Title	Describe and create a local area network		
Level	5	Credits	7

Purpose	People credited with this unit standard are able to: describe the purpose and construct of a local area network (LAN); create a LAN; demonstrate the operation of the LAN to a user; and customise the LAN's user interface.

Classification	Computing > Computer Support

Available grade	Achieved

Guidance Information

1   Definitions
    A *local area network (LAN)* refers to a single network of interconnected computers and other devices within a small geographical area (such as an office or building).
    Industry recommended procedure refers to a procedure used and recommended by an organisation involved in the computer industry.
    Organisation requirements include all the documented workplace policies, procedures, specifications, business and quality management requirements relevant to the workplace in which assessment is carried out. Candidates must be supplied these prior to assessment against this standard.

2   The assessment context for this unit standard must be suitable to meet the criteria for level 5 in the NZQF Level Descriptors, which are available by searching for "level descriptors" at www.nzqa.govt.nz.

3   Legislation relevant to this unit standard may include but is not limited to the:
    Copyright Act 1994
    Copyright (New Technologies) Amendment Act 2008
    Harmful Digital Communications Act 2015
    Health and Safety at Work Act 2015
    Privacy Act 1993
    and any subsequent amendments.
    Current legislation and regulations can be accessed at http://legislation.govt.nz.

4   References
    ACC5637 Guidelines for Using Computers - Preventing and managing discomfort, pain and injury. Accident Compensation Corporation - Department of Labour, 2010; available from Worksafe New Zealand, at http://www.business.govt.nz/worksafe/information-guidance/all-guidance-items/guidelines-for-using-computers.

5 Recommended skills and knowledge:
Unit 2797, Demonstrate knowledge of the principles of computer networks, or demonstrate equivalent knowledge and skills.

Outcomes and performance criteria

Outcome 1

Describe the purpose and construct of a LAN.

Performance criteria

1.1 The description includes the purpose of a LAN in terms of the data processing and data communication needs of an organisation.

1.2 The description identifies the components of a LAN and outlines their purpose and specifications.

Range a minimum of five components which may include but are not limited to – cables, network interface cards, connectors, repeaters, routers, servers, switches, wireless network adapter, wireless repeaters, wireless access points.

1.3 The description compares LAN topologies in terms of their components and transmission methods.

Range ring, bus, star, hybrid, adhoc.

1.4 The description explains the TCP/IP model in terms of the function(s) of each layer.

1.5 The description compares LAN architecture in terms of their main features and topologies.

Range TCP/IP model and one other.

Outcome 2

Create a LAN.

Range peer to peer and client server.

Performance criteria

2.1 Components are connected in a LAN according to the manufacturer's recommendations.

Range may include but is not limited to – workstations, cables, wireless network adapter, network interface cards, connectors, switches, repeaters, servers, routers, wireless access points.

2.2   Login procedures are automated in accordance with the manufacturer's and installation specifications.

2.3   Installation problems are diagnosed and resolved according to an industry recommended diagnostic tool and procedure.

2.4   Procedural problems encountered by users accessing a network via the workstation are diagnosed and resolved according to an industry recommended procedure.

2.5   Documentation is completed according to industry recommended practice.

2.6   The installation site is left clean and tidy according to industry recommended practice.

Outcome 3

Demonstrate the operation of the LAN to a user.

Performance criteria

3.1   The demonstration includes operation of user utilities for the network in a manner that allows the user to perform tasks to meet the needs of the organisation.

3.2   The demonstration includes managing print queues according to the manufacturer's specifications.

           Range   view, delete, insert.

3.3   The demonstration includes a description of the structure of the network access security system and identifies its purpose and features.

Outcome 4

Customise the LAN's user interface.

Performance criteria

4.1   The login scripts are customised and tested according to the manufacturer's specifications and the installation specifications.

4.2   Menus are customised according to organisation requirements.

4.3   Documentation is completed according to industry recommended practice.

Replacement information	This unit standard replaced unit standard 6854 and unit standard 6855.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	19 March 2010	31 December 2015
Rollover and Revision	2	19 September 2013	31 December 2019
Review	3	19 January 2017	31 December 2024
Review	4	26 May 2022	31 December 2024

Consent and Moderation Requirements (CMR) reference	0113

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.