Systems Architecture 3

Unit	Systems Architecture 3
SSC Code	SA3
SQA Code	H3BG 04
SCQF Level	7
SCQF Credit Value	8
Guided Learning Hours	80
Unit summary	This unit provides the learner with a detailed understanding of the computer architecture for stand-alone and distributed or networked systems. The learner will further their understanding of the features and functions of a computer operating system and be able to configure it according to different requirements.

Learning Outcomes The learner will:	Assessment Criteria
1 Understand the representation of information within a computer and the way it is processed.	1.1 Explain how number systems and data representation are used to store and process information in a computer 1.2 Explain the characteristics of C.P.U. components and the operation of the Fetch Execute Cycle 1.3 Describe the operation of a peripheral device, controller hardware and physical connection using correct technical terminology and reference to relevant standards
2 Use and configure the operating environment of current computer systems.	2.1 Install and configure an operating system to meet requirements 2.2 Use and configure operating system functions to optimise performance 2.3 Explain how concurrent processes are managed in computer operating systems 2.4 Explain how operating system features can contribute to data and system security
3 Understand the principles of	3.1 Describe the features of different architectures of

distributed computer operations	distributed computer systems
	3.2 Describe the functions and operation of computer operating systems used in distributed computer systems
	3.3 Explain the operation of computer networking devices
	3.4 Explain the characteristics and operation of distributed applications
	3.5 Explain methods to implement data and system security in distributed computer systems
	3.6 Describe methods to improve performance of distributed computer systems
Additional information about the unit	
Guidance on approaches to assessment	Further guidance is set out in the CBQ Assessment principles developed by e-skills UK and agreed by the Joint Awarding Body Forum.
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards	This unit is based on the e-skills UK NOS for IT professionals (PROCOM) available from www.e-skills.com/nos
Location of the unit within the subject/sector classification system	IT Professional
Name of the organisation submitting the unit	e-skills UK