Fast Lane

Advanced IT Training

NetApp Authorized Training Curriculum

www.FastLaneUS.com

2012

NetApp Authorized Learning Partner

Cisco Learning Specialized Partner

VMware PARTNER AUTHORIZED TRAINING CENTER

NDC Institute for Networking & Data Center Technologies

ubuntu training partner

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Microsoft GOLD CERTIFIED Partner Learning Solutions

GSA Schedule Contract GS-35F-0341X

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Delivery Methods

Fast Lane offers several delivery methods. We provide our world-class instructor-led training in most major metro areas. We also provide online virtual classrooms that allow you to conserve valuable travel time and costs. Our private onsite training can be customized for your needs and delivered at your location.

We offer a robust GTR - Guaranteed to Run™ schedule, so you can enroll with confidence.

You will notice the following icons used in our course schedules on our website.

ILT - Instructor-Led Classroom Training

ILT sessions are conducted in a physical classroom environment.

ILO - Instructor-Led Online Training

ILO sessions are conducted via WebEx™ in a VoIP environment.

FLEX Classroom™ - Combined ILT & ILO

FLEX Classroom sessions are delivered via ILO and ILT giving you the ultimate flexibility.

Private Onsite Training

We can customize our award winning training and deliver to you via any of our methods.

GTR - Guaranteed to Run™

With our GTR classes, you won't have to worry about rescheduling your training. No matter how many students are enrolled, we will run the class, guaranteed.

We Are What We Teach: Learn From the Best in the Business

NetApp, Cisco & VMware's Worldwide Authorized Learning Partner

Fast Lane delivers NetApp, Cisco and VMware training programs worldwide. Our instructors are certified specialists with extensive storage, networking, data center and virtualization experience. Fast Lane is proud to be NetApp's only worldwide Authorized Learning Partner offering the full NetApp curriculum plus additional advanced training. We are the fastest-growing training company specialized in data center architecture. We are recognized as a global VMware Authorized Training Center.

2010-2012 Awards

- NetApp Storage Efficiency Award: 2011
- Cisco Learning Partner Channel Award of Excellence in Relevance: Americas 2011
- Cisco Learning Partner Channel Award of Excellence in Acceleration: Latin America 2012
- EMEA Training (VATC) Partner of the Year 2012
- Cisco Learning Partner Channel Award of Excellence in Acceleration: Worldwide & European Markets 2011
- Cisco European Learning Partner of the Year 2011
- Cisco Learning Partner Channel Award of Excellence in Collaboration: European Markets 2011
- Cisco Learning Partner Channel Award of Excellence in Innovation: Emerging Markets
- Top 20 IT Training Company: TrainingIndustry.com (2008, 2009, 2010, 2011)

Our Quality Assurance

All of our instructors have professional experience and excellent teaching skills, which ensures you will have an optimal training experience.

Our Expertise

Fast Lane training offers specialized insight, skills, and real-world experience in the areas of virtualization, data center, storage, voice, business video, unified communications, security, wireless, and optical technologies. We deliver training in more than 100 countries, in 15 different languages. Let our experts help you become an expert too.

Our Aim

Fast Lane provides quality training programs on advanced and emerging technologies like FlexPod and NetApp product training, to help you stay on top of the needs of your company's IT environment.

Our Unrivaled Lab Infrastructure

You will enjoy the use of state-of-the art hands-on labs for all areas of high-end technologies. These labs provide a real-world experience that raises the bar for training quality. Our labs are used to support all modalities of learning: classroom, virtual and self-paced.

Our Promise

Training with Fast Lane means you are consistently receiving a quality education experience, built on leading edge curriculum, to help you address your IT challenges.

Some of Our Areas of Expertise Include:

- Borderless Networks
- Network Management
- Routing
- Switching
- Security & VPN
- Wireless
- Collaboration
- Unified Communications
- Data Center
- Cloud Computing
- Virtualization
- FlexPod
- Business Video
- TelePresence
- Security & VPN
- Boot Camps
- Optical
- Multi-tenancy
- Certification Training
- Service Provider
- IPV6
- Storage
- ITILv3
- Project Management
- Virtual eXperience Infrastructure (VXI), & Virtual Desktop Infrastructure (VDI)

Data ONTAP 7-Mode Administration (D7ADM)

NA-D7ADM Price: $4,500 or 60 NTUs Duration 5 Days

PREREQUISITES

Students who attend this course should have a background in system administration for UNIX® or Microsoft® Windows® operating systems and/or Data ONTAP 7-Mode Fundamentals (WBT)

COURSE CONTENT

Welcome to the NetApp® Data ONTAP® 7-Mode Administration course. Data ONTAP 8 is the next generation data storage operating system from NetApp. Data ONTAP 8.1 builds on the stability and reliability of the Data ONTAP 8 operating system and provides new functionality that sets it apart from all of the competition. This five-day instructor-led course enables you to perform basic support and administrative functions on a NetApp storage system running the Data ONTAP system operating in 7-Mode.

