



Australian Government

ICA60511 Advanced Diploma of Computer Systems Technology

Release 2

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Modification History

Release	Comments
Release 2	<i>This version first released with ICA11 Information and Communications Technology Training Package Version 2.</i> Addition of four new units of competency to electives.
Release 1	<i>This Qualification first released with ICA11 Information and Communications Technology Training Package version 1.0</i>

Description

This qualification provides the skills and knowledge for an individual to coordinate and administer, as an independent information and communications technology (ICT) specialist or as part of a team, the installation, commissioning and ongoing maintenance of a range of networks, enterprise servers and systems, including internetworking, security and e-business solutions.

Job roles

Possible job titles relevant to this qualification include:

- network administrator or coordinator
- network engineer
- enterprise systems administrator
- systems developer
- IT administrator or coordinator
- IT operations administrator or coordinator
- network services administrator or coordinator
- administrator or coordinator network support
- network operations analyst
- administrator or coordinator network security
- administrator or coordinator network e-business.

Pathways Information

Pathways into the qualification

Preferred pathways for candidates considering this qualification include:

- after achieving ICA41011 Certificate IV in Computer Systems Technology, or other relevant qualifications or units equivalent to the core of ICA41011

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

ICA11 Vocational Graduate Certificate qualifications or other 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"> • articulating complex scenarios in a clear, concise manner relevant to all levels of an organisation • writing and presenting complex reports for specific purposes using a range of methodologies and media
Teamwork	<ul style="list-style-type: none"> • consulting with work team 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"> • analysing and solving network problems related to the installation of hardware, software and networks • anticipating possible major problems and responding with appropriate contingency recovery plans
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 • anticipating and responding to client business needs
Planning and organising	<ul style="list-style-type: none"> • creating project plans to guide the development of systems methodologies • preparing feasibility reports that take into account project scope, time, cost, quality, communications and risk management • planning and designing an intranet • directing and managing the execution of complex IT projects • planning for controls and contingencies when designing systems
Self-management	<ul style="list-style-type: none"> • taking responsibility for own and others' output in relation to specified quality standards • working according to the Australian Computer Society Code of Ethics regarding security, legal, moral and ethical issues
Learning	<ul style="list-style-type: none"> • keeping abreast of current industry-accepted practices, hardware and software products, including broad knowledge of security features and capabilities • engaging in peer professional development activities • devising and implementing client evaluation and feedback methodologies
Technology	<ul style="list-style-type: none"> • managing and implementing software and hardware diagnostic

	<p>tools, including multimedia contexts and automated testing environments</p> <ul style="list-style-type: none">• installing, configuring and administering complex IT networks
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Packaging Rules

Total number of units = 18

12 core units plus

6 elective units, of which:

- 3 units must be from the elective units listed below
- the remaining units may be from the elective units below or from elsewhere in ICA11 or any other Training Package or accredited course at Diploma level or above.

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

Core units

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

ICANWK529A Install and manage complex ICT networks

ICANWK602A Plan, configure and test advanced server based security

ICANWK607A Design and implement wireless network security

ICAPMG608A Manage IT project systems implementation

ICAPMG609A Plan and direct complex IT projects

ICAPRG527A Apply intermediate object-oriented language skills

ICAWEB501A Build a dynamic website

ICAWEB502A Create dynamic web pages

Elective units

ICADBS504A Integrate database with a website

ICAICT502A Develop detailed component specifications from project specifications

ICAICT604A Identify and implement business innovation

ICAICT609A Lead the evaluation and implementation of current industry-specific technologies

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

ICANWK524A Install and configure network access storage devices

ICANWK525B Configure an enterprise virtual computing environment

ICANWK535A Install an enterprise virtual computing environment

ICANWK527B Manage an enterprise virtual computing environment

ICANWK533A Configure and manage advanced virtual computing environments

ICANWK534A Monitor and troubleshoot virtual computing environments

ICANWK603A Plan, configure and test advanced internetwork routing solutions

ICANWK605A Design and configure secure integrated wireless systems

ICANWK610A Design and build integrated VoIP networks

ICANWK611A Configure call processing network elements for secure VoIP networks

ICANWK612A Plan and manage troubleshooting advanced integrated IP networks

ICANWK613A Develop plans to manage structured troubleshooting process of enterprise networks

ICANWK615A Design and configure desktop virtualisation

ICANWK616A Manage security, privacy and compliance of cloud service deployment

ICAPRG505A Build advanced user interface

ICAPRG601A Develop advanced mobile multi-touch applications

ICAPRG602A Manage the development of technical solutions from business specifications

ICASAS517A Use network tools

ICAWEB503A Create web-based programs

ICAWEB505A Develop complex web page layouts