

▶ Polycom Learning
Centres EMEA

Course Catalogue 2009



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Welcome

Welcome to the 2009 Authorised Learning Centre catalogue.

Polycom offer a comprehensive training portfolio and are pleased to introduce the latest technical training courses for our Wireless voice products and our new CMA architecture to assist you in gaining the maximum benefit from your investment in Polycom technology.

Training is one of the most important tools available to ensure that you understand how to use and manage the technology you have purchased and will assist you in being more comfortable adopting and expanding the use of new technology.

Polycom is the proud sponsor of the Industry level certification – Certified Video Engineer (CVE) course – this industry generic course has been recently revised to include the latest ITU standards, increased detail on IP packet based networks including SIP, and the newest details on Audio and video technologies including High Definition interfaces to ensure you are trained on the latest information. Independent certification is available through Prometrics testing centres.

Polycom's product related courses feature a blend of lecture and hands on exercises, a combination that will maximise your overall learning experience. During these classes you gain valuable technical knowledge and skills that will improve productivity, increase utilisation of your video conferencing equipment, and speed problem resolution.

Polycom offer classroom training in Slough, UK; Munich, Germany; Paris, France; and Horsens, Denmark. On-site training is available on request.



Course administration

General information

Polycom Instructors

Our instructors are experienced in course development and course delivery in the areas of data communications, telecommunications, and networking. Additionally, instructors are kept abreast of the latest technologies in the industry, as well as new product functions/capabilities, and service topics, through direct contact with engineering and service professionals.

Prerequisites

Course prerequisites are listed with each course description. The student is responsible for ensuring that they meet all of the prerequisites, either by classroom learning, or from on the job training, before attending courses at Polycom.

Supported Products

Polycom Learning Centre supports two revisions of products, the current version and the previous release.

Manuals

Students are responsible for returning home with training manuals and/or handout materials that are obtained in the class; books are not sent out to students ahead of the scheduled training course, with the exception of on-site and over video trainings. Polycom will not be held responsible for shipping documentation to students. Students participating in an over video class will receive manuals from Polycom approximately 2-3 business days prior to the scheduled training session.

Classroom-Based Training

Classes are held at our Polycom office locations in the UK, France, Germany and Denmark, and are scheduled on a regular basis. Class sizes may vary based on material covered and location.

On-Site Training

Many of the courses offered from our standard training schedule can be delivered at the customers own site by special arrangement. The customer is responsible for ensuring a proper classroom environment and adequate equipment. For further information on these or any other course please call our sales team on +44 (0)1753 723083 or email emeaservicesales@polycom.com.

Electronic Recording/Distribution

Audio and video, or any other electronic recording of training courses or course materials is strictly prohibited.

Course registration

To register for a class held at a Polycom location please contact +44 (0)1753 723083 or emeaservicesales@polycom.com

Course Schedule

The latest course schedule is available online at: <http://www.polycom.com/emeatraining>

Payment

A purchase order for the full tuition amount of the class must be received prior to attending the course. Confirmations will be sent to the student upon receipt of the purchase order. Prices are subject to change with 30 days notice. Payment by Purchase order only.*

* IMPORTANT NOTE: Individuals are encouraged to wait for a class confirmation prior to making their travel arrangements.

Cancellation**: Customer request for course cancellation must be received by Polycom at least 10 business days prior to scheduled commencement date in order for the customer to receive a full refund or credit of the course fee. Polycom reserves the right to cancel any training course due to insufficient enrolment by providing notice to customers at least 10 business days prior to scheduled commencement date.

** Students that no-show will be charged for the full cost of the class for which they were registered.

Satisfaction Guarantee

At Polycom, we stand behind the quality of our training. If you are not satisfied with the course for which you have paid, Polycom will give you credit toward another course of comparable price.

Polycom Learning Centre Training Credit Packs

What are Polycom Learning Credits?

A Great Solution! Offered by the Polycom Learning Centre, Polycom Learning Credits are pre-paid training packs that offer the unrivaled ability to purchase, redeem and manage Polycom authorised training at any classroom location in EMEA. Learning Credits empower you to optimise your Polycom product investment.

Learning Credits may be added to your purchase order when ordering other Polycom services and products or purchased separately. Each Polycom Learning Centre Credit pack (sold in packs of 10, 15, and 25 days) pays for high-quality training, is valid for one year, and enables you to:

- Secure training budget upfront and prepay in the form of credits at time of product purchase or separately
- Streamline administrative processes by utilizing single budget and purchase order
- Develop a customised and flexible training plan while working with the Polycom Learning Centre team
- Easily track and manage ongoing employee development
- Save money, offered at a significant discount from individual class purchases

Why train?

Training increases the technical competencies of your staff, enabling them to more effectively manage and operate your investment in a collaborative communication solution... Getting you and your staff the training needed at the right time will increase productivity, reduce the cost of ownership, and help drive the adoption of new technologies providing you a competitive edge.

Training needs assessment

When your company goals are straightforward, it may be easy to establish a training plan, however most organisations have needs that are more complex. Assessing those needs and determining the appropriate training plan requires skill and experience. That is where the Polycom Learning Centre can help.

Contact a member of our team today to help you to develop a training plan for your team, by calling 44 (0)1753 723083 or emailing emeaservicesales@polycom.com

How to purchase Polycom Learning Credits

Each Polycom Learning Credit pays for high-quality classroom training and are valid for one year. Polycom Learning Credits are listed on the Polycom Global Product and Services price list and may be ordered along with Polycom services and products or as a standalone item.

List Price: £3,520/€4,513/\$6,320
Part No. 4864-07010-005
Credits for 10 Days of Training at PLCM public classes

List Price: £5,142/€6,592/\$9,230
Part No. 4864-07015-005
Credits for 15 Days of Training at PLCM public classes

List Price: £8,337/€10,688/\$14,965
Part No: 4864-07025-005
Credits for 25 Days of Training at PLCM public classes

How to redeem Polycom Learning Credits

Customers can redeem Polycom Learning Credits when booking a training course, ensure you reference your original purchase order number when using the credits. You may choose from any of our many classroom-based programs offered.



VIDEOCONFERENCING

Course:	Certified Videoconference Engineer (CVE)
Ref:	CS-CVE-CC-UK
Duration:	5 days
Fee:	£1853 / €2375 / \$3325 per person

Course description

The instructor-led 5-day Certified Videoconferencing Engineer (CVE) course is an intensive, focused, preparation tool that maps to the four major areas of the CVE Core Examination, i.e., Audio, Video, Networks and Standards. It presents a comprehensive review of the core technologies for videoconferencing planning, implementation and support, and helps to prepare individuals for the CVE Core Examination.

N.B. The exam is administered and scheduled through authorised Prometric testing centres worldwide, and is not included in the course.

This program covers topics involving the videoconferencing industry, and does not present material strictly related to any one vendors' product line.

Course outline

LAN Technologies

- Introduction
- Models of Communication
- Ethernet / Token Ring / Frame Relay / ATM
- Bridges, Switches and Routers
- IP/TCP/UDP

WAN Technologies

- Introduction to Telephony
- Analogue and Digital Telephony
- Multiplexing
- Interfaces (V.35, RS449, X.21, RS530)
- ISDN Signalling
- PRI/BRI

Sound and Audio

- Properties of Sound
- Measuring Sound (Decibels)
- Gain
- Microphone selection
- Acoustics
- Echo Cancellation
- G.711, G.722, G.722.1, G.723, G.728

Image and Video

- Image Capture
- Video Signal Types
- Lighting
- H.261, H.263, H.264

Videoconference Standards

- Standards Overview
- T.120, H.224
- H.320
- H.221, H.230, H.231, H.242, H.243, H.233, H.281, H.239
- H.323
- H.225, H.245

Intended audience

- Videoconferencing sales engineers
- Technical support engineers
- Technical trainers and industry consultants providing videoconferencing planning, implementation and support

Prerequisite skills and knowledge

The 5-day CVE course is intensive and it is advisable that delegates have prior knowledge and experience in as many of the areas covered as possible.

Polycom recommends the following preliminary course:

- CS-VOIP-TS01-UK – Voice and Video over IP

On Site Tuition

All courses can be delivered at customer premises by special request. Please contact emeaservicesales@polycom.com for further details.

