from your NetApp products and technologies. Other benefits include:

- A better return on your human resources and IT Infrastructure investments
- Reduced Operating Costs
- Reduced Support Costs
- Superior Internal Support

This 5-day instructor-led course introduces basic support and administrative functions of the Data ONTAP operating system. The course emphasizes core facts and concepts of a NetApp Storage System. The elements of the Data ONTAP operating system covered in this course are Write Anywhere File Layout (WAFL) file system, volumes, aggregates, qtress, and quotas. Hands-on labs for the course focus on the basic administrative use of Data ONTAP in NAS and IP-SAN environments.

Prerequisites

Basic knowledge of client/server and networking terminology and management including TCP/IP, and a background in UNIX, Windows, or SAN system administration is required before taking DOTF.

Certification

Data ONTAP Fundamentals is part of the recommended training for the NetApp Certified Data Management Administrator (NCDA) certification, the NetApp Certified Solution Architect (NCSA) certification, and the NetApp Certified Implementation Engineer (NCIE) certification.

Who Should Attend

Network Professionals who perform basic support and administrative functions on a NetApp storage appliance running the Data ONTAP operating system.

Course Objectives

- Identify NetApp product platforms (FAS, NearStore FAS, NearStore VTL and V-Series and summarize the key features and functionality

- Identify the components that comprise a NetApp environment

- Recognize the value of accessing the NOW Knowledgebase

- List the functions of the Data ONTAP operating system

- Identify the characteristics of a client-server network and the different storage tier types in a multiple-server network

- Manage and configure system interfaces

- Explain how to use naming services (NIS and DNS)

- Explain the main features and uses of naming services

- Explain the use of the nsswitch.conf and the /etc/ host file

- Configure and manage CIFS shares

- Recognize the purpose of shared folders and identify the different sharing options in Windows

- Identify the available shared folder permissions and set up a shared folder with different permissions for different groups

- Configure and manage NFS shares

- Define and configure volumes and aggregates

- Configure RAID groups in Data ONTAP

- Identify the benefits of SnapShot technology

- Describe Disk Management; how a FAS storage system uses disks, how disks are dually connected to a storage system for redundancy, and how to add disks to the storage system so that Data ONTAP can use them

- Explain how Data ONTAP uses raw disk space

- Explain how to calculate the raw capacity for FC and SATA disk

- State the purpose of Netbooting a NetApp storage system

- Complete software downloads and upgrades via the NOW website for the Data ONTAP operating system

- Recognize performance affecting resources such as memory and I/O (network and disk) utilization

Schedule

6/2/2008	Charlotte, NC	7/21/2008	Seattle, WA	9/15/2008	St. Louis, MO	11/10/2008	New York City, NY
6/2/2008	Minneapolis, MN	7/28/2008	Chicago, IL	9/15/2008	Columbia, MD	11/17/2008	Chicago, IL
6/9/2008	Reston, VA	7/28/2008	New York City, NY	9/22/2008	Austin, TX	12/1/2008	Seattle, WA
6/9/2008	Tampa, FL	8/4/2008	Detroit, MI	9/29/2008	Minneapolis, MN	12/1/2008	Columbia, MD
6/9/2008	Edison, NJ	8/11/2008	Los Angeles, CA	9/29/2008	Ft. Lauderdale, FL	12/1/2008	Dallas, TX
6/16/2008	Raleigh-Durham, NC	8/18/2008	Reston, VA	10/6/2008	Atlanta, GA	12/8/2008	Houston, TX
6/16/2008	Las Vegas, NV	8/18/2008	Philadelphia, PA	10/13/2008	Tampa, FL	12/8/2008	Philadelphia, PA
6/23/2008	Houston, TX	8/18/2008	Dallas, TX	10/13/2008	Reston, VA	12/8/2008	Boston, MA
7/7/2008	Atlanta, GA	8/25/2008	Denver, CO	10/20/2008	Charlotte, NC	12/15/2008	Ft. Lauderdale, FL
7/14/2008	Ft. Lauderdale, FL	8/25/2008	Boston, MA	10/27/2008	Los Angeles, CA	12/15/2008	Reston, VA
7/14/2008	Phoenix, AZ	9/8/2008	Raleigh-Durham, NC	11/3/2008	Denver, CO	12/15/2008	Atlanta, GA
7/14/2008	Columbia, MD	9/8/2008	Houston, TX	11/10/2008	Raleigh-Durham, NC		

Data ONTAP CIFS Administration (CIFS)

Price: $1500 USD or 20 TUs   **Duration:** 2 Days

Data ONTAP CIFS Administration covers the different server environments where a storage system can support Windows client users, the licensing and setting up of CIFS on the storage system, configuring files and options, administering a storage system including creating and managing shares, users, and groups, and troubleshooting CIFS problems.

Prerequisites

The Data ONTAP Fundamentals or equivalent knowledge is required before taking CIFS.

Certification

CIFS is recommended training for the NetApp Certified Data Management Administrator (NCDA) certification.

Course Objectives

- Describe the different server environments
- Identify the appropriate server environment for your storage system to support Windows client users
- Configure the CIFS environment on a storage system by licensing CIFS, setting up CIFS, and configuring files and options
- Administer a storage system in a CIFS environment including creating and managing shares, users, groups, and sessions
- Explain how to troubleshoot basic CIFS problems

Who Should Attend

Network professionals who provide support and administration for a CIFS environment on NetApp Storage Systems running the Data ONTAP operating system.

Schedule

6/23/2008	Columbia, MD	10/13/2008	Dallas, TX
7/7/2008	Reston, VA	10/20/2008	Raleigh-Durham, NC
7/14/2008	Dallas, TX	10/27/2008	Reston, VA
7/21/2008	Ft. Lauderdale, FL	11/3/2008	New York City, NY
7/28/2008	Raleigh-Durham, NC	11/10/2008	Chicago, IL
8/11/2008	Tampa, FL	11/17/2008	Los Angeles, CA
8/11/2008	New York City, NY	12/1/2008	Atlanta, GA
9/08/2008	Atlanta, GA	12/8/2008	Ft. Lauderdale, FL
9/22/2008	Denver, CO	12/8/2008	Columbia, MD
9/29/2008	Boston, MA	12/15/2008	Houston, TX
9/29/2008	Las Vegas, NV	12/15/2008	Tampa, FL

Data ONTAP NFS Administration (NFS)

Price: $750 USD or 10 TUs   **Duration:** 1 Day

This 1-day course builds from the Fundamentals class to give you a complete overview and working knowledge of using the Network File System (NFS) on Unix. Multiple hands-on Labs ensure you are prepared to deploy a NFS-based NetApp system.

Prerequisites

Data ONTAP Fundamentals or equivalent knowledge, working knowledge of UNIX, and familiarity with networking concepts are required before taking NFS.

Certification

NFS is recommended training for the NetApp Certified Data Management Administration (NCDA) certification.

Course Objectives

- Explain NFS protocol overview, NFS versions, and NFS implementation criteria
- Configure and administer client and server in a NFS environment
- State the rules for exporting resources to hosts, subnets, and netgroups
- Explain the /etc/ exports access options and how they relate to mount permissions
- Analyze NFS performance using sysstat, nfsstat, and other commands
- Collect and analyze data to assist with troubleshooting storage system hardware, operating system, network connections, NFS configuration files and options

Who Should Attend

Network Professionals who need to perform in-depth support, administrative functions, and performance management for the NFS protocol on a NetApp storage system running the Data ONTAP operating system.

Schedule

6/25/2008	Columbia, MD	10/22/2008	Raleigh-Durham, NC
7/9/2008	Reston, VA	10/29/2008	Reston, VA
7/16/2008	Dallas, TX	11/12/2008	Chicago, IL
8/13/2008	New York City, NY	11/19/2008	Los Angeles, CA
8/13/2008	Tampa, FL	12/10/2008	Columbia, MD
9/10/2008	Atlanta, GA	12/10/2008	Ft. Lauderdale, FL
10/1/2008	Las Vegas, NV	12/17/2008	Houston, TX

Data ONTAP SAN Administration (SAN)

Price: $2250 USD or 30 TUs   **Duration:** 3 Days

Students will cover the SAN infrastructure preparation, storage provisioning options, creation and management of LUNs and volumes, multipathing and high availability, Fibre Channel modes, and troubleshooting techniques. Multiple hands-on Labs focused on deploying a SAN reinforce the topics taught in class with real-world practice.

Prerequisites

The Data ONTAP Fundamentals or equivalent knowledge is required before taking SAN.

Certification

SAN is recommended for the NetApp Certified Solution Architect (NCSA) and NetApp Certified Implementation Engineer (NCIE) certification.

Course Objectives

- Define the characteristics of a SAN environment and how LUNs relate to the storage system
- Describe the components of FC and IP SANs
- Describe size planning requirements for LUNs
- Create and manage LUNs on a storage controller for both Windows and UNIX hosts
- Explain FC and IP SAN multipathing options for Windows and UNIX operating systems
- Explain how to troubleshoot common SAN issues

Who Should Attend

Network Professionals who perform in-depth support, administrative functions, and performance management for FC and IP SAN environments running the Data ONTAP operating system.

Schedule

Date	Location	Date	Location
6/11/2008	Atlanta, GA	9/24/2008	Columbia, MD
7/9/2008	Los Angeles, CA	9/24/2008	Denver, CO
7/23/2008	Ft. Lauderdale, FL	10/1/2008	Boston, MA
7/30/2008	Raleigh-Durham, NC	10/15/2008	Dallas, TX
8/6/2008	Chicago, IL	11/5/2008	New York City, NY
8/27/2008	Reston, VA	12/3/2008	Atlanta, GA
9/17/2008	Houston, TX	12/17/2008	Tampa, FL

Data Protection and Retention (DPR)

Price: $1500 USD or 20 TUs   **Duration:** 2 Days

The Data Protection and Retention course will present basic NDMP skills for data archiving to the students. The mixture of instructor-led lecture and hands-on lab time will teach concepts and techniques that are needed to effectively use and implement effective solutions.

Prerequisites

The Data ONTAP Fundamentals course or equivalent knowledge is required before taking DPR.

Course Objectives

- Explain the concept of Information Lifecycle Management (ILM)
- Set up and maintain snapshots
- Plan and perform data recovery using SnapRestore
- Configure and administer Asynchronous and Synchronous SnapMirror
- Configure and administer SnapVault
- Configure and administer OSSV
- List best practices and perform troubleshooting of SnapMirror, SnapVault, and OSSV
- Use NDMP to archive data
- Configure and administer SnapLock and LockVault

Certification

DPR is recommended training for the NetApp Certified Solution Architect (NCSA), NetApp Certified Data Management Administrator (NCDA) and for the NetApp Certified Implementation Engineer (NCIE) certifications.

Who Should Attend

Administrators and support personnel who will use SnapMirror, SnapRestore, SnapVault, OSSV, SnapLock, and LockVault to manage mission critical data.

Schedule

Date	Location	Date	Location
6/9/2008	Atlanta, GA	9/15/2008	Houston, TX
6/26/2008	Columbia, MD	9/22/2008	Columbia, MD
7/7/2008	Los Angeles, CA	10/2/2008	Las Vegas, NV
7/10/2008	Reston, VA	10/23/2008	Raleigh-Durham, NC
7/17/2008	Dallas, TX	10/30/2008	Reston, VA
8/4/2008	Chicago, IL	11/13/2008	Chicago, IL
8/14/2008	Tampa, FL	11/20/2008	Los Angeles, CA
8/14/2008	New York City, NY	12/11/2008	Ft. Lauderdale, FL
8/25/2008	Reston, VA	12/11/2008	Columbia, MD
9/11/2008	Atlanta, GA	12/18/2008	Houston, TX

NCDA Boot Camp (NCDA BC)

Price: $9975 USD or 133 TUs   **Duration:** 10 Days

This hands-on boot camp will prepare you for all required NetApp exams to achieve the NCDA certification and is valuable for those who need to perform in-depth support, administrative functions, and performance management for CIFS protocol, FCP for SCSI or iSCSI for TCP/IP protocol, NFS, or DPR protocol on a NetApp storage appliance running the Data ONTAP operating system.

Prerequisites

Basic knowledge of client/server and networking terminology and management including TCP/IP, and a background in UNIX, Windows, or SAN system administration is required before taking the NCDA Boot Camp.

Certification

The NCDA Boot Camp will prepare you to achieve your NCDA certification.

Who Should Attend

Network Professionals seeking the NCDA certification. This course is also valuable for those who need to perform in-depth support, administrative functions, and performance management for environments using any of the following enterprise storage solutions: CIFS, NFS, FCP, iSCSI protocols on a NetApp storage appliance running the Data ONTAP operating system.

Course Objectives

- State the advantages, features, and functions of a storage system
- Identify the key features of NetApp product platforms and disk shelves
- Distinguish between SAN and NAS topologies
- Describe the basic functions of the Data ONTAP operating system
- Access the NOW (NetApp on the Web) Knowledgebase to obtain software and hardware documentation
- Implement NA HA solutions using Clustered Failover, SyncMirror, and MetroCluster to ensure continuous data availability in the enterprise and rapid recovery of data in the event of a disaster
- Learn to license, cable, configure, and test Clustered Failover, SyncMirror, and MetroCluster
- Learn to administer clusters and perform appropriate "takeover" and "giveback" commands
- Use "vol" commands to create a SyncMirrored volume, split the volume, and join the volume
- Identify the appropriate CIFS server environment for your storage system to support Windows client users

- Configure the CIFS environment on a storage system by licensing CIFS, setting up CIFS, and configuring files and options
- Administer a storage system in a CIFS environment including creating and managing shares, users, groups, and sessions
- Explain how to troubleshoot basic CIFS problems
- Define the characteristics of a SAN environment and how LUNs relate to the storage system
- Describe the components of FC and IP SANs
- Describe size planning requirements for LUNs
- Create and manage LUNs on a storage controller for both Windows and UNIX hosts
- Explain FC and IP SAN multi-pathing options for Windows and UNIX operating systems
- Explain how to troubleshoot common SAN issues
- State the rules for exporting resources to hosts, subnets, and netgroups
- Explain the /etc/ exports access options and how they relate to mount permissions
- Analyze NFS performance using sysstat and nfsstat commands
- Explain NFS protocol overview, NFS versions, and NFS implementation criteria
- Configure and administer client and server in a NFS environment
- Collect and analyze data to assist with troubleshooting storage system hardware, operating system, network connections, NFS configuration files and options
- Explain the concept of Information Lifecycle Management (ILM)
- Set up and maintain snapshots
- Plan and perform data recovery using SnapRestore
- Configure and administer Asynchronous and Synchronous SnapMirror
- Configure and administer SnapVault
- Configure and administer OSSV
- List best practices and perform troubleshooting of SnapMirror, SnapVault, and OSSV
- Use NDMP to archive data
- Configure and administer SnapLock and LockVault

This Boot Camp includes all required test vouchers needed to achieve the NCDA certification.

Schedule

Date	Location
6/16/2008	Sunnyvale, CA
8/4/2008	Reston, VA
9/8/2008	New York City, NY
9/22/2008	Dallas, TX
10/6/2008	Columbia, MD
10/272008	Raleigh-Durham, NC
11/10/2008	Sunnyvale, CA

Advanced NCDA Boot Camp (ANCDA BC)

Price: $5250 USD or 70 TUs   **Duration:** 5 Days

Storage professionals who are seeking to achieve the NCDA certification will benefit from this condensed 5-day boot camp. This course covers selective topics from the following Authorized NetApp courses: CIFS, NFS, SAN, DPR, and High Availability. Given the amount of content and labs covered students should expect intense 10-hour days. To help with exam preparation complete courseware will be provided for post-course review.

Prerequisites

The Data ONTAP Fundamentals course or equivalent knowledge is required before taking the Advanced NCDA Boot Camp. It is also suggested that students have 18 months of experience with storage networking.

Certification

The Advanced NCDA Boot Camp will prepare you to achieve your NCDA certification.

Who Should Attend

Network Professionals seeking the NCDA certification. This course is also valuable for those who need to perform in-depth support, administrative functions, and performance management for environments using any of the following enterprise storage solutions: CIFS, NFS, FCP, iSCSI protocols on a NetApp storage appliance running the Data ONTAP operating system.

