



# **T Level Technical Qualification in Digital Support Services**

Employer-set project (ESP)

## **Core skills**

Digital Infrastructure & Network Cabling

Provider guide

# T Level Technical Qualification in Digital Support Services

## Employer-set project (ESP)

# Core skills

## Provider guide

Digital Infrastructure & Network Cabling

## Contents

<b>About this document</b>	<b>3</b>
Document security	3
About the employer-set project	3
Administering the external assessment	3
Marking the external assessment task	4
<b>Instructions for tutors</b>	<b>5</b>
Assessment conditions	5
Plagiarism	5
Resources	5
Accessibility and fairness	6
<b>Assessment and task specific instructions</b>	<b>7</b>
The employer-set project briefs	7
Selection of brief	7
<b>Delivery guidance</b>	<b>8</b>
Timings	10
<b>Instructions for completing and submitting the external assessment tasks</b>	<b>11</b>
<b>Guidance for students</b>	<b>12</b>
Student instructions	12
Student information	12
Plagiarism	12
Presentation of work	13
<b>York network manager notes (interviewer's notes)</b>	<b>14</b>
<b>Document information</b>	<b>15</b>
Change History Record	15

## About this document

### Document security

Please do not distribute this document to students. This is for provider and tutor use only. All tutors must be familiar with the information in this document. This document should be kept secure at all times.

This document should be read along with the regulations for conduct of external assessment. Assessment conditions and resources are defined in the qualification specific instructions for delivery (QSID). These documents can be found at [www.qualhub.co.uk](http://www.qualhub.co.uk) under policies and documents.

### About the employer-set project

The purpose of the employer-set project is to ensure that students have the opportunity to apply core knowledge and skills to develop a substantial piece of work in response to an employer-set brief. The brief and tasks are contextualised around an occupational area and chosen by the student ahead of the assessment window.

To achieve the assessment objectives and meet the brief, students must demonstrate the following core skills (CS):

CS1: Communicate information clearly to technical and non-technical stakeholders

CS2: Work with stakeholders to clarify and consider options to meet requirements

CS3: Apply a logical approach to solving problems, identifying and resolving faults whilst recording progress and solutions to meet requirements

CS4: Ensure activity avoids risk to security

The knowledge requirements will be taken from the core knowledge relevant to the brief, and the briefs will change for each assessment window.

### Administering the external assessment

The maximum overall time allowed for the external assessment is 12 hours 10 minutes under supervised conditions. The individual timings for each task are detailed later in the document. The table below shows when providers may run each task and at which stage of the assessment window each task should be completed by:

Task	Week 1	Week 2
1	NCFE fixed date: Monday	-
2	Tuesday to Friday	-
3	-	NCFE fixed date: Monday
4	-	Tuesday to Friday

NCFE sets the start date and the submission date of the assessment window for the external assessment task. External assessment material should not be given to students until the first supervised assessment session.

The assessment window will consist of provider arranged supervised sessions of external assessment. Sessions can be undertaken in the normal classroom environment, so long as each student has access to, or the option to

use, a computer system. Providers can decide how to arrange supervised sessions. Providers must submit students' completed assessment work by the published submission date.

When preparing to start a supervised session, time taken to print students' work is not included as part of the permitted hours for the external assessment task. In addition to this, time taken to collate and upload students' work is also not included as part of the permitted hours for the external assessment time.

Control documents A, B, C and D should be provided to students at the appropriate time throughout the assessment. Further instructions are detailed in the task specific instructions, in this document, and the control documents are available in the project brief.

At any time, NCFE may request the timetable that providers have set for the supervised sessions.

The permitted time must not be increased, unless a reasonable adjustment has been agreed for a student in accordance with the access arrangements and reasonable adjustments policy and special considerations policy which can be found at [www.qualhub.co.uk](http://www.qualhub.co.uk).

The permitted time must not be decreased. Students must be given the opportunity to complete the full amount of time for the external assessment task. Providers must take this into account when timetabling the sessions.

