T Level Technical Qualification in Digital Support Services

Occupational specialism assessment (OSA)

Digital Support

Assignment 1

Assignment brief

v1.1: Additional sample material
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About this assignment

Introduction

This assignment is set by NCFE and administered by your provider during a set 2-week window.

The assignment will be completed under supervised conditions.

You must complete all tasks in this assignment independently. You are required to sign a declaration of authenticity to confirm that the work is your own. This is to ensure authenticity and to prevent potential malpractice and maladministration. If any evidence was found not to be your own work, it could impact your overall grade.

Internet access is only allowed for task 2. Internet access is available for this task to allow you to install, configure and update operating system (OS) and software applications. You are **not** permitted to use the internet for any other purpose, such as research. A copy of your browsing history must be submitted as part of your evidence for this task.

Your provider will provide the licensed software necessary for the tasks.

You have 19 hours to complete all tasks within this assignment. Each task has the following number of hours:

Task 1
8 hours – this task will be spread over 2 days (one day for task 1(a) and one day for task 1(b)).

Task 2
11 hours – this will be provided after completion of task 1. This task will be spread over 3 days. There may be significant periods of time whilst waiting for installations to take place and therefore tasks 2(a), 2(b) and 2(c) may be completed in parallel.

Individual tasks must be completed within the timescales stated within each task, but it is up to you how long you spend on each part of the task, therefore be careful to manage your time appropriately.

Marks available across all assignment 1 tasks: 76.

Details on the marks available are provided in each task.

You should attempt to complete all of the tasks.

Read the instructions provided carefully.

Take all photographs using the digital camera supplied by your provider. Use of personal mobile phones is **not** permitted.

Performance outcomes (POs)

Marks will be awarded against the skills and knowledge performance outcomes (POs):

PO1: Apply procedures and controls to maintain the digital security of an organisation and its data

PO2: Install, configure and support software applications and operating systems

PO3: Discover, evaluate and apply reliable sources of knowledge

Scenario

You are a digital support specialist who has been contracted to work for KJR Solicitors, a group of solicitors operating in North East England.

The client is setting up a second office in the Midlands, which is planned to open in one month's time. This office will handle human resources (HR), admin and customer service-related functions.

There are some business control techniques and processes in their North East office; however, there are none in place for the second office.

Apart from key employees, most employees have worked from home for the last 2 years to maintain systems. Employees are expected to transition back to the office in a hybrid way of working (3 days in the office, 2 days at home).

The client requires:

- your digital expertise in planning to support a future network
- your immediate support with preparing and installing a smaller network of computers in the new office location and mobile devices for any employee who requires a hybrid working environment

Task 1: prepare for installation

Time limit

8 hours

Task 1(a) must be completed prior to starting task 1(b).

Task 1(a) is allocated 3 hours 30 minutes.

Task 1(b) is allocated 4 hours 30 minutes.

You can use the time how you want but each task must be completed within the time limit.

(20 marks)

Student instructions

Based on the scenario, you are required to complete the relevant preparation which will enable you to set up 40 computers in the Midlands office, including a switch, 1 server, 2 colour printers, plus the ability to use mobile phones for video conferencing where needed, and identification of software relevant to mobile phone security. The network needs to be set up within a 2-week window, ensuring all employees in the new office can operate as quickly as possible.

You must:

1(a) Prepare a report to explain the security considerations required for the installation, configuration and support of end-user services to ensure confidentiality, integrity and availability. Your report must include:

- suitable recommendations on implementing business control techniques within the workplace, and considerations for remote working (physical/remote/administrative)
- explanations on how the client should operate the new data systems effectively, appropriately and securely, considering GDPR/Data Protection Act 2018 and its principles

(8 marks)

1(b) Plan and complete the relevant network planning documentation:

- health and safety risk assessment for the work to be undertaken
- network planning, including:
  - timescales
  - network design, including IP addressing scheme
  - inventory
- security risk assessment for the work to be undertaken

(12 marks)

You will have access to the following equipment:

- a computer with office software pre-installed

Evidence required for submission to NCFE

The following evidence should be submitted:

- summary of all business controls documentation required (word-processed document)
- summary of how to secure data systems effectively, both internal and remote (word-processed document)
- health and safety risk assessment (worksheet in appendix 1)
- network planning documentation including timescales and network design (word-processed document)
- inventory log (worksheet in appendix 1)
- security risk assessment (worksheet in appendix 1)

Task 2: install and configure a small network

Time limit

11 hours

You can use this time how you want but all parts of task 2 must be completed within the time limit.

