

Examination Rules

Certified Professional for Software Architecture

Advanced Level

International Software Architecture Qualification Board e. V.



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The abbreviation "e. V." is part of the iSAQB's official name and stands for "eingetragener Verein" (registered association), which describes its status as a legal entity according to German law. For the purpose of simplicity, iSAQB e. V. shall hereafter be referred to as iSAQB without the use of said abbreviation.

Examination rules:

This document regulates the examination for the Certified Professional for Software Architecture – Advanced Level (CPSA-A).

Areas of competence and modular concept:

Flexible training pathways

Participants of the CPSA-A certification program can choose their individual training pathway from three areas of competence. As a prerequisite for the examination, examinees must demonstrate at least 70 credit points from three areas of competence, whereby each area of competence must be covered by at least 10 credit points. It is up to the participants to decide which combination of modules is required to achieve these points.

Modular concept

For each of these areas of competence there are different training modules whose curricula are defined by the iSAQB. For each module there is a specific number of credit points from the three competence areas. The exact assignment of credit points to the modules can be found on the [Advanced Level web page](#).

Three areas of competence

The iSAQB defines curricula for the CPSA-A in the following three areas of competence:

- **Technological competence:** Knowledge and implementation of technology solutions used in design tasks.
- **Methodical competence:** A systematic approach to architectural tasks, regardless of the technologies used.
- **Communicative competence:** Skills for productive cooperation with different stakeholders, communication, presentation, argumentation, and moderation.

Recognition of training or certificates not accredited by the iSAQB

The iSAQB recognizes various certificates and extracurricular training for admission to the CPSA-A exam. The [Advanced Level exam page](#) lists the recognized trainings and certificates with the credit points that can be credited in the FAQs.

Examination requirements

In order to be certified, every examinee must provide written evidence to the certification body which demonstrates that they meet the following requirements:

Requirement	Evidence to be submitted
Certified Professional for Software Architecture, Foundation Level	iSAQB certificate
A minimum of three years full-time professional experience in the IT industry, including involvement in the design and development of at least two different IT systems.	Overview, in tabular form, of activities as well as relevant IT systems. List of key features as bullet points (system & project scope, sector, technologies, products used, frameworks, operating systems, methods, patterns).
Participation in CPSA-A-accredited training (or equivalent recognized training or certificates) with a total score of at least 70 credit points gained in all three different areas of competence and at least 10 credit points in each competence area.	Certificates of attendance issued by the accredited training providers
Non-disclosure agreement concerning the examination task and reports (expert opinions) resp. corrections	Personal, written declaration of consent by the examinee not to pass on the examination task they received, any documents, models, papers, and notes created during the task processing as well as the reports (expert opinions) or corrections to other persons or organizations. This is a standard contract which stipulates a penalty for any breach of contract by the examinee. The document can be obtained from the certification body.

The iSAQB reserves the right to verify the fulfilment of these requirements in their entirety or to perform spot checks, in particular with regard to the type and duration of involvement in required IT systems – if applicable, references or persons to be addressed may have to be provided.

Examples:

- Josef E. has completed the modules Architecture Evaluation (20 CPs, methodical), Architecture Documentation (20 CPs, methodical), and Web Architecture (30 CPs, technological). The resulting total score of 70 CPs is not enough for participation in the CPSA-A certification, as in this case 10 CPs are missing in communicative competence.
- Hannah A. has attended non-iSAQB curriculum training and has been granted 10 CPs in technological skills by the iSAQB upon application (based on the list of acknowledged certificates). By completing the modules Architecture Evaluation (20 CPs, methodical), Architecture Documentation (20 CPs, methodical), and Soft Skills (30 CPs, communicative), Hannah A. has gained more than the 70 CPs required.

Examination cost

In addition to the expenses for individually selected training, examinees must pay an examination fee for taking part in the examination. Currently, the fee is 2,550.00 EUR plus VAT.

Parties involved in the examination process

The following individuals or parties are involved in the CPSA-A examination process:

- The examinee
- The certification body
- The examiners
- The working group Advanced Level within the iSAQB e. V.

Examination preparation

It is recommended that examinees first roughly plan their examination, attend necessary training courses, and then register for the examination.

Stock-check

To begin with, the examinees check whether they possess any recognizable certificates or have attended any CPSA-A-accredited or other qualifying training (proof of attendance required) and how many credit points required for CPSA-A certification they have achieved to date. An up-to-date list of certificates and training recognized for CPSA-A certification can be found on the [Advanced Level exam web page](#).

