rfslib

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This is a documentation of rfslib.

To create a new development environment, it is recommended to create python virtual environment and install dependencies in requirements.txt

If you want to create a new pdf documentation, you are required to install also texlive on your system.

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RFSLIB.ABSTRACT_PCONNECTION MODULE

class rfslib.abstract_pconnection.PConnection(settings:

rfslib.abstract pconnection.p connection settings)

Bases: abc.ABC

__init__(*settings*: rfslib.abstract_pconnection.p_connection_settings)

The constructor of a abstract class. If it is not called from child class, the behavior is undefined.

If local_encoding and remote_encoding have same values, no recoding is done. Analogically if local_crlf and remote crlf is same, no substitution between LF and CRLF is done.

Parameters settings – A p_connection_settings object with all generic settings for PConnection.

abstract _exists($remote_path: str$) \rightarrow bool

Protected method which checks, whether a remote file exist. If the remote file is a broken symlink, it returns False.

Parameters remote_path – Path of a remote file.

Returns True, if remote file is exist. False, if remote file doesn't exist

abstract _**isdir**(*remote_path: str*) → bool

Protected method which checks, whether a remote file is a directory.

Parameters remote_path – A path of a directory.

Returns True, if remote file is folder. False, if it isn't a folder. Undefined if the file doesn't exist.

abstract $_$ **lexists**($remote\ path:\ str$) \rightarrow bool

Protected method which checks, whether a remote file exist. If the remote file is a broken symlink, it returns True.

KNOWN BUG: Behavior is undefined in case of broken symlinks.

Parameters remote_path – Path of a remote file.

Returns True, if remote file is exist. False, if remote file doesn't exist

abstract _listdir(remote_path: str) → List[str]

Protected method which returns a list of files in the folder including hidden files. Undefined if the remote file doesn't exist or isn't a folder.

Parameters remote_path – The remote path of a remote folder.

Returns List of files in the remote folder

abstract _mkdir(remote_path: str)

Protected method which creates a new directory. Behavior is undefined if remote folder already exist, or destination folder doesn't exist.

Parameters remote_path – A path of a new remote directory.

```
abstract _pull(remote_path: str, local_path: str)
```

Protected method which downloads/pulls a nondirectory file from a remote storage to a local storage in the binary form. Behavior is undefined if source file or destination folder doesn't exist.

Parameters

- **remote_path** Path of a remote file to download.
- local_path Path of a local file, where to download/pull a remote file or local file already
 exists.

```
abstract _push(local_path: str, remote_path: str)
```

Protected method which uploads/pushes a nondirectory file from a local storage to a remote storage in the binary form. Behavior is undefined if destination folder or source file doesn't exist, source is directory or remote file already exists.

Parameters

- local_path Path of a local file to upload.
- **remote_path** Path on the remote storage, where to upload/push a local file.

```
abstract _rename(old_name: str, new_name: str)
```

Protected method which renames/moves a file. Behavior is undefined, if *new_name* file exists or *old_name* file doesn't exist.

Parameters

- **old_name** Remote path a file to move.
- **new_name** Remote path to which move the file.

```
abstract _rmdir(remote_path: str)
```

Protected method which removes an empty remote directory. Behavior is undefined if remote directory doesn't exist or it isn't empty.

Parameters remote_path – Path of an empty remote directory to delete.

```
abstract \_stat(remote\_path: str) \rightarrow os.stat\_result
```

Protected method which returns statistics of a file (eg. size, last date modified,...) Follows symlinks to a destination file. Undefined behavior if remote file doesn't exist or it is a broken symlink.

Parameters remote_path – Path of a remote file.

Returns True, if remote file exist. False, if remote file doesn't exist.

```
abstract _unlink(remote_path: str)
```

Protected method which removes a nondirectory file. Behavior is undefined if remote file doesn't exist or is a directory.