Fees and registration

Fees quoted are for training at Polycom sites. For information about training courses available at your own site, course schedules or to book this course, please contact emeaservicesales@polycom.com
Call: +44 (0)1753 723083
Fax: +44 (0)1753 733014

Cancellation

Within 10 business days prior to class is subject to full tuition fees.



TECHNICAL TRAINING

Course:	VSX Product Family Technical Training
Ref:	4864-27007-001
Duration:	2 days
Fee:	£741 / €950 / \$1330 per person

Course description

In this 2-day instructor-led course delegates will learn how to install, configure and operate the products of the Polycom VSX family (V500, V700, VSX3000, VSX5000, VSX6000, VSX7000, VSX8000).

This course will cover all areas of functionality of these video endpoints including the use of dual streams, multipoint calls and, web control and streaming.

Delegates will learn how to configure VSX products to operate within an enterprise network, and how to diagnose connectivity issues.

Course outline

Overview

VSX Product Line Overview
Component Specifications
Supported Network Options
Supported Audio and Video Compression Protocols
Supported Peripherals and their Specifications

Installation

Product comparison
Cables and connectors
Hardware Installation

Initial Configuration

Upgrading software
Out-of-Box Set-up Wizard

Operation

Remote Control Overview
Camera Control and Presets
PIP Operation and display functions
Content Sharing
Multipoint Calling
Directory

System Configuration

General Settings
Customising the workspace
Network Configuration Menus
Firewall issues
Audio/Video Configuration
Security and Limiting User Access

Troubleshooting and Maintenance

Remote Management
Diagnostics Tools
Troubleshooting

Intended audience

Videoconference Support/Field Service engineers and administrators who are responsible for the procurement, installation and/or support of Polycom VSX endpoint systems.

Prerequisite skills and knowledge

- Prior involvement in a videoconference call
- Basic understanding of data networks
- Familiarity with electronic equipment

On Site Tuition

All courses can be delivered at customer premises by special request. Please contact emeaservicesales@polycom.com for further details.

Fees and registration

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Cancellation

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TECHNICAL TRAINING

Course:	HDX™ Technical Maintenance Training
Ref:	4864-27005-001
Duration:	2 days
Fee:	£741 / €950 / \$1330 per person

Course description

This technical course is delivered through interactive lecture and hands-on exercises and builds the knowledge and skills that Support Technicians/Engineers and System Administrators need to successfully install, configure, operate, troubleshoot and maintain any system within the HDX product line.

Course outline

I. The magic of video conferencing

- The role of the codec
- Encoding and Decoding
- Audio Compression Protocols and Features
- Video Compression Protocols and Features
- Other ITU-T supported protocols

II. High Definition Primer

- High Definition defined
- Video Resolutions
- Interlaced vs. Progressive
- Aspect Ratios
- HD video conferencing Requirements
- Ultimate HD

III. Polycom HDX Product Line

- HDX Product Line Comparison
- Technical specifications – HDX 4000/7000/8000/9000 models
- HDX Options and Bundles

IV. H.320, H.323 and SIP Networking

- H.320 Networks
- H.320 Interfaces and Supported Bandwidths
- H.323 Networks
- H.323 and SIP Supported Bandwidths

V. HDX Video Inputs and Outputs

- Video Input and Output Devices and Cables
- Video Input and Output Connections and Configurations
- Video Subsystem and Matrix

VI. HDX Standard and Optional Hardware and Features

- HDX Remote Control
- People+ Content/IP
- People On Content
- Multipoint Plus Conferencing
- Transcoding
- Encryption

VII. Installation

- Cables and Connections
- Out of Box Set Up Wizard
- Component Tweaking
- Administrative Menus
- User Setting Menus

VIII. Operation

- Place, Receive and End Point-to-Point and Multipoint Calls
- Near and Far-End Camera Controls and Presets
- Audio Controls
- Video Switching

IX. Maintenance

- Diagnostic Menus
- System Information Menus
- Remote Management
- Software Updates
- Troubleshooting Logs
- Factory Restore and USB Recovery

Intended audience

Videoconference Support Technicians/Engineers and System Administrators who are responsible for installing and supporting the HDX4000, HDX8000, and HDX9000 series product line.

Prerequisite skills and knowledge

Familiarity with H.320 and H.323 Videoconferencing

On Site Tuition

All courses can be delivered at customer premises by special request. Please contact emeaservicesales@polycom.com for further details.

Fees and registration

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Cancellation

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TECHNICAL TRAINING	
Course:	RMX 1000 Technical Maintenance
Ref:	TRAINING
Duration:	3 days
Fee:	£1112 / €1425 / \$1995 per person

Course description

The RMX 1000 Technical Maintenance course is a hands-on program covering system installation, integration, configuration, maintenance, and all operations of RMX1000. The curriculum is delivered in a combination of lecture and networking hands-on laboratory exercises. (Listed in item IV).

Course outline

I. Introduction and Overview Multipoint

- Elements of RMX 1000 video conference
- Elements of H.323 Standards
- Functions and features of RMX 1000

II. Web terminal RMX interface basics

- Network Interfaces and Port usage for TCP/UDP
- RMX 1000 Protocols and Ports Used
- RMX Workplace
- PC Requirements Hardware Platform for Terminal

III. Installation and Configuration

- Identify Processing Units and properties
- Identify Network Interface Services
- RMX 1000 details of Install and RMX Interfaces

IV. Install and Configure Network Interfaces, Troubleshooting (Lab Exercises)

- Lab 1 – Setup LAN interface
- Lab 2 – IP / H.323 / SIP Configurations
- Lab 3 – Building Address book and Meeting Database
- Lab 4 – Using Polycom Conference Manager
- Lab 5 – Cascade MCUs
- Exercise Create, Edit and Configure all Types of

RMX 1000 Audio, Video, and Content Conferences during the above listed Lab Configurations

V. Define and Conduct Labs

- Address Book Site Records and parameters
- Setup Predefined Dial-In vs. Dial-Out for all Labs
- Create and Manage Conference Profiles
- Define Videoconference Troubleshooting Properties
- Audio/Video/Content/Data Conferences
- Control / Verify Sites with RMX Desktop
- Auto Add or Meet Me Sites
- Meeting Rooms and Meet Me Services

VI. Dial In and using Polycom Conference Manager(PCM)

- Creating New Conference Feature
- Password ID vs. Personal Code
- Joining Existing Conferences
- Starting Ad Hoc from the PCM

VII. RMX 1000 Log Functions

- Reading the CDR log
- Reading the Resources Report
- Reading the Alert Windows
- Collect Trace files on a Videoconference

- Faults Log and Major Vs. Minor Alarms
- Understanding Alarms and Faults

VIII. Cascading

- What is Cascading?
- Launch Cascading
- Simple and H243 Cascading
- Manage a Cascading Videoconference
- Cascading Content

IX.MCU Fine Tuning and Help Docs

- System Configuration Flags
- Administration Menu Items
- Setup Menu Items and Help
- RMX Time

X.RMX 1000 Capabilities

- H.323 Link Status
- Conference Statistics
- Describe the Caps exchange process
- Connections Statistics
- Highest Common
- Content Management
- System Alerts

XI.LEDs, Card and Power Supply Status

- Chassis Indicators
- Power Supply Indicators

XII.Troubleshooting

- Reset MCU Vs. Reset Modules
- Voltage Status
- Temperature Status
- SNMP and MIBs

Intended audience

Videoconference Support Technicians/ Engineers and System Administrators – all days required.

Prerequisite skills and knowledge

- Prior participation in a multipoint call
- Familiarity with electronic equipment
- Knowledge of details for Networks and Windows
- H.323 / H.225 / H.245 standards

On Site Tuition

All courses can be delivered at customer premises by special request. Please contact emeaservicesales@polycom.com for further details.

Fees and registration

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Cancellation

Within 10 business days prior to class is subject to full tuition fees.



TECHNICAL TRAINING

Course:	RMX 2000 Technical Training
Ref:	4864-20001-001
Duration:	3 days
Fee:	£1112 / €1425 / \$1995

Course description

The RMX Technical Maintenance and ReadiManager Integration course is a hands-on program covering system installation, integration, configuration, maintenance, and operations of RMX. The curriculum is delivered in a combination of lecture and hands-on lab exercises. Through hands-on exercises you will learn how to:

- Install and configure RMX hardware and software integrated with ReadiManager for database and scheduling
- Perform network labs to integrate RMX with IP domain networking along with live Gatekeeper
- Install/configure Microsoft.NET™ for Management
- Ad hoc videoconferencing monitor/control
- Build real customer configurations
- Troubleshoot connectivity problems; capture, read fault logs and traces for conference diagnostics and status information
- Perform upgrades, backups and system restore

Important note: This course does not include SE200 ReadiManager installation, VTC monitoring and soft-updating, Gatekeeper modes and resource management.

