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| Domain | NETWORKING | UNIT ID: 2299 |
| Title: | Apply data protocols principles and network installations | |
| Level: 4 | | Credits: 7 |

Purpose

This unit standard is intended for those who apply data protocols principles and network installations. People credited with this unit standard are able to describe synchronous and asynchronous data communication, deploy computer network types and standards, install Local Area Network (LAN), install wireless network and install Wide Area Networks (WAN).

This unit standard is intended for those who work in the networking environment.

Special Notes

1. Entry information:

Prerequisites:

- Unit ID: 2327 Recognise pc equipment and accessories
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. *IEEE Standard* - refers to a family of networking standards that cover the physical layer specifications of technologies from Ethernet to wireless.
 6. 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: Describe synchronous and asynchronous data communication

Performance Criteria

- 1.1 Synchronous and asynchronous data communication is described in terms of the characteristics.
- 1.2 Features of data communications equipment are described and explained.

Element 2: Deploy computer network types and standards

Performance Criteria

- 2.1 Logical networks are implemented.
- 2.2 Physical network topologies are implemented.
- 2.3 IEEE network standards are complied with.

Element 3: Install Local Area Network (LAN)

Performance Criteria

- 3.1 Network tools and medium components are identified.
- 3.2 Local Area Network (LAN) is designed.
- 3.3 Network Mediums are created, installed and tested.
- 3.4 Network devices and IP address configurations are applied.
- 3.5 Network connectivity tests are applied.

Element 4: Install wireless network

Types of wireless installations may include but are not limited to ad-hoc and infrastructure mode.

Performance criteria

- 4.1 Types of wireless installations are explained.

- 4.2 Wireless hardware devices are installed.
- 4.3 Wireless hardware/software is configured.
- 4.4 Wireless clients are configured.
- 4.5 Wireless connectivity is tested.

Element 5: Install Wide Area Networks (WAN)

Performance criteria

- 5.1 Network tools and medium components are identified.
- 5.2 Wide Area Network (WAN) is designed.
- 5.3 Network mediums are created, installed and tested.
- 5.4 Network devices and IP address configurations are applied.
- 5.5 Network connectivity tests are applied.

Registration Data

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| Subfield: | Information and Communication Technology |
| Date first registered: | 30 July 2020 |
| Date this version registered: | 30 July 2020 |
| Anticipated review: | 2025 |
| Body responsible for review: | Namibia Training Authority |