Parameters remote_path – Path of a remote regular file to delete.

abstract close()

Method to close the opened connection.

```
cp(old_names, new_name, recursive=False)
```

dcp(old_names, target_dir, recursive=False)

dmv(old_names, target_dir)

```
exists(remote\_path: str) \rightarrow bool
```

Method which checks, whether a remote file exist. Returns False for broken symlinks.

```
Parameters remote_path – Path of a remote file.
         Returns True, if remote file exists. False, if remote file doesn't exist.
fcp(old_name, new_name)
find(remote_path, child_first=False)
fmv(old name, new name)
get\_settings() \rightarrow rfslib.abstract\ pconnection.p\ connection\ settings
     The procedure sets all generic settings for PConnection.
         Returns A p_connection_settings object with all generic settings of PConnection.
isdir(remote_path)
lexists(remote_path)
     Method which checks, whether a remote file exist. Returns True for broken symlinks.
          Parameters remote_path – Path of a remote file.
         Returns True, if remote file exists. False, if remote file doesn't exist.
listdir(remote_path)
ls(remote_path)
lstat(remote\_path: str) \rightarrow os.stat_result
     Returns statistics of a file (eg. size, last date modified,...) Doesn't follow symlinks.
         Parameters remote_path – Path of a remote file.
         Returns True, if remote file is exist. False, if remote file doesn't exist.
mkdir(remote_path)
mv(old names, new name)
pmkdir(remote_path)
pull(remote_path, local_path)
push(local_path, remote_path)
     Uploads/pushes a file from a local storage to a remote storage in the binary form.
         Parameters
              • local_path – Path of a local file to upload.
              • remote_path – Path on the remote storage, where to upload/push a local file.
rename(old name, new name)
rm(remote path, recursive=False)
rmdir(remote_path)
rpull(remote_path, local_path)
rpush(local_path, remote_path)
set_settings(settings: rfslib.abstract_pconnection.p_connection_settings)
     The procedure sets all generic settings for PConnection.
         Parameters settings - A p_connection_settings object with all generic settings for PConnec-
              tion.
```

stat(*remote path: str*) \rightarrow os.stat result

Returns statistics of a file (eg. size, last date modified,...) Follows symlinks to a destination file.

Parameters remote_path – Path of a remote file.

Returns True, if remote file exist. False, if remote file doesn't exist.

```
touch(remote_path)
```

unlink(remote_path)

xls(remote_path)

class rfslib.abstract_pconnection.p_connection_settings

Bases: object

This object represents settings appliable for all PConnection instances (instances of class, which inherits from PConnection).

__init__()

The constructor inicializes the class to default values.

direct write: bool = False

NOT IMPLEMENTED YET. If True, push will write output directly to file. If False all push operations on regular files will create firstly tmp file in target folder and then move result to file.

local_crlf: bool = False

Does local files use CRLF? If True, it is supposed, they do. If False, it is supposed, they use LF.

local_encoding: str = 'UTF8'

The encoding of local text files. (eg. 'UTF8')

remote_crlf: bool = False

Does remote files use CRLF? If True, it is supposed, they do. If False, it is supposed, they use LF.

remote_encoding: str = 'UTF8'

The encoding of remote text files. (eg. 'cp1250')

skip_validation: bool = False

NOT IMPLEMENTED YED. If True, all validations of input will be skipped. Undefined behavior may happen if input is wrong. Increses performance.

text_transmission: bool = False

If true, all files, which will be transmitted, will be recoded from local_encoding to remote_encoding and from local_crlf to remote_crlf. If False, there will be no encoding done during transmission.

RFSLIB.SFTP_PCONNECTION MODULE

class rfslib.sftp_pconnection.SftpPConnection(settings:

rfslib.abstract_pconnection.p_connection_settings, host: str, username: str, password: Optional[str] = None, keyfile: str = '~/.ssh/id_rsa', port: int = 22, no_host_key_checking: bool = False)

Bases: rfslib.abstract_pconnection.PConnection

Class for SFTP connection. Public interface with an exception of __init__ and close is inherited from PConnection.

__init__(settings: rfslib.abstract_pconnection.p_connection_settings, host: str, username: str, password:

Optional[str] = None, keyfile: str = '~/.ssh/id_rsa', port: int = 22, no_host_key_checking: bool = False)

The constructor of SftpPConnection. Opens SFTP connection, when called. If None password is specified, the key authentication will be used. Otherwise the password authentication will be used.

Parameters

- **settings** The settings for the super class PConnection.
- host Remote address of the server.
- **port** Port for the SFTP connection.
- username Remote username
- password Password for a SFTP connection. If None is provided, key authentication will be used.
- **keyfile** A path to key file.
- no_host_key_checking Specifies, whether remote host key should be verified or not.

