

Package ‘sergeant’

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Title Tools to Transform and Query Data with Apache Drill

Version 0.9.1

Description Apache Drill is a low-latency distributed query engine designed to enable data exploration and analysis on both relational and non-relational data stores, scaling to petabytes of data. Methods are provided that enable working with Apache Drill instances via the REST API, DBI methods and using 'dplyr'/'dbplyr' idioms. Helper functions are included to facilitate using official Drill Docker images/containers.

Depends R (>= 3.6.0)

URL <https://gitlab.com/hrbrmstr/sergeant>

BugReports <https://gitlab.com/hrbrmstr/sergeant/-/issues>

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Encoding UTF-8

Imports bit64 (>= 0.9-7), DBI (>= 0.7), dplyr (>= 0.8.0), dbplyr (>= 1.3.0), httr (>= 1.2.1), jsonlite (>= 1.5.0), htmltools (>= 0.3.6), readr (>= 1.1.1), purrr (>= 0.2.2), scales (>= 0.4.1), stringi, tibble, utils, methods, magrittr (>= 1.5)

Suggests DT (>= 0.5), stevedore, tinytest, covr (>= 3.0.0), DBItest

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ctas_profile

Generate a Drill CTAS Statement from a Query

Description

When working with CSV[H] files in Drill 1.15.0+ everything comes back VARCHAR since that's the way it should be. The old behaviour of sergeant to auto-type convert was kinda horribad wrong. However, it's a royal pain to make **CTAS** queries from a giant list of VARCHAR field by hand. So, this is a helper function to do that, inspired by David Severski.

Usage

```
ctas_profile(x, new_table_name = "CHANGE_____ME")
```

Arguments

```
x          a tbl
new_table_name  a new Drill data source spec (e.g. dfs.xyz.`a.parquet`)
```

Note

WIP!

Examples

```
## Not run:
db <- src_drill("localhost")

# Test with bare data source
flt1 <- tbl(db, "dfs.d.`/flights.csvh`")

cat(ctas_profile(flt1))

# Test with SELECT
flt2 <- tbl(db, sql("SELECT `year`, tailnum, time_hour FROM dfs.d.`/flights.csvh`"))

cat(ctas_profile(flt2, "dfs.d.`flights.parquet`"))

## End(Not run)
```

dbDataType,DrillConnection-method
Drill dbDataType

Description

Drill dbDataType

Usage

```
## S4 method for signature 'DrillConnection'
dbDataType(dbObj, obj, ...)
```

Arguments

```
dbObj      A DrillDriver object
obj        Any R object
...        Extra optional parameters
```

See Also

Other Drill REST DBI API: [DrillConnection-class](#), [DrillDriver-class](#), [DrillResult-class](#), [Drill\(\)](#), [dbUnloadDriver](#), [DrillDriver-method](#)

dbGetInfo,DrillDriver-method

Metadata about database objects

Description

Metadata about database objects

Usage

```
## S4 method for signature 'DrillDriver'
dbGetInfo(dbObj)
```

```
## S4 method for signature 'DrillConnection'
dbGetInfo(dbObj)
```

Arguments

dbObj A [DrillDriver](#) or [DrillConnection](#) object

dbUnloadDriver,DrillDriver-method

Unload driver

Description

Unload driver

Usage

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

Arguments

drv driver
 ... Extra optional parameters

See Also

Other Drill REST DBI API: [DrillConnection-class](#), [DrillDriver-class](#), [DrillResult-class](#), [Drill\(\)](#), [dbDataType](#), [DrillConnection-method](#)

 Drill

Drill

Description

Drill

Connect to Drill

Usage

Drill()

```

## S4 method for signature 'DrillDriver'
dbConnect(
  drv,
  host = "localhost",
  port = 8047L,
  ssl = FALSE,
  username = NULL,
  password = NULL,
  ...
)

```

Arguments

drv	An object created by Drill()
host	host
port	port
ssl	use ssl?
username, password	credentials
...	Extra optional parameters

See Also

Other Drill REST DBI API: [DrillConnection-class](#), [DrillDriver-class](#), [DrillResult-class](#), [dbDataType](#), [DrillConnection-method](#), [dbUnloadDriver](#), [DrillDriver-method](#)

Other Drill REST DBI API: [DrillConnection-class](#), [DrillDriver-class](#), [DrillResult-class](#), [dbDataType](#), [DrillConnection-method](#), [dbUnloadDriver](#), [DrillDriver-method](#)

drill_active	<i>Test whether Drill HTTP Drill direct REST API Interface server is up</i>
--------------	---

Description

This is a very simple test (performs HEAD / request on the Drill server/cluster)

Usage

```
drill_active(drill_con)
```

Arguments

drill_con drill server connection object setup by drill_connection()

