

Package ‘mantaRSDK’

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Type Package

Title Joyent Manta Storage Service R Software Development Kit

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Depends R (>= 3.0.0),RCurl,RJSONIO,Rbunyan

Description Manta R SDK. Upload, Download and manage files,native R data and R workspaces on the Manta Storage Service
Compute on your data in the cloud with UNIX Map/Reduce from R.
Core functions communicate via the Manta REST API using RCurl.
GitHub - github.com/joyent/mantaRSDK

SystemRequirements Node.js, manta-node

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URL www.joyent.com

BugReports <https://github.com/joyent/mantaRSDK/issues>

VignetteBuilder knitr

LazyData true

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mantaAccount	<i>Changes current Manta account information</i>
--------------	--

Description

The Manta account is initially obtained from three environment variables:
\$MANTA_USER, \$MANTA_KEY, \$MANTA_URL.
The ssl key location is obtained by default on Unix/Linux from
/\$HOME/.ssh/id_rsa
or on Windows from:
C:\Users\username\.ssh\ir_rsa
The Manta datacentre enviroment variable is:
\$MANTA_URL

Usage

```
mantaAccount(account, json, verbose = FALSE)
```

Arguments

account	list, optional. Input R account values.
json	character, optional. Input JSON account values.
verbose	logical, optional. Show HTTP communication. FALSE by default.

Value

logical TRUE if account changed and working. Reverts to previous working account if it cannot connect wit the new information returns FALSE for both cases - account reverted or account is left in a state where it cannot communicate to the server.

See Also

[mantaWhoami](#)

Other mantaAccount: [mantaGetLimits](#); [mantaSetLimits](#); [mantaWhoami](#)

Examples

```
## Not run:
## To see/save current account settings:
account <- mantaWhoami(all = TRUE)

## then use:

mantaAccount(account) ## to set the modified account

## Account information may contain 1-4 key-value pairs.

## To see/save current account settings as JSON:

account <- mantaWhoami(all = TRUE, json = TRUE)

## then use:

mantaAccount(json = account) to set that account

## To set a non default SSH private key location on Windows

mysslkey <- list(SSL_KEY_PATH = "C:\\Users\\myacct\\.ssh\\my_priv_rsa")
mantaAccount(mysslkey)

## End(Not run)
```

mantaAttempt

raw REST API Manta Caller with exception handling for internal use.

Description

Exported to access HTTPS Manta API and metadata retrieval.

Usage

```
mantaAttempt(action, method, headers, returncode, limit, marker, json = TRUE,
  test = FALSE, silent = FALSE, verbose = FALSE)
```

Arguments

action	character, optional. Path to a manta object or directory with optional query terms. When unspecified, uses current Manta Directory and returns JSON listing values for the directory.
method	character, optional. Default is "GET", passed "GET", "POST", "OPTIONS", "PUT", "DELETE" or "HEAD" from higher level library callers.
headers,	array of named characters, optional. The headers follow the RCurl structure of vector of characters where HTTP header tags are the names, values as named characters, no semicolons or delimiters.
returncode,	character, optional. Set to expected HTTP return code, e.g. "200", "204" - used when test is TRUE.
limit,	numeric, optional. Set to limit number of returned listed JSON lines - number of directory entries Otherwise uses default value in mantaSetLimits

marker,	character, optional. Name or id character value of directory entry to start next listing segment of length limit.
json	logical, optional. FALSE means return R data, TRUE means return JSON data.
test	logical, optional, Set to TRUE to return logical as to whether the request passed or failed. Also affects the behavior of the silent parameter. See Value for output table.
silent	logical, optional. Controls whether > "400" service errors are emitted by cat or stop depending on the value of test. See Value for output table.
verbose	logical, optional. Passed to Rcurl GetURL, Set to TRUE to see background HTTPS REST communication.

Details

If test == TRUE, it returns pass/fail logical If passed a Manta subdirectory, it returns the directory JSON according to the length limit set with mantaSetLimits

Note getURL verbose = TRUE writes to UNIX stderr which is invisible on Windows R.

Value

The Manta reply data in JSON or R format, OR a logical value if test = TRUE. Return values and Manta server error message display or stop behavior depends on values of test, silent:

```
test = TRUE, silent = TRUE
logical - success returned, Errors are logged.
test = TRUE, silent = FALSE
logical - success returned, Errors are logged, emitted to console.
test = FALSE, silent = TRUE
data returned, Errors are logged, empty data on error.
test = FALSE, silent = FALSE data returned, Errors are logged, stop() on 400 series errors.
```

mantaCat	<i>Retrieves object from Manta and uses cat to print contents to the R console. mantaCat is intended for text files, use at your own risk on binary data.</i>
----------	---

Description

Retrieves object from Manta and uses cat to print contents to the R console. mantaCat is intended for text files, use at your own risk on binary data.

Usage

```
mantaCat(mantapath, sep = "\n")
```

Arguments

mantapath	vector of character, required.
sep	character, required, separator.

See Also

[mantaJob.outputs.cat](#), [mantaJob.errors.stderr](#)

Other mantaGet: [mantaGet](#); [mantaLoad.ws](#); [mantaLoad](#); [mantaSave](#); [mantaSource](#)

Examples

```
## Not run:
data <- runif(100)
mantaDump("data")
mantaCat("dumpdata.R")
mantaRm("dumpdata.R")

## End(Not run)
```

mantaDump	<i>Uses dump to upload text parsable R data to Manta Storage Service.</i>
-----------	---

Description

mantaDump is a wrapper for dump and mantaXfer, which implements the RCURL transfer

Usage

```
mantaDump(list, mantapath = "dumpdata.R", md5 = FALSE, headers,
  durability = 2, envir = parent.frame(), control = "all",
  evaluate = TRUE, info = TRUE, verbose = FALSE)
```

Arguments

list	required. See dump. List of R objects to dump. Name of R object in quotes works as well.
mantapath	optional. Default is dumpdata.R. Specify full Manta path to where uploaded R source will be saved or Manta object name in current working Manta directory. If no extension is provided on the filename, or a non R data style extension, .R is appended to the end of the filename.
md5	logical. Test md5 hash of R dump tempfile before/after upload.
headers	Headers for HTTP transfer, in RCur1 style. See mantaPut . User metadata headers may be provided, E.g.: Avoid supplying the content-type header, which is set to the R source code text/R-code and the durability-level header which is handled via the durability parameter.
durability	optional. Number of copies to store on Manta (2-6). If not provided, uses saved value from mantaSetLimits , system default is 2.
envir	optional. See dump. Environment of R object being passed.
control	optional. See dump.
evaluate	optional. See dump.
info	logical required. Set to FALSE to silence console output messages.
verbose	logical, optional. Passed to RCur1 GetURL, Set to TRUE to see background HTTPS REST communication on stderr Note this is not visible on Windows.

Value

TRUE or FALSE depending on success of upload.

See Also

[mantaSource](#)
Other mantaPut: [mantaPut](#); [mantaSave.image](#); [mantaSave.ws](#)

Examples

```
## Not run:  
data <- runif(100)  
mantaDump("data")  
mantaCat("dumpdata.R")  
mantaRm("dumpdata.R")  
  
## End(Not run)
```

mantaduse	<i>mantaLs and mantaFind callback</i>
-----------	---------------------------------------

Description

mantaLs and mantaFind callback

Usage

```
mantaduse(line)
```

Arguments

line	R structured directory line
------	-----------------------------

mantaExists	<i>Tests to see if a Manta object or subdirectory exists.</i>
-------------	---

Description

Like a Unix stat command. Does not download object contents.

Usage

```
mantaExists(mantapath, d = FALSE)
```

Arguments

mantapath	character, required. A full path specifying a Manta object or directory, or the name of an object/subdir in the current Manta working directory.
d	logical. Set TRUE to confirm that entity specified in mantapath exists and is a directory.

Value

logical.

See Also

Other mantaLs: [mantaLs.du](#); [mantaLs.l](#); [mantaLs.n](#); [mantaLs.paths](#); [mantaLs.url](#); [mantaLs](#)

Examples

```
## Not run:
data <- runif(100)
mantaDump("data")
mantaExists("dumpdata.R")
mantaRm("dumpdata.R")
mantaExists("dumpdata.R")
mantaMkdir("testsubidrectory")
mantaExists("testsubdirectory", d = TRUE)
mantaRmdir("testsubdirectory")
mantaExists("testsubdirectory", d = TRUE)
files <- c("file1", "file2", "file3")
sapply(files, mantaExists)

## End(Not run)
```

mantaExpandPath	<i>Checks, expands ~~ to value of \$MANTA_USER, and applies curlEscape.</i>
-----------------	---

Description

Not exported. Returns "" if subdirectory specified incorrectory or if the directory cannot exist on the system as specified.

Usage

```
mantaExpandPath(m_path, verbose = FALSE)
```

Arguments

m_path	character, required.
verbose	logical, optional.

mantaFind	<i>Recursive find tool for retrieving matching objects/subdirs from Manta hierarchy.</i>
-----------	--

Description

Search for object or directory names with regular expressions (using R grep). Sort listings by filename, time, or size. Report entries within a time window. Report disk size, number of objects, number of subdirectories.

Usage

```
mantaFind(mantapath, grepfor, entries, l = "paths", items = "o",
  level = 0, sortby = "none", starttime, endtime, decreasing = FALSE,
  ignore.case = FALSE, perl = FALSE, verbose = FALSE, info = TRUE,
  findroot = 1)
```

Arguments

mantapath	character, optional. Current subdirectory set by mantaSetwd is used, otherwise specify full Manta path to subdirectory. Supports ~~ expansion to your Manta username, e.g. "~/public" and UTF-8 encoded characters.
grepfor	character optional. Regular expression for grep name search. Ignored for reprocessed trees. Uses R regexps, N.B. use "[.]txt", not "*.txt" to match filename extensions.
entries	optional. Saved mantaFind R data. For reprocessing/reformatting retrieved R tree information saved with mantaFind(l=R)->tree.
l	character optional. Specifies listing output format by paths, n, du, R. paths is a listing of full Manta object pathnames needed for mantaJobs. l is a Unix-y listing style with full pathnames. sizes is a listing of sizes in bytes, no pathnames. size_path is a listing of size [space] path. URL is a listing of the URLs (only for objects in ~/public/). n is the number of entries found. du is the number of bytes used by objects (not counting redundancy levels!). R is the R object collected by mantaFind with mtime parsed, full path names. mantaFind(l=R) -> tree saves the directory tree for reprocessing with mantaFind(mantapath, en
items	character optional. a for all, d for directory, o for object.
level	integer optional. Maximum number of subdirectory child levels to visit, in other words, the depth of the hierarchical directory search. If level <= 0, search depth is unrestricted. Level parameter is ignored on reprocessed search trees.
sortby	character, optional. Specify none, name, time, or size. Sorting selection is independent of time-bounded find.
starttime	POSIXlt time, optional. Start time for time-bounded find. When used without endtime, endtime is set to current UTC time.
endtime	POSIXlt time, optional. End time for time-bounded find. When used without starttime, starttime is set to start of Manta service

decreasing	logical, optional. Argument passed to R order for sorting.
ignore.case	logical, optional. Argument passed to R grep for searching.
perl	logical, optional. Argument passed to R grep for searching.
verbose	logical, optional. Verbose RCurl HTTP data output on Unix.
info	logical, optional. Console status messages about child path progress.
findroot	integer, internal. Indicates nested calls, not to be used.

See Also

[mantaLs](#), [mantaLs.paths](#), [mantaLs.l](#), [mantaLs.n](#), [mantaLs.du](#), [mantaLs.url](#)

Other mantaFind: [mantaFind.du](#); [mantaFind.l](#); [mantaFind.n](#); [mantaFind.sizepath](#); [mantaFind.sizes](#); [mantaFind.url](#)

Examples

```
## Not run:
## Find all objects stored in the directory tree starting
## at subdirectory specified by mantaSetwd(),
## return full Manta path to each object:
mantaFind()

## Find all objects ending in .jpg or .JPG
## in your Manta ~/public directory and any child sub directories,
## (but not grandchildren), show a UNIX-like result sorted by file size:
mantaFind("~/public", l = 1, items = o, grepfor = "[.]jpg",
level = 2, ignore.case = TRUE, sortby = size)

## Download all objects in current Manta directory, non recursive find:
mantaGet(mantaFind(level = 1))

## Plot a histogram of all file sizes in your Manta ~/stor directory tree.
hist(mantaFind("~/stor", l = sizes))

## End(Not run)
```

mantaFind.du	<i>Recursive find tool for retrieving matching objects/subdirs from Manta hierarchy. Output is disk utilized in bytes NOT counting redundancy levels.</i>
--------------	---

Description

Search for object or directory names with regular expressions (using R grep). Reports disk size.

Usage

```
mantaFind.du(mantapath, grepfor, entries, items = "o", level = 0, starttime,
endtime, ignore.case = FALSE, perl = FALSE, verbose = FALSE,
info = TRUE)
```

Arguments

mantapath	character, optional. Current subdirectory set by mantaSetwd is used, otherwise specify full Manta path to subdirectory. Supports ~ expansion to your Manta username, e.g. "~/public" and UTF-8 encoded characters.
grepfor	character optional. Regular expression for grep name search. Ignored for reprocessed trees. Uses R regexps, N.B. use "[.]txt", not "*.txt" to match filename extensions.
entries	optional. Saved mantaFind R data. For reprocessing/reformatting retrieved R tree information saved with mantaFind(l=R)->tree.
items	character optional. a for all, d for directory, o for object.
level	integer optional. Maximum number of subdirectory child levels to visit, in other words, the depth of the hierarchical directory search. If level <= 0, search depth is unrestricted. Level parameter is ignored on reprocessed search trees.
starttime	POSIXlt time, optional. Start time for time-bounded find. When used without endtime, endtime is set to current UTC time.
endtime	POSIXlt time, optional. End time for time-bounded find. When used without starttime, starttime is set to start of Manta service
ignore.case	logical, optional. Argument passed to R grep for searching.
perl	logical, optional. Argument passed to R grep for searching.
verbose	logical, optional. Verbose RCurl HTTP data output on Unix.
info	logical, optional. Console status messages about child path progress.