_exists(remote_path)

Protected method which checks, whether a remote file exist. If the remote file is a broken symlink, it returns False.

Parameters remote_path – Path of a remote file.

Returns True, if remote file is exist. False, if remote file doesn't exist

_isdir(remote_path)

Protected method which checks, whether a remote file is a directory.

Parameters remote_path – A path of a directory.

Returns True, if remote file is folder. False, if it isn't a folder. Undefined if the file doesn't exist.

_lexists(remote path)

Protected method which checks, whether a remote file exist. If the remote file is a broken symlink, it returns True.

KNOWN BUG: Behavior is undefined in case of broken symlinks.

Parameters remote_path – Path of a remote file.

Returns True, if remote file is exist. False, if remote file doesn't exist

_listdir(remote_path)

Protected method which returns a list of files in the folder including hidden files. Undefined if the remote file doesn't exist or isn't a folder.

Parameters remote_path - The remote path of a remote folder.

Returns List of files in the remote folder

_mkdir(remote_path)

Protected method which creates a new directory. Behavior is undefined if remote folder already exist, or destination folder doesn't exist.

Parameters remote_path – A path of a new remote directory.

_pull(remote_path, local_path)

Protected method which downloads/pulls a nondirectory file from a remote storage to a local storage in the binary form. Behavior is undefined if source file or destination folder doesn't exist.

Parameters

- remote_path Path of a remote file to download.
- local_path Path of a local file, where to download/pull a remote file or local file already
 exists.

_push(local_path, remote_path)

Protected method which uploads/pushes a nondirectory file from a local storage to a remote storage in the binary form. Behavior is undefined if destination folder or source file doesn't exist, source is directory or remote file already exists.

Parameters

- **local_path** Path of a local file to upload.
- **remote_path** Path on the remote storage, where to upload/push a local file.

_rename(old_name, new_name)

Protected method which renames/moves a file. Behavior is undefined, if *new_name* file exists or *old_name* file doesn't exist.

Parameters

- **old_name** Remote path a file to move.
- **new_name** Remote path to which move the file.

_rmdir(remote_path)

Protected method which removes an empty remote directory. Behavior is undefined if remote directory doesn't exist or it isn't empty.

Parameters remote_path – Path of an empty remote directory to delete.

_stat(remote_path)

Protected method which returns statistics of a file (eg. size, last date modified,...) Follows symlinks to a destination file. Undefined behavior if remote file doesn't exist or it is a broken symlink.

```
_unlink(remote_path)
     Protected method which removes a nondirectory file. Behavior is undefined if remote file doesn't exist or
     is a directory.
          Parameters remote_path – Path of a remote regular file to delete.
close()
     Method to close the opened connection.
cp(old_names, new_name, recursive=False)
dcp(old_names, target_dir, recursive=False)
dmv(old_names, target_dir)
exists(remote\_path: str) \rightarrow bool
     Method which checks, whether a remote file exist. Returns False for broken symlinks.
          Parameters remote_path – Path of a remote file.
          Returns True, if remote file exists. False, if remote file doesn't exist.
fcp(old_name, new_name)
find(remote_path, child_first=False)
fmv(old name, new name)
\texttt{get\_settings}() \rightarrow rfslib.abstract\_pconnection.p\_connection\_settings
     The procedure sets all generic settings for PConnection.
          Returns A p_connection_settings object with all generic settings of PConnection.
isdir(remote_path)
lexists(remote_path)
     Method which checks, whether a remote file exist. Returns True for broken symlinks.
          Parameters remote_path – Path of a remote file.
          Returns True, if remote file exists. False, if remote file doesn't exist.
listdir(remote path)
ls(remote_path)
lstat(remote\_path: str) \rightarrow os.stat_result
     Returns statistics of a file (eg. size, last date modified,...) Doesn't follow symlinks.
          Parameters remote_path – Path of a remote file.
          Returns True, if remote file is exist. False, if remote file doesn't exist.
mkdir(remote_path)
mv(old_names, new_name)
pmkdir(remote_path)
pull(remote_path, local_path)
push(local_path, remote_path)
     Uploads/pushes a file from a local storage to a remote storage in the binary form.
          Parameters
```

Parameters remote_path – Path of a remote file.

Returns True, if remote file exist. False, if remote file doesn't exist.