Course Outline

Introduction and Overview

- Elements of a RMX Videoconference
- Elements of H.320 & H.323 Standards
- Functions and features of RMX

Web terminal RMX interface basics

- What is MS NET
- Network Interfaces and Port usage for TCP/UDP
- RMX Workplace
- PC Requirements Hardware Platform for Terminal

Installation and Configuration

- Identify MPM Module Units and properties
- Identify Network Interface Services
- RMX details of Install and RMX Interfaces

RMX Status LEDs

- MPM and control card indicators
- GIG Internal Switch Interfaces
- External Ethernet connections details

Shelf Management Interfaces

- Configurations
- Access Functions

Set-up COM Port for Serial MGC Manager Install, Configure Network Interfaces, Troubleshooting

- Lab 1 – Setup LAN Management Port and use access
- Lab 2 – IP / H.323 / SIP Configurations
- Lab 3 – Configure Gatekeeper Integrations
- Lab 4 - SE200/IAM ReadiManager Integration
- Lab 5 - Cascade MCUs

Define and Conduct Conference for Labs

- Address Book Site Records and parameters
- Setup Predefined Dial-In vs. Dial-Out for all Labs
- Create and Manage Conference Profiles
- Define Videoconference Troubleshooting Properties
- Audio/Video/Content/Data – T.120 Conferences
- Control / Verify Sites with RMX Desktop
- Auto Add or Meet Me Sites; Meeting Rooms and Meet Me Services

Integrate the SE200/IAM

- Scheduling and Conference Reservations
- Video Site Records
- Gatekeeper Sites lists

Other RMX Functions

- Reading the CDR log, Resources Report and Alert Windows
- Collect Trace files on a Videoconference
- Faults Log and Major vs. Minor Alarms
- Understanding Alarms and Faults

External & Internal Cascading

- What is Cascading?
- Launch Cascading, simple and H243 Cascading
- Manage a Cascading Videoconference and cascading content

MCU Fine Tuning

- System Configuration Flags
- Administration Menu Items, set-up Menu Items and Help
- RMX Time

Intended audience

Videoconferencing Support Engineers and System Administrators.

Prerequisite skills and knowledge

- Prior participation in a multipoint call, familiarity with electronic equipment, knowledge of networks, standards (H.320/H.323)
- Windows operating environment

On Site Tuition

All courses can be delivered at customer premises by special request. Please contact emeaservicesales@polycom.com for further details.

Fees and registration

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Cancellation

Within 10 business days prior to class is subject to full tuition fees.

IP Configuration

- H.323 Configuration
- Management IP addressing

LEDs and Card and Power supply status

- Control Unit
- Card Indicators
- Power Supply Indicators

Troubleshooting

- Reset MCU vs. reset modules
- Disabling and enabling units
- Terminal Traces and signal monitoring
- Fan and voltage Status
- SNMP MGC – MIBs



TECHNICAL TRAINING	
Course:	CMA 4000/5000 Technical Operations Training
Ref:	TRAINING
Duration:	5 Days
Fee:	£1853 / €2375 / \$3325 per person

Course description

The CMA Technical Maintenance training course is a 5-day, instructor led, hands-on program covering installation and configuration of the CMA 5000, and management, monitoring and scheduling of videoconference systems in an enterprise network. The curriculum is delivered in a combination of lecture and hands-on laboratory exercises.

Course Objectives

At the end of this training, students will be able to:

- Identify functions of CMA 4000/5000
- Install CMA system hardware
- Configure CMA system software
- Deploy, install, and manage CMA Desktop
- Define Areas, Zones, Resources and Equipment
- Enable Simplified Dialing
- View logging of RAS messages
- Schedule and manage conferences
- Monitor endpoint status
- Manage a Global Directory
- Remotely update endpoint configurations using Provisioning
- Remotely update endpoint software
- Generate activity reports

Course Outline

Overview

Product Overview and Features
CMA Hardware & Software Components

Initial Installation & Configuration

CMA 4000/5000 First-time Setup
CMA Desktop Configuration and Setup
User Management & Roles
Managing Resources

Gatekeeper Functions

Gatekeeper Functionality
Network Topology
Endpoint Alias Dialing
Simplified Dialing
Dialing Rules & Neighbor Gatekeepers
Conference On Demand
Least Cost Routing
Alternate Routing
Gatekeeper Reports

Scheduling & Managing Conferences

Scheduling Conferences
Recurring Conferences
Managing Schedules
Installing the MS Outlook plug-in for CMA
Scheduling using the Outlook plug-in
Managing Conferences

Device Management

Policy Groups
Monitoring Endpoint Status
CDR Reports
Global Directory
Remote Software Updates
Remote System Provisioning
Network Monitoring

Intended audience

- Videoconferencing Support Engineers
- System Administrators
- System Operators

Prerequisite skills and knowledge

- Prior attendance of the Polycom MGC 25/50/100 or RMX administrator training, or equivalent experience
- Prior attendance of an administrator training course for Polycom endpoints, or equivalent experience
- Ability to operate software in a Microsoft Windows environment

On Site Tuition

All courses can be delivered at customer premises by special request. Please contact emeaservicesales@polycom.com for further details.

Fees and registration

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Fax: +44 (0)1753 733014

Cancellation

Within 10 business days prior to class is subject to full tuition fees.



TECHNICAL TRAINING

Course:	ReadiManager SE200 Technical Operations Training
Ref:	4864-17003-001
Duration:	4 days
Fee:	£1482 / €1900 / \$2660 per person

Course description

The ReadiManager Technical Maintenance training course is a 4-day, instructor led, hands-on program covering installation and configuration of the SE200, and management, monitoring and scheduling of videoconference systems in an enterprise network. The curriculum is delivered in a combination of lecture and hands-on laboratory exercises.

Course objectives

At the end of this training, students will be able to:

- Identify functions of SE200 ReadiManager
- Install SE200 system hardware
- Configure SE200 system software
- Define Areas, Zones, Resources and Equipment
- Enable Simplified Dialing
- View logging of RAS messages
- Schedule and manage conferences
- Monitor endpoint status
- Manage a Global Directory
- Remotely update endpoint configurations using Provisioning
- Remotely update endpoint software
- Generate activity reports

Course outline

Overview

- Product Overview and Features
- SE200 Hardware & Software Components
- ReadiManager SE200 vs. Stand-alone products (PathNavigator, PCS, and GMS)

Initial Installation & Configuration

- ReadiManager SE200 First-time Setup
- Client Configuration
- User Management & Roles
- Managing Resources

Gatekeeper Functions

- Gatekeeper Functionality
- Network Topology
- Endpoint Alias Dialing
- Simplified Dialing
- Dialing Rules & Neighbor Gatekeepers
- Conference On Demand
- Least Cost Routing
- Alternate Routing
- Gatekeeper Reports

Scheduling & Managing Conferences

- Scheduling Conferences
- Recurring Conferences
- Managing Schedules
- Installing the MS Outlook plug-in for SE200
- Scheduling using the Outlook plug-in
- Managing Conferences

Device Management

- Policy Groups
- Monitoring Endpoint Status
- CDR Reports
- Global Directory
- Remote Software Updates
- Remote System Provisioning
- Network Monitoring

Intended audience

- Videoconferencing Support Engineers
- System Administrators
- System Operators

Prerequisite skills and knowledge

- Prior attendance of the Polycom MGC 25/50/100 administrator training, or equivalent experience
- Prior attendance of an administrator training course for Polycom endpoints, or equivalent experience
- Ability to operate software in a Microsoft Windows environment

On Site Tuition

All courses can be delivered at customer premises by special request. Please contact emeaservicesales@polycom.com for further details.

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Cancellation

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TECHNICAL TRAINING

Course:	MGC 25/50/100 Technical Maintenance
Ref:	CS-ACCORD-TS01-IN
Duration:	5 days
Fee:	£1853 / €2375 / \$3325 per person

Course description

In this 5-day instructor-led course delegates will learn how to install, configure and operate Polycom MGC. Delegates will learn the functions of MGC processors and network interfaces and be able to install and configure MGC hardware and software.

