



At A Glance Guide To NetApp Certification

2009



Authorized Learning Partner



Welcome

Welcome to Fast Lane / NetApp

Fast Lane is the first and only worldwide, NetApp Learning Partner.

Specializing in internetworking projects and the development of relevant professional internetworking qualifications, Fast Lane has been an authorized worldwide Cisco Learning Solutions Partner for many years. Under NetApp's Authorized Learning Partner program, Fast Lane delivers NetApp authorized courses – both standard and customized - worldwide, using certified and highly experienced instructors.



We believe in a flexible and friendly approach and will provide you with a reliable and cost effective solution, whether you require training delivered on your site, tailored or on one of our public scheduled classes held around the country.

All courses are packed with practical lessons, featuring extensive hands-on experience that thoroughly engage each student in installation, configuration and troubleshooting activities. The complete NetApp curriculum is now available in over 40 countries and 12 languages.

We look forward to working with you.

Peter Olive

Managing Director, United Kingdom and Ireland



Large investments in NetApp lab equipment ensure optimal practical experience in our NetApp courses.

“ NetApp relies on Fast Lane as its sole global partner for customer training. In response, Fast Lane continues to exceed our expectations in execution, quality of classroom training, expansion plans and focus.”



Bruce MacInnis
Senior Manager
Global Commercial Education,
NetApp,
Inc. - NetApp University

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Useful Information

NetApp Tailored Courses

Fast Lane specializes in tailoring courses and curricula to suit your company's circumstances, goals and requirements as well as participants' prior knowledge and skills.

NetApp Modular Reference Guide

The Fast Lane NetApp Modular Reference Guide allows you to build a customized training program by choosing applicable sections from NetApp courses. This enables a learning focus on only those subjects that are critical to your company or industry.

Be it a standard course, specialized technology training or a workshop designed for your company, our experts can conduct every type of training session at one of our training centers or on site at your company's premises.

NetApp Training Units

Training units can be purchased in quantities of 1, 10, 20, 50, 100 and 200's. To place an order please contact your NetApp Account Manager, or to redeem your Training Units against courses please contact Fast Lane on;

Email: netapp@flane.co.uk

Call: **+44 (0) 845 470 1000**

We will verify the amount and confirm your registration. It's that easy!

NB. If you wish to pay for your NetApp training course with NetApp Training Units, please be reminded you are required to hold a NOW account. A NOW account can be set up on NetApp's website <http://now.netapp.com>

Get NetApp Certified

NETAPP CERTIFIED DATA MANAGEMENT ADMINISTRATOR (NCDA)

TEST	RECOMMENDED TRAINING
NSO-153 Storage Networking NSO-163 Data Protection Solutions	<ul style="list-style-type: none"> • Data ONTAP Fundamentals V7.3 (DOTF) • Data ONTAP CIFS Administration V7.3 (CIFS) • Data ONTAP NFS Administration (NFS) • NetApp Protection Software Administration V7.3 (NPSA) • Data ONTAP SAN Administration (SAN)

This certification is for data management administrators and anyone who needs to perform in-depth support, administrative functions and performance management of NetApp products and solutions.
Prerequisites: None

NETAPP CERTIFIED SOLUTIONS ARCHITECT (NCSA)

TEST	RECOMMENDED TRAINING
NSO-301 Certified SAN Solution Architect NSO-310 Certified Backup and Restore Solution Architect NSO-320 Certified Business Continuance Solution NSO-330 Security Solution Architect	<ul style="list-style-type: none"> • Data ONTAP Fundamentals V7.3 (DOTF) • Data ONTAP SAN Administration (SAN) • NetApp Protection Software Administration V7.3 (NPSA)

The NCSA Certification is designed for Pre-Sales SEs.

Prerequisites: The Accredited Storage Architect Program (ASAP) is a prerequisite for the NCSA Certification for internal SEs and Channel Partner SEs only.

NETAPP CERTIFIED IMPLEMENTATION ENGINEER (NCIE)

TEST	RECOMMENDED TRAINING
NSO-501 Certified SAN Implementation Engineer NSO-510 Certified Backup & Restore Implementation Engineer NSO-520 Certified Disaster Recovery Implementation Engineer NSO-530 Certified DataFort Security Implementation Engineer	<ul style="list-style-type: none"> • Data ONTAP Fundamentals V7.3 (DOTF) • NetApp Protection Software Administration V7.3 (NPSA) • Data ONTAP SAN Administration (SAN) • Microsoft Exchange on NetApp Storage Systems (MSEXC) • Microsoft SQL Server 2000 on NetApp Storage Systems (MSSQL)

