Unit 123: CompTIA Server+

Unit code: R/501/3600

QCF Level 3: BTEC in IT

Credit value: 9

Guided learning hours: 80

Aim and purpose

A typical Server+ candidate should have at least 18 to 24 months hands-on experience installing, configuring, diagnosing and troubleshooting. In addition, candidates are encouraged to have at least one other IT certification such as CompTIA A+, or Network+ certifications. However these are not required.

Unit introduction

This unit is a comprehensive introduction to the principles of server support and enable a learner to explore the hardware technology used, disaster recovery techniques, fault resolution as well as the differing operating systems available.

The unit hardware support techniques, being able to maintain a system and how a learner may be employed as a server support specialised. Working with different operating systems, apart from systems hardware, the learner will also explore storage, security, disaster recovery and fault resolution (through troubleshooting).

CompTIA link with a range of different partners to offer a range of learning resources, where learners and centres can access these through CompTIAs Academic learning programme. To attain a pass, learners must take the CompTIA Server+ certification exam.

This unit will prepare learners to sit the CompTIA Server+ certification exam, this unit is also assessed with BTEC merit and distinction criteria.

To view general information about CompTIA objectives please visit: www.comptia.org, where the detailed scope and sequence for all certifications are available for anyone to download.

Learning outcomes

On completion of this unit a learner should:

1   Know general server hardware

2   Install a server

3   Configure a server

4   Upgrade a server

5   Proactively maintain a server

6   Protect the server environment

7   Troubleshoot and Identify Server Problems

8   Know the disaster recovery plan.

Unit content in relation to the Merit and Distinction Criteria

Hardware: eg motherboard, processor, memory, RAID, drive speed, bus types, fault tolerance

Operating system: eg Microsoft Windows Server Platform, Linux (any variant), Unix, virtualisation concepts, virtualisation practice, directory services,

Disaster recovery: eg backup methodology, data retention, data destruction, system replication

Storage: eg RAID, choice of redundant systems, capacity, access speed, location, mirroring

Networking: eg addressing, proxy, domain name service, active directory, default gate way, wireless, Bluetooth, cabled connection, fibre connection, directory services

Security: eg firewall, antivirus, spyware, updates, service packs, user access levels, supervisor password, location of server, access to server

Scenario: one server in a network of multiple servers using a 'directory services' structure

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
Pass CompTIA Server+ Certification Exam The centre will evidence this with a copy of the learners results, the learner MUST PASS at the minimum set by CompTIA.	M1 recommend server hardware and operating system based on a given scenario [IE, CT]	D1 evaluate the recommended hardware and operating system solution [IE, CT, SM]
	M2 implement and manage networking, security and storage for a server system [IE, SM]	D2 evaluate the effectiveness of the planned disaster recovery. [SM, IE]
	M3 plan a disaster recovery for the scenario [TW, EP, SM]	
	M4 implement disaster recovery. [TW, EP, SM]	

PLTS: This summary references where applicable in the pass criteria, in the square brackets, the elements of the personal, learning and thinking skills. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

The CompTIA Server+ course and associated certifications are delivered as part of an academic programme available to centres in UK and Eire. Centres may only access this certification's associated discounts from within this programme are advised to seek guidance on what current courses comprise the study/delivery required for learners to access the certification.

More information on the programme, membership and delivery requirements can be found at www.comptia.org.

If learners are taking CompTIA study as part of their BTEC programme, it is recommended that both programmes of study are integrated. Practical and theory tasks for the CompTIA programme can be integrated into the study required for the merit and distinction criteria within this unit.

The outcomes of this unit are synergic with the other CompTIA units as well as those offered by Cisco, Microsoft and VMWare, where there are considerable differences. This unit may be delivered in parallel or in sequence. Units in systems support and networking, that are both BTEC specific as well as from other vendors may be taught in conjunction with the CompTIA units to enhance the learners experience.

Outline learning plan

CompTIA as part of the their academy programme, provide learning plans and study guidance for their courses. CompTIA recommend an estimated 75 hours of delivery to attain the pass criteria, in line with QCF credit and notional learning hours. The notional hours for managed learning is set at 40 for learners to attempt the merit and distinction.

Assessment

To achieve a pass grade, learners must pass the CompTIA Server+ examination.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the merit and distinction criteria in the assessment and grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
M1, D1	System Recommendation	Learners are asked to recommend and evaluate a system proposal based on currently available technology, the assessment could be enhanced by encouraging learners to compare different types of systems available on the market (Windows vs Linux).	Presentation, poster, oral, report, video.
M2, M3, M4, D2	Support the system	Learners will support a system ensuring it is operational, secure capable of disaster recovery and providing a network service.	Presentation, poster, oral, report, video, practical observation.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

To be completed, links to 6.1 of the NOS and may be co-presented with all other CompTIA modules

Essential resources

As members of the CompTIA academic programme, centres may choose to access a range of teaching and assessment practice resources. The technological requirement for this unit does not demand any more than the 'average' centre is already providing for a computer systems session, old computers, spare components, replacement parts will enhance the learning experience. If a centre is restricted by the cost of licensing, many Linux distributions exist, that are easy to install in both desktop and server versions and now comparable in support and management terms to other popular operating systems.

Employer engagement and vocational contexts

CompTIA certification is internationally recognized by a diverse range of employers (from SME's to large corporations) as one of the principal certifications in systems support and maintenance.

Indicative reading for learners

For access to the CompTIA academic programme resources and more information on joining the programme, please visit www.comptia.org

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are …
Independent enquirers	The pass criteria is set by an examination, the PLTS of self management and reflective learning is supported by the learner, taking personal study and revision in advance of the Examination.
Creative thinkers	
Reflective learners	
Team workers	
Self-managers	
Effective participators	

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are …
Independent enquirers	investigating current hardware and operating system solutions as well as testing and troubleshooting a system
Creative thinkers	preparing a recommendation for a system as well as testing and troubleshooting a system
Reflective learners	evaluating their recommended system as well as testing and troubleshooting a system
Self-managers	implementing hardware solutions, networking solutions and security solutions.

Functional Skills – Level 2

Skill	When learners are …
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	Preparing the recommendation and managing the hardware solutions
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	Preparing the recommendation and managing the hardware solutions
Manage information storage to enable efficient retrieval	Preparing the recommendation and managing the hardware solutions
Follow and understand the need for safety and security practices	Working on the security solution as well as at all times on the hardware
Troubleshoot	Testing and troubleshooting the system
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	Gathering information for the recommendation
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	Gathering information for recommendation
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	Are applying subnet masks and IP addresses.