

**Level 3 Advanced Technical  
Extended Diploma in Digital  
Technologies (720)  
Telecoms and Cabling  
(5220-048)**

Version 1.0 (September 2017)

**Assessment Pack**

Synoptic Assignment Pack

# Introduction

General information about structure of the assignment pack

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## General guidance for candidates

### **General guidance**

This is a formal assessment that you will be marked and graded on. You will be marked on the quality and accuracy of your practical performance and any written work you produce. It is therefore important that you carry your work out to the highest standard you can. You should show how well you know and understand the subject and how you are able to use your knowledge and skills together to complete the tasks. This means you will usually have to write down your thinking and the reasons behind the way you have carried out the tasks and how/why you have made your decisions. This may be part of your planning, reflections, or evaluations.

Your assessor will observe you throughout the practical element of this assignment and will produce an observation record that will be used to assess your competence.

### **Plagiarism**

This is an assessment of your abilities, so the work must be all your own work and carried out under the conditions stated. You will be asked to sign a declaration that you have not had any outside help with the assessment.

Your tutor is allowed to give you some help understanding the assignment instructions if necessary, but they will record any other guidance you need and this will be taken into account during marking.

Plagiarism is the failure to acknowledge sources properly and/or the submission of another person's work as if it were your own. Plagiarism is not allowed in this assignment.

Where research is allowed, your tutor must be able to identify which work you have done yourself, and what you have found from other sources. It is therefore important to make sure you acknowledge all sources and clearly reference any information taken from them.

### **Timings and planning**

Where you have to plan your time, you should take care to make sure you have divided the time available between tasks appropriately. In some assignments, there are specified timings which cannot be changed and which need to be taken into account. You should check your plan is appropriate with your tutor.

If you have a good reason for needing more time, you will need to explain the reasons to your tutor and agree a new deadline date. Changes to dates will be at the discretion of the tutor, and they may not mark work that is handed in after the agreed deadlines.

### **Health and Safety**

You must always work safely, in particular while you are carrying out practical tasks.

You must always follow any relevant Health and Safety regulations and codes of practice.

If your tutor sees you working in a way that is unsafe for yourself or others, they will ask you to stop immediately, and tell you why. Your tutor will not be able to reassess you until they are sure you are ready for assessment and can work safely.

### **Presentation of work**

Presentation of work must be neat and appropriate to the task.

You should make sure that each piece of evidence including any proformas eg record/job cards are clearly labelled with your name and the assignment reference.

All electronic files must be given a clear file name that allows your tutor to identify it as your work.

Written work eg reports may be word processed but this is not a requirement.

All sketches and drawings should be neat and tidy, to scale and annotated.

Calculations should be set out clearly, with all working shown, together with any assumptions made. You should use appropriate units at all times and answers must be expressed to a degree of accuracy, consistent with the requirements of the task.

The use of non-programmable scientific calculators is acceptable.

## Assignment Brief

You are employed as an IT Technician and have recently been tasked with supporting a small wired network consisting of 4 PCs that is used to test the compatibility of hardware and software prior to deploying on the organisations main network.

At present this network is a standalone network that has no connection to the Internet. As the organisation is looking to test a cloud based storage solution there is now a requirement for the network to be able to connect to the Internet.

You have been tasked by your manager to produce a planning document to support the provision of an internet connection and the expansion of the current network to include the equipment required to support the use of mobile devices.

The planning document must define the scope of the network upgrade project, the goals, deliverables, tasks, costs and deadlines with appropriate references to sources that have been used.

To enable the successful deployment of the network there is a requirement for additional information such as:

- a floor plan that includes the location of the existing and proposed hardware, cable runs, ducts and wiring closets.
- details of the internet connection and demarcation points.
- the IP addressing scheme to be used.
- technical specifications of the additional hardware.
- any additional software required.
- a test plan detailing how the network elements are to be tested.

Once all of the required devices have been implemented you will need to ensure that the firewall utilities being used are configured to enable remote access to the network and the use of FTP and TFTP.

Once all of the configuration changes have been made the actions identified in the planning documentation should be carried out to ensure that the network is functioning as expected and the results recorded.

The planning documentation should be amended reflecting any changes to the original design.

## Tasks

### Task 1

Produce the planning document that defines the scope of the network upgrade project.

**Conditions of assessment:**

You must carry the task out on your own, under supervised conditions.  
It is expected that this task should take no more than **4 hours** in total.

**What you must produce for marking:**

- A single electronic word-processed document.

### Task 2

Having been provided with the resources to expand the existing network, install and configure the resources in accordance with the information provided in the planning documentation.

