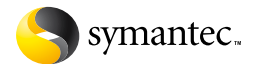




# Data Center Training 2010

- Virtualization
- Data Center Switching
- Unified Computing
- Storage Networking
- Business Continuity



We are pleased to present to you our comprehensive range of qualification programs in this data center catalog. Our offering has been extended and now encompasses a great deal of training on virtualization technologies. For example, we now offer a host of new classes centered on the Cisco Nexus 1000V, 2000, 5000, and 7000 product lines as well as new Cisco Unified Computing System (UCS) and VMware courses.

Every course participant learns the necessary theory in classroom instruction and puts this knowledge into practice, gaining hands-on experience in our high-end data center labs. Our lab infrastructure comprises new Nexus labs equipped with Nexus 7000 and Nexus 5010 switches, VMware ESX servers including Nexus 1000V, and much more.

Our specialists will be happy to adapt training to suit your unique requirements. What's more, we can conduct all training on-site at your location. Certified by the various vendors, our coaches bring to the classroom extensive practical experience with data centers.

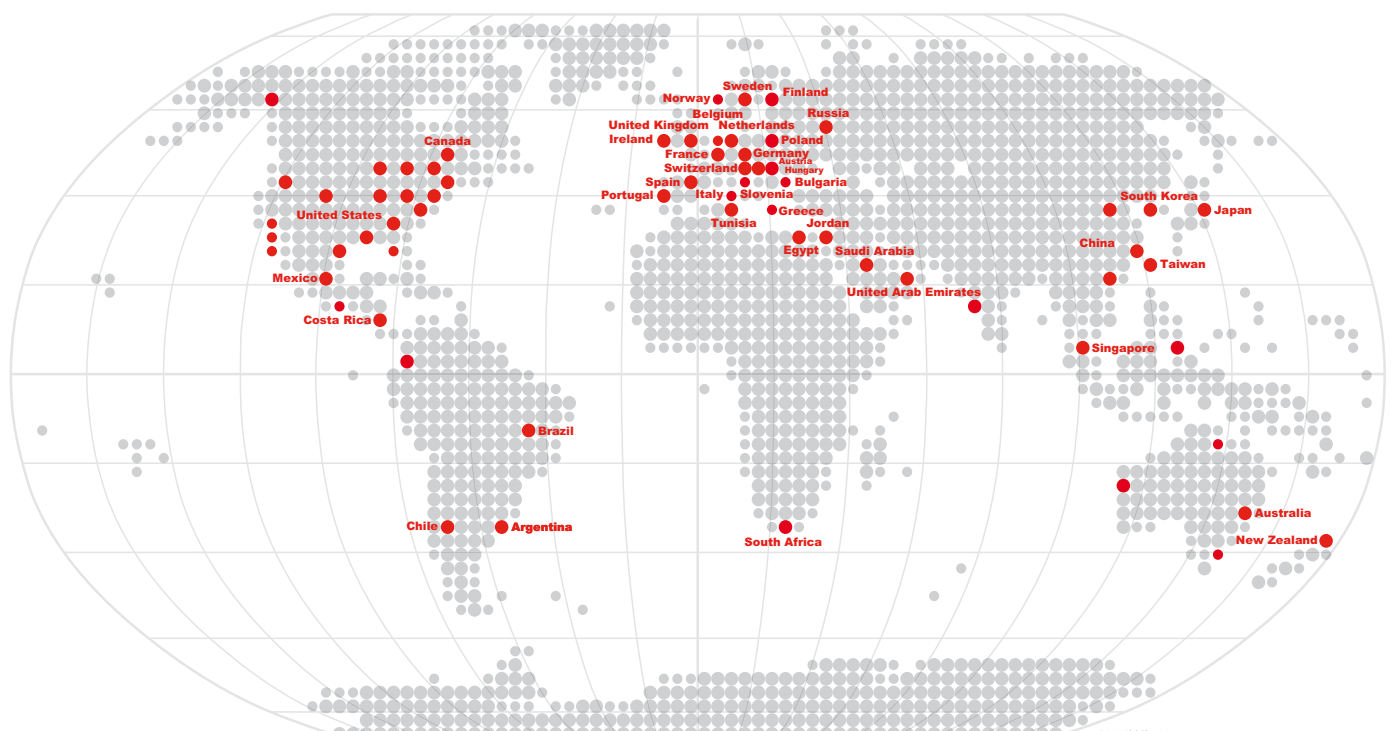
We can deliver our training to you worldwide. Fast Lane has planted a footprint on all continents, with offices in 50 countries. This makes us the only Cisco Learning Solutions Partner (CLSP) worldwide serving all regions, as well as the only global Learning Partner of NetApp.

Our experienced experts will be delighted to help you draft a training plan attuned fully to your demands and geared to develop the professional skills your people need to make the most of your data center solutions.



We look forward to working with you.

Torsten Poels  
Senior Vice President & General Manager  
Europe, Americas & Japan, Fast Lane



Fast Lane Training Centers

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Prices in this catalogue exclude VAT. Please note that pricing may differ between countries.

# Unified Computing and Unified Fabric: Training for the virtualized Data Center



The Cisco Unified Computing System (UCS) is the next-generation data center platform. Designed to improve IT responsiveness to rapidly changing business demands, it accelerates the delivery of new services simply, reliably, and securely, through end-to-end provisioning and migration support for both virtualized and non-virtualized systems. The Unified Computing System unifies network, compute, storage access, and virtualization resources in a cohesive system to reduce total cost of ownership, increase business agility, and improve productivity.

## NEW COURSES FOR CISCO'S UNIFIED COMPUTING SYSTEM (UCS)

Fast Lane was selected as an initial delivery partner by Cisco to train their internal engineers on the UCS product. Our current training offerings include the complete new Cisco Unified Computing curriculum. Beyond that, in 2010 Fast Lane brings to market a special UCS training package encompassing the full range of UCS certifications - Storage Networking, Data Center Networking Infrastructure, Virtualization (VMware), and UCS Design & Implementation.



## CISCO NEXUS 1000V / 2000 / 5000 / 7000 COURSES

The innovative architecture of the Cisco Nexus Series Switches simplifies data center transformation by helping to enable a standards-based, high-performance unified fabric. The Cisco Nexus family offers an infrastructure that can be scaled cost-effectively and that helps you increase energy, budget, and resource efficiency. Fast Lane not only offers official Cisco Nexus courses, we have also developed supplementary Cisco Nexus training courses.



## CISCO UCS COURSES

- Data Center Unified Computing Design (DCUCD) page 37
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## CISCO NEXUS COURSES

- Cisco Nexus Overview Workshop (CNOW) page 31
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- Implementing Cisco Data Center Network Infrastructure 2 (DCNI-2) page 33
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# Cisco, VMware, NetApp: Multi-vendor Training Programs



Virtualization helps consolidate, streamline, and significantly simplify the data center. Cisco, VMware, and NetApp collectively offer the innovative infrastructure on which the virtualized, Ethernet-based computing center of the future is built.

## **CISCO UNIFIED COMPUTING, VMWARE VSPHERE, NETAPP UNIFIED STORAGE**

An authorized training partner of all three vendors, we offer comprehensive technology know-how and develop custom multi-vendor training programs. We also cooperate closely and directly with Cisco and NetApp in many course development projects.

## **TRAINING FOR MULTI-VENDOR IT INFRASTRUCTURE**

Our multi-vendor training offerings enable us to demonstrate the benefits of the virtualized data center to you, including lower operating costs, protected investment in legacy systems, better exploitation of all IT resources, as well as streamlined and thus simplified data center architecture.



## **CISCO EUROPEAN LEARNING PARTNER OF THE YEAR 2009**

In June 2009, Fast Lane received the „Cisco European Learning Partner of the Year 2009“ award. Among other things, this award highlights the activities in the field of data centers in connection with VMware and NetApp technologies. This also includes Cisco Nexus 1000V, Nexus 2000, Nexus 5000 and the Nexus 7000 course and lab developments.

## **WE KEEP YOU UP TO DATE ON THE LATEST DEVELOPMENTS IN THE CURRICULUM!**

Do you know the Fast Lane community site? Register there and we will keep you posted on new developments in the curriculum! This community site has so much more to offer to our partners and customers, for instance, access to the Fast Lane Learning Center with its many free assessment tests, discussion forums, and further technical information.

» [www.fastlane-community.com](http://www.fastlane-community.com)



## **MULTIVENDOR TRAINING PROGRAMS**

- |   |         |
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| • What's New vSphere™ 4 on Nexus 1000V Data Center Networks (WNNDC)                 | page 41 |
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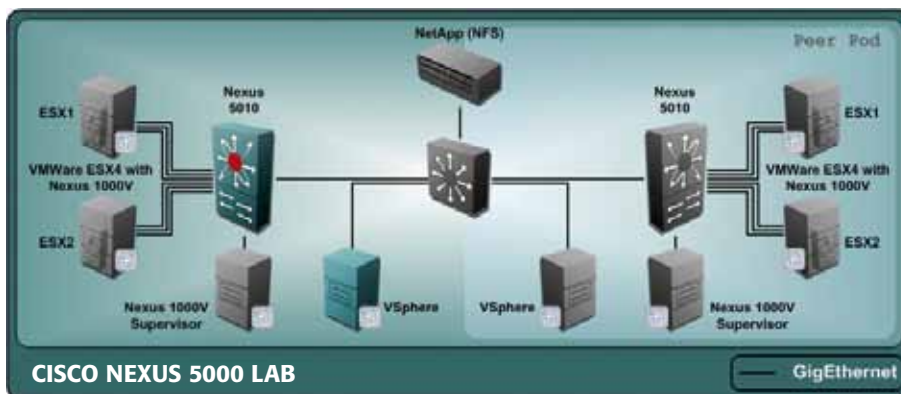
# High-end Data Center Labs



We offer our customers a data center solutions training and demo lab environment unrivalled worldwide. Featuring the latest devices and technologies, our high-end-labs provide first-rate service, setting premium quality standards for training. Our project consultants can also access our labs from any location, demonstrating complex data center environments in action on site, and enabling customers to test them under real-world conditions.

## CISCO DATA CENTER LABS

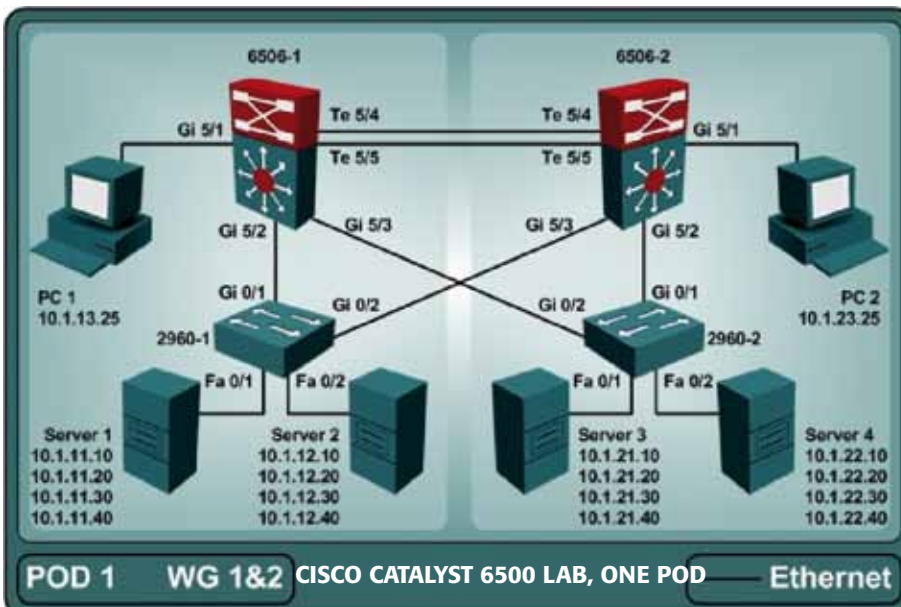
Fast Lane invested in a comprehensive Nexus Lab equipped with Cisco Nexus 7000 and 5010 Switches, Nexus 2000 Fabric Extenders, MDS 9216i Switches and VMWare ESX servers, including the Nexus 1000V.



We also offer you Europe's only Cisco SAN Lab with two MDS 9509 and 32 MDS 9216i switches. Each pod includes two MDS 9216i switches, one port analyzer, a JBOD and two high performance Dell servers.

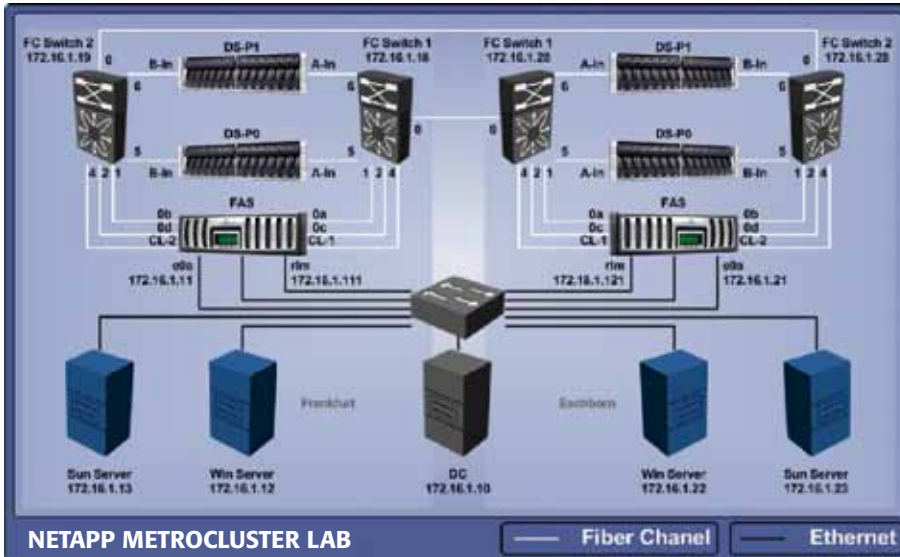


Our big Catalyst Core Lab comprises 14 Cisco 6500 Catalyst switches equipped with Virtual Switching Supervisor Engines 720-10G, Firewall Service Modules (FWSM), NAM as well as redundant ACE modules.



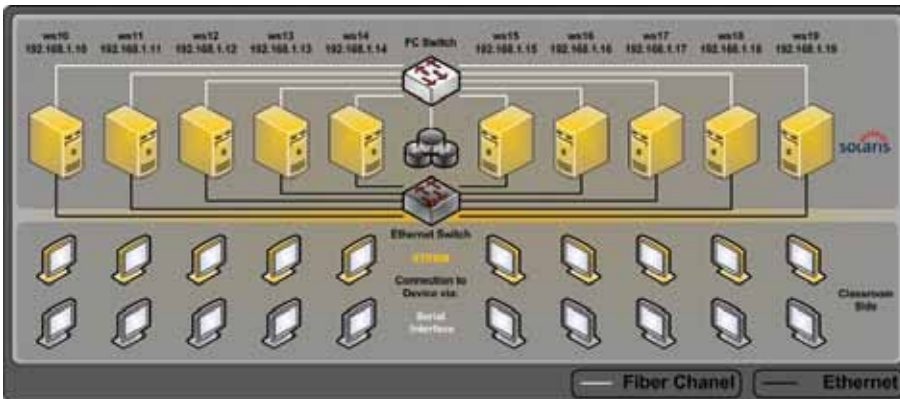
## NETAPP LABS

Fast Lane offers 12 NetApp Labs with FAS3040 Fabric Attached MetroCluster as well as 16 FAS2050 and 32 FAS270C storage systems. The labs include high performance Dell servers with Solaris and Windows. In addition, the labs are equipped with Symantec and VMware backup and virtualization solutions.



## SYMANTEC LABS

Our Symantec labs include numerous high performance servers with Solaris and Windows, Brocade switches and tape libraries.



ID	Labs	Hours	Days	Pods	Total Price	Price/day
NetApp Labs	L-DOTF Data ONTAP Fundamentals	40	5	8	3.490,00 EUR	749,00 EUR
	L-CIFS CIFS Administration on Data ONTAP	16	2	8	1.390,00 EUR	749,00 EUR
	L-NFS NFS Administration on Data ONTAP	8	1	8	749,00 EUR	749,00 EUR
	L-SAN SAN Administration on Data ONTAP	24	3	8	2.090,00 EUR	749,00 EUR
	L-NPSA NetApp Protection Software Administration	24	3	8	2.090,00 EUR	749,00 EUR
	L-METRO MetroCluster	16	2	8	1.390,00 EUR	749,00 EUR
	L-SME NetApp SnapManager 5.0 for Microsoft Exchange	32	4	8	2.490,00 EUR	749,00 EUR
	L-NAVMW VMware ESX on NetApp Storage Systems	40	5	8	3.490,00 EUR	749,00 EUR
Cisco Labs	L-MSSQL Microsoft SQL on NetApp Storage Systems	32	4	8	2.490,00 EUR	749,00 EUR
	L-ACESM Implementing the ACE Service Module	32	4	8	2.990,00 EUR	749,00 EUR
	L-ACEAP Cisco Application Control Engine Appliance	32	4	8	3.490,00 EUR	949,00 EUR
	L-ACEDES Designing an Enterprise Application Infrastructure	32	4	8	3.490,00 EUR	949,00 EUR
	L-CWAAS Cisco Wide Area Application Services	40	5	4	2.490,00 EUR	549,00 EUR
	L-DCNI-1 Implementing Cisco DC Network Infrastructure 1	40	5	8	3.490,00 EUR	749,00 EUR
	L-DCNI-2 Implementing Cisco DC Network Infrastructure 2 v3.0	40	5	6	4.900,00 EUR	1.200,00 EUR
	L-ICSNS Implementing Cisco Adv. Storage Networking Solutions 40	5	8	3.490,00 EUR	749,00 EUR	
L-IASNS Implementing Cisco Adv. Storage Networking Solutions	40	5	8	3.490,00 EUR	749,00 EUR	
L-DCSNS Designing Cisco Storage Networking Solutions	40	5	8	3.490,00 EUR	749,00 EUR	

Prices exclude VAT.

## HIRING REMOTE LABS

Our labs are available to you for many data center training courses and also for customer focused training offerings. You can rent the labs weekly or by the day. If you want more information or have questions about our remote lab offering, simply dial +49 (0)40 25334610 or send an e-mail to info@flane.de.

Fast Lane is the only global NetApp Learning Partner. We offer the full NetApp curriculum in more than 50 countries and 12 languages. 100 certified Fast Lane storage experts deliver our training programs to you worldwide.

## ORIGINAL NETAPP

As an authorized NetApp Learning Partner, Fast Lane offers NetApp's original training programs to you wherever in the world you may be. Our storage specialists share their knowledge and experience, helping you acquire the skill set it takes to design and implement highly-available and scalable NetApp storage systems.

## SUPPLEMENTARY TRAINING

We conduct further courses alongside authorized NetApp training, for instance, NetApp Power Workshops and special sales courses.

## STORAGE SECURITY TRAINING

We also offer training on NetApp DataFort products and solutions that use encryption, authentication, secured access, and partitioning to protect storage networks.

## CUSTOMIZED TRAINING RIGHT ON SITE

Our storage specialists enjoy the challenge of adapting training to suit your needs. We can even conduct all NetApp training at your company's location.

## TOP COACHES

All our instructors are NetApp-certified specialists with extensive practical experience in the storage environment.

## NETAPP LABS

NetApp training extends far beyond classroom theory, enabling every course participant opportunities to gain hands-on experience installing, configuring, and troubleshooting these systems. Fast Lane offers twelve NetApp labs featuring FAS3040 Fabric Attached MetroCluster as well as 16 FAS2050 and 32 FAS270C storage systems. These labs also comprise Dell servers with Solaris and Windows operating systems. And they are equipped with backup and virtualization solutions from Symantec and VMware.

## NETAPP TRAINING UNITS (NTUs)

Redeem your NetApp Training Units! You are free to use NTUs to pay for any NetApp training.



**“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,  
Sr. Program Manager  
for Technical Partners,  
NetApp, Inc. -  
NetApp University

**Data center proven and engineered to simplify your critical storage networking infrastructure.** NetApp delivers powerful, data center proven products and services designed to simplify complex IT environments and dramatically reduce your total cost of ownership. Designed to support large data centers, NetApp's industry-leading products make your data management scalable, flexible, and available.

## PRIMARY STORAGE

NetApp primary storage enables you to unify and streamline your infrastructure by consolidating storage across many servers and applications over any storage fabric.



**FAS2000 Series**



**FAS3100 Series**



**FAS6000 Series**

## NEARLINE STORAGE

The NetApp NearStore system bridges the gap between primary storage and offline storage by providing much faster data access than offline storage at a cost much lower than primary storage. This makes NearStore ideal for data protection and retention applications such as disk-to-disk backup, disaster recovery, archival, compliant retention, and content storage.



**NearStore on FAS, NetApp VTL**

## STORAGE VIRTUALIZATION

NetApp V-Series is a network-based solution that virtualizes tiered, heterogeneous storage arrays enabling unified block (FCP and iSCSI) and file (NAS) access to data stored in Fibre Channel SAN storage arrays.



**V-Series**

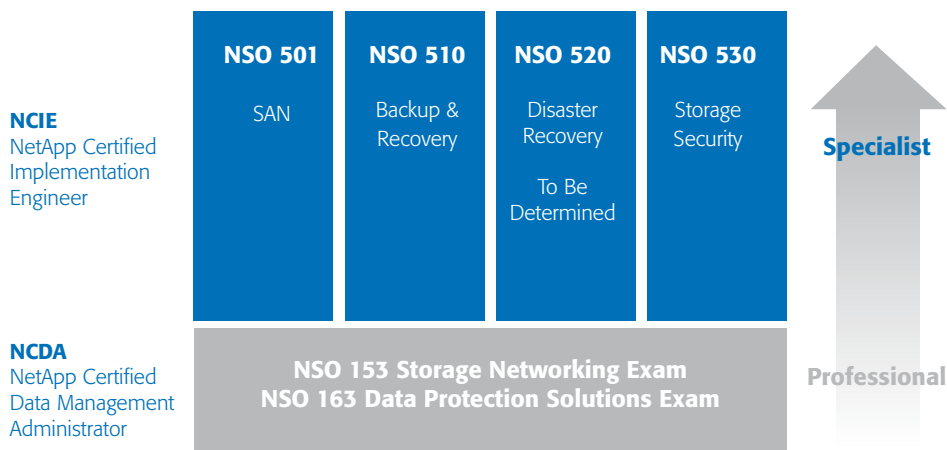
## STORAGE SECURITY

NetApp DataFort offers you the only unified platform that transparently secures data at rest across heterogeneous enterprise environments. DataFort appliances are enterprise-class storage encryption systems that build the foundation to protect core data assets.



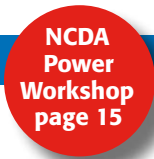
**DataFort Platform**

NetApp's comprehensive certifications give you the opportunity to validate your knowledge and skills as a trained NetApp technical professional. Fast Lane delivers the courses you need to prepare for the certification you desire.



