

Higher National Unit Specification

General information for centres

Unit title: IT Infrastructure: Service Support

Unit code: F0E0 34

Unit purpose: This Unit develops the candidate's knowledge and understanding of the concept of service support. The strategy adopted is a process driven approach to be of benefit to the IT operation within both large and small organisations. The approach modularises the functionality of service support and utilises the relationship between each of the components. This Unit will benefit individuals working in the field of IT support including operational personnel, management and supporting consultants.

On completion of the Unit the candidate should be able to:

- 1 Describe the role of the service desk within an IT infrastructure.
- 2 Understand the purpose of incident and problem handling.
- 3 Understand the purpose of change and release control.
- 4 Understand the function of configuration management.

Credit points and level: 2 HN Credits at SCQF level 7: (16 SCQF credit points at SCQF level 7*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Recommended prior knowledge and skills: Access to this Unit will be at the discretion of the centre, however, it would be beneficial to have some basic knowledge and/or experience of IT support.

Core Skills: There are no opportunities to develop Core Skills in this Unit.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

This Unit develops the students' knowledge and understanding of the role of the service support and its interrelationships with the activities of the IT organisation, its customers and the business. The coherent integration of people, process and technology extends the concept of an infrastructure approach to service support.

General information for centres (cont)

Assessment: The assessment from this Unit must combine Outcome 1, 2, 3 and 4 as a holistic assessment. This will consist of 40 questions which must be presented in a random order of equal weight.

The assessment must be undertaken in supervised conditions and is closed-book. A candidate should complete this assessment within a specified time. Candidates may not bring to the assessment event any notes, textbooks, handouts or other material. The questions presented must significantly change on **each** assessment occasion. Testing can be done in either a machine-based or paper-based format and must be invigilated. There must be no communication between candidates and communication with the invigilator must be restricted to matters relating to the administration of the test.

A candidate must answer at least 60% of the total questions correctly in order to obtain an overall pass. In addition, the candidate **must pass each separate** Outcome with a threshold of 60%.

If a candidate requires to be reassessed, a significant proportion of different questions must be used from all sections. The questions used in the reassessment must be significantly different from those used in the original test. The assessment conditions of the re-assessment must be the same as the original assessment instrument. Only the required Outcomes should be re-assessed.

This assessment may be produced using e-assessment. This may take the form of e-testing (for knowledge and understanding and/or e-portfolios (for practical abilities). There is no requirement to seek prior approval if you wish to use e-assessment for either of these purposes so long as the normal standards for validity and reliability are observed. Please see the following SQA publications for further information on e-assessment:

- 1 SQA Guidelines on Online Assessment for Further Education (March 2003).
- 2 Assessment & Quality Assurance in Open & Distance Learning (Feb. 2001).

If a centre is presenting this assessment on-line the following assessment methods, where appropriate, may be selected:

- ◆ Multiple-choice
- ◆ Drag and drop
- ◆ Multiple response
- ◆ Mix and match
- ◆ A combination of the above

It is expected that the questions will be of the multi-choice variety. Centres may consider the use of alternative question types, particularly if using Computer Assisted Assessment approaches. However, care should be taken that the questions are valid and at an appropriate level. The use of simple true/false question responses is unlikely to achieve this.

Higher National Unit specification: statement of standards

Unit title: IT Infrastructure: Service Support

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The sections of the Unit stating the Outcomes, knowledge and/or skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Describe the role of the service desk within an IT infrastructure

Knowledge and/or skills

- ◆ Purpose of the service desk
- ◆ Responsibilities of the service desk
- ◆ Features of the service desk
- ◆ Functions of the service desk
- ◆ Employee skill set
- ◆ Types of service desk
- ◆ Service desk relationships

Evidence Requirements

Candidates will need to demonstrate their knowledge and/or skills by evidencing the following:

- ◆ The purpose of the service desk: reasons, benefits and challenges of a service desk approach.
- ◆ The responsibilities of the service desk: user point of contact, evaluation, monitoring, reporting and communication.
- ◆ The features of the service desk: self-help, communications and interview scripts, technologies, databases including CMDB (Configuration Management database).
- ◆ The functions of the service desk: contact, logging, diagnostics and escalation.
- ◆ The employee skill set: interpersonal skills, ownership, customer focus, business and IT understanding.
- ◆ The types of service desk: local, remote and virtual.
- ◆ The service desk relationships: incident management and configuration management.

