



TECHNICAL &
VOCATIONAL
EDUCATION &
TRAINING

National Competency Standard for Information Technology Technician Qualifications Code: SOC02S17V2

Key for coding

DESCRIPTION	REPRESENTED BY
Industry Sector as per ESC (Three letters)	Construction Sector (CON) Fisheries and Agriculture Sector (FNA) Transport sector (TRN) Tourism Sector (TOU) Social Sector (SOC) Foundation (FOU)
Competency Standard	S
Occupation within industry Sector	Two digits 01-99
Unit	U
Common Competency	1
Core Competency	2
Optional/ Elective Competency	3
Assessment Resources Materials	A
Learning Resources Materials	L
Curricula	C
Qualification	Q1, Q2 etc
MNQF level of Qualification	L1, L2 etc
Version Number	V1, V2 etc
Year of endorsement of standard, qualification	By two digits Example- 07

1. Endorsement Application for Qualification 01		
2. NATIONAL CERTIFICATE III IN INFORMATION TECHNOLOGY TECHNICIAN		
3. Qualification code: SOC02SQ1L317		Total Number of Credits: 40
4. Purpose of the qualification Holder of this qualification is to be recognized as a quality individual, possessing the skills and knowledge required to work as an information technology technician.		
5. Regulations for the qualification		National Certificate III in Information Technology Technician will be awarded to those who are competent in units 1+2+3+4+5+6+7+8+9+10+11
6. Schedule of Units		
Unit Title	Unit Title	Code
LEVEL 3		
1.	Work effectively in an information technology environment	SOC02S1U01V2
2.	Apply occupational health and safety procedures	SOC02S1U02V2
3.	Operate a word processing and Database applications (Word Processing)	SOC02S1U03V2
4.	Operate a word processing and Database applications (spreadsheets)	SOC02S1U04V2
5.	Operate a word processing and Database applications (Database)	SOC02S1U05V2
6.	Operate a word processing and Database applications (Presentation)	SOC02S1U06V2
7.	Operate computer hardware	SOC02S1U07V2
8.	Determine client computing problems and actions	SOC02S1U08V2
9.	Maintain equipment/Software inventory	SOC02S1U09V2
10.	Work hardware peripherals	SOC02S1U10V2
11.	Install software applications	SOC02S1U11V2
7. Accreditation Requirements		The training provider should have the training facility to provide the trainees with hands-on experience related to this qualification
8. Recommended Sequencing		As appearing under the section 06

1. Endorsement Application for Qualification 02

2. NATIONAL CERTIFICATE IV IN INFORMATION TECHNOLOGY TECHNICIAN

3. Qualification code:

SOC02SQ2L417

Total Number of Credits: 120

4. Purpose of the qualification

Holder of this qualification is to be recognized as a quality individual, possessing the skills and knowledge required to work as an information technology technician.

5. Regulations for the qualification

National Certificate IV in Information Technology Technician will be awarded to those who are competent in units
1+2+3+4+5+6+7+8+9+10+11+12+13+14+15+16+17+18+19+20+21

1	Work effectively in an information technology environment	SOC02S1U01V2
2	Apply occupational health and safety procedures	SOC02S1U02V2
3	Operate a word processing and Database applications (Word Processing)	SOC02S1U03V2
4	Operate a word processing and Database applications (spreadsheets)	SOC02S1U04V2
5	Operate a word processing and Database applications (Database)	SOC02S1U05V2
6	Operate a word processing and Database applications (Presentation)	SOC02S1U06V2
7	Operate computer hardware	SOC02S1U07V2
8	Determine client computing problems and actions	SOC02S1U08V2
9	Maintain equipment/Software inventory	SOC02S1U09V2
10	Work hardware peripherals	SOC02S1U10V2
11	Install Software Applications	SOC02S1U11V2
12	Integrate commercial computing packages	SOC02S2U01V2
13	Maintain System integrity	SOC02S2U02V2
14	Install Computer Systems and Networks	SOC02S2U03V2
15	Configure Computer Systems and Networks	SOC02S2U04V2
16	Diagnose and Troubleshoot Computer Systems	SOC02S2U05V2
17	Maintain Computer Systems and Networks	SOC02S2U06V2
18	Install hardware to a network	SOC02S2U07V2
19	Install, configure and test a router	SOC02S2U08V2
20	Install, operate and troubleshoot a small enterprise branch network	SOC02S2U09V2
21	Install, configure and test network security	SOC02S2U10V2

Competency Standard for IT Technician

7.Accreditation Requirements	The training provider should have the training facility to provide the trainees with hands-on experience related to this qualification
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Unit Details

No	Unit Title	Code	Level	No of Credits
1	Work effectively in an information technology environment	SOC02S1U01V2	3	2
2	Apply occupational health and safety procedures	SOC02S1U02V2	3	2
3	Operate a word processing and Database applications (Word Processing)	SOC02S1U03V2	3	3
4	Operate a word processing and Database applications (spreadsheets)	SOC02S1U04V2	3	5
5	Operate a word processing and Database applications (Database)	SOC02S1U05V2	3	5
6	Operate a word processing and Database applications (Presentation)	SOC02S1U06V2	3	3
7	Operate computer hardware	SOC02S1U07V2	3	3
8	Determine client computing problems and actions	SOC02S1U08V2	3	3
9	Maintain equipment/Software inventory	SOC02S1U09V2	3	4
10	Connect hardware peripherals	SOC02S1U10V2	3	5
11	Install software applications	SOC02S1U11V2	3	5
12	Integrate commercial computing packaging	SOC02S2U01V2	4	8
13	Maintain System integrity	SOC02S2U02V2	4	8
14	Install Computer Systems and Networks	SOC02S2U03V2	4	10
15	Configure Computer Systems and Networks	SOC02S2U04V2	4	8
16	Diagnose and Troubleshoot Computer Systems	SOC02S2U05V2	4	8
17	Maintain Computer Systems and Networks	SOC02S2U06V2	4	8
18	Install hardware to a network	SOC02S2U07V2	4	10
19	Install, configure and test a router	SOC02S2U08V2	4	10
20	Install, operate and troubleshoot a small enterprise branch networks	SOC02S2U09V2	4	10
21	Install, configure and test network security	SOC02S2U10V2	4	10
TOTAL				90

Packaging of National Qualifications:

National Certificate III in Information Technology Technician will be awarded to those who are

Competency Standard for IT Technician

competent in units 1+2+3+4+5+6+7+8+9+10+11

Qualification Code: SOC02SQ1L317

National Certificate IV in IT Technician will be awarded to those who are competent in units

1+2+3+4+5+6+7+8+9+10+11+12+13+14+15+16+17+18+19+20+21

Qualification Code: SOC02SQ2L417

DESCRIPTION OF AN IT TECHNICIAN

Information Technology (IT) Technician provides front line technical support to individuals in various departments of an organization. They provide general IT support or specialist technical help in particular areas. They are expected to work under the supervision of an IT manager or a system administrator who would provide guidance and supervision.

Skills & Interests

IT technicians need to be:

- competent and confident users of IT, with a good knowledge of computers,
- familiar with a range of computer software packages,
- good at solving problems,
- able to explain technical issues clearly,
- familiar with different operating systems and computer languages

COMPETENCY STANDARD DEVELOPMENT PROCESS

The competencies were determined based on the analysis of the tasks expected to be performed by the IT technician in the Maldives. The task analysis was based on the existing job descriptions used in both private and public sector. Competency standards used for similar type of training in other countries were also examined.

Unit 01

Unit Title	Work effectively in an information technology environment				
Descriptor	This unit defines the competency required to support work effectively in an information technology environment				
Code	SOC ₀₂ S ₁ U ₀₁ V ₂	Level	3	Credit	2

ELEMENTS OF COMPETENCIES	PERFORMANCE CRITERIA
1. Comply with general IT policies and procedures	1.1 Roles of key players of the Information Technology organisation are determined and briefly explained 1.2 Career choices and options are determined 1.3 Policies and procedures are complied with, as directed by supervisor
2. Promote the organisation and the IT department in a Manner consistent with the organization mission	2.1 Role of the Information Technology functions within the organisation is briefly explained 2.2 Organisation is promoted in a positive way
3. Identify Information Technology equipment/ software and operating system supported by the organization	3.1 Information Technology equipment/software and operating system supported by the organisation are identified 3.2 Equipment, location and service requirements are identified according to organisational requirements

Range Statement Key player

May include but are not limited to: Information Technology organisations, vendors of IT products and services, IT professional bodies, industry publications and Government Departments involved in IT industry promotion, employer organisations, relevant unions.

Clients

Variables may include but are not limited to: internal and external customers, employers and employees.

Organisational

Safety policies, Occupational Health and Safety procedures, ethical work practices

Information Technology Department

The structure of the Information Technology department may be a separate branch, department, division or an integrated function of an organisation.

Organisational

Size and type of organisation and organisational values and culture may vary.

Information Technology Components

Can include hardware, software and communications packages.

Client user

May be a department within an organisation or a third party and so the relationship and ease of access will vary.

Documentation and Reporting

Audit trails, naming standards, version control.

Organisational Standards

May be based upon formal, well-documented methodologies, or non-existent. For training delivery purposes, best practice examples from industry will be used.

Assessment Guide Forms of assessment

Continuous assessments together with collected evidence of performance will be suitable for this unit.

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects for Assessment

Assessment must confirm the ability to assimilate into the Information Technology department by demonstrating organisational values through the organisational code of conduct in work place interactions.

UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none">• Basic principles of ethical practice when promoting the organisation in a manner consistent with the organisational mission• Broad knowledge of organisational code of conduct and values that are consistent with the organizational mission• Basic understanding of organisational systems Current industry accepted hardware and software products with broad knowledge of general features and capabilities• Broad knowledge base of vendor product directions	<ul style="list-style-type: none">• Reading and writing at a level where general workplace documents can be written and understood.• Verbal communication is clear and precise, for example when explaining the role of key players in the Information Technology organisation.• Problem-solving is limited to basic known problems within normal routines, for example, when complying with policies and procedures as directed by supervisor• Basic analysis skills in relation to normal routine work processes, for example, when complying with policies and procedures as directed by supervisor

	<ul style="list-style-type: none">• Using the features of applications, for example, when complying with policies and procedures as directed by supervisor• Basic skills in interpreting technical information, for example, when complying with policies and procedures as directed by supervisor
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Unit 02

Unit Title	Apply occupational health and safety procedures				
Descriptor	This unit defines the competency required to support the organisation's Occupational Health and Safety principles and practices.				
Code	SOC02S1U02V2	Level	3	Credit	2

Element of competencies	Performance Criteria
1. Determine Occupational Health and Safety (OH&S) issues relating to immediate work environment	<p>1.1. Occupational Health and Safety issues in the immediate workplace are assessed and action to rectify the problem is taken or reported to supervisor</p> <p>1.2. Workplace and OH&S procedures are followed to ensure safe working environment</p>
2. Document and Disseminate Occupational Health & Safety requirements	<p>2.1. Information relating to Occupational Health and Safety regulations and requirements are obtained</p> <p>2.2. OH&S regulations impacting upon the Information Technology client area are determined and documented</p> <p>2.3. Documents are submitted to supervisor for verification</p> <p>2.4. Occupational Health and Safety documents are provided to all work stations</p> <p>2.5. Occupational Health and Safety documents relating to IT are updated and re-issued</p> <p>2.6. as required</p>
3. Provide basic ergonomic advice	<p>3.1. Ergonomic requirements of clients are assessed</p> <p>3.2. Advice is provided to clients based on vendor requirements, workplace policies and the latest OH&S information</p> <p>3.3. Advice is documented and passed on to client and supervisor</p>

Range Statement

Organisational

Variables may include, but are not limited to: Occupational Health and Safety legislation; organisation safety procedures; work stations and work environment procedures; presence and impact of OH&S manager.

Advice on ergonomics

Includes: Occupational Health and Safety procedures; using and cleaning Visual Display Units (VDUs); advice on footrests, exercises, times for breaks, armrests, chairs.

Operating Systems

Command line and Graphical User Interface

Literacy skills

In relation to work place documentation may vary

OH and S standard

As per company, statutory and vendor requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency as well as Occupational Health and Safety guidelines related to use of screen-based equipment, computing equipment and peripherals, and ergonomic work stations, security procedures and customisation requirements.

Organisational Standards

May be based upon formal, well-documented methodologies, or non-existent. For training delivery purposes, best practice examples from industry will be used.

Quality process

Some organisations may be quality certified and have well-documented standards for addressing quality while others will not.

Assessment Guide Form of assessment

Continuous assessments together with collected evidence of performance will be suitable for this unit.

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects of evidence

Assessment must confirm the ability to comply with Occupational Health and Safety requirements relating to the use of computing equipment through the practical demonstration of the identification of unsafe practices and taking action to correct them.

UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none">• General ergonomic principles to avoid back, wrist and eye strain• Procedures and exercises for avoiding strain and injury• Current business practices in relation to preparing reports• Broad knowledge of Organizational Health and Safety requirements in relation to work safety, environmental factors and ergonomic considerations	<ul style="list-style-type: none">• Reading and writing are at a level where basic workplace documents are understood and presented• Questioning and active listening is employed to confirm information• Plain English literacy and communication skills in relation to dealing with clients and team members• Problem solving skills for a defined range of predictable problems

Unit 03

Unit Title	Operate a word processing and Database applications (Word-processing)				
Descriptor	This unit defines the competency required to correctly operate word processing applications and perform basic operations				
Code	SOC02S1U03V2	Level	3	Credit	3

Element of competencies	Performance Criteria
1. Create Documents	<p>1.1 Open documents and add text and symbols according to information requirements</p> <p>1.2 Use document templates as required</p> <p>1.3 Use various tools including help, search and replace, spell check, undo and simple formatting tools throughout the drafting of a document</p> <p>1.4 Add, select, copy, delete or move paragraphs within a document</p> <p>1.5 Create a mailing list with acceptable layout for mail merge purposes without the loss of relevant information</p> <p>1.6 Merge mailing list with other document</p> <p>1.7 Save document to correct directory / folder</p>
2. Customise basic settings to meet page layout conventions	<p>2.1 Adjust page display modes and size to meet user requirements and / or special needs</p> <p>2.2 Modify toolbar to meet user and document uses</p> <p>2.3 Change font type, size and colour for the purpose of the document</p> <p>2.4 Apply alignment and justification options and line spacing according to document formatting requirements</p> <p>2.5 Modify margin sizes to suit the purpose of the documents</p> <p>2.6 View multiple documents at once</p>

<p>3. Format Document</p>	<p>3.1 Use italics, bold, underline and hyphenation as required and within organisational guidelines</p> <p>3.2 Use existing styles within a document according to organizational requirements (style guides, document template layout)</p> <p>3.3 Copy selected format from another area in the document or from another active</p> <p>3.4 Document</p> <p>3.5 Use formatting tools (such as page breaks, tabs, indent, borders, bookmarks, hyperlinks, lists) as required within the document</p> <p>3.6 Insert headers and footers and incorporate all necessary information and formatting styles</p> <p>3.7 Save document in another format and/ or in a format for posting to a web site</p> <p>3.8 Save and close document to hard disk and disk</p>
<p>4. Create Tables</p>	<p>4.1 Insert a standard table in to a word processing document</p> <p>4.2 Customise cell attributes to meet formatting and data requirements</p> <p>4.3 Insert and delete columns and rows as necessary</p> <p>4.4 Use borders and other formatting tools as necessary according to organisational style requirements</p>
<p>5. Add objects and images</p>	<p>5.1 Insert images and /or graphics in a word processing document and customise as necessary</p> <p>5.2 Import and format objects such as, spreadsheets and charts to fit word processing document requirements</p> <p>5.3 Position and resize objects and images to meet the word processing document formatting needs</p>
<p>6. Print word processing documents</p>	<p>6.1 Preview document in print preview mode</p> <p>6.2 Select basic print options</p> <p>6.3 Print document or part of the document from installed</p>

	printer
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Range Statement

The Range of Variables statement contextualizes the unit of competence and provides a focus for assessment. The information provided is intended to define the scope of assessment and to assist assessors define the performance to be achieved by an individual in the workplace.

Hardware

variables may include but are not limited to personal computers and networked systems.

Document

variables may include but are not limited to: established files and new documents.

Software

variables may include but are not limited to: commercial software applications; organisational specific software; word processing.

Keyboarding

Speed will vary according to different organisational requirements and different job roles within an organisation. The keyboard technique will be in line with OHS requirements for safe use of keyboards.

Organisational

Variables may include but are not limited to: keyboarding and accuracy as per organisation guidelines.

Operating Systems

Command line and Graphical User Interface.

Disks

may include but are not limited to: diskettes, CDs, zip disks.

Workplace environment

May involve a business involved in a total organisational change, a system only change, a business improvement process, an e-commerce solution involving the total organisation or part of the organization.

Documentation and Reporting

Documentation for version control may follow ISO standards. Audit trails, naming standards, version control, project management templates and report writing styles will vary according to organisational approach, information gathering processes may have associated templates.

Standards and Procedures

Will vary from formal procedures that must be adhered to with check points and sign offs with documented procedures and templates, implementation of financial control mechanisms, communication with stakeholders, dispute resolution and modification procedures, processes for determining size and cost.

Assessment Guide Form of assessment

Continuous assessments together with collected evidence of performance will be suitable for this unit.

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects of Assessment

Assessment must confirm the ability to complete basic operations associated with creating, formatting, saving and printing a document

UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none">• General OH&S principles and responsibilities• Basic technical terminology in relation to reading help files and prompts• Logging procedures relating to accessing a PC• Organisational benchmarks for keyboarding• Security, viruses, privacy legislation, copyright• Types of software	<ul style="list-style-type: none">• Basic analysis in relation to a limited range of routine areas• Low level decision making in relation to a limited range of routine areas• Problem solving skills in known areas during normal routine• Reading and writing at a level where basic workplace documents are understood• Communication is clear and precise• Interpretation of user manuals and help functions

Unit 04

Unit Title	Operate a word processing and Database applications (Spreadsheets)				
Descriptor	This unit defines the competency required to correctly operate spreadsheet applications and perform basic operations				
Code	SOC02S1U04V2	Level	3	Credit	5

Element of competencies	Performance Criteria
1. Create Spreadsheet	<p>1.1 Enter numbers, text and symbols in cells according to information requirements</p> <p>1.2 Enter simple formulas and formulas using relative and absolute referencing where Required</p> <p>1.3 Correct formulas when standard error messages occur</p> <p>1.4 Employ basic built in functions, such as sum and average</p> <p>1.5 Use various tools including help, search and replace, spell check, undo and simple</p> <p>1.6 formatting tools during spreadsheet development</p> <p>1.7 Add, select, copy, delete or move columns and rows within the spreadsheet</p> <p>1.8 Copy or increment data entries for logical and clear presentation of information</p> <p>1.9 Save spreadsheet to correct directory / folder</p>
2. Customise basic settings	<p>2.1 Adjust page display modes, orientation and size to meet user requirements and / or special needs</p> <p>2.2 Modify toolbar to meet user and document uses</p> <p>2.3 Ensure font type, size and colour is appropriate for the purpose of the document</p> <p>2.4 Apply alignment and justification options and line spacing according to spreadsheet formatting requirements</p> <p>2.5 Modify column width and height to suit spreadsheet requirements</p>

	<p>2.6 Format cells to display different styles, values and information as required</p> <p>2.7 Modify margin sizes to suit the purpose of the spreadsheet</p> <p>View multiple workbooks/ spreadsheets at once</p>
3. Format spreadsheet	<p>3.1 Use italics, bold, underline and hyphenation as required</p> <p>3.2 Copy selected format from another cell or group of cells in the spreadsheet or from another active spreadsheet</p> <p>3.3 Use formatting tools (such as page breaks, tabs, indent, borders, lists) as required</p> <p>3.4 within the spreadsheet and / or individual cells</p> <p>3.5 Align information in selected cells as required</p> <p>3.6 Insert headers and footers and incorporate all necessary information and formatting styles</p> <p>3.7 Save document in another format and in a format for posting to a web site</p> <p>3.8 Save and close document to hard disk and disk</p>
4. Incorporate objects and charts in spreadsheets	<p>4.1 Import and manipulate objects within a spreadsheet</p> <p>4.2 Display spreadsheet data in different charts</p> <p>4.3 Modify charts for formatting reasons</p>
5. Print spreadsheets	<p>5.1 Preview spreadsheet in print preview mode</p> <p>5.2 Select basic print options</p> <p>5.3 Print spreadsheet or part of spreadsheet from installed printer</p>

Range Statement

The Range of Variables statement contextualizes the unit of competence and provides a focus for assessment. The information provided is intended to define the scope of assessment and to assist assessors define the performance to be achieved by an individual in the workplace.