See Also

Other Drill direct REST API Interface: [drill_cancel\(\)](#), [drill_connection\(\)](#), [drill_functions\(\)](#), [drill_metrics\(\)](#), [drill_options\(\)](#), [drill_opts\(\)](#), [drill_profiles\(\)](#), [drill_profile\(\)](#), [drill_query\(\)](#), [drill_settings_reset\(\)](#), [drill_set\(\)](#), [drill_stats\(\)](#), [drill_status\(\)](#), [drill_storage\(\)](#), [drill_system_reset\(\)](#), [drill_threads\(\)](#), [drill_version\(\)](#)

Examples

```
## Not run:
drill_connection() %>% drill_active()

## End(Not run)
```

drill_cancel	<i>Cancel the query that has the given queryid</i>
--------------	--

Description

Cancel the query that has the given queryid

Usage

```
drill_cancel(drill_con, query_id)
```

Arguments

drill_con drill server connection object setup by drill_connection()
 query_id the UUID of the query in standard UUID format that Drill assigns to each query.

References

[Drill documentation](#)

See Also

Other Drill direct REST API Interface: [drill_active\(\)](#), [drill_connection\(\)](#), [drill_functions\(\)](#), [drill_metrics\(\)](#), [drill_options\(\)](#), [drill_opts\(\)](#), [drill_profiles\(\)](#), [drill_profile\(\)](#), [drill_query\(\)](#), [drill_settings_reset\(\)](#), [drill_set\(\)](#), [drill_stats\(\)](#), [drill_status\(\)](#), [drill_storage\(\)](#), [drill_system_reset\(\)](#), [drill_threads\(\)](#), [drill_version\(\)](#)

drill_connection	<i>Setup a Drill connection</i>
------------------	---------------------------------

Description

Setup a Drill connection

Usage

```
drill_connection(  
    host = Sys.getenv("DRILL_HOST", "localhost"),  
    port = Sys.getenv("DRILL_PORT", 8047),  
    ssl = FALSE,  
    user = Sys.getenv("DRILL_USER", ""),  
    password = Sys.getenv("DRILL_PASSWORD", "")  
)
```

Arguments

host	Drill host (will pick up the value from DRILL_HOST env var)
port	Drill port (will pick up the value from DRILL_PORT env var)
ssl	use ssl?
user, password	(will pick up the values from DRILL_USER/DRILL_PASSWORD env vars)

Note

If user/password are set this function will make a POST to the REST interface immediately to prime the cookie-jar with the session id.

See Also

Other Drill direct REST API Interface: [drill_active\(\)](#), [drill_cancel\(\)](#), [drill_functions\(\)](#), [drill_metrics\(\)](#), [drill_options\(\)](#), [drill_opts\(\)](#), [drill_profiles\(\)](#), [drill_profile\(\)](#), [drill_query\(\)](#), [drill_settings_reset\(\)](#), [drill_set\(\)](#), [drill_stats\(\)](#), [drill_status\(\)](#), [drill_storage\(\)](#), [drill_system_reset\(\)](#), [drill_threads\(\)](#), [drill_version\(\)](#)

Examples

```
dc <- drill_connection()
```

```
drill_custom_functions
```

Drill expressions / custom functions dplyr translations

Description

One benefit of `dplyr` is that it provide a nice DSL over database ops but that means there needs to be knowledge of functions supported by the host database and then a translation layer so they can be used in R.

Details

Similarly, there are functions like `grepl()` in R that don't directly exist in databases. Yet, one can create a translation for `grepl()` that maps to a **Drill custom function** so you don't have to think differently or rewrite your pipes when switching from core tidyverse ops and database ops.

Many functions translate on their own, but it's handy to provide explicit ones, especially when you want to use parameters in a different order.

If you want a particular custom function mapped, file a PR or issue request in the link found in the DESCRIPTION file.

- `as.character(x)` : `CAST(x AS CHARACTER)`
- `as.integer64(x)` : `CAST(x AS BIGINT)`
- `as.date(x)` : `CAST(x AS DATE)`
- `as.logical(x)` : `CAST(x AS BOOLEAN)`
- `as.numeric(x)` : `CAST(x AS DOUBLE)`
- `as.posixct(x)` : `CAST(x AS TIMESTAMP)`
- `binary_string(x)` : `BINARY_STRING(x)`
- `cbrt(x)` : `CBRT(x)`
- `char_to_timestamp(x,y)` : `TO_TIMESTAMP(x,y)`
- `grepl(y,x)` : `CONTAINS(x,y)`
- `contains(x,y)` : `CONTAINS(x,y)`
- `convert_to(x,y)` : `CONVERT_TO(x,y)`
- `convert_from(x,y)` : `CONVERT_FROM(x,y)`
- `degrees(x)` : `DEGREES(x)`
- `lshift(x,y)` : `DEGREES(x,y)`
- `negative(x)` : `NEGATIVE(x)`
- `pow(x,y)` : `MOD(x,y)`
- `sql_prefix(x,y)` : `POW(x,y)`