In the event the student misses a supervised session the following procedure must be followed:

- if a student misses a fixed date session (task 1 or 3) providers must not re-arrange another time for the student to complete the session, they must follow the reasonable adjustments and special considerations policy which can be found at [www.qualhub.co.uk](http://www.qualhub.co.uk)
- if a student misses a session that does not have a fixed date, providers may re-arrange a suitable time for the student (providing it is in the appropriate assessment window), however, task 2 must be completed by all students before moving on the task 3

Each student is allowed up to a maximum of 15 minutes rest break during the tasks which have 3 or more hours allocated and breaks must be managed by the provider. These breaks must be in a supervised, controlled room and monitored by the provider. For students who are eligible for additional time, this increases proportionally based on their needs.

## Marking the external assessment task

The external assessment tasks are set and marked by NCFE. This means that providers must not assess, internally quality assure or provide any feedback to the student about their performance in the external assessment task. However, tutors may be asked within a specific task to validate and generate supplementary evidence of student performance. The supervised external assessment tasks must be treated independently of the teaching of the outline content.

In order to achieve a grade for the core component, the student must attempt both of the external examinations and the employer-set project. The combined grades from these assessments will be aggregated to form the overall core component grade (A\* to E and U). If students do not attempt one of the assessments or fail to reach the minimum standard across all assessments, they will receive a U grade until the student resits the relevant components.

# Instructions for tutors

## Assessment conditions

Students must complete the employer-set project independently and under supervised conditions, as per each task specific guidance later in the document.

Students and tutors are required to sign 1 declaration of authenticity to confirm that the work is their/the student's own. A single declaration form is sufficient for the whole project. The declaration forms can be found at [www.qualhub.co.uk](http://www.qualhub.co.uk). This is to ensure authenticity and to prevent potential malpractice and maladministration. Students must be made aware of the importance of this declaration and the impact this could have on their overall grade if the evidence was found not to be the student's own work. Tutors must be aware that by signing the declaration, they are validating it is the student's own work.

Tutors must retain students' research materials at the end of each supervised session, alongside all materials and/or evidence produced by students within the supervised assessment.

At the end of each supervised session, the tutor must collect all evidence and any other materials, including students' research materials, before students leave the room to ensure that no student takes any external assessment material or assessment evidence out of the room. This also includes sufficient monitoring and checks to ensure that students have not made materials available to themselves or anyone else electronically via the intranet or internet.

External assessment materials should be securely stored between supervised sessions. Students must not have access to this area between the supervised sessions, including electronic files.

Work such as formative assessment and/or work done with sample assessment materials must not be used again as part of the external assessment task submission to NCFE.

Appendices should not be included and will not be marked unless specifically required from the task instructions.

Students are not allowed access to any online cloud storage or email and chat services during the assessment, this should be monitored by the providers.

## Plagiarism

Plagiarism may result in the external assessment task being awarded a U grade.

For further guidance, refer to the student handbook – plagiarism guidance and maladministration and malpractice policy located at [www.qualhub.co.uk](http://www.qualhub.co.uk).

## Resources

Students must have access to the appropriate resources required to complete the employer-set project. These include the following:

- technical equipment as required, such as audio recording equipment
- access to the internet (though this should be limited to ensure that access to online cloud storage services and/or online chat clients is not accessible)
- privacy mode should be disabled, and policies applied to prevent deletion of browsing history
- appropriate word processing and spreadsheet software

Internet access: this project is designed to simulate a real world task the student may be given in the workplace. Internet access is appropriate for completion of this project as the student would be able to research error messages and potential solutions in a real world setting. The assignment has been structured to test students' ability to complete real world tasks and internet access will not compromise this. Internet access is allowed throughout all tasks though the use of online cloud storage or chat services should be restricted to ensure that students do not share materials or access any prior work completed before the assessment.

This list is not exhaustive, and you need to refer to the qualification specification for subject-specific details.

