



Australian Government

Assessment Requirements for ICTOPN510 Test and commission dense wavelength division multiplexing transmission systems

Release: 1

Assessment Requirements for ICTOPN510 Test and commission dense wavelength division multiplexing transmission systems

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:

- test and commission at least two dense wavelength division multiplexing (DWDM) transmission systems.

In the course of the above, the candidate must:

- plan and coordinate commission
- test and DWDM transmission system according to required regulations and procedures
- complete commissioning documentation according to organisational requirements.

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:

- legislation, codes, regulations and standards, work health and safety (WHS), and organisational requirements for scoped work, including:
 - reporting requirements
 - commissioning test procedures
- organisational hazard risk control measures
- procedures to review equipment for faults and compliance with organisational regulations
- causes of alarms in long term stability tests
- principles of operating DWDM transmission systems
- standard electrostatic discharge precautions
- features and operating requirements of the following test equipment:
 - a hand-held optical power meter
 - a transmission test set
 - an optical spectrum analyser

- functions of an optical add drop multiplexer
- how to set up the following:
 - internet protocol (IP) addressing
 - subnet mask
 - dynamic host configuration protocol (DHCP)
 - default gateway
- International Telecommunications Union (ITU) wavelength grid for DWDM
- identify types and characteristics of optical fibre connector
- path protection and protection switching
- physical optical loopbacks and software loopbacks
- protocols used on optical DWDM systems
- ring topologies and linear network topologies
- specific health and safety requirements that impact the safe inspection of optical connectors and the safe measurement of optical power from laser transmission systems.

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.

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>