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s3fs-package					

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s3fs-	-package s3fs: 'Amazon Web Service S3' File System	

Description

Access 'Amazon Web Service Simple Storage Service' ('S3') https://aws.amazon.com/s3/ as if it were a file system. Interface based on the R package 'fs'.

Author(s)

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See Also

Useful links:

- https://github.com/DyfanJones/s3fs
- Report bugs at https://github.com/DyfanJones/s3fs/issues

copy

Copy files and directories

Description

```
s3_file_copy copies files
s3_dir_copy copies the directory recursively to the new location
```

Usage

```
s3_file_copy(
  path,
  new_path,
  max_batch = fs_bytes("100MB"),
  overwrite = FALSE,
  ...
)

s3_dir_copy(
  path,
  new_path,
  max_batch = fs_bytes("100MB"),
  overwrite = FALSE,
  ...
)
```

Arguments

```
path (character): path to a local directory of file or a uri.

new_path (character): path to a local directory of file or a uri.

max_batch (fs_bytes): Maximum batch size being uploaded with each multipart.

overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will be thrown.

parameters to be passed to s3_put_object
```

Value

character vector of s3 uri paths

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Examples

```
## Not run:
# Require AWS S3 credentials

temp_file = "temp.txt"
file.create(temp_file)

s3_file_copy(
    temp_file,
    "s3://MyBucket/temp_file.txt"
)

## End(Not run)
```

copy_async

Copy files and directories

Description

```
s3_file_copy copies files
s3_dir_copy copies the directory recursively to the new location
```

Usage

```
s3_file_copy_async(
  path,
  new_path,
  max_batch = fs_bytes("100MB"),
  overwrite = FALSE,
  ...
)

s3_dir_copy_async(
  path,
  new_path,
  max_batch = fs_bytes("100MB"),
  overwrite = FALSE,
  ...
)
```

Arguments

```
path (character): path to a local directory of file or a uri.

new_path (character): path to a local directory of file or a uri.

max_batch (fs_bytes): Maximum batch size being uploaded with each multipart.

overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will be thrown.

... parameters to be passed to s3_put_object
```

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Value

```
return future object of s3_file_copy(), s3_dir_copy()
```

See Also

```
future s3_file_copy() s3_dir_copy()
```

create

Create files and directories

Description

```
s3_file_create create file on AWS S3, if file already exists it will be left unchanged. s3_dir_create create empty directory of AWS S3.
```

Usage

```
s3_file_create(path, overwrite = FALSE, ...)

s3_bucket_create(
  path,
  region_name = NULL,
  mode = c("private", "public-read", "public-read-write", "authenticated-read"),
  versioning = FALSE,
  ...
)

s3_dir_create(path, overwrite = FALSE, ...)
```

Arguments

Value

character vector of s3 uri paths

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Examples

```
## Not run:
# Require AWS S3 credentials

temp_file = s3_file_temp(tmp_dir= "MyBucket")
s3_file_create(temp_file)
## End(Not run)
```

delete

Delete files and directories

Description

```
s3_file_delete delete files in AWS S3
s3_dir_delete delete directories in AWS S3 recursively.
```

Usage

```
s3_file_delete(path, ...)
s3_dir_delete(path)
```

Arguments

```
path (character): A character vector of paths or s3 uris.
... parameters to be passed to s3_delete_objects
```

Value

character vector of s3 uri paths

```
## Not run:
# Require AWS S3 credentials

temp_file = s3_file_temp(tmp_dir= "MyBucket")
s3_file_create(temp_file)

s3_file_delete(temp_file)

## End(Not run)
```

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delete_async

Delete files and directories

Description

```
s3_file_delete delete files in AWS S3
s3_dir_delete delete directories in AWS S3 recursively.
```

Usage

```
s3_file_delete_async(path, ...)
s3_dir_delete_async(path)
```

Arguments

```
path (character): A character vector of paths or s3 uris.
... parameters to be passed to s3_delete_objects
```

Value

```
return future object of s3_file_delete() s3_dir_delete()
```

See Also

```
future s3_file_delete() s3_dir_delete()
```

download

Download files and directories

Description

```
s3_file_download downloads AWS S3 files to local
s3_file_download downloads AWS s3 directory to local
```

Usage

```
s3_file_download(path, new_path, overwrite = FALSE, ...)
s3_dir_download(path, new_path, overwrite = FALSE, ...)
```

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Arguments

```
path (character): A character vector of paths or uris
```

new_path (character): A character vector of paths to the new locations.

overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error

will be thrown.

... parameters to be passed to s3_get_object

Value

character vector of s3 uri paths

Examples

```
## Not run:
# Require AWS S3 credentials

temp_file = s3_file_temp(tmp_dir= "MyBucket")
s3_file_create(temp_file)

s3_file_download(temp_file, "temp_file.txt")
## End(Not run)
```

download_async

Download files and directories

Description

```
s3_file_download downloads AWS S3 files to local s3_file_download downloads AWS s3 directory to local
```

Usage

```
s3_file_download_async(path, new_path, overwrite = FALSE, ...)
s3_dir_download_async(path, new_path, overwrite = FALSE, ...)
```

Arguments

```
path (character): A character vector of paths or uris

new_path (character): A character vector of paths to the new locations.

overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will be thrown.

... parameters to be passed to s3_get_object
```

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Value

```
return future object of s3_file_download() s3_dir_download()
```

See Also

```
future s3_file_download() s3_dir_download()
```

exists

Download files and directories

Description

```
s3_file_exists check if file exists in AWS S3
s3_dir_exists check if path is a directory in AWS S3
```