## Accessibility and fairness

To promote accessibility and fairness for all students and to ensure diversity and equality, we expect providers to be aware of and meet the requirements of relevant NCFE policies and government legislation. You must ensure that:

- all of your processes concerned with assessment are carried out in a fair and objective manner
- you continue to adhere to current equal opportunities legislation
- you continue to operate an effective diversity and equality policy, with which students are familiar and which applies to all students using our products and services

# Assessment and task specific instructions

## The employer-set project briefs

For each assessment window, there will be 2 versions of the employer-set project available for booking; each version is contextualised against the occupational specialisms relevant to the pathway. These 2 briefs will be set by employers in conjunction with NCFE and will be different for each assessment window.

The briefs are designed to ensure a motivating starting point for students and will be based on, for example, a real world problem.

## Selection of brief

Students are required to discuss and agree with their tutor which of the following occupational-based briefs they would like to take forward for their employer-set project:

- Digital Infrastructure and Network Cabling
- Digital Support

The provider must book students onto the appropriate version of the employer-set project by the deadline for that specific assessment series as indicated below:

Assessment series	Student booking deadline
XXXXXX	XXXXXX
XXXXXX	XXXXXX
XXXXXX	XXXXXX
XXXXXX	XXXXXX

Bookings will be made on the NCFE portal, and guidance can be found in the portal handbook which can be accessed within the system.

The selection and registration of the student to the appropriate brief must be agreed ahead of the deadline outlined in the tutor guidance document. Whilst it is recommended that a student selects the brief that is relevant to their intended occupational specialism, it is not a requirement that the student makes a selection decision based on this, or any other specific given criteria.

# Delivery guidance

## Task 1

- task 1 will have a fixed, scheduled date set by NCFE within the assessment window
- the student should be issued control documents A, B and C for this task which are available in the project brief
- the student should be provided with a copy of the network topology diagram file emulating the current network configuration
- the student will be expected to diagnose and identify a firewall misconfiguration (related to the new internet provider) preventing virtual private network (VPN) traffic traversing the firewall
- correct ports should be indicated on the firewall configuration document and forwarding rules enabled, this document will be submitted
- the student should be allowed access to the internet to allow them to research and identify solutions to the problem
- the student should prepare and submit a simple but structured test plan that could be used to confirm the network issue has been resolved and that the network is now working correctly

## Task 2

- students must be supervised from the start of this task until all parts of the task are complete
- students should be allowed access to the internet if they wish to research anything to help them construct their set of interview questions
- students will be working independently, planning their information gathering for this project; as part of this, they will need to interview the York network manager
  - the York network manager interview should be conducted as a recorded role play with the provider supplying someone with appropriate technical knowledge to play the role of the York network manager per 10 students (this is to facilitate interview completion in a timely manner), it is acceptable that the tutor can play this role or someone with appropriate technical understanding; however, their responses must be only informed using the interviewer's notes
  - the specific interviewer guidance to support providers with the completion of task 2 is detailed at the end of this document – York network manager notes (interviewer's notes to support task 2)

Task 2 should be delivered to all students within the provider, on a specific day within the assessment window. Providers should plan how they are going to administer the task, and this will vary depending on the size of the cohort and staff availability. It may be appropriate to give each individual student different start times which are staggered (with enough time to allow for setting up the audio recording equipment). The following table is not intended to be prescriptive but should serve as a guide of how providers may stagger the start times of students to effectively administer the task.



Task 2: start time	Task 2: interview start time	Task 2: task complete time	Student
9:00am	10:00am	11:10am	A
9:15am	10:15m	11:25m	B
9:30am	10:30am	11:40am	C
9:45am	10:45am	11:55am	D