See Also

[mantaLs.du](#)

Other mantaFind: [mantaFind.l](#); [mantaFind.n](#); [mantaFind.sizepath](#); [mantaFind.sizes](#); [mantaFind.url](#); [mantaFind](#)

mantaFind.l	<i>Recursive find tool for retrieving matching objects/subdirs from Manta hierarchy. Output is long ls -o unix-y style listing with full pathnames. Search for object or directory names with regular expressions (using R grep). Sort listings by filename, time, or size.</i>
-------------	---

Description

Recursive find tool for retrieving matching objects/subdirs from Manta hierarchy. Output is long ls -o unix-y style listing with full pathnames. Search for object or directory names with regular expressions (using R grep). Sort listings by filename, time, or size.

Usage

```
mantaFind.l(mantapath, grepfor, entries, items = "o", level = 0,
  sortby = "none", starttime, endtime, decreasing = FALSE,
  ignore.case = FALSE, perl = FALSE, verbose = FALSE, info = TRUE)
```

Arguments

mantapath	character, optional. Current subdirectory set by mantaSetwd is used, otherwise specify full Manta path to subdirectory. Supports ~~ expansion to your Manta username, e.g. "~/public" and UTF-8 encoded characters.
grepfor	character optional. Regular expression for grep name search. Ignored for reprocessed trees. Uses R regexps, N.B. use "[.]txt", not "*.txt" to match filename extensions.
entries	optional. Saved mantaFind R data. For reprocessing/reformatting retrieved R tree information saved with mantaFind(l=R)->tree.
items	character optional. a for all, d for directory, o for object.
level	integer optional. Maximum number of subdirectory child levels to visit, in other words, the depth of the hierarchical directory search. If level <= 0, search depth is unrestricted. Level parameter is ignored on reprocessed search trees.
sortby	character, optional. Specify none, name, time, or size. Sorting selection is independent of time-bounded find.
starttime	POSIXlt time, optional. Start time for time-bounded find. When used without endtime, endtime is set to current UTC time.
endtime	POSIXlt time, optional. End time for time-bounded find. When used without starttime, starttime is set to start of Manta service
decreasing	logical, optional. Argument passed to R order for sorting.
ignore.case	logical, optional. Argument passed to R grep for searching.
perl	logical, optional. Argument passed to R grep for searching.
verbose	logical, optional. Verbose RCurl HTTP data output on Unix.
info	logical, optional. Console status messages about child path progress.

See Also

Other mantaFind: [mantaFind.du](#); [mantaFind.n](#); [mantaFind.sizepath](#); [mantaFind.sizes](#); [mantaFind.url](#); [mantaFind](#)

mantaFind.n	<i>Recursive find tool for retrieving matching objects/subdirs from Manta hierarchy. Output is number of found entries.</i>
-------------	---

Description

Search for object or directory names with regular expressions (using R grep). Reports number of objects.

Usage

```
mantaFind.n(mantapath, grepfor, entries, items = "o", level = 0, starttime,
  endtime, ignore.case = FALSE, perl = FALSE, verbose = FALSE,
  info = TRUE)
```

Arguments

mantapath	character, optional. Current subdirectory set by mantaSetwd is used, otherwise specify full Manta path to subdirectory. Supports ~~ expansion to your Manta username, e.g. "~/public" and UTF-8 encoded characters.
grepfor	character optional. Regular expression for grep name search. Ignored for reprocessed trees. Uses R regexps, N.B. use "[.]txt", not "*.txt" to match filename extensions.
entries	optional. Saved mantaFind R data. For reprocessing/reformatting retrieved R tree information saved with mantaFind(l=R)->tree.
items	character optional. a for all, d for directory, o for object.
level	integer optional. Maximum number of subdirectory child levels to visit, in other words, the depth of the hierarchical directory search. If level <= 0, search depth is unrestricted. Level parameter is ignored on reprocessed search trees.
starttime	POSIXlt time, optional. Start time for time-bounded find. When used without endtime, endtime is set to current UTC time.
endtime	POSIXlt time, optional. End time for time-bounded find. When used without starttime, starttime is set to start of Manta service
ignore.case	logical, optional. Argument passed to R grep for searching.
perl	logical, optional. Argument passed to R grep for searching.
verbose	logical, optional. Verbose RCurl HTTP data output on Unix.
info	logical, optional. Console status messages about child path progress.

See Also

[mantaLs.n](#)

Other mantaFind: [mantaFind.du](#); [mantaFind.l](#); [mantaFind.sizepath](#); [mantaFind.sizes](#); [mantaFind.url](#); [mantaFind](#)

mantaFind.sizepath	<i>Recursive find tool for retrieving matching objects/subdirs from Manta hierarchy. Output is R list of size and full Manta pathnames.</i>
--------------------	---

Description

Search for object or directory names with regular expressions (using R grep). Sort listings by filename, time, or size.

Usage

```
mantaFind.sizepath(mantapath, grepfor, entries, items = "o", level = 0,
  sortby = "none", starttime, endtime, decreasing = FALSE,
  ignore.case = FALSE, perl = FALSE, verbose = FALSE, info = TRUE)
```

Arguments

mantapath	character, optional. Current subdirectory set by mantaSetwd is used, otherwise specify full Manta path to subdirectory. Supports ~~ expansion to your Manta username, e.g. "~/public" and UTF-8 encoded characters.
grepfor	character optional. Regular expression for grep name search. Ignored for reprocessed trees. Uses R regexps, N.B. use "[.]txt", not "*.txt" to match filename extensions.
entries	optional. Saved mantaFind R data. For reprocessing/reformatting retrieved R tree information saved with mantaFind(l=R)->tree.
items	character optional. a for all, d for directory, o for object.
level	integer optional. Maximum number of subdirectory child levels to visit, in other words, the depth of the hierarchical directory search. If level <= 0, search depth is unrestricted. Level parameter is ignored on reprocessed search trees.
sortby	character, optional. Specify none, name, time, or size. Sorting selection is independent of time-bounded find.
starttime	POSIXlt time, optional. Start time for time-bounded find. When used without endtime, endtime is set to current UTC time.
endtime	POSIXlt time, optional. End time for time-bounded find. When used without starttime, starttime is set to start of Manta service
decreasing	logical, optional. Argument passed to R order for sorting.
ignore.case	logical, optional. Argument passed to R grep for searching.
perl	logical, optional. Argument passed to R grep for searching.
verbose	logical, optional. Verbose RCurl HTTP data output on Unix.
info	logical, optional. Console status messages about child path progress.

See Also

Other mantaFind: [mantaFind.du](#); [mantaFind.l](#); [mantaFind.n](#); [mantaFind.sizes](#); [mantaFind.url](#); [mantaFind](#)

mantaFind.sizes	<i>Recursive find tool for retrieving matching objects/subdirs from Manta hierarchy. Output is vector of file sizes in bytes, no file or path names.</i>
-----------------	--

Description

Searching for object or directory names with regular expressions (using R grep). File size information does not use durability calculation (i.e. file size for one copy only)

Usage

```
mantaFind.sizes(mantapath, grepfor, entries, items = "o", level = 0,
  sortby = "none", starttime, endtime, decreasing = FALSE,
  ignore.case = FALSE, perl = FALSE, verbose = FALSE, info = TRUE)
```

Arguments

mantapath	character, optional. Current subdirectory set by mantaSetwd is used, otherwise specify full Manta path to subdirectory. Supports ~~ expansion to your Manta username, e.g. "~/public" and UTF-8 encoded characters.
grepfor	character optional. Regular expression for grep name search. Ignored for reprocessed trees. Uses R regexps, N.B. use "[.]txt", not "*.txt" to match filename extensions.
entries	optional. Saved mantaFind R data. For reprocessing/reformatting retrieved R tree information saved with mantaFind(l=R)->tree.
items	character optional. a for all, d for directory, o for object.
level	integer optional. Maximum number of subdirectory child levels to visit, in other words, the depth of the hierarchical directory search. If level <= 0, search depth is unrestricted. Level parameter is ignored on reprocessed search trees.
sortby	character, optional. Specify none, name, time, or size. Sorting selection is independent of time-bounded find.
starttime	POSIXlt time, optional. Start time for time-bounded find. When used without endtime, endtime is set to current UTC time.
endtime	POSIXlt time, optional. End time for time-bounded find. When used without starttime, starttime is set to start of Manta service
decreasing	logical, optional. Argument passed to R order for sorting.
ignore.case	logical, optional. Argument passed to R grep for searching.
perl	logical, optional. Argument passed to R grep for searching.
verbose	logical, optional. Verbose RCurl HTTP data output on Unix.
info	logical, optional. Console status messages about child path progress.

See Also

Other mantaFind: [mantaFind.du](#); [mantaFind.l](#); [mantaFind.n](#); [mantaFind.sizepath](#); [mantaFind.url](#); [mantaFind](#)

mantaFind.url	<i>Recursive find tool for retrieving matching objects/subdirs from Manta hierarchy. Output is URL format listing with full pathnames.</i>
---------------	--

Description

Public HTTPS access is to objects in ~/public subdirectory only. ~/stor objects are not accessible. Search for object or directory names with regular expressions (using R grep). Sort listings by filename, time, or size.

Usage

```
mantaFind.url(mantapath, grepfor, entries, items = "o", level = 0,
  sortby = "none", starttime, endtime, decreasing = FALSE,
  ignore.case = FALSE, perl = FALSE, verbose = FALSE, info = TRUE)
```

Arguments

mantapath	character, optional. Current subdirectory set by mantaSetwd is used, otherwise specify full Manta path to subdirectory. Supports ~ expansion to your Manta username, e.g. "~/public" and UTF-8 encoded characters.
grepfor	character optional. Regular expression for grep name search. Ignored for reprocessed trees. Uses R regexps, N.B. use "[.]txt", not "*.txt" to match filename extensions.
entries	optional. Saved mantaFind R data. For reprocessing/reformatting retrieved R tree information saved with mantaFind(l=R)->tree.
items	character optional. a for all, d for directory, o for object.
level	integer optional. Maximum number of subdirectory child levels to visit, in other words, the depth of the hierarchical directory search. If level <= 0, search depth is unrestricted. Level parameter is ignored on reprocessed search trees.
sortby	character, optional. Specify none, name, time, or size. Sorting selection is independent of time-bounded find.
starttime	POSIXlt time, optional. Start time for time-bounded find. When used without endtime, endtime is set to current UTC time.
endtime	POSIXlt time, optional. End time for time-bounded find. When used without starttime, starttime is set to start of Manta service
decreasing	logical, optional. Argument passed to R order for sorting.
ignore.case	logical, optional. Argument passed to R grep for searching.
perl	logical, optional. Argument passed to R grep for searching.
verbose	logical, optional. Verbose RCurl HTTP data output on Unix.
info	logical, optional. Console status messages about child path progress.

See Also

[mantaLs.url](#)

Other mantaFind: [mantaFind.du](#); [mantaFind.l](#); [mantaFind.n](#); [mantaFind.sizepath](#); [mantaFind.sizes](#); [mantaFind](#)

mantaGenHeaders

Create Headers for Manta HTTPS REST requests

Description

Not exported. Creates User-Agent, Authorization, date headers. Calls [mantaGenSignature](#) to generate date and Authorization signature using openssl.

Usage

```
mantaGenHeaders()
```

Value

manta_headers HTTP headers as specified for RCurl

mantaGenSignature	<i>Get time, digest and encrypt for HTTPS authentication</i>
-------------------	--

Description

Not exported. Gets system time and converts to web time format. Implements HTTPS Signature according to Mark Cavage Draft <http://tools.ietf.org/html/draft-cavage-http-signatures-00> using system2 calls to openssl binary. Under certain conditions, Windows system2 will still have a lock on "temp_digest.bin", despite using wait = TRUE generating a permissions Warning on the file.remove command. This function is slated for replacement.

Usage

```
mantaGenSignature()
```

Value

signed time and rsa-sha256 signature

mantaGet	<i>Downloads specified Manta object(s), to file(s) or buffer.</i>
----------	---

Description

One limitation of the mantaRSDK is that it is not designed to handle large (multi-Gigabyte or larger) objects. Uploads - mantaPut - work from files, but Downloads - mantaGet - fill the R memory space to their completion before being written to a file. To download files larger than your R memory, use the Manta Node.js command line tool mget. The Node.js based Manta command line tools employ streams, so object size is not a limitation.

Usage

```
mantaGet(mantapath, filename, buffer = FALSE, metadata = FALSE,
  info = TRUE, verbose = FALSE)
```

Arguments

mantapath	vector of character, optional. Path to a manta object or object name in current working Manta directory for retrieval. Vectorized,
filename	optional. Assumes this is the target filename in the current path. Downloads file to the local path specified by getwd if full path not specified. If filename is absent, downloads to a file with same name as Manta object.
buffer	logical required. When TRUE return a buffer with data. Not supported for vectorized mantapath input.
metadata	logical optional. Set TRUE to retrieve R metadata.
info	logical. Set FALSE to suppress Downloading console messages.
verbose	logical, optional. Passed to Rcurl GetURL, Set to TRUE to see background HTTPS REST communication on stderr. Note this is not visible on Windows.

Value

TRUE or FALSE depending on success of GET transfer

See Also

[mantaPut](#)

Other mantaGet: [mantaCat](#); [mantaLoad.ws](#); [mantaLoad](#); [mantaSave](#); [mantaSource](#)

Examples

```
## Not run:
data <- runif(100)
mantaDump("data")
rm(data)
mantaGet("dumpdata.R")
mantaRm("dumpdata.R")
source("dumpdata.R")
ls()

#mantaGet(mantaLs.paths(items = o))
## Downloads the objects in your Manta working directory to your local working R directory with
## the same filenames.

#mantaGet(mantaLs.paths(items = o), metadata = TRUE)
## Downloads and return just the metadata in R format for the Manta working directory contents.

## End(Not run)
```

mantaGetLimits

Returns Manta durability level, connection timeouts and limits currently active.

