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certm:nd



Syllabus

DevOps

DevOps Engineer

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DevOps Engineer

Our goal at CertMind is to certify the skills of professionals working in the Technology context. To achieve this, we seek to ensure that professionals demonstrate their skills and knowledge through the application of an International Certification Exam.

Certification category

Main category: Agile Frameworks

Subcategory: DevOps Engineer

Scope of certification

The DevOps Engineer certification validates the technical skills of a DevOps professional at all stages, from agile project management to operations and feedback. This certification emphasizes continuous integration and delivery, test automation, deployment and infrastructure as code. By earning it, professionals will demonstrate proficiency in the use of key DevOps tools. This certification highlights professionals for their ability to apply DevOps practices in real-world situations and continuously improve software development processes.

Prerequisites

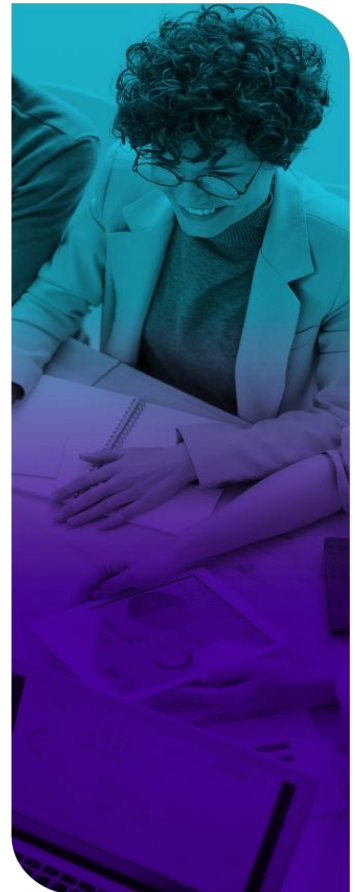
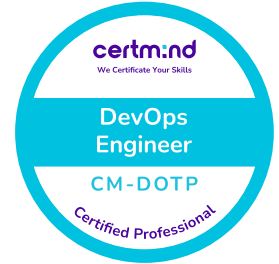
- Be of legal age, according to the minimum age determined by law (according to the National Identity Card that must be uploaded to the platform).
- Have basic knowledge of reading, writing and basic arithmetic: addition, subtraction, multiplication and division.
- Reading and acceptance of the Code of Ethics available on the platform before taking the certification exam.

Code of Ethics

All certified professionals must know, accept and abide by the Code of Ethics, which is available for consultation on the platform.

Recommendations

- It is highly recommended that the professional attends a formal DevOps training of at least 15 hours.



Required competencies and job description

In order to ensure that the professional has the minimum skills and knowledge that can be applied in a real environment, the following topics are addressed in the exam:

Module	Job Description	Required skills
Module 1: Planning and Design	Plan and design software projects using agile methodologies, manage the backlog, and define KPIs.	<ol style="list-style-type: none">1. Agile project management and incident tracking tools2. Defining objectives and key performance indicators (KPIs)3. Task prioritization and backlog management4. Infrastructure as Code (IaC)5. Creation and management of configuration scripts6. Use cases and practical examples
Module 2: Development and Construction	Understand basic concepts of Git, workflows, and best practices. Continuous Integration (CI) and CI tools will also be explored.	<ol style="list-style-type: none">1. Git flow review2. Continuous Integration (CI)3. CI tools4. CI pipeline configuration5. Use cases and practical examples
Module 3: Testing and Validation	Learn about test automation and the use of various testing tools and frameworks. Testing within the CI/CD pipeline will also be discussed.	<ol style="list-style-type: none">1. Test automation: concepts, tools, and best practices2. Unit, integration, functional, and security testing3. Testing tools and frameworks4. Testing in CI/CD pipelines5. Use cases and practical examples

Module	Job Description	Required skills
Module 4: Deployment and Delivery	Understand how Continuous Delivery (CD) works, the associated tools, and deployment strategies. Containers will be introduced as essential tools for deployment.	<ol style="list-style-type: none"> 1. Continuous Delivery (CD) 2. CD tools 3. Deployment strategies: Blue-green, Canary, etc. 4. Use cases and practical examples
Module 5: Operations and Monitoring	Learn about DevOps operations, the importance of monitoring, incident response, and problem management. Monitoring and logging tools will be introduced.	<ol style="list-style-type: none"> 1. DevOps operations 2. Importance of monitoring in DevOps 3. Incident response and problem management 4. Monitoring and logging tools 5. Use cases and practical examples
Module 6: Feedback and Continuous Improvement	Analyze metrics to improve processes, review workflows, and collaborate effectively within teams. The concept of DevSecOps will also be introduced.	<ol style="list-style-type: none"> 1. Metrics analysis: interpretation and use for process improvement 2. Process review: identifying and correcting inefficiencies 3. Collaboration practices among teams: DevOps culture and shared responsibility 4. DevSecOps: introduction and practices

