



Australian Government

ICTTEN312 Install telecommunications network equipment

Release: 1

ICTTEN312 Install telecommunications network equipment

Modification History

Release	Comments
Release 1	This version released with ICT Information and Communications Technology Training Package Version 5.0.

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 working for carriers, contractors or other service providers who install switching, transmission and radio networks and various transmission paths. It includes 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 Network 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 Obtain access to site and assess the options for network installation 1.3 Identify existing and potential site hazards 1.4 Verify network equipment installation according to appropriate plans obtained from authorised personnel 1.5 Investigate how equipment is to be connected to existing network

ELEMENT	PERFORMANCE CRITERIA
	systems 1.6 Develop and finalise installation plans to ensure minimal workplace disruption according to relevant legislation, regulations, codes and standards 1.7 Obtain tools and test equipment required for safe work practice 1.8 Notify affected parties of possible network outage
2 Install network hardware and cabling	2.1 Install network equipment according to plan and manufacturer instructions, using safe industry practices 2.2 Install equipment or insert equipment cards and modules 2.3 Install all cables according to specifications 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 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 as required 4.2 Test to verify system performance according to customer requirements 4.3 Recommend changes as required 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 according to customer 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 those language, literacy, numeracy and employment skills that are essential to performance, but not explicit in the performance criteria.

Skill	Description
Reading	Interprets information from plans, specifications and manufacturer instruction manuals
Writing	- 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	Uses appropriate strategies to establish and maintain dialogue, notify parties of disruptions and changes to planned work
Numeracy	- 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	- 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	- Follows accepted communication practices and protocols - Uses a range of strategies to establish a sense of connection and build rapport with customers and co-workers
Get the work done	- 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 enterprise 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

ICTTEN312 Install telecommunications network equipment supersedes and is equivalent to ICTTEN302 Install telecommunications network equipment.

Links

Companion Volume Implementation Guides are available from VETNet -

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

Assessment Requirements for ICTTEN312 Install telecommunications network equipment

Modification History

Release	Comments
Release 1	This version released with ICT Information and Communications Technology Training Package Version 5.0.

Performance Evidence

The candidate must demonstrate the ability to perform the tasks outlined in the elements, performance criteria, and foundation skills, and to:

- plan for 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 work health and safety (WHS) and environmental requirements and work practices
- notify customer of work progress and obtain sign-off.

Note: Evidence must be provided at least once when a specific volume or frequency is not stated.

Knowledge Evidence

The candidate must demonstrate the knowledge required to perform the tasks outlined in the elements, performance criteria, and foundation skills, which includes knowledge about:

- WHS requirements and environmental procedures relating to the activity and site conditions
- cabling types, connectors and cabling structures
- equipment and connections to carrier infrastructure and internet service provider (ISP) technologies for single and multi-dwelling environments:
 - carrier, asymmetric digital subscriber line, very-high-bit-rate digital subscriber line, fibre network termination device (NTD), hybrid fibre coaxial (HFC) modems
- electrical and/or optical properties of installation
- network and transmission equipment principles
- power requirements and electrical safety
- typical performance parameters and faults that may be encountered in customer equipment and related connection and transmission media

- various test equipment types suitable for tests to be made
- handling and environmental compliance for waste disposal.
-

Assessment Conditions

Skills must be assessed in a workplace or simulated environment where conditions are typical of those in a telecommunications work environment or workplace.

Access is required to:

- site/s where installation of telecommunications network equipment can 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

Companion Volume Implementation Guides are available from VETNet -

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