Hardware

variables may include but are not limited to personal computers and networked systems

Document

variables may include but are not limited to: established files and new documents

Software

variables may include but are not limited to: commercial software applications; organisational specific software; word processing

Keyboarding

Speed will vary according to different organisational requirements and different job roles within an organisation. The keyboard technique will be in line with OHS requirements for safe use of keyboards

Organisational

variables may include but are not limited to: keyboarding and accuracy as per organisation guidelines

Operating Systems

Command line and Graphical User Interface

Disks

may include but are not limited to: diskettes, CDs, zip disks

Workplace environment

May involve a business involved in a total organisational change, a system only change, a business improvement process, an e-commerce solution involving the total organisation or part of the organisation

Documentation and Reporting

Documentation for version control may follow ISO standards. Audit trails, naming standards, version control, project management templates and report writing styles will vary according to organisational approach, information gathering processes may have associated templates

Standards and Procedures

Will vary from formal procedures that must be adhered to with check points and sign offs with documented procedures and templates, implementation of financial control mechanisms, communication with stakeholders, dispute resolution and modification procedures, processes for determining size and cost

Assessment Guide Form of assessment

Continuous assessments together with collected evidence of performance will be suitable for this unit.

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects of evidence

Assessment must confirm the ability to complete basic operations associated with creating, formatting, saving and printing a spreadsheet, including creating basic formulas and working with objects and charts

UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge includes	Underpinning Skills include
<ul style="list-style-type: none">• General OH&S principles and responsibilities• Logging procedures relating to accessing a PC• Organisational benchmarks for keyboarding• Basic mathematics• Basic technical terminology in relation to reading help files and prompts	<ul style="list-style-type: none">• Basic analysis in relation to a limited range of routine areas• Low level decision making in relation to a limited range of routine areas• Problem solving skills in known areas during normal routine• Reading and writing at a level where basic workplace documents are understood• Communication is clear and precise• Mouse usage techniques

<ul style="list-style-type: none">• Security, viruses, privacy legislation, copyright• Types of software	
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Unit 05

Unit Title	Operate a word processing and Database applications (Database)				
Descriptor	This unit defines the competency required to correctly operate database applications and perform basic operations				
Code	SOC02S1U05V2	Level	3	Credit	5

Element of competencies	Performance Criteria
1. Create a database	<p>1.1 Formulate a simple design for a two-table database incorporating basic design principles</p> <p>1.2 Develop tables with fields and attributes according to database usage requirements</p> <p>1.3 Enter data and link and navigate tables</p> <p>1.4 Create a primary key and establish an index</p> <p>1.5 Modify table layout and field attributes as required</p> <p>1.6 Modify data in tables for information requirements</p> <p>1.7 Add and delete records as required</p> <p>1.8 Follow correct close down procedures to ensure data is not lost</p>
2. Customise basic settings	<p>2.1 Adjust page display modes, orientation and size to meet user requirements and / or</p> <p>2.2 special needs</p> <p>2.3 Modify toolbar to meet user and database uses</p> <p>2.4 Ensure font type, size and colour is appropriate for the purpose of the database</p>
3. Create reports	<p>3.1 Design report to present data in a logical sequence</p> <p>3.2 Modify reports to include / exclude additional information requirements</p> <p>3.3 Modify existing reports to accommodate current information requirements</p> <p>3.4 Distribute reports are in a suitable format (softcopy/ hardcopy)</p>

4. Create forms	4.1 Create simple forms which include imported files (images/graphics) and customized using a wizard 4.2 Open existing database and modify records through a simple form 4.3 Rearrange objects within the form to accommodate information requirements 4.4 Save and close database to hard disk and disk
5. Retrieve information	5.1 Access existing database and locate required record 5.2 Create simple query and retrieve required information 5.3 Develop query with multiple criteria and retrieve required information 5.4 Apply filters and access information 5.5 Refine queries to more precisely retrieve information 5.6 Select data and sort according to information retrieval requirements

Range Statement

The Range of Variables statement contextualize the unit of competence and provide a focus for assessment. The information provided is intended to define the scope of assessment and to assist assessors define the performance to be achieved by an individual in the workplace.

Hardware

variables may include but are not limited to personal computers and networked systems.

Document

variables may include but are not limited to: established files and new documents.

Software

variables may include but are not limited to: commercial software applications; organisational specific software; word processing.

Keyboarding

Speed will vary according to different organisational requirements and different job roles within an organisation. The keyboard technique will be in line with OHS requirements for safe use of keyboards.

Organisational

variables may include but are not limited to: keyboarding and accuracy as per organisation guidelines.

Operating Systems

Command line and Graphical User Interface.

Disks

may include but are not limited to: diskettes, CDs, zip disks.

OH and S Standards

As per company, statutory and vendor requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency; Occupational Health and Safety guidelines related to use of screen based equipment, computing equipment and peripherals, and ergonomic work stations; security procedures; customisation requirements.

Workplace environment

May involve a business involved in a total organisational change, a systems only change, a business improvement process, an e-commerce solution involving the total organisation or part of the organization.

Documentation and Reporting

Documentation for version control may follow ISO standards. Audit trails, naming standards, version control, project management templates and report writing styles will vary according to organisational approach; information gathering processes may have associated templates.

Standards and Procedures

Will vary from formal procedures that must be adhered to with implementation of financial control mechanisms, communication with stakeholders, dispute resolution and modification procedures, processes for determining size and cost.

Assessment Guide Form of assessment

Continuous assessments together with collected evidence of performance will be suitable for this unit.

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects of evidence

Assessment must confirm the ability to design and develop a simple database using a standard database package the candidate must add data, use queries, create forms and reports

UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge includes	Underpinning Skills include
<ul style="list-style-type: none">• General OH&S principles and responsibilities• Basic technical terminology in relation to reading help files and prompts• Logging procedures relating to accessing a PC• Organisational benchmarks for keyboarding• Basic technical terminology in relation to reading help files and prompts• Security, viruses, privacy legislation, copyright• Basic database design• Types of software	<ul style="list-style-type: none">• Basic analysis in relation to a limited range of routine areas• Low level decision making in relation to a limited range of routine areas• Reading and writing at a level where basic workplace documents are understood• Communication is clear and precise• Interpretation of user manuals

Unit 06

Unit Title	Operate a word processing and Database applications (Presentations)				
Descriptor	This unit defines the competency required to correctly operate presentation applications and perform basic operations				
Code	SOC02S1U06V2	Level	3	Credit	3

Element of competencies	Performance Criteria
1. Create presentations	<p>1.1 Create a simple design for a presentation according to organizational requirements</p> <p>1.2 Open presentations and add text and symbols</p> <p>1.3 Use existing styles within a presentation</p> <p>1.4 Use presentation templates / master slide to create a presentation</p> <p>1.5 Use various tools including help, search and replace, spell check, undo and simple</p> <p>1.6 formatting tools</p> <p>1.7 Add, select, copy, delete or move text, images and graphics within the presentations</p> <p>1.8 Save presentation to correct directory / folder</p>
2. Customise basic settings	<p>2.1 Adjust page display modes and size to meet user requirements and / or special needs</p> <p>2.2 Modify toolbar to meet user and document uses</p> <p>2.3 Ensure font type, size and colour is appropriate for the purpose of the presentation</p> <p>View multiple slides at once</p>
3. Format presentation	<p>3.1 Use organisational charts, charts, bulleted lists and modify as required</p> <p>3.2 Add objects (images and graphics) and manipulate to meet presentation purpose</p> <p>3.3 Import objects such as tables and modify for presentation purposes</p> <p>3.4 Modify slide layout including text and colours to meet</p>

	<p>presentation requirements</p> <p>3.5 Use formatting tools (such as tabs, cut, paste, indents, bookmarks, hyperlinks, borders, lists) as required within the presentation</p> <p>3.6 Duplicate slides within and/ or across presentations</p> <p>3.7 Reorder the sequence of slides and/ or delete for presentation purposes</p> <p>3.8 Save presentation in another format and in a format for posting to a web site</p> <p>3.9 Save and close presentation to hard disk and/or disk</p>
<p>4. Add slide show effects</p>	<p>4.1 Incorporate preset animation and multimedia effects in to presentation as required to enhance the presentation</p> <p>4.2 Change preset animation effects according to presentation purposes to create a cohesive presentation</p> <p>4.3 Add slide transition effects to presentation to ensure smooth progression though the presentation</p> <p>4.4 Test slide show effects for overall effect</p> <p>4.5 Use onscreen navigation tools to start and stop slide show or move between different slides as required</p>
<p>5. Print presentation and notes</p>	<p>5.1 Select appropriate print format (overheads, handouts etc) for slide presentation</p> <p>5.2 Select preferred slide orientation (portrait, landscape)</p> <p>5.3 Add notes, slides numbers and spell check</p> <p>5.4 Preview slides in the required formats (overheads, notes, etc)</p> <p>5.5 Print slides in the required formats</p>

Range Statement

The Range of Variables statement contextualise the unit of competence and provide a focus for assessment. The information provided is intended to define the scope of assessment and to assist assessors define the performance to be achieved by an individual in the workplace.

Hardware

variables may include but are not limited to personal computers and networked systems

Document

variables may include but are not limited to: established files and new documents

Presentation Packages

May include presentation applications contained in: Microsoft Office, Lotus Suite, Claris Works or other similar applications

Cultural Understanding

Cultural understanding requires the capacity to apply an understanding of cultures when carrying out workplace tasks, including commitment to organisational goals such as quality, safety, efficiency, teamwork, security, environmental protection, customer service and personal development, and interacting with people from widely different backgrounds and cultures in the achievement of common work goals.

- Carries out established processes
- Operates in accordance with existing company and statutory requirements
- Makes judgements of quality using given criteria

Keyboarding

Speed will vary according to different organisational requirements and different job roles within an organisation. The keyboard technique will be in line with OHS requirements for safe use of keyboards

Organisational

variables may include but are not limited to: keyboarding and accuracy as per organisation guidelines

Operating Systems

Command line and Graphical User Interface

Disks

may include but are not limited to: diskettes, CDs, zip disks

OH and S Standards

As per company, statutory and vendor requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency; Occupational Health and Safety guidelines related to use of screen based equipment, computing equipment and peripherals, and ergonomic work stations; security procedures; customisation requirements

Workplace environment

May involve a business involved in a total organisational change, a systems only change, a business improvement process, an e-commerce solution involving the total organisation or part of the organisation

Documentation and Reporting

Documentation for version control may follow ISO standards. Audit trails, naming standards, version control, project management templates and report writing styles will vary according to organisational approach, information gathering processes may have associated templates

Standards and Procedures

Will vary from formal procedures that must be adhered to with check points and sign offs with documented procedures and templates, implementation of financial control mechanisms, communication with stakeholders, dispute resolution and modification procedures, processes for determining size and cost.

