PECB BEYOND RECOGNITION

# Candidate Handbook

## LEAD CLOUD SECURITY MANAGER

PECB

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# SECTION I: INTRODUCTION

## About PECB

PECB is a certification body which provides education[1] and certification in accordance with ISO/IEC 17024 for individuals on a wide range of disciplines.

We help professionals show commitment and competence by providing them with valuable evaluation and certification services against internationally recognized standards. Our mission is to provide services that inspire trust and continual improvement, demonstrate recognition, and benefit the society as a whole.

**The key objectives of PECB are:**

1. Establishing the minimum requirements necessary to certify professionals
2. Reviewing and verifying the qualifications of applicant to ensure they are eligible to apply for certification
3. Developing and maintaining reliable certification evaluations
4. Granting certifications to qualified candidates, maintaining records, and publishing a directory of the holders of a valid certification
5. Establishing requirements for the periodic renewal of certification and ensuring compliance with those requirements
6. Ensuring that candidates meet ethical standards in their professional practice
7. Representing its members, where appropriate, in matters of common interest
8. Promoting the benefits of certification to organizations, employers, public officials, practitioners in related fields, and the public

[1] Education refers to training courses developed by PECB, and offered globally through our network of resellers.

## The Value of PECB Certification

**Why Choose PECB as Your Certification Body?**

### Global Recognition
Our certifications are internationally recognized and accredited by the International Accreditation Service (IAS); signatory of IAF Multilateral Recognition Arrangement (MLA) which ensures mutual recognition of accredited certification between signatories to the MLA and acceptance of accredited certification in many markets. Therefore, professionals who pursue a PECB certification credential will benefit from PECB's recognition in domestic and international markets.

### Competent Personnel
The core team of PECB consists of competent individuals who have relevant sector-specific experience. All of our employees hold professional credentials and are constantly trained to provide more than satisfactory services to our clients.

### Compliance with Standards
Our certifications are a demonstration of compliance with ISO/IEC 17024. They ensure that the standard requirements have been fulfilled and validated with the adequate consistency, professionalism, and impartiality.

### Customer Service
We are a customer-centered company and treat all our customers with value, importance, professionalism, and honesty. PECB has a team of experts dedicated to support customer requests, problems, concerns, needs, and opinions. We do our best to maintain a 24-hours maximum response time without compromising the quality of the service.

## PECB Code of Ethics

**PECB professionals will:**

1. Conduct themselves professionally, with honesty, accuracy, fairness, responsibility, and independence
2. Act at all times solely in the best interest of their employer, their clients, the public, and the profession, by adhering to the professional standards and applicable techniques while offering professional services
3. Maintain competency in their respective fields and strive to constantly improve their professional capabilities
4. Offer only professional services for which they are qualified to perform, and adequately inform clients about the nature of the proposed services, including any relevant concerns or risks
5. Inform each employer or client of any business interests or affiliations that might influence their judgment or impair their fairness
6. Treat in a confidential and private manner the information acquired during professional and business dealings of any present or former employer or client
7. Comply with all laws and regulations of the jurisdictions where professional activities are conducted
8. Respect the intellectual property and contributions of others
9. Not, intentionally or otherwise, communicate false or falsified information that may compromise the integrity of the evaluation process of a candidate for a professional designation
10. Not act in any manner that could compromise the reputation of PECB or its certification programs
11. Fully cooperate on the inquiry following a claimed infringement of this Code of Ethics

The full version of the PECB Code of Ethics can be downloaded here.

## Introduction to Lead Cloud Security Manager

As the use of cloud computing is constantly growing, one of the most required skills in the market is to be able to implement security controls in a cloud computing environment. The Lead Cloud Security Manager training course enables participants to develop the necessary knowledge to plan, implement, manage, monitor, and maintain a cloud security program based on ISO/IEC 27017 and ISO/IEC 27018 guidelines.

The "Lead Cloud Security Manager" credential is a professional certification for individuals aiming to demonstrate the competence to implement and manage the cloud security program.

Considering that the cloud security manager role is an exciting opportunity for IT professionals, an internationally recognized certification can help you exploit your career potential and reach your professional objectives.

It is important to understand that PECB certifications are not a license or simply a membership. They represent peer recognition that an individual has demonstrated proficiency in, and comprehension of, a set of competences. PECB certifications are awarded to candidates that can demonstrate experience and have passed a standardized exam in the certification area.