- **local_path** Path of a local file to upload.
- **remote_path** Path on the remote storage, where to upload/push a local file.

```
rename(old_name, new_name)

rm(remote_path, recursive=False)

rmdir(remote_path)

rpull(remote_path, local_path)

rpush(local_path, remote_path)

set_settings(settings: rfslib.abstract_pconnection.p_connection_settings)

The procedure sets all generic settings for PConnection.

Parameters settings - A p_connection_settings object with all generic settings for PConnection.

stat(remote_path: str) → os.stat_result

Returns statistics of a file (eg. size, last date modified,...) Follows symlinks to a destination file.

Parameters remote_path - Path of a remote file.

Returns True, if remote file exist. False, if remote file doesn't exist.

touch(remote_path)

unlink(remote_path)

xls(remote_path)
```

CHAPTER

THREE

RFSLIB.FTP_PCONNECTION MODULE

class rfslib.ftp_pconnection.FtpPConnection(settings:

```
rfslib.abstract_pconnection.p_connection_settings, host:

str, username: str, password: str, port: int = 21, tls: bool

= False, passive_mode: bool = False, debug_level: int = 1,

connection_encoding: str = 'UTF8')
```

Bases: rfslib.abstract_pconnection.PConnection

Class for FTP connection. Public interface with an exception of __init__ and close is inherited from PConnection.

```
__init__(settings: rfslib.abstract_pconnection.p_connection_settings, host: str, username: str, password: str, port: int = 21, tls: bool = False, passive_mode: bool = False, debug_level: int = 1, connection_encoding: str = 'UTF8')
```

The constructor of FtpPConnection.

Parameters

- **settings** The settings for the super class PConnection.
- host Remote address of the server.
- **port** Port for a connection.
- **username** Remote username.
- password Remote password.
- tls Enables TLS.
- passive_mode Enables passive mode of FTP connection.
- **debug_level** Specifies how much logs should be generated. 0 almost non, 1 more, 2 log almost everything
- **connection_encoding** Encoding used for a connection.

_exists(remote_path)

Protected method which checks, whether a remote file exist. If the remote file is a broken symlink, it returns False.

Parameters remote_path – Path of a remote file.

Returns True, if remote file is exist. False, if remote file doesn't exist

_isdir(remote_path)

Protected method which checks, whether a remote file is a directory.

Parameters remote_path – A path of a directory.

Returns True, if remote file is folder. False, if it isn't a folder. Undefined if the file doesn't exist.

_lexists(remote path)

Protected method which checks, whether a remote file exist. If the remote file is a broken symlink, it returns True.

KNOWN BUG: Behavior is undefined in case of broken symlinks.

Parameters remote_path – Path of a remote file.

Returns True, if remote file is exist. False, if remote file doesn't exist

_listdir(remote_path)

Protected method which returns a list of files in the folder including hidden files. Undefined if the remote file doesn't exist or isn't a folder.

Parameters remote_path – The remote path of a remote folder.

Returns List of files in the remote folder

_mkdir(remote_path)

Protected method which creates a new directory. Behavior is undefined if remote folder already exist, or destination folder doesn't exist.

Parameters remote_path – A path of a new remote directory.

_pull(remote_path, local_path)

Protected method which downloads/pulls a nondirectory file from a remote storage to a local storage in the binary form. Behavior is undefined if source file or destination folder doesn't exist.

Parameters

- remote_path Path of a remote file to download.
- local_path Path of a local file, where to download/pull a remote file or local file already
 exists.

_push(local_path, remote_path)

Protected method which uploads/pushes a nondirectory file from a local storage to a remote storage in the binary form. Behavior is undefined if destination folder or source file doesn't exist, source is directory or remote file already exists.

Parameters

- **local_path** Path of a local file to upload.
- **remote_path** Path on the remote storage, where to upload/push a local file.

_rename(old_name, new_name)

Protected method which renames/moves a file. Behavior is undefined, if *new_name* file exists or *old_name* file doesn't exist.

Parameters

- **old_name** Remote path a file to move.
- **new_name** Remote path to which move the file.

_rmdir(remote_path)

Protected method which removes an empty remote directory. Behavior is undefined if remote directory doesn't exist or it isn't empty.

Parameters remote_path – Path of an empty remote directory to delete.

