

Achievement Standard

Subject Reference Digital Technologies 3.51

Title Implement procedures for administering a wide area network

Level 3 **Credits** 4 **Assessment** Internal

Subfield Technology

Domain Digital Technologies

Status Registered **Status date** 4 December 2012

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This achievement standard involves implementing procedures for administering a wide area network.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> Implement procedures for administering a wide area network. 	<ul style="list-style-type: none"> Skilfully implement procedures for administering a wide area network. 	<ul style="list-style-type: none"> Efficiently implement procedures for administering a wide area network.

Explanatory Notes

- 1 This achievement standard is derived from the Level 8 achievement objectives from 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, 2012, at <http://seniorsecondary.tki.org.nz>.

Appropriate reference information is available in *Safety and Technology Education: A Guidance Manual for New Zealand Schools*, Ministry of Education, and the Health and Safety in Employment Act 1992.

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

2 *Implement procedures for administering a wide area network* involves:

- following standard procedures to assemble and configure a Wide Area Network (WAN) to meet given requirements
- following standard testing procedures to document that the WAN operates correctly
- following standard administrative procedures to manage a WAN
- diagnosing and troubleshooting a WAN to identify and resolve given installation and configuration faults.

Skilfully implement procedures for administering a wide area network involves:

- following standard administrative procedures to manage a WAN, showing accuracy, and independence
- diagnosing and troubleshooting a WAN to identify and resolve given installation and configuration faults, showing accuracy and independence.

Efficiently implement procedures for administering a wide area network involves:

- undertaking procedures in a manner that is economical in time, effort and resources.

3 *A wide area network* consists of:

- network components which include but are not limited to:
 - Desktop Personal Computer (PC)
 - Laptop
 - Switch
 - Modem/Router
 - Network Storage
 - Cables
- network connection technologies which include but are not limited to wired, optical and wireless technologies
- a small Local Area Network (LAN) connected via a router to a PC acting as a web server (eg AnalogX SimpleServer) using Ethernet.

4 Standard testing procedures may include the use of connectivity testing tools eg ipconfig/ifconfig, ping, tracert/traceroute and web browsing to the server and router.

5 Standard administrative procedures include management of:

- Internet Protocol (IP) Address schema and allocation
- mitigating the consequences of mismanagement
- the router eg setup Dynamic Host Configuration Protocol (DHCP), router traffic logging, establishment of Network Address Translation (NAT), admin security, user access, config backup.

6 The given network installation and configuration faults include, but are not limited to:

- networking hardware eg incorrect or missing cables, faulty networking devices
- network architecture eg incorrectly designed IP schema and other IP related errors.

7 Conditions of Assessment related to this achievement standard can be found at <http://ncea.tki.org.nz/>.

Replacement Information

This achievement standard, AS91633, AS91635, and AS91637 replaced unit standard 13402 and AS90685.

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