Description

Reports the mantaRSDK settings structure and default/current values. Includes the number of copies of an object stored on the Manta service `durability_level` which can be from 2 to 6, the number of directory entries retrieved in one HTTPS call `max_limit` set to the maximum of 1000 by default. The other settings `recieve_timeout`, `sent_timeout` and `connect_timeout` are for HTTPS transfer sessions and are set with values in seconds.

Usage

```
mantaGetLimits(all = TRUE, durability_level = FALSE,
  connect_timeout = FALSE, send_timeout = FALSE, receive_timeout = FALSE,
  max_limit = FALSE, json = FALSE)
```

Arguments

`all` logical, optional, Get all limits values
`durability_level` logical, optional. Get durability level.

connect_timeout	logical, optional. Get connect timeout.
send_timeout,	logical, optional. Get send timeout.
receive_timeout,	logical, optional. Get receive timeout.
max_limit	logical, optional. Get the maximum number of directory entries transferred in one HTTPS call (upper limit 1000 is the default)
json	logical, optional. Set TRUE to return values in JSON

Value

JSON or R values as specified.

See Also

[mantaSetLimits](#)

Other mantaAccount: [mantaAccount](#); [mantaSetLimits](#); [mantaWhoami](#)

Examples

```
## Not run:
## Save all current settings with:
limits <- mantaGetLimits(all = TRUE)
limits
## Change one or all settings, set with:
mantaSetLimits(limits)

## End(Not run)
```

mantagetnames	<i>mantaLs and mantaFind callback</i>
---------------	---------------------------------------

Description

mantaLs and mantaFind callback

Usage

```
mantagetnames(line)
```

Arguments

line	R structured directory line
------	-----------------------------

mantagetsize	<i>mantaLs and mantaFind callback</i>
--------------	---------------------------------------

Description

mantaLs and mantaFind callback

Usage

mantagetsize(line)

Arguments

line	R structured directory line
------	-----------------------------

mantagettime	<i>mantaLs and mantaFind callback</i>
--------------	---------------------------------------

Description

mantaLs and mantaFind callback

Usage

mantagettime(line)

Arguments

line	R structured directory line
------	-----------------------------

mantaGetwd	<i>Gets current working directory on Manta.</i>
------------	---

Description

The current working directory is stored internally in mantaRSDK on your local system and is not saved. between sessions. It initializes to the root directory of private Manta storage: ~/stor.

Usage

mantaGetwd()

See Also

Other Directory: [mantaMkdir](#); [mantaRmdir](#); [mantaRm](#); [mantaSetwd.public](#); [mantaSetwd.reports](#); [mantaSetwd.stor](#); [mantaSetwd](#); [mantaSnapIn](#)

Examples

```
## Not run:
## Manta working directory
mantaGetwd()
mantaGetwd() -> tempdir
mantaSetwd.public()
mantaLs.l()
mantaSetwd(tempdir)

## End(Not run)
```

mantaInitialize	<i>Initialize Manta user variables, check SSH key file exists.</i>
-----------------	--

Description

Not Exported. Initialization of manta_globals with environment variables checks SSH private key file, sets manta cwd to ~/stor.

Usage

```
mantaInitialize(useEnv = TRUE)
```

Arguments

useEnv	logical: TRUE unless called from mantaAccount - skips getting env/system settings.
--------	--

Value

TRUE or FALSE on warn, stop on errors: missing env variables, SSH key.

mantaJob.cancel	<i>Sends Manta a cancel message to stop running job.</i>
-----------------	--

Description

Sends Manta a cancel message to stop running job.

Usage

```
mantaJob.cancel(jobid)
```

Arguments

jobid	character optional. Manta job identifier such as "70c30bab-873b-66da-ebc8-ced12bd35ac4". Default uses mantaJobs.tail to fetch the jobid of the last Manta Job run on the service.
-------	---

See Also

Other mantaJobs: [mantaJob.done](#); [mantaJob.errors.stderr](#); [mantaJob.errors](#); [mantaJob.failures](#); [mantaJob.inputs](#); [mantaJob.launch](#); [mantaJob.outputs.cat](#); [mantaJob.outputs](#); [mantaJob.setup](#); [mantaJob.status](#); [mantaJobs.running](#); [mantaJobs.tail](#); [mantaJobs](#); [mantaMap](#); [mantaReduce](#)

Examples

```
## Not run:
# Send cancel signal for last run Manta job.
mantaJob.cancel()

## End(Not run)
```

mantaJob.done	<i>Checks or polls status of a Manta job. Returns done or not as logical.</i>
---------------	---

Description

Checks or polls status of a Manta job. Returns done or not as logical.

Usage

```
mantaJob.done(jobid, poll = FALSE, sleep = 30, timeout = 600,
  silent = FALSE)
```

Arguments

jobid	character optional. Manta job identifier such as "70c30bab-873b-66da-ebc8-ced12bd35ac4". Default uses mantaJobs.tail to fetch the jobid of the last Manta Job run on the service
poll	logical. Set to TRUE to poll. Returns FALSE when poll timeout exceeded and job still running, TRUE when job finished.
sleep	integer. Sleep interval used when polling. Default is 30 seconds.
timeout	integer. Seconds after which function stops polling. Default is 600 seconds.
silent	logical required. Set to TRUE for non-interactive use of the function. N.B. Errors are logged to the bunyan buffer.

Value

TRUE when job is no longer running.
 FALSE when job running.
 NULL if job status not found.
 N.B. TRUE return does not imply job success/failure/errors, only running/done state.

See Also

Other mantaJobs: [mantaJob.cancel](#); [mantaJob.errors.stderr](#); [mantaJob.errors](#); [mantaJob.failures](#); [mantaJob.inputs](#); [mantaJob.launch](#); [mantaJob.outputs.cat](#); [mantaJob.outputs](#); [mantaJob.setup](#); [mantaJob.status](#); [mantaJobs.running](#); [mantaJobs.tail](#); [mantaJobs](#); [mantaMap](#); [mantaReduce](#)

Examples

```
## Not run:
## Test if last run job is done
mantaJob.done()
## Poll a running job till done or timed out.
mantaJob.done(poll = TRUE, sleep = 10, timeout = 60)

## End(Not run)
```

mantaJob.errors

Returns JSON Manta error messages given Manta job identifier.

Description

JSON error message return values:

Name : Type. Description.

id : String. Job id.

phase : Number. Phase number of the failure.

what : String. A human readable summary of what failed.

code : String. Programmatic error code.

message : String. Human readable error message.

stderr : String (optional). A key that saved the stderr for the given command.

key : String (optional). The input key being processed when the task failed (if the service can determine it).

Usage

```
mantaJob.errors(jobid, readable = TRUE)
```

Arguments

jobid	character optional. Manta job identifier such as "70c30bab-873b-66da-ebc8-ced12bd35ac4". Default uses mantaJobs.tail to fetch the jobid of the last Manta Job run on the service.
readable	logical. Set to FALSE to return the JSON error strings, or NULL if no errors found. Default TRUE pretty prints JSON to the console.

See Also

Other mantaJobs: [mantaJob.cancel](#); [mantaJob.done](#); [mantaJob.errors.stderr](#); [mantaJob.failures](#); [mantaJob.inputs](#); [mantaJob.launch](#); [mantaJob.outputs.cat](#); [mantaJob.outputs](#); [mantaJob.setup](#); [mantaJob.status](#); [mantaJobs.running](#); [mantaJobs.tail](#); [mantaJobs](#); [mantaMap](#); [mantaReduce](#)

Examples

```
## Not run:
## Check if the last run Manta job had errors:
mantaJob.errors()

## End(Not run)
```

```
mantaJob.errors.stderr
```

Retrieves stderr messages given Manta job identifier.

Description

When you run a Manta job, any errors that the UNIX command attempted that are written to `stderr` are archived. This function retrieves the JSON errors messages and then all `stderr` message archives for each process, then uses [mantaCat](#) to print contents of each `stderr` message to the console.

Usage

```
mantaJob.errors.stderr(jobid)
```

Arguments

jobid	character optional. Manta job identifier such as "70c30bab-873b-66da-ebc8-ced12bd35ac4". Default uses <code>mantaJobs.tail</code> to fetch the jobid of the last Manta Job run on the service
-------	---

See Also

Other `mantaJobs`: [mantaJob.cancel](#); [mantaJob.done](#); [mantaJob.errors](#); [mantaJob.failures](#); [mantaJob.inputs](#); [mantaJob.launch](#); [mantaJob.outputs.cat](#); [mantaJob.outputs](#); [mantaJob.setup](#); [mantaJob.status](#); [mantaJobs.running](#); [mantaJobs.tail](#); [mantaJobs](#); [mantaMap](#); [mantaReduce](#)

Examples

```
## Not run:
# Show all stderr messages emitted by processes of last run Manta job.
mantaJob.errors.stderr()

## End(Not run)
```

```
mantaJob.failures
```

Returns list of failures given Manta job identifier.

Description

Returns list of failures given Manta job identifier.

Usage

```
mantaJob.failures(jobid)
```

Arguments

jobid	character optional. Manta job identifier such as "70c30bab-873b-66da-ebc8-ced12bd35ac4". Default uses <code>mantaJobs.tail</code> to fetch the jobid of the last Manta Job run on the service.
-------	--

See Also

Other mantaJobs: [mantaJob.cancel](#); [mantaJob.done](#); [mantaJob.errors.stderr](#); [mantaJob.errors](#); [mantaJob.inputs](#); [mantaJob.launch](#); [mantaJob.outputs.cat](#); [mantaJob.outputs](#); [mantaJob.setup](#); [mantaJob.status](#); [mantaJobs.running](#); [mantaJobs.tail](#); [mantaJobs](#); [mantaMap](#); [mantaReduce](#)

Examples

```
## Not run:
## Check if the last run Manta job had failures:
mantaJob.failures()

## End(Not run)
```

mantaJob.inputs

Returns list of input Manta objects given Manta job identifier.

Description

Returns list of input Manta objects given Manta job identifier.

Usage

```
mantaJob.inputs(jobid)
```

Arguments

jobid	character optional. Manta job identifier such as "70c30bab-873b-66da-ebc8-ced12bd35ac4". Default uses <code>mantaJobs.tail</code> to fetch the jobid of the last Manta Job run on the service.
-------	--

See Also

Other mantaJobs: [mantaJob.cancel](#); [mantaJob.done](#); [mantaJob.errors.stderr](#); [mantaJob.errors](#); [mantaJob.failures](#); [mantaJob.launch](#); [mantaJob.outputs.cat](#); [mantaJob.outputs](#); [mantaJob.setup](#); [mantaJob.status](#); [mantaJobs.running](#); [mantaJobs.tail](#); [mantaJobs](#); [mantaMap](#); [mantaReduce](#)

Examples

```
## Not run:
## See the list of of the last run Manta job inputs:
mantaJob.inputs()

## End(Not run)
```

mantaJob.launch	<i>The interface from which compute Jobs are launched.</i>
-----------------	--

Description

Submits R format Manta Job specification, runs Job, sends inputs if specified, closes inputs, polls Job status, returns Job status JSON.

Usage

```
mantaJob.launch(inputs, job, batchsize = 500, watch = TRUE, sleep = 15,
  watchtimeout = 600, silent = FALSE, verbose = FALSE)
```

Arguments

inputs	vector of character optional. List of inputs as a vector of character, each containing valid paths to Manta objects as the intended job input files. You may use output from <code>mantaFind</code> or <code>mantaList.paths</code> here. If you have no inputs, your initial Job task must be a <code>mantaReduce</code> step.
job	required. The R job structure as created with <code>mantaJob.setup</code> and Map and Reduce job tasks as defined therein by one or more <code>mantaMap</code> and/or <code>mantaReduce</code> steps. More information and parameters are explained in the help for these three functions.
batchsize	numeric. Maximum number of input object paths to upload in one batch to the running job. This function sends inputs in batches until they are all sent. Default is 500.
watch	logical. When TRUE calls <code>mantaJob.done</code> in polling mode, after job is initiated, sleeping for for sleep seconds up to the duration of the watchtimeout value in seconds. This causes the function to wait until the job is done to return, or until timed out. Timeout does not imply job success or failure.
sleep	integer. Number of seconds to wait between status requests in polling mode when watch is TRUE. Default is 15 seconds.
watchtimeout	integer. Number of seconds after which polling ends. Passed to <code>mantaJob.done</code> when watch is set to TRUE. Default is 10 minutes (600 seconds).. If watchtimeout is exceeded, it means the job is still running or queued on Manta. <code>mantaJob.done(poll = TRUE)</code> or <code>mantaJob.status</code> can be called afterward for more monitoring.
silent	logical. Suppress console messages, does not affect verbose setting.
verbose	logical optional. Passed to RCURL to reveal HTTP communication.

Details

Job is created by `mantaJob.setup` and tasks as defined therein by `mantaMap`, and/or `mantaReduce` functions. Note that Manta tasks are UNIX shell commands, not native R commands.

Value

Returns a Manta status JSON structure. The Manta Job identifier is the "id": field - like this "70c30bab-873b-66da-ebc8-ced12bd35ac4". This value is the jobId parameter to be used by other mantaJob functions for inputs, status, errors and outputs as Job lookup key. This key can also be used by Node.js Manta command-line mjob commands.