Through hands-on experience, delegates will learn how to schedule, monitor and control a conference and to troubleshoot site connectivity problems. In addition to configuration tasks, delegates will learn administrative functions such as performing backups and capturing traces and log files for diagnostics and accounting.

Course objectives

At the end of this training, students will be able to:

- Set up Connectivity MGC Manager to MGC
- Control of Site and Conference database
- Add/Modify/Assign Network Services
- Troubleshoot site connectivity problems
- Read and Examine Faults and CDR's
- Use MGC Manager to start, Schedule and control Conferences
- Understand all conference features

Course outline

Introduction and Overview Multipoint

Elements of a Videoconference
Elements of H.320 & H.323 Standards

Introduction to the MGC

Model Descriptions & Specifications
Network Interfaces and Processors Revs.

Installation and Initial Configuration

Identify Processing Modules and properties
Identify Interface Modules and properties
MGC system software
Backup and restore
Software upgrades

Network Service Configuration

Configure ISDN Network Services
Configure H.323 Network Services
Configure SIP Network Services
Configure MPI Network Services

Create participant site records

Create and use participant site records
Create and Define Templates

Create and Conduct Conferences

Create and manage Conference Templates
Define Videoconference Properties
Audio/Video/Data parameters
Manage connected sites MGC Manager
Scheduling and Conference Reservations

Maintenance

Reading the CDR log
Collect trace files on a Videoconference
Understanding Alarms and Faults

Cascading

Manage a Cascading Videoconference

MGC Architecture

Overview of MGC-100 Subsystem Process
Configuring System Parameters
MCU Utilities and MCU Date/Time

Troubleshooting

Reading the Resources Report
Reset MCU Vs. Reset Modules

Intended audience

Support/Field Service engineers and administrators who are responsible for the installation, administration, and/or support of Polycom MGC 25/50/100 units.

Prerequisite skills and knowledge

- Prior participation in a multipoint call
- Basic knowledge of data networks
- Familiarity with a Windows based PC
- Familiarity with electronic equipment

On Site Tuition

All courses can be delivered at customer premises by special request. Please contact emeaservicesales@polycom.com for further details.

Fees and registration

Fees quoted are for training at Polycom sites. For information about training courses available at your own site, course schedules or to book this course, please contact emeaservicesales@polycom.com
Call: +44 (0)1753 723083
Fax: +44 (0)1753 733014

Cancellation

Within 10 business days prior to class is subject to full tuition fees.



TECHNICAL TRAINING

Course:	MGC WebCommander Maintenance Training
Ref:	CS-WEBCMD-TS01-UK
Duration:	1 day
Fee:	£371 / €475 / \$665 per person

Course description

In this 1-day instructor-led course delegates will learn how to install and utilise Polycom WebCommander to manage multipoint conferences. Delegates will install and configure a WebCommander server to allow web-based access to conferences running on an MGC100/50 MCU. During the course of the training, delegates will start, manage and actively participate in multipoint videoconferences using the web interface of WebCommander.

Course outline

WebCommander Overview

- What is WebCommander?
- What does it consist of?
- What can it do?

Installation

- Installation Requirements
- Initial Configuration

Database Configuration

- Configuring MCU connections
- Establishing user accounts and levels of access

Using WebCommander

- Creating a new conference through the WebCommander interface
- Launching a conference as a WebCommander Moderator
- Moderating an on-going conference and controlling conference activity
- Active Participant control in an on-going conference

Intended audience

Videoconference Support/Field Service engineers and administrators that are responsible for the procurement, installation and/or support of WebCommander systems.

Prerequisite skills and knowledge

- Previous participation in a multipoint videoconference
- Familiarity with the Polycom MGC MCU

Previous attendance of the following Polycom courses is strongly recommended: CS-ACCORD-TS01-IN – MGC Technical Training

On Site Tuition

All courses can be delivered at customer premises by special request. Please contact emeaservicesales@polycom.com for further details.

Fees and registration

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Cancellation

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TECHNICAL TRAINING

Course:	PathNavigator™ Technical Maintenance Training
Ref:	CS-PNAV-TS01-IN
Duration:	3 days
Fee:	£1112 / €1425 / \$1995 per person

Course description

In this 3-day instructor-led course delegates will learn how to install and utilise PathNavigator call routing and management system within an enterprise network. This course will cover all areas of functionality of this advanced call-processing server including multipoint conference-on-demand and least cost routing. Delegates will learn how to configure PathNavigator features within a complex enterprise network, to simplify the end-user call process and make efficient use of the enterprise network infrastructure.

Course outline

PathNavigator Overview

- What is PathNavigator?
- What does it consist of?
- What can it do?
- How does it work?

Installation

- Installation Requirements
- Installation Planning
- Initial Configuration – activating the server

Monitoring Network Activity

- Monitor Options
- Types of Activity

Generating Reports

- Call Detail Records (CDR)
- Network Usage Reports

Theory of Operations

- Gatekeeper Functionality
- H.225 RAS Messaging
- Direct vs. Call Routed Operation

Advanced Features & Configuration

- Configuring and using Call Forwarding
- Configuring and using Hunt Groups
- Configuring and using Gateway and MCU Services
- Configuring and using Conference-on-Demand
- Configuring and using Simplified Dialling
- Configuring differing access levels with groups
- Building Network Maps
- Configuring and using Alternate Routing and Least Cost Routing

Problem Resolution

- Diagnostic Information Sources
- PathNavigator Diagnostic Logs

Intended audience

Videoconference Support/Field Service engineers and administrators who are responsible for the procurement, installation and/or support of PathNavigator systems.

Prerequisite skills and knowledge

- Familiarity with videoconferencing, IP and telephony concepts
 - Familiarity with administering a videoconference system
 - Familiarity with the Polycom MGC
 - Basic knowledge of data networks
 - Familiarity with a Windows based PC
- Polycom recommends the following preliminary course:
- CS-ACCORD-TS01-IN – Polycom MGC™ 25/50/100 Technical Maintenance Training

On Site Tuition

All courses can be delivered at customer premises by special request. Please contact emeaservicesales@polycom.com for further details.

Fees and registration

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Cancellation

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TECHNICAL TRAINING

Course:	Global Management System Administrator and Operator Training
Ref:	4684-06970-001
Duration:	1 day
Fee:	£371 / €475 / \$665 per person

Course description

In this 1-day instructor-led course delegates will gain hands-on experience of installing and configuring Polycom's Global Management System. This course includes operation of the user interface and theory of operation as well as system configuration and troubleshooting. You will be provided with a set of system documentation to help you better understand the system's configuration and composition. The course will also refer to, but not necessarily present, information in ancillary areas such as Microsoft Windows and will address topics that presume a basic knowledge of IP and ISDN.

Course outline

Overview

- Class Introduction
- GMS Features and Benefits

Software Installation

- Software Installation and Initial Configuration
- Database interaction

Operation

- Screen Layout, Password requirements & security
- System Management (adding video endpoints), remote management of VSX, PVX,

Viewstation and iPower systems

- Global Address Book configuration and usage
- Software updates
- Provisioning
- Account Management
- Reports
- System Alerts

Intended audience

Videoconference Support and administrators who are responsible for support of Polycom systems using GMS.

Prerequisite skills and knowledge

- Familiarity with navigation in the MS Windows environment
- Familiarity with IP and ISDN networks
- Familiarity with administrating a videoconference system

On Site Tuition

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Fees and registration

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Cancellation

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SUPPLEMENTARY TECHNICAL COURSES

Course:	Implementing IP Networks for H.323-based Video
Ref:	4864-05085-001
Duration:	3 days
Fee:	£1300 / €1667 / \$2335 per person

Course description

This fast-paced 3-day instructor-led course covers both the theory and real-world implementation of Quality of Service (QoS) and network security in networks that support H.323 based videoconferencing.

The course covers the theory of the H.323 protocol and the procedures and methods required to set-up a video call. The underlying theory of network delay, jitter and congestion management will also be discussed in detail.

The theory and real-world requirements for security and Network Address Translation (NAT) will be presented so that students learn how to implement secure IP networks that support video and voice. The training covers the specific techniques that are used to implement QoS in corporate network, both LANs and WANs, and how these to design, implement and manage QoS in both layer-2 switching and layer-3 routing using a combination of VLANs, 802.1P and DiffServ.

