

	<b>Unit ID: 2270</b>
<b>Domain</b>	<b>BROADCASTING</b>
<b>Title:</b>	<b>Perform routing and switching in a broadcast environment</b>
<b>Level: 5</b>	<b>Credits: 10</b>

**Purpose**

This unit standard is intended for those who perform routing and switching in a broadcast environment. People credited with this unit standard are able to perform setup on audio and video routers, perform audio routing and video signals in a broadcast environment, apply knowledge of solving routing and switching problems, perform maintenance on routers and switches, perform backups and restoration on routers and switches and demonstrate an understanding of customer relationship and teamwork when routing and switching signals.

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

**Special Notes**

1. Entry information:  
Prerequisites:
  - 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 broadcasting operations are carried out.
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 subfield 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 and the Namibia Training Authority on [www.nta.com.na](http://www.nta.com.na)

## **Elements and Performance Criteria**

### **Element 1: Perform setup on audio and video routers**

#### **Range**

Different types of routers and switchers may include but not limited to signal types, switching method, uses and their role in the transmission path.

Interface and Peripheral may include but not limited to A-D and D-A converters, Digital I/O's, Fiber I/O's, CPU's (Central Processing Unit), PSU's (Power supply unit), Displays and other peripherals (fans,cables,keyboards etc.)

#### **Performance Criteria**

- 1.1 Types of routers and switches are identified and described.
- 1.2 Interfaces, peripherals and displays of the router are identified and described
- 1.3 Signals configuration is performed.
- 1.4 Types of signals and positions are identified.
- 1.5 Users authority and rights are created.

### **Element 2: Perform audio routing and video signals in a broadcast environment**

#### **Performance Criteria**

- 2.1 Transmission path and role of routing in the broadcast environment is explained.
- 2.2 Destinations, audio and video sources are identified.
- 2.3 Audio and video qualities are verified.
- 2.4 Signal routing and switching with the help of computer interfacing are performed.

### **Element 3: Apply knowledge of solving routing and switching problems**

#### **Range**

Solving routing and switching problem are not limited to technical, work related, tangible or conceptual problems.

#### **Performance Criteria**

- 3.1 Routing and switching problems are explained.
- 3.2 Routing and switching problems responses are formulated.

- 3.3 Technical routing and switching problems are identified, evaluated and diagnosed.
- 3.4 Unresolved problems are reported and escalated.

**Element 4: Perform maintenance on routers and switches**

**Performance Criteria**

- 4.1 Maintenance schedule is explained.
- 4.2 Faulty internal component of controllers are identified.
- 4.3 Components of a control system are replaced and software reloaded according to the standard operating procedures.
- 4.4 Log files are interpreted and faults identified.

**Element 5: Perform backups and restoration on routers and switches**

**Performance Criteria**

- 5.1 Backup of configurations is created and updated.
- 5.2 Copy of controller software and settings is created and verified.
- 5.3 Software required is loaded into the interface according to the standard operating procedures of the company.
- 5.4 Reloaded software and configurations are verified and tested.

**Element 6: Demonstrate an understanding of customer relationship and teamwork when routing and switching signals**

**Performance Criteria**

- 6.1 Routing instructions are interpreted and verified.
- 6.2 Routing and switching requirements are clarified.
- 6.3 Existing services interruptions is communicated to clients

**Registration Data**

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