Usage

```
s3_file_exists(path)
s3_dir_exists(path = ".")
```

Arguments

path

(character) s3 path to check

Value

logical vector if file exists

```
## Not run:
# Require AWS S3 credentials

temp_file = s3_file_temp(tmp_dir= "MyBucket")
s3_file_create(temp_file)

s3_file_exists(temp_file)

## End(Not run)
```

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file_type

Functions to test for file types

Description

Test for file types

Usage

```
s3_is_file(path)
s3_is_dir(path)
s3_is_bucket(path, ...)
s3_is_file_empty(path)
```

Arguments

```
path (character): A character vector of paths or uris
... parameters to be passed to s3_list_objects_v2
```

info

Get files and directories information

Description

```
s3_file_info returns file information within AWS S3 directory
s3_file_size returns file size in bytes
s3_dir_info returns file name information within AWS S3 directory
s3_dir_ls returns file name within AWS S3 directory
```

Usage

```
s3_file_info(path)
s3_file_size(path)

s3_dir_info(
  path = ".",
  type = c("any", "bucket", "directory", "file"),
  glob = NULL,
  regexp = NULL,
  invert = FALSE,
```

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```
recurse = FALSE,
  refresh = FALSE,
  ...
)

s3_dir_ls(
  path = ".",
  type = c("any", "bucket", "directory", "file"),
  glob = NULL,
  regexp = NULL,
  invert = FALSE,
  recurse = FALSE,
  refresh = FALSE,
  ...
)
```

Arguments

path	(character): A character vector of one or more paths. Can be path or s3 uri.
type	(character): File type(s) to return. Default ("any") returns all AWS S3 object types.
glob	(character): A wildcard pattern (e.g. \star .csv), passed onto grep() to filter paths.
regexp	(character): A regular expression (e.g. $[.]csv$), passed onto grep() to filter paths.
invert	(logical): If code return files which do not match.
recurse	(logical): Returns all AWS S3 objects in lower sub directories
refresh	(logical): Refresh cached in s3_cache.
	parameters to be passed to s3_list_objects_v2

Value

s3_file_info A data.table with metadata for each file. Columns returned are as follows.

- bucket_name (character): AWS S3 bucket of file
- key (character): AWS S3 path key of file
- uri (character): S3 uri of file
- size (numeric): file size in bytes
- type (character): file type (file or directory)
- etag (character): An entity tag is an opague identifier
- last_modified (POSIXct): Created date of file.
- delete_marker (logical): Specifies retrieved a logical marker
- accept_ranges (character): Indicates that a range of bytes was specified.
- expiration (character): File expiration
- restore (character): If file is archived

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- archive_status (character): Archive status
- missing_meta (integer): Number of metadata entries not returned in "x-amz-meta" headers
- version_id (character): version id of file
- cache_control (character): caching behaviour for the request/reply chain
- content_disposition (character): presentational information of file
- content_encoding (character): file content encodings
- content_language (character): what language the content is in
- content_type (character): file MIME type
- expires (POSIXct): date and time the file is no longer cacheable
- website_redirect_location (character): redirects request for file to another
- server_side_encryption (character): File server side encryption
- metadata (list): metadata of file
- sse_customer_algorithm (character): server-side encryption with a customer-provided encryption key
- sse_customer_key_md5 (character): server-side encryption with a customer-provided encryption key
- ssekms_key_id (character): ID of the Amazon Web Services Key Management Service
- bucket_key_enabled (logical): s3 bucket key for server-side encryption with
- storage_class (character): file storage class information
- request_charged (character): indicates successfully charged for request
- replication_status (character): return specific header if request involves a bucket that is either a source or a destination in a replication rule https://boto3.amazonaws.com/v1/documentation/api/latest/reference/services/s3.html#S3.Client.head_object
- parts_count (integer): number of count parts the file has
- object_lock_mode (character): the file lock mode
- object_lock_retain_until_date (POSIXct): date and time of when object_lock_mode expires
- object_lock_legal_hold_status (character): file legal holding

s3_dir_info data.table with directory metadata

- bucket_name (character): AWS S3 bucket of file
- key (character): AWS S3 path key of file
- uri (character): S3 uri of file
- size (numeric): file size in bytes
- version id (character): version id of file
- etag (character): An entity tag is an opague identifier
- last modified (POSIXct): Created date of file

s3_dir_ls character vector of s3 uri paths

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Examples

```
## Not run:
# Require AWS S3 credentials

temp_file = s3_file_temp(tmp_dir= "MyBucket")
s3_file_create(temp_file)

s3_file_info(temp_file)

## End(Not run)
```

path

Construct path for file or directory

Description

Constructs a s3 uri path

Usage

```
s3_path(..., ext = "")
```

Arguments

```
... (character): Character vectorsext (character): An optional extension to append to the generated path
```

Value

character vector of s3 uri paths

```
## Not run:
# Require AWS S3 credentials
s3_path("my_bucket1", "my_bucket2")
## End(Not run)
```

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path_manipulate

Manipulate s3 uri paths

Description

```
s3_path_dir returns the directory portion of s3 uri
s3_path_file returns the file name portion of the s3 uri path
s3_path_ext returns the last extension for a path.
s3_path_ext_remove removes the last extension and return the rest of the s3 uri.
```

s3_path_ext_set replace the extension with a new extension.

Usage

```
s3_path_dir(path)
s3_path_file(path)
s3_path_ext(path)
s3_path_ext_remove(path)
s3_path_ext_set(path, ext)
```

Arguments

```
path (character): A character vector of paths ext (character): New file extension
```

```
## Not run:
# Require AWS S3 credentials
s3_path_dir("s3://my_bucket1/hi.txt")
s3_path_file("s3://my_bucket1/hi.txt")
## End(Not run)
```

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permission

Change file permissions

Description

Change file permissions

Usage