When configuring wireless devices, annotated screen prints of each step must be produced.

The following configuration information must be used:

- SSID - CGTCXX (XX should be replaced with your initials)
- WPA passphrase – CGtc2020

**Conditions of assessment:**

You must carry the task out on your own, under supervised conditions.  
It is expected that this task should take no more than **4 hours** in total.

**What you must produce for marking:**

- The planning document with any changes made during implementation.
- Screen Prints of configuring the devices.
- Completed assessor observation sheet.

### Task 3

A user is unable to connect to the wireless network and has asked for help. Carry out the required actions to enable them to connect to the network.

All actions taken to rectify the problem along with the results must be recorded using the fault log (Appendix A).

**Conditions of assessment:**

You must carry the task out on your own, under supervised conditions.  
It is expected that this task should take no more than **2 hours** in total.

**What you must produce for marking:**

- The completed fault log
- Completed assessor observation sheet.

**Additional evidence of your performance that must be captured for marking:**

- Notes on the fault(s) and the actions taken to resolve the issue.

## Task instructions for centres

### Time

The recommended time allocated for the completion of the tasks and production of evidence for this assessment is approximately **ten** hours. It is the centre's responsibility to arrange how this time is managed to fit with timetables during the assessment period. Candidates should be required to plan their work and have their plans confirmed for appropriateness in relation to the time allocated for each task.

### Resources

Candidates must have access to a suitable range of resources to carry out the tasks.

### Task 1

The candidate is required to have access to a wired network consisting of 4 PCs/Laptops which have an Operating System (OS), the ability to take screen prints and anti-virus software installed. The systems must be configured as shown below:

Network and system configuration

- Workgroup – CGCTDigital
- User name – Administrator
- Password – Pa33w0rd1
- Statically configured IP addresses
- Workstation 1 – 192.168.254.2 subnet mask 255.255.255.0
- Workstation 2 – 192.168.254.3 subnet mask 255.255.255.0
- Workstation 3 – 192.168.254.4 subnet mask 255.255.255.0
- Workstation 4 – 192.168.254.5 subnet mask 255.255.255.0

It is suggested that this network is isolated from the main network of your organisation as this will allow the devices to be configured without impacting on other networks.

They must also have access to a PC /Laptop that has Internet access and a word processing package to enable the candidate to gather information on the additional resources required to implement the wireless network.

The documentation provided needs to be structured and contain sufficient information to allow the implementation of the network.

### Task 2

The learner must have access to the following equipment as a minimum:

- a wired network consisting of 4 PCs/Laptops
- a wireless router/access point
- a wireless device that can connect to the network or a wireless network interface card (NIC) that can be installed into one of the existing systems
- a tool kit.

The candidate must amend the planning documentation to reflect the equipment used and record the test results.

Annotated screen prints must be produced for configuring each device.

**Task 3**

A mobile device that has the wireless access disabled and the wrong network configuration information must be provided to enable the candidate to troubleshoot the network connectivity.



## Centre guidance

Guidance provided in this document refers to this specific assignment. The following documents available on the City & Guilds website provide essential generic guidance for centres delivering Technical qualifications and **must** be referred to alongside this guidance:

- **Technical qualifications – marking and moderation** – updated annually
- **Technical qualifications – teaching, learning and assessment**

This synoptic assessment is designed to require the candidate to make use their knowledge, understanding and skills they have built up over the course of their learning to tackle problems/tasks/challenges.

This approach to assessment emphasises to candidates the importance and applicability of the full range of their learning to practice in their industry area, and supports them in learning to take responsibility for transferring their knowledge, understanding and skills to the practical situation, fostering independence, autonomy and confidence.

Candidates are provided with an assignment brief. They then have to draw on their knowledge and skills and independently select the correct processes, skills, materials, and approaches to take to provide the evidence specified by the brief.

During the learning programme, it is expected that tutors will have taken the opportunity to set shorter, formative tasks that allow candidates to be supported to independently use the learning they have so far covered, drawing this together in a similar way, so they are familiar with the format, conditions and expectations of the synoptic assessment.

You should explain to candidates what the Assessment Objectives are and how they are implemented in marking the assignment, so they will understand the level of performance that will achieve them high marks.

The candidate should not be entered for the assessment until the end of the course of learning for the qualification so they are in a position to complete the assignment successfully.

### **Health and safety**

Candidates should not be entered for assessment without being clear of the importance of working safely, and practice of doing so. The tutor must immediately stop an assessment if a candidate works unsafely. At the discretion of the tutor, depending on the severity of the incident, the candidate may be given a warning. If they continue to work unsafely however, their assessment must be ended and they must retake the assessment at a later date.

