



Australian Government

ICTTEN506 Integrate new systems and equipment into the telecommunications network

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 to follow predetermined procedures to ensure operability of the system while minimising impact on affected customers.

It applies to individuals working as field officers, technicians or technical supervisors, for telecommunications carriers, contractors or other service providers, who install new, additional and replacement equipment in telecommunications systems and networks, including support and administrative infrastructures for integration of new and emerging internet protocol (IP) based technologies.

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 integration strategy	1.1 Determine nature and scope of the integration activity of systems from appropriate personnel 1.2 Prepare an integration management plan in agreement with appropriate personnel 1.3 Obtain outage management plan if available, otherwise prepare a contingency plan to ensure the system integration goes according to a plan

ELEMENT	PERFORMANCE CRITERIA
	1.4 Identify affected systems, traffic and customers 1.5 Notify alarm management centre of action planned and obtain authority to proceed 1.6 Notify customers affected by the outage of time and likely duration
2. Integrate and test new system in the network	2.1 Plan and conduct activities over a set of integration phases safely and according to the integration management plan 2.2 Load operational software according to specification to ensure interoperability of new and existing system 2.3 Undertake tests by simulating network traffic and ensure test results are recorded and stored according to enterprise requirements 2.4 Analyse test results and ensure established parameters have all been met 2.5 Evaluate problems during the testing phase and rectify or escalate procedure 2.6 Analyse alarms for fault conditions in conjunction with the network management centre 2.7 Locate and detect faults within capability, or escalate according to enterprise policy 2.8 Check operations administrative maintenance system and alarms are connected according to instruction manual 2.9 Activate new alarms and deactivate old alarms
3. Complete administrative tasks	3.1 Complete integration records according to manufacturer's specification and enterprise policy and make recommendations for improvement for future planning 3.2 Notify appropriate personnel of project completion 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	2.2-2.4, 2.8, 3.1	Identifies, analyses and evaluates information to determine regulatory and technical requirements to assist with project planning
Writing	1.2-1.6, 2.3, 3.1	Prepares written reports and workplace documentation that communicate complex information clearly and effectively
Oral Communication	1.1, 1.2, 1.5, 1.6	- Participates in verbal exchanges with personnel and customers to ensure requirements are properly understood - Employs listening and questioning techniques to confirm understanding
Numeracy	2.4	Uses mathematical formulae to calculate measurements, analyse results and make adjustments to equipment and settings
Navigate the world of work	2.1, 2.7, 3.1	- Keeps up-to-date with relevant legislation and considers implications of this when planning work, with specific reference to safety - Adheres to organisational procedures and protocols in completing work tasks
Interact with others	1.1, 1.2, 1.5, 1.6, 3.2	Selects and uses communication conventions and protocols to suit purpose and audience
Get the work done	1.3, 1.4, 2.1, 2.2, 2.3, 2.5-2.9	- Uses a combination of formal, logical planning processes and an increasingly intuitive understanding of context to identify relevant logistical requirements, test strategies and resources - Understands key principles and concepts underpinning design and operation of digital systems and tools, and applies these as required - Implements actions according to a predetermined plan, making adjustments if necessary - Makes decisions quickly and intuitively in familiar situations requiring immediate attention, drawing on past experience to identify key variables and determine the best course of action - Uses analytical processes to decide on a course of action, establishing criteria for deciding between options, and seeking input and advice from others before taking action when necessary

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTTEN506 Integrate new systems and equipment into the telecommunication s network	ICTTEN5060A Integrate new systems and equipment into the telecommunication s network	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 ICTTEN506 Integrate new systems and equipment into the telecommunications network

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Performance Evidence

Evidence of ability to:

- develop a contingency plan
- implement an integration management plan
- test systems and equipment and associated features being integrated
- apply enterprise escalation and outage procedures
- negotiate procedures and activity on the network and timing of integration
- integrate new systems and equipment to plan and specifications.

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:

- summarise connections to carrier infrastructure or customer interface units (CIU)
- describe electrical and/or optical properties to be measured
- consider health and safety issues, including electrical, optical and electromagnetic radiation (EMR) when working with telecommunications networks
- describe telecommunication network equipment and emerging technology networks
- evaluate suitable tests and test equipment types
- explain typical performance parameters and faults that may be encountered in network equipment and related connection and transmission media.

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 should be typical of those experienced in the telecommunications networks engineering field of work and include access to:

- sites on which integration procedures can be conducted
- relevant regulatory and equipment documentation that impacts integration
- testing equipment currently used in industry
- capacity to simulate network traffic
- a network and equipment for integration
- equipment and systems manuals, specifications and enterprise policies.

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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