



Australian Government

ICTCLD603 Design hybrid cloud-based network architectures

Release: 1

ICTCLD603 Design hybrid cloud-based network architectures

Modification History

Release	Comments
Release 1	This version first released with the Information and Communications Technology Training Package Version 8.0. Newly created unit of competency to address in-demand skills needs.

Application

This unit describes the skills and knowledge required to plan the connection of traditional on-premises infrastructure to resources in specified vendor programs, through developing hybrid cloud-based network architectures. It includes designing a hybrid network architecture and selecting appropriate hybrid network solutions to support a cloud-based computing environment.

The unit applies to individuals who may work in a variety of roles, including hybrid cloud architects, network architects and specialist solution architects who independently design hybrid network architectures in various contexts.

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

Unit Sector

Cloud computing

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. Create network integration plan	1.1 Confirm work brief and tasks according to organisational policies and procedures 1.2 Identify existing and proposed on-premises and cloud-based resources in consultation with required personnel 1.3 Research vendor and hybrid network technologies 1.4 Record research findings in network integration plan according to work brief

ELEMENT	PERFORMANCE CRITERIA
	1.5 Select and source hybrid network technologies according to work brief and organisational policies and procedures 1.6 Record functions and features of hybrid network architectures in network integration plan
2. Set up on-premise hybrid connectivity	2.1 Identify advantages and disadvantages of extension program options 2.2 Select preferred option according to work brief in consultation with required personnel 2.3 Review program components according to work brief 2.4 Determine reference architecture 2.5 Confirm required network configurations 2.6 Outline procedures to confirm connection between on-premise network and selected program
3. Finalise documentation	3.1 Document capability matrix according to organisational policies and procedures 3.2 Save applications in required locations according to organisational policies and procedures 3.3 Confirm that documentation includes required components according to work brief 3.4 Securely file documentation according to organisational policies and procedures

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
Numeracy	Analyses hybrid network architecture diagrams and uses advanced numeracy to calculate capability matrix components
Reading	Interprets a range of specialised documentation and diagrams, and identifies solutions according to requirements
Writing	Completes workplace records, documentation and forms accurately and legibly using correct technical and enterprise-specific vocabulary
Planning and organising	Plans strategic priorities and outcomes in a flexible, efficient and effective context and diverse environment exposed to competing demands

Unit Mapping Information

No equivalent unit. Newly created 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 ICTCLD603 Design hybrid cloud-based network architectures

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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:

- design at least two hybrid network architectures.

In the course of the above, the candidate must:

- research and compare available hybrid network architecture options
- apply required organisational policies and procedures.

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 integration plans and capability matrices
- methods to design hybrid network architecture and integration plans
- key functions and features of hybrid network architectures, including:
 - virtual machine connections
 - bandwidth requirements
 - computers, hardware and hybrid topologies
 - network traffic
 - private connections and reference architecture
 - virtual private network (VPN) configurations and gateways
 - system and custom routing tables
- key types of industry-recognised network topologies, including:
 - site-to-site
 - multi-site

- point-to-site
- network-to-network
- methods to calculate bandwidth
- industry-recognised technologies and resources used in designing hybrid network architectures
- industry-recognised hybrid network architecture vendors
- types of communication methods between resources and datacentres
- types of extension programs to extend on-premise network over private connections
- methods to establish dedicated, high-speed connection between networks and programs
- methods to secure and save applications
- organisational formats for documentation and reports
- organisational policies and procedures, and legislative requirements relating to work tasks.

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:

- technologies and resources to design hybrid network architectures
- work brief and organisational policies and procedures required to demonstrate the performance evidence.

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

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