### **Observation**

Where the tutor is required to carry out observation of performance, detailed notes must be taken using the Practical observation (PO) form provided. This may be a generic form or tailored to the specific assignment. The centre has the flexibility to adapt the form, or produce their own to suit local requirements as long as this does not change or restrict the type of evidence collected (eg to use tablet, hand-written formats, or to ease local administration).

The number of candidates a tutor will be able to observe at one time will vary depending on local conditions eg layout of the assessment environment, support for different tasks, staggered starts etc. Tutors must consider the logistics of collecting sufficient evidence; whether there are any points that will need additional support or any that are quieter, and trial the planned arrangements where possible during formative assessment. It is suggested however that no more than six candidates should be observed by a single tutor at one time.

As far as possible, candidates should not be distracted, or their performance affected by the process of observation and evidence collection.

Observation notes form part of the candidate's evidence and must describe **how well** the activity has been carried out, rather than stating the steps/ actions the candidate has taken. The notes must be very descriptive and focus on the **quality** of the performance in such a way that comparisons between performances can be made and which provide the evidence on which the award of marks can be made by the marker and, if sampled, the moderator.

Identifying **what it is** about the performances that is **different** between candidates can clarify the qualities that are important to record. Each candidate may carry out the same steps, so a checklist of this information would not add information to help differentiate between them, but qualitative comments on **how well** they do it, and quantitative records of accuracy and tolerances would.

The tutor should refer to the marking grid to ensure appropriate aspects of performance are recorded. These notes will be used for marking and moderation purposes and so must be detailed, accurate and differentiating.

Tutors should ensure that any required additional supporting evidence including eg photographs or video can be easily matched to the correct candidate, are clear, sufficiently well-lit and showing the areas of particular interest for assessment (ie taken at appropriate points in production, showing accuracy of measurements where appropriate).

If candidates are required to work as a team, each candidate's contribution must be noted separately. The tutor may intervene if any individual candidate's contribution is unclear or to ensure fair access (see below).

**Technical qualifications – marking and moderation** centre guidance document is an essential guidance document available on the City & Guilds website, providing further information on gathering evidence suitable for marking and moderation, and must be referred to when planning and carrying out assessment.

### Minimum evidence requirements

The sections:

- **What you must produce for marking**, and
- **Additional evidence of your performance that must be captured for marking**

in the assignment list the minimum requirements of evidence to be submitted for marking and moderation.

Evidence above and beyond this may be submitted, but should provide useful information for marking and moderation.

Where candidates have carried out some work as a group, the contribution of each candidate must be clear. It is not appropriate to upload identical information for each candidate without some way for the moderator to mark the candidates individually.

Where the minimum requirements have **not** been met, the moderation remark and any subsequent adjustment will be based on the evidence that has been submitted. **Where this is insufficient to provide a mark on moderation, a mark of zero may be given.**

### Preparation

Candidates should be aware of which aspects of their performance (across the AOs) will give them good marks in assessment. This is best carried out through routinely pointing out good or poor performance during the learning period, and through formative assessment. Candidates should be encouraged to do the best they can and be made aware of the difference between these summative assessments and any formative assessments they have been subject to. Candidates may not have access to the full marking grids, as these may be misinterpreted as pass, merit distinction descriptors. See the **Technical qualifications – teaching, learning and**

**assessment** centre guidance document for further information on preparing candidates for Technical qualification assessment.

### **Guidance on assessment conditions**

The assessment conditions that are in place for this synoptic assignment are to:

- ensure the rigour of the assessment process
- provide fairness for candidates
- give confidence in the outcome.

They can be thought of as the rules that ensure that all candidates who take an assessment are being treated fairly, equally and in a manner that ensures their result reflects their true ability.

The conditions outlined below relate to this summative synoptic assignment. These do not affect any formative assessment work that takes place. Formative assessment will necessarily take a significant role throughout the learning programme where support, guidance and feedback (with the opportunity to show how feedback has been used to improve outcomes and learning) are critical. This approach is not, however, valid for summative assessment. The purpose of summative assessment is to confirm the standard the candidate has achieved as a result of participating in the learning process.

### **Authentication of candidate work**

Candidates are required to sign declarations of authenticity, as is the tutor. The relevant form is included in this assignment pack.

The final evidence for the tasks that make up this synoptic assignment must be completed under the specified conditions. This is to ensure authenticity and prevent malpractice as well as to assess and record candidate performance for assessment in the practical tasks. Any aspect that may be undertaken in unsupervised conditions is specified. It is the centre's responsibility to ensure that local administration and oversight gives the tutor sufficient confidence to be able to confirm the authenticity of the candidate's work.

