Fibreplus Ltd.
Building Partnerships
Telecommunications College

Voice Over IP (VOIP) & Introdcuction to 3CX PBX System

1,2&3 day courses

Break free from you old PBS and telephone wiring with the power of VOIP.

With the roll out of FTTX gathering pace, the increased bandwidth is making available a whole host of new services, including VOIP.

VOIP ,or Voice Over IP, allows external phone calls to be made at a minimal cost by using the Ethernet instead of the more traditional plain old telephone service (POTS), while internally the management of individual phones, extensions and groups couldn't be easier with the software installed on a designated pc providing the functions of the PBX. VOIP is a perfect solution for reducing costs in a business environment where a high volume of long distance or conference calls are being made, between office locations for example, or where a large amount of extensions and groups can be difficult to manage, a call centre for example.

- This course is designed for people with basic IT skills, although it is recommend that beginners should complete the 1 day unit 1 introduction before attempting unit 2.
- Ideal for network engineers or IT managers looking for ways to lower their telecommunications costs.
- Each unit can be completed separately or combined over 3 days.
- At the end of the 3 days students will have at least a basic understanding of VOIP and be able to use and configure the 3CX PBX System.

Unit 1 Introduction to VOIP & 3CX PBX system. 1 Day

This unit covers the basics of VOIP and the 3CX PBX System .

- Introduction to VOIP
- Introduction to the 3CX PBX System
- Installation & basic operation of the 3CX PBX

Unit2 Advanced Techniques. 2 Day

This unit covers the advanced features of the 3CX PBX including:

- Automatic provisioning
- Configuring PSTN line
- Ring Groups & Digital Receptionist
- Remote extensions
- Call Conferencing
- Monitoring & trouble shooting

Please see additional pages for in-depth course content.

Fibreplus Ltd.
Building Partnerships
Telecommunications College

VOIP Telephony Utilising 3CX PBX System

Unit 1 Basic understanding. 1 Day

Description: This one day introduction to VOIP (Voice Over IP) covers the basics of using VOIP and includes a overview of the 3CX PBX system.

Venue: **Main Fibreplus Ltd Training Centre: Westbury Wiltshire.**

Centres: Westbury - Dunfermline - Peterborough - Lancaster - Surrey

Duration: 1 Day.

Dates: Available most weeks throughout the year, refer to Calendar and call for booking availability.

Price: Please refer to current price list. **FIBREPLUS PRICE GUARANTEE**. Not to be beaten on a like for like basis.

Pre-requisite: Basic IT skills.

Introduction to VOIP

Introduction to VOIP:
- What is VOIP
- How does it work
- Encoding
- Benefits of VOIP

SIP Phones:
- Hard phones
- Soft phones
- Analogue phones
- Versions

Introduction to 3CX

Introduction to 3CX system for Windows:
- What is 3CX
- Components

Installing 3CX:
- Requirements
- Setup
- Configuration Wizard
- Upgrading 3CX
- Activating
- Firewall Configuration

Creating Extensions:
- Introduction
- Adding extensions
- User and authentication information
- Voicemail options

Basic Provisioning of Phones:
- Configuring SIP phones
- Importing Extensions
- Testing
- Provisioning
- Monitoring

Configuring VOIP lines:
- Introduction
- Requirements:
  - i. Create an account
  - ii. Add provider account to 3CX
- Specify a STUN server
- DDI's and VOIP

Configuring Basic Call rules:
- Introduction
- Creating outbound rules
- Creating Inbound rules

Call reports:
- Introduction
- Reports available
- Generating call reports

Phonebook:
- Company phone book
- Personal phonebook
- Importing phonebook entries
- Using the phonebook

Introduction to Advanced Features:
- PSTN line integration

FXO/FXS:
- Bridging
- Remote extensions
- Conference calls
- Fax

How to Backup and Restore:
- Introduction
- How to backup and restore
- Scheduling regular backups

Exam and Assessment Method

- Assessed practical exercises.

ISO 9001
REGISTERED FIRM
Fibreplus Ltd. Registration No. GB18516

Main Training Centre
Fibreplus Ltd. Unit 1 - 4 Brook Lane,
Westbury, Wiltshire. BA13 4ES
Tel:- 01225 636041 email:-enq@fibreplus.co.uk

Fibreplus Ltd.
Building Partnerships
Telecommunications College

VOIP Telephony Utilising 3CX PBX System

Unit 2 Advanced understanding. 2 Day

Description: This two day course follows on from the 1 day basic introduction to VOIP. These additional two days will cover the more advanced features for using the 3CX PBX system and a more in depth view into VOIP and the related technologies.

Venue: **Main Fibreplus Ltd Training Centre: Westbury Wiltshire.**

Centres: Westbury - Dunfermline - Peterborough - Lancaster - Surrey

Duration: 2 Days.

Dates: Available most weeks throughout the year, refer to Calendar and call for booking availability.

Price: Please refer to current price list. **FIBREPLUS PRICE GUARANTEE**. Not to be beaten on a like for like basis.

Pre-requisite: Completion of the 1 day introduction to VOIP course or previous VOIP experience required.

Course Overview

Automatic Provisioning:
- How provisioning works
- Configuring extensions for provisioning
- Configure phone to receive configuration
- Provisioning via phones web interface
- Provisioning via DHCP option 66
- Provisioning URL
- URL format for each phone
- Provisioning templates
- Re-provisioning
- Monitoring your IP phones

Configuring PSTN Lines:
- Introduction
- What is a VOIP gateway
- PSTN line configuration
- Generating a configuration file
- Configuring the PSTN interface

Adding DDI:
- Introduction
- How DDI work in 3CX
- Adding DDI
- Using DDI with a VOIP provider account
- Troubleshooting
- Calling a party on the other 3CX system

Digital receptionist:
- Introduction
- Recording a menu prompt
- Creating a digital receptionist
- Allowing callers to dial a known extension directly
- Call by name
  - i. Self identification message
  - ii. How it works

Forwarding Rules:
- What are forwarding rules
- Simple rules interface
- Advanced call forwarding interface

3CX Assistant:
- Introduction
- Installing 3CX Assistant
- Configuring 3CX Assistant for use with Outlook

Ring Groups and Queues:
- Ring groups
- Paging/Intercom
- Call queues

Call conferencing:
- Enabling conferencing
- Creating a call conference

Creating a Bridge:
- Introduction
- Connecting 3CX phone systems

Remote extensions:
- Introduction
- How it works
- Configuring the tunnel

Configuring the phone:
- Using the tunnel with IP hard phones

Fax Server:
- Introduction
- Fax receiving configuration
- Fax server credentials

Monitoring & Troubleshooting:
- Introduction
- Things to monitor

Monitor IP of gateways and phone system:
- Manual
- Configuration guides
- Wiki
- Request support via vendor or 3CX support.

Additional Information:
- Configuring the PBX and firewall.
- Systems extension
- 3CX services
- Windows events

Exam and Assessment Method

- Assessed practical and written exercises.

QMS
ISO 9001
REGISTERED FIRM
Fibreplus Ltd. Registration No. GB18516

Main Training Centre
Fibreplus Ltd. Unit 1 - 4 Brook Lane,
Westbury, Wiltshire. BA13 4ES
Tel:- 01225 636041 email:-enq@fibreplus.co.uk