- task 2 can begin at different times for students however, once students have completed their interview, they must go to a controlled, supervised room
- task 2 can be completed over more than one day however, all students must complete task 2 within the first week of the assessment window
- students will have 1 hour to prepare their questions for the interview which will then be carried out 1 hour after the start
- interviews should last no longer than 10 minutes
- once the interview is complete, the student will have the remaining 1 hour to complete the task
- in answering questions, they should refer to the York network manager notes (interviewer's notes to support task 2) which is detailed at the end of this document
- where a student asks questions outside the brief, the York network manager should explain they do not have the answer to that question at this time
- the brief document should not be provided to the student
- the York network manager interviews must be completed in a private space, with the role play submission being captured as an audio file
- the tutor must ensure the interview is recorded in the correct format and will be responsible for uploading the recording for the student
- evidence must be taken from the student prior to moving on to task 3; this is an essential control because task 3 contains information that would undermine the validity of assessment for task 2
- students will be required to submit their interview recording (via the tutor) and 2 emails using the templates provided
- to facilitate York network manager interviews, it is likely that students will be staggered in their completion of task 2
- task 3 must not commence until all students in the provider have completed task 2 to prevent them accidentally seeing or receiving information regarding the network requirements document before it is appropriate; providers must therefore ensure that all interviews have taken place before the fixed scheduled date of task 3
- email templates will be provided for this task; students should not use their own email accounts to construct the 2 emails required as evidence for the task

## Task 3

- task 3 will have a fixed, scheduled date set by NCFE within the assessment window
- providers must ensure that students are given a copy of the specification of requirements (control document D) at the start of the task
- students will be required to submit a detailed project proposal on changes to the network
- it is appropriate that students have internet access to allow them to research and develop an effective solution to the scenario
- each student is allowed up to a maximum of 15 minutes rest break during the tasks which have 3 or more hours allocated and breaks must be managed by the provider, these breaks should be in a supervised, controlled room and monitored by the provider

## Task 4

- students should be allowed access to the internet
- students should be allowed access to all previous employer-set project materials, apart from the interview audio recording
- students are required to submit a sample satisfaction survey document and a post-project review document
- each student is allowed up to a maximum of 15 minutes rest break during the tasks which have 3 or more hours allocated and breaks must be managed by the provider, these breaks should be in a supervised, in a controlled room and monitored by the provider

## Timings

The timings below have been devised to support student and provider planning:

Task 1 = 2 hours 30 minutes

Task 2 = 2 hours 10 minutes

Task 3 = 4 hours

Task 4 = 3 hours 30 minutes

Total = 12 hours 10 minutes

## Instructions for completing and submitting the external assessment tasks

The external assessment tasks must be completed and uploaded at the end of each session.

Once task 2 has been completed, students' work from task 1 and 2 should be removed from the students to prevent information distributed for task 3 being used to amend the first 2 tasks.

Tutors are encouraged to ensure that students follow the filename conventions specified in the external assessment tasks for each individual document, which is – Surname\_Initial\_student number\_evidence reference for example: Smith\_J\_123456789\_Task1. Where evidence reference is shown, this should be replaced with the task number for which the work reflects. All files must be saved in .pdf format. These files, per student, should be placed within a single folder before being zipped and submitted.

Students must respond to each task individually and follow the document structure when submitting their evidence as per the evidence requirements section within each task. They must not combine responses for separate tasks.

The next section provides guidance that should be shared with all students before completing the employer-set project.

## Guidance for students

Guidance for students is also provided for each task in the employer-set project assessment.

### Student instructions

- read the project brief carefully before starting your work
- you must work independently and make your own decisions as to how to approach the tasks within the employer-set project
- you must clearly name and date all of the work that you produce during each supervised session
- you must hand over all of your work to your tutor at the end of each supervised session
- you must not work on the assessment in between supervised sessions

