



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **UEENEED124A Integrate multiple computer operating systems on a client server local area network**

**Release: 1**

## **UEENEED124A Integrate multiple computer operating systems on a client server local area network**

### **Modification History**

Not applicable.

### **Unit Descriptor**

#### **Unit Descriptor**

#### **1) Scope:**

##### **1.1) Descriptor**

This competency standard unit covers interconnecting computers to form a local area network (LAN). It encompasses applying different computer and network operating systems on a single LAN, using network standards and protocols, selecting network topology and physical media, disaster planning recovery, performance management and documentation of work activities.

Note:

This unit applies to all aspects of Electrotechnology - engineering applications only. For general competencies related Information Technologies refer to the latest endorsed IT Training Package.

### **Application of the Unit**

#### **Application of the Unit 2)**

This competency standard unit is intended to apply to any recognised development program that leads to the acquisition of a formal award at AQF level 4 or higher.

### **Licensing/Regulatory Information**

#### **License to practice 3)**

The skills and knowledge described in this unit do not require a licence to practice in the workplace. However, practice in this unit is subject to regulations directly related to occupational health and safety and where

**License to practice**

3)

applicable contracts of training such as apprenticeships and the like.

**Pre-Requisites**

**Prerequisite Unit(s)**

4)

**Competencies**

4.1)

Granting competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed.

UEENEEE1 01A Apply Occupational Health Safety regulations, codes and practices in the workplace

**Literacy and numeracy skills**

4.2)

Participants are best equipped to achieve this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 “Literacy and Numeracy”

Reading 5 Writing 5 Numeracy 5

**Employability Skills Information**

**Employability Skills**

5)

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements.

## Elements and Performance Criteria Pre-Content

**6)** Elements describe the essential outcomes of a competency standard unit  
Performance Criteria describe the required performance needed to demonstrate achievement of the element.  
Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

| ELEMENT                                                                                   | PERFORMANCE CRITERIA                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 Prepare to install multiple operating systems on computers and a client server network. | 1.1 OHS processes and procedures for a given work area are obtained and understood.                                                                                                  |
|                                                                                           | 1.2 Established OHS risk control measures and procedures in preparation for the work are followed.                                                                                   |
|                                                                                           | 1.3 Operating systems, devices, software and services required are determined from network performance specifications and in consultations with persons of higher authority.         |
|                                                                                           | 1.4 Network security policy is reviewed in network performance specifications and in consultation with person(s) of higher authority.                                                |
|                                                                                           | 1.5 Activities are planned to meet scheduled timelines in consultation with others involved on the work.                                                                             |
|                                                                                           | 1.6 Appropriate persons are consulted to ensure the work is co-ordinated effectively with others involved or affected by the work.                                                   |
| 2 Install and configure computer and network operating systems.                           | 2.1 OHS risk control measures and procedures for carrying out the work are followed.                                                                                                 |
|                                                                                           | 2.2 Knowledge of computer and network operations and network infrastructure are applied to installing and configuring operating systems and software on computers and client server. |

| ELEMENT                                                  | PERFORMANCE CRITERIA                                                                                                                                                                         |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3 Monitor and optimise computer and network performance. | 2.3 Network protocols are installed and configured to integrate computers using different operating systems in compliance with industry standards and variants as specified for the network. |
|                                                          | 2.4 Security measures of the network are implemented in compliance with security policy, industry standards and requirements specified for the network.                                      |
|                                                          | 2.5 Disaster recovery plan is tested for absolute effectiveness and compliance with enterprise security policy.                                                                              |
|                                                          | 2.6 Methods for dealing with unexpected situations are selected on the basis of safety and specified work outcomes.                                                                          |
|                                                          | 3.1 OHS risk control measures and procedures for carrying out the work are followed.                                                                                                         |
|                                                          | 3.2 Network is monitored and common methods are implemented to optimise system performance.                                                                                                  |
|                                                          | 3.3 Common computer and server malfunctions are identified and rectified using logical techniques and known solutions.                                                                       |
|                                                          | 3.4 Computer and server operating system incremental updates and security patches are installed as soon as they are available.                                                               |
|                                                          | 3.5 Methods for dealing with unexpected situations are selected on the basis of safety and specified work outcomes.                                                                          |
|                                                          | 3.6 On-going checks of the quality of work outcomes are undertaken in accordance with job specification, technical standards, enterprise policy and/or regulatory requirements.              |
|                                                          | 3.7 Work is carried out efficiently without unnecessary waste of materials or damage to apparatus and the surrounding environment or services and using sustainable energy practices.        |

## ELEMENT

## PERFORMANCE CRITERIA

- |   |                                                                  |     |                                                                                                                                                       |
|---|------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Report integration and outcome of network monitoring activities. | 4.1 | Written justification is made for solutions used to rectify malfunctions and appropriate person/s notified in accordance with established procedures. |
|   |                                                                  | 4.2 | Computer and network installation and monitoring records are maintained in accordance with established procedures.                                    |