Assessment Guide Form of assessment

Continuous assessments together with collected evidence of performance will be suitable for this unit.

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects of evidence

Assessment must confirm the ability to create, format and prepare presentations for distribution and display

Underpinning Knowledge and Skills

Underpinning Knowledge includes	Underpinning Skills include
<ul style="list-style-type: none">• General OH&S principles and responsibilities• Basic understanding of using systems, technical• Basic technical terminology in relation to reading help files and prompts• Logging procedures relating to accessing a PC• Organisational benchmarks for keyboarding• Basic technical terminology in relation to reading help files and	<ul style="list-style-type: none">• Basic analysis in relation to a limited range of routine areas• Low level decision making in relation to a limited range of routine areas• Problem solving skills in known areas during normal routine• Reading and writing at a level where basic workplace documents are understood• Communication is clear and precise• Interpretation of user manuals

Unit 07

Unit Title	Operate computer Hardware				
Descriptor	This unit defines the competency required to determine, select and correctly operate basic computer hardware.				
Code	SOC02S1U07V2	Level	3	credit	3

Element of competencies	Performance Criteria
1. Use appropriate Office peripherals	1.1 Functions of office peripherals are identified 1.2 Requirements of task are determined 1.3 Appropriate hardware is selected to perform task 1.4 Hardware is used to produce required outcome
2. Operate and maintain a range of hardware	2.1 A range of hardware equipment is operated to complete routine tasks 2.2 Hardware consumables are determined and replaced
3. Use keyboard and equipment	3.1 Occupational Health and Safety regulations are followed 3.2 Keyboarding is carried out according to organization guidelines on speed and accuracy

Range Statement Storage

Media/Disks

May include but are not limited to: diskettes, CDs, zip drives, local HDDs, remote HDDs

Technical instructions

Technical instructions for use of specific computer hardware.

Keyboarding

Speed will vary according to different organisational requirements and different job roles within an organization. The keyboard technique will be in line with OHS requirements for safe use of keyboards.

Occupational Health and Safety

Guidelines relate to the use of screen based equipment, computing equipment and peripherals, and ergonomic workstations.

Organisational

Variables may include, but are not limited to: security procedures; Occupational Health and Safety procedures; maintenance procedures.

OH and S standards

As per company, statutory and vendor requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency.

Quality process

Some organisations may be quality certified and have well document standards for addressing quality while others will not.

Hardware

Variables may include, but are not limited to: personal computers, networked systems, personal organisers, and communications equipment.

Peripherals may include: printers, scanners, cartridges, speakers, multi media kits. Keyboard equipment may include: mouse, touch pad, keyboard, and pens.

Assessment Guide Form of assessment

Continuous assessments together with collected evidence of performance will be suitable for this unit.

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects of evidence

Assessment must confirm the ability to determine, select and use hardware components and functions correctly and efficiently according to the task requirement. Hardware consumables are correctly identified and utilized according to the task requirement.

Underpinning Knowledge and Skills

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none">• OH&S principles and responsibilities• Ergonomic principles to avoid back, wrist and eye strain• Procedures and exercises for avoiding strain and injury• Basic knowledge of current industry accepted hardware and software products with broad knowledge of general features and capabilities	<ul style="list-style-type: none">• Reading and writing at a level where basic workplace documents are understood• Decision making skills in a narrow range of areas• Problem solving skills for a defined range of predictable problems

Unit 08

Unit Title	Determine client computing problems and actions				
Descriptor	This unit defines the competency required to record and prioritize client support activities, determine the required resources, solve the client problem or escalating as necessary.				
Code	SOC02S1U08V2	Level	3	Credit	3

Element of competencies	Performance Criteria
1. Determine client problem	<p>1.1 Appropriate questions are asked to determine the client problem</p> <p>1.2 Client problem is documented for follow up</p> <p>1.3 Specific client requirements from logged requests are determined, and further appropriate investigation such as on-site visit is carried out, to gain further information</p>
2. Prioritise client problems	<p>2.1 Scale of problem is determined and monitored</p> <p>2.2 Problem constraints are determined</p> <p>2.3 Impact analysis of problem to organise is undertaken and priorities are determined</p> <p>2.4 Advice and support are provided to the client from database of known problems, if possible</p>
3. Refer maintenance to supervisor where Required	<p>3.1 Options of referral or action are investigated and appropriate process is followed</p> <p>3.2 Client help documentation is provided as required</p> <p>3.3 Support and advice are documented according to organisation guidelines</p> <p>3.4 Maintenance and technical support agreements are determined</p> <p>3.5 Problem is referred to supervisor, management or technical area as required</p> <p>3.6 Referrals are documented and tracked according to</p>

	organisation guidelines
4. Carry out maintenance	<p>4.1 New components are obtained in line with organisation guidelines</p> <p>4.2 Maintenance is completed in line with organization guidelines</p> <p>4.3 Used components are stored and disposed of in accordance with organisation guidelines</p>
5. Prepare Maintenance report	<p>5.1 Maintenance is prepared in line with organization guidelines</p> <p>5.2 Maintenance requirements to appropriate area are escalated as required</p>
6. Confirm problem resolution	<p>6.1 Client evaluation and feedback are obtained to ensure requirements of client are met</p> <p>6.2 Problem is resolved to client satisfaction or client is referred to supervisor/appropriate person for follow- up</p> <p>6.3 Problem is resolved to client satisfaction</p>

Range Statement

Advice and support Can include:

provision of client documentation, manuals; documentation from vendor. Advice on software supported by the organisation can include but is not limited to: formatting spreadsheets, creation of graphs, setting up of work processing documents for printing, setting up an electronic mail system.

Advice on hardware supported by the organisation can include but is not limited to: operation of printers, setting of screen resolution, formatting of disks, reconfiguration of printers and scanners.

Further investigation can include:

on site examination; question and answers; active listening to client and other employees; contacting vendor or maintenance contract organisations; referring to technical area.

Database of known Problems

Can include information available in the workplace, from Internet or from software vendors.

Organisation information

Includes security procedures, logged call procedures, contracting arrangements relating to Information Technology purchasing and hardware and software options within organisational environment.

Client user

May be a department within the organisation or a third party and so the relation and ease of access will vary.

Documentation and reporting

Audit trails, naming standards, version control.

OH and S Standards

As per company, statutory and vendor requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency.

Organisational Standards

May be based upon formal, well-documented methodologies, or non-existent. For training delivery purposes, best practice examples from industry will be used.

Assessment Guide Form of

assessment

Continuous assessments together with collected evidence of performance will be suitable for this unit.

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects of evidence

Assessment must confirm the ability to record and prioritise client support activities, determining the required resources, solving the client problem or escalating according to organizational guidelines or practices.

Underpinning Knowledge and Skills

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none"> • Principles of EEO and anti-discrimination • Principles of OH&S • Understanding systems, technical and organisational • Broad general knowledge of operating systems functions and basic features • Current industry accepted hardware and software products with broad knowledge of general features and capabilities and detailed knowledge in some areas • Broad knowledge of escalation procedures • Hardware and software supported by the organisation • Information Technology terminology • Telephone, fax and on-line functions and procedures • Work group procedures 	<ul style="list-style-type: none"> • Strong customer service • Decision-making involving discretion and judgement • Time management for self and Others Solving known problems in a variety of contexts • Questioning and active listening for conveying and clarifying information • Literacy skills in regard to interpretation of technical manuals

Unit 09

Unit Title	Maintain Equipment/Software inventory				
Descriptor	This unit defines the competency required to record and store the organisation's software, equipment and technical documentation.				
Code	SOC02S1U09V2	Level	3	Credit	4

Element of competencies	Performance Criteria
1. Document and update inventory	<p>1.1 Inventory is maintained to include Information Technology equipment movements, new purchases or redundant equipment</p> <p>1.2 Software inventory and licenses are maintained and updated in line with upgrades</p> <p>1.3 Manuals and associated technical documentation are recorded and stored</p> <p>1.4 Unused equipment is stored according to technical manuals</p>
2. Store technical documentation	<p>2.1 Technical documentation is stored as required by organisational guidelines</p> <p>2.2 Technical documentation is accessed and disseminated as required to meet client requirements</p>

Range Statement

Equipment

Variables may include but are not limited to: personal computers, networked systems, personal organisers, communications equipment. Peripherals may include printers, scanners, tape cartridges, speakers, multi-media kits. Keyboard equipment may include mouse, touch pad keyboard, pens.

Software

Variables may include but are not limited to: commercial software applications; organisational specific software; word processing, spreadsheet, database, graphic, mail, Internet browsers and presentation functionalities.

Organisation

Variables may include but are not limited to: security procedures; storage and retrieval of product licenses; storage of Information Technology equipment and documentation; disposal policy; technical manuals, in-house, product and vendors.

Literacy

Literacy in regard to technical documentation.

Client user

May be a department within the organisation or a third party and so the relation and ease of access will vary.

Documentation and Reporting

Audit trails, naming standards, version control.

OH and S Standards

As per company, statutory and vendor requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency.

Organisational Standards

May be based upon formal, well-documented methodologies, or non-existent. For training delivery purposes, best practice examples from industry will be used.

Assessment Guide Form of

Assessment

Continuous assessments together with collected evidence of performance will be suitable for this unit.

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects of evidence

Assessment must confirm the ability to accurately and regularly update and maintain the software, equipment and technical documentation inventory according to identified storage and retrieval policy and procedures. Software licensing requirements are adhered to according to vendor specifications; Inventories are regularly accessed and kept up to date; Literacy skills in regard to workplace documentation and technical manuals are demonstrated.

