

# Specification of Competency Standards for ICT Operation and Support

## Unit of Competency

### Functional Area: Network Support

Title	Build a small wireless LAN
Code	107879L2
Range	This unit of competency applies to junior IT personnel who are involved with construction of the organisation's network infrastructure. The main duties include installing, configuring of small wireless local area network (LAN) as well as performing user training on the use of the wireless LAN. However, during the planning and network design and sourcing of equipment for the wireless LAN he/she may be required to provide advice and assistance.
Level	2
Credit	3
Competency	<p>Performance Requirements</p> <ol style="list-style-type: none"> <li>1. Knowledge to build a small wireless LAN: <ul style="list-style-type: none"> <li>• Possess good communication and interpersonal skills</li> <li>• Possess good knowledge of basic training skills</li> <li>• Possess good knowledge of different network and wireless security risks</li> <li>• Possess good knowledge of wireless LAN components and their functions</li> <li>• Possess good knowledge of how to acquire technical manuals on wireless LAN equipment</li> <li>• Understand the network needs of users and the organisation</li> <li>• Possess good knowledge on use of network testing software</li> </ul> </li> <li>2. Building a small wireless LAN <ul style="list-style-type: none"> <li>• Comprehend and assess the wireless LAN design diagram. Confirm and raise any concerns or suggestions with the designer or supervisor before purchase of equipment or install work. Area where he/she may assist include but not limited to the following: <ul style="list-style-type: none"> <li>• Evaluate and/or selection of wireless equipment</li> <li>• Advice on any blind spots that affect the wireless signal</li> <li>• Site survey</li> </ul> </li> <li>• Prepare for installation of wireless LAN <ul style="list-style-type: none"> <li>• Identify the location of wireless router/Access Point and can be connected to the wired local network or to Internet service provider</li> <li>• Verify power availability for the wireless router</li> <li>• Verify Access Point (AP) has mounting space and signal are not obstructed that reduced transmission efficiency</li> <li>• Acquired network settings</li> <li>• All required equipment have been checked, verified working, and installation manuals are available</li> </ul> </li> <li>• Install and configure the wireless router</li> <li>• Perform a wireless coverage test. Install wireless extension device to increase network coverage and remove blind spots, if needed</li> <li>• Configure security settings that conform to the network design and the organisation security policies</li> <li>• Install and configure wireless LAN cards on personal computers or join mobile client and smartphone to the wireless LAN then perform the following tests: <ul style="list-style-type: none"> <li>• Test connection of the wireless network with user equipment to ensure general compatibility and access</li> <li>• Perform speed tests to ensure client connection is of expected performance</li> <li>• Perform security tests to ensure only authorised clients can connect to the wireless network</li> </ul> </li> <li>• Label all wireless LAN equipment in accordance with the designed infrastructure plan/diagram</li> <li>• Provide instructions sessions and/or tutoring to users on use of wireless network, topics include: <ul style="list-style-type: none"> <li>• Pairing with designated Service Set Identifier (SSID)</li> </ul> </li> </ul> </li> </ol>

	<ul style="list-style-type: none"> <li>• Logon arrangements</li> <li>• Use of wireless LAN equipment</li> <li>• Document all installation activities and record configuration and security settings details in accordance with the organisation's guidelines and procedures</li> </ul> <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> <li>• All installation activities and preparation of documents were performed in accordance with organisation guidelines and standards</li> <li>• Always protect the organisation against unauthorised wireless connection and apply industry network security best practices</li> <li>• Follow the organisation's occupational health and safety guidelines and procedures when installing with network equipment</li> </ul>
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none"> <li>• Perform the necessary preparations before the installation of wireless LAN</li> <li>• Install, configure and test the wireless LAN and equipment in accordance with the organisation's requirements and standards</li> <li>• Provide sufficient and satisfactory training to users that enable them to access the organisation network resources</li> </ul>
Remark	