```
s3_file_chmod(
  path,
  mode = c("private", "public-read", "public-read-write", "authenticated-read",
        "aws-exec-read", "bucket-owner-read", "bucket-owner-full-control")
)
s3_bucket_chmod(
  path,
  mode = c("private", "public-read", "public-read-write", "authenticated-read")
)
```

Arguments

```
path (character): A character vector of path or s3 uri.
mode (character): A character of the mode
```

Value

character vector of s3 uri paths

```
## Not run:
# Require AWS S3 credentials

temp_file = s3_file_temp(tmp_dir = "MyBucket")
s3_file_create(temp_file)

# Reset connection to connect to a different region
s3_file_chmod(
    profile_name = "s3fs_example",
    region_name = "us-east-1",
    refresh = TRUE
)

## End(Not run)
```

S3FileSystem

Access AWS S3 as if it were a file system.

Description

This creates a file system "like" API based off fs (e.g. dir_ls, file_copy, etc.) for AWS S3 storage.

Public fields

```
s3_cache Cache AWS S3
s3_cache_bucket Cached s3 bucket
s3_client paws s3 client
region_name AWS region when creating new connections
profile_name The name of a profile to use
multipart_threshold Threshold to use multipart
request_payer Threshold to use multipart
pid Get the process ID of the R Session
```

Active bindings

retries number of retries

Methods

Public methods:

- S3FileSystem\$new()
- S3FileSystem\$file_chmod()
- S3FileSystem\$file_copy()
- S3FileSystem\$file_create()
- S3FileSystem\$file_delete()
- S3FileSystem\$file_download()
- S3FileSystem\$file_exists()
- S3FileSystem\$file_info()
- S3FileSystem\$file_move()
- S3FileSystem\$file_size()
- S3FileSystem\$file_stream_in()
- S3FileSystem\$file_stream_out()
- S3FileSystem\$file_temp()
- S3FileSystem\$file_tag_delete()
- S3FileSystem\$file_tag_info()
- S3FileSystem\$file_tag_update()
- S3FileSystem\$file_touch()

```
• S3FileSystem$file_upload()
  • S3FileSystem$file_url()
  • S3FileSystem$file_version_info()
  • S3FileSystem$is_file()
  • S3FileSystem$is_dir()
  • S3FileSystem$is_bucket()
  • S3FileSystem$is_file_empty()
  • S3FileSystem$bucket_chmod()
  • S3FileSystem$bucket_create()
  • S3FileSystem$bucket_delete()
  • S3FileSystem$dir_copy()
  • S3FileSystem$dir_create()
  • S3FileSystem$dir_delete()
  • S3FileSystem$dir_exists()
  • S3FileSystem$dir_download()
  • S3FileSystem$dir_info()
  • S3FileSystem$dir_ls()
  • S3FileSystem$dir_ls_url()
  • S3FileSystem$dir_tree()
  • S3FileSystem$dir_upload()
  • S3FileSystem$path()
  • S3FileSystem$path_dir()
  • S3FileSystem$path_ext()
  • S3FileSystem$path_ext_remove()
  • S3FileSystem$path_ext_set()
  • S3FileSystem$path_file()
  • S3FileSystem$path_join()
  • S3FileSystem$path_split()
  • S3FileSystem$clear_cache()
  • S3FileSystem$clone()
Method new(): Initialize S3FileSystem class
 Usage:
 S3FileSystem$new(
   aws_access_key_id = NULL,
   aws_secret_access_key = NULL,
   aws_session_token = NULL,
   region_name = NULL,
   profile_name = NULL,
   endpoint = NULL,
   disable_ssl = FALSE,
   multipart_threshold = fs_bytes("2GB"),
   request_payer = FALSE,
   anonymous = FALSE,
 )
```

