



Australian Government

ICTSAS310 Install, configure and secure a small office or home office network

Release: 1

ICTSAS310 Install, configure and secure a small office or home office network

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to identify available network components and client requirements and to install, configure and secure those components as part of a Small Office or Home Office (SOHO) network.

It applies to individuals who work under a level of supervision and have experience with analysis and problem solving when working with technologies.

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

Unit Sector

Systems administration and support

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. Confirm client requirements and identify required network equipment	1.1 Identify and clarify client requirements for SOHO network 1.2 Identify, develop and document SOHO network design according to client requirements 1.3 Identify network materials according to SOHO network design 1.4 Obtain vendor and service suppliers specifications and cost of identified components, with required vendors 1.5 Present SOHO network design to clients and secure sign-off
2. Install and configure hardware and software	2.1 Develop installation plans according organisational requirements 2.2 Obtain approval for plans, security clearance and timing with required personnel

ELEMENT	PERFORMANCE CRITERIA
	2.3 Confirm and review cables and connectors are installed according to industry standards, client requirements and building requirements 2.4 Install and configure hardware according to network design and industry standards 2.5 Install and configure software according to network design and industry standards
3. Test network	3.1 Troubleshoot client-side connectivity using required networking settings 3.2 Test installed software and hardware according to organisational procedures 3.3 Test network settings according to organisational procedures 3.4 Resolve problems identified according to organisational procedures
4. Secure network	4.1 Identify security features for SOHO network 4.2 Apply identified security features according to organisational procedures 4.3 Troubleshoot security intrusion symptoms and issues
5. Finalise network installation and configuration	5.1 Finalise and document network design, associated hardware, software and security features 5.2 Document installation, boot up and configuration procedures according to client requirements 5.3 Handover and secure sign-off from client

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 a range of texts to critically evaluate and design the required network, comparing technical specifications and associated costs to install and maintain the network
Writing	Records information using precise language and required format to develop network plans, instructions, installation and technical specifications
Oral Communication	Confirms information and requirements, using effective communication techniques and industry standard technical language intended for audience and environment

SKILL	DESCRIPTION
Numeracy	• Uses a range of mathematical calculations to evaluate and compare numerical information and forecast costs and applies familiar measurements concerning available or consumed data, time durations and required cable length
Planning and organising	• Plans a range of routine and some non-routine tasks, accepting stated goals and aiming to achieve them efficiently, confirming client requirements and required equipment • Implements actions as per plan, making slight adjustments if required and addressing some unexpected issues
Problem solving	• Makes decisions quickly and intuitively in familiar situations requiring immediate attention, drawing on past experience to identify key variables, consider implications of different courses of action and determine course of action • Uses systematic, analytical processes in configuration and testing of network, setting goals, gathering required information and identifying and evaluating options against agreed criteria • Applies formal problem-solving processes when resolving network problems and troubleshooting symptoms and issues, breaking complex issues into manageable parts and identifying and evaluating several options for action
Self-management	• Recognises and follows explicit and implicit protocols and meets expectations associated with own role when obtaining approval and sign-off at required stages of job
Technology	• Utilises key principles and concepts that underpin the design and operation of digital systems and tools

Unit Mapping Information

Supersedes and is equivalent to ICTSAS307 Install, configure and secure a small office home office network.

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 ICTSAS310 Install, configure and secure a small office or home office network

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

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:

- install, configure and secure a SOHO network on at least one occasion.

In the course of the above, the candidate must:

- install, configure and test hardware and software for SOHO network, including:
 - network technologies
 - device
 - protocols
 - network cables and connectors
- install, configure and test the network according to client requirements and produce required documentation
- troubleshoot client-side connectivity and security system symptoms and issues
- liaise with vendors and service suppliers to:
 - obtain specifications, availability and cost of identified components
- develop installation plans that incorporate:
 - task prioritisation
 - contingency arrangements
 - minimum disruption to clients
- document final network design, security features and installation, boot up and configuration 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:

- industry accepted hardware and software products, including those used for networks

- building requirements that may be used in installing, configuring and securing an office
- data and voice transmission technologies and protocols
- hardware and software installation procedures
- organisational procedures including:
 - software and hardware testing methods
 - network setting testing methods
 - software, hardware and network setting problem resolution procedures
- local area network (LAN) capabilities and characteristics, including:
 - network types
 - internet protocol addressing
 - switch and hub operation
- network connections, both wired and wireless
- networking technologies, including network operating systems and cabling standards
- network tools, set-up and configuration procedures
- security implications and methods for a home office network
- software packages supported by the organisation
- industry standards applicable to small networks
- installation and configuration tools.

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:

- industry standard software, hardware and networking technologies
- server and workstation hardware and software
- internet connection
- live network
- network components, hardware and software
- networked devices
- vendor hardware and software components
- technical documentation and installation manuals.

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

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>