_stat(remote_path)

Protected method which returns statistics of a file (eg. size, last date modified,...) Follows symlinks to a destination file. Undefined behavior if remote file doesn't exist or it is a broken symlink.

```
Returns True, if remote file exist. False, if remote file doesn't exist.
_unlink(remote_path)
     Protected method which removes a nondirectory file. Behavior is undefined if remote file doesn't exist or
     is a directory.
          Parameters remote_path – Path of a remote regular file to delete.
close()
     Method to close the opened connection.
cp(old_names, new_name, recursive=False)
dcp(old_names, target_dir, recursive=False)
dmv(old_names, target_dir)
exists(remote\_path: str) \rightarrow bool
     Method which checks, whether a remote file exist. Returns False for broken symlinks.
          Parameters remote_path – Path of a remote file.
          Returns True, if remote file exists. False, if remote file doesn't exist.
fcp(old_name, new_name)
find(remote_path, child_first=False)
fmv(old name, new name)
get_settings() \rightarrow rfslib.abstract\ pconnection.p\ connection\ settings
     The procedure sets all generic settings for PConnection.
          Returns A p_connection_settings object with all generic settings of PConnection.
isdir(remote_path)
lexists(remote_path)
     Method which checks, whether a remote file exist. Returns True for broken symlinks.
          Parameters remote_path – Path of a remote file.
          Returns True, if remote file exists. False, if remote file doesn't exist.
listdir(remote path)
ls(remote_path)
lstat(remote\_path: str) \rightarrow os.stat_result
     Returns statistics of a file (eg. size, last date modified,...) Doesn't follow symlinks.
          Parameters remote_path – Path of a remote file.
          Returns True, if remote file is exist. False, if remote file doesn't exist.
mkdir(remote_path)
mv(old_names, new_name)
pmkdir(remote_path)
pull(remote_path, local_path)
push(local_path, remote_path)
     Uploads/pushes a file from a local storage to a remote storage in the binary form.
```

Parameters

Parameters remote_path – Path of a remote file.

- local_path Path of a local file to upload.
- **remote_path** Path on the remote storage, where to upload/push a local file.

```
rename(old_name, new_name)

rm(remote_path, recursive=False)

rmdir(remote_path)

rpull(remote_path, local_path)

rpush(local_path, remote_path)

set_settings(settings: rfslib.abstract_pconnection.p_connection_settings)

The procedure sets all generic settings for PConnection.

Parameters settings - A p_connection_settings object with all generic settings for PConnection.

stat(remote_path: str) → os.stat_result

Returns statistics of a file (eg. size, last date modified,...) Follows symlinks to a destination file.

Parameters remote_path - Path of a remote file.

Returns True, if remote file exist. False, if remote file doesn't exist.

touch(remote_path)

unlink(remote_path)

xls(remote_path)
```

RFSLIB.SMB12_PCONNECTION MODULE

class rfslib.smb12_pconnection.Smb12PConnection(settings:

rfslib.abstract_pconnection.p_connection_settings, host: str, service_name: str, username: str, password: str, port: int = 139, use_direct_tcp: bool = False, client_name: str = 'RFS', use_ntlm_v1: bool = False)

Bases: rfslib.abstract_pconnection.PConnection

Class for SMB connection version 1 or 2. Public interface with an exception of __init__ and close is inherited from PConnection.

__init__(settings: rfslib.abstract_pconnection.p_connection_settings, host: str, service_name: str, username: str, password: str, port: int = 139, use_direct_tcp: bool = False, client_name: str = 'RFS', use_ntlm_v1: bool = False)

The constructor of Smb12PConnection. Opens SMB connection version 1 or 2, when called.

Parameters

- **settings** The settings for the super class PConnection.
- host Remote address of the server.
- **service_name** Name of a shared folder.
- **port** Port for the SMB connection.
- **username** Remote username.
- password Remote password.
- **use_direct_tcp** Activates direct tcp mode for SMB.
- **client_name** Name of this client, which will be sent to a server.
- **use_ntlm_v1** Enables NTLM version 1 instead of NTLM version 2.

_exists(remote_path)

Protected method which checks, whether a remote file exist. If the remote file is a broken symlink, it returns False.

Parameters remote_path – Path of a remote file.