```
Arguments:
 aws_access_key_id (character): AWS access key ID
 aws_secret_access_key (character): AWS secret access key
 aws_session_token (character): AWS temporary session token
 region_name (character): Default region when creating new connections
 profile_name (character): The name of a profile to use. If not given, then the default profile is
 endpoint (character): The complete URL to use for the constructed client.
 disable_ssl (logical): Whether or not to use SSL. By default, SSL is used.
 multipart_threshold (fs_bytes): Threshold to use multipart instead of standard copy and
     upload methods.
 request_payer (logical): Confirms that the requester knows that they will be charged for the
 anonymous (logical): Set up anonymous credentials when connecting to AWS S3.
 ... Other parameters within paws client.
Method file_chmod(): Change file permissions
 Usage:
 S3FileSystem$file_chmod(
    path,
   mode = c("private", "public-read", "public-read-write", "authenticated-read",
      "aws-exec-read", "bucket-owner-read", "bucket-owner-full-control")
 Arguments:
 path (character): A character vector of path or s3 uri.
 mode (character): A character of the mode
 Returns: character vector of s3 uri paths
Method file_copy(): copy files
 Usage:
 S3FileSystem$file_copy(
   path,
   new_path,
   max_batch = fs_bytes("100MB"),
   overwrite = FALSE,
 )
 Arguments:
 path (character): path to a local directory of file or a uri.
 new_path (character): path to a local directory of file or a uri.
 max_batch (fs_bytes): Maximum batch size being uploaded with each multipart.
 overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will
     be thrown.
 ... parameters to be passed to s3_put_object
```

Returns: character vector of s3 uri paths Method file_create(): Create file on AWS S3, if file already exists it will be left unchanged. S3FileSystem\$file_create(path, overwrite = FALSE, ...) Arguments: path (character): A character vector of path or s3 uri. overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will be thrown. ... parameters to be passed to s3_put_object Returns: character vector of s3 uri paths Method file_delete(): Delete files in AWS S3 Usage: S3FileSystem\$file_delete(path, ...) Arguments: path (character): A character vector of paths or s3 uris. ... parameters to be passed to s3_delete_objects Returns: character vector of s3 uri paths Method file_download(): Downloads AWS S3 files to local Usage: S3FileSystem\$file_download(path, new_path, overwrite = FALSE, ...) Arguments: path (character): A character vector of paths or uris new_path (character): A character vector of paths to the new locations. overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will be thrown. ... parameters to be passed to s3_get_object Returns: character vector of s3 uri paths Method file_exists(): Check if file exists in AWS S3 Usage: S3FileSystem\$file_exists(path) Arguments: path (character) s3 path to check Returns: logical vector if file exists **Method** file_info(): Returns file information within AWS S3 directory S3FileSystem\$file_info(path) Arguments:

path (character): A character vector of paths or uris.

Returns: A data.table with metadata for each file. Columns returned are as follows.

- bucket_name (character): AWS S3 bucket of file
- key (character): AWS S3 path key of file
- uri (character): S3 uri of file
- size (numeric): file size in bytes
- type (character): file type (file or directory)
- etag (character): An entity tag is an opague identifier
- last_modified (POSIXct): Created date of file.
- delete_marker (logical): Specifies retrieved a logical marker
- accept_ranges (character): Indicates that a range of bytes was specified.
- expiration (character): File expiration
- restore (character): If file is archived
- archive status (character): Archive status
- missing_meta (integer): Number of metadata entries not returned in "x-amz-meta" headers
- version_id (character): version id of file
- cache_control (character): caching behaviour for the request/reply chain
- content_disposition (character): presentational information of file
- content_encoding (character): file content encodings
- content_language (character): what language the content is in
- content_type (character): file MIME type
- expires (POSIXct): date and time the file is no longer cacheable
- website_redirect_location (character): redirects request for file to another
- server_side_encryption (character): File server side encryption
- metadata (list): metadata of file
- sse_customer_algorithm (character): server-side encryption with a customer-provided encryption key
- sse_customer_key_md5 (character): server-side encryption with a customer-provided encryption key
- ssekms_key_id (character): ID of the Amazon Web Services Key Management Service
- bucket_key_enabled (logical): s3 bucket key for server-side encryption with
- storage_class (character): file storage class information
- request_charged (character): indicates successfully charged for request
- replication_status (character): return specific header if request involves a bucket that is either a source or a destination in a replication rule https://boto3.amazonaws.com/v1/documentation/api/latest/reference/services/s3.html#S3.Client.head_object
- parts_count (integer): number of count parts the file has
- object_lock_mode (character): the file lock mode
- object_lock_retain_until_date (POSIXct): date and time of when object_lock_mode expires
- object_lock_legal_hold_status (character): file legal holding

Method file_move(): Move files to another location on AWS S3

Usage:

```
S3FileSystem$file_move(
   path,
   new_path,
   max_batch = fs_bytes("100MB"),
   overwrite = FALSE,
 )
 Arguments:
 path (character): A character vector of s3 uri
 new_path (character): A character vector of s3 uri.
 max_batch (fs_bytes): Maximum batch size being uploaded with each multipart.
 overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will
     be thrown.
 ... parameters to be passed to s3_copy_object
 Returns: character vector of s3 uri paths
Method file_size(): Return file size in bytes
 S3FileSystem$file_size(path)
 Arguments:
 path (character): A character vector of s3 uri
Method file_stream_in(): Streams in AWS S3 file as a raw vector
 Usage:
 S3FileSystem$file_stream_in(path, ...)
 Arguments:
 path (character): A character vector of paths or s3 uri
 ... parameters to be passed to s3_get_object
 Returns: list of raw vectors containing the contents of the file
Method file_stream_out(): Streams out raw vector to AWS S3 file
 Usage:
 S3FileSystem$file_stream_out(
    obj,
    path,
   max_batch = fs_bytes("100MB"),
   overwrite = FALSE,
 )
 Arguments:
 obj (rawlcharacter): A raw vector, rawConnection, url to be streamed up to AWS S3.
 path (character): A character vector of paths or s3 uri
 max_batch (fs_bytes): Maximum batch size being uploaded with each multipart.
```

```
overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will
     be thrown.
 ... parameters to be passed to s3_put_object
 Returns: character vector of s3 uri paths
Method file_temp(): return the name which can be used as a temporary file
 S3FileSystem$file_temp(pattern = "file", tmp_dir = "", ext = "")
 Arguments:
 pattern (character): A character vector with the non-random portion of the name.
 tmp_dir (character): The directory the file will be created in.
 ext (character): A character vector of one or more paths.
 Returns: character vector of s3 uri paths
Method file_tag_delete(): Delete file tags
 Usage:
 S3FileSystem$file_tag_delete(path)
 Arguments:
 path (character): A character vector of paths or s3 uri
 ... parameters to be passed to s3_put_object
 Returns: character vector of s3 uri paths
Method file_tag_info(): Get file tags
 Usage:
 S3FileSystem$file_tag_info(path)
 Arguments:
 path (character): A character vector of paths or s3 uri
 Returns: data.table of file version metadata
   • bucket name (character): AWS S3 bucket of file
   • key (character): AWS S3 path key of file
   • uri (character): S3 uri of file
   • size (numeric): file size in bytes
   • version_id (character): version id of file
   • tag key (character): name of tag
   • tag_value (character): tag value
Method file_tag_update(): Update file tags
 Usage:
 S3FileSystem$file_tag_update(path, tags, overwrite = FALSE)
 Arguments:
 path (character): A character vector of paths or s3 uri
 tags (list): Tags to be applied
```

overwrite (logical): To overwrite tagging or to modify inplace. Default will modify inplace.