Course Objectives

- Describe the different server environments
- Identify the appropriate server environment for your storage system to support Windows client users
- Configure the CIFS environment on a storage system by licensing CIFS, setting up CIFS, and configuring files and options
- Administer a storage system in a CIFS environment including creating and managing shares, users, groups and sessions
- Explain how to troubleshoot basic CIFS problems
- Explain NFS protocol overview, NFS versions, and NFS implementation criteria
- Configure and administer client and server in a NFS environment
- State the rules for exporting resources to hosts, subnets, and netgroups
- Explain the /etc/ exports access options and how they relate to mount permissions
- Analyze NFS performance using sysstat, nfsstat, and other commands
- Collect and analyze data to assist with troubleshooting storage system hardware, operating systems, network connections, NFS configuration files and options
- Describe the components of FC and IP SANs
- Describe size planning requirements for LUNs
- Create and manage LUNs on a storage controller for both Windows and UNIX hosts
- Explain FC and IP SAN multipathing options for Windows and UNIX operating systems
- Explain how to troubleshoot common SAN issues
- Explain the concept of Information Lifecycle Management (ILM)
- Set up and maintain Snapshots
- Plan and perform data recovery using SnapRestore
- Configure and administer Asynchronous and Synchronous SnapMirror
- Configure and administer SnapVault
- Configure and administer OSSV
- List best practices and perform troubleshooting of SnapMirror, SnapVault and OSSV
- Use NDMP to archive data
- Configure and administer SnapLock and LockVault
- Create a SyncMirror aggregate
- Articulate best practices when deploying active-active configurations
- Configure MetroCluster
- Configure SyncMirror

This Boot Camp includes all required test vouchers needed to achieve the NCDA certification.

Schedule

6/9/2008	Los Angeles, CA	7/14/2008	Atlanta, GA	9/8/2008	Chicago, IL	11/17/2008	Reston, VA
6/16/2008	Reston, VA	7/28/2008	Columbia, MD	10/6/2008	New York City, NY	12/15/2008	Raleigh-Durham, NC
7/7/2008	Dallas, TX	8/4/2008	Raleigh-Durham, NC	10/27/2008	Los Angeles, CA		

Oracle on NetApp Storage Systems (ORACLE)

Price: $3750 USD or 50 TUs   **Duration:** 5 Days

Students will learn how to install, configure, and support Oracle using NetApp Storage Systems with SnapManager v2.1 for Oracle and additional components in an enterprise environment. SnapManager for Oracle v2.1 paves the way for database and storage administrators to simplify data management utilizing the powerful capabilities of NetApp storage systems. This course will also integrate the native Oracle technology (such as RAC, RMAN, and ASM) across iSCSI/FCP and NFS protocols to allow IT organizations to scale their storage infrastructure, meet increasingly stringent SLA commitments, and improve productivity across the enterprise.

Prerequisites

The Data ONTAP Fundamentals (DOTF) course and basic knowledge about transactional application concepts, particularly Oracle are required before attending the ORACLE course.

Who Should Attend

Oracle DBAs and support personnel who are responsible for using NetApp hardware with Oracle software in a SAN and NFS environment.

Course Objectives

- Describe the Oracle on NetApp course, the NetApp Oracle relationship, and where to find resources for information on implementing Oracle on NetApp Storage Systems
- Understand and articulate the different components that make up NetApp Systems, scalability of NetApp Storage Systems, and multipathing and cluster configurations

- Understand the protocols used for providing and managing storage with Data ONTAP and how WAFL, NVRAM, and Snapshots protect data
- Understand the management functionality that is provided by Data ONTAP in an Oracle environment
- Understand the relationship between RAID groups and types, aggregates, flexible volumes, qtrees, and LUNs, as well as review the commands to manage these objects
- Understand the installation of Oracle databases on NFS and SAN protocols, the use of SnapManager for Oracle, SnapDrive for UNIX, and Oracle ASM
- Understand how SnapMirror can be used to mirror copies of Oracle databases for disaster recovery.
- Use SMO v2.1 features and scripting
- Understand how volume and LUN clones can be used to provision copies of Oracle databases for development and test uses, and how to manage cloning with SMO v. 2.1
- Understand the importance of monitoring system performance, and how to use commands and applications for Oracle storage performance monitoring
- Understand the application of SMO in an Oracle RAC environment with Oracle ASM

Schedule

7/21/2008	Columbia, MD	10/13/2008	Sunnyvale, CA
8/18/2008	Atlanta, GA	11/03/2008	Reston, VA
9/22/2008	Raleigh-Durham, NC		

Operations Manager 3.7, Protection Manager, and Provisioning Manager (OPSMGR)

Price: $3750 USD or 50 TUs   **Duration:** 5 Days

The OPSMGR course will prepare the student to install, configure, and support Operations Manager 3.7 core software and additional components in an enterprise environment. Protection Manager and Provisioning Manager work with Operations Manager to manage local and remote backups and mirrors of data residing on storage systems running Data ONTAP or on UNIX-, Linux-, or Windows-based systems running Open Systems SnapVault.

Prerequisites

The Data ONTAP Fundamentals (DOTF) course is required before taking OPSMGR.

Who Should Attend

Administrators and support personnel who will use Operations Manager, Protection Manager, and Provisioning Manager services to backup and protect mission critical data in the enterprise.

Course Objectives

- Articulate the different components that make up the Operations Manager 3.7 data management suite
- Explain the differences between Operations Manager 3.7 and previous versions
- Explain Operations Manager Licensing
- Explain hardware and software requirements
- Determine proper sizing of the Operations Manager Environment
- Install Operations Manager 3.7
- Configure user accounts
- Create and manage configuration templates
- Explain the Discovery process
- Setup host credentials and create groups
- Configure Operations Manager database backups
- Install Protection Manager from within Operations Manager
- Explain how hosts become visible in Protection Manager
- Navigate through the Protection Manager management console
- Explain the configuration of groups
- Configure Resource Pools, Schedules, Polices, and Data Sets

- Configure hosts and OSSV systems for use with Protection Manager
- Enable backup interfaces
- Operate the functionality that is provided in the core Operations Manager software suite and know its limitations
- Identify common problems that are encountered with normal Operations Manager use and their remedies
- Perform common tasks in Protection Manager: add hosts, backup and restore data, manage resource pools, setup schedules, manage policies, manage data setups, setup alarms and alerts
- Explain how to backup and restore VMware ESX servers using Protection Manager
- Explain user-defined Provisioning Manager policies to automate storage provisioning and configure default settings for exporting storage
- Explain Provisioning Manager periodic conformance checking to ensure the provisioned storage conforms to the provisioning policy
- Explain how to configure Thin Provisioning using Provisioning Manager
- Perform common tasks in Provisioning Manager: resize and delete volumes, edit Data Sets, Policies and Resource Pools, resize space and capacity of existing storage, provision new and existing storage
- Troubleshoot common issues associated within provisioning, jobs, access, and hosts
- Articulate the features and functions of Performance Advisor
- Monitor and display disk, file system, processor, and memory resources
- Replay performance charts in Performance Advisor
- Explain third party SNMP integration with Performance Advisor
- Explain integration of Operations Manager RBAC support into Performance Advisor
- Create custom performance views, alarms and thresholds in Performance Advisor

Schedule

7/21/2008	Sunnyvale, CA	10/6/2008	New York City, NY
8/11/2008	Raleigh-Durham, NC	10/20/2008	Atlanta, GA
9/152008	Dallas, TX	12/1/2008	Columbia, MD

VMware ESX on NetApp Storage Systems (NAVMW)

Price: $3750 USD or 50 TUs   **Duration:** 5 Days

The new VMware ESX on NetApp Storage Systems course covers the installation, configuration, and administration of an ESX Server and focuses on optimal connectivity on NetApp Storage Systems using FCP, iSCSI, CIFS and NFS. Backup and Restore of VMware ESX Server storage LUNs with ESX and NetApp are also covered, as is the planning and operation of VMware ESX Server and NetApp Storage Systems in a high availability scenario.

Prerequisites

Before taking this course you should have knowledge of NetApp Storage Systems, VMware ESX, Linux and Windows Servers.

Who Should Attend

System administrators and system engineers who are responsible for the integration, administration and management of VMware ESX server in a NetApp Storage environment.

Course Objectives

- Overview of the VMware virtualization concepts
- Basic configuration of the VMWare ESX Server and the VMs
- Networks in VMware

- Planning, installation and configuration of CIFS/SMB, NFS and iSCSI within a VM
- Planning, installation and configuration of CIFS.SMB and NFS in the service console of VMware ESX Server
- Planning, installation and configuration of FCP, NFS, and iSCSI in the VM Kernel
- Backup scenarios
- High availability scenarios
- Monitoring and system management
- Troubleshooting

Schedule

Date	Location	Date	Location
6/2/2008	Sunnyvale, CA	8/25/2008	Sunnyvale, CA
6/16/2008	Dallas, TX	9/15/2008	Atlanta, GA
6/23/2008	Chicago, IL	9/22/2008	Reston, VA
7/14/2008	Reston, VA	10/20/2008	Raleigh-Durham, NC
7/21/2008	Sunnyvale, CA	11/10/2008	Columbia, MD
8/4/2008	Raleigh-Durham, NC	11/17/2008	Dallas, TX
8/11/2008	Columbia, MD	12/1/2008	Sunnyvale, CA
8/18/2008	Dallas, TX	12/15/2008	Reston, VA

NetApp Storage Systems & Cisco MDS Switch Administration (NACSA)

Price: $3750 USD or 50 TUs   **Duration:** 5 Days

This 5-day course covers the theory and the practical side of configuring and administering an efficient and secure Storage Area Network (SAN) using Cisco switches. Further topics and security aspects and analysis, correction and avoidance of malfunctions and performance issues in a SAN.

Prerequisites

Students should have a proficiency in Solaris and/or Windows.

Who Should Attend

Storage professionals working in a multi-vendor environment that include NetApp Storage Systems and Cisco MDS 9000 switches.

Course Objectives

- NetApp Fundamentals including a NetApp Overview, basic administration, networking, and installation
- Storage technologies including: DAS, NAS, SAN, Virtualization, and Snapshot
- The Cisco MDS 9000 Platform which include components of the platform, Intelligent Network Services, integrated management, initial MDS switch configuration, and the MDS system architecture

- Network Attached Storage is covered with a focus on NFS, CIFS, Multiprotocol, and Quota Management
- An overview of SAN, preparing storage, and creating and accessing LUNs
- High Availability including NDMP copy and volume and aggregate copy
- Fabric design and redundant fabric design
- Engineering SAN traffic and simplifying device management
- Consolidating Cisco Storage
- NetApp High Availability including FC Multipathing, iSCSI Multipathing, managing LUNs, and a cluster failover workshop

Schedule

Date	Location	Date	Location
6/23/2008	Columbia, MD	10/6/2008	Raleigh-Durham, NC
7/28/2008	Dallas, TX	11/3/2008	Reston, VA
9/8/2008	New York City, NY	12/8/2008	Sunnyvale, CA

Fundamentals of Performance Analysis (FPA)

Price: $1500 USD or 20 TUs   **Duration:** 2 Days

The knowledge and skills to perform data collection and analysis on NetApp storage systems are covered in the FPA course. Students will learn how to interpret the data and apply performance changes based on their analysis while also using the data for tuning, monitoring, and other performance related areas.

Course Objectives

- Recognize performance terminology and basic methodology
- Describe how Data ONTAP reads and writes data to disks
- Diagram how data flows through Data ONTAP components
- Use knowledge about how data flows through the network and protocol layers of Data ONTAP to monitor and analyze storage system performance
- Use Data ONTAP tools and NetApp provided scripts to identify networking disk I/O, Fibre Channel loop saturation and CPU bottlenecks
- Use the reallocation command to optimize disk performance
- Utilize both client and storage system tools to monitor and analyze a performance problem
- Identify where to find further information

Prerequisites

The Data ONTAP Fundamentals course and three months of experience with NetApp hardware and software products is recommended before taking FPA.

Who Should Attend

Administrators and support personnel of NetApp storage systems.

Schedule

6/26/2008	Dallas, TX	8/28/2008	Chicago , IL
7/10/2008	Raleigh-Durham, NC	10/23/2008	Reston, VA
7/31/2008	Columbia, MD	11/06/2008	Raleigh-Durham, NC
8/21/2008	New York City, NY	11/20/2008	Dallas, TX

Data ONTAP GX Fundamentals (DOTGX)

Price: $2250 USD or 30 TUs   **Duration:** 3 Days

Basics of the Data ONTAP GX operating system are taught in this comprehensive program. By the end of the course students will know the evolution of the Data ONTAP GX, dating back to the 1980s, understand the benefits of this product, be able to explain the architecture and functionality of the product, and be able to install, configure, manage, and troubleshoot Data ONTAP GX clusters.

Prerequisites

The Data ONTAP Fundamentals course or a Data ONTAP overview is required before taking DOTGX.

Who Should Attend

Customers who perform basic support and administrative functions on a NetApp storage system running the Data ONTAP GX operating system software.

Course Objectives

- Describe the major principles associated with Data ONTAP GX
- Describe how a N-blade and a D-blade interact with each other
- Describe how a replicated database (RDB) application communicates among the members in its ring
- Describe the difference between an mroot volume and a virtual server root volume
- Create a cluster made up of multiple nodes
- Create an aggregate
- Create two virtual servers, two additional volumes in each, and two three-volume name spaces
- Configure an active-active relationship between a pair of nodes
- Configure network interfaces for a virtual server
- Create a NFS export and a CIFS share
- Move a volume from one node to another
- Create a SnapShot policy for a volume
- Create two load sharing (LS) mirrors of a volume, and manually replicate them
- Create two disaster recovery (DR) mirrors of a volume and manually replicate them
- Promote a mirror to be read-write volume
- Diagnose a VLDB crash and recover from it
- Upgrade the CFE (firmware) on a node
- Upgrade the Data ONTAP GX software on two nodes with no down time

Schedule

7/7/2008	Raleigh-Durham, NC	9/29/2008	Sunnyvale
7/28/2008	Columbia, MD	10/20/2008	Reston, VA
8/18/2008	New York City, NY	11/3/2008	Raleigh-Durham, NC
8/25/2008	Chicago, IL	11/17/2008	Dallas, TX

Microsoft Exchange on NetApp Storage Systems (MSEXC)

Price: $3750 USD or 50 TUs   **Duration:** 5 Days

The Microsoft Exchange on NetApp Storage Systems (MSEXC) course will train customers on how to install and implement SnapManager 5.0 for Microsoft Exchange Server 2007 at customer sites, both for evaluations and purchases. This course takes students through the entire systems-integration process of architecture planning, data migration, backup and restore, disaster recovery, and troubleshooting.

Prerequisites

The Data Protection and Retention (DPR) and Data ONTAP Fundamentals (DOTF) courses are required before taking MSEXC.

Who Should Attend

Customers who plan, install, operate, and/or troubleshoot SnapDrive and SnapManager for Windows products within a Fibre Channel SAN or iSCSI SAN environment.

Course Objectives

- Describe the benefits of running MS Exchange on a storage system
- Describe the MS Exchange Server 2007 backup and restore process
- Install and configure SnapDrive for Windows 6.0

- Perform Exchange Server 2007 storage planning, implementation, and administration
- Determine the correct NetApp storage controller model, volume size, and LUN size to support the solution
- Understand the steps necessary to migrate a stand-alone Microsoft Exchange Server 2007 to a NetApp storage system
- Perform an installation of a clustered Microsoft Exchange Server 2007 on a NetApp storage system
- Backup and verify an Exchange Data Store using SnapManager 5.0
- Restore data using SnapManager 5.0
- Describe different disaster recovery methods
- Implement a disaster recovery method
- Isolate and correct faults in an Exchange Server 2007 and SnapManager 5.0 Solution

Schedule

6/16/2008	Columbia, MD	10/13/2008	New York City, NY
7/14/2008	Raleigh-Durham, NC	10/27/2008	Columbia, MD
9/8/2008	Los Angeles, CA	11/10/2008	Atlanta, GA
9/29/2008	Reston, VA	12/08/2008	Raleigh-Durham, NC

Microsoft SQL Server 2005 on NetApp Storage Systems (MSSQL)

Price: $3000 USD or 40 TUs   **Duration:** 4 Days

The focus of the MSSQL course is the optimization of Microsoft SQL Server 2005 in a NetApp storage environment. This course takes students through the entire systems integration process of architecture planning, data migration, backup and restore, disaster recovery, and troubleshooting.

