

Package ‘RSQLServer’

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Type Package

Title SQL Server R Database Interface (DBI)

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Description RSQLServer wraps the jTDS Project's JDBC 3.0 SQL Server driver and extends the RJDBC classes and DBI methods. It defines a SQLServerDriver, SQLServerConnection & SQLServerResult S4 classes as extensions of the RJDBC equivalent classes. Most of the DBI methods will simply be calls to methods defined by RJDBC classes. However, the dbConnect and some of the dbGetInfo methods are specific to SQL Server. The jTDS drivers do extend to Sybase SQL Server, but currently, only Microsoft SQL Server is supported by this package.

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Depends methods, DBI (>= 0.3.1), rJava (>= 0.9-6)

Imports RJDBC (>= 0.2-4)

SystemRequirements Java (>= 1.3)

Collate 'DBDriver.R' 'DBConnection.R' 'DBResult.R' 'RSQLServer.R'
'Utils.R' 'onLoad.R'

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R topics documented:

dbConnect,SQLServerDriver-method	2
dbGetInfo,SQLServerConnection-method	3

dbGetInfo,SQLServerDriver-method	3
dbIsValid,SQLServerConnection-method	4
dbIsValid,SQLServerResult-method	5
dbListConnections,SQLServerDriver-method	5
dbSendQuery,SQLServerConnection,character-method	6
dbUnloadDriver,SQLServerDriver-method	6
RSQLServer	7
SQLServerConnection-class	7
SQLServerDriver-class	8
SQLServerResult-class	9

Index

10

dbConnect,SQLServerDriver-method
<i>Connect to/disconnect from a SQL Server database.</i>

Description

Connect to/disconnect from a SQL Server database.

Usage

```
## S4 method for signature 'SQLServerDriver'
dbConnect(drv, server, ...)
```

Arguments

drv	An objected generated by SQLServer , or an existing SQLServerConnection . If a connection, the connection will be cloned.
server	The address of the server to connect to.
...	One or more optional connection properties .. Note if you intend to set the useNTLMv2 property to 'true' from the default API value of 'false', you will need to make a specific authentication driver available to the SQL Server driver. See RSQLServer for more details

Value

a linkS4Class{SQLServerConnection} object

Examples

```
## Not run:
dbConnect(SQLServer(), 'ServerName')

## End(Not run)
```

dbGetInfo,SQLServerConnection-method
Get connection info

Description

Get connection info

Usage

```
## S4 method for signature 'SQLServerConnection'  
dbGetInfo(dbObj, ...)
```

Arguments

dbObj	Object of type SQLServerConnection representing a connection
...	other arguments to methods. Not used here.

Value

a named list containing database product name, database version, user, and whether the connection is read only.

Examples

```
## Not run:  
dbGetInfo(dbConnect(SQLServer(), 'DatabaseName'))  
  
## End(Not run)
```

dbGetInfo,SQLServerDriver-method
Get driver info

Description

Get driver info

Usage

```
## S4 method for signature 'SQLServerDriver'  
dbGetInfo(dbObj, ...)
```

Arguments

dbObj	Object created by SQLServer
...	other arguments to methods. Not used here.

Value

A list containing the name and driver version used by drv

Examples

```
## Not run:  
dbGetInfo(SQLServer())  
  
## End(Not run)
```

dbIsValid,SQLServerConnection-method

Checks whether Connection is closed

Description

Checks whether Connection is closed

Usage

```
## S4 method for signature 'SQLServerConnection'  
dbIsValid(dbObj, ...)
```

Arguments

dbObj	An object inheriting from SQLServerConnection .
...	other parameters. Not used.

Value

logical TRUE if the connection is closed and vice-versa

`dbIsValid,SQLServerResult-method`*Checks whether ResultSet is closed*

Description

Checks whether ResultSet is closed

Usage

```
## S4 method for signature 'SQLServerResult'  
dbIsValid(dbObj)
```

Arguments

dbObj An object inheriting from [SQLServerResult](#).

Value

logical TRUE if the result set is closed and vice-versa

`dbListConnections,SQLServerDriver-method`*List active connections*

Description

List active connections

Usage

```
## S4 method for signature 'SQLServerDriver'  
dbListConnections(drv, ...)
```

Arguments

drv Object created by [SQLServer](#)
... Other arguments passed on to methods. Not used here.

Value

An empty list as JDBC driver doesn't maintain a list of active connections

Examples

```
## Not run:
dbListConnection(SQLServer())

## End(Not run)
```

dbSendQuery,SQLServerConnection,character-method
Send query to SQL Server

Description

This is basically a copy of RJDBC's [dbSendQuery](#) method for JDBCConnection.