```
Returns: character vector of s3 uri paths
Method file_touch(): Similar to fs::file_touch this does not create the file if it does not
exist. Use s3fs$file_create() to do this if needed.
 Usage:
 S3FileSystem$file_touch(path, ...)
 Arguments:
 path (character): A character vector of paths or s3 uri
 ... parameters to be passed to s3_copy_object
 Returns: character vector of s3 uri paths
Method file_upload(): Uploads files to AWS S3
 Usage:
 S3FileSystem$file_upload(
    path,
   new_path,
   max_batch = fs_bytes("100MB"),
   overwrite = FALSE,
 )
 Arguments:
 path (character): A character vector of local file paths to upload to AWS S3
 new_path (character): A character vector of AWS S3 paths or uri's of the new locations.
 max_batch (fs_bytes): Maximum batch size being uploaded with each multipart.
 overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will
     be thrown.
 ... parameters to be passed to s3_put_object and s3_create_multipart_upload
 Returns: character vector of s3 uri paths
Method file_url(): Generate presigned url for S3 object
 Usage:
 S3FileSystem$file_url(path, expiration = 3600L, ...)
 Arguments:
 path (character): A character vector of paths or uris
 expiration (numeric): The number of seconds the presigned url is valid for. By default it
     expires in an hour (3600 seconds)
 ... parameters passed to s3_get_object
 Returns: return character of urls
Method file_version_info(): Get file versions
 Usage:
 S3FileSystem$file_version_info(path, ...)
```

```
Arguments:
 path (character): A character vector of paths or uris
  ... parameters to be passed to s3_list_object_versions
 Returns: return data.table with file version info, columns below:
    • bucket_name (character): AWS S3 bucket of file
   • key (character): AWS S3 path key of file
    • uri (character): S3 uri of file
   • size (numeric): file size in bytes
    • version_id (character): version id of file
   • owner (character): file owner
   • etag (character): An entity tag is an opague identifier
    • last_modified (POSIXct): Created date of file.
Method is_file(): Test for file types
  Usage:
  S3FileSystem$is_file(path)
 Arguments:
 path (character): A character vector of paths or uris
 Returns: logical vector if object is a file
Method is_dir(): Test for file types
  Usage:
  S3FileSystem$is_dir(path)
 Arguments:
 path (character): A character vector of paths or uris
 Returns: logical vector if object is a directory
Method is_bucket(): Test for file types
  Usage:
  S3FileSystem$is_bucket(path, ...)
 Arguments:
 path (character): A character vector of paths or uris
  ... parameters to be passed to s3_list_objects_v2
 Returns: logical vector if object is a AWS S3 bucket
Method is_file_empty(): Test for file types
  Usage:
 S3FileSystem$is_file_empty(path)
 Arguments:
 path (character): A character vector of paths or uris
 Returns: logical vector if file is empty
```

```
Method bucket_chmod(): Change bucket permissions
 S3FileSystem$bucket_chmod(
   mode = c("private", "public-read", "public-read-write", "authenticated-read")
 Arguments:
 path (character): A character vector of path or s3 uri.
 mode (character): A character of the mode
 Returns: character vector of s3 uri paths
Method bucket_create(): Create bucket
 Usage:
 S3FileSystem$bucket_create(
   path,
   region_name = NULL,
   mode = c("private", "public-read", "public-read-write", "authenticated-read"),
   versioning = FALSE,
 )
 Arguments:
 path (character): A character vector of path or s3 uri.
 region_name (character): aws region
 mode (character): A character of the mode
 versioning (logical): Whether to set the bucket to versioning or not.
 ... parameters to be passed to s3_create_bucket
 Returns: character vector of s3 uri paths
Method bucket_delete(): Delete bucket
 Usage:
 S3FileSystem$bucket_delete(path)
 Arguments:
 path (character): A character vector of path or s3 uri.
Method dir_copy(): Copies the directory recursively to the new location.
 Usage:
 S3FileSystem$dir_copy(
   path,
   new_path,
   max_batch = fs_bytes("100MB"),
   overwrite = FALSE,
 )
```

```
Arguments:
 path (character): path to a local directory of file or a uri.
 new_path (character): path to a local directory of file or a uri.
 max_batch (fs_bytes): Maximum batch size being uploaded with each multipart.
 overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will
     be thrown.
 ... parameters to be passed to s3_put_object and s3_create_multipart_upload
 Returns: character vector of s3 uri paths
Method dir_create(): Create empty directory
 Usage:
 S3FileSystem$dir_create(path, overwrite = FALSE, ...)
 Arguments:
 path (character): A vector of directory or uri to be created in AWS S3
 overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will
     be thrown.
 ... parameters to be passed to s3_put_object
 Returns: character vector of s3 uri paths
Method dir_delete(): Delete contents and directory in AWS S3
 Usage:
 S3FileSystem$dir_delete(path)
 Arguments:
 path (character): A vector of paths or uris to directories to be deleted.
 Returns: character vector of s3 uri paths
Method dir_exists(): Check if path exists in AWS S3
 Usage:
 S3FileSystem$dir_exists(path = ".")
 Arguments:
 path (character) aws s3 path to be checked
 Returns: character vector of s3 uri paths
Method dir_download(): Downloads AWS S3 files to local
 Usage:
 S3FileSystem$dir_download(path, new_path, overwrite = FALSE, ...)
 Arguments:
 path (character): A character vector of paths or uris
 new_path (character): A character vector of paths to the new locations. Please ensure directo-
     ries end with a /.
 overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will
     be thrown.
```

