



Australian Government

Department of Education, Employment and Workplace Relations

ICAS5192B Configure an internet gateway

Release: 1

ICAS5192B Configure an internet gateway

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	<p>This unit defines the competency required to connect network hardware devices, mainly personal computers, to a internet gateway.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		
	ICAI4097C	Install and configure a network

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Confirm client requirements and network equipment	1.1. Confirm and validate <i>client</i> requirements 1.2. Determine scope of internet services with reference to <i>client</i> requirements 1.3. Identify and install components, both <i>hardware</i> and <i>software</i> 1.4. Verify equipment specifications and availability of components
2. Review security issues	2.1. Assess security features of internet gateways with reference to <i>architecture</i> and <i>security plan</i> 2.2. Review security measures with the internet <i>service provider</i> (ISP) with reference to <i>firewalls</i> and other measures as required 2.3. Brief <i>users</i> on the <i>security plan</i> with reference to internet use and hazard possibilities
3. Install and configure gateway products and equipment	3.1. Identify and select installation and configuration options 3.2. Install and configure gateway products and equipment as required by technical guidelines 3.3. Plan and execute tests with reference to <i>client</i> requirements and <i>network</i> impact 3.4. Analyse error reports and make changes as required
4. Configure and test node	4.1. Assign node to specific gateway as required by network <i>architecture</i> and <i>client</i> requirements 4.2. Determine <i>connection type</i> and configure with reference to <i>network architecture</i> and client requirements 4.3. Ensure node <i>software</i> and/or <i>hardware</i> is configured as required according to vendor specifications and <i>client</i> requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

REQUIRED SKILLS AND KNOWLEDGE

- Installation and configuration of computer hardware and software
- Use of proprietary software
- Business analysis skills
- Communicating with clients

Required knowledge

- Features and functions of network gateways; network architecture, including switches, routers, hubs, bridges as required; network operating systems and desktop operating systems
- Gateway software (e.g. Cisco IpeXchange, Postoffices, Lotus Notes)
- Domain name server (DNS) resolution
- Current browser software (e.g. MS Explorer, Netscape Navigator, Mozilla, Konqueror, Opera)

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> Assessment must confirm the ability to connect network hardware devices to an internet gateway and configure and test them. <p>To demonstrate competency in this unit the learner will require access to:</p> <ul style="list-style-type: none"> Network with internet access Personal computer
Context of and specific resources for assessment	<p>An internet gateway is the hardware or software set-up that translates between two dissimilar protocols and which provides a system for converting messages between TCP/IP and other protocols. Using internet gateways, various networks around the world can effectively become one large network. By reviewing a variety of internet gateways and talking with ISPs, a better understanding of gateway products and their applications will be achieved.</p> <p>Any internet gateway needs to be configured according to the needs of the client and consideration should be given to redundancy with reference to fault tolerance and back-up links.</p> <p>The breadth, depth and complexity covering planning and initiation of alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements, evaluation and coordination would be characteristic.</p> <p>The demonstration of competency may also require self-directed application of knowledge and skills, with substantial depth in some areas where judgement is</p>

EVIDENCE GUIDE	
	<p>required in planning and selecting appropriate equipment, services and techniques for self and others.</p> <p>Assessment must ensure:</p> <ul style="list-style-type: none"> • Applications involve participation in development of strategic initiatives as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams including teams concerned with planning and evaluation functions. Group or team coordination may also be involved.
Method of assessment	<p>The purpose of this unit is to define the standard of performance to be achieved in the workplace. In undertaking training and assessment activities related to this unit, consideration should be given to the implementation of appropriate diversity and accessibility practices in order to accommodate people who may have special needs. Additional guidance on these and related matters is provided in ICA05 Section 1.</p> <ul style="list-style-type: none"> • Competency in this unit should be assessed using summative assessment to ensure consistency of performance in a range of contexts. This unit can be assessed either in the workplace or in a simulated environment. However, simulated activities must closely reflect the workplace to enable full demonstration of competency. • Assessment will usually include observation of real or simulated work processes and procedures and/or performance in a project context as well as questioning on underpinning knowledge and skills. The questioning of team members, supervisors, subordinates, peers and clients where appropriate may provide valuable input to the assessment process. The interdependence of units for assessment purposes may vary with the particular project or scenario.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

EVIDENCE GUIDE	
	<p>An individual demonstrating this competency would be able to:</p> <ul style="list-style-type: none"> • Demonstrate understanding of a broad knowledge base incorporating theoretical concepts, with substantial depth in some areas • Analyse and plan approaches to technical problems or management requirements • Transfer and apply theoretical concepts and/or technical or creative skills to a range of situations • Evaluate information, using it to forecast for planning or research purposes • Take responsibility for own outputs in relation to broad quantity and quality parameters • Take some responsibility for the achievement of group outcomes • Maintain knowledge of industry products and services

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Software</i> may include but is not limited to:</p>	<ul style="list-style-type: none"> • commercial, in-house, packaged or customised software
<p><i>Hardware</i> may include but is not limited to:</p>	<ul style="list-style-type: none"> • workstations • personal computers • modems or other connectivity devices • networks • DSL modems • remote sites • servers
<p><i>Architecture</i> may include but is</p>	<ul style="list-style-type: none"> • Operating system: Novell NetWare 5 or above or other operating system that has multi-user

RANGE STATEMENT	
not limited to:	<ul style="list-style-type: none"> ability, Linux, Mac OS, Windows 2000 or above • Database software: Oracle, Sybase, Microsoft SQL server, Ingres, DB2, Informix, mSQL, MySQL, SQL server • Configuration: small memory model, large memory model, requests per second
Security plan may include:	<ul style="list-style-type: none"> • theft • viruses • standards (including archival, back-up, network) • privacy • audits • alerts • usually relates directly to the security objectives of the organisation
Firewalls may include:	<ul style="list-style-type: none"> • hardware appliances • proxy servers or individual PC solutions, with varying functionality, including network address translation (NAT)/IP masquerading and routing to specific machines
Client may include but is not limited to:	<ul style="list-style-type: none"> • internal departments • external organisations • individual people • employees
Network may include but is not limited to:	<ul style="list-style-type: none"> • large and small LANs • VPNs • WANs • the internet • the use of the PSTN for dial-up modems only • private lines • data • voice
Connection type may include:	<ul style="list-style-type: none"> • dial-up • dedicated or proxy connections

Unit Sector(s)

Unit sector	Support
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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