



Candidate Handbook

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Email

certification-support@cloudfoundry.org

Mail

1 Letterman Dr., Suite D4700
San Francisco, CA 94129
Phone/Fax: +1 415 723 9709

Web

www.cloudfoundry.org/certification

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Overview

About the Cloud Foundry Foundation Certification Program

The Cloud Foundry Foundation is committed to growing the community of Cloud Foundry developers, thereby allowing continued growth of Cloud Foundry related activities across the broad set of companies and organizations who are using Cloud Foundry. Certification is a key step in that process, allowing certified developers to quickly establish their credibility and value

in the job market, and also allowing companies to more quickly hire high quality engineering teams to support their growth.

Scope of Certifications

The Cloud Foundry Foundation offers a certification program that allows users to demonstrate their competence in a hands-on, command-line environment. The purpose of the Cloud Foundry Certified Developer (CFCD) Certification is to provide assurance that Certificate holders have the skills, knowledge and competency to perform the responsibilities of Cloud Foundry developers.

To achieve Certification, a Candidate will need to pass a performance-based Exam that tests their Cloud Foundry developer skills. The Exam includes coding examples that must be modified in some cases, and a Candidate will use either Java/Spring, Ruby or Node.js to do that. For exam security, candidates must verify their identity and are monitored by a proctor during the exam session via streaming audio, video, and screensharing feeds. The screensharing feed allows proctors to view candidates' desktops (including all monitors). The audio, video, and screensharing feeds will be stored for a limited period of time in the event that there is a subsequent need for review. Certification is issued upon a Candidate passing the required Exam.

The Certification focuses on the skills required to be a successful Cloud Foundry developer in industry today. This includes the general areas of application deployment, debugging and troubleshooting, logging and monitoring, services and routing. The Exam also covers the general topics of Cloud Native and Micro-Services Architecture.

Candidate Requirements

Testing Equipment: Hardware and Environment

Exams are delivered online and closely monitored by proctors via webcam, audio and remote screen viewing. Candidates must provide their own front-end hardware to take exams, including a computer with:

- Chrome or Chromium browser
- reliable internet access
- webcam
- microphone

The workstation on which the hardware (i.e. desktop or laptop) is placed must, aside from the required hardware, reveal a clean surface with no obstructions overhead or underneath. Candidates should ensure that their webcam is capable of being moved in case the proctor requests that the Candidate pan their surroundings to check for potential violations of exam policy.

Hardware Compatibility Check

Candidates should run the compatibility check tool provided by the Exam Proctoring Partner to verify that their hardware meets the minimum requirements. The tool is located at <https://www.examslocal.com/ScheduleExam/Home/CompatibilityCheck>. Select “Linux Foundation” as the Exam Sponsor and “CFCD” as the Exam. (At this time, only Chrome and Chromium browsers are supported.)

Candidate Identification and Authentication

Candidates are required to provide government-issued photo identification before the Exam can be launched. Any current, non-expired government ID containing Candidate’s photo and full name of Candidate in the Latin alphabet may be used for identity verification. Examples of acceptable forms of government-issued photo ID include, but are not limited to:

- passport
- government-issued driver’s license/permit
- national identity card
- state- or province-issued identity card

If you have questions about whether your photo ID is acceptable please contact: certification-support@cloudfoundry.org.

Eligibility

Candidates must test as an individual. Certification is only available for natural persons, not corporations or other legal entities.

Age

Candidates must be 18 years of age or older to be eligible for testing or Certification. Candidates under the age of 18 years old are considered underage minors and are not eligible for testing or Certification even with parental consent. The Cloud Foundry Foundation reserves the right to impose additional restrictions to comply with local data protection laws.

Accommodations for Special Needs

If a Candidate has special needs that need to be taken into account during Exam administration, they must notify the Cloud Foundry Foundation at least two (2) weeks in advance so any accommodating measures can be arranged.

Statement of Non-Discrimination

The Cloud Foundry Foundation endorses the principles of equal opportunity. Eligibility criteria for Certification as a Cloud Foundry Certified Developer (CFCD) are applied equally to all

individuals regardless of age, race, religion, gender, national origin, veteran status, or disability.

Certification and Confidentiality Agreement

Candidates are required to accept the terms of the [Cloud Foundry Foundation Certification and Confidentiality Agreement](#). This is a legally-binding agreement that applies to all Exams. Acceptance and adherence to this agreement is required in order to be exposed to the Exam and to be officially Certified. Candidates must first accept the terms and conditions of the Cloud Foundry Foundation Certification and Confidentiality Agreement **during the registration process** and **again prior to testing**. Failure to accept the terms of this Agreement will result in a terminated Exam and forfeiture of the entire Exam fee.

