

Cambridge **TECHNICALS LEVEL 3**

**IT**

Cambridge  
**TECHNICALS**  
**2016**

**Unit 20**

**IT technical support**

T/507/5023

Guided learning hours: 60

Version 1 September 2015

## LEVEL 3

### UNIT 20: IT technical support

T/507/5023

**Guided learning hours:** 60

**Essential resources required for this unit:** Learners should have access to a variety of tools used by technicians to support clients; these tools may be software tools such as 'SiSoft Sandra' or hardware tools such as multi-meters.

**This unit is internally assessed and externally moderated by OCR.**

#### UNIT AIM

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The aim of this unit is to explore the problems that are likely to be encountered by IT support professionals. You will learn about many of the tasks that they carry out.

You will develop an understanding of technical support tools and techniques. This will include looking at organisational policies and procedures to source technical information. You will also learn how to diagnose faults and communicate advice and guidance to clients to help resolve problems.

This unit is optional within the IT Infrastructure Technician specialist pathway as all IT support technicians require the skills, knowledge and understanding to troubleshoot a wide variety of hardware and software issues and provide advice and guidance to different stakeholders.

The learning in this unit will also support the delivery of the CompTIA A+, the CompTIA Mobility+ qualification objectives, as well as the Cisco ITE qualification.

## TEACHING CONTENT

The teaching content in every unit states what has to be taught to ensure that learners are able to access the highest grades.

Anything which follows an i.e. details what must be taught as part of that area of content. Anything which follows an e.g. is illustrative, it should be noted that where e.g. is used, learners must know and be able to apply relevant examples in their work, although these do not need to be the same ones specified in the unit content.

For internally assessed units you need to ensure that any assignments you create, or any modifications you make to an assignment, do not expect the learner to do more than they have been taught, but must enable them to access the full range of grades as described in the grading criteria.

Learning outcomes	Teaching content
The Learner will:	Learners must be taught:
1. Understand the role of technical support	1.1 IT Support Roles (i.e. 1st line, 2nd line, 3rd line) 1.2 Support process, i.e.: <ul style="list-style-type: none"> <li>• helpdesk activities (e.g. role, point of contact, personnel, fault logging)</li> <li>• IT support requests</li> <li>• analysis of previous trends (e.g. types of fault reports, support request documentation, analysis, reporting)</li> <li>• resources (e.g. staffing, availability, training, emerging technologies)</li> <li>• policies, e.g.:               <ul style="list-style-type: none"> <li>○ service level agreements (SLAs)</li> <li>○ computer use policy</li> <li>○ standard, non-standard equipment policy</li> </ul> </li> </ul> 1.3 Client Types, i.e.: <ul style="list-style-type: none"> <li>• environment (e.g. corporate, home)</li> <li>• skill level (e.g. novice, non-technical, technical)</li> <li>• software use (e.g. games, word processing, database)</li> <li>• features (e.g. basic, advanced)</li> </ul> 1.4 Communicating advice, i.e.: <ul style="list-style-type: none"> <li>• client type (e.g. technical, non-technical)</li> <li>• methods of communication (e.g. face-to-face, email, telephone)</li> <li>• interpersonal skills (e.g. listen, negotiate, value opinion, take criticism)</li> </ul>
2. Be able to diagnose faults and solutions for computer systems	2.1 Diagnostic techniques, i.e.: <ul style="list-style-type: none"> <li>• software tools (e.g. diagnostic software functions and sources)</li> <li>• sources of support (e.g. supplier, websites, technical documentation, fault logs)</li> <li>• gather information from customer</li> <li>• organisational constraints e.g. costs of resources required, time, client expertise</li> <li>• standard operational procedures (e.g. SOPs)</li> </ul>

Learning outcomes	Teaching content
<p>The Learner will:</p>	<p>Learners must be taught:</p> <ul style="list-style-type: none"> <li>• testing to mirror fault</li> <li>• remote access, check bios, gather diagnostic information to solve problem</li> </ul> <p>2.2 Types of faults, i.e.:</p> <ul style="list-style-type: none"> <li>• simple faults (e.g. no sound, display incorrect,)</li> <li>• complex faults (e.g. faults that require extra intervention, or remote access)</li> <li>• interlinked problems (e.g. a simple fault resolved can lead to further issues)</li> </ul> <p>2.3 Documentation and record keeping to include, i.e.:</p> <ul style="list-style-type: none"> <li>• categories of information kept</li> <li>• format of the information i.e. digital, manual</li> </ul> <p>2.4 Post fault testing, i.e.:</p> <ul style="list-style-type: none"> <li>• test for resolution of fault</li> <li>• benchmark testing against known specifications</li> <li>• follow up actions required</li> </ul>
<p>3. Be able to provide advice and guidance to specific customers</p>	<p>3.1 Communication techniques, i.e.:</p> <ul style="list-style-type: none"> <li>• Considerations, i.e.: <ul style="list-style-type: none"> <li>○ technical clients</li> <li>○ non-technical clients</li> <li>○ methods</li> <li>○ documentation</li> <li>○ use of technical language</li> <li>○ visualisation</li> <li>○ timescales</li> <li>○ accuracy and relevance of information</li> </ul> </li> </ul> <p>3.2 Effectiveness of technical provision, i.e.:</p> <ul style="list-style-type: none"> <li>• feedback from clients (e.g. questionnaires, verbal , face to face, email, call loggers)</li> <li>• effectiveness in terms of, e.g.: <ul style="list-style-type: none"> <li>○ efficiency of support delivery</li> <li>○ available tools, equipment, software</li> <li>○ cost</li> <li>○ training needs.</li> </ul> </li> <li>• review (e.g. survey information, methods, outcomes, conclusions and decide what was effective or not)</li> </ul> <p>3.3 Analyse trends and make recommendations, i.e.:</p> <ul style="list-style-type: none"> <li>• analysis of trends of problems and support requirements</li> <li>• reducing repeat occurrences</li> </ul>

