

BTEC Level 2 Diploma in IT

Assignment 2010-11



UNIT 10 - SETTING UP AN IT NETWORK

Student Name:

Hand Out Date: 20th October 2010 Hand In Date: 20th May 2011
 Date:

Assessor: Jon Fern Internal Verifier: Gordon Shering

Assignment: Setting up an IT Network 1/1

For a Pass to:		
P1	describe how the use of computer networks can improve communications for individuals and organisations	
P2	describe how a network is used by an organisation to manage its resources	
P3	describe potential issues with computer networks	
P4	describe the features and services of local and wide area network technologies	
P5	explain how hardware, software and addressing combine to support network communications	
P6	set up and test a simple local area network.	
For a Merit to:		
M1	explain how networks may improve productivity for individuals and organisations	
M2	suggest possible solutions to resolve connectivity problems	
M3	set up and configure security on a local area network.	
For a Distinction to:		
D1	evaluate the features and services provided by a local and a wide area network	
D2	explain how security issues can be minimised.	

Assessor's Comments:

Task	Criteria	Assessor's Comments	Achieved
Task 1	P1 M1 D1		
Task 2	P2		
Task 3	P3 M2 D2		
Task 4	P4 P5 D1		

Task	Criteria	Assessor's Comments	Assessor Signature	Achieved
Task 5	Lab 1 (P6)			
	Lab 2 (P6)			
	Lab 3 (P6, M3)			
	Lab 4 (M3)			
	Lab 5 (M3)			
	Lab Evaluations (D1,D2)			

Assessor's Signature:

Date

Assignment Brief

For this assignment you must demonstrate that you have an understanding of:

- the current use of computer networks
- the features and services of local and wide area network technologies
- how network hardware and software components are connected
- how to setup a simple local area network

The following assignment requires you to design and produce various reports and user guides. In addition, you will perform various practical activities that will re-enforce the theory sessions. You will produce lab reports which detail these activities.

You should include graphics and diagrams that would help the reader understand your descriptions, and remember, if you use 'Jargon', you must also explain the term, in an easy to understand way.

Assignment Scenario

You have been recently appointed as the IT Manager at a small, but rapidly expanding retail business. The Senior Management Team (SMT) has recognised that they need to invest in an IT network to help enable the business to grow but have limited experience in computing and communication technologies.

You have been asked to create a set of reports, documents and presentation materials that describe the advantages and implications of installing an integrated communications network.

TASK 1 Communication

(P1, M1, D1)

Write an informal report that gives an introduction, to 'Networking and Communications'.

The report should include:

- An explanation of what a **network** is, detailing the difference between the LAN and the WAN, giving **examples** of each. (P1)
- Descriptions of why networks are so important in modern life, both for **personal** and **business** use. You should focus on the communication tools that network provide. (P1)
- Examples of the way that **individuals** can increase their **productivity** through the communication services that networks provide. (M1)
- Examples of the way that **organisations** can increase their **productivity** through the communication services that networks provide. (M1)
- Diagrams and graphics that help the reader to **understand** your descriptions. (D1)

Hand in Date: **Week Ending 12/11/2010**

TASK 2**(P2)**

Write a **proposal** to the Senior Management Team (SMT) that attempts to justify the installation of a new network. You will need to describe how a network is used by an organisation to manage its resources effectively and in an economical way.

The proposal should cover the following:

- A definition of the term 'resources'. (P2)
- An explanation of the way that networks allow multiple users to access services and how that delivers cost savings. (P2)
- How hardware and software can be used more efficiently as a result of networking. (P2)
- Your proposal should highlight ways of reducing the environmental impact of the organisation through resource management and 'green' technologies. (P2)

Hand in Date: Week Ending 3/12/2010

TASK 3

(P3, M2, D2)

In task 2, you explained the many benefits of an IT network. We know however, that there are also many considerations when designing and running a network.

Produce a '**Trouble-shooting**' guide that describes potential issues with computer networks which could affect availability, connectivity and performance. Suggest possible remedies to the problems.

Your guide should cover (but not be limited to) the following:

- Workstation logon problems (P3)
- Disappearing network resources (P3)
- Poor network response time (P3)
- Network connection issues (M2)
-another (M2)
- Lost or corrupted user data files (D2)
- Insecure workstations and servers (D2)
-another (D2)

Hand in Date: Week Ending 11/2/2011

TASK 4 - Services

(P4, P5, D1)

A major function of networks is to provide a platform on which distributed services can be made available across a local or wide area.

For this task, you will design and deliver a **presentation** and write an accompanying **evaluation**.

Presentation

- An overview of the services numbered 1-5 below. (P4)
 1. User authentication (P4)
 2. Printing (P4)
 3. File sharing (P4)
 4. Internet access (P4)
 5. E-mail access (P4)
- A detailed description of two of 6-9. (You choose which) (P5)
 6. NTP (Network Time Protocol) (P5)
 7. DNS (Domain Name Services) (P5)
 8. DHCP (Dynamic Host Configuration Protocol) (P5)
 9. Directory Services (P5)

Your presentation should last approximately 5 minutes. You should provide notes for your audience.

Evaluation

Your evaluation for the SMT, should give a **justification** for the services provided against cost, giving your opinions on their merits and risks. (D1)

Delivery / Hand in Date: Week Ending 1/4/2011

TASK 5

(P6, M3, D1, D2)

This task is designed to allow you to demonstrate your practical skills by completing practical labs which your tutor will sign off. (P6)

Lab 1 - Create and test a Cat 5 Ethernet straight through cable. (P6)

Lab 2 - Connect two workstations together and configure, to allow communication. (P6)

Lab 3 - Create a network shared folder to allow peer to peer networking. (P6, M3)

Lab 4 - Use a Client/Server network to setup user access to network resources. (M3)

Lab 5 - Apply folder security to shared folders. (M3)

Each lab must be accompanied with a lab report, which will detail the practical task in the following format: (D1, D2)

- Introduction
- Method
- Result
- Conclusion

Some of the labs will require you to work in small groups; however, your written report must be your own. You should include screen prints of the lab tasks to include in your documentation.

Hand in Date: Week Ending 20/5/2011

End of assignment "Setting up an IT Network"