



Australian Government

ICTNPL402 Plan the deployment of access network architectures

Release: 1

ICTNPL402 Plan the deployment of access network architectures

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 plan deployment of network architecture when conducting access network telecommunications work.

It applies to individuals with a range of telecommunications skills and extensive knowledge of core and access network capabilities of the service provider. It prepares individuals for entry into planning and design for network additions and implementations to accommodate network growth and new technologies within the industry.

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

Unit Sector

Telecommunications – Network Planning

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. Scope the project	1.1 Prepare for work according to site specific safety requirements and enterprise work health and safety (WHS) processes and procedures 1.2 Determine type of access network by accessing and using network information sources 1.3 Produce a brief on how access network architecture components relate to the larger network and their impact on the work 1.4 Evaluate equipment type and technologies to be considered, to determine availability and compatibility with existing network equipment

	1.5 Obtain resources and equipment needed for the work according to enterprise procedures and check for correct operation and safety 1.6 Assess capacity limitations of various platforms in the context of the work to ensure maximum network performance 1.7 Determine product capability and calculate allowable capacity of the access network to allow for network growth
2. Produce deployment plan for an Access Network	2.1 Conduct planning work using current equipment components and complying with access network deployment rules and exemption process criteria 2.2 Produce a preliminary plan on deployment of the network that maintains integrity of the access network 2.3 Discuss unexpected situations with appropriate personnel, with consideration to job specifications, safety and enterprise procedures to establish a solution 2.4 Review plan to ensure it complies with all standards and codes required when working on network access, and where appropriate make adjustments
3. Complete work and report its impact on network access	3.1 Produce final deployment plan including recommendations agreed with customer 3.2 Provide a report on network monitoring techniques used to manage the network to ensure it is performing at optimum level

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, 1.4-1.7, 2.1, 2.4	Identifies and evaluates written and visual text in specialised workplace documentation to determine key information and specific requirements
Writing	1.3, 2.2, 3.2	Develops material for a specific audience using clear and detailed language and expected forms and conventions
Oral Communication	1.6, 1.7, 2.3, 3.1, 3.2	Articulates specific information using an appropriate tone and vocabulary for the intended audience

Numeracy	1.6, 1.7, 3.1, 3.2	Employs mathematical calculations to determine features and limitations of different networks
Navigate the world of work	1.1, 1.5, 2.1, 2.3, 2.4	- Takes personal responsibility for following explicit and implicit policies, procedures and legislative requirements - Identifies and acts on issues that contravene relevant policies, procedures and legal requirements
Interact with others	2.3	- Selects and uses appropriate conventions and protocols when communicating with clients and co-workers in a range of work contexts - Uses a range of strategies to establish a sense of connection and build rapport with clients and co-workers
Get the work done	1.1-1.7, 2.1, 3.1	- Takes responsibility for planning, sequencing and prioritising tasks and own workload for efficiency and effective outcomes - Makes routine decisions and implements standard procedures for routine tasks, using formal decision-making processes for more complex and non-routine situations - Addresses less predictable problems and initiates standard procedures in response, applying problem-solving processes in determining a solution

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTNPL402 Plan the deployment of access network architectures	ICTNPL4108A Plan the deployment of access network architectures	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 ICTNPL402 Plan the deployment of access network architectures

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Performance Evidence

Evidence of ability to:

- gather data appropriately within information sources and evaluate how the data relates to the access architecture
- source current major equipment and technologies used in an access network and detail their compatibilities
- accurately plan deployment of an access network architecture, including deployment rules, capacity and capability management and monitoring techniques
- complete work within a timeframe typically expected of the discipline, work function and industrial environment.

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 the features of an access network, including:
 - architectures and geographical categorisation
 - information sources
 - technology and equipment
- define capacity and capability management
- identify capacity limitation of various platforms
- describe commercial considerations of access network deployment
- identify compatibility issues of technology and equipment
- explain currency of technology and equipment use
- summarise enterprise deployment rules and rationale
- identify exemption process criteria

- identify major equipment components of a modern access architecture
- describe monitoring techniques to manage the access network
- outline network topologies
- identify product capability and availability allowable within an access network
- outline telecommunications access networks issues and challenges.

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 – Network Planning field of work and include access to:

- network design documentation and other site-related documentation
- equipment specifications
- live network or training facilities
- organisational guidelines
- networked computers
- networked telecommunications components.

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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