- `string_binary(x) : STRING_BINARY(x)`
- `radians(x) : RADIANS(x)`
- `rshift(x) : RSHIFT(x)`
- `to_char(x,y) : TO_CHAR x, y)`
- `to_date(x,y) : TO_DATE(x,y)`
- `to_number(x,y) : TO_NUMBER(x,y)`
- `trunc(x) : TRUNC(x)`
- `double_to_timestamp(x) = TO_TIMESTAMP(x)`
- `char_length(x) = CHAR_LENGTH(x)`
- `flatten(x) = FLATTEN(x)`
- `kvgen(x) = KVGGEN(x)`
- `repeated_count(x) = REPEATED_COUNT(x)`
- `repeated_contains(x) = REPEATED_CONTAINS(x)`
- `ilike(x,y) = ILIKE(x,y)`
- `init_cap(x) = INIT_CAP(x)`
- `length(x) = LENGTH(x)`
- `lower(x) = LOWER(x)`
- `tolower(x) = LOWER(x)`
- `ltrim(x,y) = LTRIM(x,y)`
- `nullif(x, y = NULLIF(x, y)`
- `position(x,y) = POSITION(x IN y)`
- `gsub(x,y,z) = REGEXP_REPLACE(z, x, y)`
- `regexp_replace(x,y,z) = REGEXP_REPLACE(x, y, z)`
- `rtrim(x,y) = RTRIM(x, y)`
- `rpadd(x,y) = RPAD(x, y)`
- `rpadd_with(x,y,z) = RPAD(x, y, z)`
- `lpadd(x,y) = LPAD(x, y)`
- `lpadd_with(x,y,z) = LPAD(x, y, z)`
- `strpos(x,y) = STRPOS(x, y)`
- `substr(x,y,z) = SUBSTR(x, y, z)`
- `upper(x) = UPPER(1)`
- `toupper(x) = UPPER(1)`

You can get a compact list of these with:

```
sql_translate_env(src_drill())$con)
```

as well.

See Also

Other Drill REST API (dplyr): [src_drill\(\)](#), [src_tbls.src_drill\(\)](#)

drill_functions	<i>Show all the available Drill built-in functions & UDFs</i>
-----------------	---

Description

Show all the available Drill built-in functions & UDFs

Usage

```
drill_functions(drill_con, browse = FALSE)
```

Arguments

drill_con	drill server connection object setup by <code>drill_connection()</code>
browse	if TRUE display an HTML interactive HTML widget with the functions as well as reutrn the data frame with the functions. Default if FALSE.

Value

data frame

Note

You *must* be using Drill 1.15.0+ to use this function

References

[Drill documentation](#)

See Also

Other Drill direct REST API Interface: `drill_active()`, `drill_cancel()`, `drill_connection()`, `drill_metrics()`, `drill_options()`, `drill_opts()`, `drill_profiles()`, `drill_profile()`, `drill_query()`, `drill_settings_reset()`, `drill_set()`, `drill_stats()`, `drill_status()`, `drill_storage()`, `drill_system_reset()`, `drill_threads()`, `drill_version()`

Examples

```
## Not run:  
drill_connection() %>% drill_functions()  
  
## End(Not run)
```

drill_metrics	<i>Get the current memory metrics</i>
---------------	---------------------------------------

Description

Get the current memory metrics

Usage

```
drill_metrics(drill_con)
```

Arguments

drill_con drill server connection object setup by drill_connection()

See Also

Other Drill direct REST API Interface: [drill_active\(\)](#), [drill_cancel\(\)](#), [drill_connection\(\)](#), [drill_functions\(\)](#), [drill_options\(\)](#), [drill_opts\(\)](#), [drill_profiles\(\)](#), [drill_profile\(\)](#), [drill_query\(\)](#), [drill_settings_reset\(\)](#), [drill_set\(\)](#), [drill_stats\(\)](#), [drill_status\(\)](#), [drill_storage\(\)](#), [drill_system_reset\(\)](#), [drill_threads\(\)](#), [drill_version\(\)](#)

Examples

```
## Not run:
drill_connection() %>% drill_metrics()

## End(Not run)
```

drill_options	<i>List the name, default, and data type of the system and session options</i>
---------------	--

Description

List the name, default, and data type of the system and session options

Usage

```
drill_options(drill_con, pattern = NULL)
```

Arguments

drill_con drill server connection object setup by drill_connection()
 pattern pattern to filter results by

References

[Drill documentation](#)