## NETAPP CERTIFIED DATA MANAGEMENT ADMINISTRATOR (NCDA)

Test	Recommended Training
NSO 153: Storage Networking Professional	<ul style="list-style-type: none"> <li>• Data ONTAP Fundamentals (DOTF)</li> <li>• CIFS Administration on Data ONTAP (CIFS)</li> <li>• NFS Administration on Data ONTAP (NFS)</li> <li>• SAN Administration on Data ONTAP (SAN)</li> </ul>
NSO 163: Data Protection Solutions Professional	<ul style="list-style-type: none"> <li>• NetApp Protection Software Administration (NPSA)</li> <li>• High Availability (NAHA)</li> </ul>



## NETAPP CERTIFIED IMPLEMENTATION ENGINEER (NCIE)

### NETAPP CERTIFIED SAN IMPLEMENTATION ENGINEER (NCIE-SAN)

Test	Recommended Training
NSO 501: SAN	<ul style="list-style-type: none"> <li>• SAN Administration on Data ONTAP (SAN)</li> </ul>

### NETAPP CERTIFIED BACKUP & RECOVERY IMPLEMENTATION ENGINEER (NCIE-B&R)

Test	Recommended Training
NSO 510: Backup & Recovery	<ul style="list-style-type: none"> <li>• NetApp Virtual Tape Library Administration (NAVTL)</li> <li>• NetApp Protection Software Administration (NPSA)</li> <li>• Operations Manager, Protection Manager &amp; Provisioning Manager (OPSMGR)</li> </ul>

### NETAPP CERTIFIED STORAGE SECURITY IMPLEMENTATION ENGINEER (NCIE-STORAGE SECURITY)

Test	Recommended Training
NSO 530: Storage Security	<ul style="list-style-type: none"> <li>• DataFort Storage Security Administration (DSSA)</li> </ul>

## Data ONTAP Fundamentals (DOTF)

**ID** NA-DOTF **Price** 4.500,00 EUR (excl. VAT) **60 NTUs** **Duration** 5 Days

### WHO SHOULD ATTEND

- Anyone who provides basic support and administrative functions of the Data ONTAP operating system

### PREREQUISITES

- Introduction to NetApp Products (WBT)
- NetApp Hardware Fundamentals (WBT)

### COURSE OBJECTIVES

Data ONTAP Fundamentals is an instructor-led course designed for those who provide support and administration on NetApp storage systems running the Data ONTAP operating system. The course covers 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.

### COURSE CONTENT

- Describe the basic functions of the Data ONTAP operating system
- Access the NOW (NetApp on the Web) Knowledgebase to obtain software and hardware documentation
- Set up console access for a storage system

- Configure a storage system with the setup command
- Access FilerView and the command line to manage a storage system
- Configure and manage the AutoSupport service for a FAS storage system
- Define and create virtual interfaces (vifs) and VLANs
- Describe Data ONTAP RAID technology
- Calculate usable disk space of disks
- Define and create an aggregate and volume
- Define FlexClone volume
- Configure the storage system as an NFS server and CIFS server
- Configure a multiprotocol environment
- Configure a LUN for SAN environments
- Configure, create and restore Snapshot copies
- Describe the WAFL file system, including consistency points, tetris creation, RAID management, and storage levels
- Collect performance data
- Use FlexShare
- Configure an Active-Active Configuration



<b>SCHEDULE France</b>	Hamburg	03.05.-07.05.10	Athens	<b>E</b> 22.11.-26.11.10	Madrid	12.04.-16.04.10
Lyon	Munich	17.05.-21.05.10	<b>SCHEDULE Italy</b>		Barcelona	17.05.-21.05.10
Paris	Berlin	<b>E</b> 25.05.-28.05.10	Rome	18.01.-22.01.10	Barcelona	05.07.-09.07.10
Marseille	Berlin	07.06.-11.06.10	Milan	08.02.-12.02.10	Madrid	13.09.-17.09.10
Toulouse	Dusseldorf	14.06.-18.06.10	Rome	01.03.-05.03.10	Barcelona	25.10.-29.10.10
Lyon	Frankfurt	21.06.-25.06.10	Milan	29.03.-02.04.10	Madrid	29.11.-03.12.10
Paris	Hamburg	<b>E</b> 28.06.-02.07.10	Monza	12.04.-16.04.10	<b>SCHEDULE Switzerland</b>	
Toulouse	Hamburg	05.07.-09.07.10	Milan	03.05.-07.05.10	Zurich	11.01.-15.01.10
Lyon	Stuttgart	12.07.-16.07.10	Rome	24.05.-28.05.10	Zurich	22.03.-26.03.10
Paris	Munich	19.07.-23.07.10	Milan	14.06.-18.06.10	Zurich	03.05.-07.05.10
Lyon	Berlin	02.08.-06.08.10	Rome	05.07.-09.07.10	Zurich	<b>E</b> 12.07.-16.07.10
Paris	Frankfurt	16.08.-20.08.10	Milan	26.07.-30.07.10	Zurich	30.08.-03.09.10
Marseille	Hamburg	30.08.-03.09.10	Milan	06.09.-10.09.10	Zurich	25.10.-29.10.10
Paris	Berlin	<b>E</b> 06.09.-10.09.10	Rome	27.09.-01.10.10	<b>SCHEDULE United Kingdom</b>	
Lyon	Munich	13.09.-17.09.10	Milan	18.10.-22.10.10	London	<b>E</b> 04.01.-08.01.10
Paris	Stuttgart	20.09.-24.09.10	Rome	08.11.-12.11.10	Leeds	<b>E</b> 18.01.-22.01.10
Toulouse	Berlin	27.09.-01.10.10	Milan	29.11.-03.12.10	London	<b>E</b> 25.01.-29.01.10
Paris	Frankfurt	04.10.-08.10.10	<b>SCHEDULE Netherlands</b>		London	<b>E</b> 15.02.-19.02.10
Lyon	Frankfurt	<b>E</b> 11.10.-15.10.10	Utrecht	<b>E</b> 11.01.-15.01.10	London	<b>E</b> 08.03.-12.03.10
<b>SCHEDULE Germany</b>	Dusseldorf	11.10.-15.10.10	Utrecht	<b>E</b> 08.02.-12.02.10	Leeds	<b>E</b> 22.03.-26.03.10
Hamburg	Munich	18.10.-22.10.10	Utrecht	<b>E</b> 08.03.-12.03.10	London	<b>E</b> 10.05.-14.05.10
Frankfurt	Stuttgart	25.10.-29.10.10	Utrecht	<b>E</b> 12.04.-16.04.10	Leeds	<b>E</b> 17.05.-21.05.10
Munich	Hamburg	01.11.-05.11.10	Utrecht	<b>E</b> 17.05.-21.05.10	London	<b>E</b> 01.06.-04.06.10
Berlin	Frankfurt	08.11.-12.11.10	Utrecht	<b>E</b> 14.06.-18.06.10	London	<b>E</b> 12.07.-16.07.10
Frankfurt	Hamburg	<b>E</b> 15.11.-19.11.10	<b>SCHEDULE Portugal</b>		Leeds	<b>E</b> 19.07.-23.07.10
Dusseldorf	Munich	15.11.-19.11.10	Lisbon	01.02.-05.02.10	London	<b>E</b> 02.08.-06.08.10
Hamburg	Berlin	22.11.-26.11.10	Lisbon	05.04.-09.04.10	London	<b>E</b> 23.08.-27.08.10
Berlin	Frankfurt	29.11.-03.12.10	Lisbon	24.05.-28.05.10	London	<b>E</b> 13.09.-17.09.10
Munich	<b>SCHEDULE Greece</b>		Lisbon	23.08.-27.08.10	Leeds	<b>E</b> 20.09.-24.09.10
Stuttgart	Athens	<b>E</b> 22.02.-26.02.10	Lisbon	18.10.-22.10.10	London	<b>E</b> 04.10.-08.10.10
Frankfurt	Athens	<b>E</b> 19.04.-23.04.10	Lisbon	22.11.-26.11.10	London	<b>E</b> 25.10.-29.10.10
Berlin	Athens	<b>E</b> 07.06.-11.06.10	<b>SCHEDULE Spain</b>		London	<b>E</b> 15.11.-19.11.10
Munich	Athens	<b>E</b> 09.08.-13.08.10	Barcelona	25.01.-29.01.10	<b>E</b> Training in English	
Frankfurt	Athens	<b>E</b> 04.10.-08.10.10	Madrid	01.03.-05.03.10	Further English dates on request	

## CIFS Administration on Data ONTAP (CIFS)

**ID** NA-CIFS **Price** 1.800,00 EUR (excl. VAT) **24 NTUs** **Duration** 2 Days

### WHO SHOULD ATTEND

- Anyone who provides support and administration for a CIFS environment on NetApp storage systems running the Data ONTAP operating system

### PREREQUISITES

- Data ONTAP Fundamentals (DOTF) course

### COURSE OBJECTIVES

This 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 & options, administering a storage system including creating and managing shares, users, and groups, and troubleshooting CIFS problems.

### COURSE CONTENT

- Describe the different CIFS 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
- 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



#### SCHEDULE France

Paris 15.03.-16.03.10  
Paris 26.04.-27.04.10  
Paris 20.09.-21.09.10

#### SCHEDULE Germany

Hamburg 11.01.-12.01.10  
Frankfurt **E** 27.01.-28.01.10  
Berlin 08.02.-09.02.10  
Munich **E** 24.02.-25.02.10  
Munich 22.03.-23.03.10  
Berlin **E** 07.04.-08.04.10  
Hamburg **E** 05.05.-06.05.10  
Berlin **E** 31.05.-01.06.10  
Frankfurt 28.06.-29.06.10  
Hamburg 12.07.-13.07.10  
Frankfurt **E** 28.07.-29.07.10  
Berlin 09.08.-10.08.10  
Munich **E** 25.08.-26.08.10  
Munich 20.09.-21.09.10  
Frankfurt 11.10.-12.10.10  
Hamburg **E** 27.10.-28.10.10  
Hamburg 08.11.-09.11.10  
Berlin **E** 17.11.-18.11.10  
Berlin 29.11.-30.11.10  
Frankfurt **E** 20.12.-21.12.10

#### SCHEDULE Italy

Rome 08.03.-09.03.10

Milan 10.05.-11.05.10  
Rome 12.07.-13.07.10  
Milan 13.09.-14.09.10

#### SCHEDULE Netherlands

Utrecht **E** 15.02.-16.02.10  
Utrecht **E** 06.04.-07.04.10  
Utrecht **E** 25.05.-26.05.10

#### SCHEDULE Spain

Madrid 08.03.-09.03.10  
Barcelona 12.07.-13.07.10  
Madrid 20.09.-21.09.10  
Barcelona 03.11.-04.11.10

#### SCHEDULE Switzerland

Zurich 18.01.-19.01.10  
Zurich 29.03.-30.03.10  
Zurich 10.05.-11.05.10  
Zurich **E** 19.07.-20.07.10  
Zurich 06.09.-07.09.10  
Zurich 01.11.-02.11.10  
Zurich 13.12.-14.12.10

#### SCHEDULE United Kingdom

London **E** 11.02.-12.02.10  
London **E** 01.07.-02.07.10  
London **E** 04.11.-05.11.10

**E** Training in English  
Further English dates on request

## NFS Administration on Data ONTAP (NFS)

**ID** NA-NFS **Price** 900,00 EUR (excl. VAT) **12 NTUs** **Duration** 1 Day

### WHO SHOULD ATTEND

- Anyone who provides support and administration for a NFS environment on NetApp storage systems running the Data ONTAP operating system

### PREREQUISITES

- Data ONTAP Fundamentals (DOTF) course
- Working knowledge of UNIX
- Familiarity with networking concepts

### COURSE CONTENT

- 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, netgroups

- Explain the /etc/exports access options and how they relate to mount permissions
- 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

#### SCHEDULE France

Paris 30.03.10  
Paris 08.06.10  
Paris 16.11.10

#### Germany

Hamburg 13.01.10  
Frankfurt **E** 29.01.10  
Berlin 10.02.10  
Munich **E** 26.02.10  
Munich 24.03.10  
Berlin **E** 09.04.10  
Hamburg **E** 07.05.10  
Berlin **E** 02.06.10  
Frankfurt 30.06.10  
Hamburg 14.07.10  
Frankfurt **E** 30.07.10  
Berlin 11.08.10  
Munich **E** 27.08.10  
Munich 22.09.10

Frankfurt 13.10.10  
Hamburg **E** 29.10.10  
Hamburg 10.11.10  
Berlin **E** 19.11.10  
Berlin 01.12.10  
Frankfurt **E** 22.12.10

#### Italy

Rome 15.03.10  
Milan 17.05.10  
Rome 20.07.10  
Milan 21.09.10

#### Netherlands

Utrecht **E** 17.02.10  
Utrecht **E** 08.04.10  
Utrecht **E** 27.05.10

#### Spain

Madrid 15.03.10  
Barcelona 20.07.10  
Madrid 27.09.10

Barcelona 08.11.10

#### Switzerland

Zurich 05.01.10  
Zurich 31.03.10  
Zurich 12.05.10  
Zurich **E** 21.07.10  
Zurich 08.09.10  
Zurich 03.11.10  
Zurich 15.12.10

#### United Kingdom

London **E** 05.02.10  
London **E** 06.05.10  
London **E** 03.09.10  
London **E** 10.12.10

**E** Training in English  
Further English dates on request

# SAN Administration on Data ONTAP (SAN)

**ID** NA-SAN **Price** 2.700,00 EUR (excl. VAT) **36 NTUs** **Duration** 3 Days

## WHO SHOULD ATTEND

- Anyone who provides support and administration for FC and IP SAN environments running the Data ONTAP operating system

## PREREQUISITES

- Data ONTAP Fundamentals (DOTF) course

## COURSE OBJECTIVES

The SAN Administration on Data ONTAP course was 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 UNIX hosts. The course covers SAN infrastructure preparation, storage provisioning options, creation and management of LUNs and volumes, multipathing and high availability, Fibre Channel cfmodes, and troubleshooting techniques.

## COURSE CONTENT

- 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 system from both Windows and UNIX hosts
- Explain both FC and IP SAN multipathing options for both Windows and native Solaris 10 operating system
- Explain the most common problems associated with a SAN environment and how to troubleshoot these problems



### SCHEDULE France

Lyon 25.01.-27.01.10  
 Paris 22.02.-24.02.10  
 Toulouse 03.05.-05.05.10  
 Paris 31.05.-02.06.10  
 Lyon 20.09.-22.09.10  
 Toulouse 25.10.-27.10.10  
 Paris 06.12.-08.12.10

### SCHEDULE Germany

Hamburg 27.01.-29.01.10  
 Berlin 24.02.-26.02.10  
 Frankfurt **E** 17.03.-19.03.10  
 Munich 07.04.-09.04.10  
 Berlin **E** 16.06.-18.06.10  
 Frankfurt 14.07.-16.07.10  
 Hamburg 21.07.-23.07.10  
 Berlin 25.08.-27.08.10  
 Hamburg **E** 15.09.-17.09.10  
 Munich 06.10.-08.10.10  
 Frankfurt 27.10.-29.10.10  
 Hamburg 24.11.-26.11.10  
 Berlin 15.12.-17.12.10

### SCHEDULE Italy

Milan 18.05.-20.05.10  
 Rome 28.07.-30.07.10

Milan 29.09.-01.10.10

### SCHEDULE Netherlands

Utrecht **E** 22.02.-24.02.10  
 Utrecht **E** 26.04.-28.04.10  
 Utrecht **E** 07.06.-09.06.10

### SCHEDULE Spain

Madrid 22.03.-24.03.10  
 Barcelona 28.07.-30.07.10  
 Madrid 04.10.-06.10.10  
 Barcelona 15.11.-17.11.10

### SCHEDULE Switzerland

Zurich 19.01.-21.01.10  
 Zurich 30.03.-01.04.10  
 Zurich 11.05.-13.05.10  
 Zurich **E** 20.07.-22.07.10  
 Zurich 07.09.-09.09.10  
 Zurich 02.11.-04.11.10  
 Zurich 14.12.-16.12.10

### SCHEDULE United Kingdom

London **E** 01.02.-03.02.10  
 London **E** 03.05.-05.05.10  
 London **E** 31.08.-01.09.10  
 London **E** 06.12.-08.12.10

**E** Training in English  
 Further English dates on request

# NetApp Protection Software Administration (NPSA)

**ID** NA-NPSA **Price** 2.700,00 EUR (excl. VAT) **36 NTUs** **Duration** 3 Days

## WHO SHOULD ATTEND

- Administrators and support personnel who will use SnapMirror, SnapRestore, SnapVault, Open Systems SnapVault, SnapLock, and LockVault

## PREREQUISITES

- Data ONTAP Fundamentals (DOTF) and High Availability (NAHA) courses

## COURSE OBJECTIVES

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 SnapMirror for Open Systems 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 solutions.

## COURSE CONTENT

- 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 SnapMirror for Open Systems 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



### SCHEDULE France

Paris	31.03.-02.04.10
Paris	09.06.-11.06.10
Paris	25.08.-27.08.10
Lyon	20.10.-22.10.10
Paris	17.11.-19.11.10

### SCHEDULE Germany

Hamburg	20.01.-22.01.10
Frankfurt	<b>E</b> 01.02.-03.02.10
Berlin	17.02.-19.02.10
Munich	<b>E</b> 01.03.-03.03.10
Munich	30.03.-01.04.10
Hamburg	<b>E</b> 19.04.-21.04.10
Berlin	25.05.-26.05.10

Berlin	<b>E</b> 09.06.-11.06.10
Frankfurt	07.07.-09.07.10
Hamburg	28.07.-30.07.10
Berlin	18.08.-20.08.10
Frankfurt	<b>E</b> 30.08.-01.09.10
Munich	29.09.-01.10.10
Frankfurt	20.10.-22.10.10
Hamburg	<b>E</b> 01.11.-03.11.10
Hamburg	17.11.-19.11.10
Berlin	08.12.-10.12.10
Berlin	<b>E</b> 13.12.-15.12.10

### SCHEDULE Italy

Rome	22.03.-24.03.10
Milan	26.05.-28.05.10

Rome	21.07.-23.07.10
Milan	22.09.-24.09.10
<b>SCHEDULE Netherlands</b>	
Utrecht	<b>E</b> 25.01.-27.01.10
Utrecht	<b>E</b> 29.03.-31.03.10
Utrecht	<b>E</b> 31.05.-02.06.10
<b>SCHEDULE Spain</b>	
Madrid	16.03.-18.03.10
Barcelona	21.07.-23.07.10
Madrid	28.09.-30.09.10
Barcelona	09.11.-11.11.10

### SCHEDULE Switzerland

Zurich	20.01.-22.01.10
Zurich	31.03.-02.04.10

Zurich	12.05.-14.05.10
Zurich	<b>E</b> 21.07.-23.07.10
Zurich	08.09.-10.09.10
Zurich	03.11.-05.11.10
Zurich	15.12.-17.12.10
<b>SCHEDULE United Kingdom</b>	
London	<b>E</b> 08.03.-10.03.10
London	<b>E</b> 28.06.-30.06.10
London	<b>E</b> 01.11.-03.11.10

**E** Training in English  
Further English dates on request



# NCDA Power Workshop (NCDAPW)

**ID** FL-NCDAPW **Price** 9.000,00 EUR (excl. VAT) **120 NTUs** **Duration** 10 Days

For further information about NetApp's Certification Programs please see page 10!

### WHO SHOULD ATTEND

- NCDA (NetApp Certified Data Management Administrator) Candidates
- Personnel who is responsible for support and administration of a NetApp storage system with the Data ONTAP operating system

### PREREQUISITES

- Introduction to NetApp Products Web-based Training
- Basic knowledge of client/server and networking technologies and management including TCP/IP
- Background in UNIX, Windows or SAN systems

### COURSE OBJECTIVES

This Power Workshop provides accelerated preparation for NCDA certification (Test NSO 153: Storage Networking and Test NSO 163 Data Protection Solutions) in the shortest possible time.

### COURSE CONTENT

The NCDA Power Workshop comprises the following courses:

- Data ONTAP Fundamentals (DOTF)
- CIFS Administration on Data ONTAP (CIFS)
- NFS Administration on Data ONTAP (NFS)

- SAN Administration on Data ONTAP (SAN)
- NetApp Protection Software Administration (NPSA)
- High Availability (NAHA)

<b>SCHEDULE Germany</b>		Milan	18.10.-29.10.10
Hamburg	04.01.-15.01.10	Rome	08.11.-19.11.10
Munich	<b>E</b> 18.01.-29.01.10	<b>SCHEDULE Netherlands</b>	
Frankfurt	15.02.-26.02.10	Utrecht	<b>E</b> 18.01.-29.01.10
Munich	15.03.-26.03.10	Utrecht	<b>E</b> 22.03.-02.04.10
Berlin	<b>E</b> 12.04.-23.04.10	Utrecht	<b>E</b> 17.05.-04.06.10
Hamburg	03.05.-12.05.10	<b>SCHEDULE Portugal</b>	
Dusseldorf	14.06.-25.06.10	Lisbon	05.04.-16.04.10
Munich	19.07.-30.07.10	Lisbon	23.08.-03.09.10
Hamburg	30.08.-10.09.10	Lisbon	22.11.-03.12.10
Berlin	<b>E</b> 06.09.-17.09.10	<b>SCHEDULE Spain</b>	
Stuttgart	20.09.-01.10.10	Barcelona	10.05.-21.05.10
Frankfurt	04.10.-15.10.10	Madrid	13.09.-24.09.10
Munich	18.10.-29.10.10	Madrid	29.11.-17.12.10
Berlin	22.11.-03.12.10	<b>SCHEDULE Switzerland</b>	
Hamburg	06.12.-17.12.10	Zurich	11.01.-22.01.10
<b>SCHEDULE Greece</b>		Zurich	22.03.-02.04.10
Athens	<b>E</b> 22.02.-05.03.10	Zurich	03.05.-14.05.10
Athens	<b>E</b> 07.06.-18.06.10	Zurich	<b>E</b> 12.07.-23.07.10
Athens	<b>E</b> 04.10.-15.10.10	Zurich	30.08.-10.09.10
Athens	<b>E</b> 22.11.-03.12.10	Zurich	25.10.-05.11.10
<b>SCHEDULE Italy</b>		Zurich	06.12.-17.12.10
Milan	08.02.-19.02.10	<b>E</b> Training in English	
Rome	12.04.-23.04.10	Further English dates on request	
Milan	14.06.-25.06.10		

# Advanced NCDA Power Workshop (ANCDAPW)

**ID** FL-ANCDAPW **Price** 4.500,00 EUR (excl. VAT) **60 NTUs** **Duration** 5 Days

Intensive preparation for NCDA (NetApp Certified Data Management Administrator) certification!

### WHO SHOULD ATTEND

- NCDA (NetApp Certified Data Management Administrator) Candidates
- Personnel who is responsible for support and administration of a NetApp storage system with the Data ONTAP operating system

### PREREQUISITES

- Data ONTAP Fundamentals (DOTF) course

### COURSE OBJECTIVES

This Power Workshop provides accelerated preparation for NCDA certification in the shortest possible time.

