



Australian Government

ICTIOT503 Design and test IoT devices and networks

Release: 1

ICTIOT503 Design and test IoT devices and networks

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to design and test (Internet of Things) IoT devices and networks.

It applies to those who utilise a moderate level of technical knowledge to carry out and evaluate the connectivity of IoT devices and networks.

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

Unit Sector

Internet of Things (IoT)

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Scope design options to design IoT devices and networks	1.1 Discuss IoT device and network needs with required personnel 1.2 Determine the nature, purpose and types of resources available to design IoT devices 1.3 Research industry standard IoT devices and networks 1.4 Determine design topology of scoped network and IoT devices in agreement with required personnel
2. Evaluate IoT and network design options	2.1 Discuss advantages and disadvantages of available resources to design IoT devices and networks with required personnel 2.2 Evaluate resources to be utilised to design IoT devices and networks 2.3 Communicate activities required to avoid design and performance of IoT device and network issues

3. Produce design documentation and test IoT devices and networks	3.1 Produce a design report and present to required personnel for approval 3.2 Test connectivity and ensure design compatibility with network and devices
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Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Learning	Monitors outcomes of decisions, considering results and identifying key concepts and principles that may be adaptable in the future
Oral communication	Articulates information and requirements, using effective communication techniques and industry standard technical language intended for audience and environment
Reading	Interprets technical, manufacturer and organisational documentation to determine and confirm job requirements
Writing	Prepares required documentation expressing ideas requirements and recommendations for specific audiences according to organisational procedures
Planning and organising	Uses a formal, logical planning processes together with an increasingly intuitive understanding of context
Problem solving	Uses nuanced understanding of context to recognise anomalies and subtle deviations to normal expectations, focusing attention and remedying problems as they arise
Self-management	- Takes full responsibility for identifying and considering relevant organisational protocols and requirements - Uses systematic processes, setting goals, gathering required information and identifying and evaluating options against agreed criteria
Technology	Demonstrates an understanding of principles, concepts, language and practices associated with the digital world

Unit Mapping Information

No equivalent unit. New unit.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTIOT503 Design and test IoT devices and networks

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- research, design and test at least two IoT devices according to organisational needs.

In the course of the above, the candidate must:

- communicate advantages and disadvantages of IoT devices in specified networks
- produce design reports for the two devices.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- functions and features of industry IoT devices and networks
- types of resources available to design IoT devices
- IoT design topologies
- advantages and disadvantages of resources available to design IoT devices and networks
- methods to determine compatibility between IoT devices and networks
- characteristics of design reports for IoT devices
- organisational policies and procedures to design IoT devices and networks.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- tools, equipment, materials, hardware required to design and test IoT devices and networks
- environmental conditions and specifications required for design IoT devices and networks.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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