

# Mapping - ICAS3032B Provide Network Systems Administration *(superseded)*

## ICA05 Information and Communications Technology

This unit defines the competency required to technically manage elements of a network including contribution to disaster recovery plan.

### The following units are linked and form an appropriate cluster:

ICAI3020B Install and optimise operating system software

ICAS3120C Configure and administer a network operating system

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

### Prerequisite Units:

ICAI3101B Install and manage network protocols

ICAS3024B Provide basic system administration

### Employability Skills

The unit contains employability skills

### Resources:

Competencies have been taken from ICA05 Training Package and the ICA40405 Certificate IV (Networking).

This document maps the respective unit of competency from the training package to that of the learner guides, detailing the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

The elements describe the essential outcomes of a unit of competency.

### Assessments:

To attain competence in the unit ICAS3032B – Provide Network Systems Administration – Students must:

Complete formative activities which may include class discussions, question and answer sessions and activities, these will help the student develop their underpinned knowledge over a period of time in preparation for the summative assessments.

### Summative Assessment:

1. Successfully complete the Summative Skills and Knowledge Assessment Test provided at the end of ICAS3032B learner guide – this is an open book test, 30 questions in total. The time allotted is 90 minutes, the test will be scheduled for the last week of semester. The student must correctly answer all questions.
2. Successfully complete the Practical Project Exercises as provided in the workbook utilising the equipment and software in workplace or simulated workplace, these projects are to be completed throughout the semester.

The simulated training activities in the classroom will involve individuals, pairs and small group activities.

Element	Performance Criteria	Formative Activities	Project Exercises	Skills & Knowledge Test
1. Provide client access and security	1.1. Provide logons, passwords and applications file access to <b>users</b> and prepare <b>documentation</b> in line with <b>organisational requirements</b>	Readings throughout student workbook and supplementary text Skills & knowledge activity Q. 8, 9 from learner guide – pg47	Topic 1 Exercise 1 workbook – pg31	Supplementary text-Networking Essentials Part 2-Unit 4 page 61-Intro to network security as reference  Skills and Knowledge Assessment Test Questions 1 - 8
	1.2. Evaluate records of <b>user</b> accounts to determine access privileges and usage	Readings throughout student workbook and supplementary text Skills & knowledge activity Q. 6 from learner guide – pg46	Topic 1 Exercise 1 workbook – pg31	Supplementary text-Networking Essentials Part 2-Unit 4 page 61-Intro to network security as reference  Skills and Knowledge Assessment Test Questions 6 - 11
	1.3. Take necessary action to ensure maintenance of <b>system</b> integrity and security	Readings throughout student workbook and supplementary text Skills & knowledge activity Q. 6, 10, 11, 12 from learner guide – pg48	Topic 1 Exercise 1 workbook – pg31	Supplementary text-Networking Essentials Part 2-Unit 4 page 61-Intro to network security as reference  Skills and Knowledge Assessment Test Questions 1 - 8

Element	Performance Criteria	Formative Activities	Project Exercises	Skills & Knowledge Test
2. <b>Input into and disseminate disaster recovery plan</b>	2.1. Provide input for the organisation's disaster recovery plan	Readings throughout student workbook and supplementary text Skills & knowledge activity Q. 13, 14 from learner guide – pg48	Topic 1 Exercise 1 workbook – pg31	Supplementary text-Networking Essentials Part 2-Unit 4 page 61-Intro to network security as reference  Skills and Knowledge Assessment Test Questions 12 - 16
	2.2. Disseminate disaster recovery plan to <b>user</b> as required	Readings throughout student workbook and supplementary text Skills & knowledge activity Q. 15, 16, 17, 18, 19 from learner guide – pg49 - 55	Topic 2 Exercise 2 workbook – pg38	Supplementary text- Networking Essentials Part 2-Unit 8 page 118 Disaster recovery planning as reference  Skills and Knowledge Assessment Test Questions 14 - 16