### Student information

- the employer-set project will assess your knowledge, understanding and skills from across the core content of the qualification
- in order to achieve a grade for the core component, you must attempt both of the external examinations and the employer-set project
- the combined marks from these assessments will be aggregated to form the overall core component grade (A\* to E and U) – if you do not attempt one of the assessments, or fail to reach the minimum standard across all assessments, you will receive a U grade
- the maximum time you will have to complete all tasks for the employer-set project is 12 hours 10 minutes
  - your tutor will explain how this time is broken down per task and will confirm with you if individual tasks need to be completed across multiple sessions
  - at the end of each supervised session, your tutor will collect all employer-set project assessment materials before you leave the room
  - you must not take any assessment material outside of the room (for example, via a physical memory device)
  - you must not upload any work produced to any platform that will allow you to access materials outside of the supervised sessions (including email)
- you can fail to achieve marks if you do not fully meet the requirements of the task, or equally if you are not able to efficiently meet the requirements of the task
- the project is assessed out of a total of 76 marks (this includes 2 marks for your use of maths in task 3, and 4 marks for your use of English throughout tasks 2, 3 and 4) – the individual task marks are also shown throughout the project brief booklet at the start of each task

### Plagiarism

Plagiarism may result in the external assessment task being awarded a U grade.

For further guidance, refer to your student handbook – plagiarism guidance and maladministration and malpractice policy located at [www.qualhub.co.uk](http://www.qualhub.co.uk).

## Presentation of work

- all of your work should be completed electronically using black font, Arial size 12pt unless otherwise specified
- any work not produced electronically must be agreed with your tutor, in which case the evidence you produce should be scanned and submitted as an electronic piece of evidence
- all your work should be clearly labelled with the relevant task number and your student details and be legible (for example, front page and headers)
- electronic files should be named using the following format – Surname\_Initial\_student number\_evidence reference for example: Smith\_J\_123456789\_Task1 for identification purposes – where evidence reference is shown, this should be replaced with the task number for which the work reflects and saved as a .pdf format
- all pages of your work should be numbered in the format page X of Y, where X is the page number and Y is the total number of pages
- you must complete and sign the external assessment cover sheet (EACS) and include it at the front of your assessment task evidence
- you must submit your evidence to the supervisor at the end of each session

# York network manager notes (interviewer's notes)

## Instructions

Please refer to these notes when conducting the recorded York network manager interview as part of task 2.

This interview/meeting should be conducted as a role play and recorded as part of the assignment submission. Where questions are asked wider than the brief of this document, it is appropriate to give relevant responses to allow the student to gather all information they wish.

Information should not be offered unprompted, but student questions should be given complete answers.

## Network setup

### Southampton office

- network includes a single server running which currently holds the following roles:
  - DHCP
  - DNS
  - domain controller
  - VPN server (allowing PPTP connectivity to the network – capacity for 50 concurrent connections)
  - file server
  - print server

The internet service provider at the Southampton office has recently been updated and the perimeter router and firewall have been replaced.

The Southampton office supports approximately 20 staff full time including senior management, finance, and IT.

Hot desk facilities include 10 desks for ad hoc use by the 30 remote workers located in the South of England who will be using company issued laptops to access the network.

### York office

This is a new office and currently only contains a simple LAN with a single SOHO router providing services to the network, including DHCP and DNS. There is no domain control in York. Staff are connecting via VPN to the Southampton site each day to access necessary resources.

There are approximately 10 staff permanently located in the York office as well as a further 5 hot desks to support 20 remote workers.

The following problems are regularly occurring:

- users connecting to the VPN are losing connection or being refused connection to the network
- remote users are complaining of slow connectivity to the Southampton site with poor transfer times to access resources
- currently, no remote workers or York staff can access the VPN, providing critical loss of service and productivity

## Document information

The T Level Technical Qualification is a qualification approved and managed by the Institute for Apprenticeships and Technical Education.

Copyright in this document belongs to, and is used under licence from, the Institute for Apprenticeships and Technical Education, © 2020-2021.

'T-LEVELS' is a registered trade mark of the Department for Education.

'T Level' is a registered trade mark of the Institute for Apprenticeships and Technical Education.

'Institute for Apprenticeships & Technical Education' and logo are registered trade marks of the Institute for Apprenticeships and Technical Education.

Owner: Head of Assessment Design

## Change History Record

Version	Description of change	Approval	Date of Issue
v1.0	Post approval, updated for publication.		December 2020
v1.1	Branding and formatting final updates. NCFE rebrand.		September 2021