ICTTEN207 Install and test internet protocol devices in convergence networks

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 2.0.

Application

This unit describes the skills and knowledge required for entry-level installations and testing for internet protocol (IP) based telecommunications networking, using convergent technologies to deliver services of Next Generation Networks (NGN).

It applies to technicians and cable installers who install and maintain IP-based equipment for customer and service providers for NGN services, including internet protocol TV (IPTV), IP security, digital home networks, IP-based cable access TV (CATV), IP core and access networks, home automation, interactive TV, radio frequency identification (RFID), biometric recognition systems, mesh networks, smart grids and cloud computing.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Telecommunications – Telecommunications Networks Engineering

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Gather information to prepare for installation of IP device	1.1 Obtain work health and safety (WHS) requirements and environmental requirements for a given work area, and clarify with appropriate personnel 1.2 Identify safety hazards and notify appropriate personnel 1.3 Obtain identified operating instructions, manuals, and hardware and software testing methodologies

ELEMENT	PERFORMANCE CRITERIA
	1.4 Obtain documentation on a range of IP devices that can be networked according to the open system interconnection (OSI) reference model in networking
	1.5 Obtain the range of required IP devices to be connected to the network and identify the IP-based telecommunications application that will be provided
2. Prepare for installation of IP device	2.1 Select IP device for installation that can be integrated into existing network
	2.2 Obtain appropriate hardware, software, network protocols, peripheral devices and media types and connectors for configuration process
	2.3 Draw physical topology of the device connection to network and seek approval from appropriate personnel
	2.4 Obtain configuration details to start setting up device
3. Configure and test IP device	3.1 Determine network addressing scheme for mapping network connectivity and verify by calculations
	3.2 Assign a valid static IP address to device
	3.3 Use network commands to determine and verify the media access control (MAC) address, the IP address and network performance of the device
	3.4 Determine security threats and initiate security solutions to prevent security breaches according to enterprise procedures
4. Complete and document network installation	4.1 Restore worksite to safe condition according to established safety procedures
	4.2 Record and store essential installation information according to enterprise procedures
	4.3 Notify appropriate person of task completion according to enterprise procedures
5. Test wireless link	5.1 Select types of wireless connections used in telecommunications
	5.2 Set up a wireless link to connect two wireless devices, following safe work practices
	5.3 Transmit data over the link and verify accuracy of received data

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.3-1.5, 3.3, 3.1	• Evaluates information and products from a variety of sources to ensure appropriateness to client needs
Writing	2.3, 3.2, 3.3, 4.2, 4.3, 5.3	• Develops accurate and industry specific drawings • Writes computer code and commands and records technical data, ensuring correct syntax and accuracy
Oral Communication	4.3	• Uses clear language and concepts, and tone and pace appropriate for audience and purpose
Numeracy	3.1	• Performs basic mathematical calculations to compare and verify connectivity
Navigate the world of work	1.1, 3.4, 4.1-4.3, 5.2	• Understands roles and responsibilities for task and makes basic decisions on work and completion parameters • Ensures knowledge of WHS requirements • Recognises organisational expectations and follows explicit protocols and procedures • Seeks clarification when required
Interact with others	1.1, 1.2, 2.4	• Follows instructions regarding what and how to communicate, following predetermined scripts • Initiates a connection with others through verbal, or nonverbal communication responding as appropriate
Get the work done	1.2-1.5, 2.1-2.4, 3.1-3.4, 4.1, 5.1-5.3	• Plans and implements routine tasks and workload, making limited decisions on sequencing, timing and collaboration, and seeks assistance in setting priorities • Makes low-impact decisions within familiar situations, based on a range of predefined or routine solutions and evaluates outcome effectiveness • Responds to predictable routine problems and implements standard or logical solutions • Uses digital technology for basic reading, recording and searching information, and for communications following routine procedures and security requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTTEN207 Install and test internet protocol devices in convergence networks	ICTTEN2219A Install and test internet protocol devices in convergence networks	Updated to meet Standards for Training Packages.	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2