

Domain	NETWORKING	Unit ID: 2298
Title:	Demonstrate an understanding of networking fundamentals	
Level: 3		Credits: 7

Purpose

This unit standard is intended for those who demonstrate an understanding of networking fundamentals. People credited with this unit standard are able to demonstrate an understanding of computer networks, demonstrate an understanding of different network infrastructure devices, demonstrate an understanding of the Open Systems Interconnection (OSI) Model, demonstrate an understanding of the TCP/IP model and other internet protocols, demonstrate an understanding of network medium, demonstrate an understanding of Network Security, demonstrate an understanding of Voice over Internet Protocol (VoIP) and Internet Protocol (IP) Telephony Technologies and demonstrate an understanding of Internet Protocol (IP) addressing.

This unit standard is intended for those who work in the information and communication technology environment.

Special Notes

1. Entry information:

Prerequisite:

- None

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

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

4. Performance of all elements in this unit standard must comply with industry standards.

5. Regulations and legislation relevant to this unit standard include the following:

- Labour Act 2007(Act No 11, 2007)
- Regulations relating to the health and 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 an understanding of computer networks

Range

Computer Networks may include but are not limited to WAN, LAN, storage area network, metropolitan area network, campus area network and personal area network.

Performance Criteria

- 1.1 Computer network is defined.
- 1.2 Types of computer networks are identified.
- 1.3 Logical and physical network topologies are illustrated using schematics, diagrams and descriptions.

Element 2: Demonstrate an understanding of different network infrastructure devices

Range

Network devices may include but are not limited to network interface card, hubs, switch, bridge, routers and gateways.

Performance Criteria

- 2.1 Network devices are identified.
- 2.2 Functions of network devices are explained.

Element 3: Demonstrate an understanding of the Open Systems Interconnection (OSI) model

Performance Criteria

- 3.1 OSI model is described.
- 3.2 OSI model layers are outlined and explained.

Element 4: Demonstrate an understanding of the TCP/IP model and other internet protocols

Performance Criteria

- 4.1 TCP/IP model is described.
- 4.2 TCP/IP model layers are outlined and explained.
- 4.3 TCP/IP protocols are outlined.

Element 5: Demonstrate an understanding of network medium

Performance Criteria

- 5.1 Different types of network mediums are identified.
- 5.2 Characteristics of network mediums are defined.
- 5.3 Uses of network mediums are explained.

Element 6: Demonstrate an understanding of network security

Performance Criteria

- 6.1 Network security is defined.
- 6.2 Network security aspects are identified.

Element 7: Demonstrate an understanding of Voice over Internet Protocol (VoIP) and Internet Protocol (IP) telephony technologies

Performance Criteria

- 7.1 VoIP and IP telephony technologies are explained.
- 7.2 Functions of VoIP and IP telephony services are outlined.

Element 8: Demonstrate an understanding of Internet Protocol (IP) addressing

Performance Criteria

- 8.1 IP addresses are defined.
- 8.2 IP address classes are outlined.
- 8.3 IP address versions are outlined.

Registration Data

Subfield:	Information and Communication Technology
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