



JFROG ARTIFACTORY CERTIFIED DEVOPS ENGINEER

STUDY GUIDE 2020

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ABOUT THE JFROG ARTIFACTORY CERTIFIED DEVOPS ENGINEER CERTIFICATION

The JFrog Artifactory Certified DevOps certification is designed for DevOps engineers who have fundamental knowledge of JFrog Artifactory and manage binary repositories and CI/CD pipelines using Artifactory. The knowledge required for this certification includes basic concepts of Artifactory including repositories, automation tools, security, build tools integration with CI servers, build tools configuration, and troubleshooting.



SECTION 1:

PURPOSE OF THIS STUDY GUIDE

This study guide is designed to help you assess your exam readiness and identify areas where you need to focus your review. It shows you the exam objectives and what you should demonstrate in order to successfully pass the exam. It provides you a list of learning resources as well as sample exam questions to get you prepared for the exam. Please note that our recommendation for passing the exam is to gain on-the-job experience and self-study leveraging the JFrog Academy training materials as well as additional learning resources.

SECTION 2:

EXAM AUDIENCE

A JFrog Artifactory DevOps Engineer should be able to demonstrate the following skills and abilities:

- Describe JFrog Artifactory functionality and key features
- Configure local, virtual and remote repositories in Artifactory
- Describe the security model and manage permissions
- Automate tasks in Artifactory using the REST API and the JFrog CLI
- Integrate CI servers with Artifactory
- Configure build tools
- Set up promotion workflows
- Manage metadata and properties in Artifactory
- Troubleshoot common issues and logs

Candidates should have six or more months of experience as a JFrog Artifactory Engineer and should be able to successfully perform the tasks outlined above.

SECTION 3:

ABOUT THE EXAM

The JFrog Artifactory Certified DevOps Engineer exam is web-based and includes variants of multiple-choice and multiple-answer questions. The exam contains 47 questions to be answered in 90 minutes. You must provide an answer for each question.

The certification exam fee is \$200. Proctored exams delivered onsite at a testing center or in an online setting are available. The exam is closed-book; no materials may be used during the certification exam.

To pass the certification exam you must receive a score of 75 or higher. Test takers who pass the certification exam will receive an electronic certificate document as well as a digital badge via email.

Please note that there is an automatic 2nd attempt on the certification exam that can be used at least 24 hours after completing the first certification exam (if the first attempt does not meet a passing grade).

SECTION 4:

EXAM OUTLINE AND OBJECTIVES

- Artifactory Functionality and Key Features
 - Artifactory as a universal binary repository manager
 - The System of Record model
 - Automation options available in Artifactory
- Repositories
 - Create local, virtual and remote repositories
 - Configure different repositories in Artifactory
 - Use repository naming conventions
 - Browse and search artifacts
- Security and Permissions
 - Describe the security model and entities, security configuration, API keys
 - Define users and groups
 - Permission targets
 - Create Access tokens and cross instance authentication
- Automation Tools- Rest APIs and CLI
 - Describe how REST APIs and CLI can be used in automation
 - Create users, groups and access tokens
 - Deploy, resolve and add properties
 - Deploy build, resolve artifacts, and manage metadata

- Build Tools Integration
 - Generate builds using developer tools
 - Integrate CI servers with Artifactory
 - Use developer tools to publish builds to Artifactory
 - Access build information available in Artifactory

- Development Pipeline Promotion
 - Use common stages in a promotion-based development lifecycle, such as: develop, test, stage and release artifacts
 - Use Artifactory repositories, properties, permissions that support promotion-based development
 - Set up Artifactory to support promotion-based development

- Troubleshooting Resolution Errors
 - Identify the causes of the 40X error codes
 - Use logs as a troubleshooting tool

SECTION 5:

RECOMMENDED LEARNING RESOURCES

Take advantage of our existing learning resources to enhance your skills before taking the certification exam. Please search for the topics listed in the Exam Outline and study those topics leveraging:

- The JFrog Academy <https://academy.jfrog.com/>
- The JFrog Artifactory User Guide
<https://www.jfrog.com/confluence/pages/viewpage.action?pageId=46107472>
- The Resource Center for webinars, articles, whitepapers, screencasts
- and use cases <https://jfrog.com/resource-center/>

SECTION 6:

SAMPLE EXAM QUESTIONS

- 1. You're working on a project that uses the Artifactory API. What is the best method to authenticate? (Topic - Security and Permissions - Complexity level - easy)**
 - A. Generate and copy the API key under your profile settings in Artifactory.
 - B. Include your username and encrypted password in the code.
 - C. Include a script that denies access unless it's over a secure channel.
 - D. Request that an anonymous user be created for the project and use those credentials in the code.

- 2. You've created repositories that map to your group's development cycle. Once the code has been tested and promoted to a staging repository, only select developers should continue to have write access. Which of the following solutions for permissions in Artifactory best supports this scenario? (Topic - Security and Permissions - Complexity level - easy)**
 - A. Create a group in Artifactory for developers that includes write access to staging repositories or any packages tagged with staging metadata.
 - B. Change the permissions for packages at the time of promotion.
 - C. Create an automation script that removes tested packages from the testing repository after they have been promoted so testers no longer have access to them.
 - D. When setting up the staging repository in Artifactory, use the Set Me Up wizard to define the users who can access it.

3. **Which of the following strategies offers the most efficient way to promote builds in Artifactory from one development phase to the next? (Topic - Development Pipeline Promotion - Complexity level - easy)**
- A. Use Artifactory API to promote a build from one repo to the other.
 - B. Create separate repositories for each phase in the dev cycle and at the end of each phase, duplicate files in the repository representing the next build phase.
 - C. Configure the CI server to promote builds and then mirror repository management in Artifactory to the CI server setup.
 - D. Create a virtual repository in Artifactory where an admin can organize files through each phase of the dev cycle.
4. **You're trying to resolve an artifact in Artifactory, but you get a 404 error. You know the artifact is present because your co-worker can access it. Which of the following might cause the error? (Topic - Security and Permissions - Complexity level - hard)**
- A. The exclude or include patterns in the permissions that defines your access might prevent Artifactory from resolving the artifact.
 - B. Your co-worker is probably accessing a cache that has not yet been updated to show that the artifact was deleted.
 - C. Artifactory could be operating over a slow connection which is taking too long for appropriate result to be returned.
 - D. Artifactory doesn't recognize your new machine and is preventing access.

(All correct answers are A)