Underpinning Knowledge and Skills

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none">• Basic understanding of systems, organisational• Basic software licensing requirements understanding• General copyright regulations• Broad knowledge of inventory principles and procedures• Current business practices in relation to preparing reports	<ul style="list-style-type: none">• Basic reading, writing and interpretation skills in regard to workplace documentation• Plain English literacy and communication skills in relation to the presentation of information• Problem-solving skills for a defined range of predictable problems• Low level decision-making skills

Unit 10

Unit Title	Connect hardware peripherals				
Descriptor	This unit defines the competency required to connect hardware peripherals according to instructions.				
Code	SOC02S1U10V2	Level	3	Credit	5

Element of competency	Performance Criteria
1. Confirm requirements of client	<p>1.1 Clients' peripheral requirements are identified and are confirmed in accordance with organisation standards</p> <p>1.2 Client requirements and peripherals needed in line with organizational guidelines are documented and reported to the supervisor</p> <p>1.3 Client requirements are cleared with supervisor in line with organization guidelines</p> <p>1.4 Client support expectations are covered by vendor's warranty and support services</p>
2. Obtain required peripherals	<p>2.1 Peripherals are obtained under instruction from management/supervisor</p> <p>2.2 Peripherals are entered into equipment inventory according to organization's procedures</p> <p>2.3 Contents are validated and method of ensuring the physical contents match the packing list is demonstrated</p> <p>2.4 Peripherals are stored according to vendor/manual guidelines</p>
3. Connect hardware peripherals	<p>3.1 Timeframe for installation schedule is verified with higher authority</p> <p>3.2 Existing peripherals are disconnected and replaced, with minimal disruption to clients</p> <p>3.3 New peripherals are connected with minimal disruption</p> <p>3.4 Computer is configured to accept new peripherals</p> <p>3.5 Hardware peripherals are tested and client satisfaction is confirmed. Amendments are made as required for client</p>

Range Statement

Peripherals

Peripherals will normally connect to an existing interface port or wireless and do not include peripherals accessed internally. Peripherals may include, but are not limited to: printers, scanners, tape cartridges; speakers, multimedia kits, PC fax, modems. Keyboard equipment may include mouse, touch pad, keyboard, pens; mobile phones, palmtops and desktop computers; Bluetooth devices, Universal Serial Bus (USB). Peripherals can be sourced from existing inventory or vendors.

Operating systems

Microsoft Windows OS, Macintosh OS, Linux

Hardware

Can include IT equipment of all types: workstations: PCs, IBM, Compaq, Hewlett Packard, Sun, Dell, Gateway 2000, SGI, Sun Microsystems, Bridges, 3Com, Compaq, CISCO, IBM modems: analog, cable, ISDN, DSL servers: Acer, Apple, Compaq, Dell, Gateway 2000, Hewlett-Packard, IBM, Macintosh, NEC, SGI, Sun Microsystems, Unisys network cards: Adaptec, ARTIC, Compex, SMC switches: 3Com, Accton, Cabletron, CISCO, D-Link, Farallon, Hewlett-Packard, Intel, Network Technologies hubs & repeaters: 3Com, Compaq, CISCO, Accton, Asante, D-Link, Farallon, Hewlett-Packard, Intel, Omnitron routers & gateways: 3Com, CISCO, D-Link, Intel file & print servers: AcerAltos, Aerocomm, AlphaServer, Dell, D-Link, Hewlett-Packard, IBM, NEC, Sun Microsystems.

Software and Applications

Can include packaged software, in-house development or out-sourced development. The amount of maintenance, change and tailoring that can be undertaken will vary.

Configuration

Configuration includes automatic, plug and play, and manual.

Reporting procedures

Help desk and maintenance structures will vary. Some may be a call centre or a general contact point which then calls a supplier or other technician. Others may be staffed by technicians capable of solving the problem. Thus documentation and other procedures will vary. Systems to monitor change request may be manual or computerised.

Documentation and Reporting

Documentation for version control may follow ISO standards. Audit trails, naming standards, version control, project management templates and report writing styles will vary according to organisational approach. Information gathering processes may have associated templates.

Standards and Procedures

May include: formal procedures that must be adhered to with check points and sign offs with documented procedures and templates, implementation of financial control mechanisms, communication with stakeholders, dispute resolution and modification procedures, processes for determining size and cost.

OH & S Standards

As per company, statutory and vendor requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency.

Assessment Guide Form of assessment

Continuous assessments together with collected evidence of performance will be suitable for this unit.

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects of evidence

Assessment must confirm the ability to connect hardware peripherals according to vendor instructions with a minimum of down time to the system. Competency is required in the connection of five different peripherals. Ability to interpret vendor manuals in relation to the storage and connection of hardware peripherals is demonstrated. Occupational Health and Safety regulations relating to working with electrical equipment is adhered to.

Underpinning Knowledge and Skills

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none"> • Broad general knowledge of OH&S procedures for electrical equipment • Detailed knowledge of inventory procedures • Organisational guidelines relating to external suppliers and vendors • General understanding of systems, technical terms • Broad knowledge base incorporating theoretical concepts of three or more current industry accepted hardware peripherals; knowledge of general features and capabilities and detailed knowledge in some • Broad knowledge base incorporating theoretical concepts of three or more current industry-accepted system components; knowledge of general features and capabilities and detailed knowledge in some • Broad knowledge base incorporating theoretical concepts of operating systems • Broad knowledge of help desk and maintenance practices • Current industry-accepted hardware and software products with broad knowledge of general features and capabilities and detailed knowledge in some areas • Broad knowledge base incorporating theoretical concepts of Input/output skills in relation to maintenance procedures and devices 	<ul style="list-style-type: none"> • Customer service skills in relation to maintenance procedures • Handling difficult clients • Conflict resolution skills in relation to maintenance procedures • Decision-making in a limited range of options • Literacy in regard to general workplace documentation • Problem-solving skills for a defined range of predictable problems • Plain English literacy and communication skills in relation to analysis, evaluation and presentation of information • Facilitation and presentation skills in relation to transferring and collecting information • Negotiation skills in relation to other team members and applied to a defined range of predictable problems • Report writing skills for business requiring depth in some areas, analysis and evaluation of information in a defined range of areas.

Unit 11

Unit Title	Install software applications				
Descriptor	This unit defines the competency required to install software applications under instruction.				
Code	SOC02S1U11V2	Level	3	Credit	5

Element of competencies	Performance Criteria
1. Determine software or software upgrade requirements of clients	<p>1.1 Client requirements are documented and reported to supervisor</p> <p>1.2 Supervisor’s instructions to meet client requirements are acted on in line with organisation guidelines, corporate purchasing, licensing arrangements, and budget</p>
2. Obtain software or software upgrade	<p>2.1 Software is obtained under instruction from management or supervisor</p> <p>2.2 Licensing requirements are determined and recorded in line with organization</p> <p>2.3 Guidelines</p>
3. install software or upgrade	<p>3.1 Upgrades are installed to meet supervisor instructions</p> <p>3.2 Process is undertaken so clients experience minimal disruption</p> <p>3.3 Computer is installed to accept software</p> <p>3.4 Testing and acceptance in line with corporate guidelines are carried out</p> <p>3.5 Client requirements are satisfied. Amendments are made as required for client, or client is referred to appropriate person/ supervisor, if necessary</p>

Range Statement Software

Variables may include but are not limited to: commercial software applications; organisational specific software; operating systems – standalone PC systems and network operating systems; word processing, spreadsheet, database, graphics, communications packages or any applications as used by the organisation; software installation instructions and manuals; range of suppliers.

Hardware

Includes personal computers but not networks.

Organisation

Variables may include but are not limited to: contacting arrangements relating to Information Technology purchasing; licensing requirements and supplier options; storage and retrieval of product licenses; storage of Information Technology equipment and documentation; testing standards. Client requirements may vary.

Client user

May be a department within the organisation or a third party and so the relation and ease of access will vary.

Development methods/tools

Will vary from the traditional Systems Development life cycle with little or no formalisation to a very well structured CASE tool.

OH & S Standards

As per company, statutory and vendor requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency.

Organisational Standards

May be based upon formal, well-documented methodologies, or non-existent. For training delivery purposes, best-practice examples from industry will be used.

Assessment Guide

Form of assessment

Continuous assessments together with collected evidence of performance will be suitable for this unit.

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects of evidence

Assessment must confirm the ability to install software applications through operating system instructions and to configure computer to accept new software or upgrade.

Interdependent assessment of units:

The interdependence of units of competency for assessment will vary with the particular project or scenario.

Underpinning Knowledge and Skills

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none">• Organisational guidelines for purchasing• Broad general knowledge of licensing arrangements and responsibilities• Broad general knowledge of software copyright responsibilities• Broad general knowledge of operating systems supported by the organisation• Broad general knowledge of the	<ul style="list-style-type: none">• General customer service• Decision making in a limited range of options• Problem solving of known problems in routine procedures• Plain English literacy and communication skills in relation to the presentation of information• Report writing skills for business requiring some analysis and evaluation of information in a defined range of areas

<p>hardware storage devices</p> <ul style="list-style-type: none">• Broad general knowledge of Input/Output devices• Broad general knowledge of the client business domain	
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Unit 12

Unit Title	Integrate commercial computing packaging				
Descriptor	This unit expressed the competency required to apply appropriate conversion formats and manipulation of data between commercial application software.				
Code	SOC02S2U01V2	Level	4	Credit	8

Element of competencies	Performance Criteria
1. Produce required organisational documents	1.1 Appropriate packages and conversion techniques are used to achieve an integrated outcome 1.2 Data is imported/exported to produce required outcome 1.3 Data is saved and re-accessed without loss of data
2. Determine and use help	2.1 Help is accessed through on-line help and manuals 2.2 Internal organisation client documentation is obtained and used

Range Statement Software

Variables may include but are not limited to: commercial software applications; organisational specific software; word processing, spreadsheet, database, graphic, communication packages and presentation functionalities. May include presentation applications contained in: Microsoft Office and other similar applications.

Storage Media/Disks

May include but are not limited to: diskettes, CDs, zip disks, local HDDs, remote HDDs.

Documentation and Reporting

Documentation for version control may follow ISO standards. Audit trails, naming standards, version control, project management templates and report writing styles will vary according to organisational approach. Information gathering processes may have associated templates.

Organisational

Variables may include but are not limited to: keyboarding and accuracy as per organisation guidelines; Occupational Health and Safety guidelines related to use of screen-based equipment, computing equipment and peripherals, and ergonomic work stations; security procedures.

Hardware

Variables may include but are not limited to: personal computers, networked systems, personal organisers, communications equipment. Peripherals may include: printers scanners, tape cartridges, speakers, multimedia kits. Keyboard equipment may include: mouse, touch pad, keyboard pens.

Keyboarding

Speed will vary according to different organizational requirements and different job roles within an organisation. The keyboard technique will be in line with OHS requirements for safe use of keyboards.

Sources and Output data

Variables may include, but are not limited to: hard disk, floppy disks; paper; format of data source or data output, ie ASCII and application specific format.