Prerequisites

The Data ONTAP Fundamentals (DOTF), Data ONTAP SAN Administration (SAN), Data Protection and Retention (DPR), and High Availability are all courses that are recommended to take before taking the MSSQL course. In addition at least one of the following should be taken:

- Microsoft Course 2072
- Microsoft Exam 70-228
- One year Microsoft SQL Server 2005 experience

Who Should Attend

Network Professionals who need to have a working understanding of Microsoft SQL Server 2005 on a NetApp Storage System.

Course Objectives

- Describe the benefits of running SQL Server 2005 on a NetApp Storage System
- Perform SQL Server 2005 storage planning, implementation, and administration

- Architect a high performance, highly available, consolidated SQL Server solution on a NetApp Storage System
- Deploy SQL Server 2005 on a NetApp Storage System
- Describe the SQL Server 2005 backup and restore process using SnapManager
- Determine the correct NetApp Storage Controller model, volume size, and LUN size to support the solution
- Back up and verify a SQL Server 2005 database using SnapManager
- Restore data using SnapManager
- Describe different disaster recovery methods
- Implement disaster recovery methods
- Isolate and correct faults in a SQL Server and SnapManager solution

Schedule

7/21/2008	Los Angeles, CA	10/20/2008	Columbia, MD
9/22/2008	New York City, NY	11/3/2008	Atlanta, GA
10/6/2008	Reston, VA	12/1/2008	Raleigh-Durham, NC

DataFort Storage Security Administration (DSSA)

Price: $3750 USD or 50 TUs   **Duration:** 5 Days

This instructor-led course is designed for anyone who performs basic support, and administration functions on a Decru DataFort Storage Security appliance or Lifetime Key Management appliance. Through a combination of discussion and hands-on activities, this course describes the features and functions of the DataFort E-Series (NAS & iSCSI), FC-Series (SAN Disk & SAN Tape), A-Series (SCSI Tape), Lifetime Key Management appliances and the Data Decryption Software.

Prerequisites

Knowledge of networking terminology and management, background in UNIX or Windows server administration, and knowledge of SAN administration is required before taking the DataFort Storage Security Administration course.

Who Should Attend

Anyone needing a thorough knowledge of the Decru DataFort Security Encryption products.

Course Objectives

- Explain basic security and encryption principles and how those apply to a storage security appliance
- Explain the features and functions of the DataFort platform including encryption key hierarchy and Smart Card operation
- Describe different architectures and deployment options for the DataFort storage security appliance and Lifetime Key Management (LKM) appliance
- Install the Management Console for centralized key and configuration management
- Manage a DataFort storage security appliance using the Management Console

- Use the Setup Wizard to initialize a DataFort storage security appliance
- Create and manage Cryptainer vaults that encrypt data-at-rest
- Configure the E-series DataFort (NAS and iSCSI) for storage encryption and access control
- Configure E-series DataFort appliances into a cluster and simulate failover
- Configure the FC-series DataFort (disk and tape) for storage encryption
- Perform administration of a DataFort appliance using specialty administrative accounts
- Recover a DataFort appliance from a configuration backup file
- Decrypt data without a DataFort Storage Security appliance using Data Decryption Software
- Complete operations using the command line interface (CLI) on the E-series and FC-series DataFort appliances
- Describe the key sharing methods available for DataFort storage security appliances
- Perform key sharing operations using the DataFort storage security appliances and the LKM appliance
- Describe the new features like Key Sharing Group and Remote Authorization
- Upgrade and Downgrade DataFort firmware

Schedule

6/9/2008	Sunnyvale, CA	10/6/2008	Chicago, IL
7/7/2008	Reston, VA	10/27/2008	Reston, VA
7/28/2008	Dallas, TX	11/10/2008	Dallas, TX
8/4/2008	Columbia, MD	11/17/2008	Columbia, MD
8/18/2008	Raleigh-Durham, NC	12/1/2008	Raleigh-Durham, NC
9/8/2008	Sunnyvale, CA	12/8/2008	Sunnyvale, CA

NearStore Virtual Tape Library Administration (VTL)

Price: $2250 USD or 30 TUs   **Duration:** 3 Days

Through a combination of discussion and hands-on activities, this course describes the features and functions of the NearStore VTL and how to integrate with the three leading backup applications (as measured by data center market share): Symantec NetBackup, IBM Tivoli Store Manager (TSM) and EMC Networker. A significant portion of this course is devoted to hands-on lab-centric training enabling students to setup, install and configure a VTL and then to integrate it operationally with the backup applications and tape libraries. Instructors will share case studies of complex VTL implementations and provide best practices and advanced configuration techniques.

Prerequisites

Knowledge of networking terminology and management, SAN administration, and at least 1 Major Backup Application (NetBackup, TSM or Networker) and a background in UNIX or Windows server administration is required before taking VTL.

Who Should Attend

Anyone who will architect, implement, administer or work with administrators of the VTL appliance.

Course Objectives

- Explain advanced disk-to-disk backup principles and how these apply to a virtual tape library appliance
- Explain the features and functions of the NearStore VTL
- Direct tape creation
- Sizing & architecting VTL environments
- Compression versus Tape Smart Sizing

- Explain the features of NearStore VTL and their impact on backup environments
- Describe different architectures and deployment options for the NearStore VTL
- Identify and describe "Best Practice" concepts and processes
- Install and cable a NearStore VTL
- Implement all of the features of the VTL product in a working environment:
  - Performance tuning
  - Port configurations
- Architecting & Implementing the VTL into existing SAN infrastructures
- Architecting & Implementing the VTL into new backup environments
- Configure a NearStore VTL to integrate with supported backup applications:
  - Symantec NetBackup
  - IBM Tivoli Storage Manager
  - EMC Networker
- Perform administration of a NearStore VTL
- Complete operations using the command line interface (CLI) and scripting
- Troubleshoot and resolve errors with the operation of a NearStore VTL
- Describe lessons learned from existing installations and avoid common pitfalls

Schedule

6/16/2008	Dallas, TX	9/15/2008	Reston, VA
7/14/2008	Columbia, MD	10/13/2008	Raleigh-Durham, NC
8/4/2008	Sunnyvale, CA	11/10/2008	Dallas, TX
8/25/2008	Atlanta, GA	12/8/2008	Columbia, MD

Cisco Certifications

Cisco Career Certifications are universally recognized as the industry standard for network design and support, demonstrating a high level of expertise and credibility. Organizations with Cisco certified professionals are well positioned to maximize their network investment, stay ahead of the technology curve and anticipate market factors, rather than just respond to them.

Associate

The first step in general Cisco Career Certifications begins either with CCENT as an interim step to Associate level, or directly with CCNA for network operations or CCDA for network design. The Associate level is the foundation for all other Cisco Certifications.

CCENT - Cisco Certified Entry Network Technician is a new, entry-level certification preceding the CCNA certification. Certified professionals should have the knowledge and skill to install, operate and troubleshoot a small enterprise branch network, including basic network security.

CCNA- The Cisco Certified Network Associate certification validates the ability to install, configure, operate, and troubleshoot medium-size routed and switched networks, including implementation and verification of connections to remote sites in a WAN.

CCDA - Cisco Certified Design Associate certified professionals can design routed and switched network infrastructures involving LAN, WAN, and dial access services for businesses and organizations.

Professional

The professional-level certification is the second level in general Cisco Career Certifications, similar to that of advanced or journeyman levels, including CCNP, CCSP, CCIP, CCDP, and CCVP certifications.

CCNP- Network Professionals who achieve the CCNP have demonstrated the knowledge and skills required to manage the routers and switches that form the network core, as well as edge applications that integrate voice, wireless, and security into the network.

CCSP - With a Cisco Certified Security Professional, a network professional can secure and manage network infrastructures to protect productivity and reduce costs. The content emphasizes topics such as perimeter security, virtual private networks, intrusion protection as well as how to combine these technologies in a single, integrated network security solution.

CCIP - CCIP professionals have detailed understanding of networking technologies in the service provider arena including IP routing, IP QoS, BGP, and MPLS.

CCDP - With a Cisco Certified Design Professional, a network professional can design routed and switched networks involving LAN, WAN, and dial access services, applying modular design practices and making sure the whole solution responds optimally to the business and technical needs and is designed to be highly available.

CCVP - Cisco Certified Voice Professional is aimed at IT professionals responsible for deploying and maintaining Internet Protocol telephony systems and incorporates several of Cisco's preexisting specialist-level IP telephony certifications.

Expert

This is Cisco's highest level and most respected certification. Candidates can choose from various tracks: routing and switching, security, service provider, storage networking, voice and design.

Qualified Specialist

The Specialist designation certifies the expertise of experienced technical professionals, and those who have earned associate or professional-level Cisco Career Certifications. By earning specialist certifications, network professionals can enhance their core networking knowledge in technologies such as security, IP Communications, and wireless.

Specialist Certifications include:
- Advanced Routing and Switching
- Data Center Switching Network Infrastructure
- Data Center Storage Networking
- Foundation for Channel Partners
- IP Communications
- VPM and Security Communications
- Wireless LAN
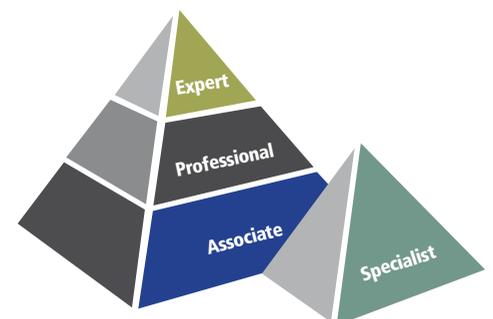
The CCNA Boot Camp combines the ICND1 and ICND2 classes, presenting important networking fundamentals using the Open Systems Interconnect (OSI) seven layer model concepts. Terminology and technologies are explained and illustrated using text and graphics animation. The class also focuses on using Cisco Catalyst switches and Cisco routers connected in local area networks (LANs) and wide-area networks (WANs) typically found at small to medium network sites. Upon completion of this course, you will be able to select, connect, configure, and troubleshoot various Cisco networking devices.

Prerequisites

Familiarity with networking topics such as TCP/IP, IP configuration, subnetting, and other network protocols, standards, and architectures.

Certification

The CCNA Boot Camp will prepare students to achieve the Cisco Certified Network Associate (CCNA) certification.

Who Should Attend

Cisco Certified Networking Associate (CCNA) certification candidates, as well as network engineers and administrators who are new to Cisco products and services.

Course Objectives

- Describe computer hardware basics, binary and hexadecimal number systems, basic networking terminology, and internetworking concepts
- Identify the major components of a network system, including clients and servers, Network Interface Cards (NICs), internetworking devices, media, and topologies
- Describe the functions, operations, and primary components of:
  - Local Area Networks (LANs)
  - Wide Area Networks (WANs)
  - Metropolitan Area Networks (MANs)
  - Storage Area Networks (SANs)
  - Content Networks (CNs)
  - Virtual Private Networks (VPNs)
- Describe the major network access methods and outline the key features of each
- Describe the functions and operations of switching technologies
- Explain the format and significance of each of the following components to a network system:
  - IP addressing
  - Classes
  - Reserved address space
  - Subnetting
- Calculate valid subnetwork addresses and mask values so that user/network requirements are met when given an IP address scheme
- Explain the purposes of networking addresses, routing protocols, and routed protocols
- Describe the functions, operations, and primary components of WAN technologies
- Describe the function, operation, and primary components required to provide remote access services
- Use available configuration tools to establish connectivity to the appropriate network device in order to complete the initial device configuration
- Build a functional configuration to support the specified network operational requirements
- Use the appropriate show commands to display network operational parameters to detect anomalies
- Use the appropriate debug commands to monitor network operational parameters to detect anomalies
- Explain the purpose and operations of the Spanning Tree Protocol (STP)
- Build a functional router configuration to support the specified network operational requirements
- Describe the features and operation of static routing

Schedule

Date	Location	Date	Location	Date	Location	Date	Location
6/16/2008	New York City, NY	8/18/2008	Raleigh-Durham, NC	10/6/2008	Atlanta, GA	11/10/2008	Raleigh-Durham, NC
7/7/2008	Atlanta, GA	9/8/2008	Dallas, TX	10/20/2008	San Jose, CA	12/1/2008	Dallas, TX
7/21/2008	San Jose, CA	9/22/2008	New York City, NY	11/3/2008	Chicago, IL	12/15/2008	Atlanta, GA
8/4/2008	Chicago, IL						

Interconnecting Cisco Networking Devices Part 1 (ICND1)

Price: $2695 USD or 27 CLCs   **Duration:** 5 Days

ICND Part 1 is the first part in the two-part updated Cisco ICND Curriculum. This course will help students gain an understanding of the operation of TCP/IP networks built with Cisco hardware. They will also learn the commands and techniques used to troubleshoot host connections, interact with Cisco switches and routers, backup and restore configuration files, and manage network equipment.

Prerequisites

To fully benefit from the ICND 1 course students should have basic computer literacy, Windows navigation skills, Internet usage skills, and e-mail usage skills.

Certification

ICND1 is part of the CCNA certification path.

Course Objectives

- Describe how networks function, identifying major components, functions of network components and the Open System Interconnection (OSI) reference model
- Using the host-to host packet delivery process, describe issues related to increasing traffic on an Ethernet LAN and identify switched LAN technology solutions to Ethernet networking issues

- Describe the reasons for extending the reach of a LAN and the methods that can be used with a focus on RF wireless access
- Describe the reasons for connecting networks with routers and how routed networks transmit data through networks using TCP/IP
- Describe the function of Wide Area Networks (WANs), the major devices of WANs, and configure PPP encapsulation, static and dynamic routing, PAT and RIP routing
- Use the command-line interface to discover neighbors on the network and managing the router's startup and configuration

Who Should Attend

Network technicians who configure and support internetworks and/or management and salespeople who need a working knowledge of modern networking.

Schedule

Date	Location	Date	Location
6/2/2008	Dallas, TX	8/18/2008	Chicago, IL
6/16/2008	Raleigh-Durham, NC	9/15/2008	Dallas, TX
6/23/2008	San Jose, CA	10/6/2008	Raleigh-Durham, NC
7/7/2008	New York City, NY	10/27/2008	San Jose, CA
7/28/2008	Atlanta, GA	11/17/2008	New York City, NY

Interconnecting Cisco Networking Devices Part 2 (ICND2)

Price: $2695 USD or 27 CLCs   **Duration:** 5 Days

This hands-on Cisco course builds from the ICND1 course and provides students with a technical foundation for the rest of the Authorized Cisco curriculum. This course will provide you with information needed to pass the CCNA certification exams.

Prerequisites

Interconnecting Cisco Network Devices Part 1 (ICND1) is required before taking ICND2.

Course Objectives

- Review how to configure and troubleshoot a small network
- Expand the switched network from a small LAN to a medium-sized LAN with multiple switches, supporting VLANs, trunking, and spanning tree
- Describe routing concepts as they apply to a medium-sized network and discuss considerations when implementing routing on the network
- Configure, verify, and troubleshoot OSPF
- Configure, verify, and troubleshoot EIGRP
- Determine how to apply ACLs based on network requirements, and to configure, verify, and troubleshoot ACLs on a medium-sized network
- Describe when to use NAT or PAT on a medium sized network, and configure NAT or PAT on routers
- Identify and implement the appropriate WAN technology based on network requirements

Certification

ICND2 is part of the CCNA certification path.

Who Should Attend

This course is designed for those who have a firm background in data networking, have some hands-on experience with Cisco routers and switches, and are looking to increase their knowledge of installation, maintaining, and troubleshooting medium-sized switched and routed networks.

Schedule

Date	Location	Date	Location
6/9/2008	Chicago, IL	9/8/2008	Chicago, IL
7/7/2008	Dallas, TX	10/13/2008	Dallas, TX
7/14/2008	Raleigh-Durham, NC	11/3/2008	Raleigh-Durham, NC
8/4/2008	New York City, NY	11/17/2008	San Jose, CA
8/25/2008	Atlanta, GA	12/8/2008	New York City, NY

Building Scalable Cisco Internetworks (BSCI)

Price: $2695 USD or 27 CLCs   **Duration:** 5 Days

This comprehensive Cisco Authorized course will teach students the complex concepts and commands necessary to configure Cisco routers for scalable operation in large and/or growing internetworks. This course will also help students prepare for the CCNP and CCIP certifications.

Prerequisites

Interconnecting Cisco Network Devices Parts 1 & 2 are required before taking the BSCI course.

