



Australian Government

Department of Education, Employment and Workplace Relations

ICA50411 Diploma of Information Technology Networking

Release: 1

ICA50411 Diploma of Information Technology Networking

Modification History

Release	Comments
Release 1	This Qualification first released with <i>ICAll Information and Communications Technology Training Package version 1.0</i>

Description

This qualification provides the skills and knowledge for an individual to manage, as an independent ICT specialist or as part of a team, the installation of a range of networks, including internetworking, security and e-business integration.

Job roles

Possible job titles relevant to this qualification include:

- network administrator
- IT administrator
- IT operations administrator
- network services administrator
- network support coordinator
- network operations analyst
- network security coordinator
- network e-business coordinator.

Pathways Information

Pathways into the qualification

Preferred pathways for candidates considering this qualification include:

- after achieving ICA40411 Certificate IV in Information Technology Networking, or other relevant qualifications or units equivalent to the core of ICA40411.

OR

- with demonstrated vocational experience in a range of work environments in senior network support roles, including administrator, operations analyst, technician, operations or support coordinator/technician.

Pathways from the qualification

ICA60211 Advanced Diploma of Network Security, or a range of other ICA11 Advanced Diploma or Vocational Graduate Certificate qualifications, or other relevant higher education sector qualifications.

Licensing/Regulatory Information

There is no link between this qualification and licensing, legislative or regulatory requirements. However users should confirm requirements with the relevant federal, state or territory authority. There may be some alignment with industry standard certification competencies.

Entry Requirements

There are no entry requirements for this qualification.

Employability Skills Summary

The following table contains a summary of the employability skills required by industry for this qualification. The employability skills facets described here are broad industry requirements that may vary depending on qualification packaging options.

Employability skill	Industry/enterprise requirements for this qualification
Communication	<ul style="list-style-type: none"> • applying plain English to written documents and reports • writing complex briefs and reports for businesses, requiring depth of analysis and evaluation of information • conducting meetings and briefing sessions for team members
Teamwork	<ul style="list-style-type: none"> • consulting with work team and providing directions to review proposed changes against current and future business requirements • establishing and improving work teams in an IT environment
Problem-solving	<ul style="list-style-type: none"> • debugging code • solving network problems related to the installation of hardware, software and networks
Initiative and enterprise	<ul style="list-style-type: none"> • developing new criteria and procedures for performing current practices • identifying, analysing and evaluating information from a variety of sources
Planning and organising	<ul style="list-style-type: none"> • creating project plans to guide the development of systems methodologies • planning and designing networking structures
Self-management	<ul style="list-style-type: none"> • taking responsibility for own and others' output in relation to specified quality standards • meeting ethical standards in the areas of security, legal, moral and ethical practice
Learning	<ul style="list-style-type: none"> • maintaining knowledge of diagnostic tools and software applications and the goods and services provided • obtaining client evaluation and feedback • providing instructions to clients and users
Technology	<ul style="list-style-type: none"> • selecting and using software, hardware and networking components and diagnostic tools in a wide range of different environments

Packaging Rules

Total number of units = 16

5 core units *plus*

11 elective units

The elective units consist of:

- up to 11 from the elective units listed below
- up to 3 from elsewhere in ICA11 or any other Training Package or accredited course at Diploma or Advanced Diploma level.

The elective units chosen must be relevant to the work outcome and meet local industry needs.

Core units

ICAICT418A Contribute to copyright, ethics and privacy in an IT environment

ICAICT511A Match IT needs with the strategic direction of the enterprise

ICANWK529A Install and manage complex ICT networks

ICTSUS5187A Implement server virtualisation for a sustainable ICT system

ICTTEN6206A Produce an ICT network architecture design

Elective units

BSBSUS501A Develop workplace policy and procedures for sustainability

ICAICT501A Research and review hardware technology options for organisations

ICAICT509A Gather data to identify business requirements

ICAICT514A Identify and manage the implementation of current industry-specific technologies

ICAICT603A Manage the use of appropriate development methodologies

ICANWK501A Plan, implement and test enterprise communication solutions

ICANWK502A Implement secure encryption technologies

ICANWK503A Install and maintain valid authentication processes

ICANWK504A Design and implement an integrated server solution

ICANWK505A Design, build and test a network server

ICANWK506A Configure, verify and troubleshoot WAN links and IP services in a medium enterprise network

ICANWK507A Install, operate and troubleshoot medium enterprise routers

ICANWK508A Install, operate and troubleshoot medium enterprise switches

ICANWK509A Design and implement a security perimeter for ICT networks

ICANWK510A Develop, implement and evaluate system and application security

ICANWK511A Manage network security

ICANWK513A Manage system security

ICANWK524A Install and configure network access storage devices

ICANWK525A Configure an enterprise virtual computing environment

ICANWK526A Install an enterprise virtual computing environment

ICANWK527A Manage an enterprise virtual computing environment

ICANWK531A Configure an internet gateway

ICAPMG501A Manage IT projects

ICASAD506A Produce a feasibility report
ICASAS406A Implement and hand over system components
ICASAS501A Develop, implement and evaluate an incident response plan
ICASAS502A Establish and maintain client user liaison
ICASAS503A Perform systems test
ICASAS505A Review and update disaster recovery and contingency plans
ICASAS512A Review and manage delivery of maintenance services
ICASAS515A Manage the testing process
ICTOPN5119A Perform acceptance and commissioning tests on optical network
ICTOPN5120A Plan for an optical system upgrade and cut over
ICTOPN5122A Test the performance of specialised optical devices
ICTOPN5123A Analyse and integrate specialised optical devices in the network
ICTSUS6233A Integrate sustainability in ICT planning and design projects
ICTSUS6234A Establish a business case for sustainability and competitive advantage in ICT projects
ICTTEN4213A Configure and troubleshoot advanced network switching
ICTTEN5168A Design and implement an enterprise voice over internet protocol and a unified communications network
ICTTEN5201A Install, configure and test a server
ICTTEN5203A Dimension and design a radio frequency identification system
ICTTEN5204A Produce technical solutions from business specifications
ICTTEN5217A Plan a wireless mesh network
ICTTEN6172A Design and configure an IP-MPLS network with virtual private network tunnelling

Selecting elective units for different outcomes

The following examples are designed to assist in the selection of appropriate electives for particular outcomes at this level, but are in no way prescriptive.

Certified technology specialist – communications technologies

Core units plus:

- ICANWK501A Plan, implement and test enterprise communication solutions

Certified technology specialist – network and applications infrastructure

Core units plus:

- ICANWK505A Design, build and test a network server

Certified technician or technology specialist – infrastructure configuration

Core units plus:

- ICANWK505A Design, build and test a network server
- ICANWK503A Install and maintain valid authentication processes

Certified network associate specialist

Core units plus:

- ICANWK529A Install and manage complex ICT networks
- ICANWK506A Configure, verify and troubleshoot WAN links and IP services in a medium enterprise network
- ICANWK507A Install, operate and troubleshoot medium enterprise routers
- ICANWK508A Install, operate and troubleshoot medium enterprise switches

Certified security and architect specialist

Core units plus:

- ICANWK529A Install and manage complex ICT networks
- ICANWK503A Install and maintain valid authentication processes
- ICANWK511A Manage network security

Certified technology specialist – internet security

Core units plus:

- ICANWK509A Design and implement a security perimeter for ICT networks