



Australian Government

DEFSIM010 Apply knowledge of simulator systems and architecture

Release: 1

DEFSIM010 Apply knowledge of simulator systems and architecture

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 apply knowledge of Simulator Systems and their Architecture.

It includes demonstrating and applying knowledge of simulation history, the benefits of simulator systems in training and operations, the building blocks of a simulator and the types of simulator systems. It also includes applying knowledge of simulator systems connectivity standards and their security.

In the context of this unit, simulator systems are used to replicate land, air, sea and undersea systems to facilitate training and operations. Simulator systems may include desktop trainers, procedural trainers, virtual reality trainers and complex simulators.

This unit applies to those working in the simulator management field and was developed for people who manage maintenance, maintenance teams, procurement and simulation projects.

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, particularly those relating to simulation standards and International Organisation for Standardisation (ISO) standards.

Those undertaking this unit would work independently, or as part of a team, with minimal supervision, while performing tasks, including maintenance management, 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

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

1 Demonstrate an understanding of simulation history and its evolution

1.1 Outline simulator systems origins and early devices

1.2 Explain evolution of simulator systems

1.3 Explain and identify impacts of conflict on simulator systems training requirements

1.4 Explain impacts of computer technology on simulator systems and the construct of devices

2 Apply knowledge of the benefits of simulator systems in training and operations

2.1 Determine requirements for the simulator system

2.2 Apply advantages and benefits of the simulator systems to training and operations

2.3 Apply limitations of the simulator systems to training and operations

3 Apply knowledge of the simulator system building blocks and key components

3.1 Explain simulator system modelling principles

3.2 Identify simulator system's key components and explain their purpose

3.3 Determine requirements for hosted software

4 Apply knowledge of simulator types

4.1 Explain simulator system types

4.2 Determine most appropriated simulator system type

5 Demonstrate an understanding of simulation connectivity standards and their security requirements

- 5.1** Explain simulator systems connectivity types and standards
- 5.2** Determine limitations of simulator systems connectivity
- 5.3** Identify and outline simulator system security requirements

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 DEF Defence Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This is a new unit. No equivalent unit.

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 DEFSIM010 Apply knowledge of simulator systems and architecture

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 include:

- undertaking research and analysis related to simulator systems
- demonstrating a knowledge of the history and origins of simulation systems
- applying knowledge of simulation systems training and operations benefits
- applying knowledge of the simulator systems key components
- applying knowledge of the different types of simulator systems
- demonstrating a knowledge of simulator systems connectivity standards
- demonstrating a knowledge of simulator systems connectivity security requirements
- identifying, reviewing and analysing information and standards related to simulator systems.

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:

- capabilities and limitations of the relevant simulator system
- standards, legislative and regulatory requirements related to the simulator systems
- organisational policy and procedures related to the relevant simulator systems
- simulator connectivity standards
- relevant International Organisation for Standardisation (ISO) standards
- relevant Simulation Interoperability Standards Organisation (SISO) standards.

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 processes and techniques must be appropriate to the language, literacy and numeracy

requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations or simulated workplace operational situations that reflect workplace conditions.

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 personal protective equipment 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>