Search for CPSA-A-accredited training

In order to be awarded the credit points required for CPSA-A certification, examinees will have to select one or more accredited training courses. Information on curricular modules and their credit points can be found on the [iSAQB website](#). Information on accredited training providers can be found on the iSAQB website using the [training calendar](#). Detailed information about accredited trainings is available directly from the accredited training providers.

Attending accredited training courses

Examinees need to attend one or more accredited training courses in order to be awarded the credit points required for CPSA-A certification.

For training courses they wish to attend (one course or more), examinees have to register directly with the accredited training providers. Upon successful completion of training, the training provider will issue the examinee with a training certificate specifying how many credit points have been awarded. For successful completion of the training, the attendance time must be at least 75% of the total duration of the training.

Examination registration

Examinees must register for the examination with a recognized certification body in writing.

The examinee must submit the following information and certificates during registration:

- Contact details (name, address, telephone number, e-mail address)
- Evidence of projects
- CPSA-F certificate
- Certificates of attendance at accredited training (including CPs), certificates and training certification for recognized training where applicable
- Non-disclosure agreement
- The type of the system to be used in the examination task (e. g., information system, web system, or embedded system)
- Desired examination period

The certification body checks the completeness of the registration and requests any missing information.

Examiner appointment & examination period determination

The iSAQB will provide the certifying bodies with a list of examiners. The list will also indicate the system types each examiner can be used for. The certification body will then verify whether two appropriate examiners are available during the examination period desired by the examinee. If they are not, the certification body will agree on a different examination period with the examinee. The certification body will confirm the chosen examination period for the examinee. At a later stage, the examinee will be able to apply for a postponement of the examination period if this becomes necessary due to exceptional circumstances that would prevent them from completing the examination during the proposed period. The certification body will then agree on a new examination period with the examinee and the examiners. Examinees may postpone the examination only once.

Payment of fees

Once all requirements for examination registration have been met, the certification body will issue the examinee with an invoice for the examination fee. No further steps will be taken until the examinee has paid the examination fee to the certification body. Part of this payment will then be used by the certification body to pay a fee to the iSAQB, and another part for the examiner's remuneration.

Delivery of the examination task

The certification body will select an examination task for the examinee and send, depending on the preferences of the examinee,

- a personalized letter containing the task to the examinee by recorded delivery or
- an e-mail containing the task as a personalized, protected PDF document to the examinee.

On request the examinee receives two examination tasks of two different types of system to choose among them, after signing a non-disclosure agreement for each task. After receipt of the tasks the examinee has three days to decide which one they would like to be examined on and to inform the certification body about this decision.

Examination structure

The examination consists of two parts:

Part 1: Assignment

Part 2: Oral examination/Defense of the assignment

Part 1 of the examination: The assignment

The assignment requires the examinees to develop predefined topics and issues. They must work out this development independently.

Delivery of the assignment

Upon submission of positive certification requirements evidence, the certification body will send out an examination task.

Sample Task

In order to know what to expect, examinees can find a [sample task](#) here. This is a task that is currently no longer in use – but is and was subject to the same rules and criteria as the current tasks.

Development requirements

The certification exam is carried out by independently working on an architecture task. The task is to design and document a professionally and technically appropriate IT system based on an existing requirements description and to explain this to the examiners appointed by the certification body during an interview by phone or in person.

A written elaboration is expected (30 - 40 A4 pages of text and diagrams: font: 11 pt., margins: 2.5 cm, single line spacing). An executable implementation is not part of the assignment but can be submitted if required to validate concepts.

Completing the task

Usually, a minimum of 40 clock hours will be necessary to successfully complete a CPISA-A task. From the time the task is issued to them, examinees will typically have three months for completion.

Comprehension questions

If examinees have comprehension questions, they can send them via e-mail to the certification body. The certification body forwards the questions to the designated examiners who will answer them within 14 days. This does not contain answering (inevitable) open issues in the examination task. The examinee has to handle them as described in the examination task (usually by making a reasonable assumption including a motivation for the assumption).

Anonymization and confidentiality of the assignment content

All individuals and institutions involved in the examination are required to treat the assignment content confidentially and to refrain from passing it on to third parties. The examinee, however, has final responsibility for the content of the assignment and its transfer. From the moment they start preparing the assignment, they must make sure not to violate any non-disclosure agreements with their employer, line manager, or client. Examinees receive two separate reports (expert opinions) or one joint report on their exam from the examiners. These reports are to be treated confidentially as well by the examinees and are not to be passed on to uninvolved third parties.

Neither the iSAQB e. V. nor any individuals or institutions involved in the examination shall assume any liability for any damages or claims that may result from a non-disclosure agreement breach. Should the examinee be unsure whether they may be in breach of applicable non-disclosure agreements on the grounds

of the content of their assignment, they should contact their employer, line manager, or client prior to submission of their assignment.