Element	Performance Criteria	Formative Activities	Project Exercises	Skills & Knowledge Test
3. Monitor network performance	3.1. Perform diagnostic tests associated with administering the network or system	Readings throughout student workbook and supplementary text Skills & knowledge activity Q. 20, 21, 22 from learner guide – pg58 - 60	Topic 2 Exercise 2 workbook – pg38	Supplementary text- Networking Essentials Part 2-Unit 8 page 118 Disaster recovery planning as reference  Skills and Knowledge Assessment Test Questions 17 - 18
	3.2. Analyse and respond to diagnostic information	Readings throughout student workbook and supplementary text Skills & knowledge activity Q. 21, 25 from learner guide pg59 - 63	Topic 3 Exercise 3 workbook – pg45	Supplementary text- Networking Essentials Part 2-Unit 6 page 96 Monitoring network performance as reference  Skills and Knowledge Assessment Test Questions 19 - 21
	3.3. Monitor <b>software</b> usage including inappropriate or illegal use	Readings throughout student workbook and supplementary text Skills & knowledge activity Q. 23, 24 from learner guide pg61 - 62	Topic 3 Exercise 3 workbook – pg45	Supplementary text- Networking Essentials Part 2-Unit 6 page 96 Monitoring network performance as reference  Skills and Knowledge Assessment Test Question 25
	3.4. Delete illegal <b>software</b> from the system	Readings throughout student workbook and supplementary text Skills & knowledge activity Q. 1, 25 from learner guide pg41 - 63	Topic 3 Exercise 3 workbook – pg45	Supplementary text- Networking Essentials Part 2-Unit 6 page 96 Monitoring network performance as reference  Skills and Knowledge Assessment Test Questions 22 - 23
	3.5. Monitor <b>hardware</b> response time and other performance indicators	Readings throughout student workbook and supplementary text Skills & knowledge activity Q. 3, 5, 26 from learner guide pg44 - 64	Topic 3 Exercise 3 workbook – pg45	Supplementary text- Networking Essentials Part 2-Unit 7 page 110 Recording software licenses as reference  Skills and Knowledge Assessment Test Questions 24 and 26
	3.6. Determine and action methods for improving network and systems efficiency according to <b>organisational guidelines</b>	Readings throughout student workbook and supplementary text Skills & knowledge activity Q. 27 from learner guide pg68	Topic 3 Exercise 3 workbook – pg45	Supplementary text- Networking Essentials Part 2-Unit 6 page 96 Monitoring network performance as reference  Skills and Knowledge Assessment Test Questions 27 - 30

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

	Project Exercises	Skills & Knowledge Test
• Interpretation of technical manuals	✓	✓
• One-to-one instruction	✓	✓
• Questioning and active listening for conveying and clarifying information	✓	✓
• Client needs assessment methods	✓	✓
• System administration skills	✓	✓
• Customer service skills in a range of contexts at various levels	✓	✓
• Diagnostic skills	✓	✓

<b>Required Knowledge</b>		
	<b>Project Exercises</b>	<b>Skills &amp; Knowledge Test</b>
• Organisational and technical systems	✓	✓
• Organisational access and security procedures	✓	✓
• Software copyright responsibilities	✓	✓
• Operating systems supported by the organisation	✓	✓
• Operating systems functions and basic features	✓	✓
• Organisational procedures for protection against and elimination of computer viruses	✓	✓
• Advanced knowledge of software features supported by the organisation	✓	✓
• Security and network guidelines and procedures	✓	✓
• Policy and procedures for deleting, restoring and archiving of files	✓	✓
• Approaches to back-up and restoring computer data	✓	✓
• Disaster recovery policy	✓	✓
• Procedures for creating logons	✓	✓
• File access	✓	✓
• In-house and vendor support	✓	✓
• OH&S legislation relating to the use of equipment	✓	✓
<b>Evidence Guide</b>		
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package		
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit:</b>		
<b>Evidence of the following is essential</b>	<b>Project Exercises</b>	<b>Skills &amp; Knowledge Test</b>
• Assessment must confirm competency in sustaining the operation of the network through maintenance of network integrity and the performing of diagnostic tests. Assessment must also confirm competency in contributing to the formulation of a disaster recovery plan and providing the client with an optimised network that complies with organisational guidelines	✓	✓
To demonstrate competency in this unit the learner will require access to:	✓	✓
• Peers and supervisors for obtaining information on the extent and quality of the contribution made		
• Live network		

Context of and specific resources for assessment	Project Exercises	Skills & Knowledge Test
<p>Demonstrating competency in network systems administration would include knowledge by recall in a narrow range of areas; and demonstrate basic practical skills, such as the use of relevant systems administration tools.</p>	✓	✓
<ul style="list-style-type: none"> <li>Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there are clear guidelines on managing a network system and associated software and hardware</li> </ul>	✓	✓
<ul style="list-style-type: none"> <li>The breadth, depth and complexity of knowledge and skills in this competency would cover selecting, adapting and transferring skills and knowledge to new environments and providing technical advice and some leadership in resolution of specified problems. This would be applied across a range of roles in a variety of contexts with some complexity in the extent and choice of options available.</li> </ul>	✓	✓
<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>Performance of a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints would be characteristic.</li> <li>Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved</li> </ul>	✓	✓
Methods of Assessment	Project Exercises	Skills & Knowledge Test
<p>The purpose of this unit is to define the standard of performance to be achieved in the workplace. In undertaking training and assessment activities related to this unit, consideration should be given to the implementation of appropriate diversity and accessibility practices in order to accommodate people who may have special needs. Additional guidance on these and related matters is provided in ICA05 Section 1.</p> <ul style="list-style-type: none"> <li>Competency in this unit should be assessed using summative assessment to ensure consistency of performance in a range of contexts. This unit can be assessed either in the workplace or in a simulated environment. However, simulated activities must closely reflect the workplace to enable full demonstration of competency.</li> <li>Assessment will usually include observation of real or simulated work processes and procedures and/or performance in a project context as well as questioning on underpinning knowledge and skills. The</li> </ul>	✓	✓