Evaluation of skills

CertMind performs two types of assessment to ensure that the professional has the required skills:

1. **Multiple choice questions with only one answer:** this evaluation modality consists of theoretical questions of multiple-choice single answer that seek to measure the degree to which the professional has understood the theoretical concepts of the certification.
2. **Study case:** Its structure is similar to that of the questions mentioned in the previous section, the difference being that, instead of asking about a particular concept, it presents a description of a situation that takes place in the real context and that must be analyzed by the professional in such a way that he/she can first identify the problem and then evaluate which of the options presented reflects the best solution to the problem situation.

Competition	Questions (1)	Study case(2)
Demonstrate knowledge of the basic concepts, principles, and drivers of DevOps, as well as considerations regarding organizational culture.	X	X
Clearly understand how to perform product planning and design following DevOps principles.	X	X
Understand how product development and deployment is performed following DevOps principles; and understand the importance of tools.	X	X
Know and understand how to integrate product development teams with operations teams to ensure successful deliveries in collaborative environments.	X	
Clearly understand the life cycle of a product or service, and how to ensure that they are properly removed from the operation reducing the negative impact on customer value.	X	
Understand the importance of measuring the results of products developed with DevOps initiatives and how they contribute to business improvement.	X	

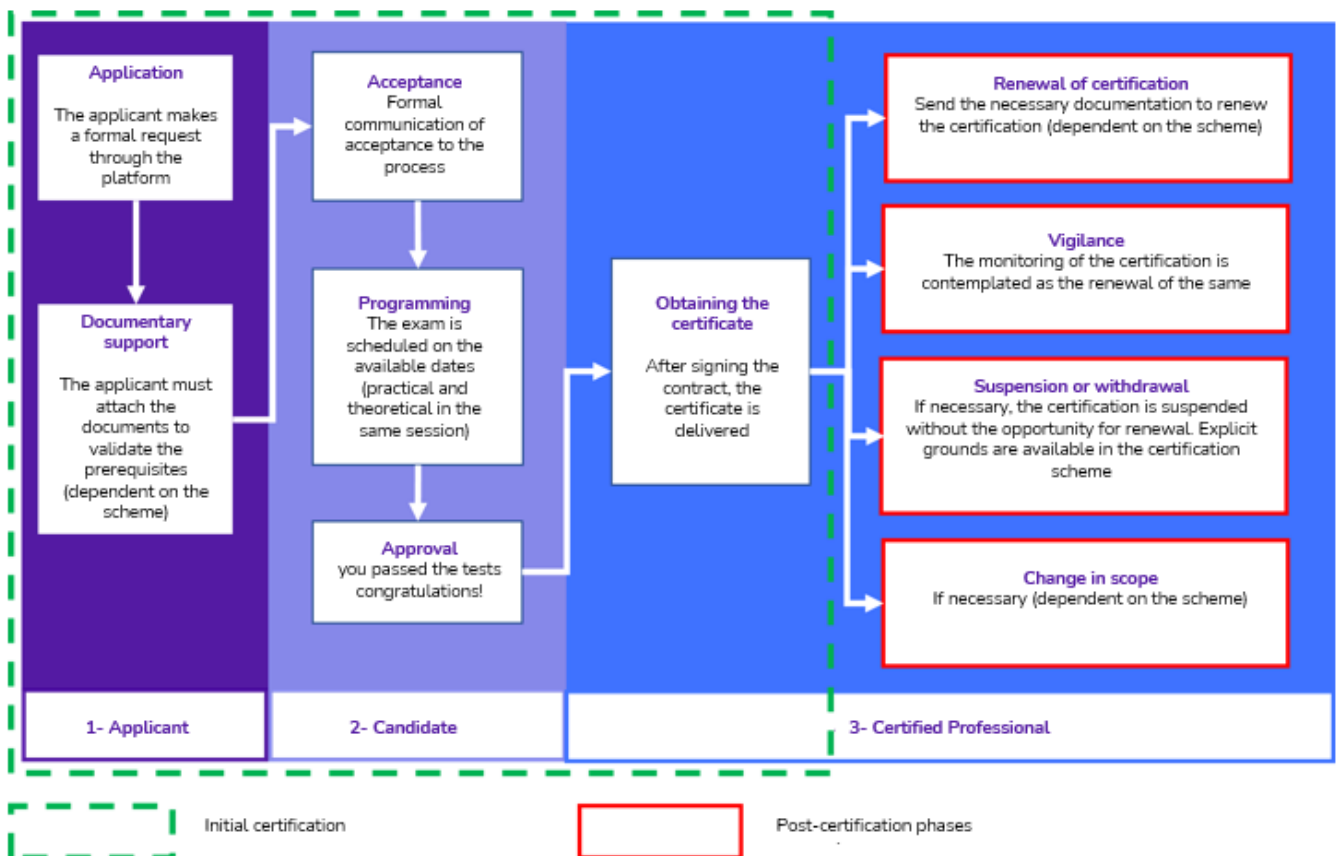
Who should take this exam?