Certification

BSCI is recommended for the Cisco Certified Network Professional (CCNP), Cisco Certified Design Professional (CCDP), and Cisco Certified Internetwork Professional (CCIP) certifications.

Course Objectives

- Utilize advanced IP addressing including variable length subnet masks, route summarization, Classless Interdomain Routing (CIDR), IP Version 6 (IPv6), and Network Address Translation (NAT) with route maps
- Identify advanced IP routing principles, including static and dynamic routing characteristics and the concepts of classless routing and network boundary summarization

- Configure Enhanced Interior Gateway Routing Protocol (EIGRP) for a scalable network
- Configure Open Shortest Path First (OSPF) for a scalable multiarea network
- Configure Intermediate System-to-Intermediate System (IS-IS) for a scalable multiarea network
- Manipulate routing updates and packet flow using redistribution, distribution lists, administrative distance, route maps, and policy-based routing
- Configure basic Border Gateway Protocol (BGP) for internal and external Border Gateway Protocol connections

Who Should Attend

Individuals seeking certification as a Cisco Certified Network Professional (CCNP) and network administrators.

Schedule

6/9/2008	Chicago, IL	9/22/2008	Dallas, TX
7/14/2008	Raleigh-Durham, NC	10/27/2008	Atlanta, GA
8/18/2008	New York City, NY	12/1/2008	San Jose, CA

Building Cisco Multilayer Switched Networks (BCMSN)

Price: $2695 USD or 27 CLCs   **Duration:** 5 Days

The BCMSN course will teach students how to implement campus networks using multilayer switching technologies over high-speed Ethernet and wireless topologies. The course will address the integration of routing and switching technologies to create an efficient campus network. Students will design, build, and configure a campus network with device and link redundancy for high reliability, while maintaining the performance to meet today's demanding application requirements, such as voice, video, and secure wireless technologies.

Prerequisites

The Cisco Certified Networking Associate (CCNA) certification is required before taking BCMSN.

Certification

BCMSN is recommended training for the Cisco Certified Network Professional (CCNP) certification and for the Cisco Certified Design Professional (CCDP) certification.

Course Objectives

- Deploy the required Cisco products and services that enable connectivity and traffic transport, given a network design that includes multilayer switching over various Ethernet technologies
- Implement the necessary services at each layer of the network to all users to obtain services in a working multilayer switched network

- Control network traffic by implementing network policies
- Restore proper network operations through the use of Cisco devices and external management tools
- Explain how service providers implement transparent LAN services & Ethernet over Multiprotocol Label Switching (MPLS) technology to deliver connectivity

Who Should Attend

Network administrators and technicians who are responsible for implementing or troubleshooting a multilayer switched network in an enterprise environment, as well as Cisco Certified Network Professional (CCNP) and Cisco Certified Design Professional (CCDP) candidates.

Schedule

6/16/2008	Dallas, TX	9/29/2008	Reston, VA
7/21/2008	Atlanta, GA	11/3/2008	Chicago, IL
8/25/2008	San Jose, CA	12/8/2008	Raleigh-Durham, NC

Implementing Secure Converged Wide Area Networks (ISCW)

Price: $2695 USD or 27 CLCs   **Duration:** 5 Days

Learn to secure the network environment using existing Cisco IOS security features and configure the three primary components of the Cisco IOS Firewall Feature set (Firewall, Intrusion, Prevention System, and AAA) in this course. Students will get the knowledge and skills needed to secure Cisco IOS router networks.

Prerequisites

The Cisco Certified Network Associate (CCNA) certification is required before taking the ISCW course.

Certification

ISCW is recommended training for the Cisco Certified Network Professional (CCNP) certification and the Cisco Certified Design Professional (CCDP) certification.

Course Objectives

- Explain the Cisco hierarchal network model as it pertains to the WAN
- Describe and implement configuration and access for telecommuters
- Implement and verify frame mode MPLS
- Describe and configure a site-to-site IPSec VPN
- Describe and configure Cisco EZVPN
- Explain the strategies used to mitigate network attacks
- Describe and configure Cisco device hardening
- Describe and configure IOS firewall features

Who Should Attend

IT professionals, network administrators, and technicians who need to design, configure, or support a Cisco WAN that utilizes Cisco's remote access technologies. This course is highly recommended for people pursuing CCNP, CCDP, and CCIE certifications.

Schedule

6/23/2008	Raleigh-Durham, NC	10/6/2008	New York City, NY
7/28/2008	Chicago, IL	11/10/2008	Dallas, TX
9/8/2008	Reston, VA	12/15/2008	Atlanta, GA

Optimizing Converged Cisco Networks (ONT)

Price: $2695 USD or 27 CLCs   **Duration:** 5 Days

Students will learn the characteristics of real-time multi-media traffic, such as voice, and you'll investigate the importance of Quality of Service management on the network and learn about the application of wireless technologies to the enterprise. The management of Wireless LAN Controllers across the enterprise using Cisco's Wireless Control System
is also explored.

Prerequisites

The Cisco Certified Network Associate (CCNA) certification and the Building Cisco Multilayer Switched Networks (BCMSN) course are both required before taking the ONT course.

Certification

ONT is recommended training for the Cisco Certified Network Professional (CCNP) certification and the Cisco Certified Design Professional (CCDP) certification.

Who Should Attend

IT professionals, network administrators, and technicians who design, configure, or support a network that uses Cisco Voice or Wireless technologies; those pursuing CCNP, CCDP & CCIE certifications.

Course Objectives

- Explain the Cisco hierarchal network model as it pertains to an end-to-end enterprise network
- Describe specific requirements for implementing a VoIP network
- Describe the need to implement QoS and the methods for implementing QoS on a converged network using Cisco's routers and Catalyst Switches
- Explain the key IP QoS mechanisms used to implement the DiffServ QoS model
- Configure Auto QoS for Enterprise
- Describe and configure wireless security and basic wireless management

Schedule

7/7/2008	New York City, NY	10/13/2008	San Jose, CA
8/4/2008	Dallas, TX	11/17/2008	Reston, VA
9/15/2008	Atlanta, GA		

Data Center Network Infrastructure Design (DCNID)

Price: $3295 USD or 33 CLCs   **Duration:** 5 Days

This 5-day course enables students to create a Data Center network design that optimizes availability, scalability, performance, and security, using the Nexus products, Catalyst 6500, Catalyst 4948, Firewall Services Module, Intrusion Detection Services Module, and Network Analysis Module.

Prerequisites

Designing for Cisco Internetworks Solutions (DESGN) and Securing Cisco Network Devices (SND) are required before taking DCNID.

Who Should Attend

Cisco channel partners, resellers, customers and employees.

Course Objectives

- Given customer requirements, the student will be able to create a Data Center network designs that optimizes availability, scalability, and performance for that environment
- Create a core layer design that optimizes data flows
- Create an aggregation layer design that optimizes data flows
- Create an access layer design that optimizes data flows
- Optimize a data center design to achieve high availability
- Design a security implementation using Catalyst 6500 service modules
- Design a management infrastructure that provides centralized management services

Schedule

6/23/2008	San Jose, CA	9/8/2008	Dallas, TX	11/3/2008	San Jose, CA
7/7/2008	Raleigh-Durham, NC	10/6/2008	Atlanta, GA	12/1/2008	Raleigh-Durham, NC
8/4/2008	Chicago, IL				

Designing Data Center Application Services (DCASD)

Price: $3295 USD or 33 CLCs   **Duration:** 5 Days

DCASD is a 5-day, instructor-led, lecture/lab course. You will learn how to deploy and configure intelligent network services using the Cisco ACE products, Catalyst 6500 Application Control Eging (ACE) 4710. This course covers all of the key features of the ACE products, including resources 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. The focus is on enabling the student to properly position the ACE products in the network for optimizing data center components and network resources.

Prerequisites

Students should have a basic understanding of TCP/IP protocol, HTTP and SSL protocols, N-tier application architecture, and server load-balancing before taking DCASD.

Who Should Attend

Cisco channel partners, resellers, customers and employees.

Course Objectives

- Describe IP application delivery with the ACE module
- Describe the configuration tasks necessary to successfully deploy an ACE module
- Describe the structure and function of the Modular Policy CLI statements used to configure ACE features
- Describe the capabilities and configuration of the ACE features used to provide load balancing of IP-based applications
- Identify the Layer 7 processing options used to provide advanced application networking
- Describe ACE support for SSL protocol processing
- Describe the ACE features that provide IP application-based security
- Describe the high-availability features of the ACE module which are used to provide reliable application networking services
- Describe a methodology used to design and configure multiple ACE features

Schedule

9/22/2008	San Jose, CA	11/17/2008	Chicago, IL
10/20/2008	Raleigh-Durham, NC	12/15/2008	Dallas, TX

Implementing Data Center Application Services (DCASI)

Price: $3295 USD or 33 CLCs   **Duration:** 5 Days

The lecture/lab course will teach students how to design, deploy, and optimize intelligent network services using the Cisco Application Control Engine (ACE) Appliance, Service Module 2.0, and GSS. 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 are also covered.

Prerequisites

Students should have a basic understanding of the TCP/IP protocol, HTTP and SLL protocols, N-tier application architecture, and server load-balancing before taking DCASI.

Who Should Attend

Cisco channel partners, resellers, customers, and employees.

Course Objectives

- Describe IP application delivery with the ACE module
- Describe the structure and function of the Modular Policy CLI statements used to configure ACE features
- Describe the capabilities of the ACE module used to load balance IP-based applications

- Create new contexts and resource classes
- Identify the Layer 7 processing options used to provide advanced application networking
- Create class maps and server farms
- Configure an ACE context load balance traffic flows
- Configure an ACE context to monitor real servers
- Implement fixups and inspection
- Describe the ACE features that provide IP application security
- Implement SSL termination
- Configure network address translations
- Describe the high availability features of the ACE module
- Configure an ACE context to perform a variety of functions in an integrated environment
- Troubleshoot common SLB configuration errors

Schedule

9/8/2008	San Jose, CA	11/3/2008	Chicago, IL
10/6/2008	Raleigh-Durham, NC	12/1/2008	Dallas, TX

Implementing Cisco Data Center Network Infrastructure 1 (DCNI-1)

Price: $3295 USD or 33 CLCs   **Duration:** 5 Days

The Implementing Cisco Data Center Network Infrastructure 1 course offers Data Center-oriented content primarily focused on the Cisco Catalyst 6500 Series switches. Cisco Catalyst 4900 Series top-of-rack switches, and to a lesser degree also on the Blade switches.

Prerequisites

Building Scalable Cisco Internetworks (BSCI), Building Cisco Multilayer Switched Networks (BCMSN), Optimizing Converged Cisco Networks (ONT), and Implementing Secure Converged Wide Area Networks (ISCW) are required before taking DCNI-1.

Who Should Attend

Cisco channel partners, resellers, customers and employees.

Course Objectives

The goal of the DCNI-1 v2.0 curriculum is to enable customers to build scalable, reliable, and intelligent Data Center networks using Cisco Catalyst 6500 Series switches.

Schedule

9/29/2008	San Jose, CA	12/15/2008	Chicago, IL
10/27/2008	Raleigh-Durham, NC		

Implementing Cisco Data Center Network Infrastructure 2 (DCNI-2)

Price: $2695 USD or 27 CLCs   **Duration:** 4 Days

The DCNI-2 course is a 4-day hands-on training that teaches you how to implement an enterprise Data Center routing and switching infrastructure with the next-generation Cisco Nexus 7000 and 5000 platforms. The first 3 days will focus on the Nexus 7000, with an overview of the Nexus 5000 and FCoE on Day 4. This course provides a technical overview of the Nexus platform architecture, deployment, and operations, including Virtual Device Contexts, Layer 2 and Layer 3 features, QoS, and security. You will explore the features of NX-OS and the Nexus platform by performing hands-on labs using a Nexus 7000 simulator.

Prerequisites

CCNA or equivalent knowledge, Building Scalable Cisco Internetworks (BSCI), Building Cisco Multilayer Switched Networks (BCMSN), Implementing Secure Converged Wide Area Networks (ISCW), and Securing Cisco Network Devices (SND) are required before taking DCNI-2.

Who Should Attend

Cisco channel partners, resellers, customers, and employees.

Course Objectives

- Describe the key features of the Nexus 7010 chassis
- Describe Supervisor Engine and Line Card Module features
- Describe the key features of the Nexus 7010 power supplies and fan-cooling system
- Describe the Connectivity Management Processor
- Describe the basic architecture of NX-OS
- Explain NX-OS Process Recovery
- Explain NX-OS Supervisor Redundancy
- Explain how the Nexus 5000 functions within SAN and LAN environments
- Describe the Fibre Channel over Ethernet (FCoE) protocol

Schedule

9/16/2008	San Jose, CA	11/11/2008	Chicago, IL
10/14/2008	Raleigh-Durham, NC	12/9/2008	Dallas, TX

Implementing Cisco Storage Networking Solutions (ICSNS)

Price: $2895 USD or 29 CLCs   **Duration:** 5 Days

Students will examine and configure the hardware and software components of the Cisco MDS 9000 products family, focusing on key technologies and features that apply to departmental, mid-range, and enterprise SANs. Students will learn to install and bring up the switch; configure Virtual SANs (VSANs), domains, interfaces, and zones; implement PortChannels; configure management security; and perform basic troubleshooting. Students will also learn how to configure highly available FCIP tunnels and tune the performance of your FCIP links.

Prerequisites

In order to fully benefit from this course, the student is expected to have previously obtained a basic understanding of data storage hardware components and protocols, including SCSI and Fibre Channel.

Certification

ICSNS is recommended training for the Cisco Storage Networking Support Specialist certification.

Who Should Attend

Cisco customers, employees, channel partners, and resellers.

Course Outline

- Module 1: MDS 9000 Platform Overview
- Module 2: System Installation and Initial Configuration
- Module 3: Building Virtual SANs
- Module 4: Managing SAN Traffic
- Module 5: Implementing FCIP
- Module 6: Troubleshooting Tools and Scenarios
- Appendix A: The Fibre Channel Protocol
- Appendix B: Installation and Configuration Reference

Course Objectives

- Given a SAN environment, identify the components, services, and features of the MDS 9000 platform that can be used to improve the availability, scalability, performance, and manageability of the SAN
- Given an MDS 9000 switch, safely install the switch hardware and perform the initial software configuration process
- Given a SAN design, implement the logical topology specified by a SAN design, so that connectivity between end devices can be verified
- Given a SAN design, describe the traffic management features associated with Intelligent Network Services for the MDS 9000 series in order to configure basic traffic management services for the SAN
- Given a SAN environment, describe how to use FCIP to implement appropriate solutions for SAN extension
- Given a SAN environment, identify MDS 9000 diagnostic tools in order to diagnose SAN problems and common configuration errors

Schedule

6/9/2008	Denver, CO	8/11/2008	San Jose, CA	10/27/2008	Raleigh-Durham, NC
6/16/2008	New York City, NY	9/22/2008	New York City, NY	11/3/2008	San Jose, CA
7/7/2008	Las Vegas, NV	9/29/2008	Denver, CO	11/10/2008	Reston, VA
7/21/2008	Raleigh-Durham, NC	10/6/2008	Las Vegas, NV	12/1/2008	Tampa, FL
8/4/2008	Reston, VA	10/13/2008	Dallas, TX	12/8/2008	Denver, CO

Implementing Cisco Advanced Storage Networking Solutions (IASNS)

Price: $2995 USD or 30 CLCs   **Duration:** 5 Days

This 5-day lecture/lab course that provides students with advanced skills in implementing and troubleshooting Cisco storage networks. IASNS focuses on advanced storage networking topics for the Cisco MDS Family of switches, including building virtual SAN fabrics, building heterogeneous SAN fabrics, configuring management and security services, configuring iSCSI, and advanced troubleshooting skills. A significant portion of the course is devoted to troubleshooting. The course enables the student to implement advanced Cisco MDS 9000 technologies and features that apply primarily to enterprise SANs, and troubleshoot common SAN problems and configuration errors.

Prerequisites

The Implementing Cisco Storage Networking Solutions (ICSNS) course is required before attending IASNS.

Certification

IASNS is recommended training for the Cisco Storage Networking Support Specialist certification.

Who Should Attend

Cisco customers, employees, channel partners, and resellers.