### COURSE CONTENT

The Advanced NCDA Power Workshop comprises the courses:

- CIFS Administration on Data ONTAP (CIFS)
- NFS Administration on Data ONTAP (NFS)
- SAN Administration on Data ONTAP (SAN)
- NetApp Protection Software Administration (NPSA)
- High Availability (NAHA)

<b>SCHEDULE France</b>		<b>SCHEDULE Italy</b>	
Paris	07.06.-11.06.10	Milan	15.02.-19.02.10
<b>SCHEDULE Germany</b>		Rome	19.04.-23.04.10
Hamburg	11.01.-15.01.10	Milan	21.06.-25.06.10
Munich	<b>E</b> 25.01.-29.01.10	Milan	25.10.-29.10.10
Frankfurt	22.02.-26.02.10	Rome	15.11.-19.11.10
Munich	22.03.-26.03.10	<b>SCHEDULE Portugal</b>	
Berlin	<b>E</b> 19.04.-23.04.10	Lisbon	14.04.-18.04.10
Hamburg	17.05.-21.05.10	Lisbon	30.08.-03.09.10
Dusseldorf	21.06.-25.06.10	Lisbon	13.12.-17.12.10
Munich	26.07.-30.07.10	<b>SCHEDULE Spain</b>	
Hamburg	06.09.-10.09.10	Barcelona	17.05.-21.05.10
Berlin	<b>E</b> 13.09.-17.09.10	Madrid	20.09.-24.09.10
Stuttgart	27.09.-01.10.10	Madrid	13.12.-17.12.10
Frankfurt	11.10.-15.10.10	<b>SCHEDULE Switzerland</b>	
Munich	25.10.-29.10.10	Zurich	18.01.-22.01.10
Berlin	29.11.-03.12.10	Zurich	29.03.-02.04.10
Hamburg	13.12.-17.12.10	Zurich	10.05.-14.05.10
<b>SCHEDULE Greece</b>		Zurich	<b>E</b> 19.07.-23.07.10
Athens	<b>E</b> 01.03.-05.03.10	Zurich	06.09.-10.09.10
Athens	<b>E</b> 14.06.-18.06.10	Zurich	01.11.-05.11.10
Athens	<b>E</b> 11.10.-15.10.10	Zurich	13.12.-17.12.10
Athens	<b>E</b> 29.11.-03.12.10	<b>E</b> Training in English	
		Further English dates on request	



## Performance Analysis on Data ONTAP (PAD)

**ID** NA-PAD **Price** 2.700,00 EUR (excl. VAT) **36 NTUs** **Duration** 3 Days

### WHO SHOULD ATTEND

- Administrators and support personnel who administrate NetApp storage systems running Data ONTAP and who wish to have a deeper understanding of the system performance

### PREREQUISITES

- Data ONTAP Fundamentals (DOTF) course

### COURSE OBJECTIVES

This course provides students with the knowledge and skills to perform data collection and analysis on NetApp storage systems. Students will learn how to interpret data and apply performance changes based on their analysis. They will use analysis data for tuning and monitoring performance.

### COURSE CONTENT

- Recognize performance terminology and basic methodology
- Use known methods and tools to collect performance data
- Describe the 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

#### SCHEDULE France

Paris 17.03.-19.03.10  
 Paris 28.04.-30.04.10  
 Paris 22.09.-24.09.10  
 Paris 24.11.-26.11.10

#### SCHEDULE Germany

Hamburg 13.01.-15.01.10  
 Frankfurt **E** 03.02.-05.02.10  
 Berlin 10.02.-12.02.10  
 Munich **E** 03.03.-05.03.10  
 Munich 24.03.-26.03.10  
 Hamburg **E** 21.04.-23.04.10  
 Berlin 26.05.-28.05.10  
 Berlin **E** 02.06.-04.06.10  
 Frankfurt 30.06.-02.07.10  
 Hamburg 14.07.-16.07.10  
 Berlin 11.08.-13.08.10  
 Frankfurt **E** 01.09.-03.09.10  
 Munich 22.09.-24.09.10  
 Frankfurt 13.10.-15.10.10  
 Hamburg **E** 03.11.-05.11.10  
 Hamburg 10.11.-12.11.10  
 Berlin 01.12.-03.12.10  
 Berlin **E** 15.12.-17.12.10

#### SCHEDULE Italy

Rome 10.03.-12.03.10  
 Milan 12.05.-14.05.10  
 Rome 14.07.-16.07.10  
 Milan 15.09.-17.09.10

#### SCHEDULE Netherlands

Utrecht **E** 18.01.-20.01.10  
 Utrecht **E** 19.04.-21.04.10

#### SCHEDULE Spain

Madrid 10.03.-12.03.10  
 Barcelona 14.07.-16.07.10  
 Madrid 22.09.-24.09.10  
 Barcelona 03.11.-05.11.10

#### SCHEDULE Switzerland

Zurich 20.01.-22.01.10  
 Zurich 10.05.-12.05.10  
 Zurich **E** 08.09.-10.09.10  
 Zurich 15.12.-17.12.10

#### SCHEDULE United Kingdom

London **E** 08.02.-10.02.10  
 London **E** 21.06.-23.06.10  
 London **E** 25.10.-27.10.10  
**E** Training in English  
 Further English dates on request



## High Availability (NAHA)

**ID** FL-NAHA **Price** 1.800,00 EUR (excl. VAT) 24 NTUs **Duration** 2 Days

### WHO SHOULD ATTEND

- Professionals responsible for continuous data availability

### PREREQUISITES

- Data ONTAP Fundamentals (DOTF) course



### COURSE OBJECTIVES

This course conveys the concepts and tasks involved in successfully implement a high-availability solution.

### COURSE CONTENT

- Backing up storage systems with redundant setups
- Employing mechanisms to protect data
- Ensuring storage systems' high availability
- Conducting an SPOF analysis
- Implementing an HA solution
- Upgrading a storage system to an HA solution
- Multi-path HA cabling
- Failover scenarios
- Protocol behavior in case of failover
- Troubleshooting and optimizing systems

#### SCHEDULE Germany

Hamburg	20.01.-21.01.10
Munich	<b>E</b> 10.03.-11.03.10
Frankfurt	28.04.-29.04.10
Berlin	07.07.-08.07.10

Munich	08.09.-09.09.10
Hamburg	<b>E</b> 20.10.-21.10.10
Munich	08.12.-09.12.10
<b>E</b> Training in English	
Further English dates on request	

## Business Continuity (BCON)

**ID** FL-BCON **Price** 2.700,00 EUR (excl. VAT) 36 NTUs **Duration** 3 Days

### WHO SHOULD ATTEND

- Professionals responsible for continuous data availability

### PREREQUISITES

- Data ONTAP Fundamentals (DOTF) course

### COURSE OBJECTIVES

This course conveys the concepts and tasks involved in successfully implement a high-availability solution and the necessary knowledge for installation, configuration, and administration of a NetApp Fabric attached MetroCluster.

### COURSE CONTENT

- Backing up storage systems with redundant setups
- Employing mechanisms to protect data
- Ensuring storage systems' high availability
- Conducting an SPOF analysis
- Implementing an HA solution
- Upgrading a storage system to an HA solution
- Multi-path HA cabling
- Failover scenarios
- Protocol behavior in case of failover
- Troubleshooting and optimizing systems
- Fibre Channel Fabric Basics
- Analysis of existing Storage systems
- Configuration of the components
- Installation of a Cluster & Cabling
- SnapMirror Configuration & Administration

- Disaster Recovery
- Troubleshooting in MetroCluster environments



#### SCHEDULE Germany

Hamburg	20.01.-22.01.10
Munich	10.03.-12.03.10
Berlin	<b>E</b> 12.04.-14.04.10
Frankfurt	28.04.-30.04.10
Berlin	07.07.-09.07.10
Munich	08.09.-10.09.10
Hamburg	<b>E</b> 20.10.-22.10.10
Munich	08.12.-10.12.10

#### SCHEDULE Spain

Barcelona	<b>E</b> 03.02.-05.02.10
Madrid	<b>E</b> 21.04.-23.04.10
Barcelona	<b>E</b> 20.10.-22.10.10

#### SCHEDULE Switzerland

Zurich	01.03.-03.03.10
Zurich	26.05.-28.05.10
Zurich	30.08.-01.09.10
Zurich	29.11.-01.12.10

#### SCHEDULE Italy

Rome	<b>E</b> 27.01.-29.01.10
Rome	<b>E</b> 09.06.-11.06.10
Rome	<b>E</b> 06.10.-08.10.10

#### SCHEDULE United Kingdom

Windsor	<b>E</b> 19.04.-21.04.10
<b>E</b> Training in English	
Further English dates on request	

# Operations Manager, Protection Manager & Provisioning Manager (OPSMGR)

**ID** NA-OPSMGR **Price** 4.500,00 EUR (excl. VAT) 60 NTUs **Duration** 5 Days

## WHO SHOULD ATTEND

- Administrators and support personnel who will use Operations Manager 3.7, Protection Manager, and Provisioning Manager services to backup & protect mission critical data in the enterprise

## PREREQUISITES

- Data ONTAP Fundamentals (DOTF) course

## COURSE CONTENT

- Components of Operations Manager 3.7 data management suite
- Operations Manager licensing & required hard- & software
- 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
- 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 & OSSV systems for use with Protection Manager
- Enable backup interfaces
- Operate the core Operations Manager software suite and know its limitations
- Identify common problems with normal Operations Manager use and their remedies

- Perform common tasks in Protection Manager such as add hosts, backup and restore data, manage resource pools, setup schedules, and more
- Explain how to backup and restore VMware ESX servers using Protection Manager
- Explain user-defined Provisioning Manager policies and conformance checking
- Explain how to configure Thin Provisioning using Provisioning Manager
- Troubleshoot common issues associated with provisioning, jobs, access, and hosts
- Articulate the features and functions of Performance Advisor
- Monitor & display disk, file system, processor & 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 France

Paris 19.04.-23.04.10  
 Paris 02.08.-06.08.10  
 Paris 27.09.-01.10.10  
 Paris 13.12.-17.12.10

### SCHEDULE GERMANY

Frankfurt **E** 18.01.-22.01.10  
 Hamburg 15.03.-19.03.10  
 Frankfurt 12.04.-16.04.10  
 Munich 17.05.-21.05.10  
 Frankfurt 05.07.-09.07.10  
 Berlin 30.08.-03.09.10  
 Frankfurt **E** 27.09.-01.10.10  
 Hamburg 01.11.-05.11.10  
 Berlin 22.11.-26.11.10

Munich 13.12.-17.12.10

### SCHEDULE Italy

Milan **E** 22.03.-26.03.10  
 Rome **E** 28.06.-02.07.10  
 Milan **E** 13.12.-17.12.10

### SCHEDULE Netherlands

Utrecht **E** 18.01.-22.01.10  
 Utrecht **E** 29.03.-02.04.10  
 Utrecht **E** 21.06.-25.06.10

### SCHEDULE Switzerland

Zurich **E** 08.02.-12.02.10  
 Zurich 17.05.-21.05.10  
 Zurich 27.09.-01.10.10  
 Zurich 20.12.-24.12.10  
**E** Training in English

# NetApp VTL Administration (NAVTL)

**ID** NA-NAVTL **Price** 2.700,00 EUR (excl. VAT) 36 NTUs **Duration** 3 Days

## WHO SHOULD ATTEND

- Anyone who will architect, implement, administer, or provide support for a NetApp VTL appliance

## PREREQUISITES

- Knowledge of networking terminology and management
- Background in UNIX or Windows server administration
- Knowledge of storage area network (SAN) administration

## COURSE CONTENT

- Install & cable a NetApp VTL
- Configure a NetApp VTL to integrate with supported backup applications
- Upgrade a NetApp VTL from VTL 5.6 to VTL 6.0 to use the deduplication feature
- Configure a NetApp VTL to perform Direct Tape Creation
- Troubleshoot & resolve errors with the operation of a NetApp VTL



### SCHEDULE Germany

Frankfurt **E** 08.02.-10.02.10  
 Hamburg **E** 24.02.-26.02.10  
 Berlin **E** 10.05.-12.05.10

Munich **E** 28.07.-30.07.10

Frankfurt **E** 06.10.-08.10.10  
 Berlin **E** 01.12.-03.12.10  
**E** Training in English

## SANscreen Fundamentals (SANSF)

**ID** NA-SANSF **Price** 1.800,00 EUR (excl. VAT) 24 NTUs **Duration** 2 Days

### WHO SHOULD ATTEND

- NetApp partners and customers

### PREREQUISITES

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

### COURSE OBJECTIVES

Learn the features and functions of the SANscreen suite of products. This hands-on course will show you how SANscreen manages storage through service policies and change-planning capabilities to provide improved resource and capacity utilization. Product demonstrations will enable you to become proficient with many aspects of SANscreen. By the end of this course, you will be able to explain how SANscreen can extend data center automation to a networked storage environment for more efficient operations.

### COURSE CONTENT

- Define the five integrated products of SANscreen and their core features and interdependencies
- Perform SANscreen, data warehouse installation and configuration
- Explain paths, violations, and application groups
- Identify policies and violations
- Interpret performance views and analyze annotations

SCHEDULE Germany			
Hamburg	01.02.-02.02.10	Frankfurt	27.09.-28.09.10
Berlin	22.03.-23.03.10	Hamburg	<b>E</b> 01.11.-02.11.10
Munich	<b>E</b> 03.05.-04.05.10	Munich	29.11.-30.11.10
Frankfurt	28.06.-29.06.10	<b>E</b> Training in English	
Berlin	16.08.-17.08.10	Further English dates on request	



## Data ONTAP GX Fundamentals (DOTGX)

**ID** NA-DOTGX **Price** 2.700,00 EUR (excl. VAT) 36 NTUs **Duration** 3 Days

### WHO SHOULD ATTEND

- Individuals who will administrate a NetApp storage system with Data ONTAP GX operating system software installed

### PREREQUISITES

- Data ONTAP Fundamentals (DOTF) course
- Basic knowledge of networking and UNIX

### COURSE CONTENT

- Describe the major principles associated with Data ONTAP GX
- Describe how an N-blade and a Dblade 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 namespaces

- Configure an active-active relationship between a pair of nodes
- Configure network interfaces for a virtual server
- Create an 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 a read-write volume
- Diagnose a VLDB crash and recover from it
- Upgrade the Common Firmware Environment on a node
- Upgrade the Data ONTAP GX software on two nodes with no downtime

SCHEDULE Germany			
Hamburg	<b>E</b> 13.01.-15.01.10	Munich	<b>E</b> 01.09.-03.09.10
Munich	03.03.-05.03.10	Berlin	27.10.-29.10.10
Berlin	21.04.-23.04.10	Frankfurt	08.12.-10.12.10
Frankfurt	09.06.-11.06.10	<b>E</b> Training in English	
Hamburg	14.07.-16.07.10	Further English dates on request	



## DataFort Storage Security Administration (DSSA)

**ID** NA-DSSA **Price** 4.500,00 EUR (excl. VAT) **60 NTUs** **Duration** 5 Days

### PREREQUISITES

- Knowledge of networking terminology and management
- Background in Unix or Windows server administration
- Knowledge of SAN administration

### COURSE CONTENT

- Basic security and encryption principles and how those apply to a storage security appliance
- Features and functions of the DataFort platform including encryption key hierarchy and Smart Card operation
- Architectures and deployment options for the DataFort storage security appliance and Lifetime Key Management 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 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 CLI on the E-series and FC-series DataFort appliances
- Key sharing methods available for DataFort storage security appliances
- Perform key sharing operations using the DataFort storage security appliances and the LKM appliance
- New features like Key Sharing Group and Remote Authorization
- Upgrade and Downgrade DataFort firmware
- Perform Monitoring and logging of DataFort
- Perform basic troubleshooting

#### SCHEDULE Germany

Frankfurt	01.02.-05.02.10
Berlin	22.03.-26.03.10
Frankfurt	<b>E</b> 26.04.-30.04.10
Hamburg	07.06.-11.06.10
Frankfurt	02.08.-06.08.10

Munich	20.09.-24.09.10
Berlin	<b>E</b> 08.11.-12.11.10
Berlin	22.11.-26.11.10

**E** Training in English  
Further English dates on request

## NetApp Hardware Class (NAHW)

**ID** FL-NAHW **Price** 1.800,00 EUR (excl. VAT) **24 NTUs** **Duration** 2 Days

### PREREQUISITES

- Server, network and FibreChannel knowledge
- Data ONTAP Fundamentals (DOTF) and High Availability (NAHA) courses
- NetApp Hardware Fundamentals (Web-based Training)

### COURSE CONTENT

- Introduction to NetApp products
- NOW support webpage (partner section)
- Firmware update (disk/shelf/system)
- ONTAP update & downgrade
- Command line operations
- Disk troubleshooting
- ONTAP simulator

- Diagnose
- Hardware replacement procedures: Disk replacement, ESH replacement, Shelf replacement, NVRAM replacement, PCI card replacement in a clustered environment, Motherboard replacement, CF card replacement
- Exceptions (fabric) in a metro cluster
- Autosupport functions
- RLM card
- Hardware characteristics



#### SCHEDULE Germany

Hamburg	18.02.-19.02.10
Frankfurt	15.04.-16.04.10
Berlin	<b>E</b> 20.05.-21.05.10
Munich	10.06.-11.06.10
Frankfurt	<b>E</b> 22.07.-23.07.10

Berlin	19.08.-20.08.10
Hamburg	14.10.-15.10.10
Munich	25.11.-26.11.10

**E** Training in English  
Further English dates on request

## NetApp Architecture & Storage Design Workshop (NAASD)

**ID** FL-NAASD **Price** 4.500,00 EUR (excl. VAT) **60 NTUs** **Duration** 5 Days

### PREREQUISITES

- Basic knowledge in the field of storage technologies

### COURSE CONTENT

- Storage concepts, functionality, performance, prerequisites
- Hardware basics
- Backup & restore
- Solutions
- Storage management

- Storage virtualization
- Storage security
- NetApp storage solutions
- Examples of storage solutions

#### SCHEDULE Germany

Hamburg	25.01.-29.01.10
Munich	08.03.-12.03.10
Frankfurt	<b>E</b> 19.04.-23.04.10
Berlin	07.06.-11.06.10

Hamburg	12.07.-16.07.10
Munich	<b>E</b> 23.08.-27.08.10
Frankfurt	04.10.-08.10.10
Berlin	29.11.-03.12.10

**E** Training in English

## Data ONTAP 7.x Tuning & Troubleshooting (NATT)

**ID** FL-NATT **Price** 4.500,00 EUR (excl. VAT) **60 NTUs** **Duration** 5 Days

### PREREQUISITES

- Data ONTAP Fundamentals (DOTF) course

### COURSE CONTENT

- New features in ONTAP 7.x: Aggregate & flex volume management; Flex volume cloning, flex volume autoresizing & snapshot autodeletion; Role based administrator control (RBAC); New features of SnapLock & SnapVault; New CIFS Features
- Migration: Planning & considerations; Migration tools (ONTAP & client operating systems); Data migration from traditional volumes to flexible volumes
- Troubleshooting, performance tuning & advanced topics: Data ONTAP Upgrade & Downgrade; Remote LAN Module (RLM) management; File system management; Storage design, storage management; Monitoring, statistics commands



#### SCHEDULE France

Paris	01.02.-05.02.10
Paris	21.06.-25.06.10
Paris	26.07.-30.07.10
Paris	29.11.-03.12.10
Lyon	13.12.-17.12.10

#### SCHEDULE Germany

Munich	15.02.-19.02.10
Munich	<b>E</b> 15.02.-19.02.10
Hamburg	06.04.-09.04.10
Frankfurt	17.05.-21.05.10
Berlin	12.07.-16.07.10

Berlin	<b>E</b> 12.07.-16.07.10
Munich	30.08.-03.09.10
Hamburg	25.10.-29.10.10
Frankfurt	29.11.-03.12.10

#### SCHEDULE Switzerland

Zurich	08.02.-12.02.10
Zurich	<b>E</b> 03.05.-07.05.10
Zurich	16.08.-20.08.10
Zurich	15.11.-19.11.10

**E** Training in English  
Further English dates on request

## NetApp Storage Systems & Cisco MDS Switch Administration (NACSA)

**ID** FL-NACSA **Price** 4.500,00 EUR (excl. VAT) **60 NTUs** **Duration** 5 Days

### PREREQUISITES

- Profound Solaris and/or Windows knowledge; basic storage knowledge

### COURSE CONTENT

- Installation & Administration of NetApp Storage Systems
- Topologies
- Fiber Channel Protocol
- Cisco Storage Products & Features
- Cisco MDS 9000 Administration
- Server Connection
- Differences SAN / NAS
- Backup in SANs
- Load Balancing, FSPF, Port-Channel, Trunking
- Performance & High Availability
- SAN Monitoring

- Virtualization
- Snapshots
- NFS, CIFS
- Quota Management
- Volume Management, NDMP
- Multipathing
- Cluster Failover
- Designing a SAN
- NASB, FAIS, SSM-Virtualization
- Switch Security
- Zoning & IVR
- FCIP

#### SCHEDULE Germany

Berlin	18.01.-22.01.10
Hamburg	01.03.-05.03.10
Munich	12.04.-16.04.10
Frankfurt	07.06.-11.06.10

Munich	26.07.-30.07.10
Hamburg	13.09.-17.09.10
Berlin	25.10.-29.10.10
Frankfurt	29.11.-03.12.10

## NetApp Storage Systems & Brocade Switch Administration (NABSA)

**ID** FL-NABSA **Price** 4.500,00 EUR (excl. VAT) **60 NTUs** **Duration** 5 Days

### PREREQUISITES

- Profound Solaris and/or Windows knowledge; basic storage knowledge

### COURSE CONTENT

- Installation & Administration of NetApp Storage Systems
- Topologies
- Fiber Channel Protocol
- Brocade Storage Products & Features
- Brocade Switch Administration
- Server Connection
- Differences SAN / NAS
- Backup in SANs
- Load Balancing, FSPF, Port-Channel, Trunking
- Performance & High Availability
- SAN Monitoring
- Virtualization
- Snapshots
- NFS, CIFS
- Quota Management
- Volume Management, NDMP
- Multipathing
- Cluster Failover
- Switch Security
- Zoning & IVR
- FCIP

#### SCHEDULE Germany

Frankfurt	25.01.-29.01.10
Munich	15.02.-19.02.10
Berlin	03.05.-07.05.10

Hamburg	28.06.-02.07.10
Frankfurt	23.08.-27.08.10
Munich	11.10.-15.10.10
Berlin	22.11.-26.11.10

## Design & Implement Virtualization Solutions on NetApp Storage (DIVS)

**ID** NA-DIVS **Price** 3.600,00 EUR (excl. VAT) **48 NTUs** **Duration** 4 Days

### WHO SHOULD ATTEND

- NetApp Global Services (NGS) and partner audiences who implement virtualization solutions with NetApp storage systems

### PREREQUISITES

- NetApp Core Technical Training or equivalent knowledge
- NetApp SAN Core Technical Training or equivalent knowledge
- Recommended: VMware Virtual Infrastructure 3 Fast Track or equivalent knowledge; Citrix XenServer Enterprise Edition 4.1: Administration or equivalent knowledge; Microsoft Hyper-V technical training or equivalent knowledge

### COURSE OBJECTIVES

This course shows how to design and implement virtualization solutions on NetApp storage systems. The course first reviews the NetApp virtualization service delivery process: students learn how to use NetApp virtualization service products to engage with customers to design and implement virtualization solutions. A case study consolidates the knowledge acquired in this part of the course. Next, the course shows how to deploy VMware Virtual Infrastructure on NetApp storage systems and how to achieve maximum value with VMware and NetApp integrated features. Hands on lab exercises consolidate the knowledge acquired in this part of the course.

