

UAN:	J/601/3250
Level:	3
Credit value:	10
GLH:	75
Endorsement by a sector or regulatory body:	This unit is endorsed by e-skills UK
Aim:	This unit is aimed at advanced Networking students who already possess the fundamentals of computer networks and desktop PC support and are now moving to study second and third line support roles where network operations and troubleshooting are now more fundamental to the job role. This qualification should be studied alongside a logical network design and server admin and server application infrastructure qualification. In addition a more fundamental network security qualification should also be studied.

Learning outcome
The learner will: Understand physical and logical topologies and systems
Assessment criteria
The learner can: - describe common physical network topologies - explain the difference between logical and physical network topologies - describe the network topologies and hardware and software components used to implement common data communication systems - identify common: cable types and properties connector types wiring standards wireless standards

Range
1.1 common physical network topologies Star, Ring, Bus, Mesh

1.3 network topologies and hardware and software components

Fast Ethernet, Token Ring, FDDI, NIC, UTP, MAC, CSMA/CD

1.4

cable types: Ethernet, coaxial, fibre

connector types: Rj45, BNC, Fibre

wiring standards: T565A / T565B

wireless standards: 802.11a/b/g/n

Learning outcome

The learner will:

2. Understand the Open System Interconnection (OSI) model

Assessment criteria

The learner can:

2.1 describe the OSI model and how its layers relate to each other

2.2 explain the function of each layer of the OSI model

2.3 describe the key features, protocols and standards of each OSI layer

Learning outcome

The learner will:

3. Understand the Internet Protocol Suite (TCP/IP)

Assessment criteria

The learner can:

3.1 describe the Internet Protocol Suite (TCP/IP) and the function of its **four layers**

3.2 describe the key features, protocols and standards of each TCP/IP layer

3.3 explain how TCP/IP relates to the OSI model

Range

3.1 four layers

Application, Transport, Network, Data Link