



Australian Government

ICTBWN302 Install optical fibre splitters in fibre distribution hubs

Release: 1

ICTBWN302 Install optical fibre splitters in fibre distribution hubs

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 install optical fibre splitters in fibre distribution hubs (FDH) as part of a fibre to the premises (FTTP) network.

It applies to individuals who work in teams to deliver very high speed broadband capacity for the National Broadband Network (NBN) initiative.

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

Unit Sector

Telecommunications – broadband and wireless networks

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Set up and prepare for installation	1.1 Obtain relevant legislation, codes, regulations and standards for compliance when conducting work 1.2 Scope work by obtaining project plan from appropriate personnel and arrange for site access to comply with security arrangements 1.3 Notify appropriate personnel of identified safety hazards at worksite 1.4 Determine type of FDH enclosure and optical splitter module from project plan, and identify splitter installation requirements using work instructions

	1.5 Obtain tools and safety equipment and material to perform tasks safely and efficiently 1.6 Select and use required protective equipment and make site safe and secure for installation work 1.7 Obtain splitter module, visually inspect for splitter module damage and replace if necessary
2. Install splitter module in FDH	2.1 Follow work health and safety (WHS) and environmental requirements, and identify and avoid other services 2.2 Open enclosure and assess suitability of FDH according to project plan 2.3 Locate next available slot in splitter module area of FDH for installation 2.4 Insert splitter module and secure according to manufacturer's specifications 2.5 Inspect installed splitter module and surrounding area for completeness of job
3. Prepare and connect splitter input fibres to feeder cable	3.1 Locate feeder port to be connected and remove protective cover in preparation 3.2 Use optical power meter to verify feeder port is not active 3.3 Clean adaptor and mated connector according to manufacturer's specifications, and route splitter input fibre to correct feeder port 3.4 Remove dust cap and clean end face according to manufacturer's specifications to prevent possible damage from mating contaminated connectors 3.5 Connect input fibre to feeder port and record connection according to organisational policy
4. Connect output fibres and test splitter	4.1 Determine output fibre to be connected and required adapter in distribution field 4.2 Clean adapter and fibre end-face according to manufacturer's specifications 4.3 Route output fibre and connect with adapter in distribution field 4.4 Test operation of optical splitter for optical power levels at operating wavelength division multiplexing (WDM) optical wavelengths 4.5 Record connections, test results and park unused fibre leads for safety reasons according to organisational policy
5. Clean up work site	5.1 Replace all dust caps on internal enclosures and close FDH 5.2 Remove installation waste and debris from worksite and dispose of according to environmental requirements

	5.3 Notify appropriate personnel of job completion and obtain sign off
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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	1.1, 1.2, 1.4, 2.1-2.4, 3.2-3.4, 4.1, 4.2, 4.5	Reads and interprets specifications and other documentation from a variety of sources and consolidates information to determine requirements
Writing	1.2, 1.3, 3.5, 4.5, 5.3	Accurately completes relevant reports and documentation using clear and technically specific language and numerical data
Oral Communication	1.2, 1.3, 5.3	- Participates in verbal exchanges with key personnel using appropriate, clear and detailed language to exchange information, ideas or solutions - Uses listening and questioning skills to confirm understanding of requirements
Numeracy	3.2, 3.5, 4.4	Performs mathematical calculations to check, interpret and confirm results of system tests
Navigate the world of work	1.4, 2.1, 3.5, 4.5, 5.2	- Complies with explicit policies and procedures - Explores and implements where identified the implicit expectations of policies and procedures
Interact with others	1.2, 1.3, 5.3	- Identifies and takes steps to follow accepted communication practices and protocols - Complies with work instructions and contributes to work group discussions using accepted conventions
Get the work done	1.1, 1.4-1.7, 2.2-2.5, 3.1-3.5, 4.1-4.5, 5.1, 5.2	- Plans and implements routine tasks and workload, making limited decisions on sequencing, timing and collaboration, and seeks assistance in setting priorities - Responds to predictable routine problems and implements standard or logical solutions - Uses the main features and functions of digital tools to complete work tasks and access information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTBWN302 Install optical fibre splitters in fibre distribution hubs	ICTBWN3088B Install optical fibre splitters in fibre distribution hubs	Updated to meet Standards for Training Packages Minor changes to Performance Criteria	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 ICTBWN302 Install optical fibre splitters in fibre distribution hubs

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Performance Evidence

Evidence of the ability to:

- comply with all work health and safety (WHS) regulations, standards and work practices
- safely use optical power test equipment
- accurately measure optical signals at two wavelength division multiplexing (WDM) wavelengths
- correctly install splitter in the enclosure
- connect input and out optical fibres to the splitter
- test optical splitter
- complete connection recording.

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:

- identify the location and summarise the contents of relevant organisational policies and procedures
- discuss WHS risks and control measures when working with optical fibre and equipment
- explain propagation of light in optical communication systems
- outline the role of transmitters and receivers in optical communication systems
- identify and describe the critical aspects of cleaning of connectors
- summarise specific WHS requirements relating to the handling of optical fibre and the use of laser light sources
- explain WDM applications.

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 must be typical of those experienced in the telecommunications – broadband and wireless networks field of work and include access to:

- a fibre distribution hub and relevant optical splitter
- tools, equipment and personal protective equipment currently used in industry
- relevant regulatory and equipment documentation that impacts on work activities.

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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