Next, this course shows how to deploy Citrix XenServer on NetApp storage systems and how to achieve maximum value with Citrix XenServer and NetApp integrated features. Hands on lab exercises consolidate the knowledge acquired in this part of the course. Finally, the course shows how to deploy Microsoft Windows Server Virtualization (Hyper-V) on NetApp storage systems and how to achieve maximum value with Hyper-V and NetApp integrated features. Hands on lab exercises consolidate the knowledge acquired in this part of the course.

### COURSE CONTENT

- Describe the NetApp Virtualization Service delivery
- Implement host and storage virtualization with VMware and NetApp
- Implement host and storage virtualization with Citrix XenServer and NetApp
- Implement host and storage virtualization with Microsoft Hyper-V and NetApp



### SCHEDULE Germany

Munich	02.02.-05.02.10	Frankfurt	14.09.-17.09.10
Berlin	<b>E</b> 16.03.-19.03.10	Munich	<b>E</b> 02.11.-05.11.10
Frankfurt	27.04.-30.04.10	Hamburg	07.12.-10.12.10
Hamburg	15.06.-18.06.10	<b>E</b> Training in English	
Berlin	27.07.-30.07.10	Further English dates on request	

## Architecting VMware Solutions on NetApp Storage (AVS)

**ID** NA-AVS **Price** 1.800,00 EUR (excl. VAT) **24 NTUs** **Duration** 2 Days

### WHO SHOULD ATTEND

- System engineers who architect VMware solutions with NetApp storage systems

### PREREQUISITES

- Basic understanding of SAN, NAS, NetApp, and VMware technologies

### COURSE OBJECTIVES

This course will cover the basics of a VMware environment and the NetApp value proposition within that environment. The course will include discussions and activities on architecting and design specifics for ESXi, vSphere, and Desktop Management. It will also describe the NetApp best practices in these environments. There will be

training and activities focused on the areas of Backup and Recovery, Deduplication, Cloning, and Sizing.

### COURSE CONTENT

- Identify NetApp's value proposition when integrated with VMware virtualization solutions
- Recognize the components of Desktop management, and the different styles of provisioning
- Practice the creation of Virtual Machines in the VMware environment
- Demonstrate when and how a Proof of Concept activity should be done for customers
- Distinguish which backup and recovery options are appropriate for the customers environment
- Practice using NetApp technology for replication, deduplication, and cloning
- Distinguish how to size VMware virtualization environments and modify the sizing as needed

### SCHEDULE Germany

Munich	02.02.-03.02.10	Frankfurt	14.09.-15.09.10
Berlin	<b>E</b> 16.03.-17.03.10	Munich	<b>E</b> 02.11.-03.11.10
Frankfurt	27.04.-28.04.10	<b>E</b> Training in English	
Hamburg	15.06.-16.06.10	Further English dates on request	
Berlin	27.07.-28.07.10		

## Architecting Hyper-V Solutions on NetApp Storage (AHS)

**ID** NA-AHS **Price** 1.800,00 EUR (excl. VAT) **24 NTUs** **Duration** 2 Days

### WHO SHOULD ATTEND

- SE and Partner audiences who architect Hyper-V solutions with NetApp storage systems

### PREREQUISITES

- Basic understanding of SAN, NAS, NetApp, and Hyper-V technologies

### COURSE OBJECTIVES

In this course you will learn the basics of a Hyper-V environment along with the value proposition of NetApp within that environment. The course will include discussions and activities on architecting and design specifics for Hyper-V, along with the NetApp best practices in these environments. There will also be training and activities focused on the areas of Backup and Recovery, Deduplication, Cloning, and Sizing.

### COURSE CONTENT

- Identify NetApp's value proposition when integrated with Hyper-V virtualization solutions
- Implement host and storage virtualization with Microsoft Hyper-V and NetApp Storage
- Demonstrate when and how a Proof of Concept activity should be done for customers
- Distinguish which backup and recovery options are appropriate for the customers environment
- Practice using NetApp technology for replication, deduplication, and cloning
- Distinguish how to size Hyper-V virtualization environments and modify the sizing as needed



SCHEDULE Germany		Frankfurt	16.09.-17.09.10
Munich	04.02.-05.02.10	Munich	<b>E</b> 04.11.-05.11.10
Berlin	<b>E</b> 18.03.-19.03.10		
Frankfurt	29.04.-30.04.10	<b>E</b> Training in English	
Hamburg	17.06.-18.06.10	Further English dates on request	

## Architecting Citrix Solutions on NetApp Storage (ACS)

**ID** NA-ACS **Price** 1.800,00 EUR (excl. VAT) **24 NTUs** **Duration** 2 Days

### WHO SHOULD ATTEND

- SE and Partner audiences who architect Citrix solutions with NetApp storage systems

### PREREQUISITES

- Basic understanding of SAN, NAS, NetApp, and Citrix technologies

### COURSE OBJECTIVES

Learn how NetApp technologies can be integrated with Citrix to provide compelling virtualization solutions. In this course, you will learn architecture, design specifics, and best practices for XenServer and XenDesktop. Through hands-on activities, you will practice creating virtual machines in a Citrix environment. By the end of this course, you will be able to demonstrate to customers the value of Citrix solutions in NetApp.

### COURSE CONTENT

- Identify the NetApp value proposition when integrated with Citrix virtualization solutions
- Recognize the components of XenDesktop, and the different styles of provisioning
- Practice the creation of virtual machines in the Citrix environment
- Demonstrate when and how a Proof of Concept activity should be done for customers
- Distinguish which backup and recovery options are appropriate for the customers environment
- Practice using NetApp technology for replication, deduplication, and cloning
- Distinguish how to size Citrix virtualization environments and modify the sizing as needed



SCHEDULE Germany		Frankfurt	20.09.-21.09.10
Munich	08.02.-09.02.10	Munich	<b>E</b> 08.11.-09.11.10
Berlin	<b>E</b> 22.03.-23.03.10		
Frankfurt	03.05.-04.05.10	<b>E</b> Training in English	
Hamburg	21.06.-22.06.10	Further English dates on request	

## VMware ESX on NetApp Storage Systems (NAVMW)

**ID** FL-NAVMW **Price** 4.500,00 EUR (excl. VAT) 60 NTUs **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

- Knowledge on NetApp storage systems, VMware ESX, Linux and Windows servers

### COURSE OBJECTIVES

This course covers the installation, configuration and administration of ESX Servers and focuses on optimal connectivity to NetApp storage systems using FCP, iSCSI, CIFS and NFS. Backup and restore of VMware ESX Server storage LUNs with ESX and NetApp means are also covered, as is the planning and operation of VMware ESX Server and NetApp storage systems in a high availability scenario.

### COURSE CONTENT

- Overview of VMware virtualization concepts
- Basic configuration of the VMware ESX Server and the VMs
- Networks in VMware
- Planning, installation & configuration of CIFS/SMB, NFS & iSCSI within a VM
- Planning, installation & configuration of CIFS/SMB & NFS in the service console of VMware ESX server
- Planning, installation & configuration of FCP, NFS & iSCSI in the VMkernel
- Backup scenarios
- High availability scenarios
- Monitoring & system management
- Troubleshooting



<b>SCHEDULE France</b>		Munich	15.11.-19.11.10
Paris	08.02.-12.02.10	Berlin	06.12.-10.12.10
Toulouse	22.03.-26.03.10	<b>SCHEDULE Netherlands</b>	
Lyon	17.05.-21.05.10	Utrecht	<b>E</b> 15.02.-19.02.10
Paris	28.06.-02.07.10	Utrecht	<b>E</b> 31.05.-04.06.10
Paris	13.09.-17.09.10	<b>SCHEDULE Italy</b>	
Toulouse	15.11.-19.11.10	Rome	29.03.-02.04.10
<b>SCHEDULE Germany</b>		Milan	30.08.-03.09.10
Munich	11.01.-15.01.10	Milan	22.11.-26.11.10
Berlin	08.02.-12.02.10	<b>SCHEDULE Switzerland</b>	
Hamburg	<b>E</b> 15.03.-19.03.10	Zurich	15.02.-19.02.10
Hamburg	15.03.-19.03.10	Zurich	03.05.-07.05.10
Frankfurt	06.04.-09.04.10	Zurich	<b>E</b> 23.08.-27.08.10
Munich	03.05.-07.05.10	Zurich	22.11.-26.11.10
Berlin	<b>E</b> 21.06.-25.06.10	<b>SCHEDULE United Kingdom</b>	
Berlin	21.06.-25.06.10	Windsor	<b>E</b> 15.03.-19.03.10
Hamburg	26.07.-30.07.10	Windsor	<b>E</b> 12.07.-16.07.10
Frankfurt	30.08.-03.09.10	Windsor	<b>E</b> 15.11.-19.11.10
Frankfurt	<b>E</b> 30.08.-03.09.10	<b>E</b> Training in English	
Stuttgart	20.09.-24.09.10	Further English dates on request	
Dusseldorf	18.10.-22.10.10		

## Oracle on NetApp Storage Systems (NAOR)

**ID** NA-NAOR **Price** 4.500,00 EUR (excl. VAT) 60 NTUs **Duration** 5 Days

### WHO SHOULD ATTEND

- Oracle database administrators, system managers, developers

### PREREQUISITES

- Proficiency in Oracle database administration
- Proficiency in NetApp storage system administration
- UNIX/Linux and/or Windows knowledge

### COURSE OBJECTIVES

This course covers the alternatives of running Oracle databases in a NetApp storage infrastructure. The course focuses on the relevant features of NetApp storage systems, like Snapshots.

### COURSE CONTENT

- Fundamentals: Storage networks: NFS, iSCSI, FCP; Configuration of NFS & iSCSI on the database server and on the storage system; Networking: Configuring gigabit ethernet, NFS mount options, tuning

- Backup & Recovery: Online and offline backup: Basics; archivelog mode of the Oracle database; Backup/recovery based on NetApp snapshots: Configuration on Unix & Windows; Database cloning with storage system means: rewriteable snapshots, FlexClone & NDMP-Copy
- High Availability: Storage: basics of NetApp Cluster & MetroCluster; Oracle: Oracle Real Application Cluster; Standby database & shadow database

<b>SCHEDULE France</b>		Berlin	17.05.-21.05.10
Paris	01.03.-05.03.10	Frankfurt	<b>E</b> 05.07.-09.07.10
Paris	14.06.-18.06.10	Munich	30.08.-03.09.10
Toulouse	05.07.-09.07.10	Berlin	04.10.-08.10.10
Paris	30.08.-03.09.10	Frankfurt	08.11.-12.11.10
Lyon	04.10.-08.10.10	Hamburg	<b>E</b> 13.12.-17.12.10
Paris	29.11.-03.12.10	<b>SCHEDULE Netherlands</b>	
<b>SCHEDULE Germany</b>		Utrecht	<b>E</b> 01.03.-05.03.10
Munich	<b>E</b> 01.02.-05.02.10	<b>E</b> Training in English	
Hamburg	22.03.-26.03.10	Further English dates on request	

## NetApp SnapManager 5.0 for Microsoft Exchange (SME)

**ID** NA-SME **Price** 3.600,00 EUR (excl. VAT) 48 NTUs **Duration** 4 Days

### WHO SHOULD ATTEND

- System Engineers, Windows and Exchange administrators

### PREREQUISITES

- Data ONTAP Fundamentals (DOTF) and NetApp Protection Software Administration (NPSA) courses
- Microsoft courses: Implementing and Managing Microsoft Exchange Server 2007, Troubleshooting Microsoft Exchange Server 2007 and Microsoft Exchange Server 2007 Disaster Recovery

### COURSE OBJECTIVES

This solution-based course focuses on the optimization of Microsoft Exchange 2007 in a NetApp storage environment. The course takes students through the entire system integration process of architecture planning, data migration, backup and restore, disaster recovery, clustering and troubleshooting.

### COURSE CONTENT

- Benefits of running MS Exchange on a storage system
- Perform Exchange 2007 storage planning, implementation,

and administration

- MS Exchange backup and restore process
- Perform an installation of a Clustered Exchange server on a NetApp storage system
- Install and configure SnapDrive for Windows 6.0
- Back up & verify an Exchange Data Store using SnapManager 5.0
- Restore data using SnapManager 5.0

#### SCHEDULE Germany

Berlin	09.02.-12.02.10
Frankfurt	16.03.-19.03.10
Hamburg	<b>E</b> 27.04.-30.04.10
Munich	15.06.-18.06.10
Frankfurt	17.08.-20.08.10
Hamburg	28.09.-01.10.10
Berlin	26.10.-29.10.10
Munich	<b>E</b> 16.11.-19.11.10
Frankfurt	14.12.-17.12.10

#### SCHEDULE Italy

Milan	<b>E</b> 02.03.-05.03.10
Rome	<b>E</b> 06.07.-09.07.10
Milan	<b>E</b> 02.11.-05.11.10

#### SCHEDULE Netherlands

Utrecht	<b>E</b> 22.02.-25.02.10
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Utrecht **E** 25.05.-28.05.10

#### SCHEDULE Spain

Madrid	<b>E</b> 23.03.-26.03.10
Barcelona	<b>E</b> 15.06.-18.06.10
Madrid	<b>E</b> 05.10.-08.10.10

#### SCHEDULE Switzerland

Zurich	02.02.-05.02.10
Zurich	25.05.-28.05.10
Zurich	31.08.-03.09.10
Zurich	30.11.-03.12.10

#### SCHEDULE United Kingdom

London	<b>E</b> 01.02.-03.02.10
London	<b>E</b> 14.06.-16.06.10
London	<b>E</b> 18.10.-21.10.10

**E** Training in English

Further English dates on request

## MS SQL on NetApp Storage Systems (MSSQL)

**ID** NA-MSSQL **Price** 4.500,00 EUR (excl. VAT) 60 NTUs **Duration** 5 Days

### WHO SHOULD ATTEND

- System Engineers and all those who design and deploy NetApp storage systems in a Microsoft SQL Server environment

### PREREQUISITES

- Data ONTAP Fundamentals (DOTF) and SAN Administration on Data ONTAP (SAN) courses
- NCDA and NCIE-SAN certification
- Minimum one year Microsoft SQL Server administration experience

### COURSE OBJECTIVES

Learn to design and implement a high-performance, highly available, consolidated Microsoft SQL Server solution on a NetApp storage system. This solution-based course focuses on the optimization of Microsoft SQL Server 2005 in a NetApp storage environment. This course takes you through the entire systems integration process of architecture planning, data migration, backup and restore, disaster recovery, and troubleshooting. By the end of this course, you will be able to confidently deploy Microsoft SQL Server on NetApp storage systems.

### COURSE CONTENT

- 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

- Describe how NetApp deployment on a Windows Server 2003 failover cluster differs from NetApp deployment on a Windows Server 2008 failover cluster
- 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
- Describe how deploying NetApp differs between Microsoft SQL Server 2008 and Microsoft SQL Server 2005 environments
- Create Microsoft SQL Server 2005 database clones for use in test and development environments using SnapManager 5.0 for SQL Server
- Describe and perform the backup and restore process using SnapManager 5.0 for SQL Server
- Describe and implement different disaster recovery methods for a SQL Server and SnapManager solution

#### SCHEDULE Germany

Frankfurt	25.01.-29.01.10
Hamburg	<b>E</b> 08.03.-12.03.10
Berlin	12.04.-16.04.10
Munich	25.05.-28.05.10
Berlin	23.08.-27.08.10
Frankfurt	<b>E</b> 04.10.-08.10.10
Hamburg	22.11.-26.11.10
Munich	06.12.-10.12.10

#### SCHEDULE Italy

Milan	<b>E</b> 22.02.-26.02.10
Rome	<b>E</b> 21.06.-25.06.10
Milan	<b>E</b> 25.10.-29.10.10

#### SCHEDULE Netherlands

Utrecht	<b>E</b> 01.03.-04.03.10
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#### SCHEDULE Spain

Madrid	<b>E</b> 15.03.-19.03.10
Barcelona	<b>E</b> 07.06.-11.06.10
Madrid	<b>E</b> 18.10.-22.10.10

#### SCHEDULE Switzerland

Zurich	08.02.-12.02.10
Zurich	<b>E</b> 31.05.-04.06.10
Zurich	06.09.-10.09.10
Zurich	06.12.-10.12.10

#### SCHEDULE United Kingdom

Windsor	<b>E</b> 01.03.-05.03.10
Windsor	<b>E</b> 30.08.-03.09.10

**E** Training in English

Further English dates on request

# IBM System Storage N series Training



Fast Lane is IBM's Worldwide Authorized Learning Partner delivering both standard and customized courses in public and private sessions on IBM System Storage™ N series Unified Storage Solutions product line. All instructors are certified to teach IBM System Storage™ N series product courses and all courses are taught using Authorized IBM System Storage™ N series courseware.

## IBM N series Data ONTAP Fundamentals (DOTFN)

**ID** FL-DOTFN **Price** 4.500,00 EUR (excl. VAT) **Duration** 5 Days

### PREREQUISITES

- Introduction to N series Products Web Based Training (WBT)

### COURSE CONTENT

- Describe the basic functions of the Data ONTAP operating system
- Access the IBM Support site to obtain software and hardware documentation
- Set up console access for a storage system
- Configure a storage system with the setup command
- Access FilerView and the command line to manage a storage system
- Configure and manage the AutoSupport service for a FAS storage system
- Define and create virtual interfaces (vifs) and VLANs
- Describe Data ONTAP RAID technology
- Calculate usable disk space of disks
- Define and create an aggregate and volume
- Define FlexClone volume
- Configure the storage system as an NFS server and CIFS server
- Configure a multiprotocol environment
- Configure a LUN for SAN environments
- Configure, create and restore Snapshot copies

- Describe the WAFL file system, including consistency points, tetrts creation, RAID management, and storage levels
- Collect performance data
- Use FlexShare
- Configure an Active-Active configuration

SCHEDULE Germany		SCHEDULE Switzerland	
Frankfurt	11.01.-15.01.10	Utrecht	E 15.03.-19.03.10
Frankfurt	E 18.01.-22.01.10	Utrecht	E 31.05.-04.06.10
Munich	08.02.-12.02.10	Zurich	11.01.-15.01.10
Frankfurt	08.03.-12.03.10	Zurich	22.03.-26.03.10
Frankfurt	E 15.03.-19.03.10	Zurich	03.05.-07.05.10
Berlin	12.04.-16.04.10	Zurich	E 12.07.-16.07.10
Frankfurt	03.05.-07.05.10	Zurich	30.08.-03.09.10
Frankfurt	E 17.05.-21.05.10	Zurich	25.10.-29.10.10
Hamburg	31.05.-04.06.10	Zurich	06.12.-10.12.10
Frankfurt	28.06.-02.07.10	SCHEDULE United Kingdom	
Frankfurt	E 05.07.-09.07.10	London	E 11.01.-15.01.10
Berlin	26.07.-30.07.10	London	E 22.02.-26.02.10
Frankfurt	23.08.-27.08.10	London	E 12.04.-16.04.10
Frankfurt	E 30.08.-02.09.10	London	E 01.06.-05.06.10
Munich	20.09.-24.09.10	London	E 12.07.-16.07.10
Frankfurt	18.10.-22.10.10	London	E 23.08.-27.08.10
Frankfurt	E 25.10.-29.10.10	London	E 04.10.-08.10.10
Hamburg	15.11.-19.11.10	London	E 15.11.-19.11.10
Frankfurt	06.12.-10.12.10		
Frankfurt	E 13.12.-17.12.10		
SCHEDULE Netherlands			
Utrecht	E 18.01.-22.01.10		

E Training in English  
Further English dates on request

## IBM N series Data ONTAP CIFS Administration (CIFSN)

**ID** FL-CIFSN **Price** 1.800,00 EUR (excl. VAT) **Duration** 2 Days

### PREREQUISITES

- IBM N series Data ONTAP Fundamentals (DOTFN) course

### COURSE CONTENT

- Describe the different CIFS 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
- 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

SCHEDULE Germany		SCHEDULE Switzerland	
Frankfurt	25.01.-26.01.10	Utrecht	E 03.05.-04.05.10
Munich	22.02.-23.02.10	Zurich	18.01.-19.01.10
Frankfurt	E 29.03.-30.03.10	Zurich	29.03.-30.03.10
Berlin	19.04.-20.04.10	Zurich	10.05.-11.05.10
Frankfurt	10.05.-11.05.10	Zurich	E 19.07.-20.07.10
Hamburg	14.06.-15.06.10	Zurich	06.09.-07.09.10
Frankfurt	E 12.07.-13.07.10	Zurich	01.11.-02.11.10
Berlin	02.08.-03.08.10	Zurich	13.12.-14.12.10
Frankfurt	06.09.-07.09.10	SCHEDULE United Kingdom	
Munich	27.09.-28.09.10	London	E 11.02.-12.02.10
Frankfurt	E 08.11.-09.11.10	London	E 13.05.-14.05.10
Hamburg	22.11.-23.11.10	London	E 05.08.-06.08.10
Frankfurt	13.12.-14.12.10	London	E 11.11.-12.11.10
SCHEDULE Netherlands			
Utrecht	E 22.02.-23.02.10		

E Training in English  
Further English dates on request

## IBM N series Data ONTAP NFS Administration (NFSN)

**ID** FL-NFSN **Price** 900,00 EUR (excl. VAT) **Duration** 1 Day

### PREREQUISITES

- IBM N series Data ONTAP Fundamentals (DOTFN) course
- Working knowledge of UNIX or equivalent experience
- Familiarity with networking concepts

### COURSE CONTENT

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



SCHEDULE Germany		Munich		Frankfurt		Hamburg		Zurich	
Frankfurt	04.02.10	Munich	04.10.10	Zurich	08.09.10	Frankfurt	E 05.11.10	Zurich	03.11.10
Munich	05.03.10	Hamburg	29.11.10	Zurich	15.12.10	<b>Netherlands</b>			
Frankfurt	E 31.03.10	<b>Netherlands</b>		Utrecht	E 24.02.10	<b>United Kingdom</b>			
Berlin	27.04.10	Utrecht	E 06.05.10	London	E 19.02.10	Further English dates on request			
Frankfurt	12.05.10	<b>Switzerland</b>		London	E 21.05.10				
Hamburg	22.06.10	Zurich	20.01.10	London	E 13.08.10				
Frankfurt	E 20.07.10	Zurich	31.03.10	London	E 19.11.10				
Berlin	09.08.10	Zurich	12.05.10						
Frankfurt	14.09.10	Zurich	E 21.07.10						

## IBM N series Data ONTAP SAN Administration (SANN)

**ID** FL-SANN **Price** 2.700,00 EUR (excl. VAT) **Duration** 3 Days

### PREREQUISITES

- IBM N series Data ONTAP Fundamentals (DOTFN) course

### COURSE CONTENT

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 system from both Windows and UNIX hosts; Explain both FC and IP SAN multipathing options for both Windows and native Solaris™ 10 operating system; Explain the most common problems associated with a SAN environment and how to troubleshoot these problems

SCHEDULE Germany		Utrecht <th colspan="2">E 06.04.-07.04.10</th>		E 06.04.-07.04.10	
Frankfurt	27.01.-29.01.10	<b>SCHEDULE Switzerland</b>			
Munich	24.02.-26.02.10	Zurich	19.01.-21.01.10		
Frankfurt	E 07.04.-09.04.10	Zurich	30.03.-01.04.10		
Berlin	21.04.-23.04.10	Zurich	11.05.-13.05.10		
Frankfurt	26.05.-28.05.10	Zurich	E 20.07.-22.07.10		
Hamburg	16.06.-18.06.10	Zurich	07.09.-09.09.10		
Frankfurt	E 14.07.-16.07.10	Zurich	02.11.-04.11.10		
Berlin	04.08.-06.08.10	Zurich	14.12.-16.12.10		
Frankfurt	08.09.-10.09.10	<b>SCHEDULE United Kingdom</b>			
Munich	29.09.-01.10.10	London	E 08.02.-10.02.10		
Frankfurt	E 02.11.-04.11.10	London	E 10.05.-12.05.10		
Hamburg	24.11.-26.11.10	London	E 02.08.-04.08.10		
Frankfurt	15.12.-17.12.10	London	E 08.11.-10.11.10		
<b>SCHEDULE Netherlands</b>		E Training in English			
Utrecht	E 25.01.-27.01.10	Further English dates on request			

## IBM N series Protection Software Administration (NPSAN)

**ID** FL-NPSAN **Price** 2.700,00 EUR (excl. VAT) **Duration** 3 Days

### PREREQUISITES

- IBM N series Data ONTAP Fundamentals (DOTFN) course

### COURSE CONTENT

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 IBM N series® App Management Console; Describe SnapMirror for Open Systems® 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

SCHEDULE Germany		SCHEDULE Switzerland	
Frankfurt	01.02.-03.02.10	Zurich	20.01.-22.01.10
Munich	02.03.-04.03.10	Zurich	31.03.-02.04.10
Frankfurt	E 12.04.-14.04.10	Zurich	12.05.-14.05.10
Berlin	28.04.-30.04.10	Zurich	E 21.07.-23.07.10
Frankfurt	31.05.-02.06.10	Zurich	08.09.-10.09.10
Hamburg	23.06.-25.06.10	Zurich	03.11.-05.11.10
Frankfurt	E 21.07.-23.07.10	Zurich	15.12.-17.12.10
Berlin	10.08.-12.08.10	<b>SCHEDULE United Kingdom</b>	
Frankfurt	15.09.-17.09.10	London	E 15.02.-17.02.10
Munich	05.10.-07.10.10	London	E 17.05.-19.05.10
Frankfurt	E 10.11.-12.11.10	London	E 09.08.-11.08.10
<b>SCHEDULE Netherlands</b>		London	E 15.11.-17.11.10
Utrecht	E 01.02.-03.02.10	E Training in English	
Utrecht	E 10.05.-12.05.10	Further English dates on request	

Fast Lane's training offerings are as multifaceted as the diverse Cisco data center technologies and specialized solutions your company and workforce need.