Exam Registration

To register for an Exam, go to <https://www.cloudfoundry.org/certification/>.

Click the Register for Exam button to be taken to the checkout page. Any discount or voucher coupons may be entered in the Coupon Code field; be sure to click the Add Coupon button so as to apply the discount or voucher. Candidates will be prompted to read and accept the Terms and Conditions for Exam Registration and the Cloud Foundry Foundation Certification and Confidentiality Agreement.

When registration is successfully completed, Candidates will be redirected to [My Portal](#), where they can view the next steps required to schedule and take their Exam. Candidates will also receive an Order Confirmation email for their Exam Registration purchase and will receive an Exam Scheduling Instructions email. (Eligibility to schedule and take an Exam expires 12 months from the date of the order.)

Refund Policy

Candidates have up to three (3) business days following payment of Exam registration fees or up to 24 hours prior to a scheduled Exam reservation, whichever comes first, to request a full refund on Exam registration fees.

Refunds will not be given and rescheduling will not be allowed in event of no-shows or if Exam is terminated early or could not be started on time due to Exam misconduct.

Refund Process

Candidates should first check that they are eligible for a refund per the refund policy and then follow the appropriate process below to request a refund:

- **Candidates who have not yet scheduled an Exam reservation:** contact certification-support@cloudfoundry.org and provide the order number, Linux Foundation ID, and Exam title for the order.
- **Candidates who have already scheduled an Exam reservation:** first, cancel the exam reservation at least 24 hours before the scheduled start time of the reservation. Once the reservation is canceled, contact certification-support@cloudfoundry.org and provide the order number, Linux Foundation ID, and Exam title on the order. ****The Cloud Foundry Foundation cannot issue a refund if there is an Exam reservation scheduled in the system.****

My Portal

Candidates can access My Portal at any time by going to <http://training.linuxfoundation.org/portal> or by clicking on the My Portal menu item from <http://training.linuxfoundation.org/>.

Once a Candidate has logged into My Portal, they will be able to view the status of their Certification efforts under the Certifications tab, as well as to download receipts for Exam registrations. Use the blue Refresh button located to the right of “Certification Status” to pull in recently made changes or if the window has been left open for an extended time. (Certain changes may require several minutes to populate, such as date and time for newly scheduled Exam reservations.)

Status Settings for Certifications

Each Certification listed in the Certifications tab of the Portal will have its status displayed to the far right.

The status settings that may appear for Certifications include:

| Status | Description |
|-----------------------------------|--|
| Not Certified - Register for Exam | User has not yet purchased registration for a Certification Exam. Use the “Register for Exam” link to purchase registration for an Exam and start the process towards getting Certified. |
| Items Pending | User has registered for a Certification Exam, but still needs to complete items towards getting Certified. When this status is on, an Exam Prep Checklist panel will be presented on the left that guides the user through the |

| | |
|------------|---|
| | items requiring completion. An Exam Info panel will be presented on the right that provides more details on an Exam as the steps in the Exam Prep Checklist are completed (e.g. distribution selected, Exam date and time, Exam results, etc.). |
| Not Passed | User has taken the Exam but their exam score was below the score required to pass. An Exam Info panel containing details on the Exam taken will be presented and a link to “Re-Register” for the Exam is provided. |
| Active | User has achieved or renewed Certification and expiration of Certification has not yet passed. Certificates for the specific Certifications in Active status will be available for download. |
| Expired | User achieved or renewed Certification previously, but the Certification has since expired. |
| Revoked | User’s Certification has been revoked. |

Exam Prep Checklist

If the Exam Prep Checklist is displayed, it indicates a Candidate has registered for an Exam, but not yet taken the Exam. Candidates should use the Exam Prep Checklist to review and complete the steps necessary to take the Exam. When items in the checklist have been completed, a green checkmark will appear next to the item. Red crosses indicate items which remain to be completed.

The items on the Exam Prep Checklist include the following:

- Register for Exam
- Check System Requirements
- Schedule Exam
- Get Candidate Handbook
- Verify Name
- Important Tips
- Take Exam

More information is provided below on each item.

Register for Exam

Register for Exam will already be checked as complete when the Exam Prep Checklist is presented.

Check System Requirements

Candidates must check that the system on which they plan to take their Exam meets the minimum requirements for taking the Exam. Clicking on the Check System Requirements link in the Exam Prep Checklist will direct a Candidate to a Compatibility Check Tool. To use the tool, the Candidate should select “Linux Foundation” as the Exam Sponsor and “CFCD” as the Exam. The tool will allow the candidate to determine if their system meets the minimum requirements or if anything is needed to bring their system up to the required specifications.

The portal cannot determine the results of the Compatibility Check Tool; it can only determine if the Candidate has accessed the tool by clicking on the Check System Requirements link provided in the Exam Prep Checklist.