See Also

Other mantaJobs: `mantaJob.cancel`; `mantaJob.done`; `mantaJob.errors.stderr`; `mantaJob.errors`; `mantaJob.failures`; `mantaJob.inputs`; `mantaJob.outputs.cat`; `mantaJob.outputs`; `mantaJob.setup`; `mantaJob.status`; `mantaJobs.running`; `mantaJobs.tail`; `mantaJobs`; `mantaMap`; `mantaReduce`

Examples

```
## Not run:
## Example - Map/Reduce Unix Word Count

## Part 1.
## Job to download all of Shakespeares plays to your account
plays <-
c("1kinghenryiv.txt", "1kinghenryvi.txt", "2kinghenryiv.txt",
  "2kinghenryvi.txt", "3kinghenryvi.txt", "allswellthatendswell.txt",
  "antonyandcleopatra.txt", "asyoulikeit.txt", "comedyoferrors.txt",
  "coriolanus.txt", "cymbeline.txt", "hamlet.txt", "juliuscaesar.txt",
  "kinghenryv.txt", "kinghenryviii.txt", "kingjohn.txt", "kinglear.txt",
  "kingrichardii.txt", "kingrichardiii.txt", "loverscomplaint.txt",
  "loveslabourslost.txt", "macbeth.txt", "measureforemeasure.txt",
  "merchantofvenice.txt", "merrywivesofwindsor.txt",
  "midsummersnightsdream.txt",
  "muchadoaboutnothing.txt", "othello.txt", "periclesprinceofityre.txt",
  "rapeoflucrece.txt", "romeoandjuliet.txt", "sonnets.txt",
  "tamingoftheshrew.txt",
  "tempest.txt", "timonofathens.txt", "titusandronicus.txt",
  "troilusandcressida.txt",
  "twelfthnight.txt", "twogentlemenofverona.txt", "various.txt",
  "venusandadonis.txt", "winterstale.txt")

file <- file("plays_list.txt", "wb")
# Important: This forces Windows to use /n instead of /r/n on write()
write(plays, file)
close(file)
rm(file)

mantaSetwd.stor()
mantaPut("plays_list.txt")

inputlist <- mantaLs.paths(grepfor = "plays_list.txt")

mantaMkdir("shakespeare")
mantaSetwd("shakespeare")
fileslocation <-
"https://us-east.manta.joyent.com/cwvhogue/public/shakespeare/"
destination <- mantaGetwd()
mantaJob.setup("Get Plays",
  mantaMap(paste("xargs -I {} sh -c curl -ksL ",
    fileslocation,
    "{} | mput ",
    destination,
    "/{}",
    sep="")))) -> moveplays

## Launch the first job to download the plays:
mantaJob.launch(inputlist, moveplays)
```

```

## See if they arrived.
mantaIs()
mantaIs.n()
mantaIs.du()

## Copy all the plays to your local drive?
# mantaGet(mantaFind())

## Speedread all of Shakespeare?
# mantaCat(mantaFind())

## Part 2.
## Map/Reduce Count all the words with wc and awk

inputs <- mantaFind()
job <- mantaJob.setup(
  name = "Word Count",
  mantaMap("wc"),
  mantaReduce("awk { l += $1; w += $2; c += $3 } END { print l, w, c }")
)

mantaJob.launch(inputs, job) -> status
## Getting Job Results:
## These functions find the last Job run if no jobid provided.
# mantaJob.status() ## check to see if job is complete, as JSON information
# mantaJob.done()   ## returns logical job done (TRUE/FALSE)
# mantaJob.inputs() ## returns list of inputs
mantaJob.outputs() ## retrieve list of paths to Manta output objects
# mantaJob.errors() ## retrieve JSON formatted job error information
mantaJob.outputs.cat() ## Print job output (text files) to console
# mantaJob.errors.stderr() ## Print any stderr messages to console

## End(Not run)

```

mantaJob.outputs

Returns list of output Manta objects given Manta job identifier.

Description

Outputs have hashed file names as saved by the Manta service.

Usage

```
mantaJob.outputs(jobid, silent = FALSE)
```

Arguments

jobid	character optional. Manta job identifier such as "70c30bab-873b-66da-ebc8-ced12bd35ac4". Default uses <code>mantaJobs.tail</code> to fetch the jobid of the last Manta Job run on the service.
silent	logical required. Set to TRUE for non-interactive use of the function to suppress stop on Manta Service error messages, and return an empty data set. N.B. Errors are logged and in the bunyan buffer.

See Also

Other mantaJobs: [mantaJob.cancel](#); [mantaJob.done](#); [mantaJob.errors.stderr](#); [mantaJob.errors](#); [mantaJob.failures](#); [mantaJob.inputs](#); [mantaJob.launch](#); [mantaJob.outputs.cat](#); [mantaJob.setup](#); [mantaJob.status](#); [mantaJobs.running](#); [mantaJobs.tail](#); [mantaJobs](#); [mantaMap](#); [mantaReduce](#)

Examples

```
## Not run:
## List the outputs of the last job run on Manta:
mantaJob.outputs()
## Download the output files of the last job run on Manta, to current R working
## directory, keeping hashed filenames.
mantaGet(mantaJob.outputs())

## End(Not run)
```

`mantaJob.outputs.cat` *Prints contents of all job output objects to the R console.*

Description

Avoid using this on binary output data.

Usage

```
mantaJob.outputs.cat(jobid)
```

Arguments

jobid	character optional. Manta job identifier such as "70c30bab-873b-66da-ebc8-ced12bd35ac4". Default uses <code>mantaJobs.tail</code> to fetch the jobid of the last Manta Job run on the service.
-------	--

See Also

Other mantaJobs: [mantaJob.cancel](#); [mantaJob.done](#); [mantaJob.errors.stderr](#); [mantaJob.errors](#); [mantaJob.failures](#); [mantaJob.inputs](#); [mantaJob.launch](#); [mantaJob.outputs](#); [mantaJob.setup](#); [mantaJob.status](#); [mantaJobs.running](#); [mantaJobs.tail](#); [mantaJobs](#); [mantaMap](#); [mantaReduce](#)

Examples

```
## Not run:
## Print all the output files to the console.
mantaJob.outputs.cat()

## End(Not run)
```

mantaJob.setup	<i>Constructor for R format Manta Job including name, and UNIX command line tasks as defined by mantaMap, and/or mantaReduce functions.</i>
----------------	---

Description

Function to construct R structure for [mantaJob.launch](#). Specify a name for the Manta job and tasks to execute via one or more calls to [mantaMap](#) and/or [mantaReduce](#) which define and parameterize each task.

Usage

```
mantaJob.setup(name, ...)
```

Arguments

name	character, optional.
...	One or more mantaMap mantaReduce functions with arguments listed in order of task execution.

Details

mantaJob.setup combines multiple tasks into a job pipeline structure for [mantaJob.launch](#). See [mantaMap](#) and [mantaReduce](#) for parameter details. Their exec parameter must be a valid generic UNIX command line, not an R function.

See Also

Other mantaJobs: [mantaJob.cancel](#); [mantaJob.done](#); [mantaJob.errors.stderr](#); [mantaJob.errors](#); [mantaJob.failures](#); [mantaJob.inputs](#); [mantaJob.launch](#); [mantaJob.outputs.cat](#); [mantaJob.outputs](#); [mantaJob.status](#); [mantaJobs.running](#); [mantaJobs.tail](#); [mantaJobs](#); [mantaMap](#); [mantaReduce](#)

Examples

```
## Not run:
## Map/Reduce Unix Word Count Job description
job <- mantaJob.setup("Word Count",
  mantaMap("wc"),
  mantaReduce("awk \{ l += $1; w += $2; c += $3 \} END \{ print l, w, c \}"))
## Launch the Job with some text files as input:
inputs <- mantaLs.paths("~/stor/shakespeare", grepfor = "[.]txt")
mantaJob.launch(inputs, job)
## Check output
mantaJob.outputs()
## Check errors
mantaJob.errors()

## End(Not run)
```

mantaJob.status	Returns JSON Manta job status data given Manta job identifier.
-----------------	--

Description

Returns JSON Manta job status data given Manta job identifier.

Usage

```
mantaJob.status(jobid, readable = TRUE)
```

Arguments

readable	logical. Set to FALSE to return the JSON Job as character(), or NULL if no Job status found. Default TRUE pretty prints JSON Job status to the console.
jobid	character optional. Manta job identifier such as "70c30bab-873b-66da-ebc8-ced12bd35ac4". Default uses mantaJobs.tail to fetch the jobid of the last Manta Job run on the service.

See Also

Other mantaJobs: [mantaJob.cancel](#); [mantaJob.done](#); [mantaJob.errors.stderr](#); [mantaJob.errors](#); [mantaJob.failures](#); [mantaJob.inputs](#); [mantaJob.launch](#); [mantaJob.outputs.cat](#); [mantaJob.outputs](#); [mantaJob.setup](#); [mantaJobs.running](#); [mantaJobs.tail](#); [mantaJobs](#); [mantaMap](#); [mantaReduce](#)

Examples

```
## Not run:
## Retrieve JSON status of the last run Manta job:
mantaJob.status(readable = FALSE) -> status
## Show JSON status of last run Manta job:
mantaJob.status()

## End(Not run)
```

mantaJobs	Lists all Manta job identifiers, sorted by time.
-----------	--

Description

Clean out your Manta job directory regularly to avoid paying storage costs and having the archive grow to large numbers of files.

Usage

```
mantaJobs()
```

See Also

Other mantaJobs: [mantaJob.cancel](#); [mantaJob.done](#); [mantaJob.errors.stderr](#); [mantaJob.errors](#); [mantaJob.failures](#); [mantaJob.inputs](#); [mantaJob.launch](#); [mantaJob.outputs.cat](#); [mantaJob.outputs](#); [mantaJob.setup](#); [mantaJob.status](#); [mantaJobs.running](#); [mantaJobs.tail](#); [mantaMap](#); [mantaReduce](#)

Examples

```
## Not run:
## List all the Manta jobs you have run so far:
mantaJobs()

## End(Not run)
```

mantaJobs.running	<i>Lists identifiers of any running Manta jobs.</i>
-------------------	---

Description

Lists identifiers of any running Manta jobs.

Usage

```
mantaJobs.running()
```

See Also

Other mantaJobs: [mantaJob.cancel](#); [mantaJob.done](#); [mantaJob.errors.stderr](#); [mantaJob.errors](#); [mantaJob.failures](#); [mantaJob.inputs](#); [mantaJob.launch](#); [mantaJob.outputs.cat](#); [mantaJob.outputs](#); [mantaJob.setup](#); [mantaJob.status](#); [mantaJobs.tail](#); [mantaJobs](#); [mantaMap](#); [mantaReduce](#)

Examples

```
## Not run:
## List any running Manta jobs:
mantaJobs.running()

## End(Not run)
```

mantaJobs.tail	<i>Returns identifier of last run Manta job identifier, or from offset n up from end of list.</i>
----------------	---

Description

Returns identifier of last run Manta job identifier, or from offset n up from end of list.

Usage

```
mantaJobs.tail(n = 1)
```


Arguments

`n` integer. Index into most recently run Jobs list. `n = 1` default is last Manta Job run. `n = 2` is second last, and so on.

See Also

Other mantaJobs: `mantaJob.cancel`; `mantaJob.done`; `mantaJob.errors.stderr`; `mantaJob.errors`; `mantaJob.failures`; `mantaJob.inputs`; `mantaJob.launch`; `mantaJob.outputs.cat`; `mantaJob.outputs`; `mantaJob.setup`; `mantaJob.status`; `mantaJobs.running`; `mantaJobs`; `mantaMap`; `mantaReduce`

Examples

```
## Not run:
## Get the Job Id of the last run Manta job:
mantaJobs.tail()
## Fifth last Manta job id:
mantaJobs.tail(n = 5)

## End(Not run)
```

mantaliststyle

mantaLs and mantaFind callback

Description

mantaLs and mantaFind callback

Usage

```
mantaliststyle(line)
```

Arguments

`line` R structured directory line

mantaLoad

Downloads specified Manta object containing R data and uses R function load.

Description

Used to download .rda .Rdata files and load their R data into the workspace or specified envir.

Usage

```
mantaLoad(mantapath, envir = parent.frame(), info = TRUE, verbose = FALSE)
```

Arguments

mantapath	character, optional. Path to a manta R data file or file name in current working Manta directory for retrieval. Not vectorized.
envir	optional. Environment in which to load, See load.
info	optional. Print information messages to console.
verbose	logical, optional. Passed to Rcurl GetURL, Set to TRUE to see background REST communication on stderr Note this is invisible on Windows.

Details

Checks for appropriate content-type HTTP header, which is set by mantaSave or mantaSave.ws to "application/x-r-data".

Value

TRUE or FALSE depending on success of download.

See Also

[mantaSave](#)

Other mantaGet: [mantaCat](#); [mantaGet](#); [mantaLoad.ws](#); [mantaSave](#); [mantaSource](#)

Examples

```
## Not run:
somedata <- runif(100)
ls()
mantaSave("somedata", mantapath = "~/stor/somedata.rda")
rm(somedata)
mantaLoad("somedata.rda")
ls()

## End(Not run)
```

mantaLoad.ws

Loads last current R workspace from Manta R workspace directory.

Description

Downloads Manta "current.Rdata" object stored in users' workspace directory containing R workspace and uses R function load to load the R workspace.

Usage

```
mantaLoad.ws(envir = parent.frame())
```

Arguments

envir	optional. Environment in which to load, See load.
-------	---

Details

Together with `mantaSave.ws` this function works from an audit trail of workspaces maintained in a Manta subdirectory created by `mantaSave.ws` made by R version and `mantaRSDK` client hostname, that looks like these:

```
~/stor/R-3.0.1/cwvh-macbookpro/
~/stor/R-3.0.2/CHOGUE-HPDV7/
```

These workspace archive subdirectories are made by [mantaSave.ws](#). The last saved R workspace from these two systems in each directory is named `"current.Rdata"`. Previously saved R workspaces are renamed to their original GMT creation date/time stamp on Manta and archived with SnapLinks before writing a new workspace.

Archived workspaces are named like this:

`"2014-01-07_14:53:05_GMT.Rdata"` To retrieve an older workspace or a workspace saved from a different `mantaRSDK` client and version, use this form:

`mantaLoad("~/stor/R-3.0.0/hostname/2014-01-07_14:53:05_GMT.Rdata")` Checks for appropriate content-type HTTP header, which is set by `mantaSave` or `mantaSave.ws` to `"application/x-r-data"`.

Value

TRUE or FALSE depending on success of download.