## **CISCO COMPLETE**

Fast Lane offers the full range of Cisco data center training, from entry-level to high-end specialty courses. We can ensure you are prepared to master the challenges of Cisco data center certification and specialization.

## **TAILORED COURSES**

Our experts will be delighted to tailor and conduct training to suit your wishes.

## **TOP COACHES**

All our instructors are Cisco-certified specialists with extensive practical experience in their specialty fields.

## **CERTIFIED WORLDWIDE**

Fast Lane is certified in all regions worldwide as a Cisco Learning Solutions Partner.

## **ADVANCED TECHNOLOGY LABS**

Putting hands-on exercises and the latest Cisco equipment to good use, we convey the knowledge you need to operate complex data center infrastructures.

## **CISCO LEARNING CREDITS**

Redeem your Cisco Learning Credits! You are free to use CLCs to pay for any Cisco training.

## **CISCO EUROPEAN LEARNING PARTNER OF THE YEAR 2009**

In June 2009, Fast Lane received the „Cisco European Learning Partner of the Year 2009“ award. Amongst other things this award highlights the activities in the field of data centers in connection with VMware and NetApp technologies. This also includes Cisco Nexus 1000V, Nexus 5000 and the Nexus 7000 course and lab developments.



# Cisco Data Center Products & Technologies



By aligning your IT people, processes, and technology with your business objectives, the new, virtualized data center helps you address global challenges. Cisco Data Center 3.0 transforms infrastructure silos into pools of resources that can be dynamically aligned to meet your application and business needs. Create network-enabled virtualized pools of storage, server, compute and application resources with Cisco data center portfolio.

## DATA CENTER SWITCHING



The network platform for Data Center 3.0 delivers new levels of operational continuity, scalability and transport flexibility to meet the demands of the next generation data center. Featured

products include:

- Cisco Nexus Family
  - Cisco Nexus 7000 Series Switches
  - Cisco Nexus 5000 Series Switches
  - Cisco Nexus 2000 Series Fabric Extenders
  - Cisco Nexus 1000V Series Switches
- Cisco Catalyst Switches
  - Cisco Catalyst 6500 Series Switches
  - Cisco Catalyst 6500 Virtual Switching System
  - Cisco Catalyst 4900 Series Switches
- Cisco Blade Switches

## UNIFIED COMPUTING SYSTEM (UCS)



The Cisco Unified Computing System unifies network, compute, storage access, and virtualization resources in a cohesive system. Featured products include:

- Cisco UCS 6100 Series Fabric Interconnects
- Cisco UCS 5100 Series Blade Server Chassis
- Cisco UCS 2100 Series Fabric Extenders
- Cisco UCS B-Series Blade Servers
- Cisco UCS C-Series Rack-Mount Servers
- Cisco UCS Network Adapters
- Cisco UCS Manager

## STORAGE AREA NETWORKING



Address the challenges of managing, protecting, and scaling data storage with an efficient, reliable, and secure solution. Featured products include:

- Cisco MDS 9500 Series Multilayer Directors
- Cisco MDS 9200 Series Multilayer Switches
- Cisco MDS 9100 Series Fabric Switches & Blade Switches
- Cisco MDS 9000 Series Intelligent Fabric Applications
- Cisco Fabric Manager

## APPLICATION NETWORKING SOLUTIONS



Increase performance, scale, and security with network-based application delivery tools. Featured products include:

- Cisco ACE Family
  - Cisco ACE Application Control Engine Module
  - Cisco ACE 4710 Appliance
  - Cisco ACE Global Site Selector
  - Cisco ACE XML Gateway
- Wide Area Application Services Software (WAAS) Family
  - Cisco Wide Area Application Services Software (WAAS)
  - Windows Server on WAAS
  - Cisco Wide Area Application Services Mobile
  - Cisco Application & Content Networking System (ACNS)

## DATA CENTER SECURITY



Defend critical business processes against attack and disruption, protect privacy, and support policy and regulatory compliance. Featured products include:

- ACE Web Application Firewall
- ACE XML Gateway
- Advanced Security Appliance 5500
- Nexus 1000V Series Switches
- Cisco MDS 9000 Family Storage Media Encryption (SME)
- Cisco Secure Access Control Server (ACS)
- Cisco Security Monitoring, Analysis & Response System

The Cisco Data Center certifications validate knowledge of the corresponding Cisco technologies. Fast Lane delivers the courses you need to prepare for the certification you desire.

## DATA CENTER NETWORKING INFRASTRUCTURE

### Cisco Data Center Networking Infrastructure Design Specialist

Prerequisites: CCDA Certification



Designing Cisco Data Center Network Infrastructure (DCNID)  
**Test #642-971**

### Cisco Data Center Networking Infrastructure Support Specialist

Prerequisites: CCNP Certification



Implementing Cisco Data Center Network Infrastructure 1 (DCNI-1)  
**Test #642-973**

Implementing Cisco Data Center Network Infrastructure 2 (DCNI-2)  
**Test #642-974**

### Cisco Data Center Networking Sales Specialist

Prerequisites: CSE Certification



Data Center Networking Solution Sales (DCNSS)  
**Test #646-985**

## DATA CENTER STORAGE NETWORKING

### Cisco Data Center Storage Networking Design Specialist

Prerequisites: none



Designing Cisco Storage Networking Solutions (DCSNS)  
**Test #642-357**

### Cisco Data Center Storage Networking Support Specialist

Prerequisites: none



Implementing Cisco Storage Networking Solutions (ICSNS)  
Implementing Cisco Advanced Storage Networking Solutions (IASNS)  
**Test #642-359**

### Cisco Data Center Storage Networking Sales Specialist

Prerequisites: CSE Certification



Selling Cisco Data Center Networking Solutions (DCNS)  
**Test #646-976**

## DATA CENTER UNIFIED COMPUTING

### Cisco Data Center Unified Computing Design Specialist

Prerequisites: VMware Design Exam  
PLUS one of the following options:  
• CCDA Certification and DCUCD 642-978 Qualifier Exam  
• Cisco DC Storage Networking Design Specialist and Cisco DC Networking Infrastructure Design Specialist Certifications

Data Center Unified Computing Design (DCUCD)  
**Test #642-982**

### Cisco Data Center Unified Computing Support Specialist

Prerequisites: VCP3 or VCP4 (VMware Certified Professional)  
PLUS one of the following options:  
• CCNA Certification and 642-979 DCUCI Qualifier Exam  
• Cisco DC Storage Networking Support Specialist and Cisco DC Networking Infrastructure Support Specialist Certifications



Data Center Unified Computing Implementation (DCUCI)  
**Test #642-983**

## DATA CENTER APPLICATION SERVICES

### Cisco Data Center Application Services Design Specialist

Prerequisites: CCDA Certification



Designing Cisco Data Center Application Services (DCASD)  
**Test #642-972**

### Cisco Data Center Application Services Support Specialist

Prerequisites: CCNA Certification



Implementing Cisco Data Center Application Services (DCASI)  
**Test #642-975**



## Cisco Nexus Overview Workshop (CNOW)

**ID** FL-CNOW **Price** 590,00 EUR (excl. VAT) **Duration** 1 Day

### WHO SHOULD ATTEND

- Data Center Architects responsible for managing the Cisco Nexus family including the Cisco Nexus 1000, 2000, 5000 and 7000 products

### PREREQUISITES

- CCNA Certification or equivalent knowledge

### COURSE OBJECTIVES

This workshop helps you develop an understanding of how to successfully make the most of the new Cisco Nexus switch family technologies to optimize the scalability, performance and efficiency of your Data Center.

### COURSE CONTENT

- Cisco Nexus Family Overview: Nexus 7000; Nexus 5000; Nexus 2000; Nexus 1000V; NX-OS
- The Nexus 5000 Series Switch: Data Center challenges; I/O Consolidation; Nexus 5000 Architecture Overview; FCoE Server Adapters; Management of the Nexus 5000

- The Nexus 2000 Fabric Extender: Architecture of the Access Switch; Nexus 2000 Access Layer Design
- The Nexus 1000V Virtual Switch: Overview of the Virtual Environment; VN-Link; VM Provisioning
- The Nexus 7000 Core Switch: Data Center Core Requirements; Nexus 7000 Deployment, Nexus 7000 Integrated Core
- Virtual Data Center Architecture: Data Center Network Overview; Access Layer Designs



SCHEDULE Germany		Frankfurt	Berlin	Hamburg	Munich
		10.05.10	04.06.10	02.11.10	02.11.10
Munich	E 22.01.10		22.06.10	Berlin	30.11.10
Hamburg	09.02.10	Hamburg	E 16.07.10	Munich	14.12.10
Frankfurt	05.03.10	Dusseldorf	03.08.10	E Training in English	
Berlin	29.03.10	Frankfurt	10.09.10	Further English dates on request	
Munich	E 23.04.10	Stuttgart	28.09.10		

## Implementing Data Center Networks Using the Cisco Nexus 1000V Switch (IDCN1V)

**ID** FL-IDCN1V **Price** 1.390,00 EUR (excl. VAT) **Duration** 2 Days

### WHO SHOULD ATTEND

- Network Field Engineers, Network System Engineers, Data Center Network Designers, Pre-sales Engineers, Post-sales Engineers, Network Administration Personnel

### PREREQUISITES

- Intermediate knowledge of switching, routing and data center architectures and protocols, as well as an understanding of server virtualization techniques

### COURSE OBJECTIVES

This highly focused, 2-day course provides a detailed understanding of the emerging features and protocols supported by the Nexus 1000V product family. Upon completion of this course, the student will understand product placement for the Nexus 1000V, in addition to its close relationship to VMware devices and services.

### COURSE CONTENT

- Modern Server Architecture Scalability & Consolidation
- Network Virtualization & Consolidation in DC Bridging Networks
- Data Center Application High-Availability
- NIV on ESX using Cisco Nexus Hardware Switches
- Nexus 1000 VEM (NX-OS) Features & Functions

- Nexus 1000V Switching Mechanisms
- Overview of the Nexus 1000 VSM
- VM Policy-based Connectivity & Mobility using Nexus 1000V
- Utilize Cisco NX-OS based End-to-End QoS Concepts & Enforcement
- Configure the Nexus 1000V System Management & Monitoring Features
- Configure VM Security Features Using the Nexus 1000V

### LAB EXERCISES

- Installing the Nexus 1000V VSM & ESM
- Configuring policy-based VM connectivity
- Configuring Nexus 1000V Security
- Configuring Nexus 1000V QoS

SCHEDULE Germany		Berlin	Stuttgart	Hamburg	Munich	Frankfurt	Berlin
Hamburg	25.01.-26.01.10						E 20.09.-21.09.10
Berlin	E 15.02.-16.02.10	Stuttgart					11.10.-12.10.10
Munich	08.03.-09.03.10	Hamburg					25.10.-26.10.10
Frankfurt	E 12.04.-13.04.10	Munich					08.11.-09.11.10
Stuttgart	03.05.-04.05.10	Frankfurt					E 22.11.-23.11.10
Dusseldorf	07.06.-08.06.10	Berlin					06.12.-07.12.10
Hamburg	E 28.06.-29.06.10	<b>SCHEDULE Netherlands</b>					
Berlin	19.07.-20.07.10	Utrecht					E 21.01.-22.01.10
Munich	E 09.08.-10.08.10	Utrecht					E 08.03.-09.03.10
Frankfurt	30.08.-31.08.10	Utrecht					E 03.05.-04.05.10
							E Training in English

# Implementing Data Center Networks Using the Cisco Nexus 5000 Switch & 2000 Fabric Extender (IDCN5K)

**ID** FL-IDCN5K **Price** 1.990,00 EUR (excl. VAT) **Duration** 3 Days

## WHO SHOULD ATTEND

- Network Field Engineers, Network System Engineers, Data Center Network Designers, Pre-sales Engineers, Post-sales Engineers, Network Administration Personnel

## PREREQUISITES

- Intermediate knowledge of switching, routing and data center architectures and protocols, as well as an understanding of server virtualization techniques

## COURSE OBJECTIVES

This highly focused, 3-day course provides a detailed understanding of Cisco's converged SAN/LAN network architecture using Fibre Channel over Ethernet (FCoE) and Data Center Bridging (DCB) protocols on the Cisco Nexus 5000 and Nexus 2000 platform. In this course you will learn about the hardware and software architecture of the Nexus 5000 and 2000 switches, and how this architecture deploys congestion management and other QoS characteristics in the FCoE/DCE networks. This course covers FCoE and DCB/DCE protol design guidelines and configuration details for Cisco's virtualized DCB network environment. You will learn how to deploy a highly available and scalable virtualized converged networking infrastructure using Nexus 5000 and Nexus 2000 series switches in switch mode or NPV/NPIV mode of operation using FC, Ethernet and virtual Port channeling, including RSTP and FSFP high availability implementation considerations. It discusses several design options for modern Data Center access layer architecture, integration of Server Virtualization (ESX), Blade Server and Rack Server into the DC network topology. In addition, QoS, Management, and Monitoring tools for these type of environments are discussed.

## COURSE CONTENT

- Fibre Channel Protocol Implementation on the Cisco Nexus 5000
- FCoE & DCB Protocols & their Applicability to a Unified Fabric Environment
- DCB/FCoE Network Design Considerations
- Configure the Nexus 5000 in Converged Network Environments
- Nexus 5000 System Hardware & Software Architecture
- Nexus 5000 Software Features & Licensing
- Configure Server Connectivity to the FCoE/DCB Network Using Converged Network Adapters
- Nexus 5000 High-Availability Features
- Configure the Nexus 5000 Management & Monitoring Features
- Nexus 2000 Hardware Architecture & Operational Features
- Relationship Between the Nexus 5000 & 2000 Product Families
- Configure Advanced Features Including Congestion Avoidance, Traffic Management, Static & Dynamic Pinning
- Utilize the Fabric & Device Manager Products to Perform Discovery, Configuration, Management & Troubleshooting

## LAB EXERCISES

- Nexus 5000 Hardware Discovery & System Management
- Configure the Nexus 5000 for Dual-Homing Using the Virtual Port-Channel Feature
- Configure DCB using the Nexus 5000
- Configure the Nexus 5000 in NPV Mode
- Configure Nexus 5000 Traffic Management & QoS & Monitor FCoE Performance Using Ethalyzer & SPAN with Wireshark
- Configure Nexus 5000 Security Features



### SCHEDULE Germany

Hamburg	27.01.-29.01.10
Berlin	<b>E</b> 17.02.-19.02.10
Berlin	17.02.-19.02.10
Munich	10.03.-12.03.10
Frankfurt	14.04.-16.04.10
Frankfurt	<b>E</b> 14.04.-16.04.10
Stuttgart	05.05.-07.05.10
Dusseldorf	09.06.-11.06.10
Hamburg	<b>E</b> 30.06.-02.07.10
Hamburg	30.06.-02.07.10
Berlin	21.07.-23.07.10
Munich	11.08.-13.08.10
Munich	<b>E</b> 11.08.-13.08.10
Frankfurt	01.09.-03.09.10

Berlin	<b>E</b> 22.09.-24.09.10
Berlin	22.09.-24.09.10
Stuttgart	13.10.-15.10.10
Hamburg	27.10.-29.10.10
Munich	10.11.-12.11.10
Frankfurt	<b>E</b> 24.11.-26.11.10
Frankfurt	24.11.-26.11.10
Berlin	08.12.-10.12.10

### SCHEDULE Netherlands

Utrecht	<b>E</b> 18.01.-20.01.10
Utrecht	<b>E</b> 06.04.-08.04.10
Utrecht	<b>E</b> 07.06.-09.06.10

**E** Training in English  
Further English dates on request

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

**ID** CI-DCNI-1 **Price** 2.990,00 EUR (excl. VAT) **Duration** 5 Days

## WHO SHOULD ATTEND

- Network Administrators; Network Engineers; Network Designers; System Engineers and Network Managers involved with Data Center Infrastructure

## PREREQUISITES

- CCNP or CCIE Routing & Switching certification status or equivalent knowledge

## COURSE OBJECTIVES

This 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.



## COURSE CONTENT

- Implementing the Catalyst 6500 , 4900 and Blade Switches
- Implementing FWSM for a Data Center Network Infrastructure
- Implementing Network Analysis with NAM
- Implementing High Availability Data Center Features

### SCHEDULE France

Paris 22.02.-26.02.10  
Paris 21.06.-25.06.10  
Paris 20.09.-24.09.10

### SCHEDULE Germany

Munich 25.01.-29.01.10  
Hamburg **E** 08.02.-12.02.10  
Hamburg 22.02.-26.02.10  
Berlin 22.03.-26.03.10  
Frankfurt 12.04.-16.04.10  
Frankfurt **E** 19.04.-23.04.10  
Stuttgart 17.05.-21.05.10  
Hamburg 14.06.-18.06.10  
Dusseldorf 12.07.-16.07.10  
Dusseldorf **E** 19.07.-23.07.10  
Frankfurt 16.08.-20.08.10  
Munich 13.09.-17.09.10  
Berlin 11.10.-15.10.10

Berlin **E** 18.10.-22.10.10  
Hamburg 08.11.-12.11.10  
Frankfurt 06.12.-10.12.10

### SCHEDULE Netherlands

Utrecht **E** 25.01.-29.01.10  
Utrecht **E** 22.03.-26.03.10  
Utrecht **E** 31.05.-04.06.10

### SCHEDULE Spain

Madrid 01.03.-05.03.10  
Madrid 05.07.-09.07.10  
Madrid 29.11.-03.12.10

### SCHEDULE Switzerland

Zurich **E** 08.02.-12.02.10  
Zurich 03.05.-07.05.10  
Zurich 13.09.-17.09.10  
Zurich 20.12.-24.12.10

**E** Training in English  
Further English dates on request

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

**ID** CI-DCNI-2 **Price** 2.990,00 EUR (excl. VAT) **Duration** 5 Days

## WHO SHOULD ATTEND

- Network Administrators; Network Engineers; Network Designers; System Engineers and Network Managers involved with Data Center Infrastructure

## PREREQUISITES

- Interconnecting Cisco Network Devices 2 (ICND2), Building Cisco Multilayer Switched Networks (BCMSN), Building Scalable Cisco Internetworks (BSCI) and Implementing Secure Converged Wide Area Networks (ISCW) courses

## COURSE OBJECTIVES

This course teaches you how to deploy, configure and troubleshoot data center networks using the Cisco Nexus Platform Family including the Cisco Nexus 7000, 5000 and 2000. **The course utilizes real Nexus hardware for all lab activities.**

## COURSE CONTENT

- Using the Cisco Nexus 7000 in Data Center Networks
  - Understanding the Cisco Nexus 7000 Series Switches
  - Overview of the Cisco Nexus 7000
  - Introducing the Virtual Device Contexts in the Cisco Nexus 7000
  - Managing the Cisco Nexus 7000
  - Cisco Nexus 7000 & Cisco NX-OS Layer 2 Protocols & Features
  - Cisco Nexus 7000 & Cisco NX-OS Layer 3 Protocols & Features
  - Cisco Nexus 7000 & Cisco NX-OS Quality of Service
  - Cisco Nexus 7000 & Cisco NX-OS Security
  - Troubleshooting

- Using the Cisco Nexus 5000 & 2000 in Data Center Networks
  - Overview of the Cisco Nexus 5000 & Cisco Nexus 2000
  - Understanding Fibre Channel
  - Implementing an FCoE Network Using Cisco Nexus 5000 Switches



### SCHEDULE France

Paris 22.03.-26.03.10  
Paris 26.07.-30.07.10  
Paris 18.10.-22.10.10

### SCHEDULE Germany

Munich 01.02.-05.02.10  
Hamburg **E** 15.02.-19.02.10  
Hamburg 01.03.-05.03.10  
Berlin 29.03.-01.04.10  
Frankfurt 19.04.-23.04.10  
Frankfurt **E** 26.04.-30.04.10  
Stuttgart 25.05.-28.05.10  
Hamburg 21.06.-25.06.10  
Hamburg **E** 28.06.-02.07.10  
Dusseldorf 26.07.-30.07.10  
Frankfurt 23.08.-27.08.10  
Munich 20.09.-24.09.10  
Hamburg **E** 27.09.-01.10.10  
Berlin 18.10.-22.10.10