If the Compatibility Check Tool reveals that a Candidate’s system does not meet minimum requirements, it is the Candidate’s responsibility to bring their system up to the necessary specifications or to procure a system that does meet the minimum requirements **before** they take their Exam.

Candidates may access the Check System Requirements link even after it has been marked as complete. This allows Candidates to re-check a system after changes have been made or to check new systems.

Schedule Exam

Use the Schedule Exam link to be directed and automatically logged in to the Exam Proctoring Partner’s scheduling site. Once authenticated and logged in, Candidates may search for the Exam by title (Cloud Foundry Certified Developer Exam), code (CFCD) or Sponsor Name (The Linux Foundation) and they can then select from available Dates and Times* for an Exam reservation.

Candidates will also be prompted to use the Check Compatibility Tool to confirm that their system meets minimum requirements needed for the Exam, and to read and accept the terms of The Cloud Foundry Foundation Certification and Confidentiality Agreement. Once all steps have been completed successfully, the Exam reservation will be confirmed. Email notification will be sent to the Candidate regarding their confirmed Exam reservation. (Candidates who have setup exclusive email whitelists should add [InnovativeExams.com](https://www.innovativeexams.com) to their list of acceptable domains.)

***Please note that exams require a 24-hour lead time to allow for preparation of the virtual machines, so the earliest possible reservation date will be the following business day.**

Additionally, the latest possible date possible in the scheduling calendar is 30 days out. If a later reservation is desired, Candidate will need to wait until their desired date is less than 30 days out to schedule.

Canceling or Rescheduling

Once Candidates have scheduled an Exam reservation, they may cancel or reschedule the reservation up to 24 hours before the start time of the reservation. Reservation changes are not possible when 24 hours or less remain before the start time. No-shows forfeit the money paid for an Exam registration.

Candidates should refer to the Cancel and Reschedule Instructions provided in the Exam reservation confirmation email from the Exam Proctoring Partner, or follow the steps below

- Go to the Exam Proctoring Partner's site as listed in the Exam Reservation Confirmation email
- Click on "My Exams"
- Click on the scheduled Exam and then click on Cancel or Reschedule button

Get Candidate Handbook

All Candidates are expected to read and familiarize themselves with the Candidate Handbook. Click on Get Candidate Handbook to access the Handbook. Once the link is clicked on, the item is marked as completed. Candidates may access the Download Candidate Handbook link even after it has been marked as completed. This allows Candidates to re-download or review the Candidate Handbook at later dates if needed.

Verify Name

Candidates must click on the Verify Name link to ensure that the First and Last Name listed on their Linux Foundation ID account matches their government-issued photo ID. Make sure these values do not change before the Exam has been taken.

The First and Last Name attached to a Linux Foundation ID are provided to the Exam Proctor so that Proctors can verify the identity of the Candidate against the government-issued photo ID presented by Candidate.

Important Tips

Candidates are encouraged to review the list of top tips for a smooth Exam experience.

Take Exam

Once a Candidate has completed the necessary steps in the Exam Prep Checklist, the Take Exam link will be made available in the Checklist. At the time of their scheduled reservation,

Candidates may click on this link to be automatically logged in to the Exam Proctoring Partner's site.

Alternatively, Candidates may click on the link provided in the Exam Reservation Confirmation and Reminder emails sent by the Exam Proctoring Partner or go directly to <http://www.examslocal.com/linuxfoundation>. Login with your Linux Foundation ID account when prompted.

Once logged in, click on My Exams and select the Exam from the left margin to get started.

Exam Info Panel

The Exam Info panel in My Portal provides the following details on a specific Exam registration, as well as links to perform certain actions for the Exam:

- **Download Receipt:** download receipt for the Exam registration
- **Expiration:** the last date on which exam can be taken; after this date, the candidate's eligibility to take the exam expires
- **Exam Date:** once a Candidate schedules an Exam reservation, the date and time of that reservation will be displayed here; if Candidate has not yet scheduled an Exam, "Unscheduled" will be displayed
 - **"Schedule Exam"** link: Candidate may use the Schedule Exam link to access the Exam Proctoring Partner's scheduling site in order to schedule an Exam Date.
 - **"Take Exam"** link: on the scheduled Exam date and time, the Candidate may use the Take Exam link to login to their Exam session on the Exam Proctoring Partner's site.
- **My Score:** the score that the Candidate earned on the Exam*
- **Score Needed to Pass:** the minimum score needed to pass the Exam*

* These items only appear once an exam has been graded.