See Also

Other Drill direct REST API Interface: [drill_active\(\)](#), [drill_cancel\(\)](#), [drill_connection\(\)](#), [drill_functions\(\)](#), [drill_metrics\(\)](#), [drill_opts\(\)](#), [drill_profiles\(\)](#), [drill_profile\(\)](#), [drill_query\(\)](#), [drill_settings_reset\(\)](#), [drill_set\(\)](#), [drill_stats\(\)](#), [drill_status\(\)](#), [drill_storage\(\)](#), [drill_system_reset\(\)](#), [drill_threads\(\)](#), [drill_version\(\)](#)

Examples

```
## Not run:
drill_connection() %>% drill_options()

## End(Not run)
```

drill_opts

Show all the available Drill options

Description

Show all the available Drill options

Usage

```
drill_opts(drill_con, browse = FALSE)
```

Arguments

drill_con	drill server connection object setup by drill_connection()
browse	if TRUE display an HTML interactive HTML widget with the options as well as return the data frame with the options Default if FALSE.

Value

data frame

Note

You *must* be using Drill 1.15.0+ to use this function

References

[Drill documentation](#)

See Also

Other Drill direct REST API Interface: [drill_active\(\)](#), [drill_cancel\(\)](#), [drill_connection\(\)](#), [drill_functions\(\)](#), [drill_metrics\(\)](#), [drill_options\(\)](#), [drill_profiles\(\)](#), [drill_profile\(\)](#), [drill_query\(\)](#), [drill_settings_reset\(\)](#), [drill_set\(\)](#), [drill_stats\(\)](#), [drill_status\(\)](#), [drill_storage\(\)](#), [drill_system_reset\(\)](#), [drill_threads\(\)](#), [drill_version\(\)](#)

Examples

```
## Not run:
drill_connection() %>% drill_opts()

## End(Not run)
```

drill_profile

Get the profile of the query that has the given queryid

Description

Get the profile of the query that has the given queryid

Usage

```
drill_profile(drill_con, query_id)
```

Arguments

drill_con	drill server connection object setup by drill_connection()
query_id	UUID of the query in standard UUID format that Drill assigns to each query

References

[Drill documentation](#)

See Also

Other Drill direct REST API Interface: [drill_active\(\)](#), [drill_cancel\(\)](#), [drill_connection\(\)](#), [drill_functions\(\)](#), [drill_metrics\(\)](#), [drill_options\(\)](#), [drill_opts\(\)](#), [drill_profiles\(\)](#), [drill_query\(\)](#), [drill_settings_reset\(\)](#), [drill_set\(\)](#), [drill_stats\(\)](#), [drill_status\(\)](#), [drill_storage\(\)](#), [drill_system_reset\(\)](#), [drill_threads\(\)](#), [drill_version\(\)](#)

drill_profiles	<i>Get the profiles of running and completed queries</i>
----------------	--

Description

Get the profiles of running and completed queries

Usage

```
drill_profiles(drill_con)
```

Arguments

drill_con drill server connection object setup by drill_connection()

References

[Drill documentation](#)

See Also

Other Drill direct REST API Interface: [drill_active\(\)](#), [drill_cancel\(\)](#), [drill_connection\(\)](#), [drill_functions\(\)](#), [drill_metrics\(\)](#), [drill_options\(\)](#), [drill_opts\(\)](#), [drill_profile\(\)](#), [drill_query\(\)](#), [drill_settings_reset\(\)](#), [drill_set\(\)](#), [drill_stats\(\)](#), [drill_status\(\)](#), [drill_storage\(\)](#), [drill_system_reset\(\)](#), [drill_threads\(\)](#), [drill_version\(\)](#)

Examples

```
## Not run:
drill_connection() %>% drill_profiles()

## End(Not run)
```

drill_query	<i>Submit a query and return results</i>
-------------	--

Description

This function can handle REST API connections or JDBC connections. There is a benefit to calling this function for JDBC connections vs a straight call to dbGetQuery() in that the function result is a tbl_df vs a plain data.frame so you get better default printing (which can be helpful if you accidentally execute a query and the result set is huge).

Usage

```
drill_query(drill_con, query, uplift = TRUE, .progress = interactive())
```

Arguments

drill_con	drill server connection object setup by <code>drill_connection()</code> or <code>drill_jdbc()</code>
query	query to run
uplift	automatically run <code>drill_uplift()</code> on the result? (default: TRUE, ignored if <code>drill_con</code> is a <code>JDBCConnection</code> created by <code>drill_jdbc()</code>)
.progress	if TRUE (default if in an interactive session) then ask <code>httr::RETRY</code> to display a progress bar

References

[Drill documentation](#)

See Also

Other Drill direct REST API Interface: [drill_active\(\)](#), [drill_cancel\(\)](#), [drill_connection\(\)](#), [drill_functions\(\)](#), [drill_metrics\(\)](#), [drill_options\(\)](#), [drill_opts\(\)](#), [drill_profiles\(\)](#), [drill_profile\(\)](#), [drill_settings_reset\(\)](#), [drill_set\(\)](#), [drill_stats\(\)](#), [drill_status\(\)](#), [drill_storage\(\)](#), [drill_system_reset\(\)](#), [drill_threads\(\)](#), [drill_version\(\)](#)

Examples

```
try({
  drill_connection() %>%
    drill_query("SELECT * FROM cp.`employee.json` limit 5")
}, silent=TRUE)
```

drill_set	<i>Set Drill SYSTEM or SESSION options</i>
-----------	--

Description

Helper function to make it more R-like to set Drill SESSION or SYSTEM options. It handles the conversion of R types (like TRUE) to SQL types and automatically quotes parameter values (when necessary).