COURSE OBJECTIVES

By the end of this course you should be able to:

- Identify the various components of a NetApp storage environment
- Install and perform the setup configuration of Data ONTAP
- Perform basic administration on a storage system
- Explain and configure physical and logical storage
- Identify and configure client protocols
- State virtualization techniques available in Data ONTAP
- Describe Snapshot copies and space consumption in Data ONTAP
- Discuss backup methods available in Data ONTAP

DETAILED COURSE OUTLINE

- Module 1: The NetApp Storage Environment
- Module 2: WAFL Simplified
- Module 3: Basic Administration
- Module 4: Physical Storage
- Module 5: Logical Storage
- Module 6: Administration Security
- Module 7: Networking
- Module 8: NFS
- Module 9: CIFS
- Module 10: NAS Management
- Module 11: SAN
- Module 12: Snapshot Copies
- Module 13: Space Management
- Module 14: High-Availability
- Module 15: Virtualization Solutions
- Module 16: Backup and Recovery Methods
- Module 17: Data Collection Tools
- Module 18: Data ONTAP Upgrades

LAB EXERCISES

- Lab 1: Exploring the lab environment & the NetApp support site
- Lab 2: Explain how the Data ONTAP operating system reads & writes data
- Lab 3: Managing the storage system from GUI & CLI
- Lab 4: Managing physical storage
- Lab 5: Managing volumes & Qtrees
- Lab 6: User account administration
- Lab 7: Configuring storage networking
- Lab 8: NFS administration
- Lab 9: CIFS administration
- Lab 10: Quota administration
- Lab 11: Configuring iSCSI SAN
- Lab 12: Creating & restoring SnapShots and using SnapRestore
- Lab 13: Space Management
- Lab 15: Creation & management of vFilers
- Lab 16: Using ndmpcopy
- Lab 17: Viewing storage performance statistics

Accelerated NCDA Boot Camp Data ONTAP 7-Mode (ANCDABC87)

NA-ANCDABC87 Price: $5,850 or 78 NTUs Duration 5 Days

PREREQUISITES

- Three years of experience in a storage related function, such as storage administrator or field engineer
- Six months experience with NetApp storage solutions
- Data ONTAP 7-Mode Administration (D7ADM)

COURSE CONTENT

Prepare for success when taking the NS0-154 NetApp® Certified Data Management 7-Mode Administrator Exam. Through lectures and labs, you will learn the essential features and functions of the Data ONTAP® 7-Mode operating system, including network-attached storage administration and storage area network configuration.

COURSE OBJECTIVES

By the end of this course you should be able to:

- Configure and administer client-server relationships in NFS environments
- Configure, administer, and troubleshoot storage systems in CIFS environments
- Collect and analyze performance data to assist with troubleshooting storage system hardware, operating systems, network connections, NFS configuration files, and options
- Define the components of a SAN environment and explain how LUNs relate to the storage system
- Describe the Fibre Channel (FC) and iSCSI SAN multipathing options for Windows and Linux-based operating systems
- List the storage-system and data availability methods
- Configure and administer SnapRestore®, asynchronous and synchronous SnapMirror®, MetroCluster™, SnapVault®, and Open Systems SnapVault technologies

DETAILED COURSE OUTLINE

- Module 1: NCDA Overview
- Module 2: NFS Overview
- Module 3: NFS Setup
- Module 4: Exports and Mounts
- Module 5: CIFS Overview
- Module 6: CIFS Workgroups
- Module 7: CIFS Shares and Sessions
- Module 8: CIFS Access Control
- Module 9: CIFS Domains
- Module 10: NAS Multiprotocol
- Module 11: NAS Troubleshooting
- Module 12: SAN Overview
- Module 13: FC Connectivity
- Module 14: iSCSI Connectivity
- Module 15: LUN Access
- Module 16: Availability Overview
- Module 17: Snapshot Copies
- Module 18: SnapRestore Software
- Module 19: SnapVault
- Module 20: Open Systems SnapVault
- Module 21: High-Availability
- Module 22: MetroCluster
- Module 23: SnapMirror
- Module 24: Performance

LAB EXERCISES

- Lab 1: Exploring the lab environment & the NetApp support site
- Lab 2: Explain how the Data ONTAP operating system reads & writes data
- Lab 3: Managing the storage system from GUI & CLI
- Lab 4: Managing physical storage
- Lab 5: Managing volumes & Qtrees
- Lab 6: User account administration
- Lab 7: Configuring storage networking
- Lab 8: NFS administration
- Lab 9: CIFS administration
- Lab 10: Quota administration
- Lab 11: Configuring iSCSI SAN
- Lab 12: Creating & restoring SnapShots and using SnapRestore
- Lab 13: Space Management
- Lab 15: Creation & management of vFilers
- Lab 16: Using ndmpcopy
- Lab 17: Viewing storage performance statistics

Data ONTAP Cluster-Mode Administration (DCADM)

NA-DCADM Price: $4,500 or 60 NTUs Duration 5 Days

PREREQUISITES

Data ONTAP 7-Mode Administration (D7ADM)

COURSE CONTENT

Data ONTAP® 8.1 is the next-generation data storage operating system from NetApp®. It builds on the stability and scalability of Data ONTAP 8.0. In this course, you learn about the evolution of Data ONTAP clustering, use new features such as block protocols and System Manager 2.0, explore the benefits of scalability, discuss the architecture and functionality of a Data ONTAP cluster, and learn how to install, configure, manage, and troubleshoot a Data ONTAP cluster.