Certification Info Panel

When a Candidate has passed an Exam and successfully achieved Certification, a Certification Info panel will be made available to the Candidate in My Portal. The Certification Info panel provides the following details on the Candidate's Certification:

- **Certificate ID Number:** this is the ID number listed on the Candidate's Certificate
- **Achieved/Renewed On:** this is the date that the Candidate achieved or if applicable, renewed their Certification
- **Expires On:** the date on which Candidate's Certification is scheduled to expire
- **My Score:** the score that the Candidate earned on the Exam they passed to achieve Certification
- **Score Needed to Pass:** the minimum score needed to pass the Exam

- Actions Panel
 - Download **Certificate**
 - Download **Certification Badges**
 - Download **Badge Usage Guidelines**
 - Download **Exam Receipt**

Exam Description

Certification exams from the Cloud Foundry Foundation require the Candidate to use the command line to demonstrate their competencies across the specified domains. Exams are delivered entirely online and closely monitored by proctors via webcam, audio, and remote screen viewing. This gives Candidates the freedom to take their exam at the place and time of their choosing (subject to meeting the conditions stipulated in [Candidate Requirements](#) section of this document).

There is no need for the Candidate to install or have access to a Cloud Foundry service. Instead, the candidate will be provided with login information for an existing Cloud Foundry service and an appropriate Command Line Interface (CLI). The Candidate logs into an exam console via a web browser; within that console, the Candidate will communicate with the proctor, view exam questions/objectives, and access the Cloud Foundry service that has been provisioned for their use during the exam.

The exam requires use of the Cloud Foundry CLI to execute, and no Cloud Foundry UI should be used to complete the exam.

Launching Exam

At the time of a Candidate's scheduled Exam reservation, the Candidate can login to My Portal and click on the **Take Exam** link to be directed to the Exam Proctoring Partner's site. Candidates may also go to the URL provided in the confirmation and reminder emails from the Exam Proctoring Partner, or go directly to <https://www.examslocal.com/linuxfoundation>. The Candidate will be prompted to authenticate via their Linux Foundation ID login.

Once authenticated and logged in, the Candidate should click on My Exams, select the appropriate Exam listed in the left margin, and click the Launch Exam button (see **Reporting Issues with Launching Exam**). Clicking the Launch Exam button will open the Exam Console in a new browser tab and the Candidate may then close all other tabs and browsers.

Once in the Exam Console, the Candidate will be prompted through a check-in process by the proctor. The check-in includes the following:

- share their screen, webcam and microphone
- present valid government-issued photo ID that matches the name listed on the Exam reservation (the Proctor will request that Candidate hold up their ID to the webcam)

- read and accept the **Exam Rules** and the terms and conditions of the Cloud Foundry Foundation Certification and Confidentiality Agreement

Upon completing the check-in process and when the Proctor has verified that the Candidate's workstation environment and surroundings meet the requirements stipulated in **Candidate Requirements**, the Proctor will release the Exam so that the candidate can view exam content and begin working in their server. The countdown timer for the Exam does not start until the Proctor releases the Exam.

Reporting Issues with Launching Exam

If the Launch Exam button does not appear or is not accessible within the 5-minute period following the Exam reservation's scheduled start time, the Candidate should contact the Exam Proctoring Partner's Support team using one of the following options:

- "Online - Click here to get help" - this opens the chat support function
- Support menu item in the top nav bar - call one of the support phone numbers

The Candidate must contact the Exam Proctoring Partner's Support team **within 15 minutes of the scheduled start time** for their reservation to report the issue. Otherwise, they will be marked as a "No Show" for the Exam.

Exam Console Format

The Exam Console is composed of three main areas:

1. **Exam Console functions** (top menu bar) – houses functions to turn on screen- and webcam-sharing, start chat with proctor, and to access Exam Controls that include options to **Show Testing Rules**, **Pause** or **End Exam**, **Refresh Exam Window**, **Reset Console** and access the **Notepad**. (See [Guidelines and Tips for Use of the Help Center](#) below.)
2. **Content Panel** (left) – contains a set of performance-based Exam objectives (the exam questions, tasks, etc.); a set of multiple choice questions; a description of the point value of an objective; and displays a countdown timer for the Exam.
3. **Virtual Machine running the Cloud Foundry CLI** (right) – panel that displays a simple linux terminal window, pre-installed with an appropriate version of the Cloud Foundry CLI. (See [Guidelines and Tips for Use of the Linux Server Terminal](#) below.)
The exam requires use of the Cloud Foundry CLI to execute, and no Cloud Foundry UI should be used to complete the exam.

In addition, candidates will be able to access a set of multiple choice questions via a tab on the Exam Console. The Content Panel will also provide instructions on when to access the multiple choice tab to complete that section of the exam. Coding questions should be done using an available line editor such as VIM or emacs, available in the linux terminal window.

Candidates will need to perform the Exam objectives listed in the Content Panel by executing command-line tasks on the Linux server terminal. Proctors will be able to see the Candidate's desktop and view the Candidate through the webcam.