Returns True, if remote file is exist. False, if remote file doesn't exist

_isdir(remote path)

Protected method which checks, whether a remote file is a directory.

Parameters remote_path – A path of a directory.

Returns True, if remote file is folder. False, if it isn't a folder. Undefined if the file doesn't exist.

_lexists(remote path)

Protected method which checks, whether a remote file exist. If the remote file is a broken symlink, it returns True.

KNOWN BUG: Behavior is undefined in case of broken symlinks.

Parameters remote_path – Path of a remote file.

Returns True, if remote file is exist. False, if remote file doesn't exist

_listdir(remote_path)

Protected method which returns a list of files in the folder including hidden files. Undefined if the remote file doesn't exist or isn't a folder.

Parameters remote_path – The remote path of a remote folder.

Returns List of files in the remote folder

_mkdir(remote_path)

Protected method which creates a new directory. Behavior is undefined if remote folder already exist, or destination folder doesn't exist.

Parameters remote_path – A path of a new remote directory.

_pull(remote_path, local_path)

Protected method which downloads/pulls a nondirectory file from a remote storage to a local storage in the binary form. Behavior is undefined if source file or destination folder doesn't exist.

Parameters

- remote_path Path of a remote file to download.
- local_path Path of a local file, where to download/pull a remote file or local file already
 exists.

_push(local_path, remote_path)

Protected method which uploads/pushes a nondirectory file from a local storage to a remote storage in the binary form. Behavior is undefined if destination folder or source file doesn't exist, source is directory or remote file already exists.

Parameters

- **local_path** Path of a local file to upload.
- **remote_path** Path on the remote storage, where to upload/push a local file.

_rename(old_name, new_name)

Protected method which renames/moves a file. Behavior is undefined, if *new_name* file exists or *old_name* file doesn't exist.

Parameters

- **old_name** Remote path a file to move.
- **new_name** Remote path to which move the file.

_rmdir(remote_path)

Protected method which removes an empty remote directory. Behavior is undefined if remote directory doesn't exist or it isn't empty.

Parameters remote_path – Path of an empty remote directory to delete.

_stat(remote_path)

Protected method which returns statistics of a file (eg. size, last date modified,...) Follows symlinks to a destination file. Undefined behavior if remote file doesn't exist or it is a broken symlink.

```
Returns True, if remote file exist. False, if remote file doesn't exist.
_unlink(remote_path)
     Protected method which removes a nondirectory file. Behavior is undefined if remote file doesn't exist or
     is a directory.
          Parameters remote_path – Path of a remote regular file to delete.
close()
     Method to close the opened connection.
cp(old_names, new_name, recursive=False)
dcp(old_names, target_dir, recursive=False)
dmv(old_names, target_dir)
exists(remote\_path: str) \rightarrow bool
     Method which checks, whether a remote file exist. Returns False for broken symlinks.
          Parameters remote_path – Path of a remote file.
          Returns True, if remote file exists. False, if remote file doesn't exist.
fcp(old_name, new_name)
find(remote_path, child_first=False)
fmv(old name, new name)
get_settings() \rightarrow rfslib.abstract\ pconnection.p\ connection\ settings
     The procedure sets all generic settings for PConnection.
          Returns A p_connection_settings object with all generic settings of PConnection.
isdir(remote_path)
lexists(remote_path)
     Method which checks, whether a remote file exist. Returns True for broken symlinks.
          Parameters remote_path – Path of a remote file.
          Returns True, if remote file exists. False, if remote file doesn't exist.
listdir(remote path)
ls(remote_path)
lstat(remote\_path: str) \rightarrow os.stat_result
     Returns statistics of a file (eg. size, last date modified,...) Doesn't follow symlinks.
          Parameters remote_path – Path of a remote file.
          Returns True, if remote file is exist. False, if remote file doesn't exist.
mkdir(remote_path)
mv(old_names, new_name)
pmkdir(remote_path)
pull(remote_path, local_path)
push(local_path, remote_path)
     Uploads/pushes a file from a local storage to a remote storage in the binary form.
```

Parameters

Parameters remote_path – Path of a remote file.

