Red Hat Integration 2019-04

Data Integration

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Abstract

Combine data from multiple sources so applications can connect to a single, virtual data model

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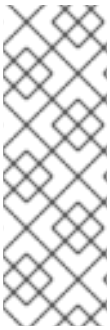
CHAPTER 1. OVERVIEW OF DATA INTEGRATION

Red Hat Data Integration is a container-native data virtualization service, based on the Teiid data virtualization project. Red Hat Data Integration combines data from multiple heterogeneous sources, such as relational databases, files, web services, and SaaS repositories. You deploy virtual databases as container-native services on OpenShift and design your own logical views of the data. An embedded query optimizer executes queries across your data sources so that all of your data becomes available to your applications through a single, uniform API.

For information about how to get started using Red Hat Data Integration, see the Additional Resources.



NOTE

Red Hat Data Integration is a Technology Preview feature only. Technology Preview features are not supported with Red Hat production service level agreements (SLAs) and might not be functionally complete. Red Hat does not recommend using them in production. These features provide early access to upcoming product features, enabling customers to test functionality and provide feedback during the development process. For more information about the support scope of Red Hat Technology Preview features, see link:https://access.redhat.com/support/offerings/techpreview/.

Available features

- Combine data from multiple sources and types (relational, file, excel, MongoDB, and REST) into a single, customized virtual database view that provides microservice developers with live access to data.
- Represent virtual database views in DDL (SQL + SQL/MED).
- Enjoy fast query performance through the implementation of internally stored materialized views, which store pre-computed snapshots of join and aggregation operations that commonly against the data sources.
- Take advantage of built-in integration with Fuse and 3scale for enterprise integration and API management.
  - Make OData APIs discoverable automatically via 3scale.
  - Automatically generate Open API definitions for OData endpoints.
- Monitor database usage and performance in real-time via Prometheus-based metrics.
- Securely distribute data source credentials by injecting them into the container as secrets.

Client access

- OData/REST access for data-driven APIs.
- ODBC/JDBC access for traditional clients to consume virtual database views for analytics.

Deployment

- Maven-based build and deploy of your data projects.
- Specify user-defined functions (UDFs) as Spring beans.

Limitations

- Technology Preview 1 provides a Spring Boot-based runtime only. No GUI is available.
- Each container can have only one virtual database. Virtual databases can have any number of views.
- Virtual databases cannot be deployed on the Red Hat JBoss Enterprise Application Platform.
- No access from SOAP-based clients.
- You cannot use custom resources that are based on the Java EE Connector Architecture (JCA). If you want to use JCA resources, you must migrate them to Spring Boot equivalents.
- Developers cannot access the ModeShape data store directly.
- You must use DDL to define virtual databases. You cannot define virtual databases via an XML document model or in .vdb files developed in Teiid Designer.

CHAPTER 2. MIGRATION FROM RED HAT DATA VIRTUALIZATION

The following list highlights key points to consider for existing Red Hat Data Virtualization customers. The list is not comprehensive, and remains subject to change.

- A provided migration utility enables you to convert XML-based virtual databases to DDL.
- Runtime compatibility mode for connecting virtual databases created in Red Hat Data Virtualization 6.4.
- You might need to update custom extensions that you created for user-defined functions or user-defined aggregate functions.

Additional resources

- Examples repository
- Simple relational database example
- Virtual database conversion utility
- Developer Guide