

# Level 2 Digital Home Technology Integrator (7575-002)



## Assignment guide for Candidates Assignment B

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# Contents

## Unit 002 – Level 2 Digital Home Technology Integrator

Assignment B

Introduction – Information for Candidates	2
Candidate Instructions	3

# Level 2 Digital Home Technology Integrator (7575-002)

## Assignment B

### Introduction – Information for Candidates

#### About this document

This assignment comprises all of the assessment for Level 2 Digital Home Technology Integrator (7575-002)

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#### Health and safety

You are asked to consider the importance of safe working practices at all times.

You are responsible for maintaining the safety of others as well as your own. Anyone behaving in an unsafe fashion will be stopped and a suitable warning given. You will **not** be allowed to continue with an assignment if you compromise any of the Health and Safety requirements. This may seem rather strict but, apart from the potentially unpleasant consequences, you must acquire the habits required for the workplace.

#### Time allowance

The recommended time allowance for this assignment is **6 hours**.

# Level 2 Digital Home Technology Integrator (7575-002)

## Candidate Instructions

**Time allowance: 6 hours**

### Assignment set up:

This assignment is made up of **three** tasks

### Scenario

QHC Ltd is a small company that specialises in planning and installing wired and wireless digital home solutions. The company offers customers a free site visit to allow a technician to discuss their requirements.

As part of your role as an installation technician you have been asked to visit a customer's premises, record the existing installations and discuss the customer's new requirements. Once you have this information you need to prepare a plan and additional documentation detailing the layout of the connecting media and the specifications of the devices that will be installed.

Read all of the instructions carefully and complete the tasks in the order given.

You have been asked to visit a customer's home to identify their requirements. At present the customer has an open wireless network that consists of one desk top computer and one Netbook that are connected to the Internet via an ADSL wireless router. The customer also has a HDTV and games console that they want integrated into the network. (See attached floor plan for the locations of the PCs and other devices).

During the initial discussion with the customer the following requirements were identified. These must be signed off by the customer.

- As the customer has just had the building renovated the customer would like a wireless solution.
- That as part of the wireless solution a wireless printer is installed and configured so that all computers that are part of the network are able to print from it.
- Configure the SSID and security settings on all devices that are going to be attached to the network.
- A security camera is installed to monitor the main entrance to the building. This camera should be linked to network so that the images from the camera can be viewed using software installed on a PC.
- Integrate the HDTV in to the network so that movies streamed from the Internet can be viewed.
- Install a home cinema system to provide a surround sound environment.
- Install and Configure Hardware and software to allow remote control of the lighting in all the rooms from the PC, Tablet or mobile phone.
- Install a USB device and the associated software that allows both Freeview and Free Radio stations to be accessed from the laptop. Suitable portable speakers should also be provided so that the customer will be able to move location within the house.
- Install and configure hardware and software required to allow VoIP to be utilised.

## Task A

- 1 **Please use the Answer Sheet provided to complete Task A1**  
Specify the devices to meet the customer's requirements.  
List the specifications of the components that you are going to install.  
Identify transmission media to be used.  
List the specifications of the transmission media to be used.  
List the resources used for information
- 2 Update the floor plans which show the existing layout, to include the new devices to be installed
- 3 Update the floor plans to Include the intended layout/location of the media that you are going to use.
- 4 **Please use the Answer Sheet provided to complete Task A4**  
Identify and explain **three** reasons for fully documenting all aspects of the proposed LAN.
- 5 **Please use the Answer Sheet provided to complete Task A5**  
Give an example of a situation where you would use Plenum rated cables.
- 6 **Please use the Answer Sheet provided to complete Task A6**  
Give **two** reasons for using DHCP in a LAN.

## Task B

- 1 Install the hardware and software required to implement the wireless solution.
- 2 **Please use the Answer Sheet provided to complete Task B2**
  - identify the wireless standard(s) used in the network
  - identify the stated speed of the wireless network
  - identify the SSID of the wireless network
  - identify the IP address range of the network
  - identify the DNS Server address / addresses for the network
  - identify any IP addresses currently provided to devices via DHCP
  - record the settings displayed on each networked device when using the **IPCONFIG** command.

- 3 Test the LAN configuration by demonstrating that both:
  - devices can connect to the Internet
  - devices can copy and paste files to each other
  - devices can share files between each other.
- 4 **Please use the Answer Sheet provided to complete Task B4**  
Explain your choice of encryption used on the network.
- 5 Install and configure the wireless printer so that all PCs and Laptops can access it.
- 6 Set the computer(s) and laptop(s) on the network to use the wireless printer.
- 7 Check and update the anti-virus software installed on the existing PC and laptop(s).
- 8 Configure the firewall to block TCP Port 43.
- 9 **Please use the Answer Sheet provided to complete Task B9**  
State **two** consequences that are likely to occur when Spyware is present on a network.
- 10 Take screen print(s) of configuring the security settings in the default web browser to disable the use of third party cookies.
- 11 Install and configure a Content Management Server to allow AV content to be shared across the network.
- 12 Connect the games console to the HDTV.  
Configure the games console as a media extender on the wireless network.
- 13 Install the components of a surround sound system.  
Test the system and visually inspect the cable.  
Ask the assessor to verify that the system is correctly installed.
- 14 **Please use the Answer Sheet provided to complete Task B14**  
When testing the surround sound system, an annoying 'electronic buzz' of short duration is heard.  
Identify **one** device that could likely cause this problem.

## Task C

- 1 Configure **two** light/lamps to be remotely controlled by a remote device.
- 2 Test the devices to ensure they are working.  
Ask the assessor to verify that the devices are working.
- 3 Install a wired or wireless security camera.

- 4 Install and configure the software required to allow images to be viewed on a PC. Test the system to ensure it functions correctly.  
Take screen print(s).
- 5 Install and configure the hardware and software required to allow users to utilise VoIP. Test the system to ensure it functions correctly.  
Take screen print(s).
- 6 **Please use the Answer Sheet provided to complete Task C6**  
With ADSL connection, what device enables the sharing of the available bandwidth?

When you have finished working:

- Sign each document above your name and label all removable storage media with your name.
- Hand all paperwork and removable storage media to your assessor.

If the assignment is taken over more than one period, all paperwork and removable media must be returned to the test supervisor at the end of each sitting.

**End of assignment**



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