Course Outline

- Module 1: Building Enterprise SAN Fabrics
- Module 2: Implementing Management and Security Services
- Module 3: Advanced Troubleshooting
- Module 4: Implementing iSCSI

Course Objectives

- Given a detailed Fibre Channel SAN design specification, the student will be able to implement a SAN with multiple virtual fabrics using the full range of features and capabilities provided by the Cisco MDS platform, so that the SAN demonstrates high availability, scalability, performance, and interoperability
- Given a detailed set of Fibre Channel SAN management requirements, the student will be able to configure and use fabric management, performance management, and security services on the Cisco MDS platform, so that the SAN can be effectively managed, tuned and secured
- Given a set of observable symptoms on a Fibre Channel SAN, the student will be able to diagnose and correct software configuration issues and inoperable hardware components, so that the problems are resolved with minimal disruption to the SAN environment
- Given a set of requirements for an iSCSI implementation, the student will be able to indentify and configure the appropriate iSCSI features to meet the requirements

Schedule

6/16/2008	Reston, VA	8/25/2008	Tampa, FL	10/20/2008	Las Vegas, NV
7/28/2008	Raleigh-Durham, NC	9/8/2008	Dallas, TX	11/17/2008	Dallas, TX
8/18/2008	Las Vegas, NV	10/13/2008	Denver, CO	12/15/2008	Reston, VA

Designing Cisco Storage Networking Solutions (DCSNS)

Price: $2995 USD or 30 CLCs   **Duration:** 5 Days

Designing Cisco Storage Networking Solutions (DCSNS) is a 5-day hands-on workshop that provides students with advanced skills in designing Cisco storage networks. Students will learn about the key features of the MDS 9000 platform, and how to leverage these features to build highly available, extensible, intelligent SANs. DCSNS includes hands-on labs to familiarize students with basic MDS 9000 configuration procedures, and design workshops where students will learn to design multiprotocol enterprise SANs and SAN extension solutions. It also enables the student to design enterprise Cisco MDS 9000 solutions that include core Fibre Channel SANs, iSCSI for mid-range applications, and SAN extension solutions.

Prerequisites

In order for students to fully benefit from DCSNS the student should have a basic understanding of data storage hardware components and protocols, including SCSI and Fibre Channel.

Certification

DCSNS is recommended training for the Cisco Storage Networking Design Specialist certification.

Who Should Attend

Cisco customers, employees, channel partners, and resellers.

Course Outline

- Module 1: MDS 9000 Platform Overview
- Module 2: Designing SAN Fabrics
- Module 3: Consolidating Storage in the Data Center
- Module 4: Securing the SAN
- Module 5: Designing SAN Extension Solutions
- Appendix A: SCSI Overview
- Appendix B: Fibre Channel Overview
- Appendix C: MDS 9000 Hardware Installation Reference

Course Objectives

- Given a SAN environment, identify the components, services, and features of the MDS 9000 platform that can be used to improve the availability, scalability, performance, and manageability of the SAN
- Given the MDS platform components, design a multiprotocol SAN to meet a variety of customer requirements
- Given a SAN environment, design a SAN that enables storage consolidation
- Given a SAN environment, design a SAN security implementation that includes port and fabric security, secure management protocols, and role-based access control to meet security policy requirements
- Given an understanding of SAN extension applications, design a SAN extension solution that meets application availability, performance, and scalability requirements

Schedule

Date	Location	Date	Location	Date	Location
6/2/2008	Raleigh-Durham, NC	8/11/2008	Tampa, FL	10/20/2008	Tampa, FL
6/9/2008	New York City, NY	9/15/2008	Denver, CO	11/3/2008	Raleigh-Durham, NC
7/14/2008	Las Vegas, NV	10/6/2008	Dallas, TX	12/1/2008	Reston, VA

Cisco Wireless Mesh Networking (CWMN)

Price: $2295 USD or 23 CLCs   **Duration:** 3 Days

This training session is a three-day instructor-led technical course that provides students with the knowledge to design, install, and maintain a wireless mesh network both as an add-on to an existing wireless LAN and as a new installation.

Prerequisites

Students should attend the Cisco Unified Wireless Networks (CUWN) and Cisco Wireless LAN Advanced Topics (CWLAT) courses before attending CWMN. Students should also have a basic knowledge of PC hardware configurations and understanding of networking business drivers.

Who Should Attend

Cisco Wireless Specialized Partners with experience in outdoor RF environments, data networking, WLAN topologies and Radio Frequency technologies. This technical training is designed for individuals who are responsible for designing, installing, or maintaining a wireless mesh network or supporting customer wireless LAN networks.

Course Objectives

- List the four configuration tasks to be conducted for priming and AP before deployment
- Describe the 1500 series AP models
- Explain how a Mesh AP finds the best path to the wired network, using the concept of ease
- Describe the client backhaul access and the backup backhaul access concepts
- Demonstrate an ability to configure a basic Cisco Unified WLAN controller with Layer 3 LWAPP so that it could be deployed immediately to an example 1-2 hops mesh network

- Describe the six steps performed during the installation and deployment of outdoor Wireless LANs with Layer 3 LWAPP
- Describe how to ensure security in the AP to controller associate process
- Explain to an audience the use of Bridge Group Names as a technique to control mesh network device associations, answering the questions:
  - How is it set up?
  - What happens if it is not set up?
  - What happens to a MAP if the RAP bearing the same BGP disappears?
- Explain the functionality relating to the following configurable parameters: Radio roles, backhaul interface, and channel assignments
- Describe the Zero Touch configuration feature as it relates to the deployment of outdoor Wireless LANs, explain its purpose, the way mesh forms with it, and what happens if it is removed prior to or after mesh deployment
- Use and show more available methods (two main screens from the GUI, 6 main CLI commands) for verifying connectivity and performance in an outdoor mesh network
- Explain the 3 step methodology used to diagnose problems in mesh networks
- List and use the 18 key CLI commands used for verification and troubleshooting

Schedule

6/9/2008	Dallas, TX	10/14/2008	Chicago, IL
7/22/2008	Raleigh-Durham, NC	11/11/2008	Atlanta, GA
8/19/2008	New York City, NY	12/16/2008	Dallas, TX
9/23/2008	Columbia, MD		

Cisco Unified Wireless Networking (CUWN)

Price: $2695 USD or 27 CLCs   **Duration:** 4 Days

CUWN enables a network administrator to deploy a WLAN Enterprise solution through the identification and successful implementation of site-appropriate hardware and software features in a Cisco Unified Wireless Network.

Prerequisites

Interconnecting Cisco Network Devices Part 1 (ICND1) and Interconnecting Cisco Network Devices Part 2 (ICND2) are recommended before taking CUWN. Students should also have an understanding of basic networking principles, TCP/IP, bridging, routing protocol and VLAN operation.

Course Objectives

- Identify key enterprise WLAN implementation challenges
- Select and properly install the Cisco Unified Wireless Network (CUWN) hardware appropriate to site use and requirements
- Use the CUWN interfaces to administer WLAN, VLANs, 802.11 security policies, and QOS appropriately to optimize performance on and protect the network
- Configure and implement the key Unified Wireless security features to mitigate WLAN threats

- Utilize the recommended troubleshooting methodology and the various tools available to gather and assess system data and isolate equipment failures and security threats
- Administer, update, backup, restore, and use the Cisco Wireless Control System (WCS) as required to monitor CUWN equipment performance
- Configure and use the WCS location tracking features and the Cisco Location Server as appropriate to locate users within a CUWN environment

Who Should Attend

Cisco customers, employees, Channel Partners, and resellers who are interested in the Cisco Unified Wireless Network solution, have a strong data networking background, and will be responsible for planning, deploying, and managing the enterprise WLAN using lightweight access points, controllers, and the advanced feature set.

Schedule

6/24/2008	Atlanta, GA	10/7/2008	Columbia, MD
7/15/2008	Reston, VA	11/4/2008	Atlanta, GA
8/5/2008	Dallas, TX	12/2/2008	Chicago, IL
9/16/2008	San Jose, CA		

Wi-Fi Mesh RF Design Boot Camp (WFRF)

Price: $ 2095 USD or 21 CLCs   **Duration:** 3 Days

All of the necessary skills to prepare a technical student to design a municipal mesh network are covered in this 3-day Boot Camp. The course is comprised of two modular courses in RF Design: Overview of RF Design Principles, and RF Design for Mesh Networks.

Prerequisites

Students should have basic knowledge of PC hardware configurations and understanding of networking business drivers before taking WFRF.

Who Should Attend

Engineers who are planning a municipal, public safety, or campus mesh deployment, and who need the RF design skills, balancing the requirements of service quality with minimum capital and operations costs.

Course Objectives

The course provides deep background and hands-on experience with the RF propagation models that are used in all RF planning tools, like those used for mesh network design. Students learn the differences between various propagation models, and where each model should be applied in your RF design process. They will also learn how to model foliage, terrain, buildings, and other obstructions in a mesh network design. The course teaches all Radio-Frequency (RF) design steps that an RF engineer would consider for a mesh deployment goals.

Schedule

7/29/2008	Raleigh-Durham, NC	10/7/2008	Chicago, IL
8/12/2008	New York City, NY	11/4/2008	Atlanta, GA
9/30/2008	Reston, VA	12/9/2008	Dallas, TX

Cisco Wireless Mesh & RF Design Boot Camp (WMRFBC)

Price: $3695 USD or 37 CLCs   **Duration:** 5 Days

The Cisco Wireless Mesh & RF Design Boot Camp (WMRFBC) 5-day course combines the Cisco Wireless Mesh Network (CWMN) course and the Wi-Fi Mesh RF Design Boot Camp (WFRF). In one week of intense training, students will learn how to design, install, and maintain a wireless mesh network as well as select, connect, configure, and troubleshoot Cisco components of their wireless mesh network. In an in-class case study, they will gain experience designing the RF network for a sample mesh-served community, engineering the client access layer, the mesh layer, and the backhaul layer.

Prerequisites

A basic understanding of PC hardware configurations and networking business drivers are both required.

Course Objectives

Part 1: Principles and models for Wi-Fi Mesh Networks
- Principles of Wireless Mesh Networks
- Wireless Mesh Design Requirements
- RF Theory
- Access Point Rules
- 802.11h Standard
- Mesh Network Overview: Components, Protocols, and Functionality
- Mesh Network Features and Applications
- Basic RF for Wi-Fi Mesh Design
- Wi-Fi Mesh Network Design
- Propagation Modeling of Mesh Networks

Part 2: Using the Cisco WLC in a Mesh Network
- Configuring a Wireless Controller
- Installation, Configuration, and Maintenance of Mesh Networks
- Installing Cisco Aironet Access Points

- Access Point and Bridging Group Configuration
- Configuring the Controller, Using the GUI to Add the AP to the Mesh Network
- Connectivity Verification
- Cisco WCS Map and Mesh Enhancements

Part 3: The Business Case and Case Study
- RF Design Cost Considerations
- Wi-Fi Mesh Design Case Study

Part 4: Troubleshooting and Verification Confirmation
- Verification and Troubleshooting
- Validating WLAN Configurations
- CLI Support Tools
- Identifying Other Considerations for Troubleshooting
- GUI Support Tools

Who Should Attend

Sales and Field engineers that are involved in designing and implementing wireless mesh networks. Also, Cisco partners that need to obtain the Advanced Technology Partner 2.0 Certification can get all required courses covered in this 5-day boot camp.

Schedule

6/16/2008	Chicago, IL	9/8/2008	Chicago, IL
6/23/2008	San Jose, CA	9/15/2008	Raleigh-Durham, NC
7/7/2008	New York City, NY	10/20/2008	San Jose, CA
7/14/2008	Dallas, TX	10/27/2008	Atlanta, GA
8/4/2008	Miami, FL	11/17/2008	Dallas, TX
8/25/2008	Reston, VA		

Securing Networks with PIX and ASA (SNPA)

Price: $2995 USD or 30 CLCs   **Duration:** 5 Days

This Authorized Cisco course will give students the knowledge and skills needed to configure, maintain, and operate Cisco ASA 5500 Series Adaptive Security Appliances and Cisco PIX 500 Series Security Appliances.

Prerequisites

Students who attend this advanced course must have experience in configuring Cisco IOS software, the CCNA certification or equivalent knowledge, basic knowledge of the Windows operating system, and a strong familiarity with networking and security terms and concepts.

Certification

SNPA is part of the Cisco Certified Security Professional (CCSP) certification.

Course Objectives

- Describe the general functionality of firewalls and security appliances
- Choose the most appropriate security appliance and licensing for a given scenario
- Configure the security appliance for basic network connectivity
- Perform address translation on a security appliance
- Configure security appliance access control
- Describe and configure the object grouping feature of Cisco security appliances
- Define, configure, and monitor AAA in Cisco security appliances
- Describe and configure the switching and routing functionality that your security appliance provides

- Describe and configure a security appliance modular policy
- Describe and configure security appliance advanced protocol handling
- Configure Cisco security appliances for VPN connectivity
- Configure security appliances for secure remote access
- Configure the Cisco security appliances to support the WebVPN feature set
- Configure Cisco security appliances to run in transparent firewall mode

Who Should Attend

Cisco customers who implement and maintain PIX and ASA Security Appliances and/or Cisco engineers who sell, implement, or maintain PIX and ASA Security Appliances.

Schedule

Date	Location	Date	Location
6/16/2008	New York City, NY	9/29/2008	San Jose, CA
6/23/2008	San Jose, CA	10/20/2008	Raleigh-Durham, NC
7/21/2008	Raleigh-Durham, NC	10/27/2008	Los Angeles, CA
7/28/2008	Los Angeles, CA	12/1/2008	Chicago, IL
8/18/2008	Chicago, IL	12/8/2008	Dallas, TX
8/25/2008	Dallas, TX	12/15/2008	New York City, NY
9/22/2008	New York City, NY		

Implementing Cisco Intrusion Prevention System (IPS)

Price: $2995 USD or 30 CLCs   **Duration:** 4 Days

An introduction of Cisco IDS detection platforms including the 4200 Series Sensors, the Catalyst 6500 Series Intrusion Detection Module 2 (IDSM2) and the IDS Network Module (NM-CIDS) are introduced in the IPS course. The command line and the IPS Device Manager GUI are used to configure the sensor.

Prerequisites

Interconnecting Cisco Network Devices Part 1 (ICND1), Interconnecting Cisco Network Devices Part 2 (ICND2), and Securing Cisco Network Devices (SND) are required before attending IPS.

Certification

IPS is recommended training for the Cisco Certified Security Professional (CCSP) certification.

Course Objectives

- Install an IPS sensor appliance in the Network and initialize it
- Use IDM to configure built-in signatures to meet the requirements of a given security policy
- Describe the functions of signature engines and their parameters and use IDM to tune and create signatures
- Tune a sensor to work optimally in the network

- Use the Monitoring Center for Security and Cisco Threat Response
- Install the NM-CIDS in a router and initialize it
- Install and recover the sensor software image and perform service pack and signature updates

Who Should Attend

Network professionals who want to ensure security on their network or who seek the Cisco Certified Security Professional Certification (CCSP).

Schedule

Date	Location	Date	Location
6/10/2008	Dallas, TX	9/30/2008	New York City, NY
7/8/2008	New York City, NY	10/7/2008	San Jose, CA
7/15/2008	San Jose, CA	11/4/2008	Raleigh-Durham, NC
8/5/2008	Raleigh-Durham, NC	11/18/2008	Los Angeles, CA
8/12/2008	Los Angeles, CA	12/9/2008	Chicago, IL
9/9/2008	Chicago, IL	12/16/2008	Dallas, TX
9/16/2008	Dallas, TX		

Securing Cisco Network Devices (SND)

Price: $2995 USD or 30 CLCs   **Duration:** 5 Days

This entry-level security course will teach basic concepts such as network security policies, network attack methods, and threat mitigation techniques, along with the Cisco security product portfolio. Students will examine the most important security technologies, including hardening Cisco IOS routers and switches against attack, Layer 2 security, stateful firewalling, Intrusion Prevention Systems (IPS), and Virtual Private Networks (VPNs).

Prerequisites

The Interconnecting Cisco Network Devices Part 1 & 2 (ICND1 & ICND2) are both required courses before taking SND.

Certification

SND is recommended training for the Cisco Certified Security Professional (CCSP) certification.

Who Should Attend

Network professionals who need to understand basic security concepts, require the basic knowledge and skills needed to deploy Cisco security, and are seeking CCSP certification, Cisco Qualified Specialist Certifications in Firewall, VPN, or IPS, or the Cisco Information Security Specialist certification.