```
... parameters to be passed to s3_get_object
 Returns: character vector of s3 uri paths
Method dir_info(): Returns file information within AWS S3 directory
 Usage:
 S3FileSystem$dir_info(
    path = ".",
    type = c("any", "bucket", "directory", "file"),
    glob = NULL,
    regexp = NULL,
    invert = FALSE,
   recurse = FALSE,
   refresh = FALSE,
 )
 Arguments:
 path (character): A character vector of one or more paths. Can be path or s3 uri.
 type (character): File type(s) to return. Default ("any") returns all AWS S3 object types.
 glob (character): A wildcard pattern (e.g. *.csv), passed onto grep() to filter paths.
 regexp (character): A regular expression (e.g. [.]csv$), passed onto grep() to filter paths.
 invert (logical): If code return files which do not match.
 recurse (logical): Returns all AWS S3 objects in lower sub directories
 refresh (logical): Refresh cached in s3_cache.
 ... parameters to be passed to s3_list_objects_v2
 Returns: data.table with directory metadata
   • bucket_name (character): AWS S3 bucket of file
   • key (character): AWS S3 path key of file
   • uri (character): S3 uri of file
   • size (numeric): file size in bytes
   • version_id (character): version id of file
   • etag (character): An entity tag is an opague identifier
   • last_modified (POSIXct): Created date of file
Method dir_ls(): Returns file name within AWS S3 directory
 Usage:
 S3FileSystem$dir_ls(
   path = ".",
    type = c("any", "bucket", "directory", "file"),
    glob = NULL,
    regexp = NULL,
   invert = FALSE,
   recurse = FALSE,
   refresh = FALSE,
 )
```

```
Arguments:
 path (character): A character vector of one or more paths. Can be path or s3 uri.
 type (character): File type(s) to return. Default ("any") returns all AWS S3 object types.
 glob (character): A wildcard pattern (e.g. *.csv), passed onto grep() to filter paths.
 regexp (character): A regular expression (e.g. [.]csv$), passed onto grep() to filter paths.
 invert (logical): If code return files which do not match.
 recurse (logical): Returns all AWS S3 objects in lower sub directories
 refresh (logical): Refresh cached in s3_cache.
 ... parameters to be passed to s3_list_objects_v2
 Returns: character vector of s3 uri paths
Method dir_ls_url(): Generate presigned url to list S3 directories
 S3FileSystem$dir_ls_url(path, expiration = 3600L, recurse = FALSE, ...)
 Arguments:
 path (character): A character vector of paths or uris
 expiration (numeric): The number of seconds the presigned url is valid for. By default it
     expires in an hour (3600 seconds)
 recurse (logical): Returns all AWS S3 objects in lower sub directories
 ... parameters passed to s3_list_objects_v2
 Returns: return character of urls
Method dir_tree(): Print contents of directories in a tree-like format
 Usage:
 S3FileSystem$dir_tree(path, recurse = TRUE, ...)
 Arguments:
 path (character): path A path to print the tree from
 recurse (logical): Returns all AWS S3 objects in lower sub directories
 ... Additional arguments passed to s3_dir_ls.
 Returns: character vector of s3 uri paths
Method dir_upload(): Uploads local directory to AWS S3
 Usage:
 S3FileSystem$dir_upload(
    path,
   new_path,
   max_batch = fs_bytes("100MB"),
   overwrite = FALSE,
 )
 Arguments:
 path (character): A character vector of local file paths to upload to AWS S3
```

```
new_path (character): A character vector of AWS S3 paths or uri's of the new locations.
 max_batch (fs_bytes): Maximum batch size being uploaded with each multipart.
 overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will
     be thrown.
 ... parameters to be passed to s3_put_object and s3_create_multipart_upload
 Returns: character vector of s3 uri paths
Method path(): Constructs a s3 uri path
 Usage:
 S3FileSystem$path(..., ext = "")
 Arguments:
 ... (character): Character vectors
 ext (character): An optional extension to append to the generated path
 Returns: character vector of s3 uri paths
Method path_dir(): Returns the directory portion of s3 uri
 Usage:
 S3FileSystem$path_dir(path)
 Arguments:
 path (character): A character vector of paths
 Returns: character vector of s3 uri paths
Method path_ext(): Returns the last extension for a path.
 Usage:
 S3FileSystem$path_ext(path)
 Arguments:
 path (character): A character vector of paths
 Returns: character s3 uri file extension
Method path_ext_remove(): Removes the last extension and return the rest of the s3 uri.
 S3FileSystem$path_ext_remove(path)
 Arguments:
 path (character): A character vector of paths
 Returns: character vector of s3 uri paths
Method path_ext_set(): Replace the extension with a new extension.
 Usage:
 S3FileSystem$path_ext_set(path, ext)
 path (character): A character vector of paths
 ext (character): New file extension
```

```
Returns: character vector of s3 uri paths
Method path_file(): Returns the file name portion of the s3 uri path
 Usage:
 S3FileSystem$path_file(path)
 Arguments:
 path (character): A character vector of paths
 Returns: character vector of file names
Method path_join(): Construct an s3 uri path from path vector
 Usage:
 S3FileSystem$path_join(parts)
 Arguments:
 parts (character): A character vector of one or more paths
 Returns: character vector of s3 uri paths
Method path_split(): Split s3 uri path to core components bucket, key and version id
 Usage:
 S3FileSystem$path_split(path)
 Arguments:
 path (character): A character vector of one or more paths or s3 uri
 Returns: list character vectors splitting the s3 uri path in "Bucket", "Key" and "VersionId"
Method clear_cache(): Clear S3 Cache
 Usage:
 S3FileSystem$clear_cache(path = NULL)
 Arguments:
 path (character): s3 path to be cl
Method clone(): The objects of this class are cloneable with this method.
 Usage:
 S3FileSystem$clone(deep = FALSE)
 Arguments:
 deep Whether to make a deep clone.
```

Note

This method will only update the modification time of the AWS S3 object.

s3_bucket_delete 31

s3_bucket_delete	Delete bucket	
------------------	---------------	--

Description

Delete AWS S3 bucket including all objects in the bucket itself.

Usage

