



Australian Government

ICTTEN302 Install telecommunications network equipment

Release: 1

ICTTEN302 Install telecommunications network equipment

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 to effectively install and test telecommunications network equipment. It includes processes for checking plans, obtaining equipment, and handling equipment and supplies.

It applies to field officers, technicians or technical supervisors employed by carriers, contractors or other service providers, who install new, or replace old, switching, transmission and radio networks and various transmission paths – including cable, optical fibre, radio, microwave and satellite telecommunications equipment.

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. Plan for installation of telecommunications network equipment	1.1 Prepare for given work according to relevant work health and safety (WHS) and environmental requirements 1.2 Notify customer to arrange site access if necessary 1.3 Assess existing and potential site hazards 1.4 Verify location of proposed network equipment installation according to appropriate plans obtained from authorised personnel 1.5 Develop installation plans to ensure minimal workplace disruption and according to relevant legislation, codes, regulations

ELEMENT	PERFORMANCE CRITERIA
	and standards 1.6 Obtain tools and test equipment required for safe work practice 1.7 Notify affected parties of possible network outage, if required
2. Install network hardware and cabling	2.1 Install network equipment according to the plan and manufacturer's instructions, using safe industry practices 2.2 Insert equipment cards and modules 2.3 Install all interconnecting cables to specification 2.4 Confirm service interruption is within limits agreed with customer 2.5 Document all installation drawings for customer
3. Install equipment accessories	3.1 Install alarms according to instruction manuals and specifications 3.2 Install operations administration and maintenance system according to specification 3.3 Install communication facilities for operational staff according to specification, taking into account any special needs of the site and operational staff 3.4 Install operator communication facilities according to needs and specifications
4. Configure and test system	4.1 Install software and configuration instructions according to system specifications, if required 4.2 Test to verify system performance according to customer requirements 4.3 Recommend any possible changes and confirm with customer 4.4 Record all test results
5. Clean up worksite and complete documentation	5.1 Remove and dispose of installation waste and debris from worksite according to environmental requirements 5.2 Restore changes made to work area during installation, to customer's satisfaction 5.3 Complete all installation documents and present to customer 5.4 Declare asset ready for commissioning and integration 5.5 Notify customer and obtain sign-off

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	1.4, 2.1, 2.3, 3.1-3.4, 4.1, 4.2	Interprets information from plans, specifications and manufacturers' instruction manuals
Writing	1.5, 2.5, 4.4, 5.3, 5.5	- Uses clear and specific terminology to produce installation plans and instructions appropriate for audience - Records results of tests in required format using industry-specific language
Oral Communication	1.2, 1.4, 1.7, 2.4, 4.3, 5.5	Uses appropriate strategies to establish and maintain dialogue, notify parties of disruptions and changes to planned work
Numeracy	1.4, 1.5	- Accurately interprets measurements from plans and applies results to installation plans and documents - Calibrates test equipment and calculates and compares results with specifications
Navigate the world of work	1.1, 1.4, 2.4, 5.1	- Takes personal responsibility for following explicit and implicit policies, procedures and legislative requirements - Identifies and acts on issues that contravene relevant policies, procedures and legal requirements
Interact with others	1.2, 1.4, 5.4	- Follows accepted communication practices and protocols - Uses a range of strategies to establish a sense of connection and build rapport with clients/workmates
Get the work done	1.3-1.6, 2.1-2.4, 3.1-3.4, 4.1, 4.2, 5.1, 5.2, 5.4	- Takes responsibility for planning, sequencing and prioritising tasks and own workload for efficiency and effective outcomes, occasionally negotiating changes - Maintains required records and reports according to organisational requirements - Makes routine decisions and implements standard procedures for routine tasks, using formal decision-making processes for more complex and non-routine situations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTTEN302 Install telecommunications network equipment	ICTTEN3056A Install telecommunications network equipment	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>

Assessment Requirements for ICTTEN302 Install telecommunications network equipment

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Performance Evidence

Evidence of ability to:

- plan and install network hardware and cabling according to equipment or system manuals and customer specifications
- configure and test installation
- verify cable continuity
- comply with all related work health and safety (WHS) requirements and work practices
- notify customer of work progress and obtain sign off.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- select appropriate cabling types, connectors and cabling structures
- identify connections to carrier infrastructure or equipment
- recognise electrical and/or optical properties of installation
- describe network and transmission equipment principles
- outline power requirements and electrical safety
- explain typical performance parameters and faults that may be encountered in customer equipment and related connection and transmission media
- describe various test equipment types suitable for tests to be made
- identify handling and environmental compliances for waste disposal.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the telecommunications networks engineering field of work and include access to:

- sites where installation of telecommunications network equipment may be conducted
- network testing equipment currently used in industry
- relevant regulatory and equipment documentation that impact telecommunications network equipment installation activities.

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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