



**Australian Government**

# **ICTTEN807 Manage voice, data and internet protocol network solutions**

**Release: 1**

# ICTTEN807 Manage voice, data and internet protocol network solutions

## Modification History

| Release   | Comments                                                                                                     |
|-----------|--------------------------------------------------------------------------------------------------------------|
| Release 1 | This version first released with ICT Information and Communications Technology Training Package Version 1.0. |

## Application

This unit describes the skills and knowledge required to integrate new solutions to an existing network and manage change implementation.

It applies to individuals with excellent technical skills working as network engineering or senior technical staff within project management roles with authority to direct activities of installation staff, manufacturers and vendors.

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

## Unit Sector

Telecommunications Networks Engineering

## 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. Develop voice, data and IP network solutions  | <p>1.1 Produce requirements for voice, data and IP network solutions for delivery of new voice, data and IP networks to customers using forecasting demand data</p> <p>1.2 Prepare plan for organisational change control process and integration of new solutions within a complete network infrastructure</p> <p>1.3 Produce test management schedule for testing process of network product solution</p> <p>1.4 Translate complex design and architecture requirements to</p> |

| ELEMENT                                                                    | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                            | <p>traceable software application characteristics according to design requirements</p> <p>1.5 Develop network architecture solution specifications using industry process according to design requirements</p> <p>1.6 Develop software and hardware resource profiling and select suitable vendor for negotiations</p> <p>1.7 Translate complex requirements into software packaging</p> <p>1.8 Produce software deployment mapping and version control to ensure complete integration and compatibility of network application solution to existing system</p> <p>1.9 Complete configuration management and provide complex input network design requirements</p> |
| 2. Critically analyse test results of voice, data and IP network solutions | <p>2.1 Use design document and integration document software to replicate issues exhibited in test environment</p> <p>2.2 Certify software solution compatibility and compliance to requirements using web-based test management tool (quality centre) to conduct performance evaluation tests</p> <p>2.3 Critically analyse test reports to evaluate load balancing and network security issues in test environment</p> <p>2.4 Resolve complex issues in interface to isolate defects</p>                                                                                                                                                                         |
| 3. Manage deployment of voice, data and IP network solutions               | <p>3.1 Plan and prepare evidence for customer acceptance and certification</p> <p>3.2 Plan and manage transition to operation activities required for transition to operation of integrated IP network solution</p> <p>3.3 Prepare installation failures procedure to make changes while maintaining service levels</p> <p>3.4 Manage change implementation plan to maintain system stability</p>                                                                                                                                                                                                                                                                  |
| 4. Maintain currency of voice, data and IP network solutions               | <p>4.1 Manage ongoing monitoring activities to prolong new IP network solution life cycle for cost-effective business reasons</p> <p>4.2 Produce tuning activities to make efficient use of resources</p> <p>4.3 Analyse current demand for resources to derive forecasts and future requirements</p> <p>4.4 Produce a capacity plan predicting infrastructure resource needs to achieve agreed service levels</p>                                                                                                                                                                                                                                                 |

## 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           | 1.2, 1.4, 1.5, 2.3                              | <ul style="list-style-type: none"><li>Organises, evaluates and interprets complex technical documentation, such as software and hardware manuals and design specifications</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Writing           | 1.3, 1.5, 1.9, 3.1, 3.3, 4.4                    | <ul style="list-style-type: none"><li>Prepares clear and concise workplace documentation including reports and recommendations incorporating technical language to communicate complex information clearly and effectively</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Numeracy          | 1.1, 2.3, 4.1, 4.3                              | <ul style="list-style-type: none"><li>Uses numerical information to interpret results, evaluate different types of technical data, take measurements and determine cost-effective outcomes</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Get the work done | 1.1-1.8, 2.1, 2.2, 2.4, 3.1, 3.2, 3.4, 4.1, 4.4 | <ul style="list-style-type: none"><li>Uses combination of formal, logical planning processes and an increasingly intuitive understanding of context for complex, high-impact activities with strategic implications</li><li>Demonstrates a sophisticated understanding of principles, concepts, language and practices associated with the digital world and uses this to devise solutions</li><li>Implements actions according to a predetermined plan, making adjustments if necessary</li><li>Takes responsibility for high-impact decisions in complex situations involving many variables and constraints</li><li>Uses formal analytical and lateral thinking techniques for identifying issues, and developing and evaluating procedures for network solutions</li></ul> |

## Unit Mapping Information

| Code and title current version | Code and title previous version    | Comments                      | Equivalence status |
|--------------------------------|------------------------------------|-------------------------------|--------------------|
| ICTTEN807 Manage voice, data   | ICTTEN7224A Manage voice, data and | Updated to meet Standards for | Equivalent unit    |

| <b>Code and title<br/>current<br/>version</b>    | <b>Code and title<br/>previous<br/>version</b> | <b>Comments</b>                                                                                     | <b>Equivalence<br/>status</b> |
|--------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------|
| and internet<br>protocol<br>network<br>solutions | internet<br>protocol<br>network<br>solutions   | Training<br>Packages.<br><br>Recoded and<br>minor changes<br>to PCs to meet<br>AQF<br>requirements. |                               |

## 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 ICTTEN807 Manage voice, data and internet protocol network solutions

## Modification History

| Release   | Comments                                                                                                     |
|-----------|--------------------------------------------------------------------------------------------------------------|
| Release 1 | This version first released with ICT Information and Communications Technology Training Package Version 1.0. |

## Performance Evidence

Evidence of the ability to:

- produce a test management schedule
- develop network architecture solution specifications
- develop software and hardware resource profiling and select suitable vendor for negotiations
- undertake configuration management of voice, data and internet protocol (IP) network, and provide complex input network design requirements
- analyse test reports to evaluate load balancing and network security issues
- plan and prepare evidence for customer acceptance
- prepare installation failures procedure
- produce tuning activities to enable efficiencies
- produce capacity plan predicting infrastructure resource needs.

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:

- summarise installation failure procedures
- investigate change management strategies relevant to introduction of new technologies
- explain new IP network solutions
- identify and contrast software and hardware resources relevant to project
- explain system integration techniques
- explain test management scheduling
- provide detailed summary of tuning activities necessary to maintain currency
- explain use of forecasting demand data
- identify and contrast various test management tools.

## 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 should be typical of those experienced in the Telecommunications – Telecommunications Networks Engineering field of work and include access to:

- a site where management of voice, data and IP network solutions can be undertaken
- software and hardware resources suitable for developing, deploying and managing voice, data and IP network solutions
- tests and equipment currently used in industry.

Assessors must satisfy NVR/AQTF assessor requirements.

## Links

Companion Volume implementation guides are found in VETNet -

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