



Red Hat JBoss Data Grid 7.1 Feature Support Document

For use with Red Hat JBoss Data Grid 7.1

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Services

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Abstract

Details JBoss Data Grid feature support and technology preview status information.

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CHAPTER 1. INTRODUCTION

1.1. INTRODUCTION

This document clarifies some important information related to features and support for Red Hat JBoss Data Grid, such as:

- ✦ The two JBoss Data Grid Usage Modes
- ✦ Supported JBoss Data Grid features
- ✦ JBoss Data Grid features that are limited to a technology preview.

1.2. ABOUT USAGE MODES

Red Hat JBoss Data Grid offers two usage modes:

- ✦ Remote Client-Server mode
- ✦ Library mode





Remote Client-Server mode, which provides a managed, distributed and clusterable data grid server. Applications can remotely access the data grid server using *Hot Rod*, *memcached* or *REST* client APIs.

Library mode allows the user to build and deploy a custom runtime environment. The Library usage mode hosts a single data grid node in the applications process, with remote access to nodes hosted in other JVMs. Tested containers for JBoss Data Grid Library mode includes JBoss Enterprise Web Server and JBoss Enterprise Application Platform (see <https://access.redhat.com/articles/2435931> for details about supported containers). Additionally, Library mode is supported outside the listed containers as a standalone application.

1.3. FEATURES AND USAGE MODES

The following table presents a list of features and indicates the usage mode for each feature. Red Hat JBoss Data Grid 7.1 includes full support for both Remote Client-Server mode and Library mode.

Table 1.1. JBoss Data Grid Features












Feature	Remote Client-Server Mode (Supported)	Library Mode (Supported)
File Cache Store and Loading		
JDBC Cache Store and Loading		

Feature	Remote Client-Server Mode (Supported)	Library Mode (Supported)
LevelDB Cache Store and Loading	✓	✓
Cassandra Cache Store and Loading	✓	✓
Cache Passivation	✓	✓
Remote Cache Store	✓	✓
Cluster Cache Store	✓	✓
Asynchronous Store	✓	✓
Cluster Configuration Using UDP	✓	✓
Cluster Configuration Using TCP	✓	✓
Mortal and Immortal Data	✓	✓
Eviction Strategy	✓	✓
Expiration	✓	✓

Feature	Remote Client-Server Mode (Supported)	Library Mode (Supported)
Unscheduled Write-behind Cache Store	✓	✓
Write-through Cache Store	✓	✓
Clustering Mode (local)	✓	✓
Clustering Mode (replicated)	✓	✓
Clustering Mode (invalidation)	✓	✓
Clustering Mode (distribution)	✓	✓
Asynchronous Clustering Modes	✓	✓
Marshalling	✓	✓
Management Using JMX	✓	✓
Cross-Datacenter Replication and State Transfer	✓	✓
JBoss Operations Network (JON) Integration and Plugin	✓	✓

Feature	Remote Client-Server Mode (Supported)	Library Mode (Supported)
Asymmetric Cluster	✓	✓
Command Line Interface (CLI)	✓	✓
Role-based Access Control	✓	✓
Node Authentication and Authorization	✓	✓
Encrypted Communication Within the Cluster	✓	✓
Per Invocation Flags	✓	✓
Handling Network Partitions	✓	✓
Spring Integration	✓	✓
Apache Camel Component for JBoss Fuse	✓	✓
Querying (by values)	✓	✓
Continuous Queries	✓	✓

Feature	Remote Client-Server Mode (Supported)	Library Mode (Supported)
Clustered Listeners and Notifications for Cache Events	✓	✓
Near Caching	✓	✓
JSR-107 Support	✓	✓
CDI	✓	✓
Asynchronous API	✓	✓
Distributed Streams ¹	✓	✓
Deploy custom cache store to JDG Server	✓	
Connection Pooling with JDBC Cache Stores	✓	
REST Interface	✓	
Memcached Interface	✓	
Hot Rod Java client	✓	

Feature	Remote Client-Server Mode (Supported)	Library Mode (Supported)
Hot Rod C++ Client		
Hot Rod .NET Client		
Hot Rod Node.js Client		
Data Compatibility Between Client-server Protocols		
Data Compatibility Between Hot Rod Java and C++ Client		
Rolling Upgrades for Hot Rod Cluster		
Rolling Upgrades for REST Clusters		
Controlled Shutdown and Restart of Cluster		
Authentication and Encryption over Hot Rod (Java client)		
JBoss Data Grid's Hot Rod Client as a JBoss EAP Module		
Externalizing HTTP sessions from JBoss EAP 7 to remote JDG cluster		

Feature	Remote Client-Server Mode (Supported)	Library Mode (Supported)
Externalizing HTTP sessions from JBoss Web Server to remote JDG cluster	✓	
Remote Task Execution	✓	
Apache Spark 1.6 Integration	✓	
Apache Spark 2.0 Integration	✓	
Apache Hadoop Integration	✓	
Administration Console	✓	
READ_COMMITTED and REPEATABLE_READ Isolation Modes		✓
Lazy Deserialization		✓
Using the infinispan.xml File in Conjunction with APIs		✓
Grouping API		✓
Java Transactional API (JTA) Support and Configuration		✓

Feature	Remote Client-Server Mode (Supported)	Library Mode (Supported)
Java Transactional API (JTA) Deadlock Detection		✓
Transaction Recovery		✓
Transaction and Batching		✓
Key Affinity		✓
Distributed Execution Framework		✓
JPA Cache Store		✓
JBoss Data Grid as a JBoss EAP Module		✓
JDG as Lucene Directory		✓

1: Distributed Streams are available in JBoss Data Grid's Remote Client-Server Mode via Remote Task Execution.

Table 1.2. Hot Rod Client Features by Language

	Java	C++	C#	Node.js
Cross-site Failover	✓	✓	✓	✓

	Java	C++	C#	Node.js
TLS-based Encryption	✓	✓	✓	✓
Server Name Indication (SNI)	✓	✓	✓	✓
Asynchronous API	✓			
Near Caching	✓			
Remote Event Listeners	✓			✓
Remote Querying	✓			
Remote Execution	✓			

1.4. TECHNOLOGY PREVIEW FEATURES

The following features are included in Red Hat JBoss Data Grid 7.1 as a technology preview only:

- ✦ Ickle, a new string-based querying language, has been introduced as technology preview
- ✦ The Hot Rod C++ Client has introduced the following new features as technology preview:
 - Asynchronous API
 - Remote Querying
 - Remote Execution
 - Remote Events/Listeners
 - Near Caching
- ✦ The Hot Rod C# Client has introduced the following new features as technology preview:
 - Asynchronous API

- Remote Querying
- Remote Execution
- Remote Events/Listeners
- Near Caching

Warning

Technology Preview features are not supported with Red Hat production service level agreements (SLAs), may not be functionally complete, and are not recommended to be used for production. These features provide early access to upcoming product features, enabling customers to test functionality and provide feedback during the development process.