```
s3_bucket_delete(path)
```

Arguments

path (character): A character vector of path or s3 uri.

s3_dir_ls_url Generate presigned url to list S3 directories

Description

Generate presigned url to list S3 directories

Usage

```
s3_dir_ls_url(path, expiration = 3600L, recurse = FALSE, ...)
```

Arguments

path (character): A character vector of paths or uris

expiration (numeric): The number of seconds the presigned url is valid for. By default it

expires in an hour (3600 seconds)

recurse (logical): Returns all AWS S3 objects in lower sub directories

... parameters passed to s3_list_objects_v2

Value

return character of urls

32 s3_file_move

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S3_	_a1r_	_tree	

Print contents of directories in a tree-like format

Description

Print contents of directories in a tree-like format

Usage

```
s3_dir_tree(path, recurse = TRUE, ...)
```

Arguments

path (character): path A path to print the tree from

recurse (logical): Returns all AWS S3 objects in lower sub directories

... Additional arguments passed to s3_dir_ls.

Value

character vector of s3 uri paths

s3_file_move

Move or rename S3 files

Description

Move files to another location on AWS S3

Usage

```
s3_file_move(path, new_path, max_batch = 100 * MB, overwrite = FALSE, ...)
```

Arguments

```
path (character): A character vector of s3 uri
new_path (character): A character vector of s3 uri.
```

max_batch (numeric): Maximum batch size being uploaded with each multipart.

overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error

will be thrown.

... parameters to be passed to s3_copy_object

Value

character vector of s3 uri paths

s3_file_move_async 33

Examples

```
## Not run:
# Require AWS S3 credentials

temp_file = s3_file_temp(tmp_dir= "MyBucket")
s3_file_create(temp_file)

s3_file_move(temp_file, "s3://MyBucket/new_file.txt")
## End(Not run)
```

s3_file_move_async

Move or rename S3 files

Description

Move files to another location on AWS S3

Usage

```
s3_file_move_async(
  path,
  new_path,
  max_batch = 100 * MB,
  overwrite = FALSE,
  ...
)
```

Arguments

```
path (character): A character vector of s3 uri
new_path (character): A character vector of s3 uri.
```

max_batch (numeric): Maximum batch size being uploaded with each multipart.

overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error

will be thrown.

... parameters to be passed to s3_copy_object

Value

```
return future object of s3_file_move()
```

See Also

```
future s3_file_move()
```

34 s3_file_system

s3_file_system

Access AWS S3 as if it were a file system.

Description

This creates a file system "like" API based off fs (e.g. dir_ls, file_copy, etc.) for AWS S3 storage. To set up AWS credentials please look at https://docs.aws.amazon.com/cli/latest/userguide/cli-configure-files.html

Usage

```
s3_file_system(
  aws_access_key_id = NULL,
  aws_secret_access_key = NULL,
  aws_session_token = NULL,
  region_name = NULL,
  profile_name = NULL,
  endpoint = NULL,
  disable_ssl = FALSE,
  multipart_threshold = fs_bytes("2GB"),
  request_payer = FALSE,
  anonymous = FALSE,
  retries = 5,
  refresh = FALSE,
  ...
)
```

Arguments

```
aws_access_key_id
                  (character): AWS access key ID
aws_secret_access_key
                  (character): AWS secret access key
aws_session_token
                  (character): AWS temporary session token
                  (character): Default region when creating new connections
region_name
profile_name
                  (character): The name of a profile to use. If not given, then the default profile is
                  used.
endpoint
                  (character): The complete URL to use for the constructed client.
disable_ssl
                  (logical): Whether or not to use SSL. By default, SSL is used.
multipart_threshold
                  (fs_bytes): Threshold to use multipart instead of standard copy and upload meth-
                  (logical): Confirms that the requester knows that they will be charged for the
request_payer
                  request.
```

s3_file_temp 35

```
anonymous (logical): Set up anonymous credentials when connecting to AWS S3.

retries (numeric): max number of retry attempts

refresh (logical): Refresh cached S3FileSystem class

Other parameters within paws client.
```

Value

S3FileSystem class invisible

Examples

```
## Not run:
# Require AWS S3 credentials

# Set up connection using profile
s3_file_system(profile_name = "s3fs_example")

# Reset connection to connect to a different region
s3_file_system(
    profile_name = "s3fs_example",
    region_name = "us-east-1",
    refresh = TRUE
)

## End(Not run)
```

s3_file_temp

Create name for temporary files

Description

return the name which can be used as a temporary file

Usage

```
s3_file_temp(pattern = "file", tmp_dir = "", ext = "")
```

Arguments

```
pattern (character): A character vector with the non-random portion of the name.

tmp_dir (character): The directory the file will be created in. By default the cached s3 bucket will be applied otherwise "" will be used.

ext (character): A character vector of one or more paths.
```

Value

character vector of s3 uri paths

36 s3_file_version_info

Examples

```
## Not run:
# Require AWS S3 credentials
s3_file_temp(tmp_dir = "MyBucket")
## End(Not run)
```

s3_file_url

Generate presigned url for S3 object

Description

Generate presigned url for S3 object

Usage

```
s3_file_url(path, expiration = 3600L, ...)
```

Arguments

path (character): A character vector of paths or uris

expiration (numeric): The number of seconds the presigned url is valid for. By default it

expires in an hour (3600 seconds)

... parameters to be passed to params parameter of s3_generate_presigned_url

Value

return character of urls

```
s3_file_version_info Query file version metadata
```

Description

Get file versions

Usage

```
s3_file_version_info(path, ...)
```

Arguments

```
path (character): A character vector of paths or uris
... parameters to be passed to s3_list_object_versions
```

s3_path_join 37

s3_path_join

Construct AWS S3 path

Description

Construct an s3 uri path from path vector

Usage

