



Qualification Specification for:

OCN NI Level 4 Certificate in Cloud Computing
➤ **Qualification No: 610/0603/8**

Qualification Regulation Information

OCN NI Level 4 Certificate in Cloud Computing

Qualification Number: 610/0603/8

Operational start date: 15 March 2022

Operational end date: 28 February 2027

Certification end date: 28 February 2031

Qualification operational start and end dates indicate the lifecycle of a regulated qualification. The operational end date is the last date by which learners can be registered on a qualification. The certification end date is the last date by which learners have to complete the qualification and claim their certificate.

All OCN NI regulated qualifications are published to the Register of Regulated Qualifications (<http://register.ofqual.gov.uk/>). This site shows the qualifications and awarding organisations regulated by CCEA Regulation and Ofqual.

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Foreword

This document explains OCN NI's requirements for the delivery and assessment of the following regulated qualification:

→ **OCN NI Level 4 Certificate in Cloud Computing**

This specification sets out:

- Qualification features
- Centre requirements for delivering and assessing the qualifications
- The structure and content of the qualifications
- Unit Details
- Assessment requirements for the qualification
- OCN NI's quality assurance arrangements for the qualifications
- Administration

OCN NI will notify centres in writing of any major changes to this specification. We will also publish changes on our website at www.ocni.org.uk

This specification is provided online, so the version available on our website is the most up to date publication. It is important to note that copies of the specification that have been downloaded and printed may be different from this authoritative online version.

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About Regulation

OCN NI

Open College Network Northern Ireland (OCN NI) is a regulated Awarding Organisation based in Northern Ireland. OCN NI is regulated by CCEA Regulation to develop and award professional and technical (vocational) qualifications from Entry Level up to and including Level 5 across all sector areas. In addition, OCN NI is regulated by Ofqual to award similar qualification types in England.

The Regulated Qualifications Framework: an overview

The Regulated Qualifications Framework (RQF) was introduced on 1st October 2015: the RQF provides a single framework for all regulated qualifications.

Qualification Level

The level indicates the difficulty and complexity of the knowledge and skills associated with any qualification. There are eight levels (Levels 1-8) supported by three 'entry' levels (Entry 1-3).

Qualification Size

Size refers to the estimated total amount of time it could typically take to study and be assessed for a qualification. Size is expressed in terms of Total Qualification Time (TQT), and the part of that time typically spent being taught or supervised, rather than studying alone, is known as Guided Learning Hours (GLH).

Qualification Features

Sector Subject Area

6.1 ICT for Practitioners

This qualification relates to the following National Occupational Standards:

[NOS - Information Technology](#)

Qualification Aim

The aim of the OCN NI Level 4 Certificate in Cloud Computing qualification is to enable the learner to understand the principles of and technologies used in cloud computing. The learner will also be able to evaluate cloud computing platforms and monitoring tools.

Qualification Objectives

The objectives of the OCN NI Level 4 Certificate in Cloud Computing are to enable the learner to understand cloud computing including security and technologies used. The learner will also be able to evaluate cloud computing platforms and monitoring tools.

Grading

Grading for this qualification is pass/fail.

Qualification Target Group

The OCN NI Level 4 Certificate in Cloud Computing is suitable for learners who work in or intend to work in roles as information technology professionals.

Progression Opportunities

The OCN NI Level 4 Certificate in Cloud Computing will enable learners to progress to higher level qualifications in the areas of information technology and cloud computing. This qualification may also assist learners to gain employment in occupations requiring the safe and secure use of cloud computing platforms.

Entry Requirements

Learners must be at least 18 years of age and have a level three qualification in information technology or related subjects or have relevant information technology experience equivalent to at least a level three qualification in information technology.

Qualification Support

A Qualification Support pack is available for OCN NI centres within the login area of the OCN NI website (<https://www.ocnni.org.uk/my-account/>), which includes additional support for teachers, eg planning and assessment templates, guides to best practice, etc.

Delivery Languages

This qualification is available in English only at this time. If you wish to offer the qualification in Welsh or Irish (Gaeilge) then please contact OCN NI who will review demand and provide as appropriate.

Centre Requirements for Delivering the Qualification

Centre Recognition and Qualification Approval

New and existing OCN NI recognised centres must apply for and be granted approval to deliver these qualifications prior to the commencement of delivery.

Centre Staffing

Centres are required to have the following roles in place as a minimum, although a member of staff may hold more than one role*:

- Centre contact
- Programme co-ordinator
- Assessor
- Internal Verifier

*Note: A person cannot be an internal verifier for any evidence they have assessed.

Tutors

Tutors delivering the qualification should be occupationally competent, qualified to at least one level higher than the qualification and have a minimum of one year's experience in cloud computing.

Assessors

The qualifications are assessed within the centre and are subject to OCN NI's quality assurance processes. Units are achieved through internally set, internally assessed, and internally verified evidence.

Assessors must:

- be occupationally competent and qualified to at least one level higher than the qualification
- have a minimum of one year's experience in cloud computing
- have direct or related relevant experience in assessment
- assess all assessment tasks and activities

Internal Verification

OCN NI qualifications must be scrutinised through the centre's internal quality assurance processes as part of the recognised centre agreement with OCN NI. The centre must appoint an experienced and trained internal verifier whose responsibility is to act as the internal quality monitor for the verification of the delivery and assessment of the qualifications.

The centre must agree a working model for internal verification with OCN NI prior to delivery of the qualification.

Internal Verifiers must:

- have at least one year's occupational experience in the areas they are internally verifying
- attend OCN NI's internal verifier training if not already completed

Internal verifiers are required to:

- support tutors and assessors
- sample assessments according to the centre's sampling strategy
- ensure tasks are appropriate to the level being assessed
- maintain up-to-date records supporting the verification of assessment and learner achievement

Structure and Content

OCN NI Level 4 Certificate in Cloud Computing

To achieve the OCN NI Level 4 Certificate in Cloud Computing learners must successfully complete the one unit – 13 credits.