This document specifies the PECB Lead Cloud Security Manager certification scheme in compliance with ISO/IEC 17024:2012. This candidate handbook also contains information about the process by which candidates may earn and maintain their credentials. It is important that you read all the information included in this candidate handbook before completing and submitting your application. If you have questions after reading it, please contact the PECB international office at certification@pecb.com.

# SECTION II: PECB CERTIFICATION PROCESS AND EXAMINATION PREPARATION, RULES, AND POLICIES

## Decide Which Certification Is Right for You

All PECB certifications have specific education and professional experience requirements. To determine the right credential for you, verify the eligibility criteria for various certifications and your professional needs.

## Prepare and Schedule the Exam

All candidates are responsible for their own study and preparation for certification exams. No specific set of training courses or curriculum of study is required as part of the certification process. Nevertheless, attending a training course can significantly increase candidates' chances of successfully passing a PECB exam.

To schedule an exam, candidates have two options:

1. Contact one of our resellers who provide training courses and exam sessions. To find a training course provider in a particular region, candidates should go to Active Resellers. The PECB training course schedule is also available on Training Events.
2. Take a PECB exam remotely from their home or any location they desire through the PECB Exam application, which can be accessed here: Exam Events.

To learn more about exams, competency domains, and knowledge statements, please refer to *Section III* of this document.

### Application Fees for Examination and Certification

PECB offers direct exams, where a candidate can sit for the exam without attending the training course. The applicable prices are as follows:

- Lead Exam: $1000
- Manager Exam: $700
- Foundation and Transition Exam: $500

The application fee for certification is $500.

For all candidates that have followed the training course and taken the exam with one of PECB's resellers, the application fee includes the costs associated with examination, application for certification, and the first year of Annual Maintenance Fee (AMF) only.

## Competency Domains

The objective of the **"PECB Certified Lead Cloud Security Manager"** exam is to ensure that the candidate has acquired the necessary expertise to support an organization in implementing and managing a cloud security program.

The Lead Cloud Security Manager certification is intended for:

- Cloud security and information security professionals involved in the cloud security program management
- Managers or consultants seeking to master cloud security best practices
- Individuals responsible for implementing and maintaining a cloud security program

- Technical experts seeking to enhance their cloud security knowledge
- Cloud security expert advisors

The exam covers the following competency domains:

- **Domain 1:** Fundamental principles and concepts of cloud computing
- **Domain 2:** Information security policy for cloud computing and documented information management
- **Domain 3:** Cloud computing security risk management
- **Domain 4:** Cloud-specific controls based on ISO/IEC 27017 and ISO/IEC 27018 and best practices
- **Domain 5:** Cloud security awareness, training, roles, and responsibilities
- **Domain 6:** Cloud security incident management
- **Domain 7:** Cloud security testing, monitoring, and continual improvement

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## Domain 1: Fundamental principles and concepts of cloud computing

**Main objective:** Ensure that the candidate understands and is able to interpret the main principles and concepts related to cloud computing

### Competencies

1. Ability to understand and explain the main concepts and principles of cloud computing
2. Ability to understand and explain the differences of cloud service models
3. Ability to understand and interpret the cloud deployment models
4. Ability to explain the difference and relationship between private and public cloud computing
5. Ability to explain the difference and relationship between the cloud service provider and cloud service customer
6. Ability to understand the level of integration of the cloud service customer and cloud service provider in different cloud service models
7. Ability to understand the concepts of information confidentiality, integrity, and availability in cloud environments
8. Ability to understand the concepts of cloud computing vulnerabilities, threats, risks, and security controls
9. Ability to understand cloud computing in the specific context of an organization
10. Ability to understand and interpret organizational cloud adjustments

### Knowledge statements

1. Knowledge of ISO/IEC 27000 family of standards and other industry standards applicable to cloud computing
2. Knowledge of the main concepts and terminology of ISO/IEC 27017 and ISO/IEC 27018
3. Knowledge of the fundamental principles and concepts used in cloud computing
4. Knowledge of cloud computing characteristics and advantages
5. Knowledge of the cloud computing reference model and main actors involved
6. Knowledge of information security concepts related to cloud computing
7. Knowledge of main vulnerabilities, threats, and risks related to cloud computing
8. Knowledge of the type and function of cloud security controls
9. Knowledge of cloud service models and cloud deployment models
10. Knowledge of cloud computing benefits and limitations

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## Domain 2: Information security policy for cloud computing and documented information management