Evidence for all the knowledge and/or skills in this Outcome must be assessed with Outcomes 2, 3 and 4.

Assessment guidelines

There may be an opportunity for a candidate to be assessed on-line subject to meeting the prescribed assessment conditions.

Higher National Unit specification: statement of standards (cont)

Unit title: IT Infrastructure: Service Support

Outcome 2

Understand the purpose of incident and problem handling

Knowledge and/or skills

- ◆ Definition of an incident
- ◆ Operation of incident handling
- ◆ Distinguish between a problem and known error
- ◆ Operation of problem and error control
- ◆ Incident handling and problem control relationships and dependencies

Evidence Requirements

Candidates will need to demonstrate their knowledge and/or skills by evidencing the following:

- ◆ Definition of an incident.
- ◆ The operation and lifecycle of incident handling including detection, recording, classification, investigation, diagnosis, resolution and recovery.
- ◆ Distinguish between a problem and known error.
- ◆ The operation and lifecycle of problem and error control including identification, recording, assessment, resolution and closure.
- ◆ Incident handling and problem control relationships and dependencies: service desk, configuration management and change management.

Evidence for all the knowledge and/or skills in this Outcome must be assessed with Outcomes 1, 3 and 4.

Assessment guidelines

There may be an opportunity for a candidate to be assessed on-line subject to meeting the prescribed assessment conditions.

Outcome 3

Understand the purpose of change and release control

Knowledge and/or skills

- ◆ Scope of change control
- ◆ Operation of change control
- ◆ Scope and types of release control
- ◆ Operation of release control
- ◆ Change and release control relationships and dependencies

Higher National Unit specification: statement of standards (cont)

Unit title: IT Infrastructure: Service Support

Evidence Requirements

Candidates will need to demonstrate their knowledge and/or skills by evidencing the following:

- ◆ The scope of change control covering hardware, communications equipment, software, documentation and procedures.
- ◆ The operation and lifecycle of change control including raising, recording, assessing, implementing, monitoring, reporting and closing.
- ◆ The scope and types of release control covering hardware, communications equipment, software, licenses, documentation and procedures for full, delta and package release.
- ◆ The operation of release control including RFC (Request for change), release policy, planning, DSL (Definitive Software Library), DHS (Definitive Hardware Store), testing, training and deployment.
- ◆ Change and release control relationships and dependencies: configuration management and problem management.

Evidence for all the knowledge and/or skills in this Outcome must be assessed with Outcomes 1, 2 and 4.

Assessment guidelines

There may be an opportunity for a candidate to be assessed on-line subject to meeting the prescribed assessment conditions.

Outcome 4

Understand the function of configuration management

Knowledge and/or skills

- ◆ Importance and scope of configuration management
- ◆ Core elements of configuration management
- ◆ Structure of the configuration information
- ◆ Configuration management relationships and dependencies

Evidence Requirements

Candidates will need to demonstrate their skills and/or knowledge by evidencing the following:

- ◆ The importance and scope of configuration management including relationship with asset management.
- ◆ The core elements of configuration management: planning, identification, control, status accounting and verification.
- ◆ The structure of the configuration information including selection, identification of the configuration database structures and CIs (Configuration Items).
- ◆ The configuration management relationships and dependencies on all of the service support components and the support lifecycle.

Higher National Unit specification: statement of standards (cont)

Unit title: IT Infrastructure: Service Support

The assessment from this Outcome must be combined with Outcome 1, 2 and 3 as a holistic assessment. This will consist of 40 questions which will be presented in supervised conditions and is closed-book. These questions must be presented in a random order of equal weight.

The assessment must be undertaken in supervised conditions and is closed-book. A candidate should complete this assessment within a specified time. Candidates may not bring to the assessment event any notes, textbooks, handouts or other material. The questions presented must significantly change on **each** assessment occasion. Testing can be done in either a machine-based or paper-based format and must be invigilated. There must be no communication between candidates and communication with the invigilator must be restricted to matters relating to the administration of the test.

A candidate must answer at least 60% of the total questions correctly in order to obtain an overall pass. In addition, the candidate **must pass each separate** Outcome with a threshold of 60%.

