



Australian Government

Assessment Requirements for ICTOPN512 Analyse and integrate specialised optical devices

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 7.0.

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:

- integrate at least two specialised optical devices in a network.

In the course of the above, the candidate must:

- evaluate and document integration to the network and recommend enhancements
- submit required documentation to personnel
- analyse specialised optical devices
- comply with all related work health and safety (WHS) requirements and work practices.

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:

- locations suitable for integrating specialised optical devices
- types of network integration options available for specialised optical devices
- characteristics and requirements of:
 - evaluation reports
 - business cases
 - design plans
 - impact risk assessments
 - contingency plans
- attenuation characteristics of optical fibres
- principles of operation of dense wavelength division multiplexing (DWDM)
- features and operating requirements of the following test equipment:
 - a hand-held optical power meter
 - an optical spectrum analyser

- a transmission test set
- dispersion characteristics of optical fibres
- role of dispersion compensation devices
- standard electrostatic discharge precautions
- functions of an optical add-drop multiplexer (OADM) and reconfigurable optical add-drop multiplexer (ROADM)
- functions and features of gain equalisation techniques
- International Telecommunications Union (ITU) wavelength grid for DWDM
- measurement of dispersion in optical systems
- optical amplifier operation
- optical fibre connector types and characteristics
- optical fibre types and characteristics
- optical return loss (ORL)
- path protection and protection switching
- protocols used on optical DWDM systems
- role of reflectance in optical systems
- ring topologies and linear network topologies
- tunable laser sources and their characteristics
- WHS requirements that impact the safe inspection of optical connectors and the safe measurement of optical power from laser transmission systems
- required legislation, codes, company work practices, regulations and standards and environmental requirements for scoped work.

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:

- test equipment used in industry
- manufacturer technical documentation, legislation, codes and standards.

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

Links

Companion Volume Implementation Guide is found on VETNet -

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