(56 marks)

Student instructions

The client has asked you to install a new small network against a set of requirements. The devices can be either virtual, physical or emulator.

All employees will use the computers centrally within the new office, and any remote working employees will use a mobile device (laptop, tablet or phone) to be able to work remotely via the approved remote working solution.

The computers need to be set up allowing the employees to make and receive calls, email, and update a centrally controlled customer relationship management (CRM) system, along with enabling them to use video conferencing when remote working.

The computers will also need to access the internet and have appropriate instant messaging and video conferencing software installed. Employees will require access to project management software to help them plan upcoming projects.

The client wants to ensure there is suitable software installed to mitigate any vulnerabilities to the system, including suitable back-up security controls in place.

The client has also asked you to create notes for the software installations that have taken place, in order to support their IT staff. Your final task is to create a useable document that briefs these individuals on the set-up of your system.

You will have access to the following:

- 3 computers with full administrator rights, or virtual/emulator machine and software
- internet
- OS
- word processing, presentation and spreadsheet software
- email software
- instant messaging software
- video conferencing software
- project management software
- mobile device or emulator
- IP address allocations for task 2 in line with provider's own network IP addressing schema
- digital camera

2(a) You must install, configure and support a small-scale network which includes 3 workstations and one mobile device via WiFi, and you also need to give evidence to show you completed the following actions:

- implementing physical network and network security measures to prevent the unauthorised access, misuse, modification or denial of a computer, information system or data (CIA and IAAA)
- installing Windows 10 2019 server and creating an active directory on one of the workstations, setting up necessary user accounts and groups
- software licence management (software install log within appendix 1)

Note: You will need to provide annotated screenshots for the processes you follow and the implementations you make, with key explanations for all decisions

As you complete the various tasks, you must log:

- all network security measures which have been implemented
- any software installations that are planned
- how software licences will be managed in the provided installation and configuration log (security risk assessment and software install log worksheets in appendix 1)
- the IP addressing schema allocated to you by your provider

(18 marks)

Evidence required for submission to NCFE

The following evidence should be submitted:

- annotated screenshots (if using virtual machines) or photographs (if using physical machines/devices) showing the set-up and successful implementation of the network and server/active directory installation

2(b) Provide evidence of the following for the client:

- installing and setting up an OS and anti-virus software
- joining computer to active directory domain
- installing a VPN or create guidance explaining how to install a VPN
- installing and configuring application software suitable for the client
- implementing back-up security controls
- installing/updating device drivers

Whilst waiting for the installation to take place, set up and configure a WiFi mobile device for network connectivity:

- configure a mobile device to include device lock security measures, mobile locator application and back-up
- carry out all necessary mobile device updates including anti-virus

Note: You will need to provide annotated screenshots/photographs for the processes you follow and any implementations you make. This will include completing the software installation log (worksheet in appendix 1) and explaining your justifications for your decisions. You will also need to show evidence of any drivers which require installing, alongside taking screenshots of the device manager. When updating any software/OS updates, you must evidence that there are no further updates required on the system. The installation may take some time to complete and therefore you should continue with task 2(c)

(22 marks)

Evidence required for submission to NCFE

The following evidence should be submitted:

- screenshots (if using virtual machines) or photographs (if using physical machines/devices) showing the set-up and successful implementation of software, device driver status and mobile devices

2(c) Review the installation and configuration notes and log (started in task 1) that report the following information to the client, ensuring the following is up to date and correct:

- record of all OS/software application installations and utilities, upgrades, uninstalls and any major configuration changes
- identify and explain any vulnerabilities detected in the current system set-up/network
- recommend actions to mitigate any vulnerabilities found

Note: You will have been filling in the installation and configuration log as you have been completing the task. You will need to review what you have done, ensure that all information contained is correct and also identify the vulnerabilities and mitigations required

Apply your communication skills appropriately, using standard English. Use accurate spelling, punctuation and grammar. Consider your target audience.

(16 marks)

Evidence required for submission to NCFE

The following evidence should be submitted:

- completed installation and configuration log (appendix 1)

Document information

The T Level Technical Qualification is a qualification approved and managed by the Institute for Apprenticeships and Technical Education. NCFE is currently authorised by the Institute to develop and deliver the T Level Technical Qualification in Digital Support Services.

Owner: Head of Assessment Design

Change History Record

Version	Description of change	Approval	Date of Issue
v1.0	Additional sample material		01 September 2023
v1.1	Sample added as a watermark	November 2023	16 November 2023