Usage

```
drill_set(drill_con, ..., type = c("session", "system"))
```

Arguments

drill_con	drill server connection object setup by <code>drill_connection()</code>
...	named parameters to be sent to ALTER SYSTEM or ALTER SESSION
type	set the session or system parameter

Details

If any query errors result, error messages will be presented to the console.

Value

a tbl (invisibly) with the ALTER queries sent and results, including errors.

References

[Drill documentation](#)

See Also

Other Drill direct REST API Interface: [drill_active\(\)](#), [drill_cancel\(\)](#), [drill_connection\(\)](#), [drill_functions\(\)](#), [drill_metrics\(\)](#), [drill_options\(\)](#), [drill_opts\(\)](#), [drill_profiles\(\)](#), [drill_profile\(\)](#), [drill_query\(\)](#), [drill_settings_reset\(\)](#), [drill_stats\(\)](#), [drill_status\(\)](#), [drill_storage\(\)](#), [drill_system_reset\(\)](#), [drill_threads\(\)](#), [drill_version\(\)](#)

Examples

```
## Not run:
drill_connection() %>%
  drill_set(exec.errors.verbose=TRUE, store.format="parquet", web.logs.max_lines=20000)

## End(Not run)
```

drill_settings_reset *Changes (optionally, all) session settings back to system defaults*

Description

Changes (optionally, all) session settings back to system defaults

Usage

```
drill_settings_reset(drill_con, ...)
```

Arguments

drill_con	drill server connection object setup by <code>drill_connection()</code>
...	bare name of system options to reset

References

[Drill documentation](#)

See Also

Other Drill direct REST API Interface: [drill_active\(\)](#), [drill_cancel\(\)](#), [drill_connection\(\)](#), [drill_functions\(\)](#), [drill_metrics\(\)](#), [drill_options\(\)](#), [drill_opts\(\)](#), [drill_profiles\(\)](#), [drill_profile\(\)](#), [drill_query\(\)](#), [drill_set\(\)](#), [drill_stats\(\)](#), [drill_status\(\)](#), [drill_storage\(\)](#), [drill_system_reset\(\)](#), [drill_threads\(\)](#), [drill_version\(\)](#)

Examples

```
## Not run:
drill_connection() %>% drill_settings_reset(exec.errors.verbose)

## End(Not run)
```

drill_show_files	<i>Show files in a file system schema.</i>
------------------	--

Description

Show files in a file system schema.

Usage

```
drill_show_files(drill_con, schema_spec, .progress = interactive())
```

Arguments

drill_con	drill server connection object setup by drill_connection()
schema_spec	properly quoted "filesystem.directory_name" reference path
.progress	if TRUE (default if in an interactive session) then ask <code>httr::RETRY</code> to display a progress bar

References

[Drill documentation](#)

See Also

Other Drill direct REST API Interface: [drill_show_schemas\(\)](#), [drill_use\(\)](#)

Examples

```
try({
  drill_connection() %>% drill_show_files("dfs.tmp")
}, silent=TRUE)
```

drill_show_schemas *Returns a list of available schemas.*

Description

Returns a list of available schemas.

Usage

```
drill_show_schemas(drill_con, .progress = interactive())
```

Arguments

drill_con	drill server connection object setup by drill_connection()
.progress	if TRUE (default if in an interactive session) then ask http::RETRY to display a progress bar

References

[Drill documentation](#)

See Also

Other Dill direct REST API Interface: [drill_show_files\(\)](#), [drill_use\(\)](#)

drill_stats *Get Drillbit information, such as ports numbers*

Description

Get Drillbit information, such as ports numbers

Usage

```
drill_stats(drill_con)
```

Arguments

drill_con	drill server connection object setup by drill_connection()
-----------	--

References

[Drill documentation](#)

See Also

Other Drill direct REST API Interface: [drill_active\(\)](#), [drill_cancel\(\)](#), [drill_connection\(\)](#), [drill_functions\(\)](#), [drill_metrics\(\)](#), [drill_options\(\)](#), [drill_opts\(\)](#), [drill_profiles\(\)](#), [drill_profile\(\)](#), [drill_query\(\)](#), [drill_settings_reset\(\)](#), [drill_set\(\)](#), [drill_status\(\)](#), [drill_storage\(\)](#), [drill_system_reset\(\)](#), [drill_threads\(\)](#), [drill_version\(\)](#)