Guidelines and Tips for Exam Console Functions in Top Menu Bar

- To turn on webcam-sharing, select **Camera** from top menu.
- To turn on screensharing, select **Desktop** from top menu.
- To ask the Proctor a question during the Exam, select **Live Chat** from top menu.
- **Exam Controls** includes the following functions
 - **Show Testing Rules**: select this to review the exam rules during an exam
 - **Refresh Exam Window**: use to refresh the Linux Server Terminal without reloading the entire webpage.
 - For example, if the Linux Server Terminal is experiencing latency issues that are not affecting the Help Center or other functions of the Exam Console or Content panels, clicking the Refresh Exam Window button may help.
 - **Reset Console**: use to reset the HTML terminal application and to flush all firewall settings on the Candidate's server.
 - **Pause Exam**: use to request break from Proctor. (Note: the exam timer continues to run through even if Proctor approves break request.)
 - **End Exam**: Candidate can use this to indicate to proctor they are ready to end the exam.

Guidelines and Tips for Use of the Content Panel

- Exam objectives can only be navigated linearly. Use the Next button at the bottom of the Content Panel to move to the next objective, and use the Back button to move back one objective.
- The timer in the content panel starts out at 180 minutes when the exam is released. Requesting a break via the Pause Exam function will not stop the timer.
 - Important Note: When a candidate's connection to the exam console has to be restarted, it can cause the timer in the content panel to be reset to the beginning balance of 180 minutes. The Proctor keeps the ultimate timer for the exam. The Candidate should check with the Proctor for a true reading of time remaining in the exam if there is any doubt or in cases where the timer has reset.
- The default language for Exam objectives is English.

Guidelines and Tips for Use of the Linux server terminal

These instructions can also be pulled up during the Exam by typing "man lf_exam" in the command line.

1. Root privileges can be obtained by running 'sudo -i'.
2. Rebooting of your server IS permitted at anytime.

3. Do not stop or tamper with the gateone process as this will END YOUR EXAM SESSION.
4. Do not block incoming ports 8080/tcp, 4505/tcp and 4506/tcp.
5. Many keyboard shortcuts will not work in the exam terminal. As an alternative, candidates can use VIM or emacs commands for handling shell commands.
6. Use Ctrl+Alt+W instead of Ctrl+W. Ctrl+W is a keyboard shortcut that will close the current tab in Google Chrome.
7. Ctrl+C & and Ctrl+V are not supported in your exam terminal, nor is copy and pasting large amounts of text. To copy and paste limited amounts of text (1-2 lines) please use;
 - For Linux: select text for copy and middle button for paste (or both left and right simultaneously if you have no middle button).
 - For Mac: ⌘+C to copy and ⌘+V to paste.
 - For Windows: Ctrl+Insert to copy and Shift+Insert to paste.
8. Installation of services and applications included in this exam may require modification of system security policies to successfully complete.
9. Only a single terminal console is available during the exam. Terminal multiplexers such as GNU Screen and tmux can be used to create virtual consoles.

Be sure to also review how you can [Practice Using the Exam's Browser-Based Linux Server Terminal](#) listed under **Exam Preparation**.

Duration of Exam

Candidates have 3 hours to complete an Exam. As Candidates proceed through the Exam, a countdown timer is displayed at the top of the Content panel. The countdown timer does not start until Proctor has released the Exam to Candidate (see **Launching Exam**). Additionally, the timer does not stop during requested breaks, and can sometimes reset to the beginning balance when candidate's connection to exam console has to be restarted. Candidates can confirm the time remaining with the Proctor directly.

Programming Tasks and Programming Languages

The Exam contains some questions or tasks that requires modest amounts of programming to complete. Each such programming task can be done in either of the three languages supported: Java/Spring, Ruby or Node.js. For each programming related task the Candidate can choose the language they feel is most appropriate, and there is no need to use the same language for all programming tasks. They should execute each programming task in only one language, and no additional points will be awarded for executing the tasks in more than one language. The scoring process will automatically determine which of the languages has been used for a given programming task and score the problem appropriately for that language.

Exam Language

Exam objectives are only available in English at this time.

Exam Scoring and Notification

Exams are scored automatically, usually within 24 hours of completion. Results will be emailed 36 hours from the time that the Exam was *completed*. Results will also be made available on My Portal.

Exams are graded for results. There may be more than one way to perform an objective on an Exam and unless otherwise specified, the Candidate can pick any available path to perform the objective as long as it produces the correct result.

