Australian Government

ICTOPN512 Analyse and integrate specialised optical devices

Release: 1

ICTOPN512 Analyse and integrate specialised optical devices

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to analyse and integrate specialised optical devices into existing optical networks to support higher bandwidths associated with Next Generation Networks (NGN).

It applies to individuals who work for network carriers, service providers or other private and public organisations, who have experience in optical transmission. They combine technical expertise with a range of analytical, research and planning skills to develop integrated solutions for particular business needs.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Telecommunications – Optical Networks

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
1. Plan for specialised optical devices for network integration	1.1 Obtain and review required legislation, codes, company work practices, regulations and standards, work health and safety (WHS) and environmental requirements, personal protective equipment, and hazard identification tools for scoped work 1.2 Obtain plans and drawings of existing optical networks from relevant personnel and review locations for suitability of integrating specialised optical devices 1.3 Analyse and evaluate integration options that satisfy customer network requirements and device specifications 1.4 Prepare and submit the business case for adopting recommended

	integration solutions 1.5 Prepare design plan with interconnection details to existing system and installation options and seek approval to proceed from customer 1.6 Conduct an impact risk assessment of the hardware integration with the network operations centre (NOC) 1.7 Create a contingency plan and address risks identified in impact risk assessment
2. Integrate specialised optical devices into the network	2.1 Install specialised optical devices into existing network according to design plan 2.2 Test the network, evaluate results and verify optical network performance with integrated specialised optical devices in operation
3. Document evaluation of integrating specialised optical devices into dense wavelength division multiplexing (DWDM) networks	3.1 Produce an updated design plan and submit to customer with archived copies filed according to organisational policies 3.2 Prepare an evaluation report on network performance with specialised optical devices and recommendations for enhancements 3.3 Notify NOC of job completion and obtain sign-off from relevant personnel

Foundation Skills

SKILL	DESCRIPTION
Numeracy	• Uses mathematical formulae to evaluate technical data and interpret results
Oral communication	• Uses listening and questioning skills to confirm technical requirements • Participates in verbal exchanges of ideas and solutions and uses required, detailed and clear language to address key personnel and clients
Reading	• Interprets textual information from required sources to identify and plan for all job requirements and adhere to procedures and standards
Writing	• Completes standard reports and documentation using clear and technically specific language and numerical data
Teamwork	• Identifies requirements of important communication exchanges, selecting required channels, format, tone and content to suit purpose and audience and monitoring impact
Planning and organising	• Works independently within workplace parameters with a strong sense of responsibility and ownership of goals, plans, decisions and outcomes

SKILL	DESCRIPTION
	• Monitors adherence to legal and regulatory rights and responsibilities with specific reference to safe industry practices
Problem solving	• Accepts responsibility for planning and sequencing complex tasks and workload, negotiating key aspects with others taking into account capabilities, efficiencies and effectiveness • Takes responsibility for high-impact decisions in complex situations involving many variables and constraints
Technology	• Identifies systems, devices and applications with potential to meet current and/or future needs

Unit Mapping Information

Supersedes and is equivalent to ICTOPN506 Analyse and integrate specialised optical devices in the network.

Links

Companion Volume Implementation Guide is found on VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2