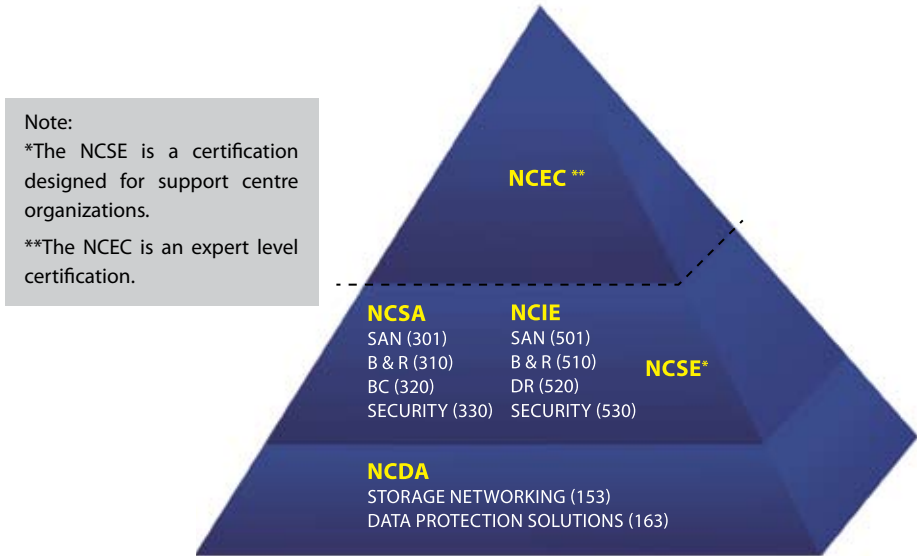
This certification is designed for Post-Sales Engineers and anyone who is implementing NetApp products and solutions.

Prerequisites: None

Please note there is web based training offered by NetApp that should be studied in conjunction with the above instructor-led courses. Further information on these offerings can be found on the NetApp website.

Why Certification?

Professional certification has become an integral part of the skills development and validation process for IT related companies as well as a tool to enable partners to build revenue and loyalty.



WHAT IT MEANS

For the company:

- Certification enhances a company's image
- Organizations that invest in certified professionals gain an advantage over the competition
- A certain level of knowledge and skill has been attained from a recognized and independent body.

For you:

- Certification improves career opportunities and provides an edge when being considered for a promotion or key assignment
- Certification leads to greater on-the-job responsibilities
- Certified professionals are aware of the changing environment surrounding their profession and possess the tools to anticipate and respond to this change
- Certification demonstrates to peers, business associates and the general public one's commitment to a profession and yields recognition throughout the IT industry.

Data ONTAP Fundamentals V7.3 (DOTF)

Price	£2420
Training Units	60
Duration	5 Days

WHO SHOULD ATTEND

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

PREREQUISITES

- Introduction to NetApp Products (web based training)
- NetApp Hardware Fundamentals (web based training)

COURSE DESCRIPTION

This five-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, qtrees and quotas. Hands-on labs for the course focus on the basic administrative use of Data ONTAP in NAS and IP-SAN environments.

There is now also a four day, intensive version on the course. Please see the website for more details.

COURSE OBJECTIVES

On completion of this course, you will be able to:

- Identify NetApp product platforms (FAS, NearStore on FAS, NearStore VTL and VSeries) 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 or 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

Data ONTAP CIFS Administration V7.3 (CIFS)

Price	£975
Training Units	24
Duration	2 Days

WHO SHOULD ATTEND

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

PREREQUISITES

- Data ONTAP Fundamentals (DOTF)
- Introduction to NetApp Products (web based training)

COURSE DESCRIPTION

This instructor-led course is designed for those who provide support and administration for a CIFS environment on NetApp storage systems running the Data ONTAP operating system. This course is delivered using a Windows host. The course 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.

COURSE OBJECTIVES

On completion of this course, you will be able to:

- 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

Data ONTAP NFS Administration (NFS)

Price	£570
Training Units	12
Duration	1 Day

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 appliance running the Data ONTAP operating system

PREREQUISITES

- Introduction to NetApp Products (web based training)
- Data ONTAP Fundamentals (DOTF)
- Working knowledge of UNIX or equivalent experience
- Familiarity with networking concepts

COURSE DESCRIPTION

This instructor-led course is intended to provide product training on the Data ONTAP Release 7.2 (incorporating Data ONTAP Release 7.1). The course will prepare students 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.

COURSE OBJECTIVES

On completion of this course, you will be able to:

- Explain NFS protocol overview, NFS versions and NFS Implementation criteria
- Configure and administer client and server in an 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

NetApp Protection Software Administration V7.3 (NPSA)

Price	£1495
Training Units	36
Duration	3 Days

WHO SHOULD ATTEND

- Administrators and support personnel who will use the SnapMirror, SnapRestore, SnapVault, OSSV, SnapLock and LockVault to manage mission critical data in the enterprise

PREREQUISITES

- Introduction to NetApp Products (web based training)
- Data ONTAP Fundamentals (DOTF)
- High Availability (web based training)

COURSE DESCRIPTION

This instructor-led course is for administrators and support personnel who will use SnapMirror®, SnapRestore®, SnapVault®, Open Systems SnapVault, SnapLock®, and LockVault™ to manage mission-critical data in the enterprise. Basic information on ReplicatorX and Protection Manager and Provisioning Manager are presented. A mixture of lecture and hands-on activities teach concepts and techniques needed to effectively use these solution.