Course Objectives

- Give an introduction to Cisco products and solutions that form the basis of Cisco's Security Portfolio
- Perform basic tasks to secure network devices at Layers 2 and 3 using command line interfaces and web-based GUIs
- Deploy the security technology in multiple Cisco devices including: routers, switches, access control servers, IPS sensors, and VPN concentrators

Schedule

Date	Location	Date	Location
6/9/2008	San Jose, CA	9/29/2008	Raleigh-Durham, NC
7/7/2008	Raleigh-Durham, NC	10/6/2008	Los Angeles, CA
7/14/2008	Los Angeles, CA	11/3/2008	Chicago, IL
8/4/2008	Chicago, IL	11/17/2008	Dallas, TX
8/11/2008	Dallas, TX	12/1/2008	New York City, NY
9/8/2008	New York City, NY	12/8/2008	San Jose, CA
9/15/2008	San Jose, CA		

Securing Networks with Routers and Switches (SNRS)

Price: $2995 USD or 30 CLCs   **Duration:** 5 Days

This 5-Day course is aimed at providing Network Professionals with the knowledge and skills needed to secure Cisco IOS Routers and Switches. Successful students will be able to secure the network environment using existing Cisco IOS and CatOS security features, configure the 3 primary components of the Cisco IOS Firewall Feature set (Context-Based Access Control (CBAC), Intrusion Prevention, and Authentication Proxy), implement Secure Tunnels (VPNs) using IPSec Technology and implement basic Access Switch Security.

Prerequisites

The Interconnecting Cisco Network Devices Part 1 & 2 (ICND1 & ICND2) are both required courses before taking SNRS.

Certification

SNRS is recommended training for the Cisco Certified Security Professional (CCSP) certification.

Who Should Attend

Internetwork professionals who want to ensure security of their network or who seek the Cisco Certified Security Professional Certification (CCSP).

Course Objectives

- Secure the network environment using existing Cisco IOS and CatOS security features
- Configure the three primary components of the Cisco IOS Firewall Feature set
- Implement secure tunnels (VPNs) using IPSec technology
- Implement basic access switch security
- Complete a security audit using Cisco Security Device Manager

Schedule

Date	Location	Date	Location
6/9/2008	New York City, NY	9/22/2008	San Jose, CA
6/16/2008	San Jose, CA	10/6/2008	Raleigh-Durham, NC
7/14/2008	Raleigh-Durham, NC	10/20/2008	Los Angeles, CA
7/21/2008	Los Angeles, CA	11/17/2008	Chicago, IL
8/11/2008	Chicago, IL	12/1/2008	Dallas, TX
8/18/2008	Dallas, TX	12/8/2008	New York City, NY
9/15/2008	New York City, NY	12/15/2008	San Jose, CA

Cisco Security Management and Monitoring (CSMM)

Price: $3595 USD or 36 CLCs   **Duration:** 4 Days

Fast Lane's unique Cisco Security Management & Monitoring class is a custom offering that combines both elements of the Cisco Security Management Suite. Students will learn scalable, policy-based configuration management with Cisco Security Manager 3.1, and enterprise monitoring and Security Threat Mitigation with the Cisco Secure MARS appliance. The Cisco Security Management Suite is an integral part of the Cisco Self-Defending Network architecture.

Prerequisites

The CCSP certification or equivalent knowledge, at least 6 months of hands-on experience configuring Cisco routers and security products, and familiarity with implementing network security policies and these networking components and concepts.

Who Should Attend

Channel Partner/Resellers pursuing the Advanced Security Specialization; enterprise customers that need to centralize configuration management, policy management, and monitoring; IT professionals interested in professional advancement and CCSP certification; any one wishing to evaluate Cisco Security Manager & MARS.

Course Objectives

- Import device configurations into Cisco Security Manager
- Create and manage global, group and individualized device policies
- Create a network map appropriate to your topology in Map View
- Manage VPN Routers including site-to-site and DMVPN
- Build and manage SSL VPN policies on routers and ASA 5500 series firewalls

- Create/manage firewall-specific policies for PIX 500 and ASA 5500 firewalls
- Cover the basic physical installation process
- Add Cisco security and network devices into MARS appliance
- Add Non-Cisco security and network devices into MARS appliance
- Configure security devices to generate interesting events that constitute and attack scenario and have MARS collect the interesting events for incident investigation
- Discuss attack mitigation and false positive confirmation in context to MARS appliance
- Configure appliance to perform Incident Investigation an attack mitigation
- Explain how to create, view and save a long-duration query and reports on the MARS appliance
- Configure the MARS appliance to send an alert
- Describe and configure rules that detect interesting patterns of network activity
- Use management features in the MARS appliance to assign event, addressing, service and user information
- Configure hardware maintenance chores like viewing audit trail, data archiving, hot swapping hard drives, upgrading software on MARS appliance
- Provide overview of MARS Global Controller
- Provide overview of Log Parser Templates

Schedule

7/8/2008	Dallas, TX	10/21/2008	Reston, VA
8/12/2008	Raleigh-Durham, NC	12/2/2008	Atlanta, GA
9/16/2008	San Jose, CA		

Implementing Unified Communications Security (IUCS)

Price: $2895 USD or 29 CLCs   **Duration:** 5 Days

Students will be prepared to install, configure, and maintain security on a Cisco Unified Communications solution.

Prerequisites

The following course are recommended before taking the IUCS course:
- Interconnecting Cisco Network Devices Part 1 (ICND1)
- Interconnecting Cisco Network Devices Part 2 (ICND2)
- Cisco Voice over IP (CVOICE)
- Cisco IP Telephony Part 1 (CIPT1)
- Cisco IP Telephony Part 1 (CIPT2)
- IP Telephony Express (IPTX)

Course Objectives

- Identify different types of threats and attacks of Unified Communication infrastructure
- Identify different types of Layer 2 threats and attacks as well as configure a Cisco Catalyst Switch to prevent these attacks
- Identify different types of Layer 3 threats and attacks as well as configure a Cisco ASA Firewall to prevent these attacks
- Deploy and enable Secure mode for Cisco Unified CallManager

- Implement Cisco IP phone security
- Implement Cisco IOS voice gateway security
- Implement security for intercluster communication
- Implement Cisco Unified SRST for remote site failover
- Implement V3PN (Voice and Video Virtual Private Network)
- Secure H.323 and SIP internetworking using IP-IP Gateway
- Implement security for Unified Communication Application such as Cisco Unified MeetingPlace, Cisco Unified MeetingPlace Express, Cisco Unity Express and Cisco Unity

Who Should Attend

Cisco customers, employees, channel partners, and resellers.

Schedule

7/7/2008	San Jose, CA	9/29/2008	San Jose, CA
7/21/2008	Dallas, TX	11/10/2008	Raleigh-Durham, NC
8/18/2008	Raleigh-Durham, NC	12/8/2008	Tampa, FL
9/8/2008	Tampa, FL		

Implementing Monitoring, Analysis, and Response System (MARS)

Price: $1995 USD or 20 CLCs   **Duration:** 2 Days

Cisco Security Monitoring, Analysis, and Response System is a family of high-performance, scalable appliances for threat management, monitoring, and mitigation that enables students to make more effective use of network and security devices by combining network intelligence, context correlation, vector analysis, anomaly detection, hotspot identification, and automated mitigation capabilities. With MARS solutions students can readily and accurately identify, manage, and eliminate network attacks and maintain network compliance.

Prerequisites

Interconnecting Cisco Network Devices Part 1 (ICND1) and Interconnecting Cisco Network Devices Part 2 (ICND2) are required before taking MARS.

Who Should Attend

Cisco customers, employees, channel partners, and resellers.

Course Objectives

- Describe the MARS solution, features and functions in context to the issues of security incidents and security information in an enterprise network
- Cover the basic physical installation process
- Add Cisco security and network devices into MARS appliance
- Add Non-Cisco security and network devices into MARS appliance

- Provide an overview of Log Parser Templates
- Configure security devices to generate interesting events that constitute an attack scenario and have MARS collect the interesting events for incident investigation
- Discuss attack mitigation and false positive confirmation in context to MARS appliance
- Configure appliance to perform incident investigation and attack mitigation
- Explain how to create, view, and save a long-duration query and reports on the MARS appliance
- Configure the MARS appliance to send an alert
- Describe and configure rules that detect interesting patterns of network activity
- Use management features in the MARS appliance to assign event, addressing, service, and user information
- Configure hardware maintenance chores like viewing audit trails, data archiving, hot swapping hard drives, and upgrading software on MARS appliance
- Provide an overview of MARS Global Controller

Schedule

6/24/2008	Atlanta, GA	10/14/2008	Chicago, IL
7/29/2008	San Jose, CA	11/18/2008	Raleigh-Durham, NC
9/9/2008	Reston, VA		

Implementing Cisco Network Administrator Control (NAC)

Price: $2295 USD or 23 CLCs   **Duration:** 3 Days

This 3-day course includes Network Access Devices (NADs) Switch (layer 2): NAC Phase 2 Network devices that enforce admission control policy on switches. This device demands 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.

Prerequisites

The CCSP Certification or equivalent knowledge, basic knowledge of the Windows operating system, and familiarity with networking and security terminology and concepts are required prerequisites for taking NAC.

Who Should Attend

Cisco customers, employees, channel partners, and resellers.

Course Objectives

- Understand how Cisco NAC operates
- Configure Cisco Secure ACS to operate as a Cisco NAC AAA policy server
- Configure Cisco IOS routers, switches, and access points to act as Cisco NAC NADs
- Configure Cisco agents to act as Cisco NAC clients
- Configure a Trend Micro policy server to operate as an external Cisco NAC policy server

Schedule

6/17/2008	Dallas, TX	10/7/2008	New York City, NY
7/15/2008	New York City, NY	11/4/2008	Los Angeles, CA
8/19/2008	Los Angeles, CA	12/16/2008	Dallas, TX
9/23/2008	Dallas, TX		

Implementing Cisco NAC Appliance (CANAC)

Price: $2595 USD or 26 CLCs   **Duration:** 3 Days

In this course students learn how to design and implement a Cisco NAC Appliance solution to suit any network. Basic configuration tasks such as NAM and NAS deployment modes, authentication (including Windows SSO), role-based access control, posture assessment, and remediation are taught.

Prerequisites

Certification as a CCSP, Building Cisco Multilayer Switched Networks (BCMSN), Securing Networks with Routers and Switches (SNRS), and Building Cisco Scalable Internetworks (BSCI) are required classes before taking CANAC. Students should also have basic knowledge of the Microsoft Windows operating system, familiarity with networking and security terminology and concepts, and fundamental knowledge of implementing network security.

Who Should Attend

Anyone responsible for the design, implementation, or support of a Cisco NAC Appliance installation and Cisco Channel Partners preparing for ASFE certification.

Course Objectives

- Given client network security requirements, explain how a NAC Appliance (Cisco Clean Access) deployment scenario will meet or exceed network security requirements
- Configure the common elements of a NAC Appliance (Cisco Clean Access) solution
- Configure the NAC Appliance (Cisco Clean Access) in-band and out-of-band implementation options
- Implement a highly available NAC Appliance (Cisco Clean Access) solution to mitigate network threats and facilitate network access for those users that meet corporate security requirements
- Maintain a highly available NAC Appliance (Cisco Clean Access) deployment in medium and large enterprise network environments

Schedule

7/15/2008	Reston, VA	10/28/2008	New York City, NY
8/19/2008	Chicago, IL	12/2/2008	Dallas, TX
9/23/2008	Raleigh-Durham, NC		

Cisco Voice over IP (CVOICE)

Price: $2795 USD or 28 CLCs   **Duration:** 5 Days

Gain an understanding of converged voice and data networks and the challenges faced by various network technologies. This course provides network administrators and network engineers with the knowledge and skills required to integrate gateways and gatekeepers into an enterprise VoIP network while also addressing design, planning, and deployment practices.

Prerequisites

Interconnecting Cisco Network Devices Part 1 (ICND1) and Interconnecting Cisco Network Devices Part 2 (ICND2) are required prerequisites before taking CVOICE.

Certification

CVOICE is recommended training for the Cisco Certified Voice Professional (CCVP) certification, the Cisco IP Telephony Support Specialist certification, and the Cisco IP Telephony Express Specialist certification.

Course Objectives

- Describe VoIP, components of a VoIP network, VoIP protocols, special requirements for VoIP calls, and Codecs
- Configure gateway interconnections to support VoIP and PSTN calls
- Describe the basic signaling protocols used on voice gateways and configure a gateway to support calls using the various signaling protocols

- Define a dial plan, describing the purpose of each dial plan component, and implement a dial plan on a voice gateway
- Describe gatekeeper functions, protocols, and operation and implement an H.323 gatekeeper to provide dial plan resolution and call admission control
- Implement a Cisco Unified Border Element gateway to connect to an Internet Telephony Service Provider

Who Should Attend

Technical professionals responsible for VoIP, including voice/data integration.

Schedule

6/9/2008	Chicago, IL	9/22/2008	Raleigh-Durham, NC
6/23/2008	Raleigh-Durham, NC	10/6/2008	Tampa, FL
7/14/2008	Tampa, FL	10/27/2008	New York City, NY
7/28/2008	New York City, NY	11/3/2008	San Jose, CA
8/11/2008	San Jose, CA	11/10/2008	Dallas, TX
8/18/2008	Dallas, TX	11/17/2008	Atlanta, GA
8/25/2008	Atlanta, GA	12/8/2008	Chicago, IL
9/8/2008	Chicago, IL		

Implementing Cisco Quality of Service (QOS)

Price: $2995 USD or 30 CLCs   **Duration:** 5 Days

This Authorized Cisco course gives students the knowledge and skills required to design, implement, and troubleshoot Quality of Service (QoS) on a network. The course addresses the essential QoS technologies and applications for both Service Provider and Enterprise networks.

Prerequisites

Interconnecting Cisco Network Devices Part 1 (ICND1), Interconnecting Cisco Network Devices Part 2 (ICND2), and Configuring BGP on Cisco Routers are required prerequisites before taking CVOICE.

Certification

QoS is recommended training for the following certifications:
- Cisco Certified Internetwork Professional (CCIP)
- Cisco Certified Voice Professional (CCVP)
- Cisco IP Telephony Support Specialist
- Cisco IP Telephony Operations Specialist
- Cisco IP Telephony Design Specialist
- Cisco IP Telephony Express Specialist

Course Objectives

- Given a converged network, explain the need to implement QoS and explain methods for implementing and managing QoS
- Use QoS queuing mechanisms to manage network congestion

- Identify and describe different models used for ensuring QoS in a network and explain key IP QoS mechanisms used to implement the models
- Explain the use of MQC and Auto QoS to implement QoS on the network
- Successfully classify and mark network traffic to implement a policy defining QoS requirements
- Use QoS congestion avoidance mechanisms to reduce the effects of congestion
- Use Cisco QoS traffic policies and traffic shaping mechanisms to effectively limit the rate of network traffic

Who Should Attend

Network professionals interested in deploying state-of-the-art QoS techniques to support multimedia traffic would benefit from this course.

Schedule

6/9/2008	Tampa, FL	9/29/2008	New York City, NY
7/7/2008	New York City, NY	10/6/2008	San Jose, CA
7/14/2008	San Jose, CA	10/20/2008	Dallas, TX
7/21/2008	Dallas, TX	11/3/2008	Atlanta, GA
8/4/2008	Atlanta, GA	11/17/2008	Chicago, IL
8/11/2008	Chicago, IL	12/1/2008	Raleigh-Durham, NC
9/8/2008	Raleigh-Durham, NC	12/8/2008	Tampa, FL
9/15/2008	Tampa, FL		

Cisco IP Telephony Part 1 (CIPT1)

Price: $2895 USD or 29 CLCs   **Duration:** 5 Days

The first part of the two-part IP Telephony courses prepares students for installing, configuring and maintaining a Cisco IP telephony solution. The course focuses primarily on Cisco Unified CallManager, the call routing and signaling component for the Cisco IP telephony solution.

Prerequisites

Interconnecting Cisco Network Devices Part 1 (ICND1) and Interconnecting Cisco Network Devices Part 2 (ICND2) are required prerequisites to CIPT1.

Certification

CIPT1 is recommended training for the Cisco Certified Voice Professional (CCVP), the Cisco Certified Internetwork Expert Voice (CCIE), and the Cisco IP Telephony Support Specialist certifications.