The Cloud Foundry Foundation will use statistical analyses of Exam data (“Data Forensics”) to identify patterns indicative of test fraud including cheating and piracy. The Cloud Foundry Foundation reserves the right to invalidate an Exam score and Certification result if review of an Exam record reveals scoring inaccuracies (attributable to The Cloud Foundry Foundation or the Exam Proctoring Partner) or response patterns indicative of possible misconduct or measurement error. If The Cloud Foundry Foundation determines that an Exam score is invalid due to issues that are beyond the control of the Candidate, the Candidate will be advised of options to retake the Exam at no charge.

Exam Results - Pass

Upon passing an Exam and if all other requirements for Certification have been met, Candidates will be granted the Certification relevant to the Exam. For Example, passing the CFCD Exam means a Candidate will be granted CFCD Certification.

Formal notice of successful Certification from The Cloud Foundry Foundation will be emailed within 3 business days of meeting program requirements. The notice will provide a Certificate ID number and include a pdf copy of the Certificate, in addition to instructions on accessing additional Certification Marks.

Exam Results - No Pass

One (1) free retake per Exam purchase will be granted in the event that a passing score is not achieved and Candidate has not otherwise been deemed ineligible for Certification or retake (see **Retake Policy**). Instructions will be provided in the Exam Results notification on how to redeem the free retake.

After the free retake, Candidates may register and pay to take the Exam again, with no discount given for such additional retakes.

Candidates may also wish to consider taking optional training to help them prepare for the Certification Exam.

Retake Policy

For Linux Foundation Certification Exams purchased directly from the Cloud Foundry Foundation, one (1) free retake per Exam purchase will be granted in the event that a passing score is not achieved and Candidate has not otherwise been deemed ineligible for Certification or retake. The free retake must be completed within 12 months of the date of the original Exam purchase. After the free retake, Candidates may register and pay to take the Exam again, with no discount given for such additional retakes.

For purchases made through an Authorized Training Partner, contact the specific Partner regarding eligibility for a free retake.

For exam purchases marked as SINGLE-ATTEMPT or SINGLE, only a single attempt will be granted.

Exam Rules and Policies

Candidates **MUST** start their exam no later than 15 minutes after the scheduled start time. If a candidate does not start their exam within 15 minutes of the scheduled start time, they will be automatically marked as a no-show and no refund or rescheduling will be allowed. (See **Reporting Issues with Launching Exam.**)

Before the Exam can be released, Candidates are presented with rules regarding their **testing location** and **candidate conduct** during the Exam, and with the policy on **warnings and Exam terminations**. The Proctor cannot release the Exam until the Candidate has indicated that they have read, understood and accept these rules.

Testing Location Policy

- Room must be quiet, private and well lit
- Bright lights or windows should not be positioned behind the Candidate
- Testing from public spaces such as coffee shops, stores, etc. is not allowed
- No one other than the Candidate can be present in the room
- Desk must be clear of all notes and electronics

Rules During Exam

- Candidate should review the Exam content instructions that are presented in the command line terminal; Candidate can also type “man lf_exam” in the command line to view instructions again at any time during the Exam

- Candidate is not allowed to communicate with anyone other than the Proctor during the Exam
- Candidate is not allowed to leave their desk or step out of view of the webcam, unless they have been granted specific permission by the Proctor
- Candidate is not allowed to eat, drink, or chew gum
- Candidate is not allowed to wear any electronic device in their ears, on their face or on their body*
- Candidate must refrain from making excessive and/or repetitive noise
- Candidate is not allowed to write or enter input on anything (whether paper, electronic device, etc.) outside of the Exam console screen.
- Candidates must comply with any requests from the Proctor. If Candidate fails to comply, the Exam will be terminated
*unless medically necessary

Policy on Warnings and Exam Terminations

Certain kinds of violations will result in a warning from the Proctor, while certain other violations result in IMMEDIATE TERMINATION OF THE EXAM WITHOUT WARNING.

If a warning is issued by the Proctor, the Exam will be paused until the Candidate is able to amend or resolve the observed violation.

If a Candidate is found to be in violation of the same rule more than twice or is found to be in violation more than four times on any combination of rules, the Exam will be terminated immediately.

The following actions will result in IMMEDIATE TERMINATION OF THE EXAM WITHOUT WARNING:

- Candidate refuses to comply with a Proctor request
- Candidate is observed to be copying Exam content, whether with software, external device(s), manual transcription, or other means
- Candidate steps out of view of the webcam for extended amount of time without the Proctor's permission
- Someone other than the Candidate is observed to complete or assist with any part of the Exam
- A discrepancy exists between the input on a Candidate's screen and the Candidate's observed activity

Policy on Tools and Resources During Exams

Candidates may use their Chrome or Chromium browser to open one additional tab in order to access assets at docs.cloudfoundry.org, apidocs.cloudfoundry.org, and/or

github.com/cloudfoundry/ for reference during the exam. No other tabs may be opened and no other sites may be navigated to. *The allowed sites above may contain links that point to external sites. It is the responsibility of the candidate not to click on any links that cause them to navigate to a domain that is not allowed.*

