

Rdb

A relational database service

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1. Overview

Rdb: *A relational database service*

1.1. Intent

An abstract representation of a database server and its dependencies. Often it is desirable to model a database server and expose its resources to referring entities such as an Application Server or other "upstream" deployments. The most common use case is to auto-generate the datasource configurations that an application server (e.g. Tomcat, JBoss, etc) may require for the database application requirements.

Additional support exists for the importing and exporting of dependent database schemas in order to automate the buliding and deploying of versioned data packages.

1.2. Discussion

The combination of Rdb and RdbSchema objects can provide a sufficient data model for automated datasource generation. Datasource configurations, which typically require the same information provided by database server(s) and its dependent schema(s), are platform specific (e.g. Tomcat and JBoss both support datasource configurations but are not in common format). It is therefore the requirement of referring objects such as of type [JBossServer](#) or [TomcatServer](#) to implement the data driven configuration.

2. Design

Super Type
[SystemService](#)

Role	Concrete. (Objects can be created.)
Instance Names	Unique
Notification	false
Template Directory	
Data View	Children, proximity: 1
Logger Name	

3. Constraints

3.1. Allowed Child Dependencies

- [RdbConnection](#) 1
- RdbData
- [RdbDriver](#) 1
- [RdbInstanceName](#) 1
- [RdbPassword](#) 1
- [RdbPort](#) 1
- [RdbSchema](#) 1
- [RdbType](#) 1
- [RdbUserName](#) 1

1: These types have a *Singleton* constraint. Only one instance may be added as a resource.

3.2. Allowed Parent Dependencies

- [JBossServer](#)
- Node
- Site
- [TomcatServer](#)

Limit rdb referrers to JBoss and Tomcat servers along with typical site and node objects.

4. Attributes

4.1. Defaults for Imported Attributes

Name	Default	Description
rdbConnection	jdbc:hsqldb:hsq://localhost:1701	the rdbConnection string representing a locally accessible hsql jdbc connection.
rdbDriver	org.hsqldb.jdbcDriver	set the rdbDriver default to the hsql database driver.
rdbInstanceName	default	set the default rdbInstanceName to "default"
rdbPassword		by default, unset the rdbPassword
rdbPort	1701	set the rdbPort to the default 1701 port.

rdbType	hsqldb	set the default rdbType to the hsql database server.
rdbUserName	sa	set the default rdbUserName to "sa"

5. Commands

View the available commands in the [User Reference](#).

6. Related Types

The following types are defined for use with Rdb.

6.1. RdbConnection

6.1.1. Overview

RdbConnection: *Specifies the Database Connection*

6.1.1.1. Intent

Specifies the database connection string, such as a jdbc connection-url. Typically accessed by a referring application server for datasource generation.

6.1.2. Design

Super Type

[RdbSetting](#)

Role	Concrete. (Objects can be created.)
Instance Names	Unique

6.1.3. Attributes

6.1.3.1. Exported Attributes

Name	Property	Description
rdbConnection	settingValue	attribute setting containing the database connection string.

6.2. RdbDriver

6.2.1. Overview

RdbDriver: *Specifies the Database Driver*

6.2.1.1. Intent

Specifies the database driver implementation such as a jdbc class implementation. Typically accessed by a referring application server for datasource generation.

6.2.2. Design

Super Type

[RdbSetting](#)

Role	Concrete. (Objects can be created.)
Instance Names	Unique

6.2.3. Attributes

6.2.3.1. Exported Attributes

Name	Property	Description
rdbDriver	settingValue	attribute setting containing the database driver implementation.

6.3. RdbInstanceName

6.3.1. Overview

RdbInstanceName: *Stores the value of the database instance name*

Optionally exposes the instance name of the database server.

6.3.2. Design

Super Type

[RdbSetting](#)

Role	Concrete. (Objects can be created.)
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Instance Names	Unique
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6.3.3. Attributes

6.3.3.1. Exported Attributes

Name	Property
rdbInstanceName	settingValue

6.4. RdbPassword

6.4.1. Overview

RdbPassword: *A schema user's password*

Optionally exposes the administrative password of the database server.

6.4.2. Design

Super Type
[RdbSetting](#)

Role	Concrete. (Objects can be created.)
Instance Names	Unique

6.4.3. Constraints

6.4.4. Attributes

6.4.4.1. Exported Attributes

Name	Property
rdbPassword	settingValue

6.5. RdbPort

6.5.1. Overview

RdbPort: *Specifies the Database Connection Port*

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Optionally exposes the listen port of the database server.

6.5.2. Design

Super Type [RdbSetting](#)

Role	Concrete. (Objects can be created.)
Instance Names	Unique

6.5.3. Attributes

6.5.3.1. Exported Attributes

Name	Property
rdbPort	settingValue

6.6. RdbSetting

6.6.1. Overview

RdbSetting: *an Rdb setting*

6.6.1.1. Intent

Supertype to encapsulate related subtypes to support Rdb service.

6.6.2. Design

Super Type Setting

Role	Abstract. (Objects cannot be created.)
Instance Names	Unique

6.6.3. Constraints

Limit RdbSetting's referrers to the Rdb service objects.

6.6.3.1. Allowed Parent Dependencies

- [Rdb](#)

6.7. RdbType

6.7.1. Overview

RdbType: *Specifies the unique key value identifying which type database type is in use (e.g. "mssql" or "oracle", etc)*

Optionally exposes the type of database implementation.

6.7.2. Design

Super Type
[RdbSetting](#)

Role	Concrete. (Objects can be created.)
Instance Names	Unique

6.7.3. Attributes

6.7.3.1. Exported Attributes

Name	Property
rdbType	settingValue

6.8. RdbUserName

6.8.1. Overview

RdbUserName: *A user for a schema*

Optionally exposes the administrative user of the database server.

6.8.2. Design

Super Type
[RdbSetting](#)

Role	Concrete. (Objects can be created.)
Instance Names	Unique

6.8.3. Attributes

Rdb

6.8.3.1. Exported Attributes

Name	Property
rdbUserName	settingValue