



Australian Government

UEECS0021 Install and administer UNIX/LINUX-based networked computers

Release: 1

UEECS0021 Install and administer UNIX/LINUX-based networked computers

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to install and administer UNIX/LINUX-based networked computers.

It includes safe working practices, performing UNIX/LINUX, LINUX or Mac OSX operating system installation, administration functions of logging in and out, setting up graphic user interface (GUI) applications, manipulating text files, creating and searching files and directories, changing permissions, using text editors, identifying and modifying initialisation files, streamlining command, execution using shell features, using network commands and documenting all administration activities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable

Competency Field

Computer Systems

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to install, upgrade and maintain

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures

network operations	for a given work area are identified, obtained and applied
	1.2 Scope of the administration work is determined from network specifications and in consultation with relevant person/s
	1.3 Activities are planned in accordance with workplace procedures for timelines and consultation with others involved
	1.4 UNIX/LINUX system variants, versions and updates required to maintain computers and networks are identified and obtained in accordance with workplace procedures and job specifications
2 Install, upgrade and maintain UNIX/LINUX-based computers and network operations	2.1 UNIX/LINUX operating system is installed, upgraded and configured on computers and servers in accordance with developer instructions and network requirements
	2.2 Desktop environment, network protocols and services and system security are implemented in accordance with workplace procedures and job specifications
	2.3 Access to resources is configured and limitations specified for users in accordance with workplace procedures and job specifications
	2.4 UNIX/LINUX-based network malfunctions are identified and rectified in accordance with workplace procedures and job specifications using tests of devices and drivers, storage, network protocols, connections and services and system security configuration processes
	2.5 Network performance and reliability is monitored and optimised in accordance with workplace procedures
	2.6 UNIX/LINUX-based network administration is carried out efficiently without waste of materials and energy or damage to apparatus, the surrounding environment or relevant services
3 Document network administration activities	3.1 Written justification is produced for network upgrading and maintenance and relevant person/s notified in accordance with workplace procedures
	3.2 Network administration and documentation are

maintained in accordance with workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Installing and configuring the operating system and administering must include at least the following:

- two networked computers
- one of the following:
 - UNIX
 - LINUX

Unit Mapping Information

This unit replaces and is equivalent to UEENEED113A Install and administer UNIX based networked computers.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

Assessment Requirements for UEECS0021 Install and administer UNIX/LINUX-based networked computers

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (WHS/OHS) requirements, including the use of risk control measures
- configuring access to resources for users
- dealing with unplanned events
- documenting computer/network administration activities
- documenting network administration activities
- identify the UNIX/LINUX-based operating system variants, versions and updates required
- identifying computer/network malfunctions
- installing, upgrading and maintaining UNIX/LINUX-based computers and network operations
- installing, upgrading and configuring computer operating system
- preparing to install, upgrade and maintain network operations
- rectifying computer/network malfunctions
- carrying out UNIX/LINUX-based network administration efficiently without waste of materials and energy or damage to apparatus, the surrounding environment or relevant services.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- accessing UNIX/LINUX and server and graphic user interface (GUI)
- backup and restoring data
- devices and drivers, storage, network protocols, connections, services and system security configuration processes
- directory and file management
- GUI applications
- networking/internet set-up procedures

- installing applications software
- operating system components and structure
- operating systems malfunctions and solutions
- printing
- relevant manufacturer specifications and developer instructions
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace instructions, policies and procedures
- system processes and memory management (Korn and C shells)
- system tools
- UNIX/LINUX operating systems.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated suitable workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, facilities and equipment currently used in industry
- resources that reflect current industry practices in relation to installing and administering UNIX/LINUX-based computers
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

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