**Main objective:** Ensure that the candidate understands and is able to identify the requirements for establishing an information security policy for cloud computing and managing the documented information in the cloud

| Competencies | Knowledge statements |
|---|---|
| 1. Ability to understand the general process of drafting the information security policy for cloud computing<br>2. Ability to understand and interpret best practices used in developing the information security policy for cloud service customer and cloud service providers<br>3. Ability to develop and establish an information security policy for cloud computing<br>4. Ability to understand the documented information life cycle in cloud computing<br>5. Ability to understand the main components of the documented information management in the cloud<br>6. Ability to understand and interpret how documented information in the cloud is managed and controlled<br>7. Ability to identify and consider the internal and external context of an organization | 1. Knowledge of the information security policy types<br>2. Knowledge of the information security policy structure for cloud computing<br>3. Knowledge of the cloud computing impact in managing the documented information of an organization<br>4. Knowledge of different documented information management solutions in the cloud<br>5. Knowledge of cloud documented information management issues<br>6. Knowledge of what typically constitutes an organization's internal and external context<br>7. Knowledge of the best practices and techniques used to draft and establish information security policies for cloud computing<br>8. Knowledge of the best practices on documented information life cycle management |

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## Domain 3: Cloud computing security risk management

**Main objective:** Ensure that the candidate is able to understand the cloud computing security risk management process and conduct a risk assessment

### Competencies

1. Ability to understand and perform different steps of the cloud computing security risk management process
2. Ability to define the risk assessment scope based on cloud-specific information security requirements of the organization
3. Ability to explain the difference and relationship between risk assessment and privacy impact assessment
4. Ability to collect, analyze, and interpret the information required to conduct a cloud computing security risk assessment
5. Ability to perform the different activities of the risk assessment process for cloud computing security
6. Ability to identify cloud computing security risks and analyze their impacts
7. Ability to utilize different threat models to conduct risk management process steps
8. Ability to analyze cloud computing security risks using different risk analysis methods
9. Ability to understand risk treatment options
10. Ability to draft and review a risk treatment plan

### Knowledge statements

1. Knowledge of a general cloud computing security risk management process applicable to both cloud service providers and customers
2. Knowledge of the different approaches and methodologies used to perform a cloud computing security risk assessment
3. Knowledge of international standards and other best practices used for cloud computing security risk management
4. Knowledge of risk treatment options and the risk treatment plan
5. Knowledge of threat models used in cloud computing risk management
6. Knowledge of cloud-specific vulnerabilities and threats
7. Knowledge of risk assessment and privacy impact assessment steps

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## Domain 4: Cloud-specific controls based on ISO/IEC 27017 and ISO/IEC 27018 and best practices

**Main objective:** Ensure that the candidate is able to implement the cloud-specific controls of ISO/IEC 27017 and ISO/IEC 27018

### Competencies

1. Ability to understand and define the organization's security architecture
2. Ability to plan the implementation of cloud-specific controls
3. Ability to select and design cloud-specific controls
4. Ability to understand and implement cloud-specific controls based on best practices in the industry
5. Ability to utilize the ISO/IEC 27017 and ISO/IEC 27018 guidance to implement cloud-specific controls
6. Ability to identify organizational assets and define the appropriate protection responsibilities in a cloud computing environment
7. Ability to identify user access management controls in a cloud computing environment
8. Ability to understand key management functions in a cloud computing environment
9. Ability to comprehend logging and monitoring controls in a cloud computing environment
10. Ability to understand the extended control set for cloud service of ISO/IEC 27017, Annex A

### Knowledge statements

1. Knowledge of cloud-specific controls from ISO/IEC 27017 and ISO/IEC 27018
2. Knowledge of the best practices used for cloud-specific controls implementation
3. Knowledge of cloud controls frameworks used in the industry
4. Knowledge of the preparation process of cloud-specific controls implementation
5. Knowledge of inventory of assets and ownership of assets in a cloud computing environment
6. Knowledge of user registration, deregistration, and access provisioning in a cloud computing environment
7. Knowledge of key management in cloud computing and key management challenges for IaaS, SaaS, and PaaS
8. Knowledge of event logging responsibilities of the cloud service provider and customer
9. Knowledge of the ISO/IEC 27017 Annex A controls for cloud services
10. Knowledge of the shared roles and responsibilities within a cloud computing environment
11. Knowledge of the removal of cloud service customer assets