Hamburg 15.11.-19.11.10  
Frankfurt 13.12.-17.12.10

### SCHEDULE Netherlands

Utrecht **E** 08.02.-12.02.10  
Utrecht **E** 19.04.-23.04.10  
Utrecht **E** 14.06.-18.06.10

### SCHEDULE Spain

Madrid 15.03.-19.03.10  
Madrid 19.07.-24.07.10  
Madrid 13.12.-18.12.10

### SCHEDULE Switzerland

Zurich **E** 18.01.-22.01.10  
Zurich 08.03.-12.03.10  
Zurich 14.06.-18.06.10  
Zurich 18.10.-22.10.10

### SCHEDULE United Kingdom

London **E** 12.04.-16.04.10  
**E** Training in English  
Further English dates on request

## Data Center Network Infrastructure Design (DCNID)

**ID** CI-DCNID **Price** 3.290,00 EUR (excl. VAT) **Duration** 5 Days

### PREREQUISITES

- Designing for Cisco Internetwork Solutions (DESGN), Implementing Cisco IOS Network Security (IINS) and Security Solutions for System Engineers (SSSE) courses

### COURSE CONTENT

- Data Center Objectives: Key Data Center Concerns and Objectives; Data Center Environmental Requirements; Data Center Networking Components: Cisco Platforms and Modules
- Cisco Nexus 7010 Switch: Hardware Architecture; Software Architecture; Continual Availability; Network Management; Security Overview; QoS implementation on NX 7010; Cisco Nexus 7010 position in the DC network
- Cisco Nexus 5000 Switch: Introduction to Fibre Channel over Ethernet (FCoE); Introduction to Cisco Nexus 5000 Switch; Cisco Nexus 5000 Switch Design Overview
- Data Center Design: Overview; Data Center Application Design



<b>SCHEDULE France</b>		Berlin	<b>E</b> 08.11.-12.11.10
Paris	03.05.-07.05.10	Frankfurt	15.11.-19.11.10
Paris	04.10.-08.10.10	Hamburg	06.12.-10.12.10
<b>SCHEDULE Germany</b>		<b>SCHEDULE Netherlands</b>	
Hamburg	11.01.-15.01.10	Utrecht	<b>E</b> 22.02.-26.02.10
Frankfurt	<b>E</b> 01.02.-05.02.10	Utrecht	<b>E</b> 17.05.-21.05.10
Berlin	15.02.-19.02.10	<b>SCHEDULE Spain</b>	
Munich	08.03.-12.03.10	Madrid	15.02.-19.02.10
Frankfurt	06.04.-09.04.10	Madrid	05.07.-09.07.10
Stuttgart	03.05.-07.05.10	Madrid	13.12.-17.12.10
Munich	<b>E</b> 25.05.-28.05.10	<b>SCHEDULE Switzerland</b>	
Dusseldorf	07.06.-11.06.10	Zurich	<b>E</b> 08.02.-12.02.10
Hamburg	05.07.-09.07.10	Zurich	03.05.-07.05.10
Berlin	09.08.-13.08.10	Zurich	30.08.-03.09.10
Hamburg	<b>E</b> 30.08.-03.09.10	Zurich	29.11.-03.12.10
Frankfurt	13.09.-17.09.10	<b>E</b> Training in English	
Munich	04.10.-08.10.10	Further English dates on request	
Dusseldorf	25.10.-29.10.10		

## Designing Data Center Application Services (DCASD)

**ID** CI-DCASD **Price** 2.990,00 EUR (excl. VAT) **Duration** 5 Days

### PREREQUISITES

- Basic understanding of the following topics: The TCP/IP protocol, the HTTP and SSL protocols, N-tier application architecture, Server load-balancing

### COURSE CONTENT

- Data Center Application Services Overview
- Designing Server Load Balancing Solutions
- Designing Web Application Acceleration Solutions
- Designing Site-to-Site Load Balancing Solutions
- Optimizing the DCAS Solution

<b>SCHEDULE France</b>		<b>SCHEDULE Netherlands</b>	
Paris	17.05.-21.05.10	Utrecht	<b>E</b> 15.03.-19.03.10
Paris	11.10.-15.10.10	Utrecht	<b>E</b> 07.05.-11.05.10
<b>SCHEDULE Germany</b>		<b>SCHEDULE Spain</b>	
Berlin	11.01.-15.01.10	Madrid	08.02.-12.02.10
Munich	<b>E</b> 08.02.-12.02.10	Madrid	07.06.-11.06.10
Hamburg	01.03.-05.03.10	Madrid	25.10.-29.10.10
Munich	26.04.-30.04.10	<b>SCHEDULE Switzerland</b>	
Frankfurt	07.06.-11.06.10	Zurich	<b>E</b> 29.03.-02.04.10
Frankfurt	<b>E</b> 21.06.-25.06.10	Zurich	14.06.-18.06.10
Hamburg	26.07.-30.07.10	Zurich	20.09.-24.09.10
Munich	13.09.-17.09.10	Zurich	13.12.-17.12.10
Munich	<b>E</b> 27.09.-01.10.10	<b>E</b> Training in English	
Frankfurt	25.10.-29.10.10	Further English dates on request	
Berlin	29.11.-03.12.10		

## Implementing Data Center Application Services (DCASI)

**ID** CI-DCASI **Price** 2.990,00 EUR (excl. VAT) **Duration** 5 Days

### PREREQUISITES

- Basic understanding of the following topics: The TCP/IP protocol, the HTTP and SSL protocols, N-tier application architecture, Server load-balancing

### COURSE CONTENT

- Data Center Application Services Overview
- Implementing Server Load Balancing
- Implementing Web Application Acceleration
- Implementing Site-to-Site Load Balancing
- Redundancy and Troubleshooting



<b>SCHEDULE France</b>		<b>SCHEDULE Netherlands</b>	
Paris	07.06.-11.06.10	Utrecht	<b>E</b> 18.01.-22.01.10
Paris	15.11.-19.11.10	Utrecht	<b>E</b> 12.04.-16.04.10
<b>SCHEDULE Germany</b>		Utrecht	<b>E</b> 28.06.-02.07.10
Berlin	18.01.-22.01.10	<b>SCHEDULE Spain</b>	
Munich	<b>E</b> 15.02.-19.02.10	Madrid	24.01.-28.01.10
Hamburg	08.03.-12.03.10	Madrid	24.05.-28.05.10
Munich	03.05.-07.05.10	Madrid	27.09.-01.10.10
Frankfurt	14.06.-18.06.10	<b>SCHEDULE Switzerland</b>	
Frankfurt	<b>E</b> 28.06.-02.07.10	Zurich	<b>E</b> 01.02.-05.02.10
Hamburg	02.08.-06.08.10	Zurich	03.05.-07.05.10
Munich	20.09.-24.09.10	Zurich	06.09.-10.09.10
Munich	<b>E</b> 04.10.-08.10.10	Zurich	06.12.-10.12.10
Frankfurt	08.11.-12.11.10	<b>E</b> Training in English	
Berlin	06.12.-10.12.10	Further English dates on request	

## Implementing Cisco Storage Networking Solutions (ICSNS)

**ID** CI-ICSNS **Price** 2.890,00 EUR (excl. VAT) **Duration** 5 Days

### WHO SHOULD ATTEND

- Cisco Channel Partner/Reseller, Cisco Customers

### PREREQUISITES

- Basic understanding of data storage hardware components and protocols, including SCSI and Fibre Channel

### COURSE OBJECTIVES

ICSNS enables the student to describe and configure the hardware and software components of the Cisco MDS 9000 product family, focusing on key technologies and features that apply to departmental, mid-range, and enterprise SANs.

### COURSE CONTENT

- MDS 9000 Platform Overview
- System Installation and Initial Configuration
- Building Virtual SANs
- Managing SAN Traffic
- Implementing FCIP
- Troubleshooting Tools and Scenarios



#### SCHEDULE France

Paris 11.01.-15.01.10  
Paris 02.08.-06.08.10

#### SCHEDULE Germany

Hamburg 18.01.-22.01.10  
Berlin **E** 08.02.-12.02.10  
Berlin 01.03.-05.03.10  
Frankfurt 12.04.-16.04.10  
Munich 17.05.-21.05.10  
Frankfurt **E** 14.06.-18.06.10  
Hamburg 05.07.-09.07.10  
Berlin 23.08.-27.08.10  
Munich **E** 13.09.-17.09.10  
Frankfurt 27.09.-01.10.10  
Munich 25.10.-29.10.10  
Hamburg **E** 08.11.-12.11.10  
Hamburg 22.11.-26.11.10

Berlin 06.12.-10.12.10

#### SCHEDULE Netherlands

Utrecht **E** 01.02.-05.02.10  
Utrecht **E** 19.04.-23.04.10  
Utrecht **E** 21.06.-25.06.10

#### SCHEDULE Spain

Madrid 12.04.-16.04.10  
Madrid 13.09.-17.09.10

#### SCHEDULE Switzerland

Zurich **E** 01.02.-05.02.10  
Zurich 03.05.-07.05.10  
Zurich 13.09.-17.09.10  
Zurich 13.12.-17.12.10

#### SCHEDULE United Kingdom

London **E** 12.04.-16.04.10  
London **E** 04.10.-08.10.10  
**E** Training in English

## Implementing Cisco Advanced Storage Networking Solutions (IASNS)

**ID** CI-IASNS **Price** 2.990,00 EUR (excl. VAT) **Duration** 5 Days

### WHO SHOULD ATTEND

- Cisco Channel Partner/Reseller, Cisco Customers

#### SCHEDULE France

Paris 08.02.-12.02.10  
Paris 30.08.-03.09.10

#### SCHEDULE Germany

Hamburg 25.01.-29.01.10  
Munich 15.02.-19.02.10  
Berlin 08.03.-12.03.10  
Berlin **E** 22.03.-26.03.10  
Frankfurt 19.04.-23.04.10  
Hamburg 07.06.-11.06.10  
Hamburg **E** 21.06.-25.06.10  
Munich 05.07.-09.07.10  
Hamburg 06.09.-10.09.10  
Munich 04.10.-08.10.10  
Munich **E** 11.10.-15.10.10  
Berlin 18.10.-22.10.10

Frankfurt 22.11.-26.11.10

Frankfurt **E** 29.11.-03.12.10  
Hamburg 13.12.-17.12.10

#### SCHEDULE Netherlands

Utrecht **E** 15.03.-19.03.10  
Utrecht **E** 31.05.-04.06.10

#### SCHEDULE Spain

Madrid 10.05.-14.05.10

#### SCHEDULE Switzerland

Zurich **E** 11.01.-15.01.10  
Zurich 01.03.-05.03.10  
Zurich 21.06.-25.06.10  
Zurich 11.10.-15.10.10

**E** Training in English  
Further English dates on request

### PREREQUISITES

- Implementing Cisco Storage Networking Solutions (ICSNS)

### COURSE OBJECTIVES

IASNS 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.

### COURSE CONTENT

- Building Enterprise SAN Fabrics
- Implementing Management and Security Services
- Advanced Troubleshooting
- Implementing iSCSI

## Cisco MDS 9000 Technical Pre-Sales Training (CMDSPS)

**ID** FL-CMDSPS **Price** 1.200,00 EUR (excl. VAT) **Duration** 2 Days

### PREREQUISITES

- Basic storage knowledge

### COURSE OBJECTIVES

This course gives a comprehensive overview of the actual Cisco MDS solutions (incl. Virtual SANs (VSANs), Switch Port Analyzer (SPAN) and iSCSI solutions) as well as their installation. As one major point the differences in architecture, management and

implementation between Cisco and its competitors solutions will be shown.

#### SCHEDULE Germany

Hamburg 10.02.-11.02.10  
Berlin **E** 30.03.-31.03.10  
Frankfurt 11.05.-12.05.10  
Munich 23.06.-24.06.10  
Dusseldorf 04.08.-05.08.10  
Stuttgart 29.09.-30.09.10

Hamburg **E** 03.11.-04.11.10

Berlin 01.12.-02.12.10  
Munich 15.12.-16.12.10

#### SCHEDULE Spain

Madrid 09.12.-10.12.10

**E** Training in English  
Further English dates on request

## Designing Cisco Storage Networking Solutions (DCSNS)

**ID** CI-DCSNS **Price** 2.890,00 EUR (excl. VAT) **Duration** 5 Days

### PREREQUISITES

- Basic understanding of data storage hardware components and protocols, including SCSI and Fibre Channel

### COURSE OBJECTIVES

DCSNS 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

### COURSE CONTENT

- MDS 9000 Platform Overview
- Designing SAN Fabrics
- Consolidating Storage in the Data Center



- Securing the SAN
- Designing SAN Extension Solutions

#### SCHEDULE France

Paris 15.03.-19.03.10  
Paris 06.09.-10.09.10

#### SCHEDULE Germany

Munich 25.01.-29.01.10  
Hamburg 22.02.-26.02.10  
Berlin E 15.03.-19.03.10  
Berlin 06.04.-09.04.10  
Hamburg 17.05.-21.05.10  
Frankfurt 21.06.-25.06.10  
Frankfurt E 28.06.-02.07.10  
Munich 09.08.-13.08.10  
Hamburg 27.09.-01.10.10  
Hamburg E 04.10.-08.10.10

Berlin 25.10.-29.10.10  
Frankfurt 29.11.-03.12.10

#### SCHEDULE Netherlands

Utrecht E 25.01.-29.01.10  
Utrecht E 12.04.-16.04.10

#### SCHEDULE Spain

Madrid 26.04.-30.04.10  
Madrid 04.10.-08.10.10

#### SCHEDULE Switzerland

Zurich E 08.03.-12.03.10  
Zurich 21.06.-25.06.10  
Zurich 30.08.-03.09.10  
Zurich 22.11.-26.11.10

E Training in English

## Cisco Mainframe Storage Solutions (CMSS)

**ID** CI-CMSS **Price** 1.490,00 EUR (excl. VAT) **Duration** 2 Days

### PREREQUISITES

- Implementing Cisco Storage Networking Solutions (ICSNS)

### COURSE CONTENT

- Mainframe Storage Technologies; FICON: Concepts, Applications, FC-SB-3 Protocol; Implementing Cisco FICON

Solutions: FICON Fabric Configuration, FICONPort Configuration, Troubleshooting, FICON Cascade

#### SCHEDULE Germany

Berlin E 04.03.-05.03.10  
Hamburg 10.05.-11.05.10  
Frankfurt 01.07.-02.07.10

Munich E 26.08.-27.08.10  
Berlin 21.10.-22.10.10  
E Training in English  
Further English dates on request

## Implementing High Performance Computing Networks with the Cisco SFS (HPCSF)



**ID** CI-HPCSF **Price** 2.990,00 EUR (excl. VAT) **Duration** 4 Days

### PREREQUISITES

- Implementing Cisco Storage Networking Solutions (ICSNS)

### COURSE CONTENT

- Fundamentals of High Performance Computing; Designing HPC Server Fabrics; Implementing Server Fabrics with the Cisco SFS;

Building the Unified Compute Fabric; Configuring the Ethernet Gateway; Configuring the Fibre Channel Gateway; Boot over InfiniBand

#### SCHEDULE Germany

Berlin E 09.03.-12.03.10  
Hamburg 18.05.-21.05.10  
Frankfurt 06.07.-09.07.10

Munich E 31.08.-03.09.10  
Berlin 26.10.-29.10.10  
E Training in English  
Further English dates on request

## CCIE Storage Networking Power Workshop (CCIESAN)

**ID** FL-CCIESAN **Price** 6.795,00 EUR (excl. VAT) **Duration** 10 Days

### COURSE CONTENT

This Power Workshop contains the topics of the Cisco Data Center Storage Networking Curriculum in a comprehensive form.

#### SCHEDULE Germany

Berlin 19.04.-30.04.10  
Frankfurt E 07.06.-18.06.10  
Munich 05.07.-16.07.10

Hamburg 13.09.-24.09.10  
Berlin E 22.11.-03.12.10  
E Training in English  
Further English dates on request

## CCIE Storage Networking Power Lab (CCIESANPL)

**ID** FL-CCIESANPL **Price** 4.990,00 EUR (excl. VAT) **Duration** 5 Days

### COURSE CONTENT

The CCIE Storage Networking Power Lab is an intensive, hands-on course which prepares the students for the challenging CCIE Storage Networking Lab exam.

#### SCHEDULE Germany

Frankfurt 15.02.-19.02.10  
Hamburg E 17.05.-21.05.10  
Berlin 28.06.-02.07.10  
Frankfurt E 23.08.-27.08.10  
Munich 04.10.-08.10.10

Hamburg 13.12.-17.12.10  
E Training in English  
Further English dates on request

## Data Center Unified Computing Design (DCUCD)

**ID** CI-DCUCD **Price** 3.290,00 EUR (excl. VAT) **Duration** 5 Days

### COURSE OBJECTIVES

The goal of this course is to enable engineers to design scalable, reliable, and intelligent Data Center Unified Computing solutions based on Cisco Unified Computing System (UCS), Cisco Nexus family switches, Catalyst 6500 in Virtual Switching System (VSS), MDS family SAN switches with NX-OS, Data Center Network Manager (DCNM) and MDS Fabric Manager configuration and management applications, VMware server virtualization products, and Linux and Microsoft Windows operating system.

### COURSE CONTENT

- Data Center Computing Solutions
- Cisco Data Center Unified Computing Solution Components
- Cisco Data Center Unified Computing Solution Benefits

- Unified Computing System Implementation Aspects
- Evaluate Existing Data Center Computing Solutions
- Design Cisco Data Center Unified Computing Solutions
- Evaluate Cisco Data Center Unified Computing Solutions

### SCHEDULE Germany

Hamburg	18.01.-22.01.10	Hamburg	<b>E</b> 05.07.-09.07.10
Hamburg	<b>E</b> 25.01.-29.01.10	Frankfurt	02.08.-06.08.10
Frankfurt	15.02.-19.02.10	Hamburg	06.09.-10.09.10
Frankfurt	<b>E</b> 22.02.-26.02.10	Hamburg	<b>E</b> 13.09.-17.09.10
Hamburg	15.03.-19.03.10	Munich	04.10.-08.10.10
Munich	19.04.-23.04.10	Berlin	01.11.-05.11.10
Munich	<b>E</b> 26.04.-30.04.10	Berlin	<b>E</b> 08.11.-12.11.10
Berlin	31.05.-04.06.10	Hamburg	29.11.-03.12.10
Hamburg	28.06.-02.07.10		<b>E</b> Training in English
			Further English dates on request

## Data Center Unified Computing Implementation (DCUCI)

**ID** CI-DCUCI **Price** 3.290,00 EUR (excl. VAT) **Duration** 5 Days

### COURSE OBJECTIVES

The Cisco Data Center Unified Computing Implementation course is designed to teach students knowledge of the fundamentals of the Cisco Unified Computing System and the ability to implement a virtualized Data Center environment. In addition the student also learns on how to implement the Cisco Unified Computing System (UCS) in an enterprise data center routing and switching infrastructure with the next-generation Cisco Nexus product family.

### SCHEDULE Germany

Hamburg	11.01.-15.01.10	Hamburg	<b>E</b> 12.07.-16.07.10
Hamburg	<b>E</b> 01.02.-05.02.10	Frankfurt	26.07.-30.07.10
Frankfurt	08.02.-12.02.10	Hamburg	30.08.-03.09.10
Frankfurt	<b>E</b> 01.03.-05.03.10	Hamburg	<b>E</b> 20.09.-24.09.10
Hamburg	08.03.-12.03.10	Munich	27.09.-01.10.10
Munich	12.04.-16.04.10	Berlin	25.10.-29.10.10
Munich	<b>E</b> 03.05.-07.05.10	Berlin	<b>E</b> 15.11.-19.11.10
Berlin	17.05.-21.05.10	Hamburg	22.11.-26.11.10
Hamburg	21.06.-25.06.10		<b>E</b> Training in English
			Further English dates on request

### COURSE CONTENT

- Understanding how Cisco UCS Benefits Today's Data Center
- Cisco's Unified Computing System: UCS Hardware Components & UCS Features
- Understanding User Management
- Understanding the Chassis Array Manager (CAM) Conceptual Overview
- Explaining the Implementation of Server Resources via the Unified Computing System
- Maintaining a Cisco Unified Computing System
- Monitoring, Diagnostics & Troubleshooting the Cisco Unified Computing System
- Designing Cisco Unified Computing System Deployment



# Cisco Wide Area Application Services (CWAAS)

**ID** CI-CWAAS **Price** 2.990,00 EUR (excl. VAT) **Duration** 5 Days

**PREREQUISITES**

- CCNA certification or equivalent knowledge

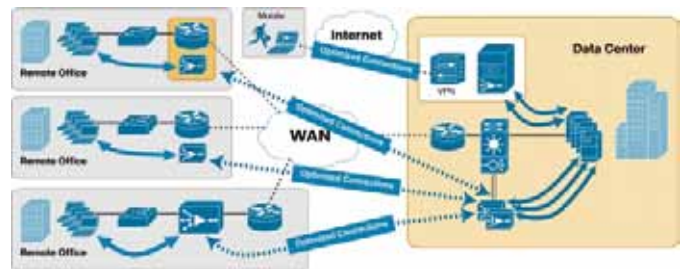
**COURSE OBJECTIVES**

This course teaches you how to deploy the WAAS 4.1 product including WAAS Mobile.

**COURSE CONTENT**

- Cisco Wide-Area Application Services
  - Introducing Cisco WAAS
  - Understanding WAN Optimization
  - Understanding Application Acceleration
- Cisco WAAS Quick Start
  - Introducing Traffic Interception
  - Installing and Configuring Cisco WAAS Using Quick Start
- Implementation, Integration, and Management
  - Performing an Advanced Cisco WAE Installation and Configuration
  - Configuring Traffic Interception
  - Implementing Cisco WAAS Central Management
  - Configuring Application Traffic Policies
  - Configuring Cisco WAAS Virtualization
- Cisco WAAS Application Optimizers
  - Configuring CIFS Optimization
  - Configuring Cisco WAAS Windows Network Printing
  - Configuring NFS Optimization
  - Configuring HTTP Optimization
  - Configuring Streaming Video Optimization
  - Configuring MAPI Optimization
  - Configuring SSL Optimization

- Cisco WAAS Design and Troubleshooting
  - Planning a Cisco WAAS Network Design
  - Troubleshooting Introduction
  - Troubleshooting Network Interception
  - Troubleshooting WAN Optimization
- Cisco WAAS Mobile Client Solution
  - Installing Cisco WAAS Mobile
  - Configuring Cisco WAAS Mobile Options
  - Troubleshooting Cisco WAAS Mobile



**SCHEDULE Germany**

Munich	<b>E</b> 18.01.-22.01.10
Munich	25.01.-29.01.10
Hamburg	22.02.-26.02.10
Frankfurt	26.04.-30.04.10
Frankfurt	<b>E</b> 17.05.-21.05.10
Berlin	28.06.-02.07.10
Berlin	<b>E</b> 12.07.-16.07.10
Hamburg	02.08.-06.08.10
Munich	30.08.-03.09.10
Hamburg	25.10.-29.10.10
Berlin	22.11.-26.11.10
Frankfurt	06.12.-10.12.10

**SCHEDULE Netherlands**

Utrecht	<b>E</b> 08.02.-12.02.10
Utrecht	<b>E</b> 19.04.-23.04.10
Utrecht	<b>E</b> 21.06.-25.06.10

**SCHEDULE Spain**

Madrid	31.05.-04.06.10
Madrid	01.11.-05.11.10

**SCHEDULE Switzerland**

Zurich	01.02.-05.02.10
Zurich	17.05.-21.05.10
Zurich	30.08.-03.09.10
Zurich	15.11.-19.11.10

**E** Training in English  
Further English dates on request

# Implementing the Application Control Engine Service Module (ACESM)

**ID** CI-ACESM **Price** 2.390,00 EUR (excl. VAT) **Duration** 4 Days

**PREREQUISITES**

- Basic understanding of the following topics: The TCP/IP protocol, the HTTP and SSL protocols, N-tier application architecture, Server load-balancing

**COURSE OBJECTIVES**

This course teaches you how to design, deploy, and optimize intelligent network services using the Cisco Application Control Engine (ACE) Service Module for Catalyst 6500 switches. The course covers all of the key features of the ACE 2.0 software, including resource virtualization and management, server load balancing (Layer 2-4 and Layer 7), SSL termination and offload, and security features like application-layer inspection and fixups.

