Achievement Standard

Subject Reference Digital Technologies 2.51

Title Implement procedures for administering a local area network

Level 2 **Credits** 4 **Assessment** Internal

Subfield Technology

Domain Digital Technologies

Status Registered **Status date** 17 November 2011

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This achievement standard involves implementing procedures for administering a local area network (LAN).

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
• Implement procedures for administering a local area network.	• Skilfully implement procedures for administering a local area network.	• Efficiently implement procedures for administering a local area network.

Explanatory Notes

1   This achievement standard is derived from Level 7 of the Technology learning area in *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007; and is related to the material in the *Teaching and Learning Guide for Technology*, Ministry of Education at http://seniorsecondary.tki.org.nz.

Further information can be found at http://www.technology.tki.org.nz/.

Appropriate reference information is available in *Safety and Technology Education: A Guidance Manual for New Zealand Schools,* Ministry of Education at http://technology.tki.org.nz/Curriculum-support/Safety-and-Technology-Education, and the Health and Safety in Employment Act 1992.

2   *Implement procedures for administering a local area network* involves:
   • following standard procedures to assemble and configure a LAN to meet given requirements
   • following standard testing procedures to ensure that the LAN operates correctly and documenting the outcomes
   • following standard administrative procedures to manage a LAN

- diagnosing and troubleshooting a LAN to identify and resolve given installation and configuration faults.

Skilfully implement procedures for administering a local area network involves:
- following standard administrative procedures to manage a LAN, showing organisation, accuracy and independence
- diagnosing and troubleshooting a LAN to identify and resolve given installation and configuration faults, showing organisation, confidence, accuracy and independence.

Efficiently implement procedures for administering a local area network involves:
- diagnosing and troubleshooting a LAN to identify and resolve given installation and configuration faults in a manner that is economical in time, effort and resources.

3   *A local area network* consists of:
- networking components which include but are not limited to:
   - computers (eg desktop PC, laptop and mobile devices such as Netbook, PDA and Smartphone)
   - networking device (eg Hub or Switch)
   - modem/router
   - network services (eg Print server, Network storage and File server).
- network connection technologies which may include but are not limited to wired, optical and wireless technologies
- a network architecture which consists of a physical topology and a logical topology.

4   Standard testing procedures may include but are not limited to the use of:
- hardware identification tools
- system software identification tools
- stand-alone programs (eg Windows Device Manager, MSConfig, Windows Network Connections Manager, hwinfo, aida32, IPConfig and Ping).

5   Standard administrative procedures include but are not limited to management of:
- internet protocol (IP) address schema and allocation
- the LAN (eg event logs, shared data areas and network services)
- malware (eg antivirus software, spyware and other malware removal tools)
- internet related software (eg internet access, internet filtering and firewall)
- data back-up software
- users (eg User accounts, User access rights and privileges and Acceptable Use Policies (AUP))
- mitigating the consequences of mismanagement.

6   The given network installation and configuration faults include, but are not limited to:
- networking hardware (eg incorrect or missing cables, faulty networking devices, incorrectly installed and configured network interface card (NIC))
- network architecture (eg incorrectly designed IP schema and other IP related errors)
- software (eg missing software, incorrect versions, incorrect configuration parameters, missing updates and file and data corruption).

7 Conditions of Assessment related to this achievement standard can be found at
http://ncea.tki.org.nz/Resources-for-Internally-Assessed-Achievement-Standards.

Quality Assurance

1 Providers and Industry Training Organisations must have been granted consent to
assess by NZQA before they can register credits from assessment against
achievement standards.

2 Organisations with consent to assess and Industry Training Organisations assessing
against achievement standards must engage with the moderation system that applies
to those achievement standards.

Consent and Moderation Requirements (CMR) reference 0233