



Australian Government

ICTOPN403 Prepare activity plans and specifications for a fibre to the x installation

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 2.0.

Application

This unit describes the skills and knowledge required to prepare the activity plans and specifications required by field technical staff to deploy a fibre to the x (FTTx) installation for optical access networks.

It applies to individuals who work in a supervisory capacity within a team environment. They are technically skilled and integral to the delivery of a very high speed broadband through the access network 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 – 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. Prepare for FTTx planning tasks	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 the worksite 1.4 Obtain tools and safety equipment and material to perform tasks

	safely and efficiently 1.5 Select and use required protective equipment and make site safe and secure for installation work 1.6 Identify and select plant and machinery for installation work activities
2. Plan FTTx activities and develop specifications	2.1 Follow work health and safety (WHS) and environmental requirements for given work and identify and avoid other services 2.2 Inspect proposed cable route visually according to cable plan and identify barriers to the cable installation 2.3 Modify cable plan, if required, and notify appropriate personnel 2.4 Prepare installation activities for FTTx provisioning according to project plan 2.5 Prepare installation specifications according to safe work practices and manufacturer's instructions to include optical fibre cable size, distribution area (DA), distribution joint including lead-in multiport serving area (DLMSA), enclosures, location of optical network terminations (ONT), location and type of fibre distribution hub (FDH) and optical splitter provisioning 2.6 Verify cable length from customer access network fibre centre to end-user ONT is within 20 km operating limit 2.7 Consult with appropriate personnel to confirm project scope, installation requirements and installation specifications according to project plan
3. Complete documentation and obtain sign-off	3.1 Complete and present updated planning activities documentation to authorised personnel 3.2 Complete and provide updated specification documentation to vendors for supply of material and resources 3.3 Submit documentation to appropriate person for approval and sign-off

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, 2.2, 2.5, 2.7	Interprets textual information from relevant sources to plan, identify all job requirements and adhere to procedures and standards

Writing	1.2, 1.3, 2.3, 2.7, 3.1, 3.2	Accurately completes relevant reports and documentation using clear and technically specific language and numerical data
Oral Communication	1.2, 1.3, 2.3, 2.6, 2.7, 3.1	Uses listening and questioning skills to confirm understanding of requirements, participates in a verbal exchange of ideas and solutions and uses appropriate, detailed and clear language to address key personnel and customers
Numeracy	2.6	Uses simple mathematical equations to determine equipment and installation requirements
Navigate the world of work	1.1, 1.3-1.5, 2.1, 2.5	- Understands nature and purpose of own role and associated responsibilities and how it contributes to the work of others in the immediate work context - Takes personal responsibility for adherence to legal and regulatory responsibilities relevant to own work context with specific reference to workplace safety
Interact with others	3.1-3.3	Selects appropriate form, channel and mode of communication for a specific purpose relevant to own role
Get the work done	1.2, 1.4-1.6, 2.2, 2.4, 2.6, 2.7	- Takes responsibility for own workload, negotiating some key aspects with others - Develops plans to manage relatively complex, non-routine tasks with an awareness of how they may contribute to longer term operational and strategic goals - Makes decisions in relatively complex situations, taking a range of constraints into account - Recognises and takes responsibility for addressing predictable and some less predictable problems in familiar work contexts - Reflects on ways digital systems and tools are used, or could be used to achieve work goals and begins to recognise strategic as well as operational applications

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTOPN403 Prepare activity plans and specifications for a fibre to the x installation	ICTOPN4117A Prepare activity plans and specifications for a fibre to the x installation	Updated to meet standards for Training Packages	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 ICTOPN403 Prepare activity plans and specifications for a fibre to the x installation

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Performance Evidence

Evidence of ability to:

- determine the scope of the installation
- visually inspect proposed cable route
- prepare installation activities for fibre to x (FTTx) provisioning
- prepare and document FTTx designs and specifications and submit for approvals
- comply with all related work health and safety (WHS) requirements and work practices.

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:

- outline properties of passive optical devices, including splitters and couplers
- identify FTTx installation equipment, including tools and safety equipment
- explain FTTx specifications
- outline legislative privacy, safety and environmental requirements including:
 - WHS requirements relating to handling of optical fibre and using laser optical sources
 - other personal safety issues
 - plant and equipment safety to be used in installation plans
 - discussion of manufacturer's requirements for safe operation of equipment
- summarise operation of optical transmitters and receivers
- identify organisational policy and procedures relevant to this work
- discuss propagation of light in optical communication systems
- summarise the role of optical transmitters and receivers in optical communication systems
- explain the concept of wavelength division multiplexing (WDM)
- discuss the importance of a knowledge of site engineering

- describe typical issues and challenges in preparing an activity plan for a site
- demonstrate a knowledge of the workplace and industry environment and their relationship to this work.

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 \— Optical Networks field of work and include access to:

- vendor product information and installation guides
- relevant regulatory and equipment documentation impacting installation 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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