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| Domain 5: Cloud security awareness, training, roles, and responsibilities<br><br>**Main objective:** Ensure that the candidate is able to define information security roles and responsibilities related to cloud computing, and define and implement a cloud security awareness and training program | |
|---|---|
| **Competencies** | **Knowledge statements** |
| 1. Ability to understand the information security organizational structure<br>2. Ability to define information security roles and responsibilities<br>3. Ability to define the information security roles and responsibilities related to cloud computing<br>4. Ability to identify cloud service customer and sub-roles<br>5. Ability to identify cloud service provider sub-roles<br>6. Ability to identify other common cloud computing roles and responsibilities<br>7. Ability to understand the difference between education, awareness, and training<br>8. Ability to assess, plan, conduct, and evaluate the cloud security awareness and training program | 1. Knowledge of the traditional and modern information security organizational structure<br>2. Knowledge of information security roles and responsibilities<br>3. Knowledge of the information security roles and responsibilities related to cloud computing<br>4. Knowledge of cloud service user, administrator, business manager, and integrator<br>5. Knowledge of cloud service operations manager, deployment manager, inter-cloud provider, cloud service security and risk manager, network provider<br>6. Knowledge of cloud engineer, cloud network engineer, and cloud automation engineer<br>7. Knowledge of cloud security awareness and training program<br>8. Knowledge of awareness and training recommendations for cloud service customers and providers |

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| Domain 6: Cloud security incident management<br><br>**Main objective:** Ensure that the candidate is able to establish a cloud security incident management | |
|---|---|
| **Competencies** | **Knowledge statements** |
| 1. Ability to define and implement an incident management process based on best practices<br>2. Ability to define the objectives of the cloud security incident management<br>3. Ability to conduct the cloud security incident management phases as defined in ISO/IEC 27035-1<br>4. Ability to conduct the data breach involving PII response plan<br>5. Ability to record the information related to cloud security incidents<br>6. Ability to communicate the cloud security incidents<br>7. Ability to understand business continuity in the cloud security context | 1. Knowledge of the incident management standards<br>2. Knowledge of the difference between events, incidents, and data breaches<br>3. Knowledge of the cloud security incident management phases: plan and prepare, detecting and reporting, assessment and decision, responses, and lessons learned<br>4. Knowledge of the containment, eradication, recovery, evidence collection and custody, and communication and remediation report<br>5. Knowledge of the incident documentation<br>6. Knowledge of the cloud security incident reporting<br>7. Knowledge of the notification of a data breach involving PII<br>8. Knowledge of business continuity management |

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## Domain 7: Cloud security testing, monitoring, and continual improvement

**Main objective:** Ensure that the candidate is able to execute a cloud security test and monitor and provide guidance on the continual improvement of the cloud security program

### Competencies

1. Ability to identify testing domains in a cloud environment
2. Ability to define the testing scope for different cloud service models
3. Ability to determine the testing tools and techniques
4. Ability to create test cases for a security test
5. Ability to report the testing results
6. Ability to verify to what extent the identified cloud security objectives have been met
7. Ability to perform regular and methodical reviews to ensure the suitability, adequacy, effectiveness of the cloud security program
8. Ability to counsel an organization on how to continually improve the effectiveness and efficiency of a cloud security program
9. Ability to implement continual improvement processes in an organization
10. Ability to determine the appropriate tools to support the continual improvement processes of an organization

### Knowledge statements

1. Knowledge of conformance, functional, performance, and security testing
2. Knowledge of testing in Infrastructure as a Service (IaaS), Software as a Service (SaaS), and Platform as a Service (PaaS)
3. Knowledge of the cloud penetration testing
4. Knowledge of the requirements of a cloud security testing report
5. Knowledge of the best practices and techniques used to monitor and evaluate the effectiveness of a cloud security program
6. Knowledge of cloud security monitoring tools
7. Knowledge of the concepts related to measurement and evaluation
8. Knowledge of the main concepts related to continual improvement
9. Knowledge of the processes related to the continual monitoring of change factors
10. Knowledge of the maintenance and improvement of a cloud security program

Based on the abovementioned domains and their relevance, 80 questions are included in the exam, as summarized in the table below:

| | | | | Level of understanding (Cognitive/Taxonomy) required | |
|---|---|---|---|---|---|
| | | Number of questions/points per competency domain | % of the exam devoted/points to/for each competency domain | Questions that measure comprehension, application, and analysis | Questions that measure synthesis and evaluation |
| Competency domains | Fundamental principles and concepts of cloud computing | 14 | 17.5 | | X |
| | Information security policy for cloud computing and documented information management | 5 | 6.25 | X | |
| | Cloud computing security risk management | 14 | 17.5 | | X |
| | Cloud-specific controls based on ISO/IEC 27017 and ISO/IEC 27018 and best practices | 11 | 13.75 | X | |
| | Cloud security awareness, training, roles, and responsibilities | 11 | 13.75 | X | |
| | Cloud security incident management | 14 | 17.5 | | X |
| | Cloud security testing, monitoring, and continual improvement | 11 | 13.75 | X | |
| | Total | **80** | **100%** | | |
| | Number of questions per level of understanding | | | **38** | **42** |
| | % of the exam devoted to each level of understanding (cognitive/taxonomy) | | | **47.5%** | **52.5%** |

The passing score of the exam is **70%**.