Candidate evidence must be kept secure to prevent unsupervised access by the candidate or others. Where evidence is produced over a number of sessions, the tutor must ensure learners and others cannot access the evidence without supervision. This might include storing written work or artefacts in locked cupboards and collecting memory sticks of evidence produced electronically at the end of each session.

**Where the candidate or tutor is unable to, or does not confirm authenticity through signing the declaration form, the work will not be accepted at moderation and a mark of zero will be given. If any question of authenticity arises eg at moderation, the centre may be contacted for justification of authentication.**

### **Accessibility and fairness**

Where a candidate has special requirements, tutors should refer to the *Access arrangements and reasonable adjustments* section of the City& Guilds website.

Tutors can support access where necessary by providing clarification to **any** candidate on the requirements or timings of any aspect of this synoptic assignment. Tutors should **not** provide more guidance than the candidate needs as this may impact on the candidate's grade, see the guidance and feedback section below.

All candidates must be provided with an environment and resources that allows them access to the full range of marks available.

Where candidates have worked in groups to complete one or more tasks for this synoptic assessment, the tutor must ensure that no candidate is disadvantaged as a result of the performance of any other team member. If a team member is distracting or preventing another team member from fully demonstrating their skills or knowledge, the tutor must intervene.

### ***Guidance and feedback***

Guidance must only support access to the assignment and must not provide feedback for improvement. The level and frequency of clarification & guidance must be

- recorded fully on the candidate record form (CRF),
- taken into account along with the candidate's final evidence during marking
- made available for moderation.

Tutors **must not** provide feedback on the quality of the performance or how the quality of evidence can be improved. This would be classed as malpractice.

Tutors **should** however provide general reminders to candidates throughout the assessment period to check their work thoroughly before submitting it, and to be sure that they are happy with their final evidence as it may not be worked on further after submission.

Candidates can rework any evidence that has been produced for this synoptic assignment during the time allowed. However, this must be as a result of their own review and identification of weaknesses and not as a result of tutor feedback. Once the evidence has been submitted for assessment, no further amendments to evidence can be made.

Tutors should ensure that candidates' plans for completion of the tasks distribute the time available appropriately and may guide candidates on where they should be up to at any point in a general way. Any excessive time taken for any task should be recorded and should be taken into account during marking if appropriate.

It is up to the marker to decide if the guidance the candidate has required suggests they are lacking in any AO, the severity of the issue, and how to award marks on the basis of this full range of evidence. The tutor must record where and how guidance has had an impact on the marks given, so this is available should queries arise at moderation or appeal.

### ***What is, and is not, an appropriate level of guidance***

- A tutor **should** intervene with caution if a candidate has taken a course of action that will result in them not being able to submit the full range of evidence for assessment. However this should **only** take place once the tutor has prompted the candidate to check that they have covered all the requirements. Where the tutor has to be explicit as to what the issue is, this is likely to demonstrate a lack of understanding on the part of the candidate rather than a simple error, and full details should be recorded on the CRF.
- The tutor **should not** provide guidance if the candidate is thought to be able to correct the issue without it, and a prompt would suffice. In other words only the minimum support the candidate actually needs should be given, since the more guidance provided, the larger the impact on the marks awarded.
- A tutor may **not** provide guidance that the candidate's work is not at the required standard or how to improve their work. In this way, candidates are given the chance to identify and correct any errors on their own, providing valid evidence of knowledge and skills that will be credited during marking.

All specific prompts and details of the nature of any further guidance must be recorded and reviewed during marking and moderation.

### ***Guidance on marking***

Please see the **Technical qualifications – marking and moderation** centre guidance document for further information on gathering evidence suitable for marking and moderation, and on using the following marking grid.

The Candidate Record Form (CRF) is used to record:

- Details of any guidance or the level of prompting the candidate has received during the assessment period
- Rough notes made while reviewing the evidence – alternatively these may be captured on the marking and moderation platform.
- Summary justifications when holistically coming to an overall judgement of the mark.

