

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, participants 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 candidate must provide written evidence to the certifying body demonstrating 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 relating to the examination task	Personal written declaration of consent by the candidate stating that they undertake to refrain from passing on to other persons or organizations the task they were provided with or any documents, models, data and notes created during accomplishment of the task. This is an agreement, which stipulates a penalty for any breach of the agreement by the candidate. The document can be obtained from the certifying 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 contact names 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, participants must pay an examination fee for taking part in the examination. Currently, the fee is 1,700.00 EUR plus VAT.

Parties involved in the examination process

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

- The examination participants (also referred to as “participants” in brief)
- The certifying body
- The examiners
- The working group Advanced Level within the iSAQB e. V.

Examination preparation

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

Stock-check

To begin with, the examination participant will have to 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 web page](#).

Search for CPSA-A-accredited training

In order to be awarded the credit points required for CPSA-A certification, an examination participant will have to select one or more licensed training courses. Information on accredited training providers can be found on the iSAQB website using the [training calendar](#). Detailed information on accredited training for participants will be provided directly by the accredited training providers.

Attending accredited training courses

Participants need to attend one or more accredited training courses in order to be awarded the credit points required for CPSA-A certification. Information on curricular modules and relevant credit points can be found on the [iSAQB website](#). Detailed information on accredited training for participants will be provided directly by the accredited training providers.

For training they wish to attend (one course or more), participants will have to register directly with the licensed training course provider. Upon successful completion of training, the training provider will issue the participant 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

Participants must register for the examination with a recognized certifying body in writing. The participant 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-based information system or embedded system)
- Desired examination period

The certifying 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 certifying body will then verify whether two appropriate examiners are available during the examination period desired by the participant. If they are not, the certifying body will agree on a different examination period with the participant. The certifying body will confirm the chosen examination period for the participant. At a later stage, the participant 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 certifying body will then agree on a new examination period with the candidate and the examiners. Participants may postpone the examination only once.

Payment of fees

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

Delivery of the examination task

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

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

On request the participant 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 participant has three days to decide which one he would like to be examined on and to inform the certifying 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 examination participants 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 certifying body will send out an examination task.

Development requirements

The certification exam is carried out by independently working on an architecture task. The participants select the system type of the task (for example: information system, web-based information system or embedded system). The certifying body randomly selects one of the existing tasks of this system type and sends it to the participant as a personalized registered letter or as a personalized, protected PDF, depending on the participant's preference. The task is to design and document a professionally and technically appropriate IT system based on an existing description of requirements and to explain this to the examiners appointed by the certifying body in a telephone or personal interview.

Questions

The assignment questions will relate to the curriculum content and must be answered in consideration of the project situation chosen by the examination participant.

Completing the task

A minimum of 40 hours will be necessary to complete the CPSSA-A task successfully. From the time the task is issued to them, participants will typically have three months for completion. A development in writing will be expected (30 - 40 A4 pages of text and graphs: font size: 11pt, margin: 2.5cm, single line spacing). A deployable implementation is not part of the task but may be submitted to support certain concepts.

Comprehension questions

If participants have comprehension questions, they can send them via e-mail to the certifying body. The certifying 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 participant 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 examination participant, 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.

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 examination participant 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 certifying bodies pass on the assignments anonymously to the examiners.

Contact details

The examination participant is required 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 certifying body within three months of receipt of the task. When issuing the assignment, the certifying body will inform the examination participant 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 certifying 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 examination participant shall be responsible for the PDF file's legibility. 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 certifying body within the predefined completion time and justified accordingly. The certifying body shall be entitled to verify this information. If it is shown that the examination participant 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 certifying body will send the written development produced by the examination participant 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 examination participant 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 certifying body will call in a third examiner.

The examination participant shall be obliged to answer such questions by the examiner. If the examination participant 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. The participant always receives the marked assignments of the examiners, no matter if he passed or failed.

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 certifying body will charge a fee for the repeat examination.

Appeal

The examination participant may appeal within 4 weeks against the assessment and must then justify this in writing. The certifying body will transfer the justification to the examiner who has marked the assignment for them to 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 candidate. The candidate 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 certifying 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 certifying body to the address specified by the examination participant. 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 certifying body will charge a fee for the repeat examination. If the repeat examination is also considered to be a fail by at least two examiners, the candidate will have to wait for at least one year until they can request a new examination.