The certification bodies pass on the assignments anonymously to the examiners.

Contact details

The examinees are obligated to include their contact details in the written development. This includes postal address, an e-mail address and, if possible, a telephone number they can be reached on at specific times to be indicated by them.

Completion time and submission deadline

The assignment must be completed and returned to the certification body within three months of receipt of the task. When issuing the assignment, the certification body will inform the examinee of the submission deadline; earlier submission is permitted. If the assignment is not returned by the deadline, this part of the examination shall be deemed failed. Apart from the maximum time allowed of three months, the total time allowed for completing all examinations of twelve months must also be considered. If these twelve months are exceeded, the entire examination shall be deemed failed – regardless of whether the three-month deadline had been adhered to or not.

Form of assignment submission

The assignment must be submitted to the certification body in electronic form as a PDF file. The PDF file may be created either by scanning printouts or by saving the development in PDF. In any case, the examinee shall be responsible for the PDF file's readability (by machine also). If the PDF files are partially or entirely illegible, this part of the examination shall be deemed failed. In addition to the assignment, the cover sheet containing a declaration on independent completion of the assignment must be signed manually, scanned, and submitted as a PDF file. Electronic signatures or inserting scanned signatures are not permissible.

Extension of the assignment completion time upon request in exceptional circumstances

On the grounds of exceptional circumstances and where this can be justified in individual cases, the completion time for the assignment may be extended once for up to three months.

- This request must be submitted in writing to the certification body within the predefined completion time and justified accordingly. The certification body shall be entitled to verify this information. If it is shown that the examinee has made false declarations, they will be excluded from the examination and any certificate that has already been issued will become void.
- In case that the maximum time allowed for the entire examination of twelve months (see section "Completion time and submission deadline") is exceeded because of such an extension, the maximum total time allowed shall also be extended to the time the extension expires.

Assessment of the assignment

The certification body will send the written development produced by the examinee to two separate iSAQB-appointed experts (examiners) for assessment.

The examiners will then mark the assignment within a maximum of four weeks. During this time, they will have the possibility of contacting the examinee via telephone or e-mail in order to ask further questions. If the two examiners disagree on the result of their assessment (one says "passed", the other says "failed"), the certification body will call in a third examiner.

The examinee shall be obliged to answer such questions by the examiner. If the examinee refuses to reply or fails to meet the deadline for a reply (when they are contacted in writing, a deadline for responding will be indicated), this part of the examination shall be deemed failed. No matter if they passed or failed, the examinees always receive the examiners' corrections, which are to be treated as confidential by the examinees.

Repeat assignment

If the examiners determine that the solution contains severe errors, there will be a one-off possibility to improve the assignment within two months from the date the examinee receives the information of the failed exam. In this case, the certification body will charge a fee for the repeat examination.

Appeal

The examinee may appeal within 4 weeks against the assessment and must then justify this in writing. The certification body will transfer the justification to the examiners review the appeal and justification and then issue a statement. This statement will confirm the original assessment or make a new assessment; either shall then be binding and can no longer be challenged.

Part 2 of the examination: Defense of the assignment

The second step involves a conference call of at least 30 minutes and no more than 60 minutes, during which both examiners will discuss the solution with the examinee. The examinee will be challenged by the examiners and will have to defend his design or design decisions. Both examiners will be able to decide on the success of the examination immediately. If the two examiners disagree on the result of their assessment (one says "passed", the other says "failed"), the certification body will call in a third examiner.

Requirements for passing the examination

The examination shall be deemed passed if both examination parts have been passed, i. e., each examination part must be passed individually and independently from the other part. Passing part 1 is a prerequisite for progressing to part 2. Both parts of the examination must be completed within twelve months of the first examination participation; failing that, the examination result shall be a fail. This twelve-month deadline shall apply in all conceivable cases, including the repetition of individual parts.

Notification of results and potential repeat examination

Just as certification documents, notification letters containing the results of examination parts shall be sent in writing by the certification body to the address specified by the examinee. If the examiners determine that the solution contains severe errors, there will be a one-off possibility to improve the assignment within two months from the date the examinee receives the information of the failed exam. In this case, the certification body will charge a fee of 750 euros plus VAT for the repeat examination. There are also examination reports on the written part of the possible re-examination, which, however, do not have to be completely new, but can be based on the original reports ("delta reports") or can also deal with the particularly criticized parts only.

If the repeat examination is also considered to be a fail by at least two examiners, the examinee will have to wait for at least one year until they can request a new examination.