## Marking grid

For any category, 0 marks may be awarded where there is no evidence of achievement

%	Assessment Objective	Band 1 descriptor Poor to limited	Band 2 descriptor Fair to good	Band 3 descriptor Strong to excellent
15	<b>AO1 Recall of knowledge relating to the qualification LOs</b> <ul style="list-style-type: none"> <li>Does the candidate seem to have the full breadth and depth of taught knowledge across the qualification to hand?</li> <li>How accurate is their knowledge? Are there any gaps or misunderstandings evident?</li> <li>How confident and secure does their knowledge seem?</li> </ul>	<b>(1-3 marks)</b> <b>Recall shows some weaknesses in breadth and/or accuracy.</b> Hesitant, gaps, inaccuracy	<b>(4-6 marks)</b> <b>Recall is generally accurate and shows reasonable breadth. Inaccuracy and misunderstandings are infrequent and usually minor.</b> Sound, minimal gaps	<b>(7-9 marks)</b> <b>Consistently strong evidence of accurate and confident recall from the breadth of knowledge.</b> Accurate, confident, complete, fluent, slick
		<b>Examples of types of knowledge expected:</b> Network technologies including wired, wireless, PowerLine, VPN. Transmission media including fibre optic, UTP, STP. Protocols including TCP, ICMP, SMTP, UDP, HTTP, IMAP. Hardware including Network interface cards (NIC), Hubs, switches, routers, modems, wireless access points, wireless routers. Software including network operating systems, web browsers, device drivers, graphical user interface, command line interface.		
		Candidate showed limited awareness of network technologies suitable to increase the capacity of the network.  Candidate awareness of different types of transmission media and their uses within networks is limited.  Candidate awareness of the utilisation of troubleshooting tools is minimal.	Candidate showed adequate awareness of network technologies suitable to increase the capacity of the network.  Candidate awareness of different types of transmission media and their uses within networks is satisfactory.  Candidate awareness of the utilisation of troubleshooting tools is adequate.	Candidate showed comprehensive awareness of network technologies suitable to increase the capacity of the network.  Candidate awareness of different types of transmission media and their uses within networks is extensive.  Candidate awareness of the utilisation of troubleshooting tools is thorough.

%	Assessment Objective	Band 1 descriptor Poor to limited	Band 2 descriptor Fair to good	Band 3 descriptor Strong to excellent
20	<b>AO2 Understanding of concepts theories and processes relating to the LOs</b> <ul style="list-style-type: none"> <li>Does the candidate make connections and show causal links and explain why?</li> <li>How well theories and concepts are applied to new situations/the assignment?</li> <li>How well chosen are exemplars – how well do they illustrate the concept?</li> </ul>	<b>(1-4 marks)</b> <b>Some evidence of being able to give explanations of concepts and theories. Explanations appear to be recalled, simplistic or incomplete.</b> Misunderstanding, illogical connections, guessing,	<b>(5-8 marks)</b> <b>Explanations are logical. Showing comprehension and generally free from misunderstanding, but may lack depth or connections are incompletely explored.</b> Logical, slightly disjointed, plausible,	<b>(9-12 marks)</b> <b>Consistently strong evidence of clear causal links in explanations generated by the candidate. Candidate uses concepts and theories confidently in explaining decisions taken and application to new situations.</b> Logical reasoning, thoughtful decisions, causal links, justified
		<b>Examples of understanding expected:</b> An understanding of the concepts providing communication services via a Local Area Network (LAN) and Wide Area Networks (WAN) Including: hardware, software, protocols and media. Planning documentation to meet specified requirements, including: scope, requirements, timescales, resources, floor plans. Purpose and function of differing technologies used in data networks, including: switches, routers, servers, storage, VLANs, Wireless access points, End user devices, PBX. Components required to implement a wireless LAN, including: routers (wired and wireless), wireless access points, network interface cards/devices, network security and devices, WPA, broadcasting SSID.		

%	Assessment Objective	<b>Band 1 descriptor</b> Poor to limited	<b>Band 2 descriptor</b> Fair to good	<b>Band 3 descriptor</b> Strong to excellent
		<p>The candidate has shown a basic understanding of network configuration.</p> <p>The candidate has demonstrated a limited understanding of the media and connectors required to implement a network.</p> <p>A partial understanding of the selection and logical use of troubleshooting tools has been displayed.</p> <p>Limited consideration has been given to the requirements of the scenario when planning the network.</p>	<p>The candidate has shown an adequate understanding of network configuration.</p> <p>The candidate has demonstrated a sound understanding of the media and connectors required to implement a network.</p> <p>An adequate understanding of the selection and logical use of troubleshooting tools has been displayed.</p> <p>An adequate consideration has been given to the requirements of the scenario when planning the network.</p>	<p>The candidate shows in-depth understanding of network configuration.</p> <p>The candidate has demonstrated a thorough understanding of the media and connectors required to implement a network.</p> <p>A comprehensive understanding of the selection and logical use of troubleshooting tools has been displayed.</p> <p>Extensive consideration has been given to the requirements of the scenario when planning the network.</p>