COURSE OBJECTIVES

- Identify the benefits of Data ONTAP and explain its two modes of operation
- Describe the steps for setting up a cluster
- Manage the physical and virtual resources within a cluster
- Manage features to ensure nondisruptive operations
- Identify the networking components and features of a cluster
- Implement supported cluster and management network switches.
- Diagram the architecture of a cluster
- Set up and configure SAN and NAS protocols
- Administer mirroring and data protection for a cluster
- Perform basic troubleshooting of a cluster
- Explain the notification capabilities of a cluster
- Describe how the integrated antivirus supports works
- Scale a cluster horizontally
- Describe the characteristics of a cluster that affect cluster performance

NCDA Boot Camp (NCDABC)

NA-NCDABC Price: $10,650 or 142 NTUs Duration 10 Days

PREREQUISITES

Introduction to NetApp Products Web Based Training

COURSE CONTENT

This 10-day boot camp will prepare you prepare for the NetApp Certified Data Management Administrator (NCDA) Data ONTAP 7-Mode exams. Through lectures and labs, learn about the features and functions of the NetApp® Data ONTAP® 7-Mode operating system and about network-attached storage (NAS) administration and SAN configuration. This course covers 153 and 163 (Data ONTAP 7.3), 154 (Data ONTAP 8.0 7-Mode) and 190 (Data ONTAP 8.1 7-Mode) NCDA exams.

COURSE OBJECTIVES

- Identify the various components of a NetApp storage environment
- Install and perform the setup configuration of Data ONTAP
- Perform basic administration on a storage system
- Explain and configure physical and logical storage
- Identify and configure client protocols
- State virtualization techniques available in Data ONTAP
- Describe Snapshot copies and space consumption in Data ONTAP
- Discuss backup methods available in Data ONTAP
- Configure and administer client-server relationships in NFS environments
- Configure, administer, and troubleshoot storage systems in CIFS environments
- Collect and analyze performance data to assist with troubleshooting storage system hardware, operating systems, network connections, NFS configuration files, and options
- Define the components of a SAN environment and explain how LUNs relate to the storage system
- Describe the Fibre Channel (FC) and iSCSI SAN multipathing options for Windows and Linux-based operating systems
- List the storage-system and data availability methods
- Configure and administer SnapRestore®, asynchronous and synchronous SnapMirror®, MetroCluster™, SnapVault®, and Open Systems SnapVault technologies

Data ONTAP CIFS Administration (CIFS)

NA-CIFS Price: $1,800 or 24 NTUs Duration 2 Days

PREREQUISITES

Data ONTAP 7-Mode Administration (D7ADM)

COURSE CONTENT

CIFS Administration on Data ONTAP® is an instructor-led course designed for those who provide support and administration for a CIFS environment on NetApp storage systems running the Data ONTAP operating system.

COURSE OBJECTIVES

- Describe the different CIFS environments
- Identify the appropriate server environment for your storage system to support Windows client users
- Configure CIFS environment on a storage system by licensing CIFS
- Configure files and options on the storage system
- Administer a storage system in a CIFS environment including creating and managing shares, users, groups, and sessions
- Understand group policy objects and file blocking
- Review approaches to harden security for a storage system in a CIFS environment
- Collect CIFS performance statistics with storage system commands and tools
- Explain how to troubleshoot basic CIFS problems

Data ONTAP NFS Administration (NFS)

NA-NFS Price: $800 or 12 NTUs Duration 1 Day

PREREQUISITES

- Data ONTAP 7-Mode Administration (D7ADM)
- Working knowledge of UNIX® or equivalent experience
- Familiarity with networking concepts

COURSE CONTENT

NFS Administration on Data ONTAP® 7.3 is an instructor-led course designed for those who provide support and administration for an NFS environment on NetApp® storage systems running the Data ONTAP operating system.

COURSE OBJECTIVES

- Explain NFS protocol overview, NFS versions, and NFS implementation criteria
- Configure NFS protocol and options on the storage system
- Configure the storage system to export resources to clients
- Configure access permissions and options
- Configure the clients to mount resources from the storage system
- Administer exported resources to targets
- Monitor the usage of exported resources
- Create quota reports based on resource usage
- State the rules for exporting resources to hosts, subnets, and netgroups
- Explain the /etc/exports access options and how they relate
- Review approaches to harden security for a storage system in an NFS environment
- Collect NFS performance statistics with storage system commands and tools
- Troubleshoot basic NFS problems

NetApp Data Protection Software Administration (NPSA8)

NA-NPSA8 Price: $1,800 or 24 NTUs Duration 2 Days

PREREQUISITES

Data ONTAP 7-Mode Administration (D7ADM)

COURSE CONTENT

You will learn how to administer the data protection technologies that are built into Data ONTAP® 7.3 and Data ONTAP 8.0— including how to use Snapshot®, SnapRestore®, SnapVault®, Open Systems SnapVault, and SnapMirror® software to replicate and restore mission-critical enterprise data.