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

8) This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of safe working practices and integrating multiple computer operating systems on a client server network.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

#### **KS01-ED124A                      Operating systems and networks**

Evidence shall show an understanding of fundamentals of operating systems and networks to an extent indicated by the following aspects:

- T1      Operating system fundamentals
- T2      Networking fundamentals
- T3      Physical components of a network
- T4      Transmission Control Protocol / Internet Protocol (TCP / IP) encompassing:
- T5      Network Services
- T6      Network Operating Systems
- T7      Installation and boot processes

## Evidence Guide

### EVIDENCE GUIDE

**9)** This provides essential advice for assessment of the unit of competency and must be read in conjunction with the performance criteria and the range statement of the unit of competency and the Training Package Assessment Guidelines.

The Evidence Guide forms an integral part of this Competency Standard Unit and shall be used in conjunction with all components parts of this unit and, performed in accordance with the Assessment Guidelines of this Training Package.

#### Overview of Assessment

##### 9.1)

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the Industry's preferred model for apprenticeships. However, where summative (or final) assessment is used it is to include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. It is recognised that, in some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accord with Industry and, Regulatory policy in this regard.

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity, electrical equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. Hence, sources of evidence need to be 'rich' in nature so as to minimise error in judgment. Activities associated with normal every day work have a bearing on the decision as to how much and how detailed the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practiced. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are included for Assessors in the Assessment Guidelines of this Training Package.

**Critical aspects  
of evidence  
required to  
demonstrate  
competency in  
this unit**     9.2)

Before the critical aspects of evidence are considered all prerequisites shall be met.

Evidence for competence in this unit shall be considered holistically. Each element and associated performance criteria shall be demonstrated on at least two occasions in accordance with the “Assessment Guidelines – UEE11”. Evidence shall also comprise:

- A representative body of work performance demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:
  - Implement Occupational Health and Safety workplace procedures and practices including the use of risk control measures as specified in the performance criteria and range; and
  - Apply sustainable energy principles and practices as specified in the performance criteria and range; and
  - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit. It may be required by some jurisdictions that RTOs provide a percentile graded result for the purpose of regulatory or licensing requirements. ; and
  - Demonstrate an appropriate level of skills enabling employment; and
  - Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures; and
- Demonstrated consistent performance across a representative range of contexts from the prescribed items below:
  - Integrate multiple computer operating systems on a client server network as described in 8) and including:
    - A                      Determining the correct operating system, devices software and services required.
    - B                      Installing and configuring computer and client server operating system and software.

- C Implementing system security measure in compliance with enterprise security policy.
- D Testing effectiveness of disaster recovery plan.
- E Using common methods to optimise system performance.
- F Identifying and rectifying common malfunctions using known solutions.
- G Providing justification for solutions used to rectify malfunctions.
- H Maintaining computer and network monitoring and records accurately.
- I Dealing with unplanned events by drawing on essential knowledge and skills to provide appropriate solutions incorporated in the holistic assessment with the above listed items.

**Context of and specific resources for assessment 9.3)**

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to undertake actual work as prescribed by this competency standard unit.

Resources required to assess this unit are listed above in context of assessment', which should also be used in the formal learning/assessment environment.

Note:

Where simulation is considered a suitable strategy for assessment it must ensure that the conditions for assessment are authentic and as far as possible reproduce and replicate the workplace and is consistent with the approved industry simulation policy.

The resources used for assessment should reflect current industry practices in relation to integrating multiple computer operating systems on a client server network.

**Method of  
assessment**

**9.4)**

This competency standard unit shall be assessed by methods given in Volume 1, Part 3 "Assessment Guidelines".

Note:

Competent performance with inherent safe working practices is expected in the Industry to which this competency standard unit applies. This requires that the specified essential knowledge and associated skills are assessed in a structured environment which is primarily intended for learning/assessment and incorporates all necessary equipment and facilities for learners to develop and demonstrate the essential knowledge and skills described in this unit.

**Concurrent  
assessment and  
relationship with  
other units**

**9.5)**

For optimisation of training and assessment effort, competency development in this unit may be arranged concurrently with unit:

UEENEED11 Support computer software and hardware  
2A

## Range Statement

### RANGE STATEMENT

**10)** This relates to the unit of competency as a whole providing the range of contexts and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

This competency standard unit shall be demonstrated in relation to integrating multiple computer operating systems on a client server network on at least two different operating systems for a client server and at least two computers connected to the server to form a client server network.

Note.

Examples of operating systems are various iteration of Windows, OS/2, Unix variants such as Linux and Mac OS X and the like.

Generic terms are used throughout this Vocational Standard shall be regarded as part of the Range of Variables in which competency is demonstrated. The definition of these and other terms that apply are given in Volume 2, Part 2.1.

## Unit Sector(s)

Not applicable.

## Competency Field

|                         |                  |
|-------------------------|------------------|
| <b>Competency Field</b> | <b>11)</b>       |
|                         | Computer Systems |