

# Package ‘MonetDB.R’

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**Title** Connect MonetDB to R

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**Imports** DBI (>= 0.3.1), digest (>= 0.6.4), testthat, methods,  
codetools

**Description** Allows to pull data from MonetDB into R.

**License** MPL (== 2.0)

**URL** <http://www.monetdb.org>

**SystemRequirements** MonetDB, available from <http://www.monetdb.org>

**Collate** mapi.R dbi.R

**NeedsCompilation** yes

**Repository** CRAN

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dbSendUpdate	<i>Send a data-altering SQL statement to the database.</i>
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### Description

dbSendUpdate is used to send a data-altering statement to a MonetDB database, e.g. CREATE TABLE or INSERT. As a convenience feature, a placeholder (? character) can be used in the SQL statement, and bound to parameters given in the varargs group before execution. This is especially useful when scripting database updates, since the parameters will be automatically quoted.

The dbSendUpdateAsync function is used when the database update is called from finalizers, to avoid very esoteric concurrency problems. Here, the update is not guaranteed to be immediately run. Also, the method returns immediately.

### Usage

```
dbSendUpdate( conn, statement, ..., async=FALSE )
```

### Arguments

conn	A MonetDB.R database connection. Created using <a href="#">dbConnect</a> with the <a href="#">MonetDB.R</a> database driver.
statement	A SQL statement to be sent to the database, e.g. 'UPDATE' or 'INSERT'.
...	Parameters to be bound to '?' characters in the query, similar to JDBC.
async	Behave like dbSendUpdateAsync? Defaults to FALSE.

### Value

Returns TRUE if the update was successful.

### See Also

[dbSendQuery](#)

### Examples

```
## Not run:
# connect to MonetDB
conn <- dbConnect(MonetDB.R(), "monetdb://localhost/acs")
# create table
dbSendUpdate(conn, "CREATE TABLE foo(a INT,b VARCHAR(100))")
# insert value, bind parameters to placeholders in statement
dbSendUpdate(conn, "INSERT INTO foo VALUES(?,?)", 42, "bar")

## End(Not run)
```

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dbTransaction	<i>Create, commit or abort a database transaction.</i>
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### Description

dbTransaction is used to switch the data from the normal auto-committing mode into transactional mode. Here, changes to the database will not be permanent until dbCommit is called. If the changes are not to be kept around, you can use dbRollback to undo all the changes since dbTransaction was called.

### Usage

```
dbTransaction(conn, ...)
```

### Arguments

conn	A MonetDB.R database connection. Created using <a href="#">dbConnect</a> with the <a href="#">MonetDB.R</a> database driver.
...	Future use.

### Value

Returns TRUE if the transaction command was successful.

### Examples

```
## Not run:
conn <- dbConnect(MonetDB.R(), "monetdb://localhost/acs")
dbSendUpdate(conn, "CREATE TABLE foo(a INT,b VARCHAR(100))")
dbTransaction(conn)
dbSendUpdate(conn, "INSERT INTO foo VALUES(?,?)", 42, "bar")
dbCommit(conn)
dbTransaction(conn)
dbSendUpdate(conn, "INSERT INTO foo VALUES(?,?)", 43, "bar")
dbRollback(conn)

# only 42 will be in table foo

## End(Not run)
```

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MonetDB.R

*DBI database connector for MonetDB*

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## Description

MonetDB.R creates a new DBI driver that can be used to connect and interact with MonetDB.

## Usage

```
MonetDB.R ()
```

## Details

The `MonetDB.R` function creates the R object which can be used to a call `dbConnect` which actually creates the connection. Since it has no parameters, it is most commonly used inline with the `dbConnect` call.

This package aims to provide a reasonably complete implementation of the DBI. A number of additional methods are provided: `dbSendUpdate` for database-altering statements, `dbSendUpdateAsync` for cleanup operations and `monetdb.read.csv` for database CSV import.

## Value

Returns a driver object that can be used in calls to `dbConnect`.

## See Also

`dbConnect` for documentation how to invoke the driver `monetdb.server.setup` to set up and start a local MonetDB server from R

## Examples

```
## Not run:
library(DBI)
conn <- dbConnect(MonetDB.R::MonetDB(), dbname = "demo")
dbWriteTable(conn, "iris", iris)
dbListTables(conn)
dbGetQuery(conn, "SELECT COUNT(*) FROM iris")
d <- dbReadTable(conn, "iris")

## End(Not run)
```

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monetdb.read.csv	<i>Import a CSV file into MonetDB</i>
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### Description

Instruct MonetDB to read a CSV file, optionally also create the table for it.

### Usage

```
monetdb.read.csv (conn, files, tablename, header=TRUE,
  best.effort=FALSE, delim=",",
  newline = "\\n", quote = "\"", create=TRUE, col.names=NULL, lower.case.names=FALSE,
  sep=delim, ...)
```

### Arguments

conn	A MonetDB.R database connection. Created using <a href="#">dbConnect</a> with the <a href="#">MonetDB.R</a> database driver.
files	A single string or a vector of strings containing the absolute file names of the CSV files to be imported.
tablename	Name of the database table the CSV files should be imported in. Created if necessary.
header	Whether or not the CSV files contain a header line.
best.effort	Use best effort flag when reading csv files and continue importing even if parsing of fields/lines fails.
delim	Field separator in CSV file.
newline	Newline in CSV file, usually <code>\n</code> for UNIX-like systems and <code>\r\n</code> on Windows.
quote	Quote character(s) in CSV file.
create	Create table before importing?
lower.case.names	Convert all column names to lowercase in the database?
col.names	Optional column names in case the ones from CSV file should not be used
sep	alias for <code>delim</code>
...	Additional parameters. Currently not in use.

### Value

Returns the number of rows imported if successful.

### See Also

`dbWriteTable` in [DBIConnection-class](#)

**Examples**

```
## Not run:
library(DBI)
# connect to MonetDB
conn <- dbConnect(MonetDB.R::MonetDB(), dbname = "demo")
# write test data to temporary CSV file
file <- tempfile()
write.table(iris, file, sep=",")
# create table and import CSV
MonetDB.R::monetdb.read.csv(conn, file, "iris")

## End(Not run)
```

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monetdbRtype	<i>Get the name of the R data type for a database type.</i>
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**Description**

For a database data type, get the name of the R data type it is being translated to.

**Usage**

```
monetdbRtype ( dbType )
```

**Arguments**

dbType            A database type string such as CHAR or INTEGER.

**Value**

String containing the R data type for the DB data type, e.g. character or numeric.

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sqlite-compatibility	<i>Compatibility functions for RSQLite</i>
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**Description**

Some functions that RSQLite has and that we support to allow MonetDBLite being used as a drop-in replacement.

**Usage**

```
isIdCurrent(dbObj, ...)
initExtension(dbObj, ...)
```

**Arguments**

- dbObj      A MonetDB.R database connection. Created using [dbConnect](#) with the [MonetDB.R](#) database driver.
- ...      Additional parameters. Currently not in use.

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