Course Objectives

- Describe Cisco Unified Communications Manager including its functions, architecture, deployment, and redundancy options, and how to install or upgrade
- Perform Cisco Unified Communications Manager platform and general administration, initial configuration, and user management

- Configure Cisco Unified Communications Manager to support on-cluster calling in a single site deployment
- Implement a dial plan in Cisco Unified Communications Manager to make internal calls and place calls using the PSTN
- Configure Cisco Unified Communications Manager media resources, features and voice mail integration

Who Should Attend

Networking Professionals within a multichannel call center environment who will have day-to-day interaction with the ICM products from Cisco.

Schedule

6/16/2008	Chicago, IL	9/29/2008	Raleigh-Durham, NC
7/7/2008	Raleigh-Durham, NC	10/20/2008	Tampa, FL
7/21/2008	Tampa, FL	11/3/2008	New York City, NY
8/4/2008	New York City, NY	11/17/2008	San Jose, CA
8/18/2008	San Jose, CA	12/1/2008	Atlanta, GA
9/8/2008	Atlanta, GA	12/15/2008	Chicago, IL
9/15/2008	Chicago, IL		

Cisco IP Telephony Part 2 (CIPT2)

Price: $2895 USD or 29 CLCs   **Duration:** 5 Days

This course focuses on Cisco Unified CallManager Release 6.0, the call routing and signaling component for the Cisco Unified Communications solution. Students will be prepared for installing and configuring a Cisco Unified Communications Manager solution in a multisite environment.

Prerequisites

Cisco IP Telephony Part 1 (CIPT1) is required before taking CIPT2.

Certification

CIPT2 is recommended training for the Cisco Certified Voice Professional (CCVP), the Cisco Certified Internetwork Expert Voice (CCIE), and the Cisco IP Telephony Support Specialist certifications.

Who Should Attend

Networking Professionals within a multichannel call center environment who will have day-to-day interaction with the ICM products from Cisco.

Course Objectives

- Describe multisite deployment issues and solutions, and describe and configure required dial plan elements
- Implement call processing resiliency in remote sites using SRST, MGCP fallback, and Cisco Unified Communications Manager Express in SRST mode
- Implement call admission control to prevent oversubscription of the IP WAN
- Implement features and applications that are pertinent for multisite deployments
- Secure a Cisco Unified Communications IP Telephony deployment

Schedule

6/9/2008	Atlanta, GA	9/22/2008	Chicago, IL
6/23/2008	Chicago, IL	10/6/2008	Raleigh-Durham, NC
7/14/2008	Raleigh-Durham, NC	10/27/2008	Tampa, FL
7/28/2008	Tampa, FL	11/17/2008	New York City, NY
8/11/2008	New York City, NY	12/1/2008	San Jose, CA
8/25/2008	San Jose, CA	12/8/2008	Atlanta, GA
9/15/2008	Atlanta, GA		

Troubleshooting Cisco Unified Communication Systems (TUC)

Price: $2995 USD or 30 CLCs   **Duration:** 5 Days

This course equips network professionals with the knowledge and skills required to troubleshoot Unified Communications systems/solutions in enterprise, mid-market, and commercial deployments. Students will learn troubleshooting methodology, triage, resources, tools, and fixes at the integrated system/solution level as well as for components, such as Cisco Unified CallManager, Cisco Unity, video conferencing, and network infrastructure.

Prerequisites

It is recommended that students take the following courses before attending TUC:
- Interconnecting Cisco Network Devices Part 1 (ICND1)
- Interconnecting Cisco Network Devices Part 2 (ICND2)
- Implementing Cisco Voice Gateways and Gatekeepers (GWGK)
- Implementing Cisco Quality of Service (QOS)
- Cisco IP Telephony Part 1 (CIPT1)
- Cisco IP Telephony Part 2 (CIPT2)

Certification

TUC is recommended training for the Cisco Certified Voice Professional (CCVP) certification.

Who Should Attend

System engineers, field engineers, and anyone attempting the CCVP certification that includes IP Telephony Troubleshooting would benefit.

Course Objectives

The professional will troubleshoot Unified Communications Systems / Solutions and components / products by identifying and isolating problems, recommending solutions, and implementing fixes.

Schedule

6/9/2008	San Jose, CA	9/29/2008	Atlanta, GA
7/7/2008	Atlanta, GA	10/6/2008	Chicago, IL
7/14/2008	Chicago, IL	11/3/2008	Raleigh-Durham, NC
8/4/2008	Raleigh-Durham, NC	11/17/2008	Tampa, FL
8/11/2008	Tampa, FL	12/8/2008	New York City, NY
9/8/2008	New York City, NY	12/15/2008	San Jose, CA
9/15/2008	San Jose, CA		

Implementing Cisco Voice Gateways and Gatekeepers (GWGK)

Price: $2895 USD or 29 CLCs   **Duration:** 5 Days

GWGK covers the in-depth and important topics needed to implement Cisco Voice Gateways and Gatekeepers in Enterprise or Service Provider environments with CallManager and Cisco Unity.

Prerequisites

It is recommended that students take the following courses before attending GWGK:
- Interconnecting Cisco Network Devices Part 1 (ICND1)
- Interconnecting Cisco Network Devices Part 2 (ICND2)
- Cisco Voice over IP (CVOICE)
- Implementing Cisco Quality of Service (QOS)
- Cisco IP Telephony Part 1 (CIPT1)
- Cisco IP Telephony Part 2 (CIPT2)

Certification

GWGK is recommended training for the Cisco Certified Voice Professional (CCVP) certification.

Who Should Attend

Network Engineers responsible for implementing Cisco Voice Gateways and Gatekeepers in Enterprise or Service Provider Environments.

Course Objectives

- Install and configure Cisco Voice Gateways and Gatekeepers
- Understand the recommendations of Cisco's Solution Reference Network Design
- Select an appropriate deployment model
- Implement Call Plans
- Implement Service Provider or managed Service Applications
- Monitor and troubleshoot Cisco Voice Gateways and Gatekeepers

Schedule

6/16/2008	Atlanta, GA	9/29/2008	Chicago, IL
7/7/2008	Chicago, IL	10/20/2008	Raleigh-Durham, NC
7/21/2008	Raleigh-Durham, NC	11/3/2008	Tampa, FL
8/4/2008	Tampa, FL	11/17/2008	Dallas, TX
8/11/2008	Dallas, TX	12/1/2008	New York City, NY
8/18/2008	New York City, NY	12/8/2008	San Jose, CA
9/8/2008	San Jose, CA	12/15/2008	Atlanta, GA
9/22/2008	Atlanta, GA		

Cisco Unified Communications Manager 6.1 (CCM61)

Price: $ 3695 USD or 37 CLCs   **Duration:** 5 Days

Learn how to fully leverage the use of Cisco Unified Communications Manager with IP phones, gateways, and applications in this 5-day Boot Camp class. This training prepares you for planning, installing, configuring, and maintaining a Cisco Unified Communications solution in a single- and multiside environment.

Prerequisites

Students should have a working knowledge of LANs and knowledge of traditional public switched telephone network (PSTN) operations and voice fundamentals before taking CCM61.

Who Should Attend

Network Administrators, Network Engineers and Systems Engineers configuring and administering Cisco Unified Communications solutions.

Course Objectives

- Get started with Cisco Unified Communications Manager
- Administer Cisco Unified Communications Manager
- Enable On-Net and Off-Net Calling
- Implement Media Resources, Features, and Applications
- Implement Multisite Deployments
- Implement Centralized Call Processing Redundancy
- Implement Bandwidth Management and Call Admission Control
- Implement Features and Applications for Multiside Deployments

Schedule

6/16/2008	Dallas, TX	9/29/2008	Reston, VA
7/14/2008	Chicago, IL	10/27/2008	Dallas, TX
8/11/2008	Raleigh-Durham, NC	11/17/2008	Chicago, IL
9/8/2008	San Jose, CA	12/15/2008	Raleigh-Durham, NC

Cisco Unified Communications Manager Migration 6.1 (CUCMM61)

Price: $2895 USD or 29 CLCs   **Duration:** 3 Days

CUCMM61 provides the knowledge and experience necessary to migrate from a Cisco Unified CallManager 4.x or Cisco Unified Communication Manager 5.x environment to a Cisco Unified Communications Manager 6.1 solution.

Prerequisites

Cisco Voice Over IP (CVOICE), Cisco IP Telephony Part 1 (CIPT1), and Cisco IP Telephony Part 2 (CIPT2) are required before taking CUCMM61.

Who Should Attend

Unified Communications design and consulting engineers responsible for Cisco Unified Communication environments.

Course Objectives

- Understand the migration strategy for Cisco Unified Communications Manager 6.1
- Plan a migration to Cisco Unified Communications Manager 6.1
- Migrate from Cisco Unified CallManager 4.x to Cisco Unified Communications Manager 6.1
- Migrate from Cisco Unified Communications Manager 5.x to Cisco Unified Communications Manager 6.1
- Explain and configure new features introduced with Cisco Unified Communications Manager 6.1

Schedule

6/25/2008	Raleigh-Durham, NC	10/22/2008	San Jose, CA
7/23/2008	Chicago, IL	11/17/2008	Raleigh-Durham, NC
8/20/2008	Atlanta, GA	12/10/2008	Chicago, IL
10/8/2008	New York City, NY		

Cisco Unified Communications Presales & Design (CUCPD)

Price: $2995 USD or 30 CLCs   **Duration:** 5 Days

This course provides the knowledge and experience necessary to sell and design Cisco Unified Communications solutions for small, medium and large companies.

Prerequisites

Students should have an understanding of LAN/WAN, Voice over IP Fundamentals, and Cisco Unified Communications basics before taking CUCPD.

Who Should Attend

Cisco Unified Communications Sales professionals and engineers who are responsible for Cisco Unified Communications selling and designing on a technical level.

Course Objectives

- Sell Cisco Unified Communications solutions
- Design Cisco Unified Communications solutions
- Design Voice Mail solutions
- Secure Cisco Unified Communications solutions

Schedule

6/23/2008	Chicago, IL	10/20/2008	Raleigh-Durham, NC
7/7/2008	Dallas, TX	11/17/2008	Chicago, IL
8/18/2008	Reston, VA	12/15/2008	Dallas, TX
9/22/2008	San Jose, CA		

Hosted Unified Communications System (HUCS)

Price: $4495 USD or 45 CLCs   **Duration:** 5 Days

This 5-day course is a first level course covering the Cisco Hosted Unified Communications System or HUCS. Included in the course are extensive labs where students will gain the knowledge and skills required to build a HUCS platform.

Prerequisites

Students should understand telephony network basics and have experience with Cisco IOS, IP networking, H.323 Gatekeepers, Cisco PGW, and CUCM before taking HUCS)

Who Should Attend

Telephony Service Providers and those who build, operate, maintain, and implement BVSM provisioned architectures.

Course Objectives

- Identify and describe Hosted Unified Communications System (HUCS)
- Describe the components of a HUCS platform and their manner of interconnection
- Given a PGW with software installed create the static configuration (pre-BVSM requirement)
- Given an HSI with software installed create the static configuration (pre-BVSM requirement)
- Given a CUCM with software installed create the static configuration (pre-BVSM requirement)
- Provision H.323 Gatekeepers
- Prepare configuration and customer workbooks ready for data entry
- Perform model loading to BVSM
- Use BVSM to provision a working configuration beginning with an empty database using GUI and Bulk Load techniques
- Test the completed configuration to demonstrate all provisioned features
- Perform first level troubleshooting on PGW, CUCM, and BVSM data entry

Schedule

9/15/2008	Raleigh-Durham, NC	11/10/2008	San Jose, CA

Cisco PGW2200 Call Control Hands-on Training (PGWC)

Price: $ 4495 USD or 45 CLCs   **Duration:** 5 Days

Cisco PGW2200 Call Control Hands-on Training covers the PSTN Gateway PGW2200 and how it is used in its call control deployments. Call control deployments include Packet Transit, TDMTDM grooming, H.323 Signaling Interface (HSI), SIP Gateway and MGCP-Dial termination.

Prerequisites

Students should be familiar with SS7, telephony network basics, transmission fundamentals, TCP/IP networking basics, and Cisco IOS before taking PGWC.

Who Should Attend

Telephony Service Providers implementing PGW2200 in a call control mode and individuals who build Cisco SS7 Interconnect and VoIP Networks for Voice and Dial Traffic.

Course Objectives

- Identify and describe Cisco layered approach to packet telephony architecture
- Provision the MGX Voice gateway or Access Server AS5xx0 using the VSPT
- Describe and provision the Cisco SLT using Cisco IOS
- Provision Number Analysis (Dial Plans)
- Describe the PGW2200 switched solutions

- Identify and describe the PGW2200 software components of the call processing system
- Identify and describe the PGW2200 hardware components
- Provision the PGW2200 using either the Man Machine Language (MML) or Voice Services Provisioning Tool (VSPT)
- Use MML to verify PGW2200
- Demonstrate use of PGW2200, HSI and SIP procedures
- Identify basic solution troubleshooting tools

Schedule

6/23/2008	Chicago, IL	9/29/2008	Chicago, IL
7/14/2008	San Jose, CA	10/6/2008	San Jose, CA
7/28/2008	Reston, VA	11/3/2008	Reston, VA
8/25/2008	Dallas, TX	12/8/2008	Dallas, TX
9/8/2008	Raleigh-Durham, NC		

PSTN Gateway Troubleshooting (PGWT)

Price: $4495 USD or 45 CLCs   **Duration:** 5 Days

PGWT focuses on how to troubleshoot the Cisco PGW solution with the PGW operating in Call Control mode. Students should have a good understanding of the technologies stated in the prerequisites. The students will spend their time in theory/lab sessions learning various Cisco and generic commands and tools.

Prerequisites

Students should have previous CCNA level knowledge and understand Voice and VoIP architectures, basic Solaris administration skills, SS7 and Q.931 call flow and operation, H.323 and SIP call flow and operation, and MGCP and Signaling Backhauling as IPFAS, BSMVO, and SIGTRAN before taking the PGWT course.

Who Should Attend

Upcoming PGW experts seeking advanced training for senior level network professionals.

Course Objectives

- Understand all PGW solution deployments
- Develop generic troubleshooting approach
- Use all PGW deployment troubleshooting tools
- Troubleshoot PGW and HSI Solaris platform
- Troubleshoot IP Connectivity, Backhaul sessions and SIGTRAN
- Troubleshoot SS7 in PGW deployments
- Troubleshoot EISUP in PGW deployments
- Troubleshoot ISDN in PGW deployments
- Troubleshoot MGCP in PGW deployments
- Troubleshoot Fax over IP in PGW deployments
- Troubleshoot H.323 in PGW deployments
- Troubleshoot SIP in PGW deployments
- Troubleshoot PGW dial plans

Schedule

7/7/2008	Reston, VA	10/6/2008	Raleigh-Durham, NC	11/17/2008	San Jose, CA
8/11/2008	San Jose, CA	10/20/2008	Dallas, TX	12/1/2008	Chicago, IL
9/15/2008	Chicago, IL	11/3/2008	Reston, VA		

Cisco Advanced Services

The Cisco Advanced Services Education team is focused on meeting the knowledge needs of Cisco customers for Cisco advanced technologies and products. There are a variety of knowledge-based services and deliverables available to help your staff get the knowledge they need, when they need it, from Cisco networking experts.

Below, you will find the listing of Advanced Services courses offered. For more information, including locations and delivery dates you can find the Advanced Service course listings on our website.