- local_path Path of a local file to upload.
- **remote_path** Path on the remote storage, where to upload/push a local file.

```
rename(old_name, new_name)

rm(remote_path, recursive=False)

rmdir(remote_path)

rpull(remote_path, local_path)

rpush(local_path, remote_path)

set_settings(settings: rfslib.abstract_pconnection.p_connection_settings)

The procedure sets all generic settings for PConnection.

Parameters settings - A p_connection_settings object with all generic settings for PConnection.

stat(remote_path: str) → os.stat_result

Returns statistics of a file (eg. size, last date modified,...) Follows symlinks to a destination file.

Parameters remote_path - Path of a remote file.

Returns True, if remote file exist. False, if remote file doesn't exist.

touch(remote_path)

unlink(remote_path)

xls(remote_path)
```

RFSLIB.SMB23_PCONNECTION MODULE

class rfslib.smb23_pconnection.Smb23PConnection(settings:

rfslib.abstract_pconnection.p_connection_settings, host: str, service_name: str, username: str, password: str, port: int = 445, enable_encryption: bool = False, dont_require_signing: bool = False)

Bases: rfslib.abstract_pconnection.PConnection

Class for SMB connection version 2 or 3. Public interface with an exception of __init__ and close is inherited from PConnection.

__init__(settings: rfslib.abstract_pconnection.p_connection_settings, host: str, service_name: str, username: str, password: str, port: int = 445, enable_encryption: bool = False, dont_require_signing: bool = False)

The constructor of Smb23PConnection. Opens SMB connection version 2 or 3, when called.

Parameters

- **settings** The settings for the super class PConnection.
- **service_name** Name of a shared folder.
- **host** Remote address of the server.
- port Port for a SMB connection.
- username Remote username
- password Password for a SMB connection.
- **enable_encryption** Enables encryption for a SMB3 connection.
- dont_require_signing Disables signing requirement.

_exists(remote_path)

Protected method which checks, whether a remote file exist. If the remote file is a broken symlink, it returns False.

Parameters remote_path – Path of a remote file.

Returns True, if remote file is exist. False, if remote file doesn't exist

_isdir(remote_path)

Protected method which checks, whether a remote file is a directory.

Parameters remote_path – A path of a directory.

Returns True, if remote file is folder. False, if it isn't a folder. Undefined if the file doesn't exist.

_lexists(remote path)

Protected method which checks, whether a remote file exist. If the remote file is a broken symlink, it returns True.

KNOWN BUG: Behavior is undefined in case of broken symlinks.

Parameters remote_path – Path of a remote file.

Returns True, if remote file is exist. False, if remote file doesn't exist

_listdir(remote_path)

Protected method which returns a list of files in the folder including hidden files. Undefined if the remote file doesn't exist or isn't a folder.

Parameters remote_path – The remote path of a remote folder.

Returns List of files in the remote folder

_mkdir(remote_path)

Protected method which creates a new directory. Behavior is undefined if remote folder already exist, or destination folder doesn't exist.

Parameters remote_path – A path of a new remote directory.

_pull(remote_path, local_path)

Protected method which downloads/pulls a nondirectory file from a remote storage to a local storage in the binary form. Behavior is undefined if source file or destination folder doesn't exist.

Parameters

- remote_path Path of a remote file to download.
- local_path Path of a local file, where to download/pull a remote file or local file already
 exists.

_push(local_path, remote_path)

Protected method which uploads/pushes a nondirectory file from a local storage to a remote storage in the binary form. Behavior is undefined if destination folder or source file doesn't exist, source is directory or remote file already exists.

Parameters

- **local_path** Path of a local file to upload.
- **remote_path** Path on the remote storage, where to upload/push a local file.

_rename(old_name, new_name)

Protected method which renames/moves a file. Behavior is undefined, if *new_name* file exists or *old_name* file doesn't exist.

Parameters

- **old_name** Remote path a file to move.
- **new_name** Remote path to which move the file.

_rmdir(remote_path)

Protected method which removes an empty remote directory. Behavior is undefined if remote directory doesn't exist or it isn't empty.

Parameters remote_path – Path of an empty remote directory to delete.