The course includes a detailed analysis of the techniques and building blocks used to implement and manage network security in both private and public networks. We describe the operation of firewalls, Network Address Translation (NAT), Application Layer Gateways (ALGs), proxies, border controllers and multiple-port H.323 bridges. The implementation and support of Network Address Translation (NAT) in each device is reviewed and new ITU standards (such as H.460) are presented.

Course outline

Voice and Video over IP Overview

- Analysis of different architectures & topologies for integrated networks that support video, voice, data
- Detailed, focused analysis of TCP/IP and the H323 protocol suite
- Technical analysis of the RTP and RTCP protocols and how they are used for voice and video

Quality of Service (QoS)

- Detailed analysis of network queuing (FIFO, fair queuing, WFQ, etc.)
- Detailed analysis of packet loss, network delay and jitter
- The IETF standards process and the history of RSVP and DiffServ
- Detailed analysis of VLANs and the 802.1Q protocol
- Using VLANs to support video and voice in corporate networks
- Technical analysis of layer-2 switching and 802.1P
- Analysis of IP Precedence and Differentiated Services (DiffServ)
- Discussion of congestion management and traffic shaping
- Review of traffic engineering and MPLS
- Testing requirements for QoS

Network Security

- Analysis of network security & firewall theory of operation
- Detailed description of the different devices used to provide network security, including:
 - Proxy servers
 - Firewalls (multiple implementation types)
 - Traversal Servers (TS)
 - Application Layer Gateways (ALG)
 - Multiple port video bridges (MCU)
- Network Address Translation (NAT) – theory of operation and detailed analysis
- Security requirements & support for in-bound video calls
- Firewall implementation planning for video
- ITU standards work (H.460) for NAT and firewall traversal
- Standards based features versus vendor proprietary features for network security and QoS

Network Planning and Management

- Requirements for managing QoS and security
- Options for the placement of the Gatekeeper, Gateway and MCU (bridge) components and the impact on network security and QoS

Intended audience

The course is intended for network analysts and engineers as well as other technical personnel who need to understand SIP so that they can decide when and how to implement it in their networks.

- Network planners and analysts
- Network engineers
- Technical personnel responsible for supporting voice or video networks

Prerequisite skills and knowledge

- A background in networks and communication protocols
- A solid understanding of the TCP/IP protocol suite
- Experience implementing or supporting networks with H.320 or H.323

Polycom recommends the following preliminary courses:

- CS-VOIP-TS01-UK – Introduction to Video Over IP
- CS-CVE-CC-UK – Polycom Certified Videoconferencing Engineer (CVE) Core Curriculum

On Site Tuition

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SUPPLEMENTARY TECHNICAL COURSES

Course:	SIP Protocols and Networks for Voice and Video
Ref:	4864-05088-001
Duration:	2 days
Fee:	£910 / €1167 / \$1635 per person

Course description

This fast-paced 2-day instructor-led course covers both the theory and practical applications of the Session Initiation Protocol (SIP) protocol suite for voice and video. The course addresses the issues of how SIP relates to H.323 and how SIP can be integrated into current IP networks. SIP call scenarios and protocol implementation options are analyzed in detail (using real-time packet traces) so that students understand how SIP can be integrated within networks that currently support both H.320 and H.323. Network Quality of Service (QoS) and network security are discussed so that students also understand how different network architectures that support video and voice can be implemented.

Course outline

Session Initiation Protocol (SIP) Overview

- The IETF standards process and the history of SIP
- Features, functions and benefits provided by SIP to support voice and video

Description of SIP Network Building Blocks

- Functionality and implementation of the SIP User Agent
- Proxies and Network Servers
- Registrar Server
- Proxy Server
- Location and Redirect Servers
- Conference and Application Servers

SIP Networks

- Requirements for networks that implement SIP
- The public Internet
- Private corporate networks and VPNs
- Access networks using DSL and cable modems

SIP Signalling Messages (Methods)

- Comparison of the H.323 protocol suite and SIP
- Invite Method
- Register and Options Methods
- Ack, Cancel and Bye Methods

Call Setup

- Detailed analysis of the SIP trapezoid and SIP Call Scenarios (from simple to complex)
- Setting up a call from endpoint to endpoint
- Setting up a call via a single outbound proxy
- Setting up a call via multiple proxy servers

Real-time Protocols for Voice and Video

- Real time transport protocol (RTP)
- Real time transport control protocol (RTCP)
- Voice and video coding standards

SIP and Firewalls

- Analysis of SIP port usage within TCP and UDP
- Support for Network Address Translation and firewalls in networks that use SIP
- Standards based features versus vendor proprietary features in SIP networks

Implementing SIP

- Designing and Implementing SIP addressing schemes
- Managing Quality of Service (QoS) and security in networks that support SIP
- Issues with implementing SIP within a corporate network
- Managing the coexistence of SIP and H.323 in the same network

Intended audience

The course is intended for network analysts and engineers as well as other technical personnel who need to understand SIP so that they can decide when and how to implement it in their networks.

- Network planners and analysts
- Videoconferencing Support Engineers
- Network engineers
- Technical personnel responsible for supporting voice or video networks

Prerequisite skills and knowledge

- A background in networks and communication protocols
- A solid understanding of the TCP/IP protocol suite
- Experience implementing or supporting networks with H.320 or H.323

Polycom recommends the following preliminary courses:

- CS-VOIP-TS01-UK - Introduction to Video Over IP
- CS-CVE-CC-UK - Polycom Certified Videoconferencing Engineer (CVE) Core Curriculum

On Site Tuition

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SUPPLEMENTARY TECHNICAL COURSES

Course:	MGC Administrator Training
Ref:	CS-ACCORD-AD01-IN
Duration:	2 days
Fee:	£910 / €1167 / \$1635 per person

Course description

In this 2-day instructor-led course delegates will learn how to operate the Polycom MGC family of MCU's to build and manage multisite, multi-network conferences.

Through hands on experience, delegates will learn how to schedule, monitor and control conferences and to troubleshoot site connectivity problems.

Delegates will learn the different methods of connecting sites in a conference and how to monitor site connectivity. Time will also be given to discussion on issues of compatibility and appropriate selection of audio/video settings.

The course will include an overview of the functions of MGC processors and network interfaces and the limitations imposed on conferences by available resources.

Course outline

Introduction and Overview

Multipoint

- Elements of a Videoconference
- Elements of H.320 & H.323 Standards

Introduction to the MGC

- Model Descriptions & Specifications
- Network Interfaces and Processors

Create participant site records

- Create and use participant site records
- Understanding participant properties
- Create and Define Templates
- Understanding basic conference parameters
- Using the database

Create and Conduct Conferences

- Create and manage Conference Templates
- Define Videoconference Properties
- Switched vs. Transcoded vs. Continuous Presence
- Audio/Video/Data parameters
- Manage site connections with MGC Manager
- Scheduling and Conference Reservations

Monitor Conferences

- Site status icons
- Site properties
- Connecting and disconnecting sites
- Capability exchange and compatibility issues

Troubleshooting

- Identifying site connectivity problems
- Reading the Resources Report
- Identifying MGC error conditions
- Reset MCU Vs. Reset Modules

Intended audience

Operators and administrators who are responsible for the day-to-day running of multipoint conferences through Polycom MGC 25/50/100 units.

Prerequisite skills and knowledge

- Familiarity with a selection of videoconference endpoints
- Prior participation in a multipoint call
- Familiarity with a Windows based PC

On Site Tuition

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Cancellation

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SUPPLEMENTARY TECHNICAL COURSES

Course:	V2IU™ Technical Training
Ref:	4864-07104-001
Duration:	2 days
Fee:	£741 / €950 / \$1330 per person

Course description

In this 2-day instructor-led course delegates will learn about the problems of H.323 videoconferencing through firewalls and Network Address Translation (NAT), and how to install, configure and manage a V2IU solution to resolve these issues. Through hands-on experience, delegates will learn how to install and configure a V2IU unit to solve problems presented by a variety of simulated network scenarios. Delegates will learn the different approaches to using a V2IU to solve network boundary problems and the different methods of dialling between remote locations, with and without external gatekeepers. Time will also be given to discussion on the theory of H.323 and why traditional firewall/NAT solutions create problems. The course will also include an overview of the QoS features of the V2IU solution and support for VLAN configuration.