Usage

```
## S4 method for signature 'SQLServerConnection,character'
dbSendQuery(conn, statement, ...,
  list = NULL)
```

Arguments

conn	connection object
statement	SQL statement to execute
...	additional arguments to prepared statement substituted for "?"
list	undocumented

Value

a [SQLServerResult](#) object

dbUnloadDriver,SQLServerDriver-method
Unload SQLServer driver

Description

Not implemented. Simply returns TRUE. See [JDBCDriver-methods](#).

Usage

```
## S4 method for signature 'SQLServerDriver'
dbUnloadDriver(drv, ...)
```

Arguments

drv Object created by [SQLServer](#)
 ... any other arguments are passed to the driver. Not used here.

Value

Always logical TRUE.

Examples

```
## Not run:
drv <- SQLServer()
dbUnloadDriver(drv)

## End(Not run)
```

RSQLServer

RSQLServer

Description

Wrapper around RJDBC DBI applied specifically to SQL Server. You will need the [Java Runtime Environment](#).

Details

If you intend to use integrated security (Windows Authentication) to authenticate your server session, you will need to download [jTDS](#) and copy the native single sign on library (ntlmauth.dll) to any file on your system's PATH (e.g. Sys.getenv("PATH")). This functionality seems a little flaky in my testing, but it could just be my setup. Full installation instructions are available in the README.SSO file in the jTDS download bundle.

SQLServerConnection-class

An S4 class to represent a SQL Server connection

Description

This class extends the [JDBCConnection](#) class to represent a SQL Server connection.

Slots

jc Java object representing the connection.
 identifier.quote quote character for a SQL Server identifier can be a single quotation mark (\''), a left or right bracket ([]), or a double quotation mark (\"). Usually inherited from [SQLServerDriver](#).

SQLServerDriver-class *An S4 class to represent a SQL Server driver*

Description

This class extends the [JDBCDriver](#) class to represent a SQL Server driver used to access SQL Server databases. This should always be initialised with `SQLServer()`. `JDBCDriver` extends `DBIDriver`. The package uses the jTDS driver set.

Usage

```
SQLServer(identifier.quote = "[")
```

Arguments

`identifier.quote`
quote character for a SQL Server identifier can be a single quotation mark (`\'`), a left or right bracket (`[]`, defaults to `[]`), or a double quotation mark (`\"`).

Value

An object of class [SQLServerDriver](#).

Slots

`identifier.quote` quote character for a SQL Server identifier can be a single quotation mark (`\'`), a left or right bracket (`[]`, defaults to `[]`), or a double quotation mark (`\"`).

`jdrv` Java object reference to an instance of the SQL Server driver if the driver can be instantiated by a default constructor. This object is only used as a fall-back when the driver manager fails to find a driver.

References

[jTDS project](#)

Examples

```
## Not run:  
SQLServer()  
  
## End(Not run)
```

SQLServerResult-class *An S4 class to represent a SQL Server result set*

Description

This class extends the [JDBCResult](#) class to represent a SQL Server result set

Slots

jr Java reference to the JDBC result set

md Java reference to the JDBC result set meta data

pull Java reference to the JDBC result pull helper class (can be null reference before first pull)

stat Java reference to the JDBC statement which generated this result

Index

dbConnect, [SQLServerDriver-method](#), [2](#)
dbGetInfo, [SQLServerConnection-method](#),
[3](#)
dbGetInfo, [SQLServerDriver-method](#), [3](#)
dbIsValid, [SQLServerConnection-method](#),
[4](#)
dbIsValid, [SQLServerResult-method](#), [5](#)
dbListConnections, [SQLServerDriver-method](#),
[5](#)
dbSendQuery, [6](#)
dbSendQuery, [SQLServerConnection-character-method](#),
[6](#)
dbUnloadDriver, [SQLServerDriver-method](#),
[6](#)

JDBCConnection, [7](#)
JDBCDriver, [8](#)
JDBCResult, [9](#)

RSQLServer, [2](#), [7](#)
RSQLServer-package (RSQLServer), [7](#)

SQLServer, [2](#), [4](#), [5](#), [7](#)
SQLServer (SQLServerDriver-class), [8](#)
SQLServerConnection, [2–4](#)
SQLServerConnection-class, [7](#)
SQLServerDriver, [7](#), [8](#)
SQLServerDriver-class, [8](#)
SQLServerResult, [5](#), [6](#)
SQLServerResult-class, [9](#)