COURSE OBJECTIVES

On completion of this course, you will be able to:

- Set up and maintain Snapshot™ copies
- Revert a file system to a previous version using SnapRestore
- Describe SnapMirror, SnapVault, and Open Systems SnapVault features and functions
- Process basic backup and restore operations with SnapMirror, SnapVault and Open Systems SnapVault
- Troubleshoot common issues and optimize mirror solution performance
- Describe functionality for the Protection Manager and the Provisioning Manager application that run in the NetApp Management Console.
- Describe ReplicatorX features, operating concepts and components and how they work together to provide reliable system-wide data consistency for data migration, replication and disaster recovery.
- Protect your data with SnapLock

Data ONTAP SAN Administration (SAN)

Price	£1495
Training Units	36
Duration	3 Days

WHO SHOULD ATTEND

- Network professionals who need to perform in-depth support, administrative functions and performance management for FCP for SCSI or iSCSI for TCP/IP protocol on a NetApp storage appliance running the Data ONTAP operating system

PREREQUISITES

- Introduction to NetApp Products (web based training)
- Data ONTAP Fundamentals (DOTF)

COURSE DESCRIPTION

SAN Administration Basics is an instructor-led course designed for those who provide support and administration for FC and IP SAN environments running the Data ONTAP operating system. This course is delivered using Windows and SUN hosts.

The course covers SAN infrastructure preparation, storage provisioning options, creation and management of LUNs and volumes, multipathing and high availability, fibre channel cf modes and troubleshooting techniques.

COURSE OBJECTIVES

On completion of this course, you will be able to:

- 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

Fundamentals of Performance Analysis (FPA)

Price	£975
Training Units	24
Duration	2 Days

WHO SHOULD ATTEND

- Administrators and support personnel of NetApp storage systems

PREREQUISITES

- Introduction to NetApp Products (web based training)
- Data ONTAP Fundamentals (DOTF)
- One year of experience with NetApp hardware and software recommended

COURSE DESCRIPTION

The Fundamentals of Performance Analysis course provides students with skills to perform data collection and analysis on NetApp storage systems. Also they will learn how to interpret the data and apply performance changes based on their analysis. Students will use data for tuning, monitoring and other performance related areas.

COURSE OBJECTIVES

On completion of this course, you will be able to:

- 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

MS Exchange on NetApp Storage Systems (MSEXC)

Price	£1495
Training Units	36
Duration	3 Days

WHO SHOULD ATTEND

- Windows and Exchange administrators

PREREQUISITES

- Microsoft course 2400: Implementing and Managing Microsoft Exchange Server 2003
- Microsoft course 2011: Troubleshooting Microsoft Exchange Server 2003
- Microsoft Seminar: Microsoft Exchange Server 2003 Disaster Recovery

COURSE DESCRIPTION

This solution-based course focuses on the optimization of Microsoft Exchange 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.

COURSE OBJECTIVES

On completion of this course, you will be able to:

- Describe the benefits of running MS Exchange on a storage system
- Describe the MS Exchange backup and restore process
- Perform Exchange 2003 storage planning, implementation and administration
- Determine the correct NetApp storage controller model, volume size and LUN size to support the solution
- Perform data migration to and from a PC and a NetApp Storage System
- Back up and verify a Exchange Data Store using SnapManager 3.2
- Restore data using SnapManager 3.2
- Describe different disaster recovery methods
- Implement a disaster recovery method
- Isolate and correct faults in an Exchange and SnapManager solution

Microsoft Clustering with SnapDrive (MSCLU)

Price	£570
Training Units	12
Duration	1 Day

WHO SHOULD ATTEND

- Windows, Exchange and SQL Server administrators

PREREQUISITES

- High Availability (web based training)
- Data ONTAP Fundamentals (DOTF)
- Data ONTAP SAN Administration (SAN)
- Clustering experience

COURSE DESCRIPTION

This intermediate level, hands-on course introduces students to clustering Microsoft servers with SnapDrive. This course also introduces students to implementing MS Exchange and MS SQL on an MS Cluster.