Course outline

Introduction and Product Overview

Introduction to the V2IU family of products, their features and functions
V2IU hardware configurations
'E'-series vs. 'S'-series

H.323 Theory and Network Boundary Issues

H.323 overview
The H.323 protocol stack
H.225 RAS messages
H.225 call signalling
H.245 call control
Audio and video media streams
H.323 call setup
IP Ports used in H.323 call setup
H.323 and firewalls
H.323 and NAT

Installation and initial configuration

Installing the V2IU unit
Initial login and setup
Software update procedure
Setting IP addresses and network service parameters
Setting DHCP server settings

Enabling the Application Layer Gateway (ALG)

Choosing the ALG mode
Internal gatekeeper
LAN side gatekeeper
WAN side gatekeeper

Call Scenarios

Internal calling
Dialling internal to external
Dialling external to internal
Dialling from network to network across multiple V2IU units
Dialling IP address + extension and e-mail dialling

Troubleshooting

Network troubleshooting tools
Call monitoring
Setting the V2IU to factory defaults

Intended audience

- Technical Support Engineers
- Systems and Network Engineers
- Technical personnel responsible for supporting voice or video networks
- Network planners and analysts

Prerequisite skills and knowledge

- A background in networks and communication protocols
- A solid understanding of the TCP/IP protocol suite
- Experience implementing or supporting networks with H.320 or H.323
- Familiarity with navigation in the MS Windows environment

Polycom recommends the following preliminary courses:

- CS-VOIP-TS01-UK – Introduction to Video Over IP
- CS-CVE-CC-UK – Polycom Certified Videoconferencing Engineer (CVE) Core Curriculum

On Site Tuition

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SUPPLEMENTARY TECHNICAL COURSES

Course:	Voice and Video over IP
Ref:	CS-VOIP-TS01-UK
Duration:	3 days
Fee:	£1112 / €1425 / \$1995 per person

Course description

In this 3-day instructor-led course delegates will learn how different traffic types such as traditional PC style data, and voice and videoconferencing, can be merged on a single IP network.

Through illustration and example we will explain how real-time data differs from normal data traffic, and how poor network performance can affect video and audio quality.

Specific emphasis will be given to studying the protocols and services used by IP telephony and videoconferencing.

Course outline

Introduction

Switched Networks vs. Packet Networks
Data traffic vs. Real Time Traffic
Blending traffic types in an IP network

Digital Audio and Video

Sampling, Quantising and Digitisation
Digital Audio Formats
Digital Video Formats
Characteristics of real-time data

Local Area networks

LAN Topologies
Ethernet and 802.x - Detailed Analysis
Ethernet and LAN Performance

IP Protocol Suite

Network Models and Architectures
Protocol Layering – 7 layer versus 5 layer
Transmission, Multiplexing and Switching
Protocol Functionality
Protocol Service Definitions
Protocol Encapsulation
Link Level Protocol Analysis

H.323 Protocol Suite

H.323 overview
H.323 Components (Terminal, Gatekeeper, Gateway, MCU)
Audio & Video protocols
Data sharing protocols
Connection management

H.323 Data Flow

H.225.0
H.225.0 RAS
H.245
RTP & RTCP

Maintaining Quality of Service

What is QoS
Measuring QoS
Factors affecting QoS
Priority mechanisms for the Internet and IP

Intended audience

- Videoconference Support
- Field Service Engineers
- Pre-sales Engineers
- Network Managers and Administrators who are responsible for the procurement, installation and/or support of videoconference systems in an IP environment.

Prerequisite skills and knowledge

- Understanding of the IP protocol suite
- Understanding of IP addressing
- Basic knowledge of telecommunications issues
- Previous participation in a videoconference

On Site Tuition

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Cancellation

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VOICE TRAINING – INSTALLED VOICE

Course:	SoundStructure™ Technical Training
Ref:	4864-37011-011
Duration:	3 days
Fee:	£1112 / €1425 / \$1995 per person

Course description

In this 3-day instructor-led course delegates will learn how to install and correctly configure a Polycom SoundStructure to enhance room audio.

This course will cover all areas of functionality of this advanced audio system including mic mixing, gating, echo cancellation, phone add and the use of macros/presets with logic inputs and outputs.

Delegates will learn how to configure a SoundStructure system to maximise the levels of intelligibility of audio with a conference room environment

Course outline

Product Overview

- The SoundStructure product range
- Features and functionality

Audio Basics

- Acoustic basics
- Gain structure
- Reverberation
- Acoustic Echo (Conference Echo)

Acoustic Design

- Noise, reflection and room construction
- Microphone functionality and operation
- Speaker placement

Equipment Setup

- Initial Hardware Configuration
- Connecting Mics/Codecs/Speakers etc
- Connecting SoundStructure Studio

SoundStructure Studio

- SoundStructure Studio overview
- Building a configuration with SoundStructure Studio Project Wizard
- Mic/Line Input configuration
- Outputs configuration
- Using feedback suppression and dynamics
- Matrix Mixer configuration
- AutoMixer configuration
- Managing audio processing features and paths
- Input/Output Diagnostics
- Integrating with HDX

Advanced Configuration

- Input/Output Filters
- Producing Reports
- Connecting multiple units – OBAM
- System options
- Defining Macros
- Using Logic Inputs/Outputs

Intended audience

Room Integrators and Videoconference Support/Field Service engineers and that are responsible for the procurement, installation and/or support of SoundStructure audio systems.

Prerequisite skills and knowledge

- Familiarity with electronic equipment
 - Familiarity with some basic audio concepts
 - Familiarity with administering a videoconference system
 - Familiarity with a Windows based PC
- Polycom recommends the following preliminary course:
- CS-CVE-CC-UK – Polycom Certified Videoconferencing Engineer (CVE) Core Curriculum

On Site Tuition

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Fees and registration

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Cancellation

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VOICE TRAINING – INSTALLED VOICE

Course:	Vortex Technical Installation and Configuration Training
Ref:	4864-37001-001
Duration:	3 days
Fee:	£1112 / €1425 / \$1995 per person

Course description

In this 3-day instructor-led course delegates will learn how to install and correctly configure a Polycom Vortex to enhance room audio.

This course will cover all areas of functionality of this advanced audio system including mic mixing, gating, echo cancellation, phone add and the use of macros with logic inputs and outputs.

Delegates will learn how to configure a Vortex system to maximise the levels of intelligibility of audio with a conference room environment.

Course outline

Product Overview

The Vortex product range features and functionality

Audio Basics

- Acoustic basics
- Gain structure
- Reverberation
- Acoustic Echo (Conference Echo)

Acoustic Design

- Noise, reflection and room construction
- Microphone functionality and operation
- Speaker placement

Equipment Setup

- Initial Hardware Configuration
- Connecting Mics/Codecs/Speakers etc
- Connecting Conference Composer

Conference Composer

- Conference Composer overview
 - Building a configuration with InstantDesigner
- Mic/Line Input configuration
- Outputs configuration
- Matrix Mixer configuration
- AutoMixer configuration
- Saving and using presets
- Input/Output Diagnostics

Advanced Configuration

- Input/Output Filters
- Producing Reports
- Connecting multiple units – bussing
- System options
- Defining Macros
- Using Logic Inputs/Outputs

Intended audience

Room Integrators and Videoconference Support/Field Service engineers and that are responsible for the procurement, installation and/or support of Vortex audio systems.

Prerequisite skills and knowledge

- Familiarity with some basic audio concepts
- Familiarity with administering a videoconference system
- Familiarity with a Windows based PC.

On Site Tuition

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VOICE TRAINING – WIRELESS

Course:	WiFi – Certified Wireless Network Administrator
Ref:	TRN910
Duration:	5 days
Fee:	£1622 / €2079 / \$2910 per person

Course description

The Wireless LAN Administration training course offers detailed instruction on the foundation concepts and technologies of wireless data networking. The SpectraLink provided course weaves voice over wireless network conversations and lab exercises throughout the course. The course consists of 40 hours of combined lecture and labs. The course may be tailored to meet the schedule and needs of the training organisation.

