

INSTALL COMPUTER NETWORK SOFTWARE

ISCED UNIT CODE: 0612 551 05A

TVET CDACC UNIT CODE: IT/OS/NSA/CC/03/5/MA

UNIT DESCRIPTION

This unit covers the competencies required to Install Computer Network Software. It involves the following: Conduct Network Software Simulation, Perform Computer Network software installation, Test Computer Network Software and Monitor computer network software performance.

Elements <i>These describe the key outcomes which make up workplace functions</i>	Performance Criteria <i>These are assessable statements which specify the required level of performance for each of the elements</i> <i>(Bold and italicized terms are elaborated in the range)</i>
1. Conduct Network Software Simulation	1.1. <i>Computer network software</i> requirements are determined as per work procedure. 1.2 <i>Computer network simulation Software</i> is installed and configured as per software manual. 1.3 <i>Network Simulation activities</i> are created as per work procedure.
2. Perform Computer Network software installation	2.1 <i>Network operating system</i> is installed as per work procedure. 2.2 <i>Network monitoring and management tools</i> are installed as per work procedure. 2.3 Network monitoring tools are configured as per work procedure.
3 Test Computer Network Software	3.1 <i>Software testing</i> is performed as per user requirements 3.2 Corrective measures are performed as per user requirements 3.3 <i>Computer software</i> functionality test report is generated as per work procedure
4. Conduct Computer Network software user training	4.1 <i>User skill gap is determined as per work procedure</i> 4.2 <i>User training manuals are prepared as per software manual.</i> 4.3 <i>User training is conducted as per user training manual</i> 4.4 <i>Training report is generated as per work procedure</i>

5. Monitor computer network software performance	5.1 <i>Real-time monitoring</i> is performed as per work procedure 5.2 <i>Bandwidth and Throughput analysis</i> is conducted as per work procedures 5.3 <i>Network Alerts and notifications</i> are monitored as per work procedures
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RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

1. Computer Network Software may include but not limited to;	● Operating systems ● Network protocols and services ● Network management software ● Remote desktop software ● Network backup and recovery software ● VoIP software
2. Computer network simulation Software may include but not limited to;	● Cisco Packet Tracer ● Graphical Network Simulator ● Wireshark
3. Network Simulation activities may include but not limited to;	● Packet tracer tracer exercises ● Wireshark analysis ● Cloud based simulations
4. Network Operating system may include but not limited to;	● Windows server ● Linux-based NOS ● Cisco IOS
5. Network monitoring and management tools may include but not limited to;	● Wireshark ● Nagios ● Zabbix ● Cisco Prime Infrastructure
6. Software testing may include but not limited to;	● Functional testing ● Performance testing ● Security testing ● Compatibility testing ● Scalability testing ● Usability testing
7. Real-time monitoring may include but not limited to;	● SNMP ● Packet sniffers ● Performance monitoring tools ● Flow-based analytics
8. Network Alerts and Notification may include but not limited to;	● Security alerts ● Performance alerts

	• Hardware alerts • Configuration alerts
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REQUIRED KNOWLEDGE AND SKILLS

This section describes the knowledge and skills required for this unit of competency:

Required knowledge

- Network components and devices
- Network security measures
- Network protocols
- Understanding Operating System
- Environmental conservation
- Workplace safety and health

Required skills

- Computer Literacy
- Critical thinking
- Problem-solving skills
- Analytical skills
- Technical proficiency
- Storage solutions
- Operating systems proficiency

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills range.

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Conducted Network Software simulation as per work procedure 1.2 Performed Computer Network software installation as per work procedure 1.3 Tested Computer Network Software as per work procedure 1.4 Monitored network software performance as per work procedure
2. Resource implications	The following resources should be provided: 2.1 Appropriately simulated environment where assessment can take place 2.2 Access to relevant work environment

	2.3 Resources relevant to the proposed activities or tasks; including computers, media, routers, switches, ports etc.
3. Methods of assessment	Competency in this unit may be assessed through: 3.1 Observation 3.2 Oral questioning 3.3 Portfolio of evidence 3.4 Interviews 3.5 Third party report 3.6 Practical assessment 3.7 Written tests
4. Context of assessment	This Competency may be assessed: 4.1 in a workplace 4.2 in a simulated workplace
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.