Red Hat Certificate of Expertise in Fast-Cache Application Development exam

Code: EX453K
URL: View Online

Individuals who pass the Red Hat Certificate of Expertise in Fast-Cache Application Development exam (EX453) have demonstrated the skills and knowledge needed to create, update, and maintain applications using Red Hat® JBoss® Data Grid from a developer perspective. The Red Hat Certificate of Expertise in Fast-Cache Application Development exam is a performance-based exam.

Who Can Benefit

This course is designed for Java application developers who use JBoss Data Grid.

Prerequisites

- Be familiar with using Red Hat JBoss Developer Studio in a Red Hat Enterprise Linux® environment
- Have taken the Red Hat JBoss Data Grid Development (JB453) course or have strong project experience using JBoss Data Grid APIs and development-related skills (marshaling, security, query, etc.)
- Review the Red Hat Certificate of Expertise in Developing Fast Cache Applications exam objectives.

Course Details

Study points for the exam

To help you prepare, the exam objectives highlight the task areas you can expect to see covered in the exam. Red Hat reserves the right to add, modify, and remove exam objectives. Such changes will be made public in advance. Using Red Hat JBoss Data Grid 6.4 and Red Hat JBoss Developer Studio, you should be able to accomplish the tasks below without assistance. The tasks have been grouped into categories to assist your preparation.

Programmatic cache configuration

- Use the ConfigurationBuilder to create caches programmatically.
- Programmatically create a CacheManager and replicated cache.
- Create a customized cache using the default named cache.
- Create a customized cache using a non-default named cache.
- Understand runtime configuration files.

Cache API

- Use the JBoss Data Grid APIs to interact with the cache.
- Understand the per-invocation flag.
- Understand the AdvancedCache interface.

Mapping domain objects to the index structure

- Define basic mapping.
- Map embedded and associated objects.
- Understand boosting.
- Understand and set up analyzers.
- Understand bridges.

Query with Lucene

- Build queries.
- Build a Lucene query.
- Build a query with Infinispan Query.
- Retrieve query results.
- Understand performance considerations.
- Define and implement a filter.
- Write fuzzy and wildcards queries.

Perform remote queries via the Hot Rod client APIs

- Understand protobuf encoding.
- Store protobuf-encoded entities.
- Understand and define protobuf messages.
- Use protobuf with Hot Rod.
- Register per entity marshallers.
- Index protobuf-encoded entities.
- Index custom fields with protobuf.
- Create queries with infinispan query DSL.
- Enable infinispan DSL-based queries.
- Run infinispan DSL-based queries.

Red Hat JBoss Data Grid security

- Understand permissions.
- Understand role mapping.
- Understand and read authentication and role configurations in JBoss EAP login modules.
- Understand and read JBoss Data Grid for authentication.
- Configure data security for library mode.
- Configure client to connect to a remote secured cache.
- Be able to read and understand security-related configuration in standalone.xml. (Hot Rod Interface Security, Realms, etc.)

- Understand user authentication over Hot Rod Using SASL.

What you need to know

Red Hat encourages all candidates for the Red Hat Certificate of Expertise in Fast-Cache Application Development exam to consider taking the Red Hat JBoss Data Grid Development (JB453) training course. Attendance in the course is not required, so one can choose to take just the exam. While attending Red Hat courses can be an important part of one's preparation to take this exam, attending courses does not guarantee success on the exam. Previous experience, practice, and native aptitude are also important determinants of success. Many books and other resources on using Red Hat's products are available. Red Hat does not officially endorse any as preparation guides for its exam. Nevertheless, you may find additional reading deepens understanding and can prove helpful.

Exam format

The Red Hat Certificate of Expertise in Fast-Cache Application Development exam is a performance-based evaluation of a candidate's skills and knowledge of the implementation of applications using JBoss Data Grid. With performance-based testing, candidates must perform tasks similar to what they perform on the job. In this exam, candidates are asked to perform a number of common development tasks which require the use of certain APIs. Candidates are then evaluated on how well their implementations meet objective criteria such as being able to configure a local cache, set up protocol buffer marshaling, or query local and remote caches. Even though the exam uses a JBoss Data Grid Platform runtime, candidates do not, and cannot, administer that runtime. The exam has no admin-specific, and only targets well-documented, developer tasks. Internet access is not provided during the exam, and internet access on your personal devices will be strictly controlled. You are not permitted to bring any printed or electronic documentation into the exam, including notes, books, or any other materials. Documentation that ships with JBoss Data Grid 6.4.1 is available during the exam. Keep these restrictions in mind as you study. Red Hat reserves the right to make changes to the exam format, including timing and the policies above. Such changes will be made public in advance through revisions to this document. The Red Hat Certificate of Expertise in Fast-Cache Application Development exam is a hands-on exam that lasts 3 hours.

Scores and reporting

- Official scores for exams come exclusively from Red Hat Certification Central. Red Hat does not authorize examiners or training partners to report results to candidates directly. Scores on the exam are usually reported within 3 U.S. business days. Exam results are reported as section scores. Red Hat does not report performance on individual items, nor will it provide additional information upon request.