This exam is ideal for individuals or teams involved in product development, software development or I.T. service delivery, interested in adopting DevOps-based agile best practices.

Roles such as: I.T. personnel, software engineers, application and product developers, I.T. architects, business analysts, data analysts, project managers and leaders, system developers and integrators.

Certification process

The following chart shows the general life cycle for obtaining a certification:



Certification process

Each of the phases for obtaining certification for the first time is described below; the phases after obtaining the certificate (red-bordered boxes) will be explained later.

- 1. Request for certification:** the applicant submits his or her certification application, on the QuizLab platform or through the partner company (where the applicant has taken his or her training). Once the application is approved, the applicant's profile is created in CertMind.
- 2. Documentary support:** the applicant must attach in the CertMind platform his or her identity document and additionally complete the registration of his or her resume (CV).
- 3. Verification and acceptance:** the platform verifies the applicant's compliance with the prerequisites, once verified, the application is accepted and the applicant becomes a candidate for the certification process.
- 4. Programming:** the call for the presentation of the exam is made, directly on the platform or through its representative. The format of the exam is explained below:
 - **Type:** 40-question, multiple-choice, single-answer online exam.
 - **Duration:** 60 minutes.
 - **Minimum passing grade:** 28/40 or 70%.
 - **Additional time:** If the professional does not take the exam in his/her native language, he/she will have an additional 15 minutes and is also allowed to use a dictionary.
 - **Supervision:** CertMind monitors the tests to ensure that they are performed correctly and transparently through the Invigilator Program (also known as "Proctor"). To learn more about this surveillance mechanism, please visit the following website www.certmind.org
 - **Open book:** No.
 - **Modality:** Available online only on the CertMind platform.
 - **Validity :** 5 Years.
 - **Others:** All applicants are required to read and accept the company's code of ethics and terms and conditions.

Levels of Difficulty: Bloom's Taxonomy

Bloom's Taxonomy is a theory known in the educational sector because many teachers consider it suitable for evaluating the cognitive level acquired in a subject. The objective of this theory is that after a learning process, the learner acquires new skills and knowledge. The following table presents a description of the categories of Bloom's taxonomy present in the certification exam, as well as a description of in the certification exam, as well as the percentage of each type of question in the exam.

Module	Level 1	Level 2	Level 3
Description	Knowledge. It can comprise remembering a wide range of elements, from specific data to complete theory. But all that is needed is to bring to mind the appropriate information.	Compression. This can be demonstrated by passing, or translating, material from one form to another (words to numbers), interpreting the material (explaining or summarizing), and estimating future trends (predicting consequences or effects).	Application. Refers to the ability or capacity to use the material learned in concrete, new situations.
Percentage of questions present in the exam	60%	25%	15%

Note: For more information on the monitoring system visit our web site <https://certmind.org>.

5. Obtaining the certificate: once the exam is passed and the terms and conditions contract is accepted, the certification is delivered.

Renewal, surveillance and withdrawal of certification

This phase occurs after the professional has obtained his or her certification. Renewal refers to the reissuance of the certification once its validity has come to an end. Surveillance refers to CertMind supervision of the professional's performance during the period between certification and recertification to ensure compliance with the stipulations of this certification scheme. The activities that the certified professional must perform in order to obtain recertification are described below:

1. Application for recertification: before the certification becomes invalid, the certified professional submits his or her recertification application on the QuizLab platform. In case the certification loses its validity, the professional must go through the certification process again.

2. Registration of PUC's: the certified professional is required to register 10 PUC's every 5 years for certification renewal.

For more information about the Professional Update Credits (PUC) system visit our website <https://certmind.org>. The certified professional must attach the supports that accredit the PUCs in the CertMind platform.

3. Validation of documentation: the platform verifies compliance with the PUCs of the certified professional, once verified, the recertification application is accepted.

4. Obtaining recertification: Once the documents have been validated, the new certification is delivered.

Criteria for suspension or withdrawal of certification

Certification will be withdrawn from the professional in the following cases:

1. Failure to comply with the code of ethics.
2. Failure to comply with the requirements of the scheme.
3. Unsatisfactory results of the surveillance process.
4. Inability to continuously meet the competency requirements of the scheme.

Changes to the certification scheme

The DevOps Engineer certification scheme does not contemplate changes in the scope as currently no extensions or reductions in the scope or level of the certification apply.



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