

OCCUPATIONAL QUALIFICATION STANDARD

Junior IT Systems Specialist, EstQF Level 4

An occupational qualification standard is a document which describes the set of skills, knowledge and attitudes, i.e. competence requirements, needed to successfully accomplish duties. Occupational qualification standards are used for compiling curricula and awarding qualifications.

Occupational title	Level of Estonian Qualifications Framework (EstQF)
Junior IT Systems Specialist, EstQF Level 4	4

Possible partial professional qualifications and titles on occupational qualification certificate	
Title of partial professional qualification	Level of Estonian Qualifications Framework (EstQF)
Help Desk Technician, Level 4	4
IT Technician, Level 4	4
IT Administrative Technician, Level 4	4

Part A DESCRIPTION OF WORK

A.1 Description of work
<p>The Junior IT Systems Specialist works independently in an assigned stage of work following the rules of procedure, best practices and good customer service practice. They can, for example, work as a customer support specialist, IT support person, monitoring specialist, IT technician or system administrator.</p> <p>The main tasks of a Junior IT Systems Specialist are IT infrastructure development, system management, solution implementation, documentation production, user support, change support, solving standard IT problems, service delivery and information security support.</p> <p>It is necessary to be prepared to work in a team and deal with conflict situations.</p> <p>The ability to perform multiple tasks simultaneously is necessary in the work of a junior IT systems specialist. The field is developing rapidly; therefore, continuous self-improvement is essential.</p> <p>Junior IT Systems Specialist, Level 4 occupation contains partial occupational qualifications for User Support Technician, Level 4, IT Technician, Level 4 and IT Administrative Technician, Level 4.</p> <p>The European ICT Competence Framework (e-CF) is the basis for describing the Junior IT Systems Specialist occupation.</p>
A.2 Tasks
<p>A.2.1 IT infrastructure development (e-CF competences A.4, A.6 & B.1)</p> <p>A.2.2 System management and solution deployment (e-CF competences B.2 & B.4)</p> <p>A.2.3 Testing (e-CF competence B.3)</p> <p>A.2.4 Documentation production (e-CF competence B.5)</p> <p>A.2.5 User support (e-CF competence C.1)</p> <p>A.2.6 Change support (e-CF competence C.2)</p> <p>A.2.7 Service delivery (e-CF competences C.3 & E.6)</p> <p>A.2.8 Problem management (e-CF competence C.4)</p> <p>A.2.9 Guidance and personnel development (e-CF competences D.3 & D.9)</p> <p>A.2.10 Relations with suppliers and clients (e-CF competences D.4, D.5, D.8 & E.4)</p> <p>A.2.11 Project and risk management (e-CF competences E.2 & E.3)</p> <p>A.2.12 Information security management (e-CF competence E.8)</p>

A.3 Professional preparation
The usual vocational preparation for Junior IT Systems Specialists is vocational secondary education or secondary education with professional work experience.
A.4 Most common occupational titles
Junior IT systems specialist, user support specialist, IT administrator, computer technician, IT technician.
A.5 Regulations governing profession
There are no regulations governing the occupation.

Part B COMPETENCY REQUIREMENTS

B.1 Structure of occupation
All competences must be certified when applying for the qualification of Junior IT Systems Specialist, EstQF Level 4.
Competences B.3.5 User support, B.3.6 Change support, B.3.4 Documentation production and B.3.12 Information security management must be certified when applying for the partial occupational qualification for User Support Technician, Level 4.
Competences B.3.3 Testing, B.3.7 Service delivery and B.3.12 Information security management must be certified when applying for the partial occupational qualification for IT Technician, Level 4.
Competences B.3.1 IT infrastructure development, B.3.2 System management and solution deployment, B.3.8 Problem management, B.3.9 Guidance and personnel development, B.3.10 Relations with suppliers and clients, B.3.11 Project and risk management and B.3.12 Information security management must be certified when applying for the partial occupational qualification for IT Administrative Technician, Level 4.

