

Domain
Title:
Level: 3

COMPUTER SYSTEM SUPPORT
Analyze operating systems

UNIT ID:2323

Credits: 8

Purpose

This unit standard is intended for those who analyse operating systems. People credited with this unit standard are able to demonstrate understanding of operating systems, perform operating systems maintenance, perform the different tasks in command-line interface, managing files and folders in command-line interface and manage different computer resources and perform operating systems installations.

This unit standard is intended for those who work as computer system supporters.

Special Notes

1. Entry information:

Prerequisite:

- None

2. This unit standard is to be delivered and assessed in the context of information and communication technology.

3. Assessment evidence may be collected from a real or a simulated workplace in which ICT operations are carried out.

4. Tools and equipment may include but are not limited to computer, external devices, storage devices and basic computer applications.

5. Glossary of terms

- '*Operating System*' the low-level software that supports a computer's basic functions, such as scheduling tasks and controlling peripherals.
- '*Network Devices*' Networking hardware may also be known as network equipment, computer networking devices. Units which are the last receiver or generate data are called hosts or data terminal equipment. All these terms refer to devices facilitating the use of a computer network.
- '*Input and output devices*' In computing, input/output I/O is the communication between information processing system (such as a computer) and the outside world, possibly a human or another information processing system. Inputs are the signals or data received by the system, and outputs are the signals or data sent from it.

6. Performance of all elements in this unit standard must comply with industry standards.
7. Regulations and legislation relevant to this unit standard include the following:
 - Labour Act 2007(Act No 11, 2007).
 - Regulations relating to the health & safety of employees at work under schedule 1 (2) of the Labour Act No.11 of 2007 and all subsequent amendments.

Quality Assurance Requirements

This unit standard and others within this sub-field may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority on www.namqa.org and the Namibia Training Authority on www.nta.com.na

Elements and Performance Criteria

Element 1: Demonstrate understanding of operating systems

Range

Operating system controls and coordinates the use of the hardware among various application programs for various users.

Operating systems may include but not limited to resource allocator, control program, accounting, protection and security and kernel.

Performance Criteria

- 1.1 Operating Systems are explained in accordance with their basic functions and usage.
- 1.2 Operating systems are identified, classified and explained.
- 1.3 Microsoft disk operating system (MS-DOS) is defined.
- 1.4 UNIX operating system and kernel is explained.
- 1.5 Knowledge of virtual machines is demonstrated.

Element 2: Perform operating systems maintenance

Range

Protection and security may include control of systems resources but is limited to user authentication and defending external I/O devices from invalid access attempts.

Performance Criteria

- 2.1 Operating systems features and vulnerabilities are compared.
- 2.2 Operating systems security maintenance is performed.
- 2.3 Operating systems performance is checked in accordance with computer application procedures.
- 2.4 Operating systems updates are performed.

Element 3: Perform the different tasks in command-line interface

Performance Criteria

- 3.1 Operation of the command line interface is executed according to instructions.
- 3.2 Fundamental commands from the command line are illustrated and applied.

Element 4: Managing files and folders in command-line interface

Performance Criteria

- 4.1 Files and folders are created.
- 4.2 Files structure/directory hierarchy is created and deleted according to file system manipulation procedures.
- 4.3 File manipulation (rename, move, copy, append) is performed according to instructions.

Element 5: Manage different computer resources

Range

Computer resources may include but not limited to storage, input and output resources.

Computer resources allocation may include but not limited to disk partitioning, memory allocation and process allocation.

Performance Criteria

- 5.1 Computer resources are allocated and managed according to specific requirement.
- 5.2 Computer resources functionalities are monitored.

Element 6: Perform operating systems installations

Range

OS installation methods may include but not limited to network, USB and CD/DVD.

Performance Criteria

- 6.1 OS installation methods are explained and performed.
- 6.2 Upgrade installation is illustrated and applied.
- 6.3 Multiple of operating systems installations on one machine are performed.

Registration Data

Subfield:	Information and Communication Technology
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