**COURSE CONTENT**

- Introducing the Cisco ACE Module
- Deploying the Cisco ACE Module
- Understanding Modular Policy CLI
- Managing the Cisco ACE Module
- Understanding Security Features



- Configuring Layer 4 Load Balancing
- Configuring Health Monitoring
- Configuring Layer 7 Protocol Processing
- Processing Secure Connections
- Understanding High Availability
- Integrating Multiple Features

**SCHEDULE France**

Paris	20.07.-23.07.10
Paris	14.12.-17.12.10

**SCHEDULE Germany**

Hamburg	25.01.-28.01.10
Berlin	01.03.-04.03.10
Munich	<b>E</b> 22.03.-25.03.10
Munich	12.04.-15.04.10
Frankfurt	17.05.-20.05.10
Hamburg	14.06.-17.06.10
Berlin	12.07.-15.07.10
Berlin	<b>E</b> 26.07.-29.07.10
Frankfurt	30.08.-02.09.10
Munich	04.10.-07.10.10
Hamburg	08.11.-11.11.10

Hamburg	<b>E</b> 15.11.-18.11.10
Berlin	29.11.-02.12.10

**SCHEDULE Netherlands**

Utrecht	<b>E</b> 01.02.-04.02.10
Utrecht	<b>E</b> 26.04.-29.04.10
Utrecht	<b>E</b> 28.06.-01.07.10

**SCHEDULE Spain**

Madrid	07.09.-10.09.10
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**SCHEDULE Switzerland**

Zurich	09.02.-12.02.10
Zurich	25.05.-28.05.10
Zurich	<b>E</b> 24.08.-27.08.10
Zurich	09.11.-12.11.10

**E** Training in English  
Further English dates on request

## Designing an Enterprise Application Infrastructure with the ACE Family (ACEDES)

**ID** CI-ACEDES **Price** 2.390,00 EUR (excl. VAT) **Duration** 4 Days

### COURSE CONTENT

- Introducing ACE
- Deploying ACE
- Modular Policy Configuration
- Layer 4 / 7 Load Balancing
- Layer 7 Protocol Processing
- Processing Secure Connections
- Security Features



- High Availability
- Integrating Multiple Features

### SCHEDULE Germany

Berlin	09.02.-12.02.10
Frankfurt	<b>E</b> 09.03.-12.03.10
Hamburg	06.04.-09.04.10
Munich	25.05.-28.05.10
Berlin	<b>E</b> 22.06.-25.06.10
Frankfurt	20.07.-23.07.10
Hamburg	14.09.-17.09.10
Berlin	<b>E</b> 05.10.-08.10.10
Munich	26.10.-29.10.10

Berlin 23.11.-26.11.10

### SCHEDULE Spain

Madrid 14.09.-17.09.10

### SCHEDULE Switzerland

Zurich 26.01.-29.01.10

Zurich 27.04.-30.04.10

Zurich **E** 20.07.-23.07.10

Zurich 26.10.-29.10.10

**E** Training in English

Further English dates on request

## Implementing the Cisco ACE Appliance (ACEAP)

**ID** CI-ACEAP **Price** 2.490,00 EUR (excl. VAT) **Duration** 4 Days

### COURSE CONTENT

- Implementing the Cisco Application Control Engine Appliance
- Introducing the Cisco ACE 4710 Appliance
- Deploying Cisco ACE
- Modular Policy CLI
- Managing the Cisco ACE Appliance
- Security Features
- Load Balancing
- Health Monitoring
- Layer 7 Protocol Processing
- Processing Secure Connections

- Deploying Application Acceleration and Optimization
- High Availability
- Integrating Multiple Features

### SCHEDULE Germany

Munich	11.01.-14.01.10
Berlin	16.02.-19.02.10
Hamburg	13.04.-16.04.10
Munich	08.06.-11.06.10
Berlin	<b>E</b> 29.06.-02.07.10
Frankfurt	27.07.-30.07.10
Hamburg	21.09.-24.09.10
Berlin	<b>E</b> 12.10.-15.10.10
Munich	02.11.-05.11.10

Berlin 30.11.-03.12.10

### SCHEDULE Spain

Madrid 27.07.-30.07.10

### SCHEDULE Switzerland

Zurich 09.03.-12.03.10

Zurich 22.06.-25.06.10

Zurich **E** 21.09.-24.09.10

Zurich 20.12.-23.12.10

**E** Training in English

Further English dates on request

## ACE XML Gateway Operations & Configuration (AXGOC)

**ID** CI-AXGOC **Price** 1.290,00 EUR (excl. VAT) **Duration** 2 Days

### COURSE CONTENT

- Application Security
- Introducing the ACE XML Gateway
- Deploying the ACE XML Gateway
- Securing Communications with SSL
- Message Level Security

- Advanced Deployment Options
- Troubleshooting the ACE XML Gateway

### SCHEDULE Germany

Hamburg	01.02.-02.02.10
Berlin	<b>E</b> 12.04.-13.04.10
Frankfurt	07.06.-08.06.10
Munich	09.08.-10.08.10

Hamburg **E** 27.09.-28.09.10

Frankfurt 08.11.-09.11.10

Berlin 13.12.-14.12.10

**E** Training in English

Further English dates on request

## Global Site Selector Operation & Configuration (GSSOC)

**ID** CI-GSSOC **Price** 1.990,00 EUR (excl. VAT) **Duration** 3 Days

### COURSE CONTENT

- Basic DNS Review
- GSS Deployment Model Overview
- GSS Setup
- Global Server Load Balancing
- GSS Keepalives
- GSS Load Balancing Methods
- GSS Network Proximity

- GSS DDoS Protection
- GSS / CNR Interaction



### SCHEDULE Germany

Hamburg	03.02.-05.02.10
Berlin	<b>E</b> 14.04.-16.04.10
Frankfurt	09.06.-11.06.10
Munich	11.08.-13.08.10
Hamburg	<b>E</b> 29.09.-01.10.10

Frankfurt 10.11.-12.11.10

Berlin 15.12.-17.12.10

### SCHEDULE Spain

Madrid 07.07.-09.07.10

**E** Training in English

Further English dates on request

# Advanced Catalyst 6500 Switching (CAT6KS)

**ID** FL-CAT6KS **Price** 2.690,00 EUR (excl. VAT) **Duration** 5 Days

**PREREQUISITES**

- CCNP certification or comparable experience

**COURSE CONTENT**

- Options and Hardware available for the Catalyst 6500 Switches: Chassis, Line Card, Supervisor, MSFC, PFC, SFM, DFC, Power Supplies, Architecture, Service Modules Overview
- Virtual Switching System 1440 Architecture, Operation and Configuration
- Deploying and Examining IOS Software Modularity
- Recovering the Supervisor Password
- Managing and Upgrading IOS on Catalyst 6500
- VLAN Enhancements: VTP and Trunk Configuration Guidelines and Restrictions
- Spanning Tree, Rapid and Multiple Spanning-Tree Operation
- Spanning-Tree Enhancements: BPDU Guard and Filter, Root Guard, Loop Guard, PortFast, UplinkFast, BackboneFast
- Using Unidirectional Link Detection
- Using EtherChannel including MultiChassis EtherChannel in VSS mode
- Configuring NetFlow and NDE
- Understanding and Implementing Catalyst 6500 QoS options
- Deploying and Examining Embedded Event Manager
- Utilizing Automated Diagnostics (GOLD, TDR, On Board Failure Logging, System Event Archive, Smart Call Home)
- Implementing SPAN, RSPAN, and ERSPAN
- Implementing High Availability Features (HSRP, FHRP, VRRP, GLBP)

- Implementing Catalyst 6500 Stateful Switchover options (RPR, RPR+, SSO, NSF)
- Network Security Enhancements (TCP Intercept, Unicast RPF, Storm Control, VLAN ACL, VACL Capture, DAI, DHCP Snooping, IP Source Gard, CoPP, Port Security, PVLAN, IEEE 802.1X Port-Base Authentication)



**SCHEDULE France**

Paris 01.03.-05.03.10  
Paris 23.08.-27.08.10

**SCHEDULE Germany**

Hamburg **E** 25.01.-29.01.10  
Hamburg 01.02.-05.02.10  
Berlin 01.03.-05.03.10  
Frankfurt 06.04.-09.04.10  
Munich **E** 26.04.-30.04.10  
Munich 03.05.-07.05.10  
Berlin 07.06.-11.06.10  
Hamburg **E** 21.06.-25.06.10  
Hamburg 28.06.-02.07.10  
Stuttgart 05.07.-09.07.10  
Dusseldorf **E** 26.07.-30.07.10  
Dusseldorf 02.08.-06.08.10  
Berlin 30.08.-03.09.10

Hamburg **E** 20.09.-24.09.10  
Hamburg 27.09.-01.10.10  
Munich 25.10.-29.10.10  
Frankfurt **E** 15.11.-19.11.10  
Frankfurt 22.11.-26.11.10  
Hamburg 13.12.-17.12.10

**SCHEDULE Spain**

Madrid 24.05.-28.05.10  
Madrid 12.07.-16.07.10  
Madrid 08.11.-12.11.10

**SCHEDULE Switzerland**

Zurich 22.02.-26.02.10  
Zurich 31.05.-04.06.10  
Zurich 09.08.-13.08.10  
Zurich 01.11.-05.11.10

**E** Training in English  
Further English dates on request

# Catalyst 6500 & Cisco 7600 Series Routers Firewall Services Module Deployment (FWSMD)

**ID** FL-FWSMD **Price** 2.990,00 EUR (excl. VAT) **Duration** 5 Days

**PREREQUISITES**

- Experience of configuring Cisco IOS Software
- CCNA certification or similar knowledge
- Basic knowledge of Windows Operating systems
- Familiarity with Network and Security Concepts

**COURSE CONTENT**

- Catalyst 6500 Family and overview over Advanced Services Modules
- Firewall Services
- Configuration of the switch for the FWSM
- Implementing the FWSM
- Translations and Connections
- Access Control Lists and Content Filtering
- Grouping of objects
- IP Routing
- Cisco Modular Policy Framework
- Advanced Protocol Handling
- Transparent Firewall Mode
- Cisco Adaptive Security Device Manager
- Authentication, Authorization and Accounting

- Deployment of the FWSM within multiple contexts
- Failover
- FWSM Management
- Site-to-Site and Remote Access VPN for FWSM Remote Management
- FWSM Troubleshooting
- Cisco Security Manager



**SCHEDULE Germany**

Hamburg 08.02.-12.02.10  
Berlin **E** 08.03.-12.03.10  
Frankfurt 29.03.-01.04.10  
Munich **E** 19.04.-23.04.10  
Hamburg 26.04.-30.04.10  
Berlin 17.05.-21.05.10  
Dusseldorf 14.06.-18.06.10  
Munich 12.07.-16.07.10  
Hamburg 23.08.-27.08.10  
Berlin **E** 13.09.-17.09.10  
Frankfurt 04.10.-08.10.10  
Berlin 08.11.-12.11.10  
Hamburg **E** 15.11.-19.11.10

Munich 06.12.-10.12.10

**SCHEDULE Netherlands**

Utrecht **E** 01.02.-05.02.10  
Utrecht **E** 17.05.-21.05.10

**SCHEDULE Spain**

Madrid 06.09.-10.09.10

**SCHEDULE Switzerland**

Zurich 15.02.-19.02.10  
Zurich **E** 03.05.-07.05.10  
Zurich 23.08.-27.08.10  
Zurich 22.11.-26.11.10

**E** Training in English  
Further English dates on request

# VMware vSphere™ and Cisco Nexus 1000V Integration



The Cisco Nexus 1000V Series Switches are virtual machine access switches that are an intelligent software switch implementation for VMware vSphere environments. Operating inside the VMware ESX hypervisor, the Cisco Nexus 1000V Series supports Cisco VN-Link server virtualization technology to provide policy-based virtual machine (VM) connectivity, mobile VM security and network policy, and non-disruptive operational model for your server virtualization, and networking teams. Fast Lane has developed two courses to prepare you for the VMware vSphere™ and Cisco Nexus 1000V integration.

## What's New vSphere™ 4 on Nexus 1000V Data Center Networks (WNNDC)

**ID** FL-WNNDC **Price** 2.390,00 EUR (excl. VAT) **Duration** 4 Days

### WHO SHOULD ATTEND

- Network Field Engineers
- Network System Engineers
- Data Center Network Designers
- Pre-sales Engineers
- Post-sales Engineers
- Network Administration Personnel
- System architects
- System administrators
- IT managers, and individuals responsible for implementing and managing VMware Infrastructure architectures

### PREREQUISITES

- VMware Infrastructure 3: Install & Configure (VIIC) or equivalent experience with VMware ESX and vCenter Server
- Intermediate knowledge of switching, routing and data center architectures and protocols, as well as an understanding of server virtualization techniques

### COURSE OBJECTIVES

This course provides a detailed understanding of the features and protocols supported by the Nexus 1000V product family and explores new features in VMware vCenter Server and ESX™/ESXi, as well as how to upgrade an ESX 3.X environment. Upon completion of this course, you will understand product placement for the Nexus 1000V, with its close relationship to VMware devices and services. Practical lab exercises augment and reinforce the courseware to provide a unified curriculum.

### COURSE CONTENT

- Overview of the Nexus 1000 VEM and VSM
- Network Virtualization and consolidation in Data Center Bridging Networks
- Upgrading VMware deployments
- Data Center Application High-Availability
- Nexus 1000 VEM (NX-OS) Features and Switching Mechanisms
- Deploying distributed virtual switches to simplify datacenter-wide network management
- Migrating virtual machines' storage while they are live with Storage vMotion
- Growing virtual disks and VMFS volumes while they are live
- Employing VMware's new Pluggable Storage Architecture
- Ensuring application availability with VMware Fault Tolerance
- Use the new host profiles feature to keep hosts uniformly configured
- Saving energy with VMware Distributed Power Management
- Saving disk space with thin provisioning
- NIV on ESX using Cisco Nexus switches
- Virtual Machine Policy-based Connectivity and Mobility
- Utilize Cisco NX-OS based End-to-End QoS Concepts and Enforcement
- Configure the Nexus 1000V System Management and Monitoring Features
- Configure Virtual Machine Security Features Using the Nexus 1000V
- Save disk space with thin provisioning
- Administer virtual appliances consisting of more than one virtual machine



### SCHEDULE Germany

Frankfurt	12.01.-15.01.10
Frankfurt	<b>E</b> 09.02.-12.02.10
Berlin	29.03.-01.04.10
Berlin	<b>E</b> 06.04.-09.04.10
Hamburg	25.05.-28.05.10
Hamburg	<b>E</b> 06.07.-09.07.10
Munich	03.08.-06.08.10
Munich	<b>E</b> 06.09.-09.09.10

Frankfurt	05.10.-08.10.10
Frankfurt	<b>E</b> 02.11.-05.11.10
Hamburg	20.12.-23.12.10
<b>SCHEDULE Netherlands</b>	
Utrecht	<b>E</b> 25.01.-28.01.10
Utrecht	<b>E</b> 26.04.-29.04.10

**E** Training in English  
Further English dates on request

# Install, Config & Manage vSphere™ 4 on Nexus 1000V Data Center Networks (ICMND)

**ID** FL-ICMND **Price** 2.990,00 EUR (excl. VAT) **Duration** 5 Days

### WHO SHOULD ATTEND

- Network Field Engineers
- Network System Engineers
- Data Center Network Designers
- Pre-sales Engineers
- Post-sales Engineers
- Network Administration Personnel
- System architects
- System administrators
- IT managers, and individuals responsible for implementing and managing VMware Infrastructure architectures

### PREREQUISITES

- Administration experience on Microsoft Windows or Linux operating systems
- Intermediate knowledge of switching, routing and data center architectures and protocols
- VMware vSphere 4: What's New (VIWN) course

### COURSE OBJECTIVES

This course provides a detailed understanding of the emerging features and protocols supported by the Nexus 1000V product family and installation configuration, and management of VMware vSphere™. Upon completion of this course, you will understand product placement for the Nexus 1000V, in addition to its close relationship to VMware devices and services. Practical lab exercises augment and reinforce the courseware to provide a unified curriculum.

### COURSE CONTENT

- Install and configure ESX and vCenter Server
- Configure and manage ESX networking and storage using vCenter Server
- Deploy, manage and monitor VM and their resources
- Manage user access to the VMware infrastructure
- Increase scalability using vCenter Server
- Apply patches using VMware vCenter Update Manager
- Manage higher availability and data protection using vCenter Server
- Overview of the Nexus 1000 VEM and VSM
- Network Virtualization and consolidation in Data Center Bridging Networks
- Data Center Application High-Availability
- Nexus 1000 VEM (NX-OS) Features and Switching Mechanisms
- NIV on ESX using Cisco Nexus switches
- Virtual Machine Policy-based Connectivity and Mobility
- Utilize Cisco NX-OS based End-to-End QoS Concepts and Enforcement
- Configure the Nexus 1000V System Management and Monitoring Features
- Configure Virtual Machine Security Features Using the Nexus 1000V
- Manage higher availability and data protection using vCenter Server

#### SCHEDULE Germany

Frankfurt	18.01.-22.01.10
Frankfurt	<b>E</b> 22.02.-26.02.10
Berlin	22.03.-26.03.10
Berlin	<b>E</b> 19.04.-23.04.10
Hamburg	17.05.-21.05.10
Hamburg	<b>E</b> 14.06.-18.06.10
Munich	12.07.-16.07.10
Munich	<b>E</b> 16.08.-20.08.10

Frankfurt	13.09.-17.09.10
Frankfurt	<b>E</b> 11.10.-15.10.10
Hamburg	29.11.-03.12.10

#### SCHEDULE Netherlands

Utrecht	<b>E</b> 01.02.-05.02.10
Utrecht	<b>E</b> 17.05.-21.05.10

**E** Training in English  
Further English dates on request



Fast Lane is an authorized VMware Training Center (VATC) and delivers original VMware education programs. We can also deliver VMware courses as customized on-site programs for your company.

## VCP CERTIFICATION

The VMware Certified Professional (VCP) Program is designed for any technical individual - partners, end-users, resellers, and consultants - who wants to demonstrate his or her virtualization expertise and increase his or her potential for career advancement. Please note that participation in a VMware authorized training class is required for VCP certification. Candidates who take the VCP exam without a class will not be certified or confirmed by VMware. Fast Lane delivers the courses you need to prepare for the VCP certification.

Test	Recommended Training
VCP on vSphere 4 Test # VCP-401	<ul style="list-style-type: none"> <li>VMware vSphere 4: Install, Configure, Manage (VICM) or</li> <li>VMware vSphere 4 Fast Track (VVFT) or</li> <li>VCP on VI3 Certification plus VMware vSphere 4: What's New (VIWN)</li> </ul>



## VMware vSphere: Overview (VVO)

**Special Price:**  
**149,00 EUR!**

**ID** VM-VVO **Price** 149,00 EUR (excl. VAT) **Duration** 1 Day

### PREREQUISITES

- System administration experience on Microsoft Windows or Linux operating systems

### COURSE CONTENT

- Virtual Infrastructure Overview
- Creating Virtual Machines
- Allocating Compute Resources to Business Functions
- Migrating Virtual Machines
- Balancing Virtual Machine Workloads
- Monitoring the Virtual Datacenter
- High Availability and Fault Tolerance
- Extending VMware vSphere Capabilities

Germany		Frankfurt	Frankfurt	Frankfurt	
Hamburg	18.01.10	Munich	21.06.10	Berlin	25.10.10
Stuttgart	25.01.10	Stuttgart	28.06.10	Hamburg	01.11.10
Dusseldorf	08.02.10	Berlin	05.07.10	Stuttgart	08.11.10
Berlin	<b>E</b> 08.02.10	Hamburg	<b>E</b> 12.07.10	Frankfurt	<b>E</b> 22.11.10
Hamburg	15.02.10	Dusseldorf	19.07.10	Hamburg	29.11.10
Frankfurt	22.02.10	Munich	26.07.10	Munich	06.12.10
Munich	<b>E</b> 08.03.10	Frankfurt	02.08.10	Berlin	<b>E</b> 13.12.10
Hamburg	15.03.10	Stuttgart	<b>E</b> 09.08.10		
Stuttgart	22.03.10	Berlin	16.08.10		
Dusseldorf	12.04.10	Frankfurt	30.08.10		
Munich	19.04.10	Hamburg	06.09.10		
Stuttgart	26.04.10	Berlin	<b>E</b> 13.09.10		
Berlin	<b>E</b> 03.05.10	Stuttgart	27.09.10		
Dusseldorf	07.06.10	Munich	<b>E</b> 11.10.10		

**E** Training in English

## VMware vSphere: What's New? (VIWN)

**ID** VM-VIWN **Price** 1.300,00 EUR (excl. VAT) **Duration** 2 Days

### PREREQUISITES

- Completion of VMware Infrastructure 3: Install & Configure V3.5 or equivalent experience with VMware ESX and vCenter Server

### COURSE CONTENT

- Introducing vSphere 4
- Infrastructure Administration
- Networking
- Storage
- Resource Management
- Business Continuity

SCHEDULE Germany		Dusseldorf	12.07.-13.07.10
Berlin	<b>E</b> 01.02.-02.02.10	Stuttgart	<b>E</b> 02.08.-03.08.10
Frankfurt	15.02.-16.02.10	Hamburg	30.08.-31.08.10
Munich	<b>E</b> 01.03.-02.03.10	Munich	<b>E</b> 04.10.-05.10.10
Berlin	22.03.-23.03.10	Hamburg	25.10.-26.10.10
Munich	<b>E</b> 12.04.-13.04.10	Frankfurt	<b>E</b> 15.11.-16.11.10
Hamburg	17.05.-18.05.10	Munich	29.11.-30.11.10
Frankfurt	<b>E</b> 07.06.-08.06.10	Berlin	06.12.-07.12.10
Berlin	28.06.-29.06.10		<b>E</b> Training in English

## VMware vSphere: Install, Configure, Manage (VICM)

**ID** VM-VICM **Price** 2.800,00 EUR (excl. VAT) **Duration** 4 Days

### PREREQUISITES

- System administration experience on Microsoft Windows or Linux operating systems

### COURSE CONTENT

- Introduction to VMware Virtualization
- Configuring ESXi/ESX
- Installing and Using VMware vCenter Server
- Networking

- Storage
- Virtual Machines
- Access Control
- Resource Monitoring
- Scalability
- High Availability and Data Protection
- Configuration Management
- Installing ESX



<b>SCHEDULE Germany</b>							
Hamburg	19.01.-22.01.10	Stuttgart	27.04.-30.04.10	Stuttgart	<b>E</b> 10.08.-13.08.10	Hamburg	30.11.-03.12.10
Hannover	19.01.-22.01.10	Berlin	04.05.-07.05.10	Berlin	17.08.-20.08.10	Hannover	30.11.-03.12.10
Stuttgart	26.01.-29.01.10	Leipzig	04.05.-07.05.10	Leipzig	17.08.-20.08.10	Munich	07.12.-10.12.10
Leipzig	02.02.-05.02.10	Berlin	<b>E</b> 04.05.-07.05.10	Frankfurt	31.08.-03.09.10	Nuremberg	07.12.-10.12.10
Dusseldorf	<b>E</b> 09.02.-12.02.10	Hannover	18.05.-21.05.10	Hamburg	07.09.-10.09.10	Berlin	<b>E</b> 14.12.-17.12.10
Berlin	<b>E</b> 09.02.-12.02.10	Hamburg	25.05.-28.05.10	Hannover	07.09.-10.09.10	Leipzig	14.12.-17.12.10
Hamburg	16.02.-19.02.10	Muenster	08.06.-11.06.10	Berlin	<b>E</b> 14.09.-17.09.10		
Frankfurt	23.02.-26.02.10	Dusseldorf	08.06.-11.06.10	Muenster	21.09.-24.09.10		
Nuremberg	02.03.-05.03.10	Frankfurt	<b>E</b> 15.06.-18.06.10	Stuttgart	28.09.-01.10.10		
Munich	<b>E</b> 09.03.-12.03.10	Nuremberg	22.06.-25.06.10	Nuremberg	05.10.-08.10.10		
Hamburg	16.03.-19.03.10	Munich	22.06.-25.06.10	Munich	<b>E</b> 12.10.-15.10.10		
Stuttgart	23.03.-26.03.10	Stuttgart	29.06.-02.07.10	Frankfurt	19.10.-22.10.10		
Berlin	29.03.-01.04.10	Berlin	06.07.-09.07.10	Berlin	26.10.-29.10.10		
Frankfurt	<b>E</b> 06.04.-09.04.10	Hamburg	<b>E</b> 13.07.-16.07.10	Hamburg	02.11.-05.11.10		
Dusseldorf	13.04.-16.04.10	Dusseldorf	20.07.-23.07.10	Stuttgart	09.11.-12.11.10		
Munich	20.04.-23.04.10	Munich	27.07.-30.07.10	Muenster	16.11.-19.11.10	<b>E</b> Training in English	
		Frankfurt	03.08.-06.08.10	Frankfurt	<b>E</b> 23.11.-26.11.10	Further English dates on request	

## VMware vSphere: Fast Track (VWFT)

Incl. Exam Voucher!

**ID** VM-VWFT **Price** 4.760,00 EUR (excl. VAT) **Duration** 5 Days

### PREREQUISITES

- Willingness to participate in a demanding, high-intensity training experience
- Comfort with system administration using command-line interfaces

### COURSE CONTENT

This intensive, extended-hours training course focuses on installing, configuring, managing, and troubleshooting VMware vSphere™. It combines the content of the VMware vSphere 4: Install, Configure, Manage (VICM) course with advanced tasks and skills for configuring a highly available and scalable virtual infrastructure. Upon completing this course, you can take the examination to qualify as a VMware Certified Professional.

<b>SCHEDULE Germany</b>			
Hamburg	25.01.-29.01.10	Munich	18.10.-22.10.10
Munich	15.03.-19.03.10	Hamburg	08.11.-12.11.10
Munich	<b>E</b> 15.03.-19.03.10	Hamburg	<b>E</b> 08.11.-12.11.10
Frankfurt	12.04.-16.04.10	Frankfurt	29.11.-03.12.10
Berlin	17.05.-21.05.10		
Berlin	<b>E</b> 17.05.-21.05.10		
Frankfurt	21.06.-25.06.10		
Hamburg	19.07.-23.07.10		
Hamburg	<b>E</b> 19.07.-23.07.10		
Stuttgart	16.08.-20.08.10		
Berlin	20.09.-24.09.10	<b>E</b> Training in English	
Berlin	<b>E</b> 20.09.-24.09.10	Further English dates on request	

## VMware vSphere Troubleshooting (VSTS)

**ID** VM-VSTS **Price** 2.100,00 EUR (excl. VAT) **Duration** 3 Days



<b>SCHEDULE Germany</b>			
Hamburg	02.02.-04.02.10	Hamburg	10.08.-12.08.10
Frankfurt	29.03.-31.03.10	Berlin	<b>E</b> 28.09.-30.09.10
Frankfurt	<b>E</b> 29.03.-31.03.10	Berlin	28.09.-30.09.10
Berlin	10.05.-12.05.10	Frankfurt	02.11.-04.11.10
Munich	29.06.-01.07.10	Munich	<b>E</b> 07.12.-09.12.10
Munich	<b>E</b> 29.06.-01.07.10	<b>E</b> Training in English	
		Further English dates on request	

## VMware vSphere: Manage Scalability (VMS)

**ID** VM-VMS **Price** 690,00 EUR (excl. VAT) **Duration** 1 Day

### PREREQUISITES

- VMware vSphere 4: Install, Configure, Manage (VICM) course

### COURSE CONTENT

- Thin Provisioning
- Host Profiles
- VMware Distributed Resource Scheduler Cluster
- VMware vCenter Linked Mode
- VMware ESX Script Installation

<b>SCHEDULE Germany</b>			
Hamburg	05.02.-05.02.10	Berlin	01.10.-01.10.10
Frankfurt	01.04.-01.04.10	Berlin	<b>E</b> 01.10.-01.10.10
Frankfurt	01.04.-01.04.10	Frankfurt	05.11.-05.11.10
Berlin	14.05.-14.05.10	Munich	<b>E</b> 10.12.-10.12.10
Munich	02.07.-02.07.10	Munich	10.12.-10.12.10
Munich	<b>E</b> 02.07.-02.07.10		
Hamburg	13.08.-13.08.10		

**E** Training in English  
Further English dates on request



## VMware vSphere: Design Best Practices (VDBP)

Only for VMware Partners!

**ID** VM-VDBP **Price** 1.300,00 EUR (excl. VAT) **Duration** 2 Days

### PREREQUISITES

- vSphere 4.0 installation, upgrade, configuration, and system administration knowledge

### COURSE CONTENT

- Design Process
- Current State Analysis
- Design Decisions
- Design Considerations: technical, operational, and organizational factors to consider in the design process

<b>SCHEDULE Germany</b>			
Munich	08.02.-09.02.10	Berlin	12.07.-13.07.10
Hamburg	06.04.-07.04.10	Munich	06.09.-07.09.10
Frankfurt	25.05.-26.05.10	Hamburg	25.10.-26.10.10
		Berlin	13.12.-14.12.10



Book the VMware vSphere: Design Best Practices (VDBP) course together with VMware Capacity Planner (VCAP) and pay our bundle price of only 1.600 EUR!

## VMware Capacity Planner (VCAP)

Only for VMware Partners!

**ID** VM-VCAP **Price** 690,00 EUR (excl. VAT) **Duration** 1 Day

### PREREQUISITES

- Windows and/or UNIX/Linux system administration experience, including network-interface configuration, file permissions, and familiarity with performance-tuning basics on x86-architecture

### COURSE CONTENT

- VMware Capacity Planner Overview
- Collecting Data with Capacity Planner
- Creating Consolidation Scenarios
- Creating Reports
- Managing Users and Access
- Troubleshooting



<b>SCHEDULE Germany</b>			
Munich	10.02.-10.02.10	Berlin	14.07.-14.07.10
Hamburg	08.04.-08.04.10	Munich	08.09.-08.09.10
Frankfurt	27.05.-27.05.10	Hamburg	27.10.-27.10.10
		Berlin	15.12.-15.12.10

## VMware vSphere: Manage Availability (VMA)

**ID** VM-VMA **Price** 690,00 EUR (excl. VAT) **Duration** 1 Day

### PREREQUISITES

- Completion of the VMware vSphere 4: Install, Configure, Manage (VICM) course or the VMware vSphere 4: What's New (VIWN) course, or have prior experience using VMware ESX™/ESXi and vCenter products

SCHEDULE Germany		Hamburg	07.04.10	Hamburg	27.10.10
Munich	10.02.10	Frankfurt	26.05.10	Berlin	15.12.10
Frankfurt	08.03.10	Berlin	14.07.10		
		Munich	08.09.10		

### COURSE CONTENT

- Business Continuity
- Virtual Machine Clustering
- VMware High Availability Clusters
- VMware Fault Tolerance
- VMware vCenter Server Heartbeat

Book the VMware vSphere: Manage Availability (VMA) course together with VMware Site Recovery Manager (VSRM) and pay our bundle price of only 1.600 EUR !

## VMware Site Recovery Manager (VSRM)

**ID** VM-VSRM **Price** 1.300,00 EUR (excl. VAT) **Duration** 2 Days

### PREREQUISITES

- Completion of VMware Infrastructure 3: Install & Configure (VIIC) or equivalent experience with VMware Infrastructure 3
- Basic knowledge of disaster recovery concepts
- Basic knowledge of storage array technology

SCHEDULE Germany		Berlin	15.07.-16.07.10
Munich	11.02.-12.02.10	Munich	09.09.-10.09.10
Frankfurt	09.03.-10.03.10	Hamburg	28.10.-29.10.10
Hamburg	08.04.-09.04.10	Berlin	16.12.-17.12.10
Frankfurt	27.05.-28.05.10		

### COURSE CONTENT

- SRM Overview
- Introduction to Disaster Recovery
- SRM Planning
- SRM Installation
- Array Managers
- Inventory Mappings
- Protection Groups
- Recovery Plans
- SRM Alarms and Site Status
- Troubleshooting
- Failover Testing and Failover
- Failback

## VMware View™: Install, Configure, Manage (VIEW)

**ID** VM-VIEW **Price** 2.100,00 EUR (excl. VAT) **Duration** 3 Days

### PREREQUISITES

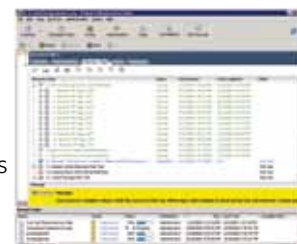
- Experience in Microsoft Windows Active Directory (AD) administration
- Experience with VMware Infrastructure 3

### COURSE CONTENT

- Introduction to VMware View

SCHEDULE Germany		Berlin	20.07.-22.07.10
Munich	16.02.-18.02.10	Munich	14.09.-16.09.10
Hamburg	13.04.-15.04.10	Munich	09.11.-11.11.10
Frankfurt	08.06.-10.06.10	Berlin	14.12.-16.12.10

- VMware View Connection Server
- VMware View Virtual Desktops
- VMware View Client Options
- View Administrator
- Configuring & Managing Linked Clones
- Unified Access
- Virtual Printing
- Managing View Security
- View Manager Performance and Scalability
- VMware ThinApp



Book the VMware View™: Install, Configure, Manage (VIEW) course together with VMware View: Design Best Practices (VVD) and pay our bundle price of only 2.500 EUR !

## VMware View: Design Best Practices (VVD)

Only for VMware Partners!

**ID** VM-VDD **Price** 690,00 EUR (excl. VAT) **Duration** 1 Day

### PREREQUISITES

- Completion of VMware View: Install, Configure, Manage (VIEW) or equivalent experience with VMware View

### COURSE CONTENT

- Design Methodology: Design process; Elements of a View deployment design; Multilayered reference architecture

- Design Considerations: Designing for client access devices; Designing the access infrastructure; Designing the virtual infrastructure; Designing virtual desktops; End-user session management

SCHEDULE Germany		Berlin	23.07.-23.07.10
Munich	19.02.-19.02.10	Munich	17.09.-17.09.10
Hamburg	16.04.-16.04.10	Munich	12.11.-12.11.10
Frankfurt	11.06.-11.06.10	Berlin	17.12.-17.12.10

Fast Lane offers original Symantec training covering storage and server administration, high availability, as well as data and system protection.

## STORAGE FOUNDATION

- Veritas Storage Foundation 5.x for Windows (SFW)
- Veritas Storage Foundation 5.0 MP3 for Solaris (SFS)
- Symantec High Availability Fundamentals with Veritas Storage Foundation 5.1 & Veritas Cluster Server 5.1 for Windows (SFHAW)
- Storage Foundation 5.x for Oracle 10g RAC for Solaris (SFOS)
- Veritas Volume Replicator (Solaris) (VRS)

## BACKUP EXEC

- Symantec Backup Exec 12.x for Windows Servers: Administration (BEWS12)
- Backup Exec System Recovery 8 (BEWSR)

## NETBACKUP

- NetBackup 6.5 for Windows Suite (NBUW)
- NetBackup 6.5 for UNIX Administration (NBUS)
- NetBackup 6.x to 6.5 Differences for Windows (NBWD)
- NetBackup 6.x to 6.5 Differences for Solaris (NBUD)
- NetBackup 6.x Troubleshooting Techniques for Solaris (NBTTSS)
- NetBackup 6.x Troubleshooting Techniques for Windows (NBTTW)
- NetBackup Bare Metal Restore 6.5 (NBBMR)
- NetBackup Pure Disk 6.5 (NBUPD)
- Veritas Backup Reporter 6.5.1 (VBR)

## ENTERPRISE VAULT

- Enterprise Vault 8.x for Exchange: Administration (EVA)
- Enterprise Vault 8.x Compact (EVAK)
- Enterprise Vault 8.0: Troubleshooting and Maintenance (EVTSS)
- Enterprise Vault 8.0 Differences (EVD)

## VERITAS CLUSTER SERVER

- Veritas Cluster Server 5.0 MP3 for Solaris (CSS)
- Veritas Cluster Server 5.x for Windows (CSW)
- Veritas Cluster Server Global Clustering (Solaris) (CSGC)

## CONTACT US.

Feel free to get in touch if you have any questions about our training offerings - we'll be delighted to hear from you. You can reach us any time by calling +49 (0)40 25334610 or sending an e-mail to [info@flane.de](mailto:info@flane.de).



## Planning and rolling out future-oriented Data Center Solutions

We can help you plan and implement future-focused storage and data center solutions with network-enabled, virtualized pools of storage, server, computing, and application resources. And we can qualify the IT personnel who are tasked to handle this technology.

Our consulting services encompass:

- Conducting feasibility studies (ROI analysis, TCO considerations)
- Planning and coordinating invitations to tender
- Consolidating and virtualizing computer centers
- Enabling business continuity / disaster recovery
- Conceptualizing and designing storage solutions (SAN, NAS)
- Selecting components and assisting you in negotiations with vendors
- Supporting and steering the implementation effort
- Providing on-the-job training
- And many more services

### RENT A SPECIALIST

In times when your workforce is stretched thin - during the vacation season, when human resources are devoted to projects, or when you need more peoplepower to introduce new systems – we can help you bridge the gap. Call on us if you need one or several of our specialists to support and operate your data center infrastructures.

### THE GREEN DATA CENTER AT FAST LANE

Benefit from our experience. We understand green concerns and have implemented a virtualized, energy-efficient data center solution for our labs. We:

- Consolidated servers, introduced VMware virtualization technologies, and optimized resource utilization to bring the total number of servers down by 100 units
- Reduced the number of servers by another 100 units in 2009 by deploying Nexus 5000 and Nexus 1000V in combination with NetApp technologies
- Achieved 40% power savings by introducing comprehensive power management capability that automatically switches equipment off when it is not in use
- Tapped the potential of the natural climate, reducing air conditioning 35% by sourcing cool air from outdoors and using temperature generated by the data center for heating purposes

### CONTACT US

To learn more about our consulting services for data center solutions and other specialty fields such as security, unified communications, and wireless, call us on +49 (0)40 25334610 or e-mail us at [info@flane.de](mailto:info@flane.de).



## High-end IT Training and Consulting

We can help your company gain and develop all the technology skills it needs to rise to high-end challenges. After all, technology is the tool and only those who master it can capitalize on its benefits. Our customers and partners rely on us, and for very good reasons.

**Fast Lane provides the IT know-how you need.** Virtualization and data center, voice, video and unified communications, security, wireless networking or optical technologies – whatever specialized insight, skills, and consulting you may need, Fast Lane has the right expert for you.

**Fast Lane is there for you in 50 countries across all continents.** More than 300 Fast Lane employees train and advise major companies in all industries, leading service providers, and government agencies in twelve languages. Serving customers worldwide, Fast Lane head offices are sited in Berlin, Cary/NC, San Jose de Costa Rica, Ljubljana, St. Petersburg, Tokyo and Dubai.

**Fast Lane is one of the leading Cisco Learning Solutions Partners worldwide.** The fastest growing Cisco Learning Solutions Partner (CLSP), Fast Lane offers you the full Cisco training curriculum, from entry-level to specialized high-end courses, in all regions across the globe.

**Fast Lane is the only global NetApp Learning Partner.** An authorized NetApp training partner, Fast Lane offers original NetApp training programs worldwide. NetApp-certified specialists with extensive storage experiences conduct the training.

**Fast Lane is the training provider of choice when it comes to virtualized data center solutions.** As an authorized training partner of Cisco, NetApp, VMware, and Symantec, we get you ready to rise to the challenges of planning and making the most of future-focused data center solutions.

**Fast Lane has developed courses of its own covering all key future technologies.** What's more, our offering comprises many other vendors and organizations' training programs, for example, Brocade, CA, Check Point, Citrix, CompTIA, HP, ITIL, Lotus, LPI, Microsoft, Nokia, Novell, Oracle, PMI, PRINCE2™, Red Hat, RSA Security, SAP, Sun, Symantec, Trend Micro, and VMware.

**Fast Lane gives you access to a lab infrastructure unrivalled worldwide.** Fast Lane customers enjoy the use of training and demo labs for all areas of high-end networking. Equipped with the latest devices and technologies, our high-end labs provide first-rate service and raise the bar for training quality. Our project consultants can access these labs from any location.

**Fast Lane services satisfy the most discerning demands.** A comprehensive evaluation system ensures Fast Lane lives up to the most rigorous quality standards. With professional experience and excellent teaching skills, all our instructors and consultants transfer knowledge efficiently and effectively.

**Fast Lane employees' response is swift and courteous.** Rest assured you will always enjoy friendly, competent service and a quick response to your every request, even at shortest notice. For example, we can deploy troubleshooting experts within a few hours and organize on-site training including a coach, equipment, and course materials within 24 hours.



## NETWORK FOUNDATIONS

Networking & TCP/IP Fundamentals (NWF)  
Troubleshooting TCP/IP (TTCP)  
Routing & Switching (RSW)  
VPN Design & Implementation (VDI)

## PACKET ANALYSIS

Packet Analysis with Wireshark Analyzer (PAE)  
Advanced Packet Analysis with Ethereal/Wireshark (APAE)  
Packet Analysis Power Workshop (PAPW)  
Analysing MS-Windows Networking (AWN)

## CISCO ROUTING & SWITCHING

Interconnecting Cisco Network Devices 1 (ICND1)  
Interconnecting Cisco Network Devices 2 (ICND2)  
Building Scalable Cisco Internetworks (BSCI)  
Building Cisco Multilayer Switched Networks (BCMSN)  
Implementing Secure Converged Wide Area Networks (ISCW)  
Optimizing Converged Cisco Networks (ONT)  
Configuring BGP on Cisco Routers (BGP)  
Implementing Cisco MPLS (MPLS)  
Implementing Cisco MPLS Traffic Engineering (MPLST)  
IPv6 Fundamentals, Design & Deployment (IP6FD)

## CISCO WIRELESS

Implementing Cisco Unified Wireless Networking Essentials (IUWNE)  
Conducting Cisco Unified Wireless Site Survey (CUWSS)  
Implementing Advanced Cisco Unified Wireless Security (IAUWS)  
Implementing Cisco Unified Wireless Voice Networks (IUWVN)  
Implementing Cisco Unified Wireless Mobility Services (IUWMS)  
Cisco Wireless Mesh Networking (CWMN)  
Designing Cisco RF Networks (DRFN)

## SECURITY

Voice Anti-Hacking Workshop (VHACK)  
Anti-Hacking Workshop / White Hat Hacking (HACK)  
WLAN Anti-Hacking Workshop (WHACK)

## CISCO SECURITY

Implementing Cisco IOS Network Security (IINS)  
Securing Networks with Cisco Routers & Switches (SNRS)  
Securing Networks with ASA Fundamentals (SNAF)  
Securing Networks with ASA Advanced (SNAA)  
Implementing Cisco Intrusion Prevention Systems (IPS)  
Designing VPN Security (DVS)  
Implementing Cisco Network Admission Control (NAC)  
Implementing Cisco NAC Appliance (CANAC)  
Implementing Cisco Security Monitoring, Analysis & Response System (MARS)

## CISCO IRONPORT SECURITY

Securing Your Email with IronPort C-Series (SYEPW)  
Securing Your Web with Ironport S-Series (SYW)

## VOICE OVER IP

Telecommunications & VoIP Migration (TMV)  
VoIP for Enterprise & SP Networks (VOIP)

## CISCO VOICE & UNIFIED COMMUNICATIONS

Implementing Cisco IOS Unified Communications (IIUC)  
Implementing Cisco Quality of Service (QOS)  
Cisco Voice over IP (CVOICE)  
Implementing Cisco Unified Communications Manager Part 1 (CIPT1)  
Implementing Cisco Unified Communications Manager Part 2 (CIPT2)  
Troubleshooting Cisco Unified Communications Systems (TUC)

## CISCO BUSINESS VIDEO

TelePresence Installation and Configuration Training (TPICT)  
Digital Media Systems (DMS)  
IP Video Surveillance (IPVS)  
Implementing Cisco Unified MeetingPlace Solutions (IMPS)  
Designing Cisco Unified MeetingPlace Solutions (DMPS)

Fast Lane offers many courses in basic and advanced technologies. On the left is a sample of the technology courses we offer, including a subset of our Cisco courses. Visit our website for more details or contact us to discuss your specific training needs. You can find the contact details of your nearest Fast Lane location on the back cover.



# Course Booking



You can find the contact details of your nearest Fast Lane location on the back cover.

## COMPANY INFORMATION

Company

Last Name

First Name

Job Title

Address

Post Code

Country

Phone

Fax

E-mail

## COURSE TITLE / ID

## DATE / LOCATION

## PRICE (excl. VAT)

## BILLING ADDRESS

Company

Last Name

First Name

Job Title

Address

Post Code

Country

Date

Signature / Company Stamp

## **FAST LANE EUROPE**

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Fax +31 (0)30 6582135  
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info@flane.se / www.flane.com

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