```
s3_path_join(path)
```

Arguments

path

(character): A character vector of one or more paths

Value

character vector of s3 uri paths

Examples

```
## Not run:
# Require AWS S3 credentials
s3_path_dir(c("s3://my_bucket1/hi.txt", "s3://my_bucket/bye.txt"))
## End(Not run)
```

s3_path_split

Split s3 path and uri

Description

Split s3 uri path to core components bucket, key and version id

Usage

```
s3_path_split(path)
```

Arguments

path

(character): A character vector of one or more paths or s3 uri

Value

list character vectors splitting the s3 uri path in "Bucket", "Key" and "VersionId"

38 stream

Examples

```
## Not run:
# Require AWS S3 credentials
s3_path_dir("s3://my_bucket1/hi.txt")
## End(Not run)
```

stream

Streams data from R to AWS S3.

Description

```
s3_file_stream_in streams in AWS S3 file as a raw vector
s3_file_stream_out streams raw vector out to AWS S3 file
```

Usage

```
s3_file_stream_in(path, ...)
s3_file_stream_out(
  obj,
  path,
  max_batch = fs_bytes("100MB"),
  overwrite = FALSE,
  ...
)
```

Arguments

```
path (character): A character vector of paths or s3 uri

... parameters to be passed to s3_get_object and s3_put_object

obj (rawlcharacter): A raw vector, rawConnection, url to be streamed up to AWS S3.

max_batch (fs_bytes): Maximum batch size being uploaded with each multipart.

overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will be thrown.
```

Value

list of raw vectors containing the contents of the file

stream_async 39

Examples

```
## Not run:
# Require AWS S3 credentials

obj = list(charToRaw("contents1"), charToRaw("contents2"))

dir = s3_file_temp(tmp_dir = "MyBucket")
  path = s3_path(dir, letters[1:2], ext = "txt")

s3_file_stream_out(obj, path)
s3_file_stream_in(path)

## End(Not run)
```

stream_async

Streams data from R to AWS S3.

Description

```
s3_file_stream_in streams in AWS S3 file as a raw vector s3_file_stream_out streams raw vector out to AWS S3 file
```

Usage

```
s3_file_stream_in_async(path, ...)
s3_file_stream_out_async(
  obj,
  path,
  max_batch = fs_bytes("100MB"),
  overwrite = FALSE,
  ...
)
```

Arguments

```
path (character): A character vector of paths or s3 uri

... parameters to be passed to s3_get_object and s3_put_object

obj (rawlcharacter): A raw vector, rawConnection, url to be streamed up to AWS S3.

max_batch (fs_bytes): Maximum batch size being uploaded with each multipart.

overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will be thrown.
```

Value

```
return future object of s3_file_stream_in() s3_file_stream_out()
```

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See Also

```
future s3_file_move() s3_file_stream_in() s3_file_stream_out()
```

tag

Modifying file tags

Description

```
s3_file_tag_delete delete file tags
s3_file_tag_info get file tags
s3_file_tag_info
```

Usage

```
s3_file_tag_delete(path)
s3_file_tag_info(path)
s3_file_tag_update(path, tags, overwrite = FALSE)
```

Arguments

path (character): A character vector of paths or s3 uri

tags (list): Tags to be applied

overwrite (logical): To overwrite tagging or to modify inplace. Default will modify in-

place.

touch

Change file modification time

Description

Similar to fs::file_touch this does not create the file if it does not exist. Use s3_file_create to do this if needed.

Usage

```
s3_file_touch(path, ...)
```

Arguments

```
path (character): A character vector of paths or s3 uri
... parameters to be passed to s3_copy_object
```

upload 41

Value

character vector of s3 uri paths

Note

This method will only update the modification time of the AWS S3 object.

Examples

```
## Not run:
# Require AWS S3 credentials

dir = s3_file_temp(tmp_dir = "MyBucket")
path = s3_path(dir, letters[1:2], ext = "txt")

s3_file_touch(path)
## End(Not run)
```

upload

Upload file and directory

Description

```
s3_file_upload upload files to AWS S3
s3_dir_upload upload directory to AWS S3
```

Usage

```
s3_file_upload(
  path,
  new_path,
  max_batch = fs_bytes("100MB"),
  overwrite = FALSE,
  ...
)
s3_dir_upload(path, new_path, max_batch, overwrite = FALSE, ...)
```

Arguments

```
path (character): A character vector of local file paths to upload to AWS S3

new_path (character): A character vector of AWS S3 paths or uri's of the new locations.

max_batch (fs_bytes): Maximum batch size being uploaded with each multipart.

overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will be thrown.

... parameters to be passed to s3_put_object and s3_create_multipart_upload
```

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Value

character vector of s3 uri paths

upload_async

Upload file and directory

Description

```
s3_file_upload upload files to AWS S3
s3_dir_upload upload directory to AWS S3
```

Usage

```
s3_file_upload_async(
  path,
  new_path,
  max_batch = fs_bytes("100MB"),
  overwrite = FALSE,
  ...
)
s3_dir_upload_async(path, new_path, max_batch, overwrite = FALSE, ...)
```

Arguments

```
path (character): A character vector of local file paths to upload to AWS S3

new_path (character): A character vector of AWS S3 paths or uri's of the new locations.

max_batch (fs_bytes): Maximum batch size being uploaded with each multipart.

overwrite (logical): Overwrite files if the exist. If this is FALSE and the file exists an error will be thrown.

... parameters to be passed to s3_put_object and s3_create_multipart_upload
```

Value

```
return future object of s3_file_upload() s3_dir_upload()
```

See Also

```
future s3_file_move() s3_file_upload() s3_dir_upload()
```

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