If a candidate requires to be reassessed, a significant proportion of different questions must be used from all sections. The questions used in the reassessment must be significantly different from those used in the original test. The assessment conditions of the re-assessment must be the same as the original assessment instrument.

Assessment guidelines

There may be an opportunity for a candidate to be assessed on-line subject to meeting the prescribed assessment conditions.

Administrative Information

Unit code: F0E0 34

Unit title: IT Infrastructure: Service Support

Superclass category: AG

Original date of publication: August 2006

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Version	Description of change	Date

Source: SQA

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Higher National Unit specification: support notes

Unit title: IT Infrastructure: Service Support

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 80 hours.

Guidance on the content and context for this Unit

This Unit develops the candidate's knowledge and understanding of the concept of service support. The strategy adopted is a process driven approach to be of benefit to the IT operation within both large and small organisations. The approach modularises the functionality of service support and utilises the relationship between each of the components. This Unit will benefit individuals working in the field of IT support including operational personnel, management and supporting consultants.

Guidance on the delivery and assessment of this Unit

This Unit in conjunction with HN Unit F0DY 35 *IT Infrastructure: Service Delivery* forms the PDA certificate in IT Service Management. This certification has been designed to match the learning required to successfully achieve the ITIL (Information Technology Infrastructure Library) Foundation certificate. For further information visit the following website — <http://www.ogc.gov.uk>

It is recommended that these Units are taught using a holistic approach based on the main components of people, processes and technology working together. This approach can be best demonstrated by using a case study.

The Service Desk is the single point of contact between service providers and customers/users on a day-to-day basis which coordinates all activities and customer communications about incidents, problems, and inquiries related to production systems.

The candidate could look at the role and purpose and of the Service Desk covering the reasons, benefits and challenges of this approach. The Service Desk represents the concept of the Help Desk but describes the broader role of front line support. The assessor could introduce the responsibilities of the service desk such as user point of contact, evaluation, monitoring, reporting and communication. The features and functions of the service desk could include self-help, communications and interview scripts, technologies, databases including CMDB (Configuration Management database), involving contact, logging, diagnostics and escalation. The candidate could consider the skills and attributes required by service desk employees such as interpersonal skills, ownership, customer focus, the necessary business and IT understanding. The types of service desk could be local, remote or virtual.

The candidate could identify the relationships and dependencies between the service desk and the associated service support functions of incident management and configuration management.

Higher National Unit specification: support notes

Unit title: IT Infrastructure: Service Support

Incident management is the process of managing and controlling faults and disruptions in the use or implementation of IT services as reported by customers or IT partners. The candidate could know how to define an incident, supported at least two examples. The assessor will introduce and exemplify the operation and lifecycle of incident handling including detection, recording, classification, investigation, diagnosis, resolution and recovery, enabling the candidate to outline the processes and their relationships.

Problem management seeks to ensure stability in service solutions by identifying and removing errors in the IT infrastructure. The candidate could define and distinguish between a problem and known error, supported by an example of each. The assessor will introduce and exemplify the operation and lifecycle of problem and error control including identification, recording, assessment, resolution and closure, enabling the candidate to outline the processes and their relationships.

The candidate could identify the relationships and dependencies between incident handling, problem control and the associated service support functions of service desk, configuration management and change management.

The Change Management is responsible for managing changes to ensure that all parties affected by a given change are aware of and understand the impact of the impending change. The candidate could describe the scope of change control, which covers hardware, communications equipment, software, documentation and procedures. The assessor will introduce and exemplify the operation and lifecycle of change control including raising, recording, assessing, implementing, monitoring, reporting and closing, enabling the candidate to outline the processes and their relationships.

The Release Management facilitates the introduction of software and hardware releases into managed IT environments. The candidate could describe the scope and types of release control, which cover hardware, communications equipment, software, licenses, documentation, involving the procedures for full, delta and package release. The assessor will introduce and exemplify the operation of release control including RFC (Request for change), release policy, planning, DSL (Definitive Software Library), DHS (Definitive Hardware Store), testing, training and deployment, enabling the candidate to outline the processes and their relationships.

The candidate could identify the relationships and dependencies between change and release control and the associated service support functions of configuration management and problem management.