COURSE OBJECTIVES

- Present an overview of NetApp protection technology to support team members or customers
- Create and manage Snapshot copies using NetApp System Manager and Protection Manager
- Create and manage SnapVault relationships
- Create and manage Open Systems SnapVault relationships
- Import existing SnapMirror and SnapVault relationships into Protection Manager
- Create SnapMirror relationships for disaster recovery capability
- Recall information about additional topics, such as, the NetApp Syncsort Integrated Backup solution, Symantec Foundation Storage Thin Reclamation, and NetApp SMTape backup functions

SnapProtect Solution Administration (SPSA)

NA-SPSA Price: $2,700 or 36 NTUs Duration 3 Days

PREREQUISITES
Data ONTAP 7-Mode Administration (D7ADM)

COURSE CONTENT
This course provides instruction, hands-on practice, and interactive demonstrations to help you to learn how to plan, implement, operate, and troubleshoot the NetApp SnapProtect solution.

COURSE OBJECTIVES
- Install and configure a NetApp SnapProtect solution environment
- Set up SnapProtect disk libraries
- Set up SnapProtect disk-to-disk and disk-to-tape storage policies
- Protect NAS and SAN application data
- Upgrade and restore the SnapProtect solution environment
- Use diagnostic tools to troubleshoot the SnapProtect solution

Data ONTAP SAN Administration (SAN)

NA-SAN Price: $2,700 or 36 NTUs Duration 3 Days

PREREQUISITES
Data ONTAP 7-Mode Administration (D7ADM)

COURSE CONTENT
The SAN Administration on Data ONTAP® 7.3 course was designed for those who provide support and administration for FC and IP SAN environments running the Data ONTAP operating system.

COURSE OBJECTIVES
- Define the characteristics of a SAN environment
- Describe the components of FC and IP SANs
- Describe size planning requirements for LUNs
- Create and manage LUNs on a storage system
- Explain both FC and IP SAN multipathing options for both Windows and native Solaris™ 10 operating system
- Explain common problems associated with a SAN environment

SAN Implementation Workshop (SANIW)

NA-SANIW Price: $2,700 or 36 NTUs Duration 3 Days

PREREQUISITES
- Data ONTAP 7-Mode Administration (D7ADM)
- Accelerated NCDA Boot Camp Data ONTAP 7-Mode (ANCDABC87)
- SAN Fundamentals on Data ONTAP WBT

COURSE CONTENT
In this workshop course, you learn how to connect Windows®, vSphere™, and Linux® hosts via Fibre Channel (FC) and iSCSI protocols to NetApp® SANs.

COURSE OBJECTIVES
- Define and describe SANs that use FC and iSCSI protocols
- Configure Windows Server 2008 R2, vSphere 5, Red Hat® 5, and Data ONTAP® systems for iSCSI andd FC connectivity
- Use FC and iSCSI protocols to create and access LUNs
- Install and use SnapDrive® for Windows and SnapDrive for Linux
- Size, clone, back up, and recover LUNs on Windows Server 2008 R2, vSphere 5, and Red Hat 5 systems
- Install and Configure vSphere 5 on NetApp Virtual Storage Console 4
- Troubleshoot SAN connectivity and performance issues

SnapProtect Solution Administration (SANSA)

NA-SANSA Price: $1,800 or 24 NTUs Duration 2 Days

PREREQUISITES
- SAN Implementation Workshop (SANIW)
- Data ONTAP Cluster-Mode Administration (DCADM)

COURSE CONTENT
Prepare for the NetApp® Certified Implementation Engineer (NCIE) SAN 502 and 503 exams and for the implementation of Data ONTAP® 8.1 Cluster-Mode SAN at the same time.

COURSE OBJECTIVES
- Configure Data ONTAP 8.1 Cluster-Mode SAN
- Identify the details of FC architecture and supported FC fabrics
- Set Brocade and Cisco FC switches
- Configure FCoE
- Describe the architecture of an IP SAN
- Examine the host consideration that influences SAN scalability
- Discuss failover for Data ONTAP 8.1 Cluster-Mode SAN

Performance Analysis on Data ONTAP (PAD)

NA-PAD Price: $2,700 or 36 NTUs Duration 3 Days

PREREQUISITES
Data ONTAP 7-Mode Administration (D7ADM)

COURSE CONTENT
The Performance Analysis on Data ONTAP® 7.3 course provides you with the knowledge and skills to perform data collection and analysis on NetApp® storage systems. You will learn how to interpret data and apply performance changes based on their analysis. You will use analysis data for tuning and monitoring performance.

COURSE OBJECTIVES
- Recognize performance terminology and basic methodology
- Use known methods and tools to collect performance data
- Data ONTAP architecture and the benefits of features such as NVRAM and the WAFL® (Write Anywhere File Layout) file system
- Use knowledge about how data flows through the network and protocol layers of Data ONTAP to monitor and analyze storage system performance
- Examine command output from case studies to identify performance bottlenecks
- Perform basic software configuration and recognize diagnostic operations for the Performance Acceleration Module and FlexScale
- Use FlexCache™ to improve NFSv2 and NFSv3 read performance
- Use the reallocate command to measure volume or file layout and optimize the layout when appropriate
- Implement configuration for best practices for resiliency and performance
- Identify where to find further information

Basic NetApp Configuration and Administration (BNCA)

NA-BNCA Price: $900 or 12 NTUs Duration 1 Day

PREREQUISITES
- Data ONTAP 8.0 7-Mode Fundamentals WBT
- Introduction to NetApp Products WBT

COURSE CONTENT
The Basic NetApp Configuration and Administration course will get you started providing basic support and administrative tasks on NetApp® storage systems running the Data ONTAP® 8.0.1 7-Mode operating system.