Assessment Guide Form of

assessment

Continuous assessments together with collected evidence of performance will be suitable for this unit.

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects of evidence

Assessment must confirm the ability to apply appropriate conversion formats and manipulate data between commercial application software.

Underpinning Knowledge and Skills

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none">• General understanding of features and functions of particular categories of commercial computing packages• Software packages supported by the organisation• General Occupational Health and Safety regulations• Use of input/output devices• Current business practices in relation to preparing reports• Importing/exporting functions	<ul style="list-style-type: none">• Reading and general comprehension of technical manuals• Decision making in a limited range of options• Basic analytical skills for known problems in routine procedures• Problem solving skills in regard to known problems in routine processes• Use of commercial computing packages

Unit 13

Unit Title	Maintain System integrity				
Descriptor	This unit expresses the competency required to protect and secure stand-alone or client server environments.				
Code	SOC02S2U02V2	Level	4	Credit	8

Element of competencies	Performance Criteria
1. Carry out file maintenance	1.1 File back-ups are carried out 1.2 Back-ups are determined and stored according to organisational guidelines 1.3 Records or back-up are maintained
2. Carry out virus scanning	2.1 Virus protection is maintained 2.2 Detected viruses are reported to supervisor and are removed
3. Follow software copyright procedures	3.1 Software licenses are monitored 3.2 Illegal software is determined 3.3 Illegal software is reported to supervisor
4. Record software licenses	4.1 Licensed software is determined 4.2 Records of license number and location are maintained 4.3 Personal computers and networks are checked for illegal software 4.4 Illegal software is reported to supervisor
5. Restore system back-up	5.1 Back-ups are restored 5.2 Restore procedures are determined according to the organizational guidelines 5.3 Restore is carried out under supervisor instruction 5.4 Restore carried out is recorded according to the organizational guidelines

Range Statement Hardware

Variables may include, but are not limited to: personal computers, networked systems, tools to perform back-ups such as tapes, streamers, floppy disks

Software

Software application/operating system with system security functions.

Organisation

Variables may include but are not limited to: security procedures; backing-up procedures; virus removal procedures; software license documentation; reporting of illegal software; restore procedures.

Literacy skills

In regard to reporting and recording organisational documentation.

Client user

May be a department within the organisation or a third party. Consequently, the relationship and ease of access will vary.

Documentation and Reporting

Audit trails, naming standards, version control.

OH & S standards

As per company, statutory and vendor requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency.

Organisational Standards

May be based upon formal, well documented methodologies or non-existent. For training delivery purposes, best practice examples from industry will be used.

Assessment Guide Form of assessment

Continuous assessments together with collected evidence of performance will be suitable for this unit.

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects for Assessment

Assessment must confirm the ability to protect and secure stand alone or networked client server environments and operating systems according to system maintenance procedures. Undertaking file back-up, restore, delete and archive are carried out according to back-up and restore procedures.

Underpinning Knowledge and Skills

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none">• Software copyright responsibilities• A broad knowledge base incorporating some theoretical concepts of system performance• Broad knowledge of maintenance procedures• A broad knowledge base of inventory procedures• A broad knowledge base incorporating some theoretical concepts of restore procedures• A broad knowledge base of storage and retrieval guidelines• A broad knowledge base incorporating some theoretical concepts of operating systems• Current industry accepted hardware and software products with broad knowledge of general feature and	<ul style="list-style-type: none">• Plain English literacy and communication skills in relation to the presentation of information• Basic diagnostic skills in relation to system integrity• Questioning and active listening in regard to clarifying instructions• Basic analytical skills in relation to system integrity• Problem-solving skills for a defined range of predictable problems• Problem solving in regard to known problems in routine procedures• Research skills for identifying broad features of current viruses and best practice in virus protection

<p>capabilities and detailed knowledge in some areas</p> <ul style="list-style-type: none">• A broad knowledge base incorporating some theoretical concepts of diagnostic tools• A broad knowledge base of current viruses and protection methods	
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Unit 14

Unit Title	Install Computer Systems and Networks				
Descriptor	This unit covers the outcomes required in installing, assembling and testing computers systems and networks.				
Code	SOC02S2U ₀₃ V2	Level	4	Credit	10

Element of competencies	Performance Criteria
1. Plan and prepare for installation	<p>1.1 Installation is planned and prepared to ensure OH&S policies and procedures are followed, the work is appropriately sequenced in accordance with requirements</p> <p>1.2 Appropriate personnel are consulted to ensure the work is coordinated effectively with others involved on the work site</p> <p>1.3 Devices / systems are obtained in accordance with established procedures and to comply with requirements</p> <p>1.4 Location in which devices / systems are to be installed is determined from job requirements</p> <p>1.5 Materials necessary to complete the work are calculated and obtained in accordance with established procedures</p> <p>1.6 Tools, equipment and testing devices needed to carry out the installation work are obtained in accordance with established procedures and checked for correct operation and safety</p> <p>1.7 Preparatory work is checked to ensure no unnecessary damage has occurred and complies with requirements</p>
2. Install equipment / device /	2.1 OH&S policies and procedures for installing

<p>System</p>	<p>devices/systems are followed</p> <p>2.2 Devices / systems are installed in accordance with requirements, without damage or distortion to the surrounding environment or services</p> <p>2.3 Variation to devices / systems installation is carried out in accordance to customer/client requirements</p> <p>2.4 Devices / systems are terminated and connected in accordance with requirements</p> <p>2.5 Unplanned events or conditions are responded to in accordance with established procedures</p> <p>2.6 Approval is obtained in accordance with established procedures from appropriate personnel before any contingencies are implemented</p> <p>2.7 On-going checks of the quality of the work are undertaken in accordance with established procedures</p>
<p>3. Conduct test</p>	<p>3.1 OH&S policies and procedures are followed</p> <p>3.2 Circuits and systems are checked as being isolated where necessary using specified testing procedures</p> <p>3.3 Parts or connections of the installation or service that are removed in order to conduct the test are stored to protect against loss or damage and in accordance with established procedures</p> <p>3.4 Unplanned events or conditions are responded to in accordance with established procedures</p> <p>3.5 Approval is obtained in accordance with established procedures from appropriate personnel before any contingencies are implemented</p> <p>3.6 Devices / systems and/or installation is tested to determine whether it conforms to requirements</p> <p>3.7 Parts, and/or connections removed for the purpose of testing are returned to pre-test conditions in</p>

	<p>3.1 accordance with established procedures</p> <p>3.2 Final inspections are undertaken to ensure the installed devices / systems conforms to requirements</p> <p>3.3 Documentation in relation to the test is forwarded to appropriate personnel and/or authority in accordance with requirements</p>
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Range Statement

OH&S Standards

Occupational Health and Safety Laws Personal Safety, Workplace Hazards and Environment Laws

Hardware

Personal computer systems and devices, Monitor, System unit and its components e.g., motherboard, power supply, Peripherals such as printers, scanners, Network devices and cabling such as hubs, switches, LAN cards

Items and Tools for computer network

Crimping Jack, Punching Keystone and other tools for network

Literacy skills

In regard to reporting and recording organizational documentation.

Client user

May be a department within the organization or a third party. Consequently, the relationship and ease of access will vary.

Assessment Guide Form of assessment

Assessment may be conducted in the workplace or in a simulated environment

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects for Assessment

Assessment must show that the candidate

- Installed the computer systems and networks in accordance with requirements, without damage or

Competency Standard for IT Technician

distortion to the surrounding environment or services

- Tested the installed computer systems and network to determine whether it conforms to clients requirements
- Conducted final inspections to ensure the installed devices / systems conforms to clients requirements

Underpinning skills and Knowledge:

Underpinning Knowledge includes	Underpinning Skills include
<ul style="list-style-type: none">• Types of computers• Computer operating systems• Peripheral devices• Application packages & use of application programs• Multimedia systems• Motherboards• Multimedia storage devices:• Video cards• Sound cards• Computer PC hardware• Local area networks (LANs)• Graphical user interface• Use of utilities/software• Operating systems• Diagnostic software• Device drivers• Cable troubleshooting	<ul style="list-style-type: none">• Problem solving skills• Decision making skills• Reading and writing skills

Unit 15

Unit Title	Configure Computer Systems and Networks				
Descriptor	This unit covers the knowledge, skills and attitudes needed to configure computer systems and networks.				
Code	SOC02S2U04V2	Level	4	Credit	8

Element of competencies	Performance Criteria
1. Plan and prepare for configuration	<p>1.1 Computer systems and networks to be configured are identified from the Job/Service Order or instructions</p> <p>1.2 Configuration is planned and prepared in line with job requirements.</p> <p>1.3 OHS policies and procedures are followed in line with job requirements.</p> <p>1.4 Computer systems and networks for configuration are checked against specifications and requirements.</p> <p>1.5 Materials necessary to complete the work are obtained in accordance with established procedures and checked against job requirements.</p> <p>1.6 Tools, equipment and testing devices needed for configuration of computer systems and networks are obtained and checked for correct operation and safety</p>
2. Configure Computer Systems and Networks	<p>2.1 Appropriate personal protective equipment is used and OHS policies and procedures are followed</p> <p>2.2 Normal function of systems and networks is checked in accordance with manufacturer's instructions. The damaged cables, shorts and loops in a network are identified. Any damaged switch or electrical interference are identified and</p>

	<p>networks is diagnosed in line with the standard operating procedures.</p> <p>2.3 Computer systems and networks are configured in line with the standard operating procedures.</p> <p>2.4 Three layer switches are configured</p> <p>2.5 Unplanned events or conditions are responded to in accordance with established procedures</p>
<p>3. Inspect and Test Configured Computer Systems and Networks</p>	<p>3.1 Final inspections are undertaken to ensure that the configuration done on the systems and networks conforms with the manufacturer's instruction/manual</p> <p>3.2 Computer systems and networks are checked to ensure safe operation.</p> <p>3.3 Report is prepared according to company requirements.</p>

Range Statement

OH&S Standards

Occupational Health and Safety Laws Personal Safety, Workplace Hazards

and Environment Laws

Hardware

Includes but not limited to: Servers, peripherals, and desktop computers, Connectors, Adaptors, Wires and

cables, appropriate software, Computer storage media

Items and Tools for computer network

Crimping Jack, Punching Keystone and other tools for network

Configuring Layer three switch

NAT, routing and VLAN tagging

Testing Devices

Testing devices includes but not limited to:

Multimeter, Calibrators, Signal generator, Oscilloscope

Literacy skills

In regard to reporting and recording organizational documentation.

