



Australian Government

ICTTEN603 Undertake network traffic management

Release: 1

ICTTEN603 Undertake network traffic management

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 monitor, analyse and improve network performance for the purpose of effectively managing traffic flow in telecommunications networks.

It applies to individuals working as field officers, technicians or technical supervisors for carriers, contractors or other service providers, who manage network traffic and make recommendations for capacity planning switching and transmission networks.

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

Unit Sector

Telecommunications – 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. Evaluate network capacity and traffic problems	1.1 Interrogate network alarms to identify areas of route and circuit unavailability 1.2 Assess planned and unplanned outages to determine network unavailability and verify restoration times 1.3 Interrogate system to identify traffic status using network management system 1.4 Analyse system alert to identify real and potential traffic problems 1.5 Analyse customer complaints and traffic measurement data to

ELEMENT	PERFORMANCE CRITERIA
	identify network problems 1.6 Activate and deactivate semi-permanent controls active in the network on a regular basis to simulate irregular traffic
2. Develop strategies to overcome network traffic problems	2.1 Conduct traffic measurements across all identified routes 2.2 Analyse results including historical data to make assessment of traffic volume requirements 2.3 Determine specific thresholds, loading and grading levels to alter traffic flows 2.4 Liaise with personnel to determine amendments to plan, based on funding parameters and budgeted levels 2.5 Develop strategies, based on traffic analysis and patterns, to control traffic and prevent congestion or other traffic problems 2.6 Develop strategies for recovery where traffic congestion occurs 2.7 Develop contingency plans to allow for problems during network changes
3. Apply short and long term solutions	3.1 Implement software changes according to planned strategy 3.2 Develop short-term ad hoc solutions where only a temporary solution is required 3.3 Ensure reversal action can be initiated in cases of temporary solutions 3.4 Implement contingency plan where required 3.5 Undertake monitoring of changes and take measurements to assess outcomes of variations 3.6 Prepare a report based on analysis of measurements for appropriate personnel with recommendations for further changes or actions 3.7 Review and monitor strategies regularly and initiate corrective action where required
4. Detect and take action on potential traffic congestion	4.1 Measure and analyse traffic loads to assess potential congestion problems and determine possible impact 4.2 Control traffic flow to prevent processor overloads 4.3 Evaluate potential traffic increases for impact on the network and develop contingencies to control traffic flow if required
5. Provide traffic indicators for capacity planning	5.1 Predict future potential traffic trends and requirements using data on current and historical traffic patterns 5.2 Identify potential network traffic problems and make

ELEMENT	PERFORMANCE CRITERIA
	recommendations to network planners 5.3 Complete reports with recommendations and forward to enterprise planners and account managers

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	1.5, 2.2, 5.1	Organises, evaluates and interprets technical specifications and related documentation from a range of complex texts
Writing	2.5-2.7, 3.6, 5.3	Prepares clear and concise workplace documentation, including reports and recommendations incorporating technical language, to communicate complex information clearly and effectively
Oral Communication	2.4	- Participates in verbal exchanges using specific and relevant language suitable to audience - Employs listening and questioning techniques to confirm understanding
Numeracy	1.5, 2.1-2.4, 3.5, 4.1, 5.1	- Uses mathematical formulas to interpret data and make projections about traffic flow - Uses mathematical formulae to estimate and plan project costs within business budgets
Interact with others	2.4, 5.2, 5.3	- Collaborates with others to achieve joint outcomes - Selects and uses appropriate conventions and protocols when communicating with personnel in a range of work contexts
Get the work done	1.1-1.4, 1.6, 2.5-2.7, 3.1-3.4, 3.7, 4.2, 4.3	- Uses a combination of formal, logical planning processes and an increasingly intuitive understanding of context for complex, high-impact activities with strategic implications - Approaches problem-solving in diverse ways, recognising that there is no single formula that applies in all situations - Uses formal processes to monitor implementation of solutions and reflect on outcomes - Uses digital systems and tools to enter, store and

		analyse data
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTTEN603 Undertake network traffic management	ICTTEN6043A Undertake network traffic management	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 ICTTEN603 Undertake network traffic management

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Performance Evidence

Evidence of ability to:

- implement a contingency plan
- conduct traffic measurements
- develop contingencies to control traffic flow
- identify potential network traffic problems and make recommendations
- provide information for capacity planning.

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:

- explain customer policies and service level agreements
- outline network management planning principles
- summarise traffic blocking, congestion and dimensioning principles
- explain traffic engineering
- summarise traffic patterns
- outline transmission type and signals that may be encountered
- clarify typical network topologies, switching, routing and transmission techniques
- summarise various network management systems suitable for conducting traffic evaluations.

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 networks engineering field of work and include access to:

- a network and equipment for traffic monitoring and management
- equipment and systems manuals, specifications and enterprise policy.

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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