Examples

```
## Not run:
drill_connection() %>% drill_stats()

## End(Not run)
```

drill_status	<i>Get the status of Drill</i>
--------------	--------------------------------

Description

Get the status of Drill

Usage

```
drill_status(drill_con)
```

Arguments

drill_con drill server connection object setup by [drill_connection\(\)](#)

Note

The output of this is in a "viewer" window

See Also

Other Drill direct REST API Interface: [drill_active\(\)](#), [drill_cancel\(\)](#), [drill_connection\(\)](#), [drill_functions\(\)](#), [drill_metrics\(\)](#), [drill_options\(\)](#), [drill_opts\(\)](#), [drill_profiles\(\)](#), [drill_profile\(\)](#), [drill_query\(\)](#), [drill_settings_reset\(\)](#), [drill_set\(\)](#), [drill_stats\(\)](#), [drill_storage\(\)](#), [drill_system_reset\(\)](#), [drill_threads\(\)](#), [drill_version\(\)](#)

Examples

```
## Not run:
drill_connection() %>% drill_status()

## End(Not run)
```

drill_storage	<i>Retrieve, modify or update storage plugin names and configurations</i>
---------------	---

Description

Retrieve, modify or remove storage plugins from a Drill instance. If you intend to modify an existing configuration it is suggested that you use the "list" or "raw" values to the as parameter to make it easier to modify them.

Usage

```
drill_storage(drill_con, plugin = NULL, as = c("tbl", "list", "raw"))
```

```
drill_mod_storage(drill_con, name, config)
```

```
drill_rm_storage(drill_con, name)
```

Arguments

drill_con	drill server connection object setup by <code>drill_connection()</code>
plugin	the assigned name in the storage plugin definition.
as	one of "tbl" or "list" or "raw". The latter two are useful if you want modify an existing storage plugin (e.g. add a workspace) via <code>drill_mod_storage()</code> .
name	name of the storage plugin configuration to create/update/remove
config	a raw 1-element character vector containing valid JSON of a complete storage spec

References

[Drill documentation](#)

See Also

Other Drill direct REST API Interface: `drill_active()`, `drill_cancel()`, `drill_connection()`, `drill_functions()`, `drill_metrics()`, `drill_options()`, `drill_opts()`, `drill_profiles()`, `drill_profile()`, `drill_query()`, `drill_settings_reset()`, `drill_set()`, `drill_stats()`, `drill_status()`, `drill_system_reset()`, `drill_threads()`, `drill_version()`

Examples

```
## Not run:
drill_connection() %>% drill_storage()
```

```
drill_connection() %>%
  drill_mod_storage(
    name = "drilldat",
    config = '
```

```

{
  "config" : {
    "connection" : "file:///",
    "enabled" : true,
    "formats" : null,
    "type" : "file",
    "workspaces" : {
      "root" : {
        "location" : "/Users/hrbrmstr/drilldat",
        "writable" : true,
        "defaultInputFormat": null
      }
    }
  },
  "name" : "drilldat"
}
')

## End(Not run)

```

drill_system_reset *Changes (optionally, all) system settings back to system defaults*

Description

Changes (optionally, all) system settings back to system defaults

Usage

```
drill_system_reset(drill_con, ..., all = FALSE)
```

Arguments

drill_con	drill server connection object setup by <code>drill_connection()</code>
...	bare name of system options to reset
all	if TRUE, all parameters are reset (... is ignored)

References

[Drill documentation](#)

See Also

Other Drill direct REST API Interface: [drill_active\(\)](#), [drill_cancel\(\)](#), [drill_connection\(\)](#), [drill_functions\(\)](#), [drill_metrics\(\)](#), [drill_options\(\)](#), [drill_opts\(\)](#), [drill_profiles\(\)](#), [drill_profile\(\)](#), [drill_query\(\)](#), [drill_settings_reset\(\)](#), [drill_set\(\)](#), [drill_stats\(\)](#), [drill_status\(\)](#), [drill_storage\(\)](#), [drill_threads\(\)](#), [drill_version\(\)](#)

Examples

```
## Not run:  
drill_connection() %>% drill_system_reset(all=TRUE)  
  
## End(Not run)
```

drill_threads

Get information about threads

Description

Get information about threads

Usage

```
drill_threads(drill_con)
```

Arguments

drill_con drill server connection object setup by drill_connection()

Note

The output of this is in a "viewer" window

See Also

Other Drill direct REST API Interface: [drill_active\(\)](#), [drill_cancel\(\)](#), [drill_connection\(\)](#), [drill_functions\(\)](#), [drill_metrics\(\)](#), [drill_options\(\)](#), [drill_opts\(\)](#), [drill_profiles\(\)](#), [drill_profile\(\)](#), [drill_query\(\)](#), [drill_settings_reset\(\)](#), [drill_set\(\)](#), [drill_stats\(\)](#), [drill_status\(\)](#), [drill_storage\(\)](#), [drill_system_reset\(\)](#), [drill_version\(\)](#)

Examples

```
## Not run:  
drill_connection() %>% drill_threads()  
  
## End(Not run)
```

drill_up	<i>Start a Dockerized Drill Instance</i>
----------	--

Description

This is a "get you up and running quickly" helper function as it only runs a standalone mode Drill instance and is optionally removed after the container is stopped. You should customize your own Drill containers based on the one at [Drill's Docker Hub](#).

