



Australian Government

ICTTEN434 Install, configure and test internet protocol networks

Release: 1

ICTTEN434 Install, configure and test internet protocol networks

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to identify required network elements according to specifications, install for interoperability within network, apply network topologies, protocols and security issues, and troubleshoot when required.

It applies to individuals who are involved in installation, maintenance and upgrade of Information and Communications Technology (ICT) networks in telecommunications or Information Technology Networking provisioning companies.

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
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to install IP network	1.1 Determine internet protocol performance requirements 1.2 Select components and network elements according to technical and organisational requirements 1.3 Obtain vendor specifications and availability of required components 1.4 Develop plans for installation of components according to organisational requirements 1.5 Obtain feedback and approval for plans from required personnel
2. Install and configure IP network	2.1 Install and configure server hardware and software according to organisational and industry standards

ELEMENT	PERFORMANCE CRITERIA
	2.2 Install and configure computer, other hardware and software according to organisational and industry standards 2.3 Install and configure security and integrity software required for network
3. Test and reconfigure IP network	3.1 Test installed software and hardware, utilising available technical tools, to ensure all components are functioning as expected 3.2 Test the network to ensure it is functioning according to specifications 3.3 Resolve problems identified in the modified network
4. Finalise documentation and clean worksite	4.1 Complete hardware and asset recording document according to organisational requirements 4.2 Document installation, boot-configuration procedure according to organisational requirements 4.3 Tabulate test results and finalise user reports 4.4 Complete client report and notify of network status according to organisational policies and procedures 4.5 Lodge all documentation and seek finalised sign off from required personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria

SKILL	DESCRIPTION
Learning	Recognises and anticipates an increasing range of familiar problems, their symptoms and causes, depending on differing operational contingencies, risk situations and environments
Numeracy	Makes calculations required to take test measurements, interpret results and evaluate performance and interoperability of network
Oral communication	Uses listening and questioning techniques to confirm requirements and articulate complex concepts and matters using relevant industry for intended audience
Reading	Recognises and interprets technical, legislative and operational documentation to determine job requirements
Writing	Prepares documentation detailing work performed according to organisational requirements
Teamwork	Cooperates with others as part of familiar routine activities and contributes to specific activities requiring joint responsibility and

SKILL	DESCRIPTION
	accountability
Planning and organising	• Works logically and systematically to monitor, analyse and action job priorities • Implements and adjusts actions according to a predetermined plan
Problem solving	• Makes decisions quickly and intuitively in familiar situations requiring immediate attention, drawing on past experience to identify key variables and determine required course of action
Self-management	• Takes personal responsibility for adherence to legal and regulatory responsibilities relevant to own work context • Recognises and follows explicit and implicit protocols and meets expectations associated with own role
Technology	• Demonstrates an understanding of key principles and concepts underpinning design and operation of digital systems and tools, and applies these as required

Unit Mapping Information

Supersedes and is not equivalent to ICTTEN416 Install, configure and test an internet protocol network.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTTEN434 Install, configure and test internet protocol networks

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- select network elements to plan, prepare and install at least one IP network installation
- configure and test network on at least one occasion
- document completed process.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of organisational procedures including:

- industry-accepted hardware and software products
- data and voice transmission technologies and protocols
- networking technologies
- router-based network architectures
- safe installation of networking products
- interoperability across networking layers.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- field measurement equipment currently used in industry
- network design documentation
- equipment specifications
- network components
- hardware and software

- a live network
- organisational guidelines
- networked (LAN) computers
- wide area network (WAN) service point of presence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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