COURSE OBJECTIVES
- Explain features and functions of DATA ONTAP 8.0.1 7-Mode
- Obtain hardware and software documentation from My Support
- Identify basic NetApp hardware components including storage systems and shelves
- Describe how the WAFL file system processes read and write requests
- Connect to a NetApp storage system through the NetApp System Manager
- Getting started with Network administration on Data ONTAP
- Getting started on applying system administration tasks to manage and protect data
- Apply message logging and NetApp support features to maintain a NetApp storage system

NetApp MultiStore Administration (NMA)

NA-NMA Price: $1,800 or 24 NTUs Duration 2 Days

PREREQUISITES
intermediate knowledge of NetApp storage and Data ONTAP

COURSE CONTENT
This highly focused 2-day course provides a detailed understanding of how to implement and administer NetApp MultiStore.

COURSE OBJECTIVES
- Product placement for NetApp MultiStore
- Process for secure implementation of MultiStore
- How various NetApp technologies integrate with MultiStore to enhance data management

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

NA-OPSMGR Price: $2,700 or 36 NTUs Duration 5 Days

PREREQUISITES
Data ONTAP 7-Mode Administration (D7ADM)

COURSE CONTENT
Discover how to simplify your storage management tasks. Learn how to install, configure and administer NetApp® Operations Manager 4.0, Protection Manager 4.0, Provisioning Manager 4.0, as well as Performance Advisor 4.0.

COURSE OBJECTIVES
- Diagram, install and configure the architecture of Operations Manager 4.0, Performance Advisor 4.0, Protection Manager 4.0, and Provisioning Manager 4.0
- Secure and manage storage systems with Operations Manager 4.0
- Create and manage reports using Operations Manager 4.0
- Collect and view performance data using Performance Advisor
- Configure storage systems and vFiler™ units using Provisioning Manager 4.0
- Manage backup and disaster recovery relationships using Operations Manager 4.0 and Protection Manager 4.0
- Troubleshoot Operations Manager 4.0, Performance Advisor 4.0, Protection Manager 4.0, and Provisioning Manager 4.0

VMware vSphere on NetApp (VVNA)

NA-VVNA Price: $4,500 or 60 NTUs Duration 5 Days

PREREQUISITES
- Knowledge on NetApp Storage Systems, VMware Virtualization, Linux and Windows Servers.
- Data ONTAP 7-Mode Administration (D7ADM)

COURSE CONTENT
In this course, you will learn the installation, configuration, and administration of an ESX/vSphere Server, and focus on optimal connectivity on NetApp Storage Systems using FCP, iSCSI, and NFS. You will also learn about Backup and Restore of VMware ESX/vSphere Server storage LUNs with ESX and NetApp, and the planning and operation of VMware ESX Server and NetApp Storage Systems in a high availability scenario. You will be provided with practical scenarios for implementing ESX/vSphere on NetApp utilizing utilities from both environments.

COURSE OBJECTIVES
- An understanding of how to deploy a virtualized infrastructure within a NetApp environment
- Provide a firm comprehension of VMware services, protocols and connectivity
- Utilize NetApp virtualization applications to ensure proper functionality and performance for virtual machines

NetApp SANscreen Fundamentals (SANSF)

NA-SANSF Price: $2,700 or 36 NTUs Duration 3 Days

PREREQUISITES
- SANscreen Deployment (WBT)
- Basic working knowledge of Fibre Channel and storage networking

COURSE CONTENT
Learn the features and functions of theSANscreen® suite of products. This hands-on course will show you how SANscreen manages and supports multiprotocol storage systems through service policies and change-planning capabilities to provide improved resource and capacity utilization.

COURSE OBJECTIVES
- Define the five integrated products of SANscreen and their core features and interdependencies
- Describe the steps to perform a SANscreen and Data Warehouse installation and configuration
- Explain paths, violations, and policies
- Identify vulnerabilities and application groups
- Explain how SANscreen manages multiprotocol storage systems (FC, iSCSI, NFS, CIFS)
- Interpret performance views and analyze annotations
- Identify and recall how to run the standard SANscreen reports
- Explain the functions and features of SANscreen online help system

NetApp OnCommand Unified Manager Administration (OCADM)

NA-OCADM Price: $4,500 or 60 NTUs Duration 5 Days

PREREQUISITES

Data ONTAP 7-Mode Administration (D7ADM)

COURSE CONTENT

Centralize your ability to deploy, automate, protect and monitor all your storage with NetApp® OnCommand™ unified manager software. With its unique capability of monitoring and managing both physical and virtual storage infrastructures, it offers effective, cost-efficient management of your shared storage infrastructure. It enables you to optimize utilization, meet SLAs, minimize risk, and boost the performance of your storage infrastructure. This course provides an overview of the features of OnCommand management software. In this course you learn to administer your storage infrastructure by using OnCommand management software.

