DCT Unified Communications & Video Conferencing

Program Duration:

5 Days

Program Objectives

- Describe the components of IP Telephony.
- Describe PSTN components and technologies.
- Describe how to interconnect VoIP with service provider networks.
- Implement a Unified Communication Systems PBX
- Implement phone provisioning to support endpoints.
- Implement Basic Voicemail and IVR an IP PBX platform.
- Implement Voice Gateways and analogue Phone integration with IP Systems

Target Audience

Network Engineers

Pre-requisite

Those attending this course require basic understanding of IP Basic Knowledge of telephony desired but not compulsory.

Program Overview

DCT Unified Communications is a unique Multi-vendor course that introduces IP Telephony, Unified Messaging, Unified Presence and Unified mail to ICT Professional who are interested in venturing into the world of IP communications The class based training offers advanced hands on experience labs to prepare students for any deployment scenarios.

DCT Unified Communications & Video Conferencing Topics: Copper

a). Introduction to Balanced Twisted-Pair Cables

- Connecting Hardware
- Telecommunications Outlets
- Patch panels
- Wiring Blocks

b). Networks

- Local and Wide Area Networks
- Pros and Cons of a Network
- Network Topologies
- Generic (Structured) Cabling

c). Cabling Standards

- •ANSI/TIA/EIA Standards
- ISO/IEC Standards
- CENELEC Standards
- Cable Categories

d). Horizontal Cabling

- Horizontal Channels
- Channel Lengths
- Horizontal Pathways
- Maximum Pathway Fill

e). Backbone Cabling

- Backbone Cabling Systems
- Backbone Cabling Distance Limitations

f). Work Area Cabling

- Work Area Components
- Telecommunications Outlets
- Work Area Cable Termination

g). Telecommunications Spaces

- Equipment Rooms
- Telecommunication Rooms
- Entrance Facilities

h). Electromagnetic Interference (EMI)

- What is EMI
- Power Separations/ Shielding

DCT Copper systems and Fiber systems

DCT Unified Communications & Video Conferencing Topics: Copper

i). Installation Practices

- Cable Management
- Bend Radius
- Cable Stacking Height
- Cable Stress
- Cable Support
- Rack Clearance
- Equipment Locations
- Mounting Connecting Hardware
- Earthling And Bonding
- Cable Pulling
- Cable Termination

k). Administration

- Labels
- Records
- Administration Classes

l). Warranties

- Test Results
- Warranty Registration Form

m). Labs

- Terminations, Troubleshooting and testing on:
- Category 6 UTP Cabling system
- Category 6A FTP Cabling system
- Trouble shooting and Testing of both Cat 6 and Cat 6A cabling
- Fibre Field terminations
- Fibre splicing
- Fibre Trouble shooting and Testing

DCT Copper systems and Fiber systems

DCT Unified Communications & Video Conferencing Topics: Fiber

a). Introduction to Fibre Optics

- What are Optical Fibres?
- Optical Fibre Construction
- Fibre Sizes

b). Optical Fibre Transmission

- Fibre optic transmission systems and data links
- Transmitting and receiving devices
- Transmission over different types of fibre
- Electromagnetic Spectrum and Wavelengths
- Fibre Optic Transmission Windows

c). Typical Types of Fiber Optic Cables

- Aerial Fiber Optic Cable
- Underground Fiber Optic Cable
- Undersea Fiber Optic Cable
- Direct Buried Fiber Optic Cable
- Ribbon Fiber Optic Cable
- Loose Tube Fiber Optic Cable
- Armored Fiber Optic Cable
- Newer Fiber Optic Cable Types

d. Fibre Splicing and Terminating

- What is fibre splicing?
- Fusion Splicing
- Mechanical Splicing

e). Signal Degradation

- Attenuation loss
- Absorption
- Scattering
- Bending loss
- Dispersion loss
- Coupling loss

f). Implementing Fibre Optic Cabling in the LAN

- Fibre vs Copper
- Fibre in the LAN
- Channel Classification
- Optical Fibre Categories
- Fibre Cannel Classification
- Fibre Channel Length
- Optical Fibre Applications
- Fibre Cabling Design
- Fibre Optic in the Work Area

f). Fibre Optic Safety

- Chemical Hazards
- Optical Hazards
- Fibre Fragments
- Environment
- Safety for Everyone

g). Fibre Optic Cable Installation

- Cable Pulling
- Maximum Pulling Load
- Bend Radius
- Pulling Cables in Ducts
- Colour Codes

h). Fibre Optic Testing

- Types of Test Required
- Flashlight and Visual Fault Locator
- Fibre Microscope
- Attenuation Testing Using LSPM
- Channel Attenuation Calculations
- Optical Time Domain Reflectometer

i). Labs

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