B.2 General skills of Junior IT Systems Specialist, EstQF Level 4
<ol style="list-style-type: none"> 1) Their actions are guided by professional ethics, legislation, the organisation's values and interests; they use the organisation's resources prudently and sparingly. 2) Informs the manager and other parties of any unethical or illegal activity. 3) Behaves in an environmentally responsible manner based on the principles of energy saving and waste management. 4) Treats colleagues with respect and if possible, intervenes in situations where someone is being disrespectful or discriminatory. 5) Assesses the feasibility of the tasks delegated to them and informs the involved parties of situations where the tasks exceed their competence. 6) Speaks Estonian and one foreign language at least at B1 level (see Annex 1).

B.3 Competences	
B.3.1 IT infrastructure development	EstQF Level 4
Performance indicators:	
<ol style="list-style-type: none"> 1. Provides input to identify key users and stakeholders to ensure and manage adequate information for decision-makers. 2. Participates in the planning of the solution and the development of functional conditions following best practices. 3. Selects the appropriate technical options for the design of the solution. 4. Assesses the resource needs of the production environment based on the resource use of the test environment. 5. Explains and describes the development of the solution to the client. 	
B.3.2 System management and solution deployment	EstQF Level 4
Performance indicators:	

1. Determines the compatibility of technical conditions of software and hardware, assesses the adequacy and suitability of hardware components (including computer sets, recording devices, computer network components and mobile devices) to solve the terms of reference.
2. Installs systems and system components based on predetermined instructions and requirements.
3. Provides input to plan and select appropriate software hosting environment (including the operating system and its capability, application servers and their capability).
4. Installs software and its components using automatic and mass installation tools.
5. Conducts routine system maintenance based on predetermined instructions and requirements.
6. Prepares system changes and if necessary, assesses the actual impact of the changes on the system, including on performance.
7. Identifies malfunctioning components and determines the root cause of the errors throughout the solution.
8. Monitors system performance and compliance with key performance indicators (KPI).
9. Ensures the business continuity of the system, including data back-up, monitors the operation of systems (components, services).

B.3.3 Testing	EstQF Level 4
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- Performance indicators:
1. Creates a test plan to assess the performance, capability, fault tolerance and vulnerability of the system based on established requirements and best practices; where possible, ensures the repeatability of testing based on the compiled test plan.
 2. Prepares the test according to the test plan using automation (including scripts, monitoring elements and scheduled activities) where possible.
 3. Uses the created test or testing tools and documents the results.
 4. Presents test results and provides input for improvements based on test results.

B.3.4 Documentation production	EstQF Level 4
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- Performance indicators:
1. Documents the work done and its results, records deviations and solutions, prepares reports in compliance with appropriate requirements for documentation using correct professional terminology.
 2. Prepares and updates the necessary instructions (instructions for routine operations and end-users, knowledge base articles).
 3. Uses appropriate tools and components for preparing documentation (including texts, video and figures).

B.3.5 User support	EstQF Level 4
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- Performance indicators:
1. Records user requests and monitors their status from the start to the end solution following the incident management process; if possible, solves easier cases independently.
 2. Communicates with the user (including providing instructions on how to apply known solutions) following good customer service practice.
 3. Identifies circumstances related to the incident and where possible, determines the impact and extent (including the affected services and systems, amount of users, criticalness of the error and existence of an alternative use) of the error or technical failure by analysing them.

B.3.6 Change support	EstQF Level 4
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- Performance indicators:
1. Follows the change management process of the organisation.
 2. Provides input to prepare a change request taking into account the impact of the change on existing systems and service level agreements.
 3. Follows the plan described in the change application when making changes; restores the initial condition if the change fails.
 4. Informs interested parties of the status and outcome of the change based on agreed procedures.

B.3.7 Service delivery	EstQF Level 4
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- Performance indicators:
1. Implements the principles of the service level agreement in their work based on their knowledge of the technologies used.
 2. Systematically monitors information system performance and reliability data using appropriate tools and compares them to the service level agreement.