COURSE OBJECTIVES

- Monitor and manage physical and virtual storage infrastructure
- Provision storage for VMware virtual infrastructure using SnapDrive for Windows
- Provision storage for application datastores using OnCommand provisioning capability
- Perform policy-based backups using OnCommand protection capability
- Clone VMs and backup and recover VMware infrastructure using On-Command plug-in for VMware
- Administer security to enable business policy compliance
- Automate storage provisioning and protection by using storage catalogue
- Monitor and analyze storage systems and vFiler unit performance using Performance Advisor

Design and Implement Virtualization Solutions on NetApp Storage (DIVS)

NA-DIVS Price: $3,600 or 48 NTUs Duration 4 Days

PREREQUISITES

- NetApp core technical training or equivalent knowledge
- NetApp SAN core rechnical training or equivalent knowledge
- Basic knowledge of VMware and Microsoft virtualization

COURSE CONTENT

Learn how to design and implement virtualization solutions on NetApp® storage systems. In this course, you learn how to deploy VMware® virtual infrastructure on NetApp storage, how to integrate VMware and NetApp features, and how to deploy Microsoft® Windows® server virtualization (Hyper-V®) on NetApp storage.

COURSE OBJECTIVES

- Describe VMware vSphere™ 5.0 and Microsoft Hyper-V(Windows Server 2008 R2) virtualization solutions
- Configure physical and virtual infrastructures
- Provision the virtual infrastructure with NetApp storage
- Create, migrate, and clone virtual machines
- Protect the virtual infrastructure
- Monitor and optimize the virtual infrastructure

Implementing Enhanced Secure Multi-tenancy Solutions (IESMT)

FL-IESMT Price: $2,700 or 27 NTUs Duration 3 Days

PREREQUISITES

To benefit fully from this course the FlexPod for VMware Essentials (FPVE) course or equivalent background and experience is required. You should also have:

- A Solid understanding of networking protocols
- CCNA Certification recommended
- A good understanding of Virtualized environments
- Attendance of the VMware vSphere: Install, Configure, Manage class or equivalent knowledge recommended

COURSE CONTENT

This highly focused 3-day course provides a detailed understanding of how to integrate NetApp MultiStore, Cisco Unified Computing Systems (UCS), Cisco Nexus 1000v switches, and VMware vSphere to create a secure multi-tenant computing environment based on the Enhanced Secure Multi-tenancy guidelines. NetApp MultiStore serves as the storage foundation for multi-tenancy, Cisco UCS serves as the server hardware platform for VMware vSphere, and Cisco Nexus 1000v functions as a virtual intelligent switch. These individual products combine to provide secure isolated multi-tenant computing environments with independent security models, assured quality of service for critical services and applications, highly available redundant architecture, and an administrative support model that defines access levels for tenant administrators.

The Enhanced Secure Multi-Tenancy platform introduces several new components to the virtualization layer including intrusion prevention, firewall and load balancing services in addition to characterization of application workloads within the secure multi-tenant environment.

COURSE OBJECTIVES

- Describe Enhanced Secure Multi-Tenancy
- Identify and work within Secure Multi-Tenancy guidelines
- Prescribe the multivendor products and features that enable a multi-tenant architecture
- Configure hardware security features related to secure multi-tenancy
- Identify implementation criteria of secure multi-tenancy on a FlexPod for VMware hardware platform
- Integrate the UCS, NetApp, VMware, and Nexus technologies to create a secure multi-tenant environment in a network and computing environment
- Demonstrate Enhanced Secure multi-Tenancy

FlexPod for VMware Essentials (FPVE)

FL-FPVE Price: $1,895 Duration 2 Days

PREREQUISITES

Some background in Cisco routing and switching is strongly recommended

COURSE CONTENT

This 2-day course teaches you how to prepare for and deploy FlexPod in a VMware environment, with an emphasis on exploiting the key technologies in the Cisco Nexus series of switches.

COURSE OBJECTIVES

- Describe UCS LAN connectivity requirements
- Identify UCS port requirements
- Describe UCS port channel functionality
- Access and operate the UCS Manager
- Configure server pools and identity pools
- Establish LAN connectivity via MAC address Pools, VLANs, vNIC templates and port channels to the Nexus 5548 switches
- Establish SAN connectivity using WWNN and WWPN pools, global VSANs, and vHBA templates
- Configure policies for booting, server pools, and other resources
- Create and configure NetApp data aggregates, Flex Volumes, NFS exports, and infrastructure vFiler

FlexPod for VMware Design and Implementation (FPVI)

FL-FPVI Price: $2,695 Duration 3 Days

PREREQUISITES

To benefit fully from this course the 2-day FlexPod for VMware Essentials course or equivalent background and experience is required. You should also have:

- A Solid understanding of networking protocols
- CCNA Certification recommended
- A good understanding of Virtualized environments
- Attendance of the VMware vSphere: Install, Configure, Manage class or equivalent knowledge recommended

COURSE CONTENT

This 3-day course is designed for systems engineers, consulting systems engineers, technical solutions architects and Cisco integrators/ partners that have entry level experience the FlexPod infrastructure. This course builds upon the 2-day FlexPod Essentials course to also provide the skills necessary to plan, design, and implement an actual FlexPod for VMWare configuration for Data Center business requirements using the Cisco Validate Design as the reference.