Assessment Guide Form

of assessment

The assessor may select two of the following assessment methods to objectively assess the candidate:

Observation

Questioning Third

Party Portfolio

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects for Assessment

Assessment must show that the candidate

- Interpreted work instructions according to job requirements.
- Diagnosed faults or problems on the systems and networks
- Configured the identified systems and networks
- Checked configured systems and networks to ensure safety
- Documented the tasks undertaken

Underpinning Knowledge and Skills

Underpinning Knowledge includes	Underpinning Skills include
<ul style="list-style-type: none">• Occupational health and safety• IT hardwares• Use of tools• Mathematical calculations• Electrical theory• Electronics theory• Use of test equipment and calibrators• Wiring techniques• Drawing interpretation• Soldering techniques• Computer operations	<ul style="list-style-type: none">• Reading skills required to interpret work instructions• Communication skills needed to interpret and define work procedures• Problem solving in emergency situation• Configuration procedures

Unit 16

Unit Title	Diagnose and Troubleshoot Computer Systems				
Descriptor	This unit covers the knowledge, skills and attitudes needed to diagnose computer systems.				
Code	SOC02S2U05V2	Level	4	Credit	8

Element of competencies	Performance Criteria
1. Plan and prepare for diagnosis of faults of computer systems	<p>1.1 Diagnosis of faults is planned and prepared in line with job requirements</p> <p>1.2 OH & S policies and procedures are followed in line with job requirements</p> <p>1.3 Appropriate personnel are consulted to ensure that the work is effectively coordinated</p> <p>1.4 Materials necessary to complete the work are obtained in accordance with established procedures</p> <p>1.5 Tools, equipment and testing devices needed to carry out the work are obtained in accordance with established procedures and checked for proper operation and safety.</p> <p>1.6 Computer systems and networks defects are checked against job requirements.</p>
2. Diagnose faults of computer systems	<p>2.1 Appropriate personal protective equipment is used in line with standard procedures.</p> <p>2.2 Faults or problems in the computer systems and networks are diagnosed according to requirements and in line with the standard procedures.</p> <p>2.3 Contingency measures are managed and implemented in accordance with established procedures</p>

	2.4 Unplanned events or conditions are responded to in accordance with established procedures
3. Rectify/correct defects in computer systems and networks	3.1 Appropriate personal protective equipment is used in line with standard procedures. 3.2 Defective components or parts are replaced or corrected without damage to the surrounding environment or services 3.3 Adjustments, if necessary are made in accordance with established procedures 3.4 Unplanned events or conditions are responded to in accordance with established procedures.

Range Statement

OH&S Standards

Occupational Health and Safety Laws Personal Safety, Workplace Hazards and Environment Laws

Hardware

Includes but not limited to: Servers, peripherals, and desktop computers, Connectors, Adaptors, Wires and cables, appropriate software, Computer storage media

Tools

Tools for: cutting, shaping, drilling, threading, tapping, finishing, dismantling, and assembling.

Diagnostic tasks

Includes but not limited to;

- Identifying the types of hardware and peripherals installed in the computer system
- Types of beeps and their meanings
- Computer does not start up
- Computer display does not show
- Trembling and shaking of monitor screen

Testing Devices

Testing devices includes but not limited to: Multimeter, Calibrators, Signal generator, Oscilloscope

Literacy skills

In regard to reporting and recording organizational documentation.

Assessment Guide Form of assessment

The assessor may select two of the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Third- Party Portfolio

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects for Assessment

Assessment must show that the candidate:

- Checked the computer systems and networks against job requirements
- Correctly diagnosed the faults and problems in the computer systems and networks according to requirements and in line with the standard procedures
- Corrected the defective components or parts of the computer systems and networks without damage to the surrounding environment or services
- Tested the computer systems and networks to ensure safe operation

UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none"> • Occupational Health and Safety • Use of tools • Knowledge on Microprocessor • Knowledge on Power supplies • Knowledge on Graphical user interface • Knowledge on Data communications • Knowledge on Local Area Networks • Knowledge on Network Operating Systems • Knowledge on Application software • Knowledge on Computer monitors • Knowledge on Control programming style • Knowledge on Multimedia computer systems 	<ul style="list-style-type: none"> • Reading skills required to interpret work instructions • Communication skills needed to interpret and define work procedures • Problem solving in emergency situation

Unit 17

Unit Title	Maintain Computer Systems and Networks				
Descriptor	This unit covers the knowledge, skills and attitudes needed to maintain computer systems and networks.				
Code	SOC02S2U06V2	Level	4	Credit	8

Element of competencies	Performance Criteria
1. Plan and prepare for maintenance	<p>1.1 Maintenance is planned and prepared in line with job requirements.</p> <p>1.2 OHS policies and procedures are followed in line with job requirements.</p> <p>1.3 Computer systems and networks for maintenance are checked against specifications and requirements.</p> <p>1.4 Materials necessary to complete the work are obtained in accordance with established procedures and checked against job requirements.</p> <p>1.5 Tools, equipment and testing devices needed for the maintenance are obtained and checked for correct operation and safety</p> <p>1.6 Computer systems and networks maintained are identified from the job/service order or instructions</p>
2. Maintain computer systems and networks	<p>2.1 Appropriate personal protective equipment is used in line with standard procedures.</p> <p>2.2 Normal function of computer systems and networks are checked in accordance with manufacturer's instructions.</p>

	<p>2.3 Scheduled/periodic maintenance is performed in accordance with manufacturer’s requirements.</p> <p>2.4 Where necessary, needed repairs/replacements are made in accordance with established procedures.</p> <p>2.5 Unplanned events or conditions are responded to in accordance with established procedures</p>
<p>3. Inspect and test the computer systems and networks</p>	<p>3.1 Final inspections are undertaken to ensure that the testing conducted on the device conforms with the manufacturer’s instruction/manual</p> <p>3.2 Computer systems and networks are checked to ensure safe operation.</p> <p>3.3 Work site is cleaned and cleared of all debris and left in safe condition in accordance with company procedures</p> <p>3.4 Report is prepared and completed according to company requirements</p>

Range Statement OH&S Standards

Occupational Health and Safety Laws Personal Safety, Workplace Hazards and Environment Laws

Hardware

Includes but not limited to: Servers, peripherals, and desktop computers

Tools

Tools for: cutting, shaping, drilling, threading, tapping, finishing, dismantling, and assembling.

Testing Devices

Testing devices includes but not limited to:

Multimeter, software, Maintenance bench and Power supply equipment

Literacy skills

In regard to reporting and recording organizational documentation.

Assessment Guide Form

of assessment

The assessor may select two of the following assessment methods to objectively assess the candidate:

Observation with oral questioning Interview

Third Party Portfolio

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects for Assessment

Assessment must show that the candidate:

- Interpreted work instructions according to job requirements.
- Conducted maintenance properly on the systems using standard procedures
- Diagnosed faults in the systems
- Checked the maintained/serviced systems to ensure safety
- Documented the tasks undertaken

UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none">• Occupational health and safety• PC systems• Computer Operating Systems	<ul style="list-style-type: none">• Use of applications software• Reading skills required to interpret work instructions

<ul style="list-style-type: none">• Use of tools• Mathematical calculations• Wiring techniques• Drawing interpretation• Computer operations• Advanced networking• Network cabling• Viruses	<ul style="list-style-type: none">• Communication skills needed to interpret and define work procedures• Problem solving in emergency situation• Network Cabling• Connecting computers to wired and wireless LAN• Removing viruses from infected machines
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Unit 18

Unit Title	Install hardware to a network				
Descriptor	<p>This unit describes the skills and knowledge required to plan, manage and install new hardware components in a network.</p> <p>It applies to individuals employed in technical information and communications technology (ICT) support roles, such as network administrators, who support network hardware in a peer-to-peer or client-server networked environment.</p>				
Code	SOC02S2U07V1	Level	4	Credit	10

ELEMENT	PERFORMANCE CRITERIA
1. Determine network hardware requirements	<p>1.1 Assess client network hardware and cabling requirements, considering compatibility with existing application software and operating system</p> <p>1.2 Analyse requirements against local area network (LAN), wide area network (WAN), wireless networks, and mobile equipment access design limitations and organisational guidelines</p> <p>1.3 Evaluate client requirements according to organisational guidelines, corporate purchasing procedures, licensing arrangements and budget</p>
2. Obtain network hardware	<p>2.1 Contact vendors and obtain technical specifications</p> <p>2.2 Evaluate or test hardware according to client requirements and organisational guidelines</p> <p>2.3 Document recommendations and provide copies to appropriate person</p> <p>2.4 Determine and document licensing requirements and security issues</p> <p>2.5 Acquire hardware according to recommendations and organisational procedures</p> <p>2.6 Organise cabling infrastructure where required</p>

Competency Standard for IT Technician

ELEMENT	PERFORMANCE CRITERIA
3. Install network hardware	3.1 Conduct installation with minimal disruption to clients 3.2 Install hardware according to appropriate installation procedures 3.3 Configure and test the installation to ensure that it meets client needs
4. Provide instruction and support for installed products	4.1 Determine and document client instructions and needs 4.2 Provide one-to-one or group instruction to client and users as required 4.3 Obtain client evaluation and feedback to ensure that client requirements have been met

Range Statement

OH&S Standards

Occupational Health and Safety Laws Personal Safety, Workplace Hazards and Environment
Laws

Hardware

Includes but not limited to: Servers, peripherals, and desktop computers

Tools

Tools for: cutting, shaping, drilling, threading, tapping, finishing, dismantling, and assembling.

Testing Devices

Testing devices includes but not limited to:

Network tester, Multimeter, software, Maintenance bench and Power supply equipment

Literacy skills

In regard to reporting and recording organizational documentation.

