



Australian Government

ICTNWK562 Configure internet gateways

Release: 1

ICTNWK562 Configure internet gateways

Modification History

Release	Comments
Release 1	This version first released with the Information and Communications Technology Training Package Version 8.0. Supersedes and is equivalent to ICTNWK531 Configure an internet gateway. Minor edits to title.

Application

This unit describes the skills and knowledge required to install and confirm the functionality of internet gateways, including meeting required internet service provider (ISP) security requirements.

The unit applies to individuals who may be network engineers, technical specialists and security analysts who are independently responsible for analysing and managing business security using a variety of information and communications technology (ICT) skills and knowledge.

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

Unit Sector

Networking

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. Prepare to configure internet gateways	1.1 Confirm work brief and tasks according to organisational policies and procedures 1.2 Assess system architecture according to work brief 1.3 Select and source required configuration hardware, software and tools 1.4 Verify equipment specifications and confirm component serviceability

ELEMENT	PERFORMANCE CRITERIA
2. Determine security requirements	2.1 Analyse existing ISP security features 2.2 Conduct required ISP speed test and identify system vulnerabilities 2.3 Analyse internet gateway options 2.4 Select required internet gateway option and create security plan according to analysis findings
3. Install internet gateways	3.1 Identify required internet gateway installation method according to security plan and work brief 3.2 Configure internet gateway according to technical guidelines 3.3 Test internet gateway, and rectify and report any network issues
4. Connect nodes to internet gateways	4.1 Establish prerequisites and confirm gateway connection to network router 4.2 Assign nodes to logical gateway as required by network architecture 4.3 Determine connection type and configure firewalls 4.4 Test and confirm internet gateway node connection

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
Reading	Interprets required technical and national guidelines to determine and confirm requirements
Initiative and enterprise	Initiates standard procedures when responding to complex problems in the immediate context
Planning and organising	Regularly reviews priorities and performance during implementation, and identifies and addresses issues
Problem solving	Analyses anomalies in network environment and subtle deviations to normal expectations and solves complex problems as they arise
Self-management	Determines importance of security in relation to own work and takes personal responsibility for identifying and managing risks
Technology	Considers strategic and operational potential of digital trends to achieve work goals, enhance work processes, create

Skill	Description
	opportunities and enhance or reduce risks

Unit Mapping Information

Supersedes and is equivalent to ICTNWK531 Configure an internet gateway

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 ICTNWK562 Configure internet gateways

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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:

- configure at least two different internet gateways
- connect at least two nodes to a logical internet gateway.

In the course of the above, the candidate must:

- assess network performance requirements
- meet required internet service provider (ISP) security requirements
- report network issues to required personnel within required timeframes
- apply required organisational policies and procedures
- comply with required technical and national guidelines for configuring internet gateways.

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:

- key security threats to ISP networks, including:
 - data interception
 - data corruption
 - data falsification
- industry-recognised internet gateways and installation methods
- functions and features of security plans
- industry-recognised methods to configure network components using required technical and national guidelines

- required operations for configuring network components
- networking techniques to analyse and minimise system vulnerabilities
- methods to conduct ISP network security and speed tests
- hardware, software and tools for internet gateway and node configurations
- key functions and features of internet gateway architecture, including:
 - network architecture
 - domain name server (DNS) resolution
 - bridges
 - node connection
 - logical gateways and desktop operating systems
 - hubs
 - firewalls
 - network gateways and operating systems
 - routers and switches
 - prerequisites and technical requirements
- functions and features of security practices for ISP network protection
- troubleshooting procedures for logical gateway and network router connection
- key security maintenance procedures, including ethical hacking
- 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:

- ISP network and internet gateway
- network infrastructure and vendor specifications, including servers and components
- 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.

Links

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