



Australian Government

DEFSIM016 Fault find and repair simulator computer systems and peripheral hardware

Release: 1

DEFSIM016 Fault find and repair simulator computer systems and peripheral hardware

Modification History

Release 1. This is the first release of this unit of competency in the DEF Defence Training Package Release 4.0.

Application

This unit describes the knowledge and skills required to conduct fault finding and repairs to simulator computer systems and peripheral hardware. This includes analysing fault reports, identifying and rectifying faults, conducting functional tests and the documentation and certification processes. In the context of this unit, simulators are used to replicate land, air, sea and undersea systems to facilitate training and development.

Computer systems may include Generic Simulator Computer Systems (x86 and x64), host computers, input/output systems, visual computers and instructor operating systems of simulators.

Peripheral hardware may include instruments, visual display unit equipment, printers, hard drives and data storage devices, switches and routers.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work independently, or as part of a team, with minimal supervision, while performing complex tasks, including complex problem solving, in a limited range of contexts. They would use discretion and judgement and take responsibility for the quality of their outputs.

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

Pre-requisite Unit

Not applicable.

Competency Field

Simulator Operations

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

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

1 Receive and analyse fault report	1.1	Receive and analyse simulator computer systems peripheral hardware fault report
	1.2	Identify and select appropriate fault finding method(s) that will apply across the range of simulator computer systems and peripheral hardware
	1.3	Prepare the simulator computer system and peripheral hardware for fault finding
2 Identify and find fault	2.1	Apply fault finding method(s)
	2.2	Identify and analyse fault indicators
	2.3	Identify the simulator computer systems and peripheral hardware fault
	2.4	Confirm that the fault is the one initially reported
3 Repair fault	3.1	Identify and confirm cause of fault
	3.2	Identify and confirm repair method(s)
	3.3	Complete simulator computer systems and peripheral hardware repair
	3.4	Conduct post repair safety check
	3.5	Restart simulator computer system and peripheral hardware
4 Conduct functional test	4.1	Test simulator computer system and peripheral hardware to ensure operational integrity
	4.2	Confirm operational parameters
5 Finalise repair process	5.1	Finalise simulator computer system and peripheral hardware repair reports including a detailed synopsis of the fault and the repair process and any certification requirements
	5.2	Report the operational status of the simulator computer system and peripheral hardware

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 Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to DEFSIM002 Fault find and repair simulator computer systems and peripheral hardware

Links

Companion Volume Implementation Guides are found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6bdbab1e-11ed-4bc9-9cba-9e1a55d4e4a9>

Assessment Requirements for DEFSIM016 Fault find and repair simulator computer systems and peripheral hardware

Modification History

Release 1. This is the first release of this unit of competency in the DEF Defence Training Package Release 4.0.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and includes:

- undertaking research and analysis related to simulator computer systems and peripheral hardware
- following logical, fault finding techniques
- applying simulator computer systems and/or peripheral hardware repair methodologies
- following configuration management processes
- using appropriate information technology and software including at least one of:
 - general online diagnostic tools
 - proprietary simulator management databases
 - customer diagnostics software
 - burn in test software
 - image management software
 - file comparison software
- identifying, reviewing and analysing information that may impact on the simulator computer systems and peripheral hardware fault finding
- conducting simulator computer systems and peripheral hardware functional testing
- negotiating and communicating with key stakeholders.

Knowledge Evidence

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

- operational capabilities and limitations of the relevant simulator
- operational capabilities and limitations of the relevant simulator computer systems and peripheral hardware
- simulator operating modules comprising the simulator system being worked on
- fault indicators related to the simulator computer systems and peripheral hardware being worked on
- repair methodologies related to the simulator computer systems and peripheral hardware being worked on

- legislative and regulatory requirements related to the simulator being worked on
- organisational policy and procedures related to the relevant simulator computer systems and peripheral hardware
- configuration management related to the simulator computer systems and peripheral hardware being worked on
- product knowledge related to systems and/or equipment in service.

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 workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect 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.

Retail or commercial systems whose primary purpose is entertainment do not meet the requirements.

Individual domestic use systems whose primary purpose is entertainment do not meet the requirements.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- acceptable means of simulation assessment
- applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and PPE currently used in industry.

Links

Companion Volume Implementation Guides are found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6bdbab1e-11ed-4bc9-9cba-9e1a55d4e4a9>