Usage

```
drill_up(  
  image = "drill/apache-drill:1.16.0",  
  container_name = "drill",  
  data_dir = getwd(),  
  remove = TRUE  
)  
  
drill_down(id)
```

Arguments

image	Drill image to use. Must be a valid image from Drill's Docker Hub . Defaults to most recent Drill docker image.
container_name	naem for the container. Defaults to "drill".
data_dir	valid path to a place where your data is stored; defaults to the value of <code>getwd()</code> . This will be <code>path.expand()</code> ed and mapped to /data in the container. This will be mapped to the dfs storage plugin as the dfs.d workspace.
remove	remove the Drill container instance after it's stopped? Defaults to TRUE since you shouldn't be relying on this in production.
id	the id of the Drill container

Details

The path specified in `data_dir` will be mapped inside the container as /data and a new dfs storage workspace will created (dfs.d) that maps to /data and is writable.

Use `drill_down()` to stop a running Drill container by container id (full or partial).

Value

a stevedore docker object (invisibly) which *you* are responsible for killing with the `$stop()` function or from the Docker command line (in interactive mode the docker container ID is printed as well).

Note

this requires a working Docker setup on your system and it is *highly suggested* you docker pull it yourself before running this function.

See Also

Other Drill Docker functions: [killall_drill\(\)](#), [showall_drill\(\)](#)

Examples

```
## Not run:  
drill_up(data_dir = "~/Data")  
  
## End(Not run)
```

drill_uplift	<i>Turn columnar query results into a type-converted tbl</i>
--------------	--

Description

If you know the result of `drill_query()` will be a data frame, then you can pipe it to this function to pull out rows and automatically type-convert it.

Usage

```
drill_uplift(query_result)
```

Arguments

`query_result` the result of a call to `drill_query()`

Details

Not really intended to be called directly, but useful if you accidentally ran `drill_query()` without `uplift=TRUE` but want to then convert the structure.

References

[Drill documentation](#)

drill_use	<i>Change to a particular schema.</i>
-----------	---------------------------------------

Description

Change to a particular schema.

Usage

```
drill_use(drill_con, schema_name, .progress = interactive())
```

Arguments

drill_con	drill server connection object setup by <code>drill_connection()</code>
schema_name	A unique name for a Drill schema. A schema in Drill is a configured storage plugin, such as hive, or a storage plugin and workspace.
.progress	if TRUE (default if in an interactive session) then ask <code>httpr::RETRY</code> to display a progress bar

References

[Drill documentation](#)

See Also

Other Drill direct REST API Interface: [drill_show_files\(\)](#), [drill_show_schemas\(\)](#)

drill_version	<i>Identify the version of Drill running</i>
---------------	--

Description

Identify the version of Drill running

Usage

```
drill_version(drill_con)
```

Arguments

drill_con	drill server connection object setup by <code>drill_connection()</code>
-----------	---

References

[Drill documentation](#)

See Also

Other Drill direct REST API Interface: [drill_active\(\)](#), [drill_cancel\(\)](#), [drill_connection\(\)](#), [drill_functions\(\)](#), [drill_metrics\(\)](#), [drill_options\(\)](#), [drill_opts\(\)](#), [drill_profiles\(\)](#), [drill_profile\(\)](#), [drill_query\(\)](#), [drill_settings_reset\(\)](#), [drill_set\(\)](#), [drill_stats\(\)](#), [drill_status\(\)](#), [drill_storage\(\)](#), [drill_system_reset\(\)](#), [drill_threads\(\)](#)

Examples

```
## Not run:
drill_connection() %>% drill_version()

## End(Not run)
```

```
format.DrillConnection
```

A concise character representation (label) for a DrillConnection

Description

A concise character representation (label) for a DrillConnection

Usage

```
## S3 method for class 'DrillConnection'
format(x, ...)
```

Arguments

x	a DrillConnection
...	ignored

```
killall_drill
```

Prune all dead and running Drill Docker containers

Description

This is a destructive function. It will stop **any** Docker container that is based on an image matching a runtime command of "bin/drill-embedded". It's best used when you had a session forcefully interrupted and had been using the R helper functions to start/stop the Drill Docker container. You may want to consider using the Docker command-line interface to perform this work manually.