After successfully passing the exam, candidates will be able to apply for the "PECB Certified Lead Cloud Security Manager" credential depending on their level of experience.

## Taking the Exam

### General Information on the Exam

Candidates are required to arrive/be present at least 30 minutes before the exam starts. Candidates who arrive late will not be given additional time to compensate for the late arrival and may not be allowed to sit for the exam.

Candidates are required to bring a valid identity card (a national ID card, driver's license, or passport) and show it to the invigilator.

If requested on the day of the exam (paper-based exams), additional time can be provided to candidates taking the exam in a non-native language, as follows:

- 10 additional minutes for Foundation exams
- 20 additional minutes for Manager exams
- 30 additional minutes for Lead exams

### PECB Exam Format and Type

1. **Paper-based:** Exams are provided on paper, where candidates are not allowed to use anything but the exam paper and a pen. The use of electronic devices, such as laptops, tablets, or phones, is not allowed. The exam session is supervised by a PECB approved Invigilator at the location where the Reseller has organized the training course.
2. **Online:** Exams are provided electronically via the PECB Exams application. The use of electronic devices, such as tablets and cell phones, is not allowed. The exam session is supervised remotely by a PECB Invigilator via the PECB Exams application and an external/integrated camera.

For more detailed information about the online format, please refer to the PECB Online Exam Guide.

**This exam contains multiple choice questions:** This format has been chosen because it has proven to be effective and efficient for measuring and assessing learning outcomes related to the defined competency domains. The multiple-choice exam can be used to evaluate a candidate's understanding on many subjects, including both simple and complex concepts. When answering these questions, candidates will have to apply various principles, analyze problems, evaluate alternatives, combine several concepts or ideas, etc. The multiple-choice questions are scenario based, which means they are developed based on a scenario that candidates are asked to read and are expected to provide answers to one or more questions related to that scenario. This multiple-choice exam is "open book", due to the context-dependent characteristic of the questions. You will find a sample of exam questions provided below.

Since the exam is "open book," candidates are authorized to use the following reference materials:

- A hard copy of the ISO/IEC 27017 and ISO/IEC 27018 standards
- Training course materials (accessed through PECB Exams app and/or printed )
- Any personal notes during the training course (accessed through the PECB Exams app and/or printed)
- A hard copy dictionary

Any attempt to copy, collude, or otherwise cheat during the exam session will lead to automatic failure.

PECB exams are available in English and other languages. To learn if the exam is available in a particular language, please contact examination@pecb.com.

**Note:** PECB will progressively transition to multiple-choice exams. They will also be open book and comprise scenario-based questions that will allow PECB to evaluate candidates' knowledge, abilities, and skills to use information in new situations (apply), draw connections among ideas (analyze), and justify a stand or decision (evaluate). All PECB multiple-choice exams have one question and three alternatives, of which only one is correct.

For specific information about exam types, languages available, and other details, visit the List of PECB Exams.

### Sample Exam Scenario-based Questions

**Scenario 1:**
*Vitals* is a clinical laboratory offering its services in Northern California Region. They provide high-quality testing services with accurate and timely test results. *Vitals* is an advocate of technology and since their establishment in 2005, they have been utilizing innovative solutions to improve their services, enhance communication between patients and other healthcare providers such as hospitals and medical centers, and enable analytics. Test results are usually sent to patients within six hours from the entry of the results to the *Vitals'* electronic health record (EHR) system. This fast turnaround has made *Vitals* one of the most demanded laboratories during the COVID-19 pandemic.

They identified the need for a solution to the problems and limitations of the on-premise EHR system to support the COVID-19 pandemic response. *Vitals* had complete control over how and where the data of the EHR system are stored, in addition to controlling the infrastructure configuration. This control helped them customize the system to fit their specific needs. A major drawback, however, was that the on-premise EHR system required more hardware, software, and competent personnel as *Vitals'* was becoming an integral part of the medical community. That is why investing in the on-premise EHR system during the pandemic was a major decision for *Vitals,* which outweighed the level of control that they have over the on-premise EHR system. As such, *Vitals* considered moving to the cloud.

