Convergence Technologies Professional (CTP) – Course 3:
Convergence Technologies

Convergence Technologies is designed to teach you fundamental concepts, standards and practices that combine telephony and data networks into convergence networks. Topics include industry standards and protocols, Voice over Internet Protocol (VoIP), and network convergence. This course will cover the vendor-independent networking skills and concepts required for entry-level professionals seeking employment in the information technology or telecommunications industry. It will also help to prepare you for the Telecommunications Industry Association (TIA) CTP exam.

Topics

Convergence Industry Standards and Protocols
Defining Convergence
Governing Organizations in Convergence Technologies
Institute of Electrical and Electronics Engineers (IEEE)
International Telecommunication Union (ITU)
Internet Engineering Task Force (IETF)
Electronic Industries Alliance (EIA)
Telecommunications Industry Association (TIA)
American National Standards Institute (ANSI)
Telcordia (formerly Bellcore)

Voice-Over-IP Convergence
Investigating VoIP
Investigating Gatekeepers and Gateways
Troubleshooting VoIP
Large Date Frames and Delay Budgets
Quality of Service (QoS) Issues
Voice Compression and Decompression
Transmission Media
VoIP Software and Hardware

Network Convergence
Characteristics of Convergent Networks
Circuit-based vs. Convergence Calling
Convergence Signaling Protocols
H-Series Protocols
Session Initiation Protocol (SIP)
Media Gateway Control Protocol (MGCP)
Network Call Signaling (NCS)
Bandwidth Concerns
Planning a Convergent Network

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* and *Telephony Networking* courses, or be able to demonstrate equivalent networking knowledge.

Duration

6 hours