The following resources are forbidden during the Exam:

- Communications with other Candidates
- Use of devices other than the Exam desktop
- Notes
- Notepads
- Devices external to computer on which they are taking the Exam, including but not limited to: mobile phones, PDAs, wearable computers, smart glasses, smart watches

Exam Misconduct

Candidates engaging in Exam Misconduct will not be allowed to complete the Exam or receive an Exam result. Such Candidates may also be barred from taking any other Cloud Foundry Foundation Certification Exam and if applicable, may have their Cloud Foundry Foundation Certification withdrawn. Refunds will not be given and rescheduling will not be allowed if an Exam is terminated early or could not be started on time due to Exam misconduct. Misconduct may, at any time, result in application of sanctions.

Examples of Exam Misconduct include but are not limited to:

- Failing to comply with the **Exam Rules and Policies**
- Disseminating actual Exam content by any means, including, but not limited to, web postings, formal or informal test preparation or discussion groups, chat rooms, reconstruction through memorization, study guides, or any other method, as well as providing Exam content or information to any person not expressly authorized by Cloud Foundry Foundation to receive such content or information (including but not limited to a Cloud Foundry Foundation employee who is not part of the Certification Program staff).
- Copying or otherwise transferring, modifying, making derivative works of, reverse engineering, decompiling, disassembling, or translating any Exam or any part thereof.
- Seeking and/or obtaining unauthorized access to Examination materials (this includes using recollections of others of materials from previous administrations of any Exam, a.k.a. braindump material, and/or any unauthorized publication of Exam questions with or without answers)
- Using falsified or altered Certificates, score reports, or other documents or electronic media to misrepresent Certification status
- Allowing another person, or an organization in which you are not actively involved, to use your Certification credentials to obtain employment or promotions
- Providing falsified information, documentation or statements as a means of a false identity, false address or solicitation of someone to take a test on another's behalf

- Giving, receiving, or obtaining unauthorized assistance during the Examination or attempting to do so
- Making notes of any kind during the Exam, whether on paper or via digital means
- Possession of non-authorized items during the Exam
- Providing or accepting improper assistance on your Exam or Exams taken by others
- Removing or attempting to remove Exam material (in any format)
- Intentionally or otherwise repeatedly causing a disturbance of any kind during the Exam
- Tampering with the Exam server and its environment or attempting to use it for any function other than taking a Linux Foundation Exam
- Modifying and/or altering the results and/or score report for this Exam or any other Exam record
- Violating the Exam **Retake Policy**
- Using computer scripts to register for Exams
- Misconduct as determined by Data Forensics (see “**Exam Scoring and Notification**”)
- Failing to adhere to any Cloud Foundry Foundation or Exam Proctoring Partner policy, procedure, rule, or instruction
- Using profanity, threatening to harm, bully or in any way harass any Cloud Foundry Foundation or Exam Partner employee or contractor (whether verbally or in writing, including through electronic communications or external web postings)
- Otherwise violating the terms of the [Cloud Foundry Foundation Certification and Confidentiality Agreement](#)

Certificates and Certification

Certified Candidates (“Certificants”) receive a Certificate ID number and a Certificate indicating their successful completion of the requirements necessary to achieve the title indicated on their Certificate. Certifications expire 24 months from the date that a Certificant successfully passes their Certification Exam, unless revoked earlier for cause or Certificant successfully completes Certification renewal requirements.

While their Certification status is active,

- CFCD Certificants may use the term Cloud Foundry Certified Developer to refer to themselves
- Certificants may use the Marks applicable to their Certification on their stationery, business card, personal Web site, etc., to indicate their status

Certificate

The CFCD Certificates list the following information:

- Name of the Candidate who obtained the Certificate
- Title of Certification (e.g. Cloud Foundry Certified Developer)
- Certificate ID number
- Date of Completion (i.e. date Exam was passed)

Certification Expiration

Certifications expire 24 months from the date that the Program Certification requirements are met by a Candidate. Certificants must meet [renewal requirements](#) prior to the expiration date of their current Certification in order to maintain active Certification. If Certification renewal requirements are not completed before the expiration date, Certification will be revoked.