Assessment Guide

Form of assessment

The assessor may select two of the following assessment methods to objectively assess the candidate:

Observation with oral questioning Interview

Third Party Portfolio

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects for Assessment

Assessment must show that the candidate:

- Interpreted work instructions according to job requirements.
- Conducted maintenance properly on the systems using standard procedures
- Diagnosed faults in the systems
- Checked the maintained/serviced systems to ensure safety
- Documented the tasks undertaken

UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none">• Occupational health and safety• PC systems• Use of tools• Wiring techniques• Drawing interpretation• Computer operations• Advanced networking• Network cabling	<ul style="list-style-type: none">• Reading skills required to interpret work instructions• Communication skills needed to interpret and define work procedures• Problem solving in emergency situation• Network Cabling• Connecting computers to wired and wireless LAN

Unit 19

Unit Title	Install, configure and test a router				
Descriptor	<p>This unit describes the skills and knowledge required to undertake router installation and configuration, as part of an upgrade in an existing network or the implementation of a new network.</p> <p>It applies to individuals who carry out installation, maintenance and upgrade of information and communication technologies (ICT) networks.</p>				
Code	SOC02S2U08V1	Level	4	Credit	10

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to install router	<p>1.1 Prepare for given work according to relevant legislation, work health and safety (WHS) regulations, codes and standards</p> <p>1.2 Arrange site access according to required procedure</p> <p>1.3 Ascertain network topology from technical requirements</p> <p>1.4 Determine the internet protocol (IP) addressing scheme for the network topology</p> <p>1.5 Evaluate network management and security requirements, with reference to current and future requirements</p> <p>1.6 Select a router with appropriate features according to technical requirements</p> <p>1.7 Choose cables, wireless application protocol (WAP), wide area network (WAN) connectors and other peripherals according to network and router specification, and WAN protocols</p>
2. Install and configure router	<p>2.1 Assemble router and peripherals according to manufacturer's requirements, enterprise guidelines and protocols</p> <p>2.2 Connect communications cables and WAN connectors to the router and network</p> <p>2.3 Configure router according to manufacturer's instructions and technical requirements, taking into account interoperability requirements with network components</p>
3. Test router and reconfigure network	<p>3.1 Test the router for connectivity across the network and for routing protocol functions</p> <p>3.2 Adapt or modify predetermined router configuration, depending on outcome</p>

Competency Standard for IT Technician

ELEMENT	PERFORMANCE CRITERIA
	of tests 3.3 Review router in line with organisational requirements 3.4 Test router and peripherals according to manufacturer's instructions and technical requirements 3.5 Test hardware and router to ensure full functionality and interoperability 3.6 Reconfigure additional hardware as required 3.7 Make adjustments to network depending on test results
4. Complete documentation and clean worksite	4.1 Tabulate test results and complete all user reports 4.2 Complete report and notify client of network status 4.3 Clean up and restore worksite to client's satisfaction 4.4 Secure sign-off from appropriate person

Range Statement

OH&S Standards

Occupational Health and Safety Laws Personal Safety, Workplace Hazards and Environment Laws

Hardware

Includes but not limited to: Servers, peripherals, and desktop computers, disks & cds

Tools

Tools for: cutting, shaping, drilling, threading, tapping, finishing, dismantling, and assembling.

Testing Devices

Testing devices includes but not limited to:

Network tester, Multimeter, software, Maintenance bench and Power supply equipment

Literacy skills

In regard to reporting and recording organizational documentation.

Assessment Guide Form

of assessment

The assessor may select two of the following assessment methods to objectively assess the candidate:

Observation with oral questioning Interview

Third Party Portfolio

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects for Assessment

Assessment must show that the candidate:

- Interpreted work instructions according to job requirements.
- Conducted maintenance properly on the systems using standard procedures
- Diagnosed faults in the systems
- Checked the maintained/serviced systems to ensure safety
- Documented the tasks undertaken

UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none">• Occupational health and safety• PC systems• Computer Operating Systems• Knowledge on different types of testers	<ul style="list-style-type: none">• Use of applications software• Reading skills required to interpret work instructions• Communication skills needed to interpret and define work procedures• Problem solving in emergency situation• Network Cabling

Unit 20

Unit Title	Install, operate and troubleshoot a small enterprise branch network				
Descriptor	This unit describes the skills and knowledge required to utilise networking fundamentals, including wide area network (WAN) technologies, basic security, routing and switching fundamentals, and to configure simple networks.				
	It applies to individuals working in a network support position. They would use the appropriate tools, equipment, software and protocols to install, operate, and troubleshoot, a small enterprise branch network				
Code	SOC02S2U09V1	Level	4	Credit	10

ELEMENT	PERFORMANCE CRITERIA
1. Specify the operation of a data network	1.1 Identify the various network elements 1.2 Use the open system interconnections (OSI) and transmission control protocol, or internet protocol (TCP/IP), models to explain how data flows in a network 1.3 Define the purpose, and basic operation, of the protocols in the OSI and TCP/IP models 1.4 Identify common network problems at layers 1, 2, 3 and 7, using a layered model approach
2. Implement a small switched network	2.1 Select the appropriate media, cables, ports, and connectors to connect switches to other network devices and hosts 2.2 Identify the network segmentation, basic traffic management and switching requirements 2.3 Perform, save and verify the initial switch configuration tasks 2.4 Verify the network status and switch the operation using basic utilities 2.5 Implement and verify the basic security for a switch
3. Implement an IP addressing scheme and IP services to	3.1 Specify the need and role of addressing in a network 3.2 Create and apply an addressing scheme to a network

Competency Standard for IT Technician

ELEMENT	PERFORMANCE CRITERIA
meet network requirements	3.3 Assign and verify valid IP addresses to hosts, servers and networking devices in a local area network (LAN) environment 3.4 Specify the operational requirements of private and public IP addressing 3.5 Implement static and dynamic addressing services for hosts in a LAN environment 3.6 Enable the network address translation (NAT) for a small network, with a single internet service provider (ISP) and connection, and verify the operation 3.7 Configure the dynamic host configuration protocol (DHCP) on a router
4. Implement a small routed network	4.1 Select the appropriate media, cables, ports, and connectors to connect routers to other network devices and hosts 4.2 Research and select a basic router 4.3 Perform, save and verify basic router configuration tasks 4.4 Configure and verify, a classless routing protocol 4.5 Verify the device configuration and network connectivity, using basic utilities 4.6 Implement the password, and physical security
5. Implement and verify WAN links	5.1 Research different methods for connecting to a WAN 5.2 Configure and verify, the basic WAN serial connection
6. Troubleshoot a small enterprise branch network	6.1 Identify and resolve, common switched network issues 6.2 Identify and correct, IP addressing issues 6.3 Troubleshoot DHCP and NAT on a router 6.4 Identify and resolve, common routing problems 6.5 Troubleshoot basic WAN connection problems

Range Statement

OH&S Standards

Occupational Health and Safety Laws Personal Safety, Workplace Hazards and Environment

Laws

Hardware

Competency Standard for IT Technician

Includes but not limited to: Servers, peripherals, and desktop computers, disks & cds

Tools

Tools for: cutting, shaping, drilling, threading, tapping, finishing, dismantling, and assembling.

Testing Devices

Testing devices includes but not limited to:

Network tester, Multimeter, software, Maintenance bench and Power supply equipment

Literacy skills

In regard to reporting and recording organizational documentation.

Assessment Guide Form

of assessment

The assessor may select two of the following assessment methods to objectively assess the candidate:

Observation with oral questioning Interview

Third Party Portfolio

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects for Assessment

Assessment must show that the candidate:

- Interpreted work instructions according to job requirements.
- Conducted maintenance properly on the systems using standard procedures
- Diagnosed faults in the systems
- Checked the maintained/serviced systems to ensure safety
- Documented the tasks undertaken

UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
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Competency Standard for IT Technician

<ul style="list-style-type: none">• Occupational health and safety• PC systems• Use of tools• Wiring techniques• Drawing interpretation• Computer operations• Advanced networking• Network cabling	<ul style="list-style-type: none">• Reading skills required to interpret work instructions• Communication skills needed to interpret and define work procedures• Problem solving in emergency situation• Network Cabling• Connecting computers to wired and wireless LAN and switches
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Unit 21

Unit Title	Install, configure and test network security				
Descriptor	<p>This unit describes the skills and knowledge required to install, configure and test network security in an information and communications technology (ICT) network.</p> <p>It applies to individuals working as ICT professionals who install, configure and test secure networks of any size.</p>				
Code	SOC02S2U10V1	Level	4	Credit	10

ELEMENT	PERFORMANCE CRITERIA
1. Assess network security threats and vulnerabilities to identify risk	1.1 Assess and report on current system security, according to required asset security level 1.2 Determine additional network, software, hardware and system security threats and vulnerabilities 1.3 Use identified threats and vulnerability information to identify security risks 1.4 Make recommendations to management to address security deficiencies, according to current and future commercial and business requirements
2. Implement countermeasures for identified vulnerabilities and threats	2.1 Implement required level of perimeter security based on current and future business needs 2.2 Assess and implement best practice server and network hardening techniques and measures 2.3 Implement secure authentication and user account controls 2.4 Secure data integrity and transmission
3. Test and verify functionality and performance of security system implemented	3.1 Design test items to verify key function and performance measures against criteria 3.2 Conduct function and performance tests recording results 3.3 Modify and debug security system as necessary 3.4 Develop documentation on current system settings and file for future

Competency Standard for IT Technician

ELEMENT	PERFORMANCE CRITERIA
	reference
4. Provide systems for monitoring and maintaining security	4.1 Monitor current network security, including physical aspects, using appropriate third-party testing software where applicable 4.2 Review logs and audit reports to identify and record security incidents, intrusions or attempts 4.3 Carry out spot checks and audits to ensure that procedures are not being bypassed 4.4 Document newly discovered security threats, vulnerabilities and risks in a report for presentation to appropriate person to gain approval for changes to be made

Range Statement

OH&S Standards

Occupational Health and Safety Laws Personal Safety, Workplace Hazards and Environment
Laws

Hardware

Includes but not limited to: Servers, peripherals, and desktop computers

Tools

Tools for: cutting, shaping, drilling, threading, tapping, finishing, dismantling, and assembling.

Testing Devices

Testing devices includes but not limited to:

Network tester, Multimeter, software, Maintenance bench and Power supply equipment

Literacy skills

In regard to reporting and recording organizational documentation.

Assessment Guide

Form of assessment

The assessor may select two of the following assessment methods to objectively assess the candidate:

- Observation with oral questioning Interview
- Third Party Portfolio

Assessment context

Assessment may be done in workplace or a simulated work environment.

Critical aspects for Assessment

Assessment must show that the candidate:

- Interpreted work instructions according to job requirements.
- Conducted maintenance properly on the systems using standard procedures
- Diagnosed faults in the systems
- Checked the maintained/serviced systems to ensure safety
- Documented the tasks undertaken

UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none">• Occupational health and safety• PC systems• Use of tools• Wiring techniques• Drawing interpretation• Computer operations• Advanced networking• Network cabling• Network testing	<ul style="list-style-type: none">• Reading skills required to interpret work instructions• Communication skills needed to interpret and define work procedures• Problem solving in emergency situation• Network Cabling• Network testing