They cautiously checked cloud service providers' reputation and their regulatory compliance. *Vitals* adheres to strict guidelines that ensure confidentiality and integrity of patients' information. Therefore, it was vital for them to also choose a cloud service provider that supports security and compliance. Based on such requirements and *Vitals'* need for flexible and automatic provision and release of the allocated resources to meet their resource consumption, they decided to use Infrastructure as a Service (IaaS) and private cloud. Since this would initiate major changes in the architecture of the system, *Vitals* assigned Paul, an IT technician, the role of the cloud service integrator. That is why Paul's cloud computing activities included connecting the ICT systems to cloud services and monitoring them.

The benefits of using the EHR system powered by cloud solutions were numerous to *Vitals* mainly on reducing the load on servers while allowing effortless scalability. They were also able to reduce installation and maintenance costs associated with the hardware and software of the on-premise EHR system. It was standard practice for *Vitals'* employees to understand and use the EHR system, and moving to the cloud did not make any change to them. *Vitals,* nonetheless, carefully identified employees with access to the system and ensured that their right to perform specific actions on the EHR system such as inserting, updating, or retrieving data is only granted upon logging in with the correct username and password.

Based on this scenario, answer the following questions:

1. ***Vitals* needed flexible and automatic provision and release of the allocated resources to meet their resource consumption. Which cloud computing characteristic is this?**
   A. Broad network access
   B. **Rapid elasticity**
   C. Resource pooling

2. **Based on scenario 1, why should *Vitals* use the private cloud?**
   A. Because it unburdens *Vitals* from security and compliance tasks as private cloud supports logging, monitoring, and implementation of security controls
   B. **Because it has tighter security compared to other cloud deployment models and supports security and compliance**
   C. Because it offers high scalability, minimal security risks, and compliance

3. ***Vitals* uses Infrastructure as a Service (IaaS). As such, they manage the:**
   A. **Data**
   B. Servers
   C. Storage

4. **Does *Vitals* use strong authentication?**
   A. Yes, username and password are considered strong authentication
   B. **No, authentication based only on username and password is intrinsically weak**
   C. No, username and password only refer to one factor of authentication: something you have

5. **Paul, the cloud service integrator, was responsible for monitoring the cloud services. How do you describe this situation?**
   A. **Unacceptable, the cloud service integrator is not responsible for monitoring the cloud services**
   B. Unacceptable, the cloud service provider is responsible for monitoring the cloud services when IaaS is used
   C. Acceptable, the cloud service integrator should continually monitor the cloud services, once they have been connected to ICT systems

## Receiving the Exam Results

Exam results will be communicated via email. The only possible results are *pass* and *fail*; no specific grade will be included.

- The time span for the communication starts from the exam date and lasts two to four weeks for multiple-choice paper-based exams.

- For online multiple-choice exams, candidates receive their results instantly.

Candidates who successfully complete the exam will be able to apply for one of the credentials of the respective certification scheme.

For candidates who fail the exam, a list of the domains where they have performed poorly will be added to the email to help them prepare better for a retake.

## Exam Retake Policy

There is no limit to the number of times a candidate can retake an exam. However, there are certain limitations in terms of the allowed time span between exam retakes.

- If a candidate does not pass the exam on the 1st attempt, they must wait 15 days from the initial date of the exam for the next attempt (1st retake). Retake fees apply.
  ***Note:*** *Candidates who have completed the training course but failed the exam are eligible to retake the exam once for free within a 12-month period from the initial date of the exam*.
- If a candidate does not pass the exam on the 2nd attempt, they must wait three months after the initial date of the exam for the next attempt (2nd retake). Retake fees apply.
  ***Note:*** For candidates that fail the exam in the 2nd retake, PECB recommends them to attend a training course in order to be better prepared for the exam.
- If a candidate does not pass the exam on the 3rd attempt, they must wait six months after the initial date of the exam for the next attempt (3rd retake). Retake fees apply.
- After the 4th attempt, the waiting period for further retake exams is 12 months from the date of the last attempt. Retake fees apply.

To arrange exam retakes (date, time, place, costs), candidates need to contact the PECB Reseller/Distributor who has initially organized the session.