Course outline

Radio Frequency (RF) Fundamentals

- RF behaviour
- Principles of antennas
- Following power output channels
- RF math calculations standards

Spread Spectrum Technologies

- Uses of spread spectrum
- Frequency hopping
- Direct sequencing
- Comparing DSSS to FHSS
- Co-location and throughput analysis

Hardware Installation, Configuration and Management

- Access points
- Wireless bridges
- Wireless workgroup bridges
- Client devices
- Residential gateways
- Enterprise gateways

Antennas and Accessories

- Omni-directional
- Semi-directional
- Directional
- Determining coverage areas
- Proper mounting and safety
- Performing outdoor/indoor installations
- Power over ethernet
- Cables and connector usage requirements

Organisations and Standards

- FCC rules
- Frequency ranges and channels
- IEEE 802.11 family of standards
- Wireless LAN organisations
- HomeRF
- Bluetooth
- Infrared

802.11 Network Architecture

- Joining a wireless LAN requirements
- Authentication and association
- Basic service set
- Extended service set
- Independent basic service set
- Roaming in a wireless LAN
- Beacons and probe frames
- Power management features

Physical and MAC Layers

- Differences between wireless and ethernet frames
- Collision handling and the use of RTS/CTS
- Throughput and dynamic rate selection
- Analysis of DCF/PCF
- Interframe spacing
- Effects of packet fragmentation

Wireless LAN Security

- Analysis of 802.11 security including WEP
- Available security solutions
- Types of network attacks
- Protecting the network from attacks
- Corporate security policies
- Security recommendations

Site Surveying

- Defining business requirements
- Facility analysis
- Interviewing network management and users
- Identifying bandwidth requirements
- Determining contours of RF coverage
- Documenting installation problems
- Locating interference
- Reporting methodology and procedures

Troubleshooting Wireless LANs

- Multipath
- Hidden node
- Near/Far
- Identifying and resolving interference problems
- Maximising system throughput
- Maximising co-location throughput
- Channel reuse for roaming
- Range considerations

Intended audience

- Videoconference Support
- Field Service Engineers
- Pre-sales Engineers
- Network Managers and Administrators who are responsible for the procurement, installation and/or support of videoconference systems in an IP environment.

CWNA is the foundation level wireless LAN certification for the industry standard CWNP Program, and is the starting point for wireless training and certification. CWNA covers a broad range of wireless LAN topics focused on 802.11 wireless technology rather than specific vendors' products.

Prerequisite skills and knowledge

It is recommended that all students have at least a basic knowledge of networking (as exhibited in Net+, CCNA, CNA, or MCP) prior to enrolling in this course.

Progression

Upon completion of the CWNA Certification course, students will be prepared to pass the CWNA Certification Exam (Exam #PW0-100) at Prometric Testing Centers.

Fees and registration

Fees quoted are for training at Polycom sites. For information about training courses available at your own site, course schedules or to book this course, please contact emeaservicesales@polycom.com
Call: +44 (0)1753 723083
Fax: +44 (0)1753 733014

Cancellation

Within 10 business days prior to class is subject to full tuition fees.



VOICE TRAINING – WIRELESS	
Course:	DECT – KWS 600 V3 Technical Training
Ref:	4864-57001-001
Duration:	3 days
Fee:	£969 / €1265 / \$1770 per person

Course description

After successfully passing the course, the participant will have achieved basic knowledge of the KWS 600 solution. This includes general system architecture, installation in IP networks, user creation, and administration, update of the solutions as well as basic troubleshooting and different assignments/hands-on tasks.

Course outline

General Description of the KIRK Wireless Server 600

- Definitions and explanations
- KWS 600 main equipment
- Technical data

Protocols, Software Applications and Tools

- DECT
- Basic SIP
- KIRK equipment maintenance software

KWS 600 Installation

- Deployment

KWS 600 System Configuration

- KWS 600 system programming
- P master
- Media Resource
- Base Station
- Repeater
- Codec
- Handset programming/subscription
- KWS 600 data backup/restore
- KWS 600 S/W upgrading
- KWS 600 troubleshooting

Practical training/Hands-on

Intended audience

Technical staff at new/old customers who are dedicated to working with KIRK IP solutions in areas such as installation, deployment, troubleshooting and daily maintenance of the KWS 600 solutions

Prerequisite skills and knowledge

- Basic analogue telephony knowledge
- Basic PBX knowledge
- Basic IP knowledge

On Site Tuition

All courses can be delivered at customer premises by special request. Please contact emeaservicesales@polycom.com for further details.

Fees and registration

Fees quoted are for training at Polycom sites. For information about training courses available at your own site, course schedules or to book this course, please contact emeaservicesales@polycom.com
Call: +44 (0)1753 723083
Fax: +44 (0)1753 733014

Cancellation

Within 10 business days prior to class is subject to full tuition fees.



VOICE TRAINING – WIRELESS	
Course:	DECT – KWS 6000 Technical Training
Ref:	4864-57005-001
Duration:	3 days
Fee:	£970 / €1265 / \$1770 per person

Course description

After successfully passing the course, the participant will have achieved basic knowledge of the KWS 6000 solution. This includes general system architecture, installation in IP networks, user creation, and administration, update of the solutions as well as basic troubleshooting and different assignments/hands-on tasks.

Course outline

General Description of the KIRK Wireless Server 6000

- Definitions and explanations
- KWS 6000 main equipment
- Technical data

Protocols, Software Applications and Tools

- DECT
- Basic SIP
- KIRK equipment maintenance software

KWS 600 Installation

- Deployment

KWS 6000 System Configuration

- KWS 6000 system programming
- P master
- Media Resource
- Base Station
- Repeater
- Codec
- Handset programming/subscription
- KWS 6000 data backup/restore
- KWS 6000 S/W upgrading
- KWS 6000 troubleshooting

Practical training/Hands-on

Intended audience

Technical staff at new/old customers who are dedicated to working with KIRK IP solutions in areas such as installation, deployment, troubleshooting and daily maintenance of the KWS 6000 solutions

Prerequisite skills and knowledge

- Basic analogue telephony knowledge
- Basic PBX knowledge
- Basic IP knowledge

On Site Tuition

All courses can be delivered at customer premises by special request. Please contact emeaservicesales@polycom.com for further details.

Fees and registration

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Cancellation

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VOICE TRAINING – VOIP

Course:	Voice Over IP Architectures and Processes Simulation Training
Ref:	4864-37004-001
Duration:	2 days
Fee:	£741 / €950 / \$1330 per person

Course description

With the ever-increasing market acceptance and deployment of VoIP solutions it is now critical for organisations to understand the benefits, challenges and skills required to successfully deploy this vital new technology. In this 2-day instructor-led course delegates will be able to:

- Understand how to use a data packet network to provide wide area voice communications.
- Understand the role of each component of the network.
- Understand the transmission process of a voice signal over an IP network.
- Discuss the challenges related to the convergence of voice and data networks.
- Identify critical issues to consider in the planning stages of the implementation of a VoIP network.

Methodology

This course uses a more innovative approach to traditional training through the use of simulation. Following instruction of the basic concepts and fundamentals, participants are then asked to role play the various components of an IP phone network and to carry out the steps of a voice call over an IP network. Through observations, immediate feedback and group discussions, participants will have mastered course content and objectives.

Course outline

Voice vs. data

- Voice and video signals characteristics
- Voice network functionalities
- Voice signal transmission (encoding, supervision and signalling)

Data networks

- Asynchronous transfer mode
- IP networks characteristics

Carrying voice over an IP network

- Constraints and solutions
- The challenges
- Architectures, protocols and components
 - Standardisation organisations
 - SIP and SDP (User agent, proxy server, location server)
 - H.323 (Gateway and Gatekeeper, RAS, H.225 and H.245)
 - MGCP and Megaco
 - Inter-domains protocols

Voice transmission over an IP network

- Digitisation, compression
- Fragmentation and encapsulation
- Performance criteria's
 - Packets size
 - Delay and jitter
 - RTP, RTCP
 - Priority queuing and QoS

VoIP: A good decision?

- What are the business triggers?
- Implementation and migration
- Costs, management and security issues
- Products and applications

Intended audience

- Videoconference Support
- Field Service Engineers
- Pre-sales Engineers
- Network Managers and Administrators who are responsible for the procurement, installation and/or support of videoconference systems in an IP environment.

Prerequisite skills and knowledge

- Understanding of the IP protocol suite
- Understanding of IP addressing
- Basic knowledge of telecommunications issues
- Previous participation in a videoconference

On Site Tuition

All courses can be delivered at customer premises by special request. Please contact emeaservicesales@polycom.com for further details.