Usage

```
killall_drill()
```

See Also

Other Drill Docker functions: [drill_up\(\)](#), [showall_drill\(\)](#)

print.drill_conn	<i>Print function for drill_conn objects</i>
------------------	--

Description

Print function for drill_conn objects

Usage

```
## S3 method for class 'drill_conn'
print(x, ...)
```

Arguments

x	a drill_conn object made with drill_connection()
...	unused

sergeant-exports	<i>sergeant exported operators</i>
------------------	------------------------------------

Description

The following functions are imported and then re-exported from the sergeant package to enable use of the magrittr pipe operator with no additional library calls

showall_drill	<i>Show all dead and running Drill Docker containers</i>
---------------	--

Description

This function will show *all* Docker containers that are based on an image matching a runtime command of "bin/drill-embedded".

Usage

```
showall_drill()
```

See Also

Other Drill Docker functions: [drill_up\(\)](#), [killall_drill\(\)](#)

 src_drill

Connect to Drill (dplyr)

Description

Use `src_drill()` to connect to a Drill cluster and `tbl()` to connect to a fully-qualified "table reference". The vast majority of Drill SQL functions have also been made available to the `dplyr` interface. If you have custom Drill SQL functions that need to be implemented please file an issue on GitHub.

Usage

```
src_drill(
  host = Sys.getenv("DRILL_HOST", "localhost"),
  port = as.integer(Sys.getenv("DRILL_PORT", 8047L)),
  ssl = FALSE,
  username = NULL,
  password = NULL
)
```

```
## S3 method for class 'src_drill'
tbl(src, from, ...)
```

Arguments

<code>host</code>	Drill host (will pick up the value from <code>DRILL_HOST</code> env var)
<code>port</code>	Drill port (will pick up the value from <code>DRILL_PORT</code> env var)
<code>ssl</code>	use ssl?
<code>username, password</code>	if not NULL the credentials for the Drill service.
<code>src</code>	A Drill "src" created with <code>src_drill()</code>
<code>from</code>	A Drill view or table specification
<code>...</code>	Extra parameters

Note

This is a DBI wrapper around the Drill REST API.

See Also

Other Drill REST API (dplyr): [drill_custom_functions](#), [src_tbls.src_drill\(\)](#)

Other Drill REST API (dplyr): [drill_custom_functions](#), [src_tbls.src_drill\(\)](#)

Examples

```

try({
db <- src_drill("localhost", 8047L)

print(db)
## src: DrillConnection
## tbls: INFORMATION_SCHEMA, cp.default, dfs.default, dfs.root, dfs.tmp, sys

emp <- tbl(db, "cp.`employee.json`")

count(emp, gender, marital_status)
## # Source: lazy query [?? x 3]
## # Database: DrillConnection
## # Groups: gender
## marital_status gender n
## <chr> <chr> <int>
## 1 S F 297
## 2 M M 278
## 3 S M 276

# Drill-specific SQL functions are also available
select(emp, full_name) %>%
  mutate(
    loc = strpos(full_name, "a"),
    first_three = substr(full_name, 1L, 3L),
    len = length(full_name),
    rx = regexp_replace(full_name, "[aeiouAEIOU]", "*"),
    rnd = rand(),
    pos = position("en", full_name),
    rpd = rpad(full_name, 20L),
    rpdw = rpad_with(full_name, 20L, "*"))
## # Source: lazy query [?? x 9]
## # Database: DrillConnection
## loc full_name len rpdw pos rx
## <int> <chr> <int> <chr> <int> <chr>
## 1 0 Sheri Nowmer 12 Sheri Nowmer***** 0 Sh*r* N*wm*r
## 2 0 Derrick Whelply 15 Derrick Whelply***** 0 D*rr*r*ck Wh*lp*ly
## 3 5 Michael Spence 14 Michael Spence***** 11 M*ch**l Sp*nc*
## 4 2 Maya Gutierrez 14 Maya Gutierrez***** 0 M*y* G*t**rr*z
## 5 7 Roberta Damstra 15 Roberta Damstra***** 0 R*b*rt* D*mstr*
## 6 7 Rebecca Kanagaki 16 Rebecca Kanagaki**** 0 R*b*cc* K*n*g*k*
## 7 0 Kim Brunner 11 Kim Brunner***** 0 K*m Br*nn*r
## 8 6 Brenda Blumberg 15 Brenda Blumberg***** 3 Br*nd* Bl*mb*rg
## 9 2 Darren Stanz 12 Darren Stanz***** 5 D*rr*n St*nz
## 10 4 Jonathan Murraiin 17 Jonathan Murraiin*** 0 J*n*th*n M*rr***n
## # ... with more rows, and 3 more variables: rpd <chr>, rnd <dbl>, first_three <chr>
}, silent=TRUE)

```

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