



Australian Government

ICTOPN605 Manage optical ethernet transmission

Release: 1

ICTOPN605 Manage optical ethernet transmission

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 manage ethernet optical transmission systems. It includes analysis of fault conditions that may occur.

It applies to individuals, who work as members of a team with carrier networks and use optical technologies. Individuals in these roles are excellent communicators and skilled technicians.

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
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan to test optical ethernet link	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 Confirm that worksite adheres to safety requirements and organisational guidelines 1.3 Determine the technical environment and required network components 1.4 Report on infrastructure and confirm that ethernet link meets performance requirements
2. Specify architecture requirements for	2.1 Discuss architecture requirements for managing optical ethernet transmission with relevant personnel

managing optical ethernet transmission	2.2 Verify and list required architecture components 2.3 Determine functions and frameworks for the system to operate across network boundaries in consideration of performance criteria
3. Manage optical ethernet link	3.1 Conduct work in compliance with testing requirements and agreed upon procedures 3.2 Document and analyse test results in comparison with industry benchmarks 3.3 Report test results to relevant personnel according to organisational procedures and guidelines

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Numeracy	Uses mathematical formulae to evaluate technical data and interpret results
Oral communication	- Uses listening and questioning skills to confirm technical and operational requirements - Participates in verbal exchanges of ideas and solutions and uses required, detailed and clear language to address internal and external 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	- Sequences and schedules complex activities, monitors implementation and manages required communication - Takes responsibility for high-impact decisions in complex situations involving many variables and constraints
Problem solving	- Works independently within parameters with a strong sense of responsibility and ownership of goals, plans, decisions and outcomes - Monitors adherence to legal and regulatory rights and responsibilities with specific reference to safe industry practices
Technology	Identifies systems, devices and applications with potential to meet current and/or future needs

Unit Mapping Information

Supersedes and is equivalent to ICTOPN601 Manage optical ethernet transmission.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for ICTOPN605 Manage optical ethernet transmission

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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:

- manage optical ethernet transmissions in at least two networks.

In the course of the above, the candidate must:

- identify test performance parameters and architectural requirements for managing optical ethernet transmission
- plan optical ethernet transmission tests from performance requirements
- select and perform testing regimes on ethernet optical transmissions
- comply with all 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:

- principles and techniques for documenting and reporting test results
- organisational safety requirements and hazard detection guidelines
- industry benchmarks for managing optical ethernet transmission
- intricacies of the following optical ethernet systems:
 - system architecture
 - function and framework within a network environment
 - required testing techniques and analysis
- explain WHS requirements relating to:
 - handling of optical fibre
 - personal safety issues
 - use of laser light sources

- 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

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