Certification Revocation

The Cloud Foundry Foundation will revoke Certification if you fail to comply with Certification renewal requirements. In addition, The Cloud Foundry Foundation may, in its sole discretion, revoke any and all Certifications you may have earned, and permanently ban you from earning future Certifications, under any of the following circumstances:

- Threatens to harm, bully or in any way harass any Cloud Foundry Foundation or Exam Partner employee or contractor (whether verbally or in writing, including through electronic communications or external web postings);
- Breaches the terms and conditions of the Cloud Foundry Foundation Certification and Confidentiality Agreement;
- Is determined by the Cloud Foundry Foundation to have undertaken or participated in **Exam Misconduct** or violated the **Professional Code of Conduct**;
- Has been convicted of a crime that The Cloud Foundry Foundation deems, in its sole discretion, in any way harms or affects The Cloud Foundry Foundation's or the Program's reputation, goodwill or security; or
- Has lost or settled a civil case in which The Cloud Foundry Foundation is the plaintiff and the claim arose from any alleged damage to The Cloud Foundry Foundation, its brand, goodwill or reputation.

Certification Renewal Requirements

Candidates have the option to retake and pass the same exam to keep their Certification valid. The Certification will become valid for 2 years starting on the date the exam is retaken and passed.

Professional Code of Conduct

Candidates, before and after Certification, shall:

- Perform duties with objectivity, due diligence and professional care.
- Access private information on computer systems only when it is necessary in the course of technical duties. Maintain the privacy and confidentiality of information obtained in the course of their activities unless disclosure is required by legal authority. Such information shall not be used for personal benefit or released to inappropriate parties.
- Provide service in their areas of competence, being honest and forthright about any

limitations of their experience and education. Maintain competency in their respective fields and agree to undertake only those activities they can reasonably expect to complete with the necessary skills, knowledge and competence.

- Strive to ensure the necessary integrity, reliability, and availability of the systems for which they are responsible.
- Design and maintain each system in a manner consistent with the purpose of the system to the organization.
- Inform appropriate parties of the results of work performed including the disclosure of all significant facts known to them that, if not disclosed, may distort the reporting of the results.
- Not engage in deceptive financial practices such as bribery, double billing, or other improper financial practices.
- Obey all laws governing they work, unless, in exceptional circumstances, such compliance is inconsistent with the public interest.
- Promote no interest adverse to their employer or client, unless a higher ethical concern is being compromised; in that case, inform the employer or another appropriate authority of the ethical concern.
- Avoid entering into conflicting obligations with one client, such as obligations of confidentiality, availability for work, or otherwise, which conflict with obligations to another client.
- Not unlawfully discriminate or knowingly permit unlawful discrimination on the basis of race, national origin, sex, sexual orientation, religion, age or disability in: (1) hiring, promoting, discharging, or otherwise determining the conditions of employment of any person; or (2) accepting or terminating representation of any client.
- Identify, document, and report significant issues of social concern, of which they are aware, in software or related documents, to the employer or the client.
- Ensure that they have no other professional or contractual obligations that are inconsistent with this Code of Conduct.

Exam Preparation

Examination Content Outline

An overview of domains and competencies for the Cloud Foundry Certified Developer Exam can be found at:

<https://www.cloudfoundry.org/certification/>

Info on the Exam's Browser-Based Linux Server Terminal

Since the exam terminal is delivered in your browser, it will behave slightly different than an SSH client or local install. Aside from the known issues with certain keyboard shortcuts already mentioned in the "Guidelines and Tips for Use of the Linux server terminal" section, there may be some other keyboard shortcuts that present issues for some candidates. If you'd like to get more information on Gate One, which is used to deliver the terminal in your exam console, please visit the following link - <https://github.com/liftoff/GateOne>

Appeals

Appeals policy

In the event that sanctions are imposed, e.g. for **Exam Misconduct**, Candidates will have thirty (30) calendar days from the date of their notification letter to file an appeal. A Certification Appeals Submission Form will also be provided. If the Candidate believes they have valid grounds for an appeal, they may complete the submission requirements for the Certification Appeals Submission Form and submit it as instructed.

Incomplete submissions and submissions received after the thirty (30) calendar period will not be considered. If the Cloud Foundry Foundation determines that a written request for appeal is filed within the allowable time and follows required guidelines for consideration, and the original sanction decision is upheld by the Cloud Foundry Linux Foundation, such appeal and the information submitted by the Candidate will be forwarded to the Cloud Foundry Foundation Certification Appeals Committee for consideration.

Appeals Decisions

You may expect to receive a written response from the Cloud Foundry Foundation within ninety (90) calendar days after the Appeals Committee meets. Decisions rendered by the Appeals Committee are final.

Copyright

All Exam questions are the property of the Cloud Foundry Foundation and are protected by copyright. Most national laws provide severe civil and criminal penalties for the unauthorized reproduction, distribution, or exhibition of copyrighted materials.

Customer Support

For questions regarding the Cloud Foundry Foundation's Certification Program, please visit <https://www.cloudfoundry.org/certification/>. If your question is not answered there, you may submit a support ticket by sending an email to certification-support@cloudfoundry.org.