3. Records deviations in the functioning of the information system from the service level agreement in accordance with instructions.
4. Generalises potential service level errors and proposes improvements to service reliability.
5. Assesses the technical state of system components and implements preventive measures to prevent possible service level non-compliance.
6. Follows the principles established in the organisation's quality policy when participating in the service providing process and if necessary, proposes updates to the principles.

B.3.8 Problem management	EstQF Level 4
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- Performance indicators:
1. Identifies the problem or a problem candidate (expected problem) based on repeated incidents.
 2. Registers the problem following the problem management process.
 3. Identifies the root cause of the problem in simpler cases, analysing incidents and/or using appropriate diagnostic devices where necessary; if necessary, forwards the problem to the next level specialist for solving.
 4. Finds a temporary solution to alleviate the problem if the root cause is not identified.
 5. Looks for possible solutions to eliminate the root cause based on best practices.
 6. Informs the related parties of the nature of the problem, temporary solution, time of the final solution and other relevant information.

B.3.9 Guidance and personnel development	EstQF Level 4
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- Performance indicators:
1. Guides end-users and colleagues on how to use the software and equipment adhering to best customer service practice using terminology understandable to the target audience.
 2. Assesses their competences and skills through self-analysis and provides input to define training needs.

B.3.10 Relations with suppliers and clients	EstQF Level 4
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- Performance indicators:
1. Assesses the conformity of outsourced services and products with the signed service level agreements, technical specification and legislation; if necessary, informs the related parties of non-conformities.
 2. Prepares the technical specifications for purchasing products and services based on the problem to be solved or the needs of the organisation.
 3. Follows best customer service practice when communicating with suppliers and clients.

B.3.11 Project and risk management	EstQF Level 4
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- Performance indicators:
1. Participates in the project group as a team member based on their role in the project team and the project plan.
 2. Assesses the current and target situation described in the project plan and the realism of the set objectives.
 3. Assesses the amount of time needed to carry out their work and if necessary, the realism of the set deadline.
 4. Informs the project leader of the circumstances that may affect the course of the project or the achievement of the objectives.
 5. Assesses the risks and their impacts related to their work and proposes ways to mitigate them.
 6. Participates in developing and updating risk control plans as a team member.

B.3.12 Information security management	EstQF Level 4
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- Performance indicators:
1. Follows the information security policy established in the organisation, the best practices of information security management and the general principles of cyber hygiene.
 2. Proposes updates to the organisation's information security policy based on relevant standards (e.g. ISO 27000 family).
 3. Recognises a simpler information security incident and behaves according to process instructions if one occurs.
 4. Assesses the compliance of the information assets with the established classification and informs the related parties of possible deviations.
 5. Implements appropriate technical solutions (including encryption and hashing) to ensure the confidentiality and integrity of information assets.
 6. Assesses the compatibility of the organisation's security policy with the ISKE baseline security system.

Part C
GENERAL INFORMATION AND ANNEXES

C.1 Information concerning compilation and certification of occupational qualification standard and reference to classification of occupations	
1. ID of occupational qualification standard in register of occupational qualifications	08-17102019-1.6/6k
2. Occupational qualification standard compiled by:	Marti Mänd, Baltic Computer Systems AS Silver Püvi, Arvuti Traumpunkt OÜ Marek Tamm, Playtech AS Martin Tann, Telia Eesti AS Heiki Tähis, Tallinna Polütehnikum Merje Vaide, BCS Koolitus AS Signe Vedler, Tartu Kutsehariduskeskus
3. Occupational qualification standard approved by:	Information Technology and Telecommunication
4. No. of decision of Sectoral Council	15
5. Date of decision of Sectoral Council	17.10.2019
6. Occupational qualification standard valid until	22.09.2024
7. Occupational qualification standard version no.	6
8. Reference to International Standard Classification of Occupations (ISCO 08)	3511 Information and Communications Technology Operations Technicians
9. Reference to European Qualifications Framework (EQF)	4
C.2 Occupational title in foreign language	
English:	Junior IT Systems Specialist, EstQF Level 4
C.3 Annexes	
Lisa 1 Language skills level descriptions	