## GRADING CRITERIA

LO	Pass	Merit	Distinction
	The assessment criteria are the Pass requirements for this unit.	To achieve a Merit the evidence must show that, in addition to the pass criteria, the candidate is able to:	To achieve a Distinction the evidence must show that, in addition to the pass and merit criteria, the candidate is able to:
1. Understand the role of technical support	P1: Describe the activities within a technical support role	M1: Analyse the communication considerations used for differing client types	
2. Be able to diagnose faults and solutions for computer systems	P2*: Perform diagnosis of simple faults with an identified computer system and implement solutions <i>(*Synoptic assessment from Unit 1 Fundamentals of IT, Unit 2 Global information and Unit 3 Cyber security)</i>	M2: Investigate complex faults with an identified computer system and implement solutions	D1: Test computer system post fault resolution and interpret results
	P3: Document faults and solutions for computer systems		
3. Be able to provide advice and guidance to specific customers	P4: Communicate technical advice and guidance to an identified non-technical client		D2: Analyse trends from troubleshooting technical issues and make recommendations to reduce repeat occurrences
	P5: Present technical advice and guidance to an identified technical client	M3: Measure the effectiveness of technical support provision	

## SYNOPTIC ASSESSMENT

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When learners are taking an assessment task, or series of tasks, for this unit they will have opportunities to draw on relevant, appropriate knowledge, understanding and skills that they will have developed through other units. We've identified those opportunities in the grading criteria (shown with an asterisk). Learners should be encouraged to consider for themselves which skills/knowledge/understanding are most relevant to apply where we have placed an asterisk.

## ASSESSMENT GUIDANCE

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Learners will be introduced in this unit to the work role of an IT support technician. Learners will need to gain experience and deal with common and complex problems.

Learners will need to be given scenarios in which they demonstrate that they can support their colleagues. This could be taught through role play with a wide variety of scenarios. An IT support technician will need to assist a wide range of clients with a wide range of knowledge. Hence the support provided will vary depending on the knowledge of the clients. Providing learners with experience working alongside technicians could enable them to encounter a range of issues, and to see how these issues are subsequently dealt with.

### LO1 Understand the role of technical support

**P1:** Learners are required to describe the activities within the IT support roles of an organisation. Learners will need to look at how support is delivered to clients for each of the listed IT support roles in order to cover all the items listed in the IT support process. Evidence could be presented as a report, a presentation with detailed speaker notes or a career's guidance booklet.

**M1:** Learners are required to analyse communication techniques that can be used for differing client types. Learners should consider the listed client types in the teaching content. Their analysis should include the characteristics of the different client types and a reasoned comment as to why the communication technique used is appropriate. Evidence could be presented as a report, presentation with detailed speaker notes or a guide for new IT support technicians.

### LO2 Be able to diagnose faults and solutions for computer systems

Learners will need to be provided with a variety of computer systems that have different faults for diagnosis. These faults should be a mixture of complex and simple.

**P2:** Learners are required to perform diagnostic activities on an identified client's computer system resulting in them establishing the faults on the system. They are then required to identify and implement appropriate solutions for the resolution of the faults. The evidence could be presented in the form of a report with annotated photographs, a video of the learner carrying out the activities, work log supported by printouts or screenshots of diagnostic activities and confirmation of resolution of faults.

**M2:** Learners are required to investigate complex faults for an identified client's computer system. Once they have investigated the faults, they are required to identify and implement appropriate solutions to resolve these faults. The faults should be complex with respect to challenging the learners' knowledge and understanding of fault diagnosis. Evidence could be in the form of a report with annotated photographs supported by printouts and/or

screen prints. Evidence could also be in the form of a presentation with detailed speaker notes and supporting evidence and/or work log with annotated photographs, printouts and/or screen prints.