_stat(remote_path)

Protected method which returns statistics of a file (eg. size, last date modified,...) Follows symlinks to a destination file. Undefined behavior if remote file doesn't exist or it is a broken symlink.

```
Returns True, if remote file exist. False, if remote file doesn't exist.
_unlink(remote_path)
     Protected method which removes a nondirectory file. Behavior is undefined if remote file doesn't exist or
     is a directory.
          Parameters remote_path – Path of a remote regular file to delete.
close()
     Method to close the opened connection.
cp(old_names, new_name, recursive=False)
dcp(old_names, target_dir, recursive=False)
dmv(old_names, target_dir)
exists(remote\_path: str) \rightarrow bool
     Method which checks, whether a remote file exist. Returns False for broken symlinks.
          Parameters remote_path – Path of a remote file.
          Returns True, if remote file exists. False, if remote file doesn't exist.
fcp(old_name, new_name)
find(remote_path, child_first=False)
fmv(old name, new name)
get_settings() \rightarrow rfslib.abstract\ pconnection.p\ connection\ settings
     The procedure sets all generic settings for PConnection.
          Returns A p_connection_settings object with all generic settings of PConnection.
isdir(remote_path)
lexists(remote_path)
     Method which checks, whether a remote file exist. Returns True for broken symlinks.
          Parameters remote_path – Path of a remote file.
          Returns True, if remote file exists. False, if remote file doesn't exist.
listdir(remote path)
ls(remote_path)
lstat(remote\_path: str) \rightarrow os.stat_result
     Returns statistics of a file (eg. size, last date modified,...) Doesn't follow symlinks.
          Parameters remote_path – Path of a remote file.
          Returns True, if remote file is exist. False, if remote file doesn't exist.
mkdir(remote_path)
mv(old_names, new_name)
pmkdir(remote_path)
pull(remote_path, local_path)
push(local_path, remote_path)
     Uploads/pushes a file from a local storage to a remote storage in the binary form.
```

Parameters

Parameters remote_path – Path of a remote file.

- **local_path** Path of a local file to upload.
- **remote_path** Path on the remote storage, where to upload/push a local file.

```
rename(old_name, new_name)
rm(remote_path, recursive=False)
rmdir(remote_path)
rpull(remote_path, local_path)
rpush(local_path, remote_path)
set_settings(settings: rfslib.abstract_pconnection.p_connection_settings)
    The procedure sets all generic settings for PConnection.
```

Parameters settings – A p_connection_settings object with all generic settings for PConnection

```
stat(remote\_path: str) \rightarrow os.stat_result
```

Returns statistics of a file (eg. size, last date modified,...) Follows symlinks to a destination file.

Parameters remote_path – Path of a remote file.

Returns True, if remote file exist. False, if remote file doesn't exist.

```
touch(remote_path)
unlink(remote_path)
xls(remote_path)
```

rfslib.smb23_pconnection.config_smb23($no_dfs: bool = False, disable_secure_negotiate: bool = False, dfs_domain_controller: Optional[str] = None)$

The procedure changes global setting for SMB version 2 or 3 across all connection. Don't change value, if any SMB connection version 2 or 3 is active.

Parameters

- **no_dfs** Disables DFS support useful as a bug fix.
- **disable_secure_negotiate** Disables secure negotiate requirement for a SMB connection
- **dfs_domain_controller** The DFS domain controller address. Useful in case, when rfstools fails to find it themself.

RFSLIB.FS PCONNECTION MODULE

class rfslib.fs_pconnection.**FsPConnection**(*settings:* rfslib.abstract_pconnection.p_connection_settings)
Bases: rfslib.abstract_pconnection.PConnection

Class for operating with local filesystem. Public interface with an exception of __init__ and close is inherited from PConnection.

__init__(settings: rfslib.abstract_pconnection.p_connection_settings)

The constructor of FsPConnection.

Parameters settings – The settings for super class PConnection.

_exists(remote_path)

Protected method which checks, whether a remote file exist. If the remote file is a broken symlink, it returns False.

Parameters remote_path – Path of a remote file.

Returns True, if remote file is exist. False, if remote file doesn't exist

_isdir(remote_path)

Protected method which checks, whether a remote file is a directory.

Parameters remote_path – A path of a directory.

Returns True, if remote file is folder. False, if it isn't a folder. Undefined if the file doesn't exist.

_lexists(remote_path)

Protected method which checks, whether a remote file exist. If the remote file is a broken symlink, it returns True.

KNOWN BUG: Behavior is undefined in case of broken symlinks.

Parameters remote_path – Path of a remote file.

Returns True, if remote file is exist. False, if remote file doesn't exist

_listdir(remote_path)

Protