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Learning Solutions

Cisco Advanced Services Education 2009/2010

- Data Center
- Metro Ethernet
- Network Management
- Optical
- Routing
- Switching
- Security
- Service Exchange Framework
- Unified Communications
- Unified Contact Center
- Service Provider Voice
- Wireless LAN

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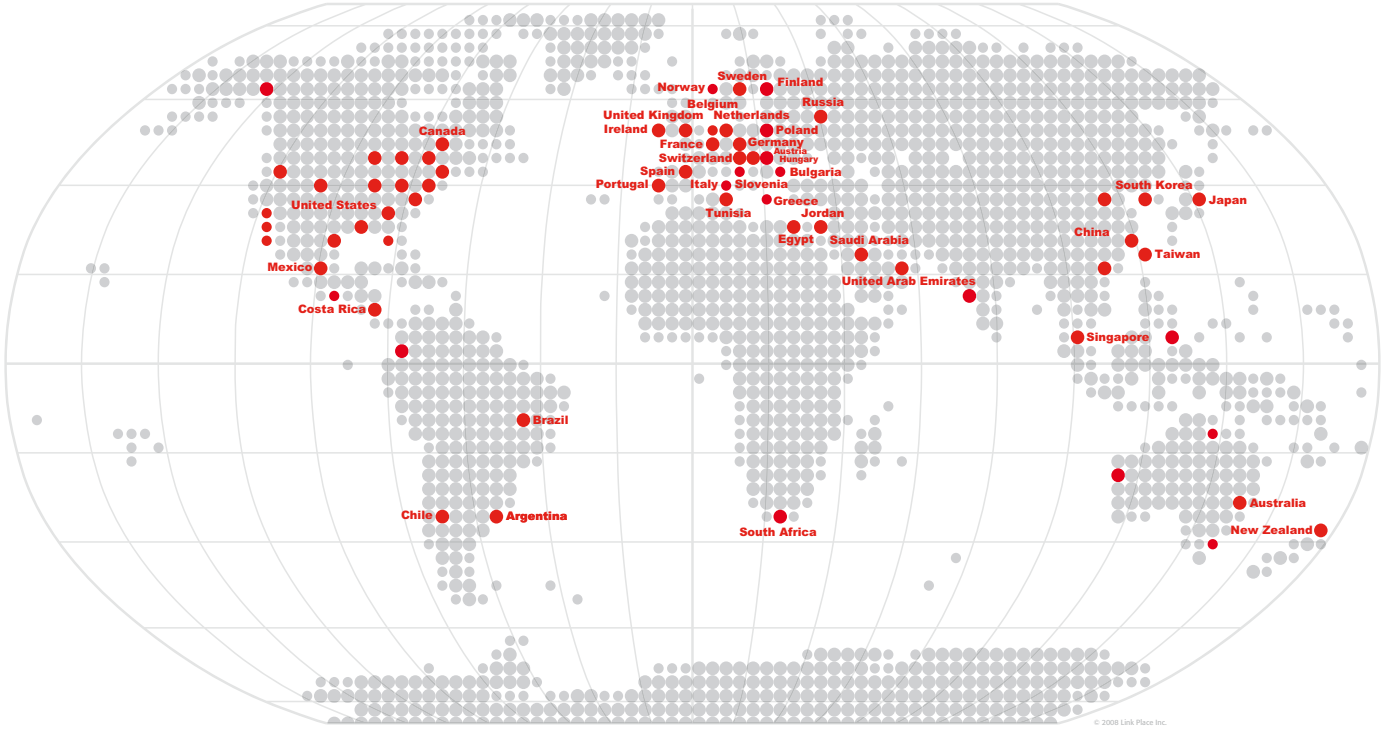
Advanced Services Education

The primary mission of Advanced Services Education (ASE) is to help Cisco customers optimize their network investment, and speed adoption and migration of advanced technologies, by providing customer-oriented skills development solutions.

ASE is uniquely positioned to be a primary training source for Cisco product knowledge and skills. ASE creates and delivers hands-on, instructor-led training for leading-edge Cisco technologies and platforms. In addition, ASE works closely with the Cisco Advanced Services engineers to help ensure that all course offerings are aligned with engineering best practices and recommendations.

As a Cisco Learning Solutions Partner (CLSP) Fast Lane is one of the few companies to have achieved this highest Cisco accreditation. We work closely with Cisco to bring new technology training to their partners and customers. We have partnered with Cisco Advanced Services to offer their broad range of courses on a worldwide basis. For further information please contact your nearest Fast Lane office. Details can be found on the back page.

Fast Lane Training Centers



Contents

Data Center

Building Enterprise Data Center Architectures (EDCA)	4
Implementing Cisco Data Center Network Infrastructure 2 (DCNI-2)	4
Implementing Enterprise Data Center Infrastructure Security (IEDIS)	5

Metro Ethernet

Deploying & Maintaining Carrier Ethernet Services (DMCE)	5

Network Management

Cisco Active Network Abstraction (CANA)	6
Cisco Secure Access Control Server (CS-ACS)	6
Cisco Unified Operations Manager & Service Monitor (CUOM-SM)	6
Cisco Unified Provisioning Manager (CUPM)	6

Optical

ONS 15454 MSTP Rel. 8.5 Basic (MSTP BASIC)	7
ONS 15454 MSTP Rel. 8.5 Implementing Data over DWDM (MSTP DATA)	7
ONS 15454 MSTP Rel. 8.5 Advanced (MSTP ADVANCED)	7

Routing & Switching

Cisco IOS XR Software Fundamentals for Network Operations (XRFUND)	8
Cisco IOS XR IPV4 Routing (XIPV4R)	8
Cisco XR 12000 Series Essentials (XR12K)	9
Deploy, Maintain, and Troubleshoot Cisco IOS XR Software (IOSXR)	9
Cisco CRS-1 Essentials (CRS1)	10
Cisco 10000 Series Essentials (C10K)	10
Implementing Broadband Aggregation on Cisco Routers (BBAGG)	10
ASR 1000 Essentials (ASR1K)	11
Cisco ASR 9000 Aggregation Services Router Series Essentials (ASR9K)	11
Cisco 7600 Series Essentials (ASISR)	11
Building Core Networks with OSPF, IS-IS, BGP, and MPLS (BCN)	12
Advanced Implementing and Troubleshooting MPLS VPN Networks (AMPLS)	12
Integrating IPv6 in Service Provider and Enterprise Networks (IP6AD)	12

Security

Building Enhanced Cisco Security Networks (BECSN)	13

Service Exchange Framework

Service Control Application for Broadband Training (SCA-BB)	14
Service Control Application Solution Deployment (SCA-D)	14

Unified Communications

Cisco Unified Communications Manager 7.0 (CMBC7)	15
Cisco Unified Application Environment Developer Essentials (CUAE)	15

Unified Contact Center

Cisco IPCC Enterprise PPDIOO Workshop (PPDIOO)	16
Customized Reporting for ICM and IPCC (IPCAR)	16
Cisco IPCC Advanced Scripting (IPCAS)	16

Service Provider Voice

Cisco BTS 10200 Essentials (BTSE1, BTSE2)	17
Cisco IP Transfer Point (ITP)	17

Wireless LAN

Cisco Unified Wireless Network for Data and Voice (CUWN-DVW)	18

All Advanced Services courses are delivered in English.

Data Center

Cisco Advanced Services Education (ASE) offers hands-on, solutions-based training for building and securing data centers. The courses highlight products such as Cisco Catalyst 6500 Series Switches, Cisco Application Control Engine (ACE), Cisco Intrusion Detection System (IDS), Firewall Services Modules, Cisco MDS SAN switches, Cisco Security Monitoring, Analysis, and Response System (MARS), and Cisco Guard and Detector DDoS appliances. Through solutions-oriented training, students can build and secure a data center from end-to-end using the Cisco Service-Oriented Network Architecture (SONA) framework.

Building Enterprise Data Center Architectures (EDCA)

ID CI-EDCA **Duration** 5 days **Price** (excl. VAT) 2,990.- €

COURSE CONTENT

- Enterprise Data Center Architecture Overview
- Implementing the Cisco Catalyst 6500 Content Services Module in Routed Mode
- Implementing the Cisco Catalyst 6500 SSL Service Module for SSL Offloading
- Implementing the Cisco Catalyst 6500 Application Control Engine in Routed Mode
- Implementing the Cisco Catalyst 6500 Firewall Services Module in Transparent Mode
- Implementing Data Center Redundancy
- Implementing Active/Active Data Center Redundancy
- Implementing the Cisco Catalyst 6500 Application Control Engine in Bridged Mode
- Implementing the Cisco Catalyst 6500 Application Control Engine in One-Armed Mode
- Enterprise Data Center Storage Overview
- Data Center Interconnectivity Using SONET
- Implementing Storage Networking Protocols – FCIP
- Implementing Storage Networking Protocols - iSCSI

Schedule **EUROPE** Germany Frankfurt 01.02.-05.02.10 UK London 16.11.-20.11.09, London 05.07.-09.07.10 **AMERICAS** USA Irving 05.10.-09.10.09, Research Triangle Park 19.10.-23.10.09, Herndon 09.11.-13.11.09, San Jose 14.12.-18.12.09 **LATIN** Brazil São Paulo 22.03.-26.03.10 Mexico México City 12.10.-16.10.09, México City 21.06.-25.06.10 **ASIA PACIFIC** Japan Tokyo 07.12.-11.12.09 Singapore Singapore 07.12.-11.12.09, Singapore 17.05.-21.05.10 **RUSSIA/CIS** Russia Moscow 19.04.-23.04.10 **MIDDLE EAST** UAE Dubai 30.11.-04.12.09, Dubai 06.06.-10.06.10

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

ID CI-DCNI2 **Duration** 5 days **Price** (excl. VAT) 2,990.- €

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 and NX-OS Layer 2 Protocols and Features; Cisco Nexus 7000 and NX-OS Layer 3 Protocols and Features; Cisco Nexus 7000 and Cisco NX-OS Quality of Service; Cisco Nexus 7000 and Cisco NX-OS Security; Troubleshooting
- Using the Cisco Nexus 5000 and 2000 in Data Center Networks: Overview of the Cisco Nexus 5000 and 2000; Understanding Fibre Channel; Implementing an FCoE Network Using Cisco Nexus 5000 Switches

Schedule **EUROPE** Belgium Brussels 30.11.-04.12.09 Denmark Copenhagen 26.10.-29.10.09 France Paris 12.10.-15.10.09 Germany Frankfurt 19.10.-23.10.09, Hamburg 09.11.-13.11.09, Munich 16.11.-20.11.09, Hamburg 07.12.-11.12.09, Frankfurt 26.04.-30.04.10, Hamburg 28.06.-02.07.10, Hamburg 27.09.-01.10.10 Italy Milano 23.11.-26.11.09 Netherlands Utrecht 02.11.-06.11.09 Norway Oslo 30.11.-03.12.09 Poland Warsaw 07.12.-10.12.09 Serbia Belgrade 07.12.-10.12.09, Slovenia Ljubljana 09.11.-12.11.09 Spain Barcelona 13.10.-16.10.09, Madrid 15.12.-18.12.09 Sweden Stockholm 05.10.-08.10.09, Stockholm 30.11.-03.12.09 Switzerland Zurich 17.11.-20.11.09, Zurich 18.01.-22.01.10, Zurich 08.03.-12.03.10, Zurich 14.06.-18.06.10 UK London 09.11.-13.11.09, London 16.11.-19.11.09 **AMERICAS** USA Richardson 26.10.-30.10.09 **ASIA PACIFIC** Japan Tokyo 24.11.-27.11.09 **RUSSIA/CIS** Russia Moscow 16.11.-20.11.09 **LATIN** Argentina Buenos Aires 09.11.-12.11.09 Brazil São Paulo 07.12.-10.12.09 Chile Santiago 26.10.-29.10.09 Colombia Bogotá 30.11.-03.12.09 Mexico México City 12.10.-15.10.09

Implementing Enterprise Data Center Infrastructure Security (IEDIS)

ID CI-IEDIS **Duration** 5 days **Price** (excl. VAT) 2,990.- □

COURSE CONTENT

- Data Center Security Overview
- Cisco Nexus Architecture Overview and Setup
- CoPP for the Cisco Nexus 7000
- Layer 2 Network Security
- Layer 3 Network Security
- Deploying the Cisco ASA in an Enterprise Data Center
- Configuring IPS Services for the Data Center Using the Cisco ASA
- Securing Data Center DNS Using the Cisco ASA and AIP-SSM
- Managing Network Security Threats Using Cisco Security MARS
- Integrating Cisco Security Manager into the Data Center

Schedule EUROPE UK London 02.11.-06.11.09

Metro Ethernet

The Deploying and Maintaining Carrier Ethernet Services course gives students the knowledge and skills required to configure, administer, and deploy Layer 2 Ethernet services as defined by the Metro Ethernet Forum (MEF) on a service provider or large enterprise Multiprotocol Label Switching (MPLS)–enabled network. Students learn how to configure customer premises equipment (CPE) to connect to the MPLS network and configure the access, aggregation, distribution, and core portions of the service provider or large enterprise network to provide the Layer 2 Ethernet services. Students also learn how to secure the network to protect it from attack. Labs are designed to reinforce what is discussed in the lecture.

Deploying & Maintaining Carrier Ethernet Services (DMCE)

ID CI-DMCE **Duration** 5 days **Price** (excl. VAT) 2,990.- □

COURSE CONTENT

- Overview of Carrier Ethernet Services and the Cisco Carrier Ethernet System
- Building a Network Core
- Building an Access Network
- Point-to-Point Ethernet virtual connection (EVC): E-Line Service
- Multipoint-to-Multipoint EVC: E-LAN Service
- Scaling and Extending Ethernet Services
- Increasing the Availability of Ethernet Services
- Securing a Carrier Ethernet Network
- Deploying QoS in a Carrier Ethernet Network
- Managing Services in a Carrier Ethernet Network

Schedule EUROPE Germany Frankfurt 26.04.-30.04.10 UK London 26.10.-30.10.09, London 15.02.-19.02.10 **AMERICAS** USA Research Triangle Park 09.11.-13.11.09, Boxborough 16.11.-20.11.09 **ASIA PACIFIC** Japan Tokyo 19.10.-23.10.09 Singapore Singapore 02.11.-06.11.09 **LATIN** Brazil São Paulo 15.03.-19.03.10 **MIDDLE EAST** UAE Dubai 13.12.-17.12.09

Network Management

Cisco Advanced Services Education (ASE) network management courses focus on a variety of platforms including Active Network Abstraction (ANA), Cisco Secure Access Control Server (ACS), and Unified Communications platforms, such as Cisco Unified Operations Manager and Cisco Unified Provisioning Manager.

Cisco Active Network Abstraction (CANA)

ID CI-CANA **Duration** 4 days **Price** (excl. VAT) 2,990.- ☐

COURSE CONTENT

- Cisco ANA Installation
- Getting Started: Cisco ANA GUI; Initial System Configuration; User Accounts and Scopes; Global ANA Setting; High Availability
- Visualizing the Network: Topology Maps; Inventory Management; Service Path Trace
- Fault Management: ANA Fault Management Overview; Troubleshooting Perspective
- Configuration Archive: Getting Started with Configuration Archive; Managing Device Configuration Files
- Network Element Image Management (NEIM): Getting Started with NEIM; Deploying Software Images; Cisco IOS® XR Software Package Management
- Customization: Cisco ANA Soft Properties and Alarm Thresholds; Cisco ANA Command Builder; Cisco ANA Workflow Engine
- Cisco ANA Postdeployment: System Maintenance; System Troubleshooting

Schedule **AMERICAS** USA San Jose 17.11.-20.11.09, Herndon 08.12.-11.12.09 **ASIA PACIFIC** Australia Sydney 30.11.-03.12.09

Cisco Secure Access Control Server (CS-ACS)

ID CI-CS-ACS **Duration** 2 days **Price** (excl. VAT) 1,400.- ☐

COURSE CONTENT

- Introduction: Access Control in the Network; AAA Concepts/ Technology; Cisco Secure ACS/ACS View Product Overviews
- Getting Started: ACS Server Installation and Initial Configuration; ACS View Installation and Initial Configuration
- Network Access Scenarios: Remote VPN Access Scenarios; Wired/Wireless 802.1x Scenario
- Device Administration Scenarios: Securing Device Administration using Network Access Restrictions (NAR); Securing Device Administration Using Privilege Levels and CLI View; Securing Device Administration Using Command Authorization Sets
- Other Deployment Topics: Scalability and Performance; Database Replication

Schedule **EUROPE** Germany Frankfurt 25.02.-26.02.10 UK London 17.11.-18.11.09, London 15.04.-16.04.10 **AMERICAS** USA San Jose 06.10.-07.10.09, Research Triangle Park 20.10.-21.10.09 **LATIN** Brazil São Paulo 01.10.-02.10.09 Mexico México City 18.03.-19.03.10 **ASIA PACIFIC** Singapore Singapore 10.12.-11.12.09 **RUSSIA/CIS** Russia Moscow 30.10.-31.10.09, Moscow 10.06.-11.06.10

Cisco Unified Provisioning Manager (CUPM)

ID CI-CUPM **Duration** 2 days **Price** (excl. VAT) 1,400.- ☐

COURSE CONTENT

- Introduction: Overview of Unified Communications; Provisioning Unified Communications; Cisco UPM Overview
- Using Cisco UPM: Getting Started; Setup Deployment; Order Subscribe Services; Policy Management; Inventory Management; Provisioning the Network
- System Administration: Planning for Deployment; Preparing for Deployment; System Maintenance

Schedule **EUROPE** Germany Frankfurt 15.12.-16.12.09, Frankfurt 25.05.-26.05.10 UK London 13.10.-14.10.09, London 23.03.-24.03.10 **AMERICAS** USA Richardson 26.10.-30.10.09 **ASIA PACIFIC** Singapore Singapore 19.11.-20.11.09 **MIDDLE EAST** UAE Dubai 22.04.-23.04.10 **RUSSIA/CIS** Russia Moscow 16.02.-17.02.10, Moscow 27.07.-28.07.10 **LATIN** Brazil São Paulo 06.05.-07.05.10 Mexico México City 01.10.-02.10.09

Cisco Unified Operations Manager & Service Monitor (CUOM-SM)

ID CI-CUOM-SM **Duration** 2 days **Price** (excl. VAT) 1,400.- ☐

COURSE CONTENT

- Introduction: What Is Unified Communications?; Managing Unified Communications; Cisco Unified Communications Management Suite
- Using Cisco Unified Operations Manager and Service Monitor: Getting Started; Device Management; Monitoring Dashboards; Diagnostic Tests; Reports; Monitoring Call Quality; Notification Services; Fine Tuning of Polling and Threshold Settings
- System Administration; Planning for Deployment; Preparing Devices and Services; Advanced Security Topics; Server Administration

Schedule **EUROPE** Germany Frankfurt 17.12.-18.12.09, Frankfurt 27.05.-28.05.10 UK London 15.10.-16.10.09, London 25.03.-26.03.10 **AMERICAS** USA Research Triangle Park 20.10.-21.10.09 **ASIA PACIFIC** Singapore Singapore 19.11.-20.11.09 **MIDDLE EAST** UAE Dubai 20.04.-21.04.10 **RUSSIA/CIS** Russia Moscow 18.02.-19.02.10, Moscow 29.07.-30.07.10 **LATIN** Brazil São Paulo 04.05.-05.05.10

Cisco Advanced Services Education offers courses that highlight the various applications and implementations supported by the Cisco ONS 15454. This includes courses on the SONET multiservice provisioning platform (MSPP) and multiservice transport platform (MSTP) for dense wavelength-division multiplexing (DWDM). These courses include hands-on lab exercises and are designed for individuals who install, deploy, and maintain the Cisco ONS 15454 in these various environments.

ONS 15454 MSTP Rel. 8.5 Basic (MSTP BASIC)

ID CI-MSTPBASIC **Duration** 4 days **Price** (excl. VAT) 2,100.- €

COURSE CONTENT

- Cisco ONS 15454 MSTP System Overview
- Fiber Optics Review
- DWDM Fundamentals
- Cisco ONS 15454 MSTP Hardware Installation
- Node Types and Topologies
- Cisco Transport Planner
- Cisco Transport Controller
- Alarms, Monitoring, and Operations
- Multishelf
- Building a Ring Configuration

Schedule **EUROPE** Germany Frankfurt 17.11.-20.11.09, Frankfurt 23.02.-26.02.10, Frankfurt 18.05.-21.05.10 Italy Monza 16.11.-19.11.09, Monza 15.12.-18.12.09, Monza 23.03.-26.03.10, Monza 22.06.-25.06.10 UK London 20.10.-23.10.09, London 20.04.-23.04.10, London 27.07.-30.07.10 **LATIN** Brazil São Paulo 06.07.-09.07.10 Mexico México City 09.02.-12.02.10 **ASIA PACIFIC** Singapore Singapore 16.03.-19.03.10 **MIDDLE EAST** UAE Dubai 09.11.-12.11.09

ONS 15454 MSTP Rel. 8.5 Implementing Data over DWDM (MSTP DATA)

ID CI-MSTPDATA **Duration** 4 days **Price** (excl. VAT) 2,100.- €

COURSE CONTENT

- Cisco ONS 15454 Product Overview
- Safety
- Cisco ONS 15454 MSTP Data Card Overview
- G.709 Encapsulation
- 2.5G Transponders & Encapsulation Options
- GFP G.7041
- 2.5G & 10G DME Cards & Encapsulation Options
- Ethernet and VLANs
- 10GE-XP and GE-XP Cards, Settings, and Circuits Layer 1
- Crossponder Gigabit Ethernet Y-Cable Protection
- QoS
- XP Cards Protected Ring, Class of Service (CoS), and QoS
- ADM-10G Installation and Settings
- ADM-10G Circuits for Data

Schedule **EUROPE** Germany Frankfurt 24.11.-27.11.09, Frankfurt 02.03.-05.03.10, Frankfurt 25.05.-28.05.10 Italy Monza 23.11.-26.11.09, Monza 01.12.-04.12.09, Monza 30.03.-02.04.10, Monza 29.06.-02.07.10 UK London 27.10.-30.10.09, London 27.04.-30.04.10, London 03.08.-06.08.10 **AMERICAS** USA Herndon/Reston, VA 19.10.-22.10.09 **LATIN** Brazil São Paulo 06.10.-09.10.09, São Paulo 13.07.-16.07.10 Mexico México City 16.02.-19.02.10 **ASIA PACIFIC** Singapore Singapore 13.04.-16.04.10 **MIDDLE EAST** UAE Dubai 14.12.-17.12.09

ONS 15454 MSTP Rel. 8.5 Advanced (MSTP ADVANCED)

ID CI-MSTPADVANCED **Duration** 4 days **Price** (excl. VAT) 2,600.- €

COURSE CONTENT

- Cisco ONS 15454 MSTP System Overview
- Cisco Transport Controller Operations
- Safety
- MSTP Rings
- Internal Patchcords & Provisionable Patchcords
- 10 Gigabit Transponders and Muxponders
- ADM-10G "MSPP on a Blade"
- Manual Multiring
- 40-Channel Ring
- Mesh Networks

Schedule **EUROPE** Germany Frankfurt 08.12.-11.12.09, Frankfurt 09.03.-12.03.10, Frankfurt 08.06.-11.06.10 Italy Monza 05.10.-08.10.09, Monza 12.01.-15.01.10, Monza 06.04.-09.04.10, Monza 06.07.-09.07.10 UK London 03.11.-06.11.09, London 11.05.-14.05.10, London 10.08.-13.08.10 **AMERICAS** USA Minneapolis 05.10.-08.10.09 **LATIN** Brazil São Paulo 13.10.-16.10.09, São Paulo 20.07.-23.07.10, Mexico México City 23.02.-26.02.10 **ASIA PACIFIC** Singapore Singapore 25.05.-28.05.10 **MIDDLE EAST** UAE Dubai 01.02.-04.02.10

Routing & Switching

ASE offers skills based training on routing and switching technologies and on leading edge service provider platforms. Courses focus on deploying and optimizing large networks using technologies such as: IS-IS, OSPF, BGP, MPLS VPNs, MPLS TE, QoS, IPv6, and more. Product courses span from the Cisco 7600, the Cisco CRS-1 System, the Cisco XR12000 Series Router, to Cisco's newest service provider platform, the ASR1000.

Cisco IOS XR Software Fundamentals for Network Operations (XRFUND)

ID CI-XRFUND **Duration** 4 days **Price** (excl. VAT) 3,690.- □

COURSE CONTENT

- Overview of Hardware Platforms Supporting Cisco IOS XR Software
- Cisco IOS XR Software Overview
- Cisco IOS XR Software Configuration Basics
- SDRs
- Cisco IOS XR Software Installation
- Cisco IOS XR Software Security
- Cisco IOS XR Software Operations
- Cisco IOS XR Software Routing Protocols
- Routing Policy Language
- Multicast
- MPLS

Schedule **EUROPE** Germany Frankfurt 13.10.-16.10.09, Frankfurt 26.01.-29.01.10, Frankfurt 20.07.-23.07.10 UK London 25.05.-28.05.10 **AMERICAS** USA San Jose 27.10.-30.10.09, San Jose 02.11.-05.11.09 **LATIN** Mexico México City 09.02.-12.02.10 **ASIA PACIFIC** Singapore Singapore 20.10.-23.10.09 **MIDDLE EAST** UAE Dubai 23.11.-26.11.09, Dubai 26.04.-29.04.10 **RUSSIA/CIS** Russia Moscow 23.03.-26.03.10, Moscow 22.06.-25.06.10

Cisco IOS XR IPV4 Routing (XIPV4R)

ID CI-XIPV4R **Duration** 4 days **Price** (excl. VAT) 3,690.- □

COURSE CONTENT

- IPv4 Routing Architecture and Infrastructure
- Routing Policy Language
- IS-IS Routing in the Core
- OSPF Routing in the Core
- BGP Routing Through the Core

Schedule **EUROPE** Germany Frankfurt 16.03.-19.03.10 UK London 11.05.-14.05.10 **AMERICAS** USA Research Triangle Park 06.10.-09.10.09, San Jose 17.11.-20.11.09 **LATIN** Brazil São Paulo 09.02.-12.02.10 **ASIA PACIFIC** Japan Tokyo 02.11.-06.11.09 Singapore Singapore 19.01.-22.01.10 **MIDDLE EAST** UAE Dubai 18.10.-21.10.09 **RUSSIA/CIS** Russia Moscow 17.11.-20.11.09, Moscow 20.07.-23.07.10

Cisco XR 12000 Series Essentials (XR12K)

ID CI-XR12K **Duration** 5 days **Price** (excl. VAT) 3,690.- €

COURSE CONTENT

- Cisco XR 12000 Series Hardware
- Cisco XR 12000 Series Common Elements
- Cisco IOS Software to Cisco IOS XR Software Upgrade
- Cisco IOS XR Software Overview
- Cisco IOS XR Software Basics
- Secure Domain Routers
- Cisco IOS XR Software Installation
- Cisco IOS XR Software Security
- Cisco IOS XR Software Operations
- Cisco IOS XR Software Routing Protocols
- MPLS
- Layer 3 VPNs
- Multicast Routing
- Routing Policy Language
- Cisco IOS Software to Cisco IOS XR Software Configuration Conversion and Unique Commands
- Cisco XR 12000 Series Router Data Flow and Modular QoS Command line interface

Schedule **EUROPE** Germany Frankfurt 12.10.-16.10.09, Frankfurt 23.11.-27.11.09, Frankfurt 12.04.-16.04.10, Frankfurt 12.07.-16.07.10 UK London 26.10.-30.10.09, London 02.11.-06.11.09, London 14.06.-18.06.10 **AMERICAS** USA San Jose 09.11.-13.11.09, Research Triangle Park 07.12.-11.12.09 **LATIN** Mexico México City 14.12.-18.12.09, México City 24.05.-28.05.10 **ASIA PACIFIC** Japan Tokyo 02.11.-06.11.09 Singapore Singapore 11.01.-15.01.10 **MIDDLE EAST** UAE Dubai 02.05.-06.05.10 **RUSSIA/CIS** Russia Moscow 16.11.-20.11.09, Moscow 01.02.-05.02.10

Deploy, Maintain & Troubleshoot Cisco IOS XR Software on the Cisco CRS & Cisco XR 12000 Router (IOSXR)

ID CI-IOSXR **Duration** 5 days **Price** (excl. VAT) 3,690.- €

COURSE CONTENT

- Introduction to Deploy, Maintain, and Troubleshoot Cisco IOS XR Software on the Cisco CRS-1 and Cisco XR 12000
- Monitor the Cisco IOS XR Software Operating System
- Manage Cisco IOS XR Software Configurations
- Network Expansion Case Study
- Troubleshoot Traffic Flow on the Cisco CRS-1
- Cisco IOS XR Software Emergency Recovery Procedures
- Troubleshoot Cisco XR 12000 Traffic Flow
- Troubleshoot Packet Forwarding on Cisco IOS XR Software
- Deploy and Verify QoS on the Cisco CRS-1

Schedule **EUROPE** Germany Frankfurt 07.12.-11.12.09, Frankfurt 12.04.-16.04.10 UK Reading 05.10.-09.10.09, London 02.11.-06.11.09, London 01.02.-05.02.10, London 12.07.-16.07.10 **AMERICAS** USA San Jose 19.10.-23.10.09, Boxborough 16.11.-20.11.09 Canada Toronto 09.11.-13.11.09 **LATIN** Brazil São Paulo 01.03.-05.03.10 Mexico México City 24.05.-28.05.10 **ASIA PACIFIC** Japan Tokyo 14.12.-18.12.09 Singapore Singapore 23.11.-27.11.09, Singapore 30.11.-04.12.09 Thailand Bangkok 26.10.-30.10.09 **MIDDLE EAST** UAE Dubai 14.02.-18.02.10 **RUSSIA/CIS** Russia Moscow 05.10.-09.10.09, Moscow 29.03.-02.04.10, Moscow 21.06.-25.06.10

Cisco CRS-1 Essentials (CRS1)

ID CI-CRS1 **Duration** 5 days **Price** (excl. VAT) 3,690.- □

COURSE CONTENT

- Introduction to Cisco CRS-1 Carrier Routing Systems
- Cisco CRS-1 Chassis Hardware
- Cisco CRS-1 Line Card Chassis Common Elements
- Introduction to Cisco CRS-1 Multishelf Architecture
- Cisco IOS XR Software Overview and Basics
- Secure Domain Routers
- Cisco IOS XR Software Installation, Security, and Operations
- Routing Protocols
- Route Policy Language
- Multicast Routing
- MPLS; MPLS Layer 3 VPNs
- Cisco CRS-1 Data Flow and Modular QoS Command-Line Interface
- Troubleshooting Cisco CRS-1 Carrier Routing Systems

Schedule **EUROPE** Germany Frankfurt 07.12.-11.12.09, Frankfurt 01.02.-05.02.10, Frankfurt 17.05.-21.05.10 Norway Oslo 02.11.-06.11.09 UK London 26.10.-30.10.09, London 08.03.-12.03.10, London 21.06.-25.06.10 **AMERICAS** USA Herndon 12.10.-16.10.09, San Jose 16.11.-20.11.09 **LATIN** Brazil São Paulo 19.10.-23.10.09, São Paulo 12.04.-16.04.10 Mexico México City 18.01.-22.01.10, México City 07.06.-11.06.10 **ASIA PACIFIC** Japan Tokyo 09.11.-13.11.09 Malaysia Kuala Lumpur 30.11.-04.12.09 Singapore Singapore 09.11.-13.11.09, Singapore 03.05.-07.05.10 Thailand Bangkok 19.10.-23.10.09 **MIDDLE EAST** UAE Dubai 04.07.-08.07.10 **RUSSIA/CIS** Russia Moscow 30.11.-04.12.09

Cisco 10000 Series Essentials (C10K)

ID CI-C10K **Duration** 4 days **Price** (excl. VAT) 2,100.- □

COURSE CONTENT

- Cisco 10000 Series Introduction
- Hardware and Software Overview
- Line Cards and Basic Interface Configuration
- System Architecture
- High Availability
- Quality of Service
- MPLS and LDP Technology Overview
- MPLS VPN Overview

Schedule **EUROPE** Germany Frankfurt 08.02.-11.02.10, Frankfurt 21.06.-24.06.10 UK London 01.12.-04.12.09, London 19.04.-22.04.10 **AMERICAS** USA Herndon 12.10.-16.10.09, San Jose 16.11.-20.11.09 **LATIN** Brazil São Paulo 09.11.-12.11.09 Mexico México City 11.05.-14.05.10 **ASIA PACIFIC** Japan Tokyo 06.10.-09.10.09 Singapore Singapore 01.03.-04.03.10 **MIDDLE EAST** UAE Dubai 30.05.-02.06.10

Implementing Broadband Aggregation on Cisco Routers (BBAGG)

ID CI-BBAGG **Duration** 4 days **Price** (excl. VAT) 2,100.- □

COURSE CONTENT

- Broadband Aggregation Architectures Overview
- RBE and RFC 1483 Routing
- Point-to-Point Protocol over ATM (PPPoA)
- Point-to-Point Protocol over Ethernet (PPPoE)
- Cisco Aggregation Optimization Features
- AAA Services
- Layer 2 Tunneling Protocol (L2TP)

Schedule **EUROPE** Germany Frankfurt 19.10.-22.10.09 UK London 10.11.-13.11.09, London 04.05.-07.05.10 **LATIN** Brazil São Paulo 09.03.-12.03.10 Mexico México City 06.10.-09.10.09 **ASIA PACIFIC** Japan Tokyo 13.10.-16.10.09 Singapore Singapore 19.04.-22.04.10 **MIDDLE EAST** UAE Dubai 23.11.-26.11.09 **RUSSIA/CIS** Russia Moscow 09.02.-12.02.10

ASR 1000 Essentials (ASR1K)

ID CI-ASR1K **Duration** 4 days **Price** (excl. VAT) 2,990.- €

COURSE CONTENT

- Cisco ASR 1000 System Introduction
- Cisco ASR 1000 Hardware Architecture
- Cisco ASR 1000 Software Architecture
- Cisco ASR 1000 High Availability
- Cisco ASR 1000 In-Service Software Upgrade
- Quality of Service
- Multicast Services
- Security Services

Schedule EUROPE Germany Frankfurt 29.09.-02.10.09

Cisco ASR 9000 Aggregation Services Router Series Essentials (ASR9K)

ID CI-ASR9K **Duration** 5 Days **Price** (excl. VAT) 3,690.- €

COURSE CONTENT

- Introduction to the Cisco ASR 9000 Aggregation Series
- Cisco ASR 9000 Hardware
- Cisco IOS XR Software Overview
- Cisco IOS XR Software Basics
- Cisco IOS XR Software Software Installation
- Cisco IOS XR Software Security
- Cisco IOS XR Software Operations
- Cisco IOS XR Routing Protocols
- Cisco IOS XR MPLS
- Cisco ASR 9000 Layer 2 Architecture
- Cisco ASR 9000 Point-to-Point Layer 2 Services
- Cisco ASR 9000 Multipoint Layer 2 Services
- Cisco ASR 9000 Layer 2 Multicast
- Layer 3 VPN
- Layer 3 Multicast
- Cisco ASR 9000 QoS

Schedule EUROPE UK London 26.10.-30.10.09 **AMERICAS** USA Research Triangle Park 19.10.-23.10.09

Cisco 7600 Series Essentials (ASISR)

ID CI-ASISR **Duration** 5 days **Price** (excl. VAT) 2,990.- €

COURSE CONTENT

- Cisco 7600 Series Router System Overview
- Cisco 7600 Series Router Hardware Overview
- Detailed Supervisor Engine Architecture
- Packet Flows in the Cisco 7600 Series
- High Availability
- Cisco 7600 Series Router QoS
- MPLS on Cisco 7600 Series Routers
- Layer 2 EoMPLS and VPLS VPNs on Cisco 7600 Series Routers

Schedule EUROPE Germany Frankfurt 23.11.-27.11.09, Frankfurt 15.03.-19.03.10, Frankfurt 19.07.-23.07.10 UK London 05.10.-09.10.09, London 09.11.-13.11.09, London 18.01.-22.01.10, London 24.05.-28.05.10 **AMERICAS** USA San Jose 05.10.-09.10.09, Research Triangle Park 26.10.-30.10.09 **LATIN** Brazil São Paulo 09.11.-13.11.09, São Paulo 10.05.-14.05.10 Mexico México City 22.02.-26.02.10, México City 05.07.-09.07.10 **ASIA PACIFIC** Singapore Singapore 26.04.-30.04.10 **MIDDLE EAST** UAE Dubai 06.12.-10.12.09

Also available in Virtual Classroom Format

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

ID CI-BCN **Duration** 5 days **Price** (excl. VAT) 2,990.- □

COURSE CONTENT

- Get Started with Core Networking
- Implement Link State Protocols (OSPF and IS-IS)
- Implement BGP
- BGP Scaling Techniques
- Implement BGP Policy Control
- Implement and Troubleshoot MPLS
- Implement Intranet and Extranet MPLS VPNs
- Implement MPLS Traffic Engineering
- Implement Layer 2 VPNs with AToM

Schedule **EUROPE** Germany Frankfurt 26.10.-30.10.09, Frankfurt 07.12.-11.12.09, Frankfurt 17.05.-21.05.10 UK London 12.10.-16.10.09, London 01.03.-05.03.10 **AMERICAS** USA Irving 05.10.-09.10.09, San Jose 12.10.-16.10.09, Irving 02.11.-06.11.09, Research Triangle Park 09.11.-13.11.09, San Jose 07.12.-11.12.09 **LATIN** Brazil São Paulo 01.02.-05.02.10 **ASIA PACIFIC** Japan Tokyo 16.11.-20.11.09 Singapore Singapore 12.03.-16.03.10 **MIDDLE EAST** UAE Dubai 04.10.-08.10.09 **RUSSIA/CIS** Russia Moscow 19.04.-23.04.10 **AFRICA** South Africa Johannesburg 16.11.-20.11.09

Also available in Virtual Classroom Format

Advanced Implementing and Troubleshooting MPLS VPN Networks (AMPLS)

ID CI-AMPLS **Duration** 5 days **Price** (excl. VAT) 2,990.- □

COURSE CONTENT

- Implementing and Troubleshooting MPLS
- Implementing Intranet and Extranet MPLS VPNs
- Scaling MPLS VPN Networks
- Implementing Inter-AS MPLS VPNs
- Troubleshooting MPLS VPNs
- Implementing Inter-AS Carrier Supporting Carrier (CsC)
- Internet Access in MPLS VPN Networks

Schedule **EUROPE** Germany Frankfurt 22.02.-26.02.10 Netherlands Amsterdam 19.10.-23.10.09 UK London 09.11.-13.11.09, London 17.05.-21.05.10 **AMERICAS** USA Research Triangle Park 05.10.-09.10.09, San Jose 09.11.-13.11.09 **LATIN** Brazil São Paulo 05.04.-09.04.10 Mexico México City 05.10.-09.10.09 **ASIA PACIFIC** Australia Sydney 26.10.-30.10.09 Japan Tokyo 30.11.-04.12.09 Singapore Singapore 19.10.-23.10.09 **MIDDLE EAST** UAE Dubai 24.01.-28.01.10 **RUSSIA/CIS** Russia Moscow 05.07.-09.07.10

Integrating IPv6 in Service Provider and Enterprise Networks (IP6AD)

ID CI-IP6AD **Duration** 5 days **Price** (excl. VAT) 2,990.- □

COURSE CONTENT

- Fundamentals of IPv6 (Addressing, Enabling IPv6 on Cisco IOS Software)
- IPv6 and Routing (RIPng, OSPF, IS-IS, EIGRP, BGP)
- IPv6 Integration Technologies (ISATAP, 6to4, MPLS, NAT-PT)
- Securing IPv6-Enabled Networks
- IPv6 Advanced Services (Mobility, Multicast, and Network Management)
- Deploying IPv6 in an Enterprise Network (Branch, Campus)
- Deploying IPv6 in a Service Provider Network (Dual Stack, MPLS)

Schedule **EUROPE** Germany Frankfurt 16.11.-20.11.09, Frankfurt 12.07.-16.07.10 UK London 10.05.-14.05.10 **LATIN** Mexico México City 15.02.-19.02.10 **ASIA PACIFIC** Singapore Singapore 15.03.-19.03.10 **MIDDLE EAST** UAE Dubai 25.10.-29.10.09 **RUSSIA/CIS** Russia Moscow 25.01.-29.01.10

The Building Enhanced Cisco Security Networks course is an end-to-end solutions course that focuses on securing access to the enterprise network, and on securing the data that flows through it. Students who attend the course will configure and verify operation of many security features and functions available in Cisco's leading edge security platforms, including: Cisco Secure PIX, Cisco ASA 5500 Series Adaptive Security Appliances (ASAs), and Cisco Catalyst 6500 Series Firewall Services Modules (FWSMs). The end-to-end solutions approach allows students to have hands-on practice with a variety of Cisco security products, as well as exposure to product interactions, for a comprehensive security solution.

Building Enhanced Cisco Security Networks (BECSN)

ID CI-BECSN **Duration** 5 days **Price** (excl. VAT) 2,990.-

COURSE CONTENT

- Network Security Overview
- Layer 2 Network Security
- Layer 3 Network Security
- Cisco Firewalls for Enterprise Networks
- NAC for Enterprise Networks
- IPsec and NAT Coexistence for IOS Routers and Cisco Firewalls
- DMVPN
- Deploying SSL VPNs Using ASDM with the Cisco ASA
- Managing Network Threats with Cisco IPS and Cisco Security MARS

Schedule **EUROPE** Germany Frankfurt 07.12.-11.12.09, Frankfurt 17.05.-21.05.10 UK London 09.11.-13.11.09, London 25.01.-29.01.10, London 19.07.-23.07.10 **AMERICAS** USA Herndon 05.10.-09.10.09, Research Triangle Park 12.10.-16.10.09, San Jose 26.10.-30.10.09, Anchorage 30.11.-04.12.09, Research Triangle Park 14.12.-18.12.09 **LATIN** Mexico México City 22.02.-26.02.10 **ASIA PACIFIC** Japan Tokyo 16.11.-20.11.09 Singapore Singapore 22.03.-26.03.10 **MIDDLE EAST** UAE Dubai 15.11.-19.11.09 **RUSSIA/CIS** Russia Moscow 19.10.-23.10.09, Moscow 07.06.-11.06.10

Service Exchange Framework

These courses prepare you to install, configure, and operate the Cisco Service Control Application for Broadband components, including the Cisco Service Control Engine (SCE), Service Control Application for Broadband Console, Collection Manager, Service Control Application Reporter, and Subscriber Manager.

Also available in Virtual Classroom Format

Service Control Application for Broadband Training (SCA-BB)

ID CI-SCA-BB **Duration** 4 days **Price** (excl. VAT) 2,990.- €

COURSE CONTENT

- Overview and Defining a Site
- Global Bandwidth Control and Filters
- Reports
- Anonymous Mode
- Subscriber-Aware Mode
- Subscriber Manager Using Push or Pull Mode
- Architecture Considerations
- Integration with RADIUS and DHCP
- Committed Information Rate (CIR) and Peak Information Rate (PIR)
- Assurance Level
- Relative Priority
- Extra Bandwidth Controllers
- Service Controls (Kbytes and Queue Settings)
- Quota (Bandwidth and Sessions)
- Time-Based Bandwidth Management
- Classification Services with Flavors and Zones
- Multiple Bandwidth Control Scenarios
- Collecting Data and Generating Reports
- Security Issues
- New Protocol Signature Creation

Schedule **EUROPE** Germany Frankfurt 02.03.-05.03.10 UK London 24.11.-27.11.09, London 22.06.-25.06.10 **AMERICAS** USA San Jose 05.10.-08.10.09, Research Triangle Park 03.11.-06.11.09 **LATIN** Brazil São Paulo 03.11.-06.11.09 Mexico México City 08.06.-11.06.10 **ASIA PACIFIC** Japan Tokyo 06.10.-09.10.09, Tokyo 24.11.-27.11.09 Singapore Singapore 24.11.-27.11.09, Singapore 27.04.-30.04.10 **MIDDLE EAST** UAE Dubai 08.02.-11.02.10, Dubai 26.05.-29.05.10 **RUSSIA/CIS** Russia Moscow 06.10.-09.10.09, Moscow 19.01.-22.01.10, Moscow 13.04.-16.04.10, Moscow 13.07.-16.07.10

Service Control Application Solution Deployment (SCA-D)

ID CI-SCA-D **Duration** 5 days **Price** (excl. VAT) 2,990.- €

COURSE CONTENT

- SCA-BB Solution and Architecture Review
- SCA-BB Component Installations
- Service Control Scenarios
- Subscriber Manager/External Quota Manager
- Integration with RADIUS and DHCP
- Solution Design
- Virtual Links
- MGSCP Topology

Schedule **EUROPE** Germany Frankfurt 05.07.-09.07.10 UK London 26.10.-30.10.09, London 19.04.-23.04.10 **AMERICAS** USA San Jose 05.10.-08.10.09, Research Triangle Park 03.11.-06.11.09 **LATIN** Brazil São Paulo 31.05.-04.06.10 Mexico México City 08.06.-11.06.10 **ASIA PACIFIC** Japan Tokyo 30.11.-04.12.09 Singapore Singapore 23.11.-27.11.09 **MIDDLE EAST** UAE Dubai 21.03.-25.03.10 **RUSSIA/CIS** Russia Moscow 25.01.-29.01.10, Moscow 28.06.-02.07.10 **AFRICA** South Africa Johannesburg 09.11.-13.11.09

These courses focus on key Unified Communications (CallManager) platform topics, including configuration, operation, and troubleshooting. They are written for data networking professionals who need to integrate Unified Communications into their enterprise networks.

Cisco Unified Communications Manager 7.0 (CMBC7)

ID CI-CMBC7 **Duration** 5 days **Price** (excl. VAT) 2,990.- □

COURSE CONTENT

- Configuring Cisco Unified Communications Manager
  - Examining Cisco Unified Communications Solutions
  - Installing, Upgrading, Backing-Up, and Restoring Cisco Unified Communications Manager
  - Configuring Unified Communications Manager System-Wide Functions
  - Provisioning Cisco IP Phones and User Features
- Gateways
  - Understanding Gateways
  - Implementing Analog Voice Gateways with SCCP
  - Implementing MGCP Gateways
  - Implementing H.323 Gateways
- Dial Plans and Advanced Call Routing
  - Understanding and Implementing Dial Plans
  - Implementing Intercluster Trunks and Gatekeepers
  - Implementing Class of Service
  - Implementing Call Admission Control
  - Implementing Survivable Remote Site Telephony
- Media Resources and Advanced Unified Communications
  - Understanding and Implementing Media Resources
  - Configuring Advanced User Features and Administration
- Managing and Troubleshooting Unified Communications
  - Troubleshooting Cisco Unified Communications Manager
  - Implementing Call Detail Records

Schedule **EUROPE** Germany Frankfurt 19.10.-23.10.09, Frankfurt 12.07.-16.07.10 UK London 15.02.-19.02.10 **AMERICAS** USA San Jose 26.10.-30.10.09 **LATIN** Brazil São Paulo 31.05.-04.06.10 Mexico México City 31.05.-04.06.10 **ASIA PACIFIC** Singapore Singapore 03.05.-07.05.10 **MIDDLE EAST** UAE Dubai 24.01.-28.01.10 **RUSSIA/CIS** Russia Moscow 09.11.-13.11.09, Moscow 12.04.-16.04.10

Cisco Unified Application Environment Developer Essentials (CUAE)

ID CI-CUAE **Duration** 3 days **Price** (excl. VAT) 2,390.- □

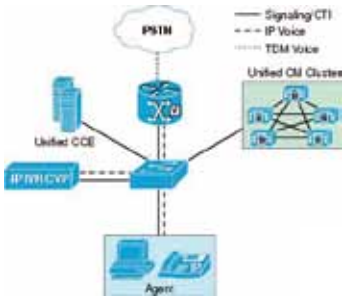
COURSE CONTENT

- Cisco Unified Application Environment Overview
- Platform Architecture
- Understanding the Application Runtime
- Platform Administration
- Developing Applications
- Examples of Applications

Schedule On request

Unified Contact Center

These advanced courses focus on the Cisco Unified Contact Center platform. The courses assume that individuals already have working experience with Unified Contact Center, but need training on planning for a deployment, customizing reports, or creating advanced scripts.



Cisco IPCC Enterprise PPDIOO Workshop (PPDIOO)

ID CI-PPDIOO **Duration** 5 days **Price** (excl. VAT) 2,990.- □

COURSE CONTENT

- IPCC Technical Review
- IPCC Engagement Process and PPDIOO Methodology
- Case Study
- Prepare and Plan: Customer Requirements
- Design and Implement
- Operate and Optimize
- Troubleshooting

Schedule EUROPE UK London 16.11.-20.11.09 **AMERICAS** USA Research Triangle Park 02.11.-06.11.09, Boxborough 14.12.-18.12.09 **ASIA PACIFIC** Japan Tokyo 19.10.-23.10.09 Thailand Bangkok 12.10.-16.10.09

Customized Reporting for ICM and IPCC (IPCAR)

ID CI-IPCAR **Duration** 3 days **Price** (excl. VAT) 1,400.- □

COURSE CONTENT

- Introduction to the Reporting Interface (WebView)
- Call Flows and Data Generation
- Template Formatting
- Installing and Modifying WebView Templates
- Database Tools
- Basic SQL
- Designing and Building Templates from Scratch
- Agent Detail Records
- Cisco Unified ICM Detail Call Data
- Fulfilling custom requirements

Schedule EUROPE UK London 08.12.-09.12.09, London 10.12.-11.12.09 **AMERICAS** USA Boxborough 06.10.-07.10.09, Boxborough 08.10.-09.10.09, Research Triangle Park12.01.-13.01.10, Research Triangle Park 14.01.-15.01.10 **ASIA PACIFIC** Japan Tokyo 26.10.-28.10.09

Cisco IPCC Advanced Scripting (IPCAS)

ID CI-IPCAS **Duration** 2 days **Price** (excl. VAT) 1,400.- □

COURSE CONTENT

- Script Editor Interface
- Basic Scripting Overview
- Routing Logic
- Business Rules Development
- Formula Editor, Built-In Functions, Custom Functions
- Database Routing
- Advanced Features

Schedule EUROPE UK London 08.12.-09.12.09, London 10.12.-11.12.09 **AMERICAS** USA Boxborough 06.10.-07.10.09, Boxborough 08.10.-09.10.09, Research Triangle Park12.01.-13.01.10, Research Triangle Park 14.01.-15.01.10, **ASIA PACIFIC** Japan Tokyo 29.10.-30.10.09

Cisco Advanced Services Education offers a series of courses that focus on the Cable Voice and Multimedia Communications Solution, which enables IP voice in a service provider environment. The flagship courses focus on the implementation and operation of the BTS 10200 Softswitch, which provides call-control intelligence for establishing, maintaining, routing, and terminating voice calls. Courses on the Cisco IP Transfer Point and MGX 8000 Series Carrier Voice Gateway provide in-depth training on the individual components used with the BTS 10200.

Cisco BTS 10200 Essentials I (BTSE1)

ID CI-BTSE1 **Duration** 5 days **Price** (excl. VAT) 2,990.- €

COURSE CONTENT

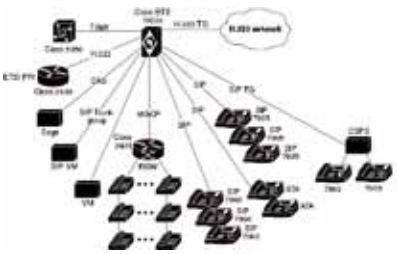
- Broadband Local Integrated Services Solutions Introduction
- Cisco BTS 10200 Softswitch System Overview
- Cisco BTS 10200 Application Management
- System Management
- Softswitch Provisioning Tools
- Initial System Provisioning
- Cisco IAD Subscriber Provisioning
- PacketCable eMTA Subscriber Provisioning
- SIP IP Phone Subscriber Provisioning
- Applying Subscriber Services
- Centrex and Multiline Hunt Group Provisioning
- Translations and Routing
- Network Management
- Troubleshooting Tools and Techniques

Schedule **EUROPE** Germany Frankfurt 02.11.-06.11.09 UK London 14.06.-18.06.10 **AMERICAS** USA Richardson 02.11.-06.11.09 **LATIN** Brazil São Paulo 05.10.-09.10.09 Mexico México City 22.03.-26.03.10 **ASIA PACIFIC** Singapore Singapore 23.11.-27.11.09 **MIDDLE EAST** UAE Dubai 14.02.-18.02.10 **RUSSIA/CIS** Russia Moscow 12.04.-16.04.10

Cisco BTS 10200 Essentials II (BTSE2)

ID CI-BTSE2 **Duration** 5 days **Price** (excl. VAT) 2,990.- €

COURSE CONTENT



- Cisco Broadband Local Integrated Services Solution and Cisco BTS System Review
- MGCP
- SIP
- Translations and Trunking
- Announcement Server Provisioning
- SS7/SIGTRAN Signaling and ITP Provisioning
- Provisioning Trunking Gateways
- Cisco MGX 8000 Series (VISM) Trunking Gateways
- Translations and Dial Plans
- Off-Net Troubleshooting

Schedule **EUROPE** Germany Frankfurt 25.01.-29.01.10, Frankfurt 17.05.-21.05.10 **AMERICAS** USA Richardson 16.11.-20.11.09 **LATIN** Mexico México City 26.04.-30.04.10 **ASIA PACIFIC** Singapore Singapore 30.11.-04.12.09 **MIDDLE EAST** UAE Dubai 14.03.-18.03.10 **RUSSIA/CIS** Russia Moscow 26.10.-30.10.09, Moscow 22.02.-26.02.10

Cisco IP Transfer Point (ITP)

ID CI-ITP **Duration** 4 days **Price** (excl. VAT) 2,390.- €

COURSE CONTENT

- Cisco ITP Generic Overview
- Cisco IOS® Software Basics
- SS7 Overview
- SS7 over IP Features and Functions
- MTP3 User Adaptation layer (M3UA) and SCCP User Adaptation layer (SUA)
- High-Speed Signaling (HSL) Links
- Global Title Translation
- ITP Multi-Instances
- Gateway Screening
- Multilayer Routing
- Designing an ITP Network
- Mobile Number Portability (MNP) and Application Routing Director (ARD)
- ITP Maintenance, Monitoring, and Troubleshooting

Schedule **EUROPE** Germany Frankfurt 27.10.-30.10.09, Frankfurt 24.11.-27.11.09, Frankfurt 04.05.-07.05.10 France Paris 12.10.-15.10.09 Spain Madrid 13.10.-16.10.09 UK London 02.02.-05.02.10, London 13.07.-16.07.10 **LATIN** Argentina Buenos Aires 30.11.-03.12.09 Brazil São Paulo 26.10.-29.10.09 Chile Santiago 09.11.-12.11.09 Colombia Bogotá 05.10.-08.10.09 Mexico México City 12.10.-15.10.09, México City 09.03.-12.03.10 **ASIA PACIFIC** Australia Sydney 10.11.-13.11.09 Singapore Singapore 01.04.-04.04.10 **MIDDLE EAST** UAE Dubai 14.12.-17.12.09 **RUSSIA/CIS** Russia Moscow 10.11.-13.11.09, Moscow 20.04.-23.04.10

Wireless LAN

The Cisco Unified Wireless Network for Data and Voice course provides knowledge and hands-on experience for students in wireless technology for networks containing data and voice. Students will learn about the technology and configurations required for creating a wireless network for data and voice including creating a wireless network using Cisco lightweight access points, Cisco 4402 Wireless LAN Controller (WLC), Cisco Unified Wireless IP Phone 7921G, and Cisco Wireless Control System (WCS).

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

ID CI-CUWN-DVW **Duration** 5 days **Price** (excl. VAT) 2,990.- □

COURSE CONTENT

- Cisco Unified Wireless Network
- Wireless Radio Fundamentals
- WLAN Standards and Working Groups
- Ad-Hoc Networks
- Autonomous Networks
- Converting a Cisco Aironet 1200 Access Point to Lightweight
- WLCs
- Lightweight Access Point Protocol (LWAPP)
- Radio Resource Management (RRM)
- WLAN for Voice and Data
- Security for Wireless
- QoS for Voice
- Voice Networks and Cisco Unified Wireless IP Phone 7921G Configuration
- Mobility
- WCS
- Site Survey
- Controller Deployment Designs
- H-REAP
- Guest Access

Schedule **EUROPE** Germany Frankfurt 19.10.-23.10.09, Frankfurt 26.04.-30.04.10, UK London 01.02.-05.02.10, London 12.07.-16.07.10 **AMERICAS** USA Boxborough 02.11.-06.11.09, Herndon 16.11.-20.11.09 **LATIN** Mexico México City 24.05.-28.05.10 **ASIA PACIFIC** Japan Tokyo 19.10.-23.10.09 Singapore Singapore 18.01.-22.01.10 **MIDDLE EAST** UAE Dubai 13.06.-17.06.10 **RUSSIA/CIS** Russia Moscow 09.11.-13.11.09, Moscow 20.04.-23.04.10

About Fast Lane

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 400 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, Check Point, Citrix, 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.

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