25	<b>AO3 Application of practical/ technical skills</b> <ul style="list-style-type: none"> <li>How practiced/fluid does hand eye coordination and dexterity seem?</li> <li>How confidently does the candidate use the breadth of practical skills open to them?</li> <li>How accurately/ successfully has the candidate been able to use skills/achieve practical outcomes?</li> </ul>	<b>(1-5 marks)</b> <b>Some evidence of familiarity with practical skills. Some awkwardness in implementation, may show frustration out of inability rather than lack of care.</b> Unable to adapt, frustrated, flaws, out of tolerance, imperfect, clumsy.	<b>(6-10 marks)</b> <b>Generally successful application of skills, although areas of complexity may present a challenge. Skills are not yet second nature.</b> Somewhat successful, some inconsistencies, fairly adept/ capable.	<b>(11-15 marks)</b> <b>Consistently high levels of skill and/or dexterity, showing ability to successfully make adjustments to practice; able to deal successfully with complexity.</b> Dextrous, fluid, comes naturally, skilled, practiced,
		<b>Examples of skills expected:</b> Following safe working practices, the application of antistatic precautions, using tools in a safe manner. Document formatting or production, synthesising and analysing data, configuring and testing devices. Visual troubleshooting, including: damage, physical connection, workstation / device, patch panel, incorrect connection, connection LED, output. Prepare documentation including: fault logs, test plans, planning documentation. Installing and configuring the required components to enable wireless LANs to be implemented, including: working practices, routers, wireless access points, network interface cards/devices, end user devices.		

		<p>Candidate created a simplistic planning document containing minimum detail.</p> <p>Candidate demonstrated a limited understanding of the wired and wireless technologies required to implement the solution.</p> <p>Limited attention to detail when configuring network devices and security, skills are sporadically applied.</p> <p>Limited understanding of fault diagnosis and rectification demonstrated.</p> <p>Limited detail of the actions taken to resolve the issues and outcomes was included in the documentation.</p>	<p>Candidate created a straight forward planning document containing adequate detail.</p> <p>Candidate demonstrated an adequate understanding of the wired and wireless technologies required to implement the solution.</p> <p>Adequate attention to detail when configuring network devices and security, skills are consistently applied.</p> <p>Appropriate understanding of fault diagnosis and rectification demonstrated.</p> <p>Adequate detail of the actions taken to resolve the issues and outcomes was included in the documentation.</p>	<p>Candidate created a detailed planning document comprehensively covering all requirements.</p> <p>Candidate demonstrated a comprehensive understanding of the wired and wireless technologies required to implement the solution.</p> <p>Thorough attention to detail when configuring network devices and security, skills follow industry best practice.</p> <p>Comprehensive understanding of fault diagnosis and rectification demonstrated.</p> <p>Extensive detail of the actions taken to resolve the issues and outcomes was included in the documentation.</p>
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20	<b>AO4 Bringing it all together - coherence of the whole subject</b> <ul style="list-style-type: none"> <li>Does the candidate draw from the breadth of their knowledge and skills?</li> <li>Does the candidate remember to reflect on theory when solving practical problems?</li> <li>How well can the candidate work out solutions to new contexts/problems on their own?</li> </ul>	<b>(1-4 marks)</b> <b>Some evidence of consideration of theory when attempting tasks. Tends to attend to single aspects at a time without considering implication of contextual information.</b> Some random trial and error, new situations are challenging, expects guidance, narrow. Many need prompting.	<b>(5-8 marks)</b> <b>Shows good application of theory to practice and new context, some inconsistencies.</b> Remembers to apply theory, somewhat successful at achieving fitness for purpose. Some consolidation of theory and practice	<b>(9-12 marks)</b> <b>Strong evidence of thorough consideration of the context and use of theory and skills to achieve fitness for purpose.</b> Purposeful experimentation, plausible ideas, guided by theory and experience, fit for purpose, integrated, uses whole toolkit of theory and skills.
<b>Examples of bringing it all together:</b> Applying knowledge and understanding to upgrade a network to support wireless communications including: gathering information regarding the technical specifications of the logical and physical components. The ability to diagnose issues on wired and wireless networks and remedy the issues. Correctly applied relevant standards associated with telecommunications such as IEEE 802.11.				