COURSE OBJECTIVES

- Configure dual Nexus 5548 switches for multi-home dual fabric
- Enable Fibre Channel Server/Uplink Ports
- Create global VSANs, Boot Policies, Server Pools, Profile Templates, Service Profiles
- Create VSANs for fabric “A” or “B”
- Create igroups, LUNs for Service Profiles and map LUNs to igroups
- Set up a management VLAN, DNS and NFS and vMotion vMkernal ports with Jumbo Frames MTU
- Configure Nexus 1000v and 5548 for Unified Computing
- Create data aggregates, Flex volumes, NFS exports and infrastructure filers
- Configure Fibre Channel Zone and active zonesets
- Enable VMware DRS and HA functionality

FlexPod for VMWare Administration (FPVA)

FL-FPVA Price: $2,695 Duration 3 Days

PREREQUISITES

To benefit fully from this course the 2-day FlexPod for VMware Essentials course or equivalent background and experience is required. You should also have:

- A Solid understanding of networking protocols
- CCNA Certification recommended
- A good understanding of Virtualized environments
- Attendance of the VMware vSphere: Install, Configure, Manage class or equivalent knowledge recommended

COURSE CONTENT

This advanced 3-day course helps you gain the knowledge and skills needed to administer and manage a complex FlexPod environment.

COURSE OBJECTIVES

- Explain the challenges data centers face in managing resources
- Outline data center infrastructure challenges
- Discuss how FlexPod for VMware is used for datacenter evolution
- Identify key components of FlexPod for VMware infrastructure
- Describe and compare the Nexus 5000 switch options available for use with FlexPod
- Describe common configuration tasks for the Nexus 5000 switch when used in a FlexPod environment
- Define the hardware components of Cisco UCS
- Describe the major Cisco UCS hardware components included with a base FlexPod

FlexPod for Account Managers (FPAM)

FL-FPAM Price: $895 Duration 1 Day

PREREQUISITES

A background in networking and solution sales is strongly recommended.

COURSE CONTENT

This account manager course teaches you Cloud computing concepts and benefits with the Cisco and NetApp FlexPod infrastructure. You can take this course as a 1-day instructor led course or in two half days.

COURSE OBJECTIVES

- Explain the essential characteristics and the key requirements for cloud computing
- Identify suitable customer applications for cloud deployment
- Understand how a FlexPod architecture helps reduce costs while increasing resource utilization and improving business agility
- Qualify potential FlexPod customers and markets
- Identify cloud computing opportunities and reasons for deployment in a Data Center
- Articulate Cisco's vision for the evolution of cloud computing
- Identify the competitors and Markets for FlexPod
- Explain the benefits of deploying virtual services with a FlexPod architecture
- Explain the FlexPod components and advantages at the CxO level

Architecting and Designing for FlexPod (FLEX)

FL-FLEX Price: $1,800 Duration 2 Days

PREREQUISITES

Students are expected to have the following intermediate level knowledge/experience prior to attending:

- Switching
- Routing
- Data Center Architecture and protocols
- VMware ESX Server virtualization and vSphere
- NetApp storage
- Backup and disaster recovery technologies

COURSE CONTENT

The Architecting and Design of FlexPod for VMware course will prepare you to describe the advantages of using the technologies from NetApp, Cisco and VMware to construct a high availability solution for shared storage. You will be able to architect and design the specific configurations as defined in the sizing guide. You will also be able to integrate the components from Cisco, NetApp and VMware to create scalable solutions supporting applications as required by customers in a virtualized environment.

COURSE OBJECTIVES

- Introduction to FlexPod for VMware
  - Define FlexPod architecture
  - Define the Cisco Unified Computing System (UCS) technology
  - Explain the benefits of FlexPod as a complete solution for providing highly available services
  - Explain the benefits of FlexPod as an end-to-end solution
  - Define the FlexPod key differentiators
  - Identify key customer objections and how to respond to them
- FlexPod for VMware Workload Sizing and Technical Specifications
  - Explain the Sizing Guide elements
  - Describe the various sizing tools
  - Define the key specifications and bill of materials
  - Create a FlexPod for VMware including the tool that exists to create the bill of materials, including all cables, etc.
- FlexPod for VMware Deployment and Management
  - Describe the elements of the Deployment Guide
  - Define the scoping and time requirements of a deployment
  - Describe NetApp OnCommand Software Suite
  - Describe the partner enabled Management Solutions

Microsoft Exchange on NetApp Storage Systems (MSEXC)

NA-MSEXC Price: $3,600 or 48 NTUs Duration 4 Days

PREREQUISITES

- Data ONTAP 7-Mode Administration (D7ADM)
- Microsoft course 2400: Implementing and Managing Microsoft Exchange Server 2007
- Microsoft course 2011: Troubleshooting Microsoft Exchange Server 2007
- Microsoft Seminar: Microsoft Exchange Server 2007 Disaster Recovery
- Planning Backup and Recovery Solutions

COURSE CONTENT

Learn how to optimize Microsoft® Exchange Server 2007 in a NetApp® storage environment.