See Also

[mantaSave.ws](#) [mantaLoad](#) [mantaSetwd.ws](#)

Other `mantaGet`: [mantaCat](#); [mantaGet](#); [mantaLoad](#); [mantaSave](#); [mantaSource](#)

Examples

```
## Not run:
somedata <- runif(100)
somechar <- "My current workspace"
ls()
mantaSave.ws()
rm(somedata)
rm(somechar)
mantaLoad.ws()
ls()
## What is my workspace subdirectory?
mantaGetwd() -> tempdir
mantaSetwd.ws()
mantaGetwd() ## this one
mantaLs.l() ## Inspect workspace archives
mantaSetwd(tempdir)

## End(Not run)
```

mantaLs

Lists, searches, filters, sorts and formats Manta directory listings.

Description

Used for getting disk size, number of objects, number of subdirectories. Searching for filenames with regular expressions (using R `grep`). Sorting listings by filename, time, or size.

Usage

```
mantaLs(mantapath, grepfor, json, l = "names", items = "a",
        sortby = "none", decreasing = FALSE, ignore.case = FALSE,
        perl = FALSE, verbose = FALSE, internal = FALSE)
```

Arguments

<code>mantapath</code>	character, optional. Current subdirectory set by <code>mantaSetwd</code> is used, otherwise specify full Manta path to subdirectory. Supports <code>~~</code> expansion to your Manta username, e.g. <code>~/~/public</code> and UTF-8 encoded characters.
<code>grepfor</code>	character optional. Regular expression for grep name search. Uses R regexps, N.B. use <code>"[.]txt"</code> , not <code>"*.txt"</code> to match filename extensions.
<code>json</code>	optional. Input saved JSON data from <code>mantaLs(format=json)</code> used for reprocessing previously retrieved listings. Include previously specified <code>mantapath</code> if you wish to recover true paths.
<code>l</code>	character optional. Specifies listing output format by <code>names</code> , <code>l</code> , <code>paths</code> , <code>URL</code> , <code>n</code> , <code>du</code> , <code>R</code> , <code>Rraw</code> , <code>URL</code> , <code>json</code> .. <code>names</code> returns object/directory names. <code>l</code> is a long unix <code>ls -o</code> style of directory listing. <code>paths</code> is a listing of full Manta object pathnames. <code>n</code> is the number of entries in the directory only. <code>du</code> is the number of bytes used by objects (not counting redundancy levels!). <code>R</code> is normalized R structures from JSON with <code>size = 0</code> for directories, <code>mtime</code> in R time format. <code>URL</code> is the browser format URL for objects, applies to <code>~/~/public</code> objects only. <code>Rraw</code> is R struct unparsed, unsorted, unnormalized, can convert back to json with <code>toJSON</code> . <code>json</code> is exactly what the server replies - sorting/filtering are not applied.
<code>items</code>	character optional. <code>a</code> for all, <code>d</code> for directory, <code>o</code> for object.
<code>sortby</code>	character, optional. Specify <code>none</code> , <code>name</code> , <code>time</code> , or <code>size</code> .
<code>decreasing</code>	logical, optional. Argument passed to R order for sorting.
<code>ignore.case</code>	logical, optional. Argument passed to R grep for searching.
<code>perl</code>	logical, optional. Argument passed to R grep for searching.
<code>verbose</code>	logical, optional. Verbose HTTPS RCurl data output on Unix.
<code>internal</code>	logical, Internal use by <code>mantaFind</code> .

See Also

[mantaFind](#)

Other `mantaLs`: [mantaExists](#); [mantaLs.du](#); [mantaLs.l](#); [mantaLs.n](#); [mantaLs.paths](#); [mantaLs.url](#)

Examples

```
## Not run:
## List names of all objects stored in the directory
## specified by mantaSetwd(),
mantaLs()

## List all objects ending in .jpg or .JPG
```

```
## in your Manta ~/public/images directory,
## Show a UNIX-like result sorted by file size:
mantaLs("~/public/images", l = 1, items = o, grepfor = "[.]jpg",
ignore.case = TRUE, sortby = size)

## Download all objects in current Manta directory, non recursive find:
#mantaGet(mantaLs.paths(items = o))

## End(Not run)
```

mantaLs.du	<i>Returns disk used in bytes of directory listings, NOT counting redundancy levels</i>
------------	---

Description

Used for getting number of bytes occupied by objects matching directory query.

Usage

```
mantaLs.du(mantapath, grepfor, json, items = "a", ignore.case = FALSE,
perl = FALSE, verbose = FALSE)
```

Arguments

mantapath	character, optional. Current subdirectory set by mantaSetwd is used, otherwise specify full Manta path to subdirectory. Supports ~ expansion to your Manta username, e.g. "~/public" and UTF-8 encoded characters.
grepfor	character optional. Regular expression for grep name search. Uses R regexps, N.B. use "[.]txt", not "*.txt" to match filename extensions.
json	optional. Input saved JSON data from mantaLs(format=json) used for reprocessing previously retrieved listings. Include previously specified mantapath if you wish to recover true paths.
items	character optional. a for all, d for directory, o for object.
ignore.case	logical, optional. Argument passed to R grep for searching.
perl	logical, optional. Argument passed to R grep for searching.
verbose	logical, optional. Verbose HTTPS RCurl data output on Unix.

See Also

[mantaFind.du](#)

Other mantaLs: [mantaExists](#); [mantaLs.l](#); [mantaLs.n](#); [mantaLs.paths](#); [mantaLs.url](#); [mantaLs](#)

mantaLs.l	<i>Lists, searches, filters, sorts and formats Manta directory listings Output is long ls -o unix style of directory listing.</i>
-----------	---

Description

Used for listing Manta subdirectory. Uses current working Manta directory or one supplied in mantapath. Searches for filenames with regular expressions (using R grep). Sorts listings by filename, time, or size.

Usage

```
mantaLs.l(mantapath, grepfor, json, items = "a", sortby = "none",
  decreasing = FALSE, ignore.case = FALSE, perl = FALSE,
  verbose = FALSE)
```

Arguments

mantapath	character, optional. Current subdirectory set by mantaSetwd is used, otherwise specify full Manta path to subdirectory. Supports ~~ expansion to your Manta username, e.g. "~/public" and UTF-8 encoded characters.
grepfor	character optional. Regular expression for grep name search. Uses R regexps, N.B. use "[.]txt", not "*.txt" to match filename extensions.
json	optional. Input saved JSON data from mantaLs(format=json) used for reprocessing previously retrieved listings. Include previously specified mantapath if you wish to recover true paths.
items	character optional. a for all, d for directory, o for object.
sortby	character, optional. Specify none, name, time, or size.
decreasing	logical, optional. Argument passed to R order for sorting.
ignore.case	logical, optional. Argument passed to R grep for searching.
perl	logical, optional. Argument passed to R grep for searching.
verbose	logical, optional. Verbose HTTPS RCurl data output on Unix.

See Also

[mantaFind.l](#)

Other mantaLs: [mantaExists](#); [mantaLs.du](#); [mantaLs.n](#); [mantaLs.paths](#); [mantaLs.url](#); [mantaLs](#)

mantaLs.n	<i>Returns number of files matched in Manta directory listing.</i>
-----------	--

Description

Used for getting number of objects/subdir in a directory. Default uses current Manta directory.

Usage

```
mantaLs.n(mantapath, grepfor, json, items = "a", ignore.case = FALSE,
  perl = FALSE, verbose = FALSE)
```

Arguments

mantapath	character, optional. Current subdirectory set by mantaSetwd is used, otherwise specify full Manta path to subdirectory. Supports <code>~~</code> expansion to your Manta username, e.g. <code>~~/public</code> and UTF-8 encoded characters.
grepfor	character optional. Regular expression for grep name search. Uses R regexps, N.B. use <code>"[.]txt"</code> , not <code>"*.txt"</code> to match filename extensions.
json	optional. Input saved JSON data from <code>mantaLs(format=json)</code> used for reprocessing previously retrieved listings. Include previously specified mantapath if you wish to recover true paths.
items	character optional. a for all, d for directory, o for object.
ignore.case	logical, optional. Argument passed to R grep for searching.
perl	logical, optional. Argument passed to R grep for searching.
verbose	logical, optional. Verbose HTTPS RCurl data output on Unix.

See Also

[mantaFind.n](#)

Other mantaLs: [mantaExists](#); [mantaLs.du](#); [mantaLs.l](#); [mantaLs.paths](#); [mantaLs.url](#); [mantaLs](#)

mantaLs.paths	<i>Lists, searches, filters, sorts and formats Manta directory listings Output is full Manta pathnames of directory listing.</i>
---------------	--

Description

Searches for filenames with regular expressions (using R grep). Sorts listings by filename, time, or size. Use this dotted form of mantaLs for passing mantapath parameters into vectorized functions like `mantaJob.launch`, `mantaGet`, `mantaSnapIn`, etc.

Usage

```
mantaLs.paths(mantapath, grepfor, json, items = "a", sortby = "none",
  decreasing = FALSE, ignore.case = FALSE, perl = FALSE,
  verbose = FALSE)
```

Arguments

mantapath	character, optional. Current subdirectory set by mantaSetwd is used, otherwise specify full Manta path to subdirectory. Supports ~~ expansion to your Manta username, e.g. "~/public" and UTF-8 encoded characters.
grepfor	character optional. Regular expression for grep name search. Uses R regexps, N.B. use "[.]txt", not "*.txt" to match filename extensions.
json	optional. Input saved JSON data from mantaLs(format=json) used for reprocessing previously retrieved listings. Include previously specified mantapath if you wish to recover true paths.
items	character optional. a for all, d for directory, o for object.
sortby	character, optional. Specify none, name, time, or size.
decreasing	logical, optional. Argument passed to R order for sorting.
ignore.case	logical, optional. Argument passed to R grep for searching.
perl	logical, optional. Argument passed to R grep for searching.
verbose	logical, optional. Verbose HTTPS Rcurl data output on Unix.

See Also

[mantaFind](#)

Other mantaLs: [mantaExists](#); [mantaLs.du](#); [mantaLs.l](#); [mantaLs.n](#); [mantaLs.url](#); [mantaLs](#)

mantaLs.url	<i>Lists, searches, filters, sorts and formats Manta directory listings Output is URL path to ~/public Manta objects in the specified subdirectory</i>
-------------	--

Description

Used for getting URLs for links to object in Manta ~/public area. Searching for filenames with regular expressions (using R grep). Sorting listings by filename, time, or size.

Usage

```
mantaLs.url(mantapath, grepfor, json, items = "o", sortby = "none",
  decreasing = FALSE, ignore.case = FALSE, perl = FALSE,
  verbose = FALSE)
```

Arguments

mantapath	character, optional. Current subdirectory set by mantaSetwd is used, otherwise specify full Manta path to subdirectory. Supports ~~ expansion to your Manta username, e.g. "~/public" and UTF-8 encoded characters.
grepfor	character optional. Regular expression for grep name search. Uses R regexps, N.B. use "[.]txt", not "*.txt" to match filename extensions.
json	optional. Input saved JSON data from mantaLs(format=json) used for reprocessing previously retrieved listings. Include previously specified mantapath if you wish to recover true paths.

items	character optional. a for all, d for directory, o for object.
sortby	character, optional. Specify none, name, time, or size.
decreasing	logical, optional. Argument passed to R order for sorting.
ignore.case	logical, optional. Argument passed to R grep for searching.
perl	logical, optional. Argument passed to R grep for searching.
verbose	logical, optional. Verbose HTTPS RCur1 data output on Unix.

See Also

[mantaFind.url](#)

Other mantaLs: [mantaExists](#); [mantaLs.du](#); [mantaLs.l](#); [mantaLs.n](#); [mantaLs.paths](#); [mantaLs](#)

mantaMap	<i>Constructor for R format Manta Job for Map Unix task.</i>
----------	--

Description

Helper function to construct R structure describing a Map task. To be used to satisfy the ... argument of [mantaJob.setup](#) and specify the Unix command line task, any initialization tasks, an array of Manta asset objects, and the memory/disk size to be used for the compute instance on Manta.

Usage

```
mantaMap(exec, init, assets, memory, disk)
```

Arguments

exec	character required. The Unix shell command to be executed in the Map task operating on the input Manta objects specified when the job is launched. exec may be any valid Unix shell command capable of running on the Manta compute node at execution time. Use the Node.js command <code>mlogin</code> to test out commands. Pipelines and shell syntax escaping and substitution are all supported. You can also execute your own programs stored as Manta objects by including them with the <code>assets</code> parameter and referencing them from the <code>exec</code> command from the <code>/assets</code> folder. See: http://apidocs.joyent.com/manta/jobs-reference.html for more details.
init	character optional. A Unix shell command executed prior to the <code>exec</code> command. Used to run initialization steps on the Manta compute node prior to task execution. <code>init</code> can also execute programs stored as Manta objects mounted as POSIX read-only files mounted at <code>/assets</code> . For example it can unpack a tar asset before running <code>exec</code> .
assets	array of character, optional. Specify Manta objects that are to be accessed by the compute node at job runtime. Include shell scripts, installation steps configuration steps, custom executables compiled for SmartOS, or tar files as you require here. At job runtime, each node will provide the specified Manta objects as POSIX files at the <code>/assets</code> directory for read-only access from your <code>exec</code> or

	init shell commands. For example a Manta object listed as an asset that lives at <code>~/stor/data.tgz</code> will be found by your script on the Manta compute node as a mounted read-only POSIX file at <code>/assets/~/stor/data.tgz</code> where <code>~</code> is your Manta username.
memory	integer optional. Amount of memory requested for Manta compute node instance. 128, 256, 512, 1024, 2048, 8192, or 16384 are valid values in MB. Default is 1024 MB.
disk	integer optional. Amount of temporary working disk (not Manta storage space) to be used by the compute node when executing the task. Valid values are: 2, 4, 8, 16, 32, 64, 128, 256, 512, or 1024 GB. Default is 8 GB. Writeable disk on each compute node is found at the <code>/var/tmp</code> directory during <code>init</code> or <code>exec</code> job runtime. To save data from this space onto permanent Manta storage, use the Node.js command <code>mput</code> in your <code>exec</code> script to upload the files from <code>/var/tmp</code> onto Manta storage.

