

Convergence Technologies Professional (CTP) – Course 2: Telephony Networking

Telephony Networking is designed to provide detailed coverage of telephony standards and best practices for North America and countries that use the same telephony standards and equipment found in the United Kingdom. You will learn about basic telephony concepts, including ground-start (i.e., earth start) and loop-start trunks, common telephony standards, and PBX elements. From learning about tip and ring to CLASS 5 switches, you will learn about how voice and data are routed across the global public service telephone network.

You will learn about key infrastructure issues, including how equipment must be properly tested and placed. For example, by the end of this course, you will be able to identify the function of the NEBS and BAPT standards, and you will also be able to determine when and how to place standard and plenum cabling. The course also focuses on specific troubleshooting techniques. You will learn how to use common troubleshooting tools, including a digital multimeter, a tone and probe kit, a lineman's test handset (i.e., butt set), and other tools that allow you to wire analog and digital lines.

Finally, you will learn about analog and digital signaling, including analog and digital E&M, ground-start (i.e., earth-start) and loop-start methods. This course also helps to prepare for the Telecommunications Industry Association (TIA) Convergence Technologies Professional (CTP) certification (www.ctpcertified.com).

Topics

Telephony Essentials

- Telephony Basics
- The Central Office
- Cabling and Wiring
- Call-Processing Steps

Investigating the Local Loop

- Inside the Demarcation Point

Infrastructure Issues and Standards

- Common Telephony Issues
- The Network Equipment Building System
- British Approvals Board for Telecommunications (BAPT)
- Office of Telecommunications (OfTel)
- Additional Telephony Regulators and Organizations
- Proper Cabling Procedures
- Securing Equipment

Troubleshooting

- Troubleshooting Terms and Tools
- Troubleshooting Analog and Digital Lines

Analog and Digital Signaling

- Signaling Categories
- In-Band and Out-of-Band Signaling
- Analog Signaling
- Digital Signaling
- Private Integrated Services Network (PISN)
- Signaling System Seven (SS7)
- Connecting to the PBX
- Computer Telephony Integration
- CTI and Telephony Power Issues

Target Audience

Field technicians, voice and telephony technicians, networking administrators, systems engineers, data-communications technicians, technical sales and marketing professionals, data professionals who need telephony, telephony professionals who need data, and any individual interested in pursuing or advancing a data or convergence technologies career.

Job Responsibilities

Implement products and services in accordance with industry standards, apply basic troubleshooting practices, verify interoperability, identify components of a converged network and the challenges of integrating circuit-switched and packet-switched networks, properly implement IP addressing plans, and establish Voice-over IP (VoIP) requirements.

Prerequisites

Students must have completed the *Data Networking* course, or be able to demonstrate equivalent networking knowledge.

Duration

12 hours

To start instructor-led training online: www.ipxconnect.com or 888-479-2663