questioning of team members, supervisors, subordinates, peers and clients where appropriate may provide valuable input to the assessment process. The interdependence of units for assessment purposes may vary with the particular project or scenario.		
Guidance information for assessment	✓	✓
Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: <ul style="list-style-type: none"> <li>• ICAI3020B Install and optimise operating system software</li> <li>• ICAS3120B Configure and administer a network operating system</li> </ul>	✓	✓
Demonstration of competency would involve: <ul style="list-style-type: none"> <li>• Demonstrating basic operational knowledge of a network system in a range of areas</li> <li>• Applying appropriate knowledge and skills in managing and administering a network within a limited range of predictable outcomes</li> <li>• Performing a range of tasks where choice between options for network performance is required</li> </ul>	✓	✓
Additionally, an individual demonstrating this competency would be able to: <ul style="list-style-type: none"> <li>• Demonstrate some relevant theoretical knowledge</li> <li>• Apply a range of well-developed skills</li> <li>• Apply known solutions to a variety of predictable problems</li> <li>• Perform processes that require a range of well-developed skills where some discretion and judgement is required</li> <li>• Interpret available information, using discretion and judgement</li> <li>• Take responsibility for own outputs in work and learning</li> <li>• Take limited responsibility for the output of others</li> <li>• Maintain knowledge of industry products and services</li> </ul>	✓	✓

<b>Employability Skills</b>  Industry/enterprise requirements for this qualification include the following facets:		Assessment Tools		
		Class Activities	Project Exercise	Skills & Knowledge Test
<b>Communication</b>	<ul style="list-style-type: none"> <li>writing skills for business, requiring depth in some areas, and analysis and evaluation of information in a defined range of areas (e.g. when hardware and asset recording documentation is completed in line with organisational requirements)</li> </ul>	✓	✓	✓
<b>Teamwork</b>	<ul style="list-style-type: none"> <li>consulting with the work team to review proposed changes against current and future business requirements</li> <li>establishing and improving work teams in an IT environment</li> </ul>	✓	✓	
<b>Problem solving</b>	<ul style="list-style-type: none"> <li>debugging code</li> <li>solving network problems related to the installation of hardware, software and networks</li> </ul>	✓	✓	

<p><b>Initiative and enterprise</b></p>	<ul style="list-style-type: none"> <li>• <i>developing new criteria and procedures for performing current practices</i></li> <li>• <i>identifying, analysing and evaluating information from a variety of sources</i></li> </ul>	<p>✓</p>	<p>✓</p>	
<p><b>Self management</b></p>	<ul style="list-style-type: none"> <li>• <i>taking responsibility for own output in relation to specified quality standards</i></li> <li>• <i>working within the Australian Computer Society code of ethics regarding security, legal, moral and ethical issues</i></li> </ul>		<p>✓</p>	
<p><b>Planning and organising</b></p>	<ul style="list-style-type: none"> <li>• <i>creating project plans to guide the development of systems methodologies</i></li> <li>• <i>planning and designing an intranet</i></li> <li>• <i>preparing feasibility reports taking into account the scope, time, cost, quality, communications and risk management</i></li> </ul>	<p>✓</p>	<p>✓</p>	
<p><b>Learning</b></p>	<ul style="list-style-type: none"> <li>• <i>maintaining knowledge of tools and software applications and the goods and services provided</i></li> <li>• <i>obtaining client evaluation and feedback</i></li> <li>• <i>providing one-to-one instruction for clients and users</i></li> </ul>	<p>✓</p>	<p>✓</p>	
<p><b>Technology</b></p>	<ul style="list-style-type: none"> <li>• <i>selecting and using software and hardware diagnostic tools, including multimedia contexts and automated testing environments</i></li> </ul>	<p>✓</p>	<p>✓</p>	<p>✓</p>