## Exam Security

A significant component of a professional certification credential is maintaining the security and confidentiality of the exam. PECB relies upon the ethical behavior of certification holders and applicants to maintain the security and confidentiality of PECB exams. Any disclosure of information about the content of PECB exams is a direct violation of PECB's Code of Ethics. PECB will take action against any individuals that violate such rules and policies, including permanently banning individuals from pursuing PECB credentials and revoking any previous ones. PECB will also pursue legal action against individuals or organizations who infringe upon its copyrights, proprietary rights, and intellectual property.

## Reschedule the Exam

For any changes with regard to the exam date, time, location, or other details, please contact examination@pecb.com.

## Apply for Certification

All candidates who successfully pass the exam (or an equivalent accepted by PECB) are entitled to apply for the PECB credentials they were examined for. Specific educational and professional requirements need to be fulfilled in order to obtain a PECB certification. Candidates are required to fill out the online certification application form (that can be accessed via their PECB online profile), including contact details of references who will be contacted to validate the candidate's professional experience. Candidates can submit their application in various languages. Candidates can choose to either pay online or be billed. For additional information, contact certification@pecb.com.

The online certification application process is very simple and takes only a few minutes, as follows:

- Register your account
- Check your email for the confirmation link
- Log in to apply for certification

For more information about the application process, follow the instructions on this manual Apply for Certification.

The application is approved as soon as the Certification Department validates that the candidate fulfills all the certification requirements regarding the respective credential. An email will be sent to the email address provided during the application process to communicate the application status. If approved, candidates will then be able to download the certification from their PECB Account.

PECB provides support in both English and French.

## Renew your Certification

PECB certifications are valid for three years. To maintain them, candidates must demonstrate every year that they are still performing tasks that are related to the certification. PECB certified professionals must annually provide Continual Professional Development (CPD) credits and pay $100 as the Annual Maintenance Fee (AMF) to maintain the certification. For more information, please visit the Certification Maintenance page on the PECB website.

## Closing a Case

If candidates do not apply for certification within three years, their case will be closed. Even though the certification period expires, candidates have the right to reopen their case. However, PECB will no longer be responsible for any changes regarding the conditions, standards, policies, and candidate handbook that were applicable before the case was closed. A candidate requesting their case to reopen must do so in writing and pay the required fee.

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# SECTION III: CERTIFICATION REQUIREMENTS

## Lead Cloud Security Manager

**The requirements for PECB Cloud Security Manager certifications are:**

| Credential | Exam | Professional experience | Cloud security project experience | Other requirements |
|---|---|---|---|---|
| PECB Certified Provisional Cloud Security Manager | PECB Certified Lead Cloud Security Manager exam or equivalent | None | None | Signing the PECB Code of Ethics |
| PECB Certified Cloud Security Manager | PECB Certified Lead Cloud Security Manager exam or equivalent | Two years: One year of work experience in cloud security | Project activities: a total of 200 hours | Signing the PECB Code of Ethics |
| PECB Certified Lead Cloud Security Manager | PECB Certified Lead Cloud Security Manager exam or equivalent | Five years: Two years of work experience in cloud security | Project activities: a total of 300 hours | Signing the PECB Code of Ethics |
| PECB Certified Senior Lead Cloud Security Manager | PECB Certified Lead Cloud Security Manager exam or equivalent | Ten years: Seven years of work experience in cloud security | Project activities: a total of 1,000 hours | Signing the PECB Code of Ethics |

To be considered valid, cloud security activities should follow best implementation and management practices and include the following:

1. Managing a cloud security program
2. Implementing a cloud security program
3. Managing documented information in cloud
4. Monitoring the cloud security performance
5. Managing a cloud security team

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## SECTION IV: CERTIFICATION RULES AND POLICIES

### Professional References

For each application, two professional references are required. They must be from individuals who have worked with the candidate in a professional environment and can validate their cloud security project experience, as well as their current and previous work history. Professional references of persons who fall under the candidate's supervision or are their relatives are not valid.

### Professional Experience

Candidates must provide complete and correct information regarding their professional experience, including job title(s), start and end date(s), job description(s), and more. Candidates are advised to summarize their previous or current assignments, providing sufficient details to describe the nature of the responsibilities for each job. More detailed information can be included in the résumé.

### Cloud Security Project Experience

The candidate's cloud security project log will be checked to ensure that the candidate has the required number of management hours.

### Evaluation of Certification Applications

The Certification Department will evaluate each application to validate the candidate's eligibility for certification. A candidate whose application is being reviewed will be notified in writing and, if necessary, given a reasonable time frame to provide any additional documentation. If a candidate does not respond by the deadline or does not provide the required documentation within the given time frame, the Certification Department will validate the application based on the initial information provided, which can eventually lead to its downgrade to a lower credential.