		<p>Candidate has given basic consideration to the network requirements in the planning documentation.</p> <p>A functioning network was implemented with minor faults.</p> <p>Candidate has conducted a basic trouble shooting process identifying and recording any issues found.</p> <p>Limited consideration has been given to the expansion of the current network to include equipment required to support the use of mobile devices.</p>	<p>Candidate has given reasonable consideration to the network requirements in the planning documentation.</p> <p>A functioning network was implemented. Any faults present were identified and rectified.</p> <p>Candidate has conducted a troubleshooting process successfully identifying, rectifying and correctly recording any actions taken.</p> <p>Adequate consideration has been given to the expansion of the current network to include equipment required to support the use of mobile devices.</p>	<p>Candidate has given thorough consideration to the network requirements in the planning documentation.</p> <p>The network was fully implemented with no faults present.</p> <p>Candidate demonstrated logic in conducting a thorough troubleshooting process successfully identifying, rectifying and correctly recording any actions taken.</p> <p>Comprehensive consideration has been given to the expansion of the current network to include equipment required to support the use of mobile devices.</p>
20	<p><b>A05 Attending to detail/ perfecting</b></p> <ul style="list-style-type: none"> <li>Does the candidate routinely check on quality, finish etc and attend to imperfections/ omissions</li> <li>How much is accuracy a result of persistent care and attention (eg measure twice cut once)?</li> </ul>	<p><b>(1-4 marks)</b></p> <p><b>Easily distracted or lack of checking. Insufficiently concerned by poor result; little attempt to improve. Gives up too early; focus may be on completion rather than quality of outcome.</b></p> <p>Careless, imprecise, flawed, uncaring, unfocussed, unobservant, unmotivated.</p>	<p><b>(5-8 marks)</b></p> <p><b>Aims for satisfactory result but may not persist beyond this. Uses feedback methods but perhaps not fully or consistently.</b></p> <p>Variable/intermittent attention, reasonably conscientious, some imperfections, unremarkable.</p>	<p><b>(9-12 marks)</b></p> <p><b>Alert, focussed on task. Attentive and persistently pursuing excellence. Using feedback to identify problems for correction.</b></p> <p>Noticing, checking, persistent, perfecting, refining, accurate, focus on quality, precision, refinement, faultless, meticulous.</p>

<ul style="list-style-type: none"> <li>Would you describe the candidate as a perfectionist and wholly engaged in the subject?</li> </ul>	<b>Examples of attending to detail:</b> Proof reading, meeting expectations of the brief, reflection of choices made, identifying areas for improvement, structured and efficient approach taken to planning documentation, task implementation and fault finding, referencing of sources, validity of sources.		
	There is limited consistency and attention to detail applied to the documentation.	The level of detail is adequate and consistently applied to the documentation.	The level of detail is comprehensive and consistently applied to the documentation.
	The approach to installing and configuring network devices was limited.	The approach to installing and configuring network devices was adequate.	The approach to installing and configuring network devices was meticulous.
	<p>Candidate demonstrated limited attention to detail when diagnosing and rectifying issues.</p> <p>Limited consideration given to configuration to allow the use of FTP and TFTP for remote access.</p>	<p>Candidate demonstrated adequate attention to detail when diagnosing and rectifying issues.</p> <p>Adequate consideration given to configuration to allow the use of FTP and TFTP for remote access.</p>	<p>Candidate demonstrated a thorough approach and attention to detail when diagnosing and rectifying issues.</p> <p>Comprehensive consideration given to configuration to allow the use of FTP and TFTP for remote access.</p>

## Declaration of Authenticity

Candidate name

Candidate number

---

Centre name

---

Centre number

---

### Candidate:

**I confirm that all work submitted is my own, and that I have acknowledged all sources I have used.**

Candidate signature

Date

### Tutor:

**I confirm that all work was conducted under conditions designed to assure the authenticity of the candidate's work, and am satisfied that, to the best of my knowledge, the work produced is solely that of the candidate.**

---

Tutor signature

Date

### Note:

**Where the candidate and/or tutor is unable to, or does not confirm authenticity through signing this declaration form, the work will not be accepted at moderation and a mark of zero will be given. If any question of authenticity arises, the tutor may be contacted for justification of authentication.**

## Candidate Record Form (CRF)

Candidate Name:  
Candidate Number:

Assessment ID:  
Centre Number:  
**Total Mark:**

	Summary justification	AO Mark
<b>A01</b> Recall		
<b>A02</b> Understanding		
<b>A03</b> Practical/ technical skills		
<b>A04</b> Bringing it all together		
<b>A05</b> Attention to detail		

Tutor/assessor signature:

Date:

# Candidate Record Form (CRF)

## Marker Notes

<b>A01 - Recall</b> Breadth, depth, accuracy	<b>Examples of types of knowledge expected:</b> Network technologies including wired, wireless, PowerLine, VPN. Transmission media including fibre optic, UTP, STP. Protocols including TCP, ICMP, SMTP, UDP, HTTP, IMAP. Hardware including Network interface cards (NIC), Hubs, switches, routers, modems, wireless access points, wireless routers. Software including network operating systems, web browsers, device drivers, graphical user interface, command line interface.		
15%	Band 1 1-3 marks	Band 2 4-6 marks	Band 3 7-9 marks
Mark:	Notes/Comments		
<b>A02 - Understanding</b> Security of concepts, causal links	<b>Examples of understanding expected:</b> An understanding of the concepts providing communication services via a Local Area Network (LAN) and Wide Area Networks (WAN) Including: hardware, software, protocols and media. Planning documentation to meet specified requirements, including: scope, requirements, timescales, resources, floor plans. Purpose and function of differing technologies used in data networks, including: switches, routers, servers, storage, VLANs, Wireless access points, End user devices, PBX. Components required to implement a wireless LAN, including: routers (wired and wireless), wireless access points, network interface cards/devices, network security and devices, WPA, broadcasting SSID.		
20%	Band 1 1-4 marks	Band 2 5-8 marks	Band 3 9-12 marks
Mark:	Notes/Comments		
<b>A03 - Practical skill</b> Dexterity, fluidity, confidence, ease of application	<b>Examples of skills expected:</b> Following safe working practices, the application of antistatic precautions, using tools in a safe manner. Document formatting or production, synthesising and analysing data, configuring and testing devices. Visual troubleshooting, including: damage, physical connection, workstation / device, patch panel, incorrect connection, connection LED, output. Prepare documentation including: fault logs, test plans, planning documentation. Installing and configuring the required components to enable wireless LANs to be implemented, including: working practices, routers, wireless access points, network interface cards/devices, end user devices.		
25%	Band 1 1-5 marks	Band 2 6-10 marks	Band 3 11-15 marks
Mark:	Notes/Comments		



<b>A04 – Bringing it together</b> use of knowledge to apply skills in new context	<b>Examples of bringing it all together:</b> Applying knowledge and understanding to upgrade a network to support wireless communications including: gathering information regarding the technical specifications of the logical and physical components. The ability to diagnose issues on wired and wireless networks and remedy the issues. Correctly applied relevant standards associated with telecommunications such as IEEE 802.11.		
20%	Band 1 1-4 marks	Band 2 5-8 marks	Band 3 9-12 marks
Mark:	Notes/Comments		
<b>A05 - Attending to detail / perfecting</b> Repeated checking, perfecting, noticing	<b>Examples of attending to detail:</b> Proof reading, meeting expectations of the brief, reflection of choices made, identifying areas for improvement, structured and efficient approach taken to planning documentation, task implementation and fault finding, referencing of sources, validity of sources.		
20%	Band 1 1-4 marks	Band 2 5-8 marks	Band 3 9-12 marks
Mark:	Notes/Comments		

**Please refer to the full marking grid for the qualification for full details of marking requirements.**

**Where marker notes and justifications are captured on the marking and moderation platform, this form is not required**

## Assessor Observation Form Task 2 and 3

Candidate Name:  
Candidate Number:

Assessment ID:  
Centre Number:

Task Number	Task Outcome	Observed as meeting specification	Errors made/ specification not met
2/3	Configured SSID to: CGTCXX (XX replaced with candidates initials)		
2/3	WPA passphrase set to: CGtc2020 (Case sensitive)		
2/3	IP address correctly configured as per planning document		
2/3	Configured wireless connectivity on a device/PC correctly		
	Checked wireless connectivity to existing network		

### Notes for Assessor:

Use the above Assessor checklist. The learner's performance should be marked against the criteria on the Assessor checklist and the Marking grid. Additional Assessor notes must be included to comment on how well the candidate carried out each criteria. The learner should be familiar with the performance criteria above before commencement of the task but should not have a copy with them during the assessment.

### Assessor observations and mark justification:

.....  
**Assessors Name**  
(please print)

(please sign)

.....  
**Assessors Name**

## Appendix A

Fault Log

Date	Description of the issue	Actions taken	Comments	Signature

## Practical Observation Form (PO)

Candidate Name:

Candidate Number:

Assessment ID:

Centre Number:

### Notes

#### **A01 - Recall**

Breadth, depth, accuracy

#### **A02 - Understanding**

Security of concepts, causal links

#### **A03 - Practical skill**

Dexterity, fluidity, confidence, ease of application

#### **A04 – Bringing it all together**

use of knowledge to apply skills in new context

#### **A05 - Attending to detail / perfecting**

Repeated checking, perfecting, noticing

**Tutor/Assessor signature:**

**Date:**