Fees and registration

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Cancellation

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VOICE TRAINING – VOIP

Course:	Soundpoint IP Telephones Technical Training
Ref:	4864-37003-001
Duration:	2 days
Fee:	£741 / €950 / \$1330 per person

Course description

In this 2-day instructor-led course delegates will learn how to install, configure and operate the Polycom range of Voice over IP (VoIP) telephones.

Through presentation, demonstration and hands-on experience, students will learn about the software architecture of the telephones and how they use the SIP protocol for dialling. In addition, students will learn how to provision the phones using ftp and other protocols. Time will be given to discussion of the theory of VoIP as well as to the architecture of the phones.

Students will gain hands-on experience of installing and provisioning telephones to meet real-world customer needs.

N.B. Although a VoIP soft-switch will be used as part of the training, the Polycom products are designed to interoperate with a variety of soft-switch vendors. For this reason, the training will not cover any specific features of the soft-switch used, but will instead concentrate on the Polycom VoIP telephone handsets.

Course outline

Polycom's VoIP Portfolio features and functions

- IP330, IP550, IP650
- IP7000

Software Architecture Overview

- BootROM, Application, Configuration Files and Resource Files
- BootROM and Application dependencies and migration paths
- Provisioning Protocols
- SSL certificates

Installation and Set-up

- Power over Ethernet (POE)
- Optional Accessories
- Connecting the phone
- Menus (Main, DHCP, Server and Exit)

Advanced feature configurations

- Loading new software for bootROM,
- Rebooting and resetting to factory defaults
- Configuring, volume settings and call appearance options
- CODEC preferences
- Programming functions keys
- Creating a digit map, Creating and modifying tones, Adding and editing languages
- Configuring QoS
- Creating local directories

Troubleshooting Procedures

- Tools
- BootROM and Application error messages and status indicators
- Status Menu and log files
- Logging options and settings
- Override files

Intended audience

The course is intended for voice, video or data network engineers as well as other technical personnel who need to install and configure Polycom VoIP telephones.

- Network engineers
- Telephony engineers
- Technical personnel responsible for supporting voice networks.

Prerequisite skills and knowledge

A background in networks and communication protocols

- A solid understanding of the TCP/IP protocol suite.

On Site Tuition

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Fees and registration

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Cancellation

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Directions

How to find us – UK

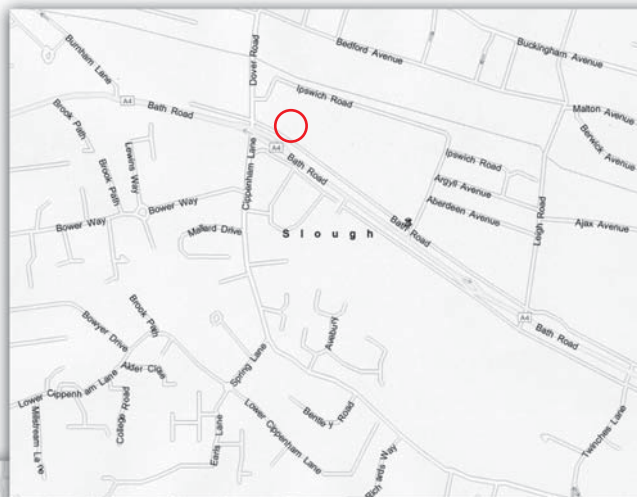
From the West

Turning off the M4 at junction 7, follow the dual carriageway to the A4 roundabout. Turn right towards Slough and carry through to crossroads and traffic lights with the Greenoaks Mercedes Garage on the right hand side. Turn left and immediately right into the service road in front of the Polycom building. Turn left into the visitors car park at the front of the building.

From the East

Turning off the M4 at junction 6, follow the A355 across the roundabout to the first set of traffic lights. Turn left onto A4 Bath Road towards Maidenhead. Carry onto the set of traffic lights just before Currys. Turn right into Ipswich Road and then turn immediately left into the service road. Polycom is the fifth building on the right hand side. Turn right into the visitors car park at the front of the building.

Polycom (United Kingdom)
Limited
270 Bath Road
Slough
Berkshire
SL1 4DX
United Kingdom
Tel: +44 (0)1753 723000
Fax: +44 (0)1753 723010



How to find us – France

By public transport

- Station: **La Défense Grand Arche**
- Subway Line 1
- T2 Tram
- RER A: when coming from Paris, take the RER A in the direction of ST-GERMAIN EN LAYE or to CERGY, stop to "LA DEFENSE GRAND ARCHE"
- BUS: 73, 141B, 158A, 159, 161, 174, 178, 262, 272, 344, 344H, 360.

On foot

- Exit E « PARVIS » or F « CALDER MIRO »
- Head to your right towards the EDF tower. Then follow the direction "La defense 8 – Tour Franklin". The tower is situated between the mall named "Les Quatre Temps" and the EDF Tower.

By car from Paris:

- To come to the FRANKLIN Tower by car, take the circular boulevard and leave at exit DEFENSE 8. Then follow the signposts to the car park BOIELDIEU.

By car from the Province:

- Take the A13 motorway and A14 towards La Defense. Then the circular boulevard and leave at exit 8.

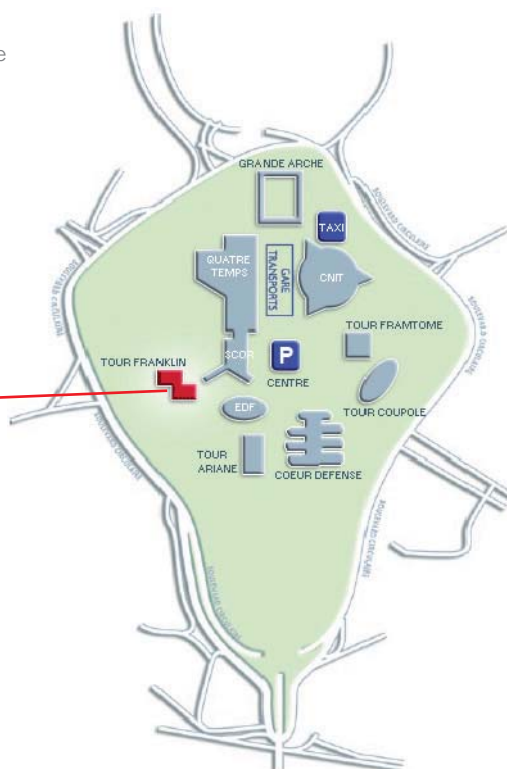
From the Airport Roissy-Charles de Gaulle:

- Take the motorway A1 then A86 towards La Defense. Then the circular boulevard and leave at exit 8.

By taxi:

- Take the circular boulevard and then the exit DEFENSE 8. Follow the directions for "Taxi Tour Franklin".

POLYCOM France
24ème Etage



Polycom (France) SARL
Tour Franklin
24e étage
100/101 Terrasse Boieldieu
La Défense 8
92042 Paris Cedex
France
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How to find us – Germany

From the airport

Coming from the "Südallee" please take the exit towards "Hallbergmoos". At the crossing turn left towards "Hallbergmoos" on the "FS 44". Leave the "FS44" at the sign "Hallbergmoos" (roundabout) and turn into the "Ludwigstraße". Follow the road up to the next roundabout, please turn right to the Airport Business Centre ("Am Söldnermoos"). After 300m the Airport Business Centre is on the left hand side (a blue ABC Pylon is visible).

From the town centre

Please drive on the "A9" in the direction of "Nürnberg": at the motorway intersection "Neufahrn" Please turn on the "A92" in the direction of "Deggendorf (Munich airport)". Leave the "A92" at the exit "Munich airport/Hallbergmoos". After 800m you should leave the freeway in the direction of "Hallbergmoos". After approximately 400m you reach a crossing, please turn left in the direction of "Hallbergmoos" on the "FS44". Leave the "FS44" at the roundabout "Hallbergmoos". Please turn into "Ludwigstraße". Follow the road to the next roundabout, and then turn right to the Airport Business Centre ("Am Söldnermoos"). After 300m the Airport Business Centre is on the left hand side (a blue ABC Pylon is visible).

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How to find us – Denmark



Approx. 50 Km from Billund (BLL)
International Airport

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