Total Qualification Time (TQT) for this qualification: 130 hours
 Guided Learning Hours (GLH) for this qualification: 64 hours

Unit Reference Number	OCN NI Unit Code	Unit Title	Credit Value	GLH	Level
M/650/1650	CBF722	Principles of Cloud Computing	13	64	Four

Unit Details

Title	Principles of Cloud Computing
Level	Four
Credit Value	13
Guided Learning Hours (GLH)	64
OCN NI Unit Code	CBF722
Unit Reference No	M/650/1650
<i>Unit purpose and aim(s):</i> This unit will enable the learner to understand the principles of and technologies used in cloud computing. The learner will also be able to evaluate cloud computing platforms and monitoring tools.	
Learning Outcomes	Assessment Criteria
1. Understand cloud computing.	1.1. Explain using examples what is meant by the following <ol style="list-style-type: none"> cloud systems taxonomy of clouds 1.2. Explain using examples the challenges in applying cloud technologies and how they can be addressed. 1.3. Critically compare and contrast grid computing versus cloud computing. 1.4. Evaluate the benefits of cloud computing in terms of: <ol style="list-style-type: none"> availability scalability elasticity agility disaster recovery 1.5. Explain what is meant by cloud computing platforms and cloud monitoring tools.
2. Understand cloud computing security.	2.1. Explain general security and network security features as they apply to cloud computing for the following: <ol style="list-style-type: none"> policy compliance, security alerts, secure score, and resource hygiene functionality and usage of key encryption functionality and usage of security information and event manager (SIEM) platforms functionality and usage of dedicated hosting
3. Understand cloud computing technologies.	3.1. Explain data synchronisation, infrastructure design and virtual machines in relation to cloud computing. 3.2. Explain virtualisation stack components as they apply to cloud computing including: <ol style="list-style-type: none"> regions and region pairs availability zones resource groups management groups

	<p>3.3. Explain using examples what is meant by the following services and the software considerations for each in order to facilitate deployment:</p> <ul style="list-style-type: none"> a) infrastructure-as-a-service (IaaS) b) platform-as-a-service (PaaS) c) serverless computing d) software-as-a-service (SaaS) <p>3.4. Explain using examples what is meant by DevOps pipelines including:</p> <ul style="list-style-type: none"> a) automated infrastructure b) continuous integration c) continuous deployment d) continuous monitoring
4. Be able to evaluate cloud platforms and monitoring tools.	<p>4.1. Research and evaluate at least three current cloud providers against given criteria.</p> <p>4.2. Research and evaluate at least seven different current cloud computing monitoring tools against given criteria.</p>

Assessment Guidance

The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.

Assessment Method	Definition	Possible Content
Portfolio of evidence	<p>A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes</p> <p>OR</p> <p>A collection of documents containing work that shows the learner's progression through the course</p>	<p>Learner notes/written work</p> <p>Learner log/diary</p> <p>Peer notes</p> <p>Record of observation</p> <p>Record of discussion</p>
Practical demonstration/assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	<p>Record of observation</p> <p>Learner notes/written work</p> <p>Learner log</p>
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	<p>Record of observation</p> <p>Learner notes/written work</p> <p>Tutor notes/record</p> <p>Learner log/diary</p>
E-assessment	The use of information technology to assess learners' work	<p>Electronic portfolio</p> <p>E-tests</p>

Quality Assurance of Centre Performance

External Verification

All OCN NI recognised centres are subject to External Verification. External verification visits and monitoring activities will be conducted annually to confirm continued compliance with the conditions of recognition, review the centre's risk rating for the qualification and to assure OCN NI of the maintenance of the integrity of the qualification.

The External Verifier will review the delivery and assessment of this qualification. This will include the review of a sample of assessment evidence and evidence of the internal verification of assessment and assessment decisions. This will form the basis of the External Verification report and will inform OCN NI's annual assessment of centre compliance and risk. The External Verifier is appointed by OCN NI.

Standardisation

As a process, standardisation is designed to ensure consistency and promote good practice in understanding and the application of standards. Standardisation events:

- make qualified statements about the level of consistency in assessment across centres delivering a qualification
- make statements on the standard of evidence that is required to meet the assessment criteria for units in a qualification
- make recommendations on assessment practice
- produce advice and guidance for the assessment of units
- identify good practice in assessment and internal verification

Centres offering units of an OCN NI qualification must attend and contribute assessment materials and learner evidence for standardisation events if requested.

OCN NI will notify centres of the nature of sample evidence required for standardisation events (this will include assessment materials, learner evidence and relevant assessor and internal verifier documentation). OCN NI will make standardisation summary reports available and correspond directly with centres regarding event outcomes.

Administration

Registration

A centre must register learners within 20 working days of commencement of a qualification.

Certification

Certificates will be issued to centres within 20 working days of receipt of correctly completed results marksheets. It is the responsibility of the centre to ensure that certificates received from OCN NI are held securely and distributed to learners promptly and securely.

Charges

OCN NI publishes all up to date qualification fees in its Fees and Invoicing Policy document. Further information can be found on the centre login area of the OCN NI website.

Equality, Fairness and Inclusion

OCN NI has considered the requirements of equalities legislation in developing the specification for these qualifications. For further information and guidance relating to access to fair assessment and the OCN NI Reasonable Adjustments and Special Considerations policies, centres should refer to the OCN NI website.

Retention of Evidence

OCN NI has published guidance for centres on the retention of evidence. Details are provided in the OCN NI Centre Handbook and can be accessed via the OCN NI website.

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