**P3:** The evidence for this assessment criterion could be linked to the evidence for P2. Learners are required to document the simple faults and solutions that they have identified for a client's computer system. The evidence could be in the form of a report with annotated photographs and/or supported by printouts from tests or screen prints. Evidence could also be in the form of a presentation with detailed speaker notes or work log supported by annotated photographs, printouts and/or screenshots.

**D1:** Learners are required to show that they have interpreted the results from testing an identified client's computer system post the resolution of any faults. This can be an extension of M2 but learners will need to show they have tested the computer system and interpreted the results following the resolution of different simple and complex faults. The evidence could be in the form of detailed report or, alternatively, a presentation which includes detailed speaker notes. These would be supported by annotated photographs, printouts from testing or screen prints.

### **LO3 Be able to provide advice and guidance to specific customers**

**P4:** Learners are required to show that they can communicate technical advice and guidance to a non-technical client. It is important that learners can demonstrate that they have selected a suitable form of communication as well as using appropriate language for the non-technical audience. The evidence could be in the form of an email providing technical advice and guidance to a customer, an information guide on how to resolve simple computer issues or a presentation with detailed speaker notes.

**P5:** Learners are required to show that they can present technical advice and guidance to a technical client. It is important that the learners can demonstrate that they have selected a suitable form of communication as well as using appropriate language for the technical audience. The evidence could be in the form of a technical guide, report, work logs, fault and resolution guide or a presentation with detailed speaker notes.

**M3:** Learners are required to measure the effectiveness of the technical support provided to different clients for different faults. The learner could be given a set of detailed reports from which these measurements could be made. The evidence could be in the form of a detailed report or a presentation with detailed speaker notes.

**D2:** Learners are required to analyse trends from troubleshooting technical issues and make recommendations to reduce repeat occurrences. This could be a report to management informing them of the trends analysed and the changes that need to be made to current working practices. The evidence could be in the form of a detailed report or presentation with detailed speaker notes supported.

Some providers for the industry qualifications offer quizzes, tests and assessments. Reference to these websites may support knowledge and learning.

[www.comptia.org](http://www.comptia.org)  
[www.cisco.com/UK](http://www.cisco.com/UK)

**Feedback to learners:** you can discuss work-in-progress towards summative assessment with learners to make sure it's being done in a planned and timely manner. It also provides an opportunity for you to check the authenticity of the work. You must intervene if you feel there's a health and safety risk.

Learners should use their own words when producing evidence of their knowledge and understanding. When learners use their own words it reduces the possibility of learners' work being identified as plagiarised. If a learner does use someone else's words and ideas in their work, they must acknowledge it, and this is done through referencing. Just quoting and referencing someone else's work will not show that the learner knows or understands it. It has to be clear in the work how the learner is using the material they have referenced **to inform their** thoughts, ideas or conclusions.

For more information about internal assessment, including feedback, authentication and plagiarism, see the centre handbook. Information about how to reference is in the OCR *Guide to Referencing* available on our website: <http://www.ocr.org.uk/i-want-to/skills-guides/>.

## EMPLOYABILITY SKILLS

Employability skills	Learning outcome
Communication	P1, M1, P4, D2
Problem solving/decision making	P2, P3, M2,D2
Time management	P3
Critical thinking	M3, D1

## MEANINGFUL EMPLOYER INVOLVEMENT - a requirement for the Diploma (Tech Level) qualifications

The 'Diploma' qualifications have been designed to be recognised as Tech Levels in performance tables in England. It is a requirement of these qualifications for centres to secure for every learner employer involvement through delivery and/or assessment of these qualifications.

The minimum amount of employer involvement must relate to at least one or more of the elements of the mandatory units.

Eligible activities and suggestions/ideas that may help you in securing meaningful employer involvement for this unit are given in the table below.

Please refer to the *Qualification Handbook* for further information including a list of activities that are not considered to meet this requirement.

Meaningful employer involvement	Suggestion/ideas for centres when delivering this unit
1. Learners undertake structured work-experience or work-placements that develop skills and knowledge relevant to the qualification.	Learners could undertake work experience to support the school's or college's IT technicians or in a local business IT support team. The work experience should be structured so the learner has the opportunity to see how businesses deal with technical support to support the learning outcomes in this unit.
2. Learners undertake project(s), exercises(s) and/or assessments/examination(s) set with input from industry practitioner(s).	This could be setting up call loggers and students working with school or college technicians look at how the communication flows.
3. Learners take one or more units delivered or co-delivered by an industry practitioner(s). This could take the form of master classes or guest lectures.	You could arrange for local IT support technicians to deliver a session to your learners to support the learning in this unit for example: <ul style="list-style-type: none"> <li>Explaining the role of IT support within their business to cover learning in LO1</li> <li>How they provide advice and guidance to their customers (LO3)</li> </ul>

To find out more

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or call our Customer Contact Centre on **02476 851509**

Alternatively, you can email us on **[vocational.qualifications@ocr.org.uk](mailto:vocational.qualifications@ocr.org.uk)**



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