

# ITRAINONLINE MMTK

## *Trainers' notes: Wireless Client Installation*

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<b>Introduction</b>	An introduction to selecting hardware, installing and configuring a wireless device on your client computer (laptop, desktop). The unit targets both installation on a Linux machine and a Windows (XP) machine.
<b>Timing/duration</b>	3 hours (Part A: 2hours, Part B: 1 hour) This unit should follow "Access points configuration". The units can be taught as one (A+B) or only one part at the time (A or B).
<b>Content outline and main topics covered</b>	<ul style="list-style-type: none"><li>• The units consists of two parts: Part A (Linux) and Part B (Windows).</li><li>• Each part has tree different phases:</li><li>• <ol style="list-style-type: none"><li>1. Choosing a wireless device (hardware)<ul style="list-style-type: none"><li>• What hardware is best for your situation</li><li>• Officially supported hardware</li></ul></li><li>2. Installing the wireless card<ul style="list-style-type: none"><li>• Plug and Play</li><li>• Installing drivers</li></ul></li><li>3. Configuring the network<ul style="list-style-type: none"><li>• Radio settings</li><li>• IP settings</li></ul></li></ol></li></ul> <p>The Linux part is mainly focusing on phase 1-2 since those are the most challenging ones for a Linux user. Windows focuses on phase 3 as phase 1-2 are quite trivial for Windows.</p>
<b>Target audience</b>	Part A: Linux users with no previous wireless experience, or advanced computer users with very basic Linux desktop experience. Part B: Windows users that aim to set up a wireless connection.
<b>Prerequisite skills/knowledge</b>	Part A+B: Unit "Access point configuration" Part A: Basic computer desktop experience, and at least some understanding of what Linux is. Basic understanding of 802.11 wireless systems, as presented in the MMTK Introduction to Wireless unit. Part B: Basic computer knowledge.
<b>Unit objectives/expected outcomes</b>	Part A: Participants should be able to select and install a wireless card that is supported by their distribution of choice, and be able to configure that same card across a number of different distributions.

	<p>They should also have a basic understanding of generic command-line utilities for wireless and networking under Linux (iwconfig, ifconfig) as well as where to look for further documentation.</p> <p>Part B: After completion, the participants should be able to set up their computer for wireless networking under Windows. They will either use infrastructure mode and connect to an access point or use ad hoc mode and directly connect with another wireless client.</p>
<b>Pre-workshop activities</b>	<p>Part A: It might be a good idea to let participants play around with desktop Linux, i.e. by booting Knoppix on some POC's or by installing a simple distribution such as Fedora Core, Mandrake or Ubuntu. Let them try to connect to the internet and spend 30 minutes familiarising themselves with the interface.</p> <p>Part B: Before the workshop, participants with their own laptops should check whether it has a wireless card, and if so which vendor/model.</p>
<b>Notes on using exercises</b>	<p>Part A (Linux)</p> <p>Exercise 1: Let participants install a wireless device which is supported by the distribution used at the workshop, i.e. pre-select a device with plug and play support. How do we see that the card has been detected and is working? Remember to pre-download any packages that are needed.</p> <p>Exercise 2: Let participants connect to an access point and a network that uses DHCP using the distributions graphical interface. Same access point but using a static IP address.</p> <ul style="list-style-type: none"> <li>• Exercises require some preparation.</li> <li>• There should be access to at least 1 computer per 4-5 participants for installation and prep exercises. These computers should be preinstalled with a desktop Linux distribution that the trainer is familiar with and which supports wireless networking)</li> <li>• A wireless device (with USB or PCMCIA) should be available, but not necessarily installed for each machine). Make sure that the particular devices are supported by the chosen distribution, and that all necessary software is downloaded and easily installable. We recommend NOT using the wlan-ng driver, as it does not support the wireless-tools package.</li> </ul> <p>Part B (Windows):</p> <p>Exercise 1: Get participants to install wireless clients on their own or dedicated workshop machines. Ideally have a few machines running Windows versions other than Windows XP.</p>
<b>Resources included with unit</b>	<ul style="list-style-type: none"> <li>• Handout</li> <li>• List of additional resources</li> <li>• Copyright statement</li> </ul>

	<ul style="list-style-type: none"> <li>• Trainers' notes</li> <li>• Materials evaluation form</li> <li>• Workshop evaluation form</li> </ul>
<b>Additional trainer resources</b>	
<b>Equipment needed</b>	<p>Part A+B</p> <ul style="list-style-type: none"> <li>• 1 Access point with DHCP server (Ideal 2 access points, one without encryption and one with)</li> <li>• Internet access for case study (search the web)</li> <li>• Some laptops, PCMCIA or USB cards</li> </ul> <p>Part A:</p> <ul style="list-style-type: none"> <li>• 1 desktop PC with Linux installed for each 4-5 participants (preferably 2-3 participants)</li> </ul>
<b>Comments</b>	It should be pointed out to the trainees that "Additional Resources" contains very useful links for Linux client installation.