

Technical Test

This test has a fairly simple coding exercise that involves finding the most popular and the 2nd most popular jar (binary) file in a repository that's part of JFrog Artifactory. There will be an instance (Orbitera test drive) given that includes a basic CI/CD pipeline (i.e. pre-installed and pre-configured softwares such as Jenkins, Artifactory, etc).

Candidates will be evaluated based on the best practices followed while doing this coding exercise, a 360-degree perspective of the problem and communication skills.

Background:

The instance given for the technical test includes JFrog Artifactory which is a universal binary repository manager. An Artifactory instance typically includes a lot of repositories of different types. Example: It can include a maven repository that holds pom files, jar files, war files, etc, a rpm repository, docker repository, helm repository, etc.

Coding Question:

Problem Statement: Find the most popular and the 2nd most popular jar file (artifact) in a maven repository. The most popular artifact will be the one with highest number of downloads. In addition, to build and deploy this solution, create a robust CI/CD pipeline via Jenkins or other CI tool.

Hint:

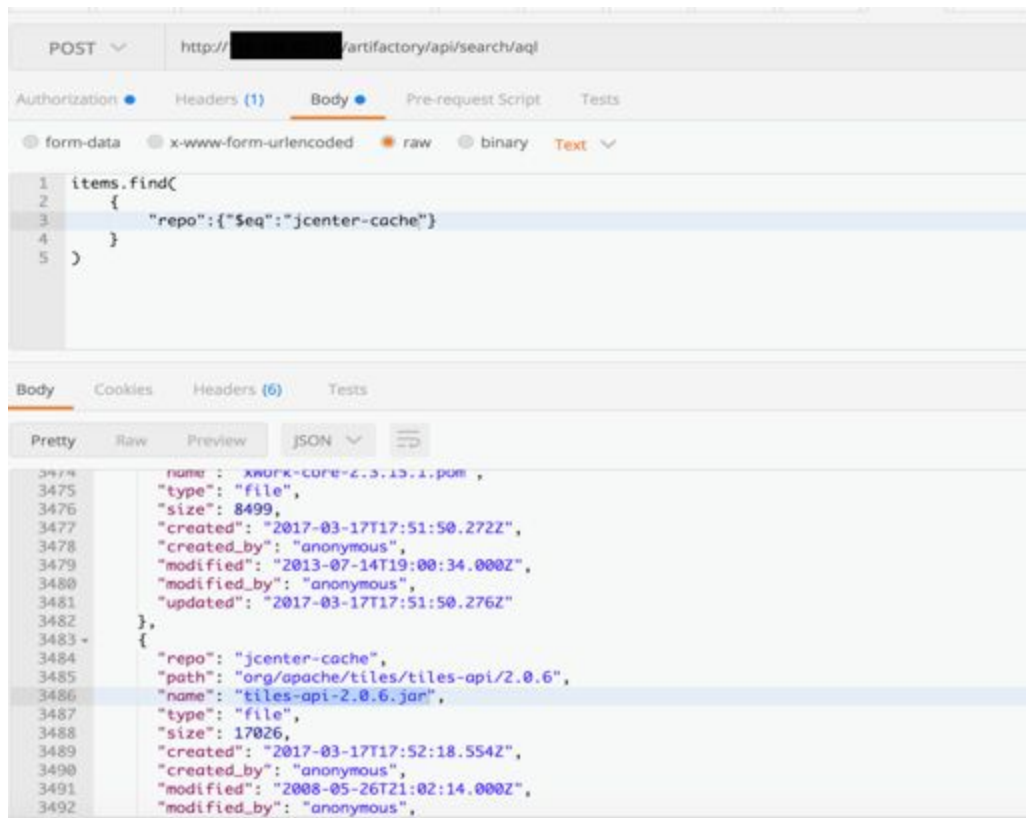
To implement a solution to this problem, following REST endpoints can be used, however it is not necessary to use these APIs.

1. Get a list of all artifacts in a repository

[https://www.jfrog.com/confluence/display/RTF/Artifactory+REST+API#ArtifactoryRESTAPI-ArtifactoryQueryLanguage\(AQL\)](https://www.jfrog.com/confluence/display/RTF/Artifactory+REST+API#ArtifactoryRESTAPI-ArtifactoryQueryLanguage(AQL))

Example -

```
POST http://<IP_ADDRESS>/artifactory/api/search/aql
Body:
items.find(
  {
    "repo":{"$eq":"jcenter-cache"}
  }
)
```



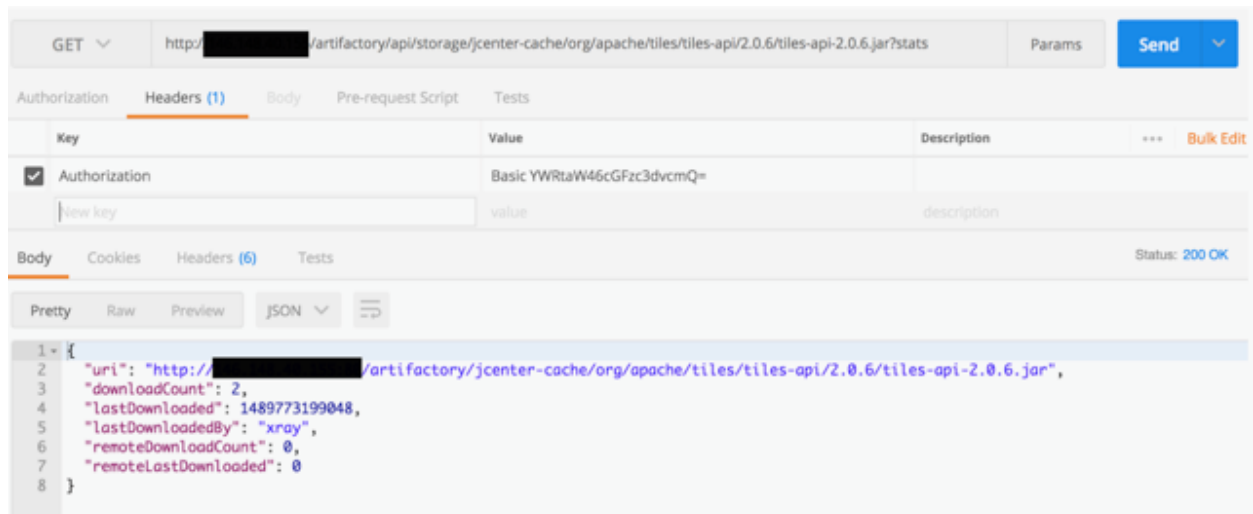
2. Get file stats that includes the **download count**

<https://www.jfrog.com/confluence/display/RTF/Artifactory+REST+API#ArtifactoryRESTAPI-FileStatistics>

Example -

GET

`http://<IP_ADDRESS>/artifactory/api/storage/jcenter-cache/org/apache/tiles/tiles-api/2.0.6/tiles-api-2.0.6.jar?stats`



3. Feel free to use any Rest APIs mentioned under

<https://www.jfrog.com/confluence/display/RTF/Artifactory+REST+API>

4. Create an Orbitera test drive account - <https://jfrog.orbitera.com/c2m/trial/1039>. This test drive has all JFrog products and Jenkins installed. You will need the Artifactory instances for the exercise above. But feel free to play with the other products and talk about them in your interview. Do share IPs with us so that we can extend trial period of this Orbitera instance and provide you with an admin account that will help you to create pipelines.