COURSE OBJECTIVES

- Describe the benefits of running Exchange 2007 on a NetApp storage system
- Describe key factors for sizing Exchange solutions on NetApp storage systems
- Perform Exchange 2007 storage planning, implementation and administration
- Describe the Exchange backup and restore process
- Perform an installation of a clustered Exchange Server on a NetApp storage system
- Install and configure SnapDrive® for Windows®
- Back up and verify an Exchange data store using SnapManager® for Microsoft Exchange
- Restore data using SnapManager for Microsoft Exchange

Microsoft SQL Server on NetApp Storage Systems (MSSQL)

NA-MSSQL Price: $4,500 or 60 NTUs Duration 5 Days

PREREQUISITES

- Data ONTAP 7-Mode Administration (D7ADM)
- NetApp Data Protection Software Administration (NPSA8)
- Data ONTAP SAN Administration (SAN)

At least one of the following:

- Microsoft Course 2072A: Administering a Microsoft SQL Server 2000 Database
- Microsoft Exam 70-228: System Administration for Microsoft SQL Server 2000
- One year of Microsoft SQL Server 2005 experience

COURSE CONTENT

Learn to design and implement a high-performance, highly available, consolidated Microsoft® SQL Server solution on a NetApp® storage system.

COURSE OBJECTIVES

- Design and implement a high-performance, highly available, consolidated Microsoft SQL Server solution on a NetApp storage system
- Establish a failover cluster on Windows Server 2003 with SnapDrive® created iSCSI storage, describe how it works and discuss its benefits
- Install and deploy Microsoft SQL Server 2005 and SnapManager® 5.0 for SQL Server on a Windows Server 2003 failover cluster where SQL Server data is stored on a NetApp storage system
- Create Microsoft SQL Server 2005 database clones for use in environments using SnapManager 5.0 for SQL Server
- Describe and implement different disaster recovery methods for a SQL Server and SnapManager solution

NetApp Syncsort Integrated Backup Solution System Administration (NSIBS)

ST-NSIBS Price: $2,700 Duration 3 Days

PREREQUISITES

- Knowledge of NetApp disk storage systems and Data ONTAP OS
- Knowledge of data protection principles and techniques
- Basic system administration experience on Microsoft Windows OS

COURSE CONTENT

The NetApp Syncsort Integrated Backup Solution System Administration course prepares an individual to successfully configure and manage NSB as part of their data protection solution.

COURSE OBJECTIVES

- Design and implement a high-performance, highly available, consolidated Microsoft SQL Server solution on NetApp storage
- Define, run, schedule and monitor NSB backup and recovery jobs
- Explain and use NSB Advanced Recovery options including IA, BMR, IV and Full V
- Protect Exchange, SQL, SharePoint, Oracle, and VMware environments using NSB
- Explain NSB advanced integration with NetApp disk storage system
- Perform NDMP backups and archive backup data to tape using NSB

Contact Information & Resources

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Email: Info@FastLaneUS.com
Website: www.FastLaneUS.com

Twitter
Follow us on Twitter. Fast Lane tweets about new blog articles, promotions, webinars and upcoming events.
twitter.com/#!/FastLaneUS

Facebook
Join us on Facebook. We post about new promotions, trade shows, and Fast Lane news.
www.facebook.com/pages/Fast-Lane/150484421671891

LinkedIn
Join our group on LinkedIn. Fast Lane anticipates the needs of our customers by following our partners posts and IT industry trends.
www.linkedin.com/groups/Fast-Lane-US-1903087

Fast Lane Blog
Subscribe to our blog. We discuss the latest IT trends and updates that will effect your IT environment.
www.fastlaneus.com/blog

YouTube
Preview your training experience with us by viewing our YouTube channel.
www.youtube.com/user/FastLaneUS

www.FastLaneUS.com/schedules
View all of our upcoming course dates and locations for all of the training we offer. We are constantly growing our schedule, so bookmark this page.

www.FastLaneUS.com/guaranteed
Learn more about our GTR - Guaranteed to Run™ courses and schedules.

www.FastLane-Community.com
The Fast Lane Community Site features pre-assessment tests for our courses, updated news, student & instructor forums, brochures and announcements.

www.FastLaneUS.com/enterprisetraining
Fast Lane realizes that not every company needs the same class. Fast Lane can meet your company's individual needs by custom tailoring a course to meet your exact specifications.

www.FastLane.com/GSA
This program focuses on how Fast Lane works with government angencies to provide the training they need for the DOD 8570 mandate and other certification requirements.

www.FastLaneUS.com/webinars
Our webinars are presented by our instructors and offer you explanations, opinions and updates regarding certifications, new classes and trends in the industry.

www.PearsonVUE.com
Fast Lane provides testing services as well as training. Visit the Pearson Vue website to register for your exam.

TrainingIndustry.com 2011 Top Training Companies IT Training

NetApp Authorized Learning Partner
cisco Learning Specialized Partner
vmware PARTNER AUTHORIZED TRAINING CENTER
NDC Institute for Networking & Data Center Technologies
ubuntu training partner
EC-Council
CompTIA AUTHORIZED PARTNER
ITIL ACCREDITED BY exin
Microsoft GOLD CERTIFIED Partner Learning Solutions
GSA Schedule Contract GS-35F-0341X