Configuration Management is responsible for identifying, recording, tracking, and reporting of key IT components or assets called configuration items. The candidate could understand the importance and scope of configuration management including relationship with asset management. The assessor will introduce the core elements of configuration management, which are planning, identification, control, status accounting and verification, underpinned by structured configuration management and CI (Configuration Item) information.

The candidate could identify the integral relationships and dependencies between configuration management and all the other service support functions.

The assessment from this Unit will combine Outcome 1, 2, 3 and 4 as a holistic assessment. This will consist of 40 questions will be a representative sample from each Outcome which must be presented in a random order of equal weight.

Higher National Unit specification: support notes

Unit title: IT Infrastructure: Service Support

ITIL Glossary of Abbreviations

BCM	Business Continuity Model
BSC	Balanced Score Card
CAB	Change Advisory Board
CDB	Capacity Management Database
CFIA	Component Failure Impact Analysis
CI	Configuration Items
CMDB	Configuration Management Database
CMM	Capability Maturity Model
CRAMM	Risk Analysis & Management Methodology
CSF	Critical Success Factors
DHS	Definitive Hardware Store
DSL	Definitive Software Library
EFQM	European Foundation for Quality Management
EXIN	Exameminstituut voor Informatica (Dutch Foundation)
FSC	Forward Schedule of Change
HRM	Human Resource Management
ISEB	Information Systems Examination Board
ISO	International Standards Organisation
IT	Information Technology
ITIL	Information Technology Infrastructure Library
ITSCM	IT Service Continuity Management
ITSMF	IT Service Management Forum
KEdb	Known Error database
KPI	Key Performance Indicators
OGC	Office of Government Commerce
OLA	Operational Level Agreements
PIR	Post Implementation Review
PSA	Projected Service Availability
RFC	Request for Change
RFW	Request For Work
SIP	Service Improvement Programme
SLA	Service Level Agreement
SLR	Service Level Requirements
SOR	Service Outage Analysis
SPOF	Single Points Of Failure
SQP	Service Quality Plan
TCO	Total Cost of Ownership
TOP	Technical Observation Post
UC	Underpinning Contracts

Higher National Unit specification: support notes (cont)

Unit title: IT Infrastructure: Service Support

Opportunities for developing Core Skills

There are no opportunities to develop the Core Skills in this Unit.

Open learning

This Unit could be delivered by distance learning. However, it would require planning by the centre to ensure the sufficiency and authenticity of candidate evidence. The assessment arrangements outlined above should be suitable for open learning provided regular contact can be maintained with the tutor.

For information on normal open learning arrangements, please refer to the SQA guide *Assessment and Quality Assurance of Open and Distance Learning* (SQA, 2000).

Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Alternative Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on SQA's website: www.sqa.org.uk.

General information for candidates

Unit title: IT Infrastructure: Service Support

You will be introduced to the Service Desk representing the concept of the Help Desk but describes the broader role of front line support. You should be introduced to the responsibilities of the service desk such as user point of contact, evaluation, monitoring, reporting and communication. The types of service desk which will be covered are local, remote or virtual.

You will identify the relationships and dependencies between the service desk and the associated service support functions of incident management and configuration management.

Problem management seeks to ensure stability in service solutions by identifying and removing errors in the IT infrastructure. You will be introduced and asked to exemplify the operation and lifecycle of problem and error control including identification, recording, assessment, resolution and closure, enabling the candidate to outline the processes and their relationships.

You will identify the relationships and dependencies between incident handling, problem control and the associated service support functions of service desk, configuration management and change management.

You could describe the scope of change control, which covers hardware, communications equipment, software, documentation and procedures. The Release Management facilitates the introduction of software and hardware releases into managed IT environments. Also being introduced and having to exemplify the operation of release control including RFC (Request for change), release policy, planning, DSL (Definitive Software Library), DHS (Definitive Hardware Store), testing, training and deployment, enabling you to outline the processes and their relationships.

You will identify the relationships and dependencies between change and release control and the associated service support functions of configuration management and problem management.

You will understand the importance and scope of configuration management including relationship with asset management. The assessor will introduce the core elements of configuration management, which are planning, identification, control, status accounting and verification, underpinned by structured configuration management and CI (Configuration Item) information.

Finally, you will identify the integral relationships and dependencies between configuration management and all the other service support functions.