



Australian Government

ICTTEN614 Conduct network system optimisation and administration

Release: 1

ICTTEN614 Conduct network system optimisation and administration

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to maintain the integrity of network support systems and software, for both system platforms and applications of computer systems, including local area networks (LAN) and wide area networks (WAN).

It applies to individuals, working as system administration support officers for service providers and large organisations, who manage and administer networks and make recommendations for improved customer support.

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. Prepare to conduct network system administration	1.1 Obtain work details and scope from relevant personnel and arrange for site access in compliance with required security arrangements, legislation, codes, regulations and standards 1.2 Prepare methodology to conduct platform network optimisation and administration according to organisational requirements 1.3 Interrogate and monitor system platforms to determine error logs, ageing time on processes, database checks and system loadings 1.4 Notify relevant personnel of problems and provide advice and guidance on solutions 1.5 Conduct system measurements from a user perspective on

ELEMENT	PERFORMANCE CRITERIA
	response times and initiate investigations on problems where specifications are not being met 1.6 Assess availability of data storage space and initiate required action 1.7 Develop procedures for system backup and restoration, and review for efficiency of operation and amend, where required
2. Provide application support to system users	2.1 Produce a set of procedures for formal meetings with users on a regular basis, and discuss and support user issues 2.2 Devise training and related instructions for database optimisation and administration
3. Investigate unusual network activity special investigations	3.1 Evaluate requests for investigation to determine detail of action required 3.2 Prepare activity plan including timelines, specific goals, investigative team and resources required to conduct an investigation 3.3 Conduct investigation methodically according to plan and record findings 3.4 Analyse findings and prepare and forward reports, including recommendations to the requesting body
4. Investigate unusual network administration	4.1 Conduct investigation and record findings according to organisational requirements 4.2 Produce a cost-benefit analysis of database optimisation schedule and evaluate the return on investment (ROI) 4.3 Analyse investigative findings and prepare reports and recommendations for relevant personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Numeracy	• Uses mathematical formulae to make statistical calculations about traffic predictions • Uses mathematical formulae to complete cost-benefit analysis
Oral communication	• Provides verbal instructions and guidance using specific and required language suitable to audience • Employs listening and questioning techniques to confirm understanding

SKILL	DESCRIPTION
Reading	Organises, evaluates and interprets technical specifications and required documentation from a range of complex texts
Writing	- Prepares workplace documentation including training instructions - Produces reports on system administration and investigations, incorporating technical language, to communicate complex information clearly and effectively
Planning and organising	Uses a combination of formal, logical planning processes and an understanding of context for complex, high-impact activities with strategic implications
Problem solving	- Recognises and addresses some unfamiliar problems of increasing complexity within own scope - Uses formal processes to monitor implementation of solutions and reflect on outcomes
Technology	- Uses digital systems and tools to enter, store and monitor data - Considers the strategic and operational potential of digital technologies to achieve work goals, enhance work processes and enhance solutions

Unit Mapping Information

Supersedes and is equivalent to ICTTEN602 Undertake system administration.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for ICTTEN614 Conduct network system optimisation and administration

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- conduct optimisation and administration activities for at least two network systems.

In the course of the above, the candidate must:

- prepare methodologies for system maintenance
- produce cost-benefit analyses and training for database optimisation and administration
- review development of training instructions
- conduct system measurements
- develop support processes for system users
- manage user accounts and security procedures
- investigate potential system administration problems and make recommendations.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- required legislation, codes, company work practices, regulations and standards, workplace health and safety (WHS) requirements for scoped work
- methodologies for database system administration and optimisation
- cost-benefit analysis of database optimisation schedules
- return on investment (ROI) calculations
- producing training and related instructions
- functions and features of:
 - back-up systems
 - computer systems
 - error logs

- database checks
- system loading
- user support networks
- hierarchical user profiling systems
- user account security
- profiling systems
- network monitoring tools
- activity plans
- workplace reports
- methods to calculate ageing time on processes
- processes for investigating user requests and actions.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- a network for maintenance and analysis of special investigations
- 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.

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