- **Advanced Implementing and Troubleshooting MPLS VPN Networks** (AMPLS)

- **Active Network Abstraction v4.0** (ANA4.0)

- **Cisco 7600 Series Essentials** (ASISR)

- **Advanced Unified Communications 6: Migration, SIP and Presence** (AUC6-MSP)

- **Implementing Broadband Aggregation on Cisco Routers** (BBAGG)

- **Building Core Networks with OSPF, BGP, and MPLS** (BCN)

- **Building Enhanced Cisco Security Networks** (BECSN)

- **Cisco Bliss Solution ITP/MGX Components Deployment** (BLISS)

- **Cisco BTS 10200 Softswitch Essentials I** (BTSE1)

- **Cisco BTS 10200 Softswitch Essentials II** (BTSE2)

- **Cisco 10000 Series Essentials with Performance Routing Engine 2** (C10K)

- **Cisco ANA Training** (CANA)

- **Deploying Cisco Unified Communications Manager 6** (CMBC6)

- **Cisco CRS-1 Essentials** (CRS-1)

- **Cisco Secure Access Control Server** (CS-ACS)

- **Cisco Unified Application Environment Developer Training** (CUAE)

- **Cisco Unified Operations Manager and Service Monitor** (CUOM-SM)

- **Cisco Unified Provisioning Manager** (CUPM)

- **Cisco Unified Wireless Network for Data and Voice** (CUWN-DVW)

- **Deploying and Maintaining Carrier Ethernet Services** (DMCE)

- **Building Enterprise Data Center Architecture** (EDCA)

- **Deploy, Maintain, & Troubleshoot Cisco IOS XR Software** (IOSXR)

- **Customizing ICM/IPCC Reports Workshop** (IPCAR)

- **Cisco IPCC Enterprise Advanced Scripting** (IPCAS)

- **IP Transfer Point** (ITP)

- **Metro Ethernet Switching Deployment Bootcamp** (METSI)

- **Cisco ONS 15454 Test and Turn Up** (MSPP)

- **Cisco ONS 15454 MSTP Release 8.0 Basic** (MSTP Basic)

- **Cisco ONS 15454 Multiservice Transport Platform** (MSTP) **Release 8** (MSTP Data)

- **Cisco IPCC Enterprise PPDIOO Workshop** (PPDIOO)

- **Service Control Application for Broadband Training** (SCA-BB)

- **Cisco Service Control Application Solution Deployment Course** (SCA-D)

- **Securing Enterprise Data Center Architectures** (SEDCA)

- **Cisco VoBB Solution Deployment Workshop** (VoBB)

- **Cisco IOS XR IPv4 Routing** (XIPV4R)

- **Cisco XR 12000 Series Essentials** (XR12K)

Additional Cisco
Authorized Courses

Routing & Switching

- **Implementing the Application Control Engine Service Module** (ACESM)

- **Advanced Routing & Switching for Field Engineers** (ARSFE)

Communications & Services

- **Implementing Cisco MPLS Traffic Engineering & Other Features** (MPLST)

- **Configuring BGP on Cisco Routers** (BGP)

- **Implementing Cisco MPLS** (MPLS)

- **Advanced OSPF Workshop** (AOSPF)

- **Implementing Cisco Multicast** (MCAST)

- **IPv6 Fundamentals, Design, and Deployment** (IP6FD)

- **Implementing Cisco IOS Unified Communications** (IIUC)

Wireless & Mobility

- **Cisco Wireless LAN Fundamentals** (CWLF)

- **Cisco Wireless LAN Advanced Topics** (CWLAT)

- **Voice over WLAN** (VOWLAN)

Network Security

- **Securing Hosts Using Cisco Security Agent** (HIPS)

Application Network Services

- **Cisco Wide Area Application Services Technical Training** (WAAS)

Network Design

- **Designing for Cisco Internetwork Solutions** (DESGN)

- **Designing Cisco Network Service Architectures** (ARCH)

Network Management

- **Implementing Cisco Works** (LMS)

IronPort S-Series Administration (SSA)

Price: $1995 USD   **Duration:** 2 Days

The S-Series Administration course is an instructor-led training course for IronPort customers. It has hands-on labs, demos, and presentations to help students learn technical aspects of the S-Series Web Security Appliances. This course covers how to install, configure, operate, and maintain the S-Series.

Prerequisites

Students should possess the following background knowledge and skills:
- A basic understanding of TCP/IP services, including DNS, SSH, FTP, NTP, and SNMP
- A basic understanding of IP routing
- Familiarity with HTTP and HTTPS, including an understanding of web-server and browser administration and operation

It is helpful but not mandatory that students have experience with IronPort Email Security Appliances.

Who Should Attend

Security architects and system designers, network administrators and operations engineers, and network or security managers responsible for web security.

Course Objectives

- HTTP and HTTPS proxy services
- L4 traffic monitoring
- Authentication and web access control
- URL filtering
- Anti-malware filtering
- Troubleshooting S-Series configuration issues
- S-Series deployment

Schedule

6/19/2008	Las Vegas, NV	10/9/2008	Raleigh-Durham, NC
7/10/2008	Dallas, TX	10/30/2008	Las Vegas, NV
7/24/2008	Tampa, FL	11/6/2008	Dallas, TX
8/7/2008	Raleigh-Durham, NC	11/20/2008	Atlanta, GA
8/21/2008	Las Vegas, NV	12/4/2008	Raleigh-Durham, NC
9/11/2008	Dallas, TX	12/18/2008	Las Vegas, NV
9/25/2008	Atlanta, GA		

IronPort C-Series Configuration (CSC)

Price: $1995 USD   **Duration:** 2 Days

This comprehensive, 2-day training course provides a thorough foundation on how to successfully install, configure, and administrate IronPort email security appliances. Extensive lab exercises provide attendees with critical hands-on experience with installing, configuring, and administering IronPort email security appliances. At the end of the course, students will possess a working knowledge of how to use IronPort email security appliances to successfully manage and troubleshoot email traffic entering and leaving the enterprise network.

Prerequisites

Students should possess the following background knowledge and skills:
- A moderate knowledge of TCP/IP fundamentals, including IP addressing and sub-netting, static IP routing, DNS, and a very basic understanding of TCP
- Experience with Internet-based messaging, including SMTP is highly recommended. See RFC 2821, Internet message formats, and MIME message formatting and body parts
- Familiarity with both command line interface (CLI) and graphical user interface (GUI) configuration of devices

In addition, it is recommended that students have some experience with basic configuration of an IronPort email security appliance.

Who Should Attend

Enterprise messaging managers and system administrators, email system designers and architects, and network managers responsible for messaging implementation.

Course Objectives

- How to deploy IronPort email security appliance in a typical enterprise email environment, including "best practices" for installation, configuration, and system administration
- How to manage, monitor, and troubleshoot the flow of email through TronPort email security appliances
- How to configure access control policies to eliminate threats at the perimeter, based on the identity and trustworthiness of the sender
- How to create content filters to implement and enforce corporate email policies and address such issues as identity theft and protecting financial information
- How to configure IronPort email security appliances to detect and handle unwanted spam and viruses
- How to manage Quarantines and Bounce Profiles
- How to create Safe List / Block List
- How to generate, schedule and interpret reports
- How to set up email Security Manager
- How to secure your email with Cisco Registered Envelope Service

Schedule

6/16/2008	Las Vegas, NV	10/6/2008	Raleigh-Durham, NC
7/7/2008	Dallas, TX	10/27/2008	Las Vegas, NC
7/21/2008	Tampa, FL	11/3/2008	Dallas, TX
8/4/2008	Raleigh-Durham, NC	11/17/2008	Atlanta, GA
8/18/2008	Las Vegas, NV	12/1/2008	Raleigh-Durham, NC
9/8/2008	Dallas, TX	12/15/2008	Las Vegas, NV
9/22/2008	Atlanta, GA		

IronPort Advanced C-Series Configuration (ACSC)

Price: $995 USD   **Duration:** 1 Day

The ACSC course provides advanced information for successful configuration and operation of an IronPort email security appliance. Extensive lab exercises provide students with critical hands-on experience working with advanced features of the IronPort email security appliance. Students gain working knowledge of how to use the IronPort appliance to successfully manage and troubleshoot email traffic entering and leaving the enterprise network.

Prerequisites

Students should possess the following background knowledge and skills:

- Experience configuring IronPort email security appliances through participation in the IronPort Configuration Workshop or equivalent working experience
- Solid knowledge of TCP/IP fundamentals, including IP addressing and sub-netting, static IP routing, DNS, and a very basic knowledge of the TCP protocol
- Experience with the Internet-based messaging, including SMTP, Internet message formats, and MIME message formatting and body parts
- Strong familiarity both with AsyncOS command line interface (CLI) and graphical user interface (GUI) configuration of devices

Who Should Attend

Enterprise messaging managers and system administrators, email system designers and architects, and network managers responsible for messaging implementation.

Course Objectives

- Integrating with a directory server via LDAP
- Debugging of LDAP integration issues
- Using message filters to redirect and modify messages
- Safe deployment and debugging of message filters
- Domain Key Identified Mail

Schedule

6/18/2008	Las Vegas, NV	9/10/2008	Dallas, TX	11/19/2008	Atlanta, GA
7/9/2008	Dallas, TX	9/24/2008	Atlanta, GA	12/3/2008	Raleigh-Durham, NC
7/23/2008	Tampa, FL	10/8/2008	Raleigh-Durham, NC	12/17/2008	Las Vegas, NV
8/6/2008	Raleigh-Durham, NC	10/29/2008	Las Vegas, NV		
8/20/2008	Las Vegas, NV	11/5/2008	Dallas, TX		

Microsoft Training — NEW!

Fast Lane is now proud to offer Microsoft training courses. Please see below for a listing of all Microsoft courses available. For available dates and locations visit our website at http://www.flane.us/ap/training/kursangebot/microsoft/-article-217/. If you have other questions regarding the Microsoft training contact us at (919)674-3100 or info@flane.us.

COURSES

Designing a Windows Server 2003 Active Directory and Network Infrastructure (DADNI)

Price: $2,195 USD
Duration: 5 Days

This 5 day course is designed to provide students with the knowledge and skills to design a Microsoft Active Directory service and network infrastructure for a Windows Server 2003 environment. This course will help those students wishing to get certified prepare for the 70-297 exam.

Designing Security for a Windows Server 2003 Network (DSN)

Price: $2,195 USD
Duration: 5 Days

This 5 day course is designed to provide students with the knowledge and skills to analyze business requirements for a secure Microsoft Windows Server 2003 network infrastructure, and to design a security solution that meets those requirements. This course will help those students wishing to get certified prepare for the 70-298 exam.

Implementing and Administering Security in a Windows Server 2003 Network (IASN)

Price: $2,195 USD
Duration: 5 Days

This 5 day course provides the skills and knowledge necessary to implement, manage, maintain, and troubleshoot security in a Windows Server 2003 Public Key Infrastructure (PKI). Course material comes with MeasureUp exam prep software. This course will help those students wishing to get certified prepare for the 70-299 exam.

Implementing and Maintaining a Windows Server 2003 Active Directory Infrastructure (IMADI)

Price: $2,195 USD
Duration: 5 Days

This 5 day course is designed to give proficiency in the skills and knowledge necessary to implement, administer, manage, and maintain a Microsoft Windows Server 2003 network infrastructure. Course material also comes with MeasureUp exam prep software. This course will help those students wishing to get certified prepare for the MCSE 294 certification exam.
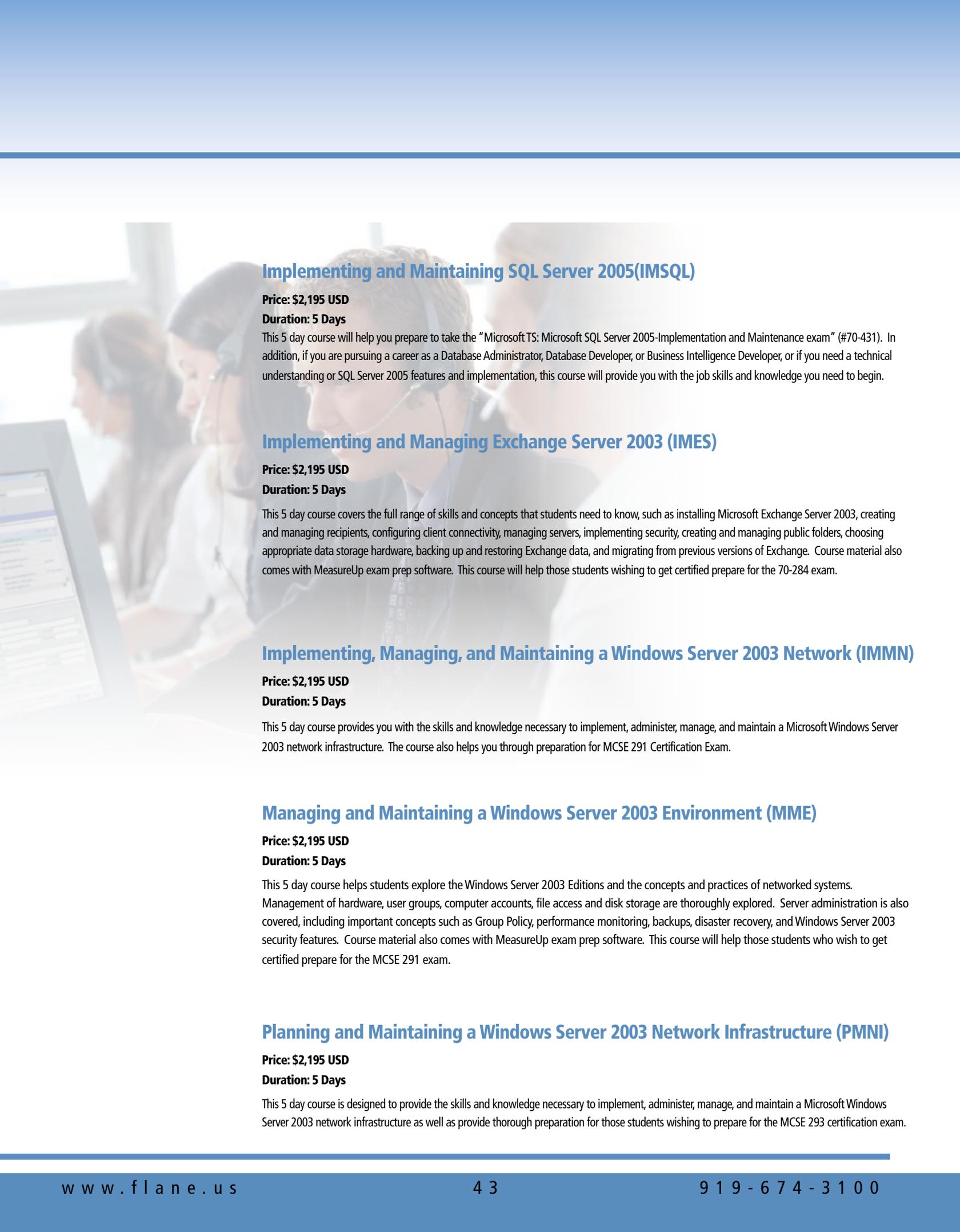
Implementing and Maintaining SQL Server 2005(IMSQL)

Price: $2,195 USD
Duration: 5 Days

This 5 day course will help you prepare to take the "Microsoft TS: Microsoft SQL Server 2005-Implementation and Maintenance exam" (#70-431). In addition, if you are pursuing a career as a Database Administrator, Database Developer, or Business Intelligence Developer, or if you need a technical understanding or SQL Server 2005 features and implementation, this course will provide you with the job skills and knowledge you need to begin.

Implementing and Managing Exchange Server 2003 (IMES)

Price: $2,195 USD
Duration: 5 Days

This 5 day course covers the full range of skills and concepts that students need to know, such as installing Microsoft Exchange Server 2003, creating and managing recipients, configuring client connectivity, managing servers, implementing security, creating and managing public folders, choosing appropriate data storage hardware, backing up and restoring Exchange data, and migrating from previous versions of Exchange. Course material also comes with MeasureUp exam prep software. This course will help those students wishing to get certified prepare for the 70-284 exam.

Implementing, Managing, and Maintaining a Windows Server 2003 Network (IMMN)

Price: $2,195 USD
Duration: 5 Days

This 5 day course provides you with the skills and knowledge necessary to implement, administer, manage, and maintain a Microsoft Windows Server 2003 network infrastructure. The course also helps you through preparation for MCSE 291 Certification Exam.

Managing and Maintaining a Windows Server 2003 Environment (MME)

Price: $2,195 USD
Duration: 5 Days

This 5 day course helps students explore the Windows Server 2003 Editions and the concepts and practices of networked systems. Management of hardware, user groups, computer accounts, file access and disk storage are thoroughly explored. Server administration is also covered, including important concepts such as Group Policy, performance monitoring, backups, disaster recovery, and Windows Server 2003 security features. Course material also comes with MeasureUp exam prep software. This course will help those students who wish to get certified prepare for the MCSE 291 exam.

Planning and Maintaining a Windows Server 2003 Network Infrastructure (PMNI)

Price: $2,195 USD
Duration: 5 Days

This 5 day course is designed to provide the skills and knowledge necessary to implement, administer, manage, and maintain a Microsoft Windows Server 2003 network infrastructure as well as provide thorough preparation for those students wishing to prepare for the MCSE 293 certification exam.

Quality Training From the Experts

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