### Denial of Certification

PECB can deny certification if candidates:

- Falsify the application
- Violate the exam procedures
- Violate the PECB Code of Ethics
- Fail the exam

For more detailed information, refer to "Complaint and Appeal" section.

The application payment for the certification is non-refundable.

### Suspension of Certification

PECB can temporarily suspend certification if the candidate fails to satisfy the requirements. Other reasons for suspending certification include:

- PECB receives large amounts of or serious complaints by interested parties (Suspension will be applied until the investigation has been completed.).
- The logos of PECB or accreditation bodies are intentionally misused.
- The candidate fails to correct the misuse of a certification mark within the time frame determined by PECB.
- The certified individual has voluntarily requested a suspension.
- PECB deems appropriate other conditions for suspension of certification.

## Revocation of Certification

PECB can revoke certification if the candidate fails to fulfill the PECB requirements. Candidates are then no longer allowed to represent themselves as PECB certified professionals. Other reasons for revoking certification can be if candidates:

- Violate the PECB Code of Ethics
- Misrepresent and provide false information of the scope of the certification
- Break any other PECB rules

## Upgrade of Credentials

Professionals can apply to upgrade to a higher credential as soon as they can demonstrate that they fulfil the requirements.

In order to apply for an upgrade, candidates need to login in to their PECB Account, visit the "My Certifications" tab, and click on the "Upgrade" link. The upgrade application fee is $100.

## Downgrade of Credentials

A PECB Certification can be downgraded to a lower credential due to the following reasons:

- The AMF has not been paid.
- The CPD hours have not been submitted.
- Insufficient CPD hours have been submitted.
- Evidence on CPD hours has not been submitted upon request.

***Note:*** *PECB certified professionals who hold Lead Certifications and fail to provide evidence of certification maintenance requirements will have their credentials downgraded. On the other hand, the holders of Master Certifications who fail to submit CPDs and pay AMFs will have their certifications revoked.*

## Other Statuses

Besides being active, suspended, or revoked, a certification can be voluntarily withdrawn or designated as Emeritus. More information about these statuses and the permanent cessation status, and how to apply, please visit Certification Status Options.

# SECTION V: PECB GENERAL POLICIES

## PECB Code of Ethics

Adherence to the PECB Code of Ethics is a voluntary engagement. It is important that PECB certified professionals not only adhere to the principles of this Code, but also encourage and support the same from others. More information can be found here.

## Other Exams and Certifications

PECB accepts certifications and exams from other recognized accredited certification bodies. PECB will evaluate the requests through its equivalence process to decide whether the respective certification(s) or exam(s) can be accepted as equivalent to the respective PECB certification (e.g., ISO/IEC 27001 Lead Auditor certification).

## Non-discrimination and Special Accommodations

All candidate applications will be evaluated objectively, regardless of the candidate's age, gender, race, religion, nationality, or marital status.

To ensure equal opportunities for all qualified persons, PECB will make reasonable accommodations for candidates, when appropriate. If candidates need special accommodations because of a disability or a specific physical condition, they should inform the Reseller/Distributor in order for them to make proper arrangements. Any information candidates provide regarding their disability/need will be treated with strict confidentiality.

Click here to download the Candidates with Disabilities Form.

## Complaints and Appeals

Any complaints must be made no later than 30 days after receiving the certification decision. PECB will provide a written response to the candidate within 30 working days after receiving the complaint. If they do not find the response satisfactory, the candidate has the right to file an appeal. For more information about the complaints and appeal procedures, click here.

(1) According to ADA, the term "reasonable accommodation" may include: (A) making existing facilities used by employees readily accessible to and usable by individuals with disabilities; and (B) job restructuring, part-time or modified work schedules, reassignment to a vacant position, acquisition or modification of equipment or devices, appropriate adjustment or modifications of examinations, training materials or policies, the provision of qualified readers or interpreters, and other similar accommodations for individuals with disabilities.

(2) ADA Amendments Act of 2008 (P.L. 110-325) Sec. 12189. Examinations and courses. [Section 309]: Any person that offers examinations or courses related to applications, licensing, certification, or credentialing for secondary or post-secondary education, professional, or trade purposes shall offer such examinations or courses in a place and manner accessible to persons with disabilities or offer alternative accessible arrangements for such individuals.

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**PECB Help Center**
Visit our Help Center to browse Frequently Asked Questions (FAQ), view manuals for using PECB website and applications, read documents related to PECB processes, or to contact us via Support Center's online tracking system.

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