COURSE OBJECTIVES

On completion of this course, you will be able to:

- Illustrate how MS Clustering works and discuss its benefits
- Establish MS Cluster with a SnapDrive-created iSCSI Quorum disk
- Demonstrate, maintain and troubleshoot an MS Cluster
- Install MS Exchange on an MS cluster
- Demonstrate, maintain and troubleshoot MS Exchange on an MS Cluster
- Install MS SQL on an MS Cluster
- Demonstrate, maintain and troubleshoot MS SQL on an MS Cluster

MS SQL on NetApp Filers (MSSQL)

Price	£1995
Training Units	48
Duration	4 Days

WHO SHOULD ATTEND

- Windows and SQL Server administrators

PREREQUISITES

- Data ONTAP Fundamentals (DOTF)
- Data ONTAP SAN Administration (SAN)
- High Availability (web based training)
- At least one of the following:
 - Microsoft course 2072
 - Microsoft exam 70-228
 - One year Microsoft SQL Server 2005 experience

COURSE DESCRIPTION

This solution-based course focuses on 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.

COURSE OBJECTIVES

On completion of this course, you will be able to:

- 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 3.2
- 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 3.2
- Describe different disaster recovery methods
- Implement disaster recovery methods
- Isolate and correct faults in a SQL Server and SnapManager solution

Data Management Using Operations Manager 3.6 and Protection Manager (OPSMGR)

Price £1995

Training Units 48

Duration 4 Days

WHO SHOULD ATTEND

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

PREREQUISITES

- Data ONTAP Fundamentals (DOTF)
- Introduction to NetApp Products

COURSE DESCRIPTION

This instructor-led course is for administrators and support personnel who will use Operations Manager and Protection Manager services to backup and protect mission critical data in the enterprise. A mixture of lecture and hands-on activities teach concepts and techniques needed to effectively use and troubleshoot these solutions.

COURSE OBJECTIVES

On completion of this course, you will be able to:

- Articulate the different components that make up the Operations Manager 3.6 data management suite
- Explain the differences between Operations Manager 3.6 and previous versions
- Explain Operations Manager Licensing
- Explain hardware and software requirements
- Determine proper sizing of the Operations Manager Environment
- Install Operations Manager 3.6
- 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, Policies, 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
- Troubleshoot common issues associated with 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

NCDA Boot Camp (NCDA BC)

Price	£5995
Training Units	120
Duration	10 Days

WHO SHOULD ATTEND

- Network Professionals seeking the NetApp Certified Data Management Administrator (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.

PREREQUISITES

- None

COURSE DESCRIPTION

This 10-day boot camp will prepare you to pass all the NetApp exams required to achieve the NetApp Certified Data Management Administrator (NCDA) certification.

COURSE OBJECTIVES

On completion of this course, you will be able to:

- State the advantages, features, and functions of a NetApp 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 NetApp 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 how to administer NetApp 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 multipathing 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 clients and servers in an NFS environment
- 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

Advanced NCDA Boot Camp (ANCA BC)

Price	£2995
Training Units	60
Duration	5 Days

WHO SHOULD ATTEND

- Network Professionals seeking the NetApp Certified Data Management Administrator (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.

PREREQUISITES

- DOTF

COURSE DESCRIPTION

This 5-day intensive, advanced boot camp will prepare you for all required NetApp exams to achieve the NetApp Certified Data Management Administrator (NCDA) certification, assuming you have met the prerequisites. The hands-on course covers the required knowledge from the CIFS, NFS, SAN and NPSA.

COURSE OBJECTIVES

On completion of this course, you will be able to:

- 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 an 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
- 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
- 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
- Define High Availability and Network Appliance solutions: active-active configuration, SyncMirror, Stretch MetroCluster, and Fiber-Attached MetroCluster
- Create a SyncMirror aggregate
- Articulate best practices when deploying active-active configurations
- Configure MetroCluster
- Configure SyncMirror

VMware ESX on NetApp Storage Systems (NAVMW)

Price	£2420
Training Units	60
Duration	5 Days

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

PREREQUISITES

Before taking this course you should have the following:

- Knowledge on NetApp Storage Systems, VMware ESX, Linux and Windows Servers

COURSE DESCRIPTION

This 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.

COURSE OBJECTIVES

On completion of this course, you will be able to:

- 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

Coming Soon

Oracle on NetApp Storage Systems (ORACLE)

Duration	5 Days
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WHO SHOULD ATTEND

- Anyone who manages, or needs to know about running Oracle databases on NetApp products

PREREQUISITES

- Data ONTAP Fundamentals (DOTF)
- Basic knowledge about transactional application concepts, particularly Oracle

COURSE OBJECTIVES

On completion of this course, you will be able to:

- Explain the NetApp - Oracle relationship
- 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
- Understand how volume and LUN clones can be used to provision copies of Oracle databases for development and test uses
- Understand the application of SMO in an Oracle RAC environment with Oracle ASM



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NetApp Courses Available In:

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Norway Poland Portugal Russia Spain Sweden Switzerland Turkey Ukraine United Kingdom **MIDDLE EAST** Egypt Saudi
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