Details

On Manta, a Map task phase executes a generic UNIX command given some input Manta object list which is specified in `mantaJob.launch`, which distributes the jobs to compute instances local to the Manta object location. The `exec` argument must be a valid generic UNIX command line, not an R function. The `exec` argument may call executables or runtime language scripts that are hosted on Manta and specified as assets. The `init` argument is called before the `exec` argument and is not passed input. The `init` argument may be used, for example to extract scripts from an asset on Manta saved as a tar file.

Value

Returns an R list describing a Map task phase for consumption by `mantaJob.setup`

See Also

Other `mantaJobs`: [mantaJob.cancel](#); [mantaJob.done](#); [mantaJob.errors.stderr](#); [mantaJob.errors](#); [mantaJob.failures](#); [mantaJob.inputs](#); [mantaJob.launch](#); [mantaJob.outputs.cat](#); [mantaJob.outputs](#); [mantaJob.setup](#); [mantaJob.status](#); [mantaJobs.running](#); [mantaJobs.tail](#); [mantaJobs](#); [mantaReduce](#)

Examples

```
## Not run:
# Example - Map/Reduce Unix Word Count
job <- mantaJob.setup("word count",
  mantaMap("wc"),
  mantaReduce("awk { l += $1; w += $2; c += $3 } END { print l, w, c }"))

## End(Not run)
```

mantaMkdir

Makes a Manta subdirectory, optionally with parent directories.

Description

Makes subdirectory on Manta. Specify absolute (e.g. `~/stor`) or relative path from the current Manta directory. Supports creation of parent directories with `p = TRUE`. New directories can be created in `~/stor` your private space or `~/public` a publically accessible HTTPS directory.

Usage

```
mantaMkdir(mantapath, p = FALSE, info = TRUE)
```

Arguments

<code>mantapath</code>	character, required. Path or name of new subdirectory to create. Not vectorized.
<code>p</code>	logical, optional. Make all the parent directories too.
<code>info</code>	logical. Set FALSE to suppress console messages.

Value

TRUE or FALSE depending on success of upload.

See Also

[mantaRmdir](#)

Other Directory: [mantaGetwd](#); [mantaRmdir](#); [mantaRm](#); [mantaSetwd.public](#); [mantaSetwd.reports](#); [mantaSetwd.stor](#); [mantaSetwd](#); [mantaSnapln](#)

Examples

```
## Not run:
## Make absolute path subdirectory
mantaMkdir("~/stor/testdirectory")
mantaLs("~/stor")
mantaRmdir("~/stor/testdirectory")

## Make with parent directories,
mantaGetwd() -> tempdir
mantaMkdir("~/stor/a_test/b_test/c_test", p = TRUE)
mantaSetwd("~/stor/a_test/b_test/c_test")
mantaMkdir("d_test") # Relative path
data <- runif(100)
mantaDump("data")
mantaSetwd("..")
mantaDump("data")
mantaSetwd("..")
mantaDump("data")
mantaLs.l()
mantaFind()
## Recursive Rm Subdirectory Contents
mantaSetwd.stor()
mantaRm("~/stor/a_test", r = TRUE)
mantaSetwd("~/stor/a_test")
mantaLs.l()
mantaFind()
mantaSetwd.stor()
mantaRmdir("~/stor/a_test")
mantaLs.l("~/stor")
mantaSetwd(tempdir)

## End(Not run)
```

mantaPath	<i>Given a user typed path or object name, returns full path, does not validate object is there, assumes it is in current subdir. Not exported.</i>
-----------	---

Description

Given a user typed path or object name, returns full path, does not validate object is there, assumes it is in current subdir. Not exported.

Usage

```
mantaPath(m_path)
```

Arguments

m_path character, required. Manta object

Value

character with full Manta path to object or empty string "" as processed by curlEscape with / left in

mantaPut	<i>Uploads file(s) (vectorized), or raw R buffer data to Manta Storage Service.</i>
----------	---

Description

Transfers file, buffer to Manta Storage Object specified in mantapath. To save a file, specify the filename. It will go into the current working Manta directory with the same name unless absolute Manta path or relative object name is specified with the mantapath argument. To see the current directory on Manta use [mantaGetwd](#), and [mantaSetwd](#) to change it.

Usage

```
mantaPut(filename, mantapath, buffer, md5 = FALSE, headers, info = TRUE,
          verbose = FALSE)
```

Arguments

mantapath	character, optional. Path to where uploaded data will go on Manta or Manta Object file name in current working Manta directory. If mantapath ends in "/" it is assumed to be specifying a Manta subdirectory and the filename portion is appended to it. Memory data uploads using buffer parameter require mantapath to have a destination file name at the end of the path with an extension for proper guessing of Content-Type header information.
filename	vector of character, optional. Path to local file to upload. If only a filename is given, assumes file is in path specified by getwd. Vectorized.
buffer	optional. Raw buffer of data to put. If filename is specified, buffer is ignored and filename contents are uploaded. Not vectorized.

md5	logical optional. Test md5 hash of file/raw buffer with OpenSSL before/after upload. TRUE by default, setting FALSE will speed up transfers a bit.
headers	optional. Headers including R structured metadata (up to 4k in user metadata) as array of named character E.g. headers = c(content-type = "image/jpg", x-durability-level = 4) Manta user metadata is prefixed with "m-", E.g. headers = c(content-type = "x-chemical/x-pdb", m-molecule-class = "protein")
info	logical required. FALSE silences output messages while downloading.
verbose	logical, optional. Passed to Rcurl GetURL, Set to TRUE to see background REST communication on stderr Note this is not visible on Windows.

Details

To save a raw R buffer, pass the string with its name e.g. buffer = "myRawBuffer"

One limitation of the mantaRSDK is that it is not designed to handle large (multi-Gigabyte or larger) objects. Uploads - mantaPut - work from files, but Downloads - [mantaGet](#) - fill the R memory space to their completion before being written to a file. To download files larger than your R memory, use the Manta Node.js command line tool mget. The Node.js based Manta command line tools employ streams, so object size is not a limitation.

The Content-Type information metadata for the file is obtained using the Rcurl library function guessMIMEtype on the filename extension provided, e.g. .jpg or it can be set by passing a header parameter, which is an Rcurl style HTTP header - a list of named character values like this:

header = c(content-type = "image/jpg"). The default Content-Type header is "application/octet-stream". The number of copies (durability level) saved is by default 2. This can be changed by using headers like this:

headers = c(x-durability-level = 4) for one-time use.

For larger operations use [mantaSetLimits](#) to change the default durability level for the current mantaRSDK session. The number of copies stored can range from 2 to 6. This function does not support streaming uploads, for that use the Node.js Manta command line interface (CLI). Other Manta operations involving HTTP conditional request semantics and CORS headers are not implemented in this R library, but can be used with the Node.js CLI which can be called from R with the system2 command shell. mantaPut is a wrapper for mantaXfer, which implements the actual RCURL data upload.

Value

TRUE or FALSE depending on success of upload.

See Also

[mantaGet](#)

Other mantaPut: [mantaDump](#); [mantaSave.image](#); [mantaSave.ws](#)

Examples

```
## Not run:
## Save a static hello world HTML page
htmlpage <- paste("<!DOCTYPE html>\n<html>\n<body>\n\n",
  "<h1>Hello from Joyent Manta.</h1>\n\n",
  "<p>Hello world! from ",
  mantaWhoami(),
  ".</p>\n\n",
```

```

                                "</body>\n</html>", sep="")
file <- file("test_index.html", "wb")
write(htmlpage,file)
close(file)
rm(file)
rm(htmlpage)

## Upload the HTML file to Manta in your public area
mantaSetwd.public()
mantaPut("test_index.html")
mantaExists("test_index.html")
mantaCat("test_index.html")

ls()
buffer <- mantaGet("test_index.html", buffer = TRUE)
cat(rawToChar(buffer))

## Upload the raw buffer
mantaPut(mantapath = "~/public/buffer_index.html", buffer = buffer)
mantaLs.l(grepfor = "[.]html")
mantaCat("buffer_index.html")

## Check file metadata to see Content-type
mantaGet("test_index.html", metadata = TRUE)
mantaGet("buffer_index.html", metadata = TRUE)

## copy and paste URL into browser.
mantaLs.url("~/public", grepfor = "[.]html")

## Cleanup this demo
#mantaRm("~/public/test_index.html")
#mantaRm("~/public/buffer_index.html")
#file.remove("test_index.html")
#rm(buffer)

## End(Not run)

```

mantaReduce

Constructor for R format Manta Job for Reduce Unix task.

Description

Helper function to construct R structure describing a Reduce task. To be used to satisfy the ... argument of `mantaJob.setup` and specify the Unix command line task, any initialization tasks, an array of Manta filesystem asset files, and the memory/disk size to be used for the compute instance on Manta.

Usage

```
mantaReduce(exec, init, assets, reducers, memory, disk)
```

Arguments

reducers	integer. Number of reducers to use from 1 to 1024. Use with caution.
exec	character required. The Unix shell command to be executed in the Map task operating on the input Manta objects specified when the job is launched. <code>exec</code> may be any valid Unix shell command capable of running on the Manta compute node at execution time. Use the Node.js command <code>mlogin</code> to test out commands. Pipelines and shell syntax escaping and substitution are all supported. You can also execute your own programs stored as Manta objects by including them with the <code>assets</code> parameter and referencing them from the <code>exec</code> command from the <code>/assets</code> folder. See: http://apidocs.joyent.com/manta/jobs-reference.html for more details.
init	character optional. A Unix shell command executed prior to the <code>exec</code> command. Used to run initialization steps on the Manta compute node prior to task execution. <code>init</code> can also execute programs stored as Manta objects mounted as POSIX read-only files mounted at <code>/assets</code> . For example it can unpack a tar asset before running <code>exec</code> .
assets	array of character, optional. Specify Manta objects that are to be accessed by the compute node at job runtime. Include shell scripts, installation steps configuration steps, custom executables compiled for SmartOS, or tar files as you require here. At job runtime, each node will provide the specified Manta objects as POSIX files at the <code>/assets</code> directory for read-only access from your <code>exec</code> or <code>init</code> shell commands. For example a Manta object listed as an asset that lives at <code>~/stor/data.tgz</code> will be found by your script on the Manta compute node as a mounted read-only POSIX file at <code>/assets/~/stor/data.tgz</code> where <code>~~</code> is your Manta username.
memory	integer optional. Amount of memory requested for Manta compute node instance. 128, 256, 512, 1024, 2048, 8192, or 16384 are valid values in MB. Default is 1024 MB.
disk	integer optional. Amount of temporary working disk (not Manta storage space) to be used by the compute node when executing the task. Valid values are: 2, 4, 8, 16, 32, 64, 128, 256, 512, or 1024 GB. Default is 8 GB. Writeable disk on each compute node is found at the <code>/var/tmp</code> directory during <code>init</code> or <code>exec</code> job runtime. To save data from this space onto permanent Manta storage, use the Node.js command <code>mput</code> in your <code>exec</code> script to upload the files from <code>/var/tmp</code> onto Manta storage.

Details

On Manta, a Reduce task phase executes a generic UNIX command when specified in `mantaJob.launch`, or from the output pipelined from a previous step. Use `mantaReduce` to run a job that has no Manta object input data.

The `exec` argument must be a valid generic UNIX command line, not an R function. The `exec` argument may call executables or runtime language scripts that are hosted on Manta and specified as `assets`. The `init` parameter command is called before the `exec` argument and is not passed input. The `init` argument may be used, for example to extract scripts from an asset on Manta saved as a tar object.

Note that you do not have to specify the input for a Reduce task for `mantaJob.launch`, the service pipes the output of the previous Map task phase as input to the Reduce task. Note also that the piped

input for a Reduce task may arrive in any order, no sorting is done by the service to the pipe between Map and Reduce tasks.

Value

Returns an R list for consumption by `mantaJob.setup`

See Also

Other `mantaJobs`: [mantaJob.cancel](#); [mantaJob.done](#); [mantaJob.errors.stderr](#); [mantaJob.errors](#); [mantaJob.failures](#); [mantaJob.inputs](#); [mantaJob.launch](#); [mantaJob.outputs.cat](#); [mantaJob.outputs](#); [mantaJob.setup](#); [mantaJob.status](#); [mantaJobs.running](#); [mantaJobs.tail](#); [mantaJobs](#); [mantaMap](#)

Examples

```
## Not run:
# Example - Map/Reduce Unix Word Count
job <- mantaJob.setup("word count",
  mantaMap("wc"),
  mantaReduce("awk { l += $1; w += $2; c += $3 } END { print l, w, c }"))

## End(Not run)
```

mantaRm

Removes specified Manta object, optionally recursive, not vectorized.

Description

Removes object. Specify absolute (e.g. `~/stor/myobject.txt`) or relative path from the current Manta directory. Supports recursive removal of child contents objects and directories with `r = TRUE`. You can use `mantaFind` to prepare a list of absolute Manta pathnames to objects with detailed searching and filtering specifications and then use `lapply(pathnamelist, mantaRm)` to delete the items.

Usage

```
mantaRm(mantapath, r = FALSE, info = TRUE)
```

Arguments

<code>mantapath</code>	character, required. Not vectorized.
<code>r</code> ,	logical optional. Set TRUE for recursive delete of all objects within all child subdirectories, and the directories.
<code>info</code>	logical. Set FALSE to suppress console messages.

Value

TRUE or FALSE depending on success of remove.

See Also

Other Directory: [mantaGetwd](#); [mantaMkdir](#); [mantaRmdir](#); [mantaSetwd.public](#); [mantaSetwd.reports](#); [mantaSetwd.stor](#); [mantaSetwd](#); [mantaSnapIn](#)

Examples

```
## Not run:
data <- runif(100)
mantaDump("data")
mantaCat("dumpdata.R")
mantaRm("dumpdata.R")

## Make a hierarchical directory set, for removal:
mantaGetwd() -> tempdir
mantaMkdir("~/stor/a_test/b_test/c_test", p = TRUE)
mantaSetwd("~/stor/a_test/b_test/c_test")
mantaMkdir("d_test") # Relative path
mantaDump("data")
mantaSetwd("..")
mantaDump("data")
mantaSetwd("..")
mantaDump("data")
mantaLs.l()
mantaFind()

## Recursive Rm Subdirectory Contents
mantaSetwd.stor()
mantaRm("~/stor/a_test", r = TRUE)
mantaSetwd("~/stor/a_test")
mantaLs.l()
mantaFind()
mantaSetwd.stor()
mantaRmdir("~/stor/a_test")
mantaLs.l("~/stor")
mantaSetwd(tempdir)

## End(Not run)
```

mantaRmdir	<i>Removes Manta subdirectory.</i>
------------	------------------------------------

Description

Removes specified Manta subdirectory. Non-recursive, not vectorized.

Usage

```
mantaRmdir(mantapath, info = TRUE)
```

Arguments

mantapath	character, required. Not vectorized.
info	logical. Set FALSE to suppress console messages.

Details

Removes directory. Specify absolute (e.g. ~/stor/myobject.txt) or relative path from the current working Manta directory.

Value

TRUE or FALSE depending on success of remove.

See Also

Other Directory: [mantaGetwd](#); [mantaMkdir](#); [mantaRm](#); [mantaSetwd.public](#); [mantaSetwd.reports](#); [mantaSetwd.stor](#); [mantaSetwd](#); [mantaSnapln](#)

Examples

```
## Not run:
## Save current working Manta directory
mantaGetwd() -> tempdir
## Relative mantapath use:
mantaSetwd.stor()
mantaMkdir("a_test")
mantals.l()
mantaRmdir("a_test")
mantals.l()
## Absolute mantapath use:
mantaMkdir("~/public/b_test")
mantals.l("~/public")
mantaRmdir("~/public/b_test")
mantals.l("~/public")
## Restore current working Manta directory
mantaSetwd(tempdir)

## End(Not run)
```

mantaRSDK

mantaRSDK

Description

R functions to transmit/receive native R data and files to the Manta Storage Service for object storage.

Manta jobs can compute on stored objects with Map/Reduce and UNIX shell commands in the cloud. Core functions communicate via the Manta REST API using RCurl. OpenSSL is required for authentication support, and must be installed separate from R.

To use this library you require a Joyent Manta account <http://www.joyent.com>

Configuration requires 3 environment variables \$MANTA_USER, \$MANTA_KEY, and \$MANTA_URL and your SSH keys as registered with Joyent.

FOR COMPLETE INSTALLATION INSTRUCTIONS - SEE:
<https://github.com/joyent/mantaRSDK/blob/master/README.md>

Details

Joyent Manta Storage Service R Software Development Kit

RSDK Functions

Manta Account Management

[mantaAccount](#) [mantaWhoami](#) [mantaGetLimits](#) [mantaSetLimits](#)

Manta Hierarchical Directory Operations

[mantaGetwd](#) [mantaSetwd](#) [mantaSetwd.jobs](#) [mantaSetwd.public](#) [mantaSetwd.reports](#) [mantaSetwd.stor](#)
[mantaSetwd.ws](#) [mantaMkdir](#) [mantaRmdir](#) [mantaLs](#) [mantaLs.du](#) [mantaLs.l](#) [mantaLs.n](#) [mantaLs.paths](#)
[mantaLs.url](#) [mantaFind](#) [mantaFind.du](#) [mantaFind.l](#) [mantaFind.n](#) [mantaFind.sizepath](#) [mantaFind.sizes](#)
[mantaFind.url](#)

Manta Object Store Operations

[mantaExists](#) [mantaPut](#) [mantaGet](#) [mantaCat](#) [mantaRm](#) [mantaSnapIn](#) [mantaDump](#) [mantaSource](#)
[mantaSave](#) [mantaLoad](#) [mantaSave.ws](#) [mantaLoad.ws](#)

Manta Compute Job Operations

[mantaJob.setup](#) [mantaMap](#) [mantaReduce](#) [mantaJob.launch](#) [mantaJob.status](#) [mantaJob.done](#)
[mantaJob.cancel](#) [mantaJob.errors](#) [mantaJob.errors.stderr](#) [mantaJob.failures](#) [mantaJob.inputs](#)
[mantaJob.outputs](#) [mantaJob.outputs.cat](#) [mantaJobs](#) [mantaJobs.running](#) [mantaJobs.tail](#)

Exposed Low Level Calls

[mantaAttempt](#) [mantaXfer](#) [mantaSave.image](#)

Useful Bunyan Debug/Log Utilities

[bunyanSetLog](#) [bunyanBuffer](#) [bunyanTraceback](#)

Details

Manta Account Management

[mantaAccount](#)

Changes current Manta account information.

[mantaWhoami](#)

Report the active Manta account settings.

[mantaGetLimits](#)

Returns Manta durability level, connection timeouts and limits currently active.

[mantaSetLimits](#)

Sets Manta durability level, connection timeouts and limits currently active.

Manta Hierarchical Directory Operations

[mantaGetwd](#)

Gets Manta working directory.

[mantaSetwd](#)

[mantaSetwd.public](#)

[mantaSetwd.stor](#)

[mantaSetwd.ws](#)

[mantaSetwd.jobs](#)

[mantaSetwd.reports](#)

Sets Manta working directory. Dotted forms are top-level (public, stor, jobs, reports) or workspace (as set by [mantaSave.ws](#)).

[mantaMkdir](#)

Makes a Manta subdirectory, optionally with parent directories.

[mantaRmdir](#)

Removes a Manta subdirectory.

[mantaLs](#)
[mantaLs.du](#)
[mantaLs.l](#)
[mantaLs.n](#)
[mantaLs.paths](#)
[mantaLs.url](#)

Lists, searches, filters, sorts and formats Manta directory listings. Dotted forms alter the format of the output. Numerical values are returned by n (number) and du (disk used).

[mantaFind](#)
[mantaFind.du](#)
[mantaFind.l](#)
[mantaFind.n](#)
[mantaFind.sizepath](#)
[mantaFind.sizes](#)
[mantaFind.url](#)

Recursive find tool for retrieving matching objects/subdirs from Manta hierarchy. Dotted forms alter the format of the output. Numerical values are returned by n (number) and du (disk used).

Manta Object Storage Operations

[mantaExists](#)

Tests to see if a Manta object or subdirectory exists.

[mantaPut](#)

Uploads file(s) (vectorized), or raw R buffer data to Manta Storage Service.

[mantaGet](#)

Downloads Manta object(s) (vectorized) specified to file(s) or buffer.

[mantaCat](#)

Retrieves object from Manta and uses cat to print contents to the R console.

[mantaRm](#)

Removes specified Manta object, optionally recursive.

[mantaSnapln](#)

Makes a Snaplink - combination snapshot and symbolic link.

[mantaDump](#)

Uses dump to upload text parsable R data to Manta Storage Service.

[mantaSource](#)

Downloads specified Manta object and applies source to parse R code file.

[mantaSave](#)

Uploads R data to Manta Storage Service using R function save.

[mantaLoad](#)

Downloads specified Manta object containing R data and uses R function load.

[mantaSave.ws](#)

Saves R workspace to Manta R workspace directory with an audit trail of backups.

[mantaLoad.ws](#)

Loads last current R workspace from Manta R workspace directory.

Compute Job Operations

[mantaJob.setup](#)

[mantaMap](#)

[mantaReduce](#)

Constructors for R format Manta Job including name, and UNIX command line tasks as defined by [mantaMap](#), and/or [mantaReduce](#) functions.

[mantaJob.launch](#)

Submits list of input Manta objects and R format Manta Job specification, runs job optionally polls job status. Returns job status.

[mantaJob.cancel](#)

Sends Manta a cancel message to stop running job.

[mantaJob.status](#)

Returns JSON Manta job status data given Manta job identifier.

[mantaJob.done](#)

Checks or polls status of a Manta job. Returns done or not as logical.

[mantaJob.errors](#)

Returns JSON Manta error messages given Manta job identifier.

[mantaJob.errors.stderr](#)

Retrieves JSON errors given Manta job identifier, then retrieves each stderr message archived on Manta (if any) and uses [mantaCat](#) to print contents of stderr to the console.

[mantaJob.failures](#)

Returns list of failures given Manta job identifier.

[mantaJob.inputs](#)

Returns list of input Manta objects given Manta job identifier.

[mantaJob.outputs](#)

Returns list of output Manta objects given Manta job identifier.

[mantaJob.outputs.cat](#)

Retrieves list of Manta output objects given Manta job identifier, then retrieves each object from Manta and uses `cat` to print contents to the R console.

[mantaJobs](#)

Lists all Manta job identifiers, sorted by time.

[mantaJobs.running](#)

Lists identifiers of any running Manta jobs.

[mantaJobs.tail](#)

Returns identifier of last run Manta job identifier, or from offset `n` up from end of list.

Exposed Low Level Calls**[mantaAttempt](#)**

raw REST API Manta Caller with exception handling, used by many functions.

[mantaXfer](#)

raw REST API Manta Caller for [mantaPut](#) [mantaGet](#) and related data transfer routines.

[mantaSave.image](#)

Workspace Upload function that calls `R.save.image`; used by [mantaSave.ws](#).

Useful Bunyan Debug/Log Utilities**[bunyanSetLog](#)**

Starts bunyan JSON message logging at supplied logging threshold to file or memory buffer.

[bunyanBuffer](#)

Returns memory buffer.

[bunyanTraceback](#)

Get messages from memory after last `bunyanSetpoint`

References

<http://apidocs.joyent.com/manta/>

mantaSave

Uploads R data to Manta Storage Service using R function save.

Description

Uploads to R data files .rda .Rdata .RData files. If no file extension is provided, .rda is appended. mantaSave is a wrapper for save and mantaXfer, which implements the RCURL upload.

Usage

```
mantaSave(..., list = character(),
  mantapath = stop("mantapath destination file or full path must be specified"),
  md5 = FALSE, headers, durability = 2, ascii = FALSE, version = NULL,
  envir = parent.frame(), compress = !ascii, compression_level,
  eval.promises = TRUE, precheck = TRUE, info = TRUE, verbose = FALSE)
```

Arguments

...	See save R objects to be saved
list	required. See save List of R objects to be saved.
mantapath	required. Path/filename to where uploaded data will go on Manta or Manta object/file name in current working Manta directory. If no extension is provided on the filename, or a non R data style extension .rda is appended to the end of the filename.
md5	logical. Test md5 hash of R data tempfile with OpenSSL before/after PUT transfer. Default is TRUE. Setting FALSE will speed up transfers a bit by skipping this step.
headers	optional. Headers for HTTPS transfer, in RCur1 style. See mantaPut . User metadata headers may be provided, E.g.: Avoid supplying the content-type header, which is set to the R data type "application/x-r-data", and the durability-level header which is handled via the durability parameter.
durability	optional. Number of copies to store on Manta (2-6). If not provided, uses saved value from mantaSetLimits, system default is 2.
ascii	optional. See save.
version	optional. See save.
envir	optional. See save. Environment of R object being passed.
compress	optional. See save.
compression_level	optional. See save.
eval.promises	optional. See save.
precheck	optional. See save.
info	logical required. Set to FALSE to silence output messages while downloading.
verbose	logical, optional. Passed to RCur1 GetURL, Set to TRUE to see background REST communication on stderr. Note this is not visible on Windows.

Value

TRUE or FALSE depending on success of transfer.

See Also

[mantaLoad](#)

Other mantaGet: [mantaCat](#); [mantaGet](#); [mantaLoad.ws](#); [mantaLoad](#); [mantaSource](#)

Examples

```
## Not run:
data <- runif(100)
mantaSave("data", mantapath = "~/stor/data")
rm(data)
mantaExists("~/stor/data.rda")
mantaLoad("~/stor/data.rda")
ls()
rm(data)

## End(Not run)
```

mantaSave.image

Workspace Upload function that uses R save.image.

Description

mantaSave.image uses mantaSave, mantaXfer, which implements the RCURL transfer This function is wrapped by [mantaSave.ws](#) for audit trail management of current and timestamped older R workspaces.

Usage

```
mantaSave.image(mantapath, md5 = TRUE, headers, durability = 2,
  version = NULL, ascii = FALSE, compress = !ascii, info = TRUE,
  verbose = FALSE)
```

Arguments

mantapath	required. Path/filename to where uploaded data will go on Manta or Manta object/file name in current working Manta directory. If no extension is provided on the filename, or a non R data style extension .rda is appended to the end of the filename.
md5	logical. Test md5 hash of R data tempfile with OpenSSL before/after PUT transfer. Default is TRUE. Setting FALSE will speed up transfers a bit by skipping this step.
headers	optional. Headers for HTTPS transfer, in RCur1 style. See mantaPut . User metadata headers may be provided, E.g.: Avoid supplying the content-type header, which is set to the R data type "application/x-r-data", and the durability-level header which is handled via the durability parameter.

durability	optional. Number of copies to store on Manta (2-6). If not provided, uses saved value from mantaSetLimits, system default is 2.
version	optional. See save.
ascii	optional. See save.
compress	optional. See save.
info	logical required. Set to FALSE to silence output messages while downloading.
verbose	logical, optional. Passed to Rcurl GetURL, Set to TRUE to see background REST communication on stderr. Note this is not visible on Windows.

Value

TRUE or FALSE depending on success of upload.

See Also

[mantaLoad](#) [mantaSave.ws](#) [mantaLoad.ws](#)

Other mantaPut: [mantaDump](#); [mantaPut](#); [mantaSave.ws](#)

Examples

```
## Not run:
data <- runif(100)
myusername <- mantaWhoami()
ls()
mantaSave.image(mantapath = "~/stor/myworkspace")
rm(data)
rm(myusername)
mantaExists("~/stor/myworkspace.RData")
mantaLoad("~/stor/myworkspace.RData")
ls()
rm(data)
rm(myusername)
mantaRm("~/stor/myworkspace.RData")

## End(Not run)
```

mantaSave.ws	<i>Save current R workspace and uploads to a Manta R workspace directory with audit trail.</i>
--------------	--

Description

Uploads Manta "current.Rdata" object to an audit-trail workspace directory using mantaSave.image.

Usage

```
mantaSave.ws()
```


Details

Together with `mantaLoad.ws` this function works with an audit trail of workspaces maintained in a Manta subdirectory created by `mantaSave.ws` made by R version and `mantaRSDK` client hostname, that looks like these:

```
~/stor/R-3.0.1/cwvh-macbookpro/
~/stor/R-3.0.2/CHOGUE-HPDV7/
```

These workspace archive subdirectories are made by `mantaSave.ws` when first run.

The last saved R workspace from these two systems in each directory is named `"current.Rdata"`. Previously saved R workspaces are renamed to their original GMT creation date/time stamp on Manta and archived with SnapLinks before writing a new workspace.

Archived workspaces are named like this:

`"2014-01-07_14:53:05_GMT.Rdata"` To retrieve an older workspace or a workspace saved from a different `mantaRSDK` client and version, use this form:

`mantaLoad("~/stor/R-3.0.0/hostname/2014-01-07_14:53:05_GMT.Rdata")` If you wish to save your workspace to a different location use `mantaSave.image` Adds appropriate content-type HTTP header, which is set to `"application/x-r-data"`.

Value

TRUE or FALSE depending on success of download.

See Also

`mantaSave.image` `mantaLoad` `mantaSetwd.ws` `mantaLoad.ws`

Other `mantaPut`: `mantaDump`; `mantaPut`; `mantaSave.image`

Examples

```
## Not run:
somedata <- runif(100)
somechar <- "My current workspace"
ls()
mantaSave.ws()
rm(somedata)
rm(somechar)
mantaLoad.ws()
ls()
## What is my workspace subdirectory?
mantaGetwd() -> tempdir
mantaSetwd.ws()
mantaGetwd() ## this one
mantaLs.l() ## Inspect workspace archives
mantaSetwd(tempdir)

## End(Not run)
```

Description

Use [mantaGetLimits](#) to see the settings structure and default values. Pass a structure in R or JSON to [mantaSetLimits](#) to change values. This is where the Manta default connection parameters are changed, including the number of copies of an object stored on the Manta service "durability_level" which can be from 2 to 6, the number of directory entries retrieved in one HTTPS call `max_limit` which is set to the maximum of 1000 by default. The other settings `recieve_timeout`, `sent_timeout` and `connect_timeout` are for HTTPS transfer sessions and are set with values in seconds.

Usage

```
mantaSetLimits(limits, json, verbose = FALSE)
```

Arguments

<code>limits</code>	list, optional. New R limits values.
<code>json</code>	character, optional. New JSON limits values.
<code>verbose</code>	logical, optional. Show HTTPS traffic in RCURL and console output.

Value

logical TRUE if values changed FALSE if values unchanged

See Also

Other `mantaAccount`: [mantaAccount](#); [mantaGetLimits](#); [mantaWhoami](#)

Examples

```
## Not run:
## Save all current settings with:
limits <- mantaGetLimits(all = TRUE)
## Change one or all settings, set with:
mantaSetLimits(limits)

## End(Not run)
```

`mantaSetwd`

Sets current working directory on Manta.

Description

This sets the current working directory in Manta. Supports `~~` expansion to `$MANTA_USER` setting, i.e. for my account `~/stor` expands to `/cwwhogue/stor`. There are 4 top level Manta subdirectories:

- `~/stor` Your private storage.
- `~/public` Your public storage.
- `~/jobs` Your job archive.
- `~/reports` Your account report information.

Specify the full path (absolute) or start from current working directory (relative). All `mantaRSDK` functions assume unprefixed filenames are in the current working directory on Manta. To move UP

one directory at a time use "." but note that "../.." forms are NOT supported as there are no parent directory "." object links on Manta. Returns FALSE if directory specified incorrectly or if the directory does not exist. The current working directory is stored internally in mantaRSDK on your local system and is not saved. between sessions. It initializes to the root directory of private Manta storage: ~/stor.

Usage

```
mantaSetwd(mantapath)
```

Arguments

mantapath character, required. Absolute or relative subdirectory name to set to.

See Also

Other Directory: [mantaGetwd](#); [mantaMkdir](#); [mantaRmdir](#); [mantaRm](#); [mantaSetwd.public](#); [mantaSetwd.reports](#); [mantaSetwd.stor](#); [mantaSnapIn](#)

Examples

```
## Not run:
## Show current Manta working directory
mantaGetwd()
## Save current subdirectory
mantaGetwd() -> tempdir
## Absolute path with ~~ expansion
mantaSetwd("~/~/public")
mantaGetwd()
## Dotted forms for 4 top level subdirectories:
mantaSetwd.public()
mantaGetwd()
mantaLs.l()
mantaSetwd.stor()
mantaGetwd()
mantaLs.l()
mantaSetwd.jobs()
mantaGetwd()
mantaLs.l()
mantaSetwd.reports()
mantaGetwd()
mantaLs.l()
## Restore saved subdirectory
mantaSetwd(tempdir)

## End(Not run)
```

```
mantaSetwd.jobs
```

```
Sets Manta working directory to ~/jobs
```

Description

Sets Manta working directory to ~/jobs

Usage

mantaSetwd.jobs()

mantaSetwd.public	<i>Sets current Manta working directory to ~/public</i>
-------------------	---

Description

See mantaSetwd.

Usage

mantaSetwd.public()

See Also

Other Directory: [mantaGetwd](#); [mantaMkdir](#); [mantaRmdir](#); [mantaRm](#); [mantaSetwd.reports](#); [mantaSetwd.stor](#); [mantaSetwd](#); [mantaSnapln](#)

mantaSetwd.reports	<i>Sets current Manta working directory to ~/reports</i>
--------------------	--

Description

See mantaSetwd.

Usage

mantaSetwd.reports()

See Also

Other Directory: [mantaGetwd](#); [mantaMkdir](#); [mantaRmdir](#); [mantaRm](#); [mantaSetwd.public](#); [mantaSetwd.stor](#); [mantaSetwd](#); [mantaSnapln](#)

mantaSetwd.stor	<i>Sets current Manta working directory to ~/stor</i>
-----------------	---

Description

See mantaSetwd.

Usage

mantaSetwd.stor()

See Also

Other Directory: [mantaGetwd](#); [mantaMkdir](#); [mantaRmdir](#); [mantaRm](#); [mantaSetwd.public](#); [mantaSetwd.reports](#); [mantaSetwd](#); [mantaSnapln](#)

mantaSetwd.ws	<i>Sets the current Manta working directory to the R workspace. E.g. <code>~/stor/R-3.0.1/myworkstation</code></i>
---------------	--

Description

Sets the current Manta working directory to the R workspace.
E.g. `~/stor/R-3.0.1/myworkstation`

Usage

```
mantaSetwd.ws()
```

Value

logical.

mantaSnapln	<i>Makes a Snaplink - combination ZFS snapshot and Symbolic link.</i>
-------------	---

Description

As a persistent object store, there are no copy or move commands on Manta. Instead the `mantaSnapln` command is used to add an object's name into another subdirectory without physically moving data on the service. Internally the system takes a ZFS snapshot of the data and the new object entry is the snapshot. If the original data is overwritten, the SnapLink still points to the original snapshot. The R workspace audit trail used by [mantaSave.ws](#) and [mantaLoad.ws](#) is implemented using `mantaSnapln`.

Usage

```
mantaSnapln(from, to, info = TRUE)
```

Arguments

<code>from</code>	character, required. Object in current subdirectory or full Manta path to stored object. Vectorized.
<code>to</code>	character, required. Snaplink name in current subdirectory, existing Manta subdirectory or full Manta object path to the new SnapLink. If <code>from</code> is a vector of Manta paths, then <code>to</code> must specify a single valid Manta subdirectory.
<code>info</code>	logical. When FALSE suppresses messages on the console.

See Also

[mantaSave.ws](#) [mantaLoad.ws](#)

Other Directory: [mantaGetwd](#); [mantaMkdir](#); [mantaRmdir](#); [mantaRm](#); [mantaSetwd.public](#); [mantaSetwd.reports](#); [mantaSetwd.stor](#); [mantaSetwd](#)

Examples

```
## Not run:
## Save a static hello world HTML page
htmlpage <- paste("<!DOCTYPE html>\n<html>\n<body>\n\n",
                  "<h1>Hello from Joyent Manta.</h1>\n\n",
                  "<p>Hello world! from ",
                  mantaWhoami(),
                  ".</p>\n\n",
                  "</body>\n</html>", sep="")
file <- file("test_index.html", "wb")
write(htmlpage,file)
close(file)
rm(file)
rm(htmlpage)

## Upload the HTML file to Manta in your private area
mantaSetwd.stor()
mantaPut("test_index.html")
mantaCat("test_index.html")

## Make it public
mantaMkdir("~/public/test")
mantaSnapln("test_index.html", "~/public/test")
mantaSnapln("test_index.html", "~/public/test/index.html")

## copy and paste URL into browser.
mantals.url("~/public/test", grepfor = "[.]html")

## Delete the original in private area
mantaRm("~/stor/test_index.html")
mantaExists("~/stor/test_index.html")

## Snaplink copies is still there in ~/public
mantaExists("~/public/test/test_index.html")
mantaExists("~/public/test/index.html")
mantaCat("~/public/test/index.html")

## Cleanup this demo
# mantaRm("~/public/test/index.html")
# mantaRm("~/public/test/test_index.html")
# mantaRmdir("~/public/test")
# file.remove("test_index.html")

## End(Not run)
```

mantaSource

Downloads specified Manta R source code file and applies source to parse/load it.

Description

Downloads specified Manta R source code file and applies source to parse/load it.

Usage

```
mantaSource(mantapath, local = FALSE, verbose = FALSE,
  max.deparse.length = 150, encoding = getOption("encoding"),
  keep.source = getOption("keep.source"))
```

Arguments

<code>mantapath</code>	character, optional. Path to a manta R code file or file name in current working Manta directory for retrieval. Not vectorized.
<code>local</code>	logical optional. See source.
<code>verbose</code>	logical, optional. Passed to Rcurl GetURL, Set to TRUE to see background REST communication on stderr. Note this is not visible on Windows.
<code>max.deparse.length</code>	optional. See source.
<code>encoding</code>	optional. See source.
<code>keep.source</code>	optional. See source.

Value

TRUE or FALSE depending on success of download.

See Also

[mantaDump](#)

Other mantaGet: [mantaCat](#); [mantaGet](#); [mantaLoad.ws](#); [mantaLoad](#); [mantaSave](#)

Examples

```
## Not run:
data <- runif(100)
ls()
mantaDump("data")
rm(data)
mantaCat("dumpdata.R")
ls()
mantaSource("dumpdata.R")
ls()
mantaRm("dumpdata.R")
rm(data)

## End(Not run)
```

mantaunixstyle

mantaLs and mantaFind callback - Unix like listings mimic of ln -o but some of this is static

Description

mantaLs and mantaFind callback - Unix like listings mimic of ln -o but some of this is static

Usage

```
mantaunixstyle(line)
```

Arguments

```
line          R structured directory line
```

mantaWhoami	<i>Reports the active Manta account information.</i>
-------------	--

Description

The active Manta account is initially obtained from environment variables \$MANTA_USER, \$MANTA_KEY, and \$MANTA_URL. Retrieve account settings, data center as JSON with this function. Change/restore account settings with mantaAccount.

Usage

```
mantaWhoami(all = FALSE, user = TRUE, dc_url = FALSE, key_id = FALSE,
            ssl_key = FALSE, json = FALSE)
```

Arguments

```
all          logical, optional, TRUE returns all account settings.
user         logical, optional. TRUE by default to report Manta user.
dc_url       logical, optional. Set TRUE to get Manta data center.
key_id       logical, optional. Set TRUE to get the current key id.
ssl_key      logical, optional. Set TRUE to get the private key path.
json         logical, optional. Set TRUE to get JSON output
```

Value

JSON or R values as specified.

See Also

Other mantaAccount: [mantaAccount](#); [mantaGetLimits](#); [mantaSetLimits](#)

Examples

```
## Not run:
mantaWhoami()
## To see/save current account settings:
account <- mantaWhoami(all = TRUE)

## then use:

mantaAccount(account) ## to set the modified account

## Account information may contain 1-4 key-value pairs.
```



```
## To see/save current account settings as JSON:

account <- mantaWhoami(all = TRUE, json = TRUE)

## then use:

mantaAccount(json = account) to set that account

## End(Not run)
```

mantaXfer	<i>raw REST API Manta Caller for mantaPut mantaGet and related data transfer routines. Not exported.</i>
-----------	--

Description

Note getURL verbose = TRUE writes to stderr - invisible on Windows R.

Usage

```
mantaXfer(action, method, filename, buffer, returnmetadata = FALSE,
  returnbuffer = FALSE, md5 = FALSE, headers, verbose = FALSE)
```

Arguments

action	character, optional. curlEscaped path to a manta object.
method	character, required. "GET", or "PUT" or "HEAD"
filename	optional. Path to local file for PUT or GET
buffer	optional. Raw buffer to put.
returnmetadata	logical required. For GET function returns metadata.
returnbuffer	logical required. For GET function returns buffer.
md5	logical optional. Test md5 hash of data before/after transfer
headers,	array of named characters, optional. The headers follow the RCurl structure of vector of characters where HTTP header tags are the names, values as named characters, no semicolons or delimiters.
verbose	logical, optional. Passed to RCurl GetURL, Set to TRUE to see background REST communication on stderr which is invisible on Windows

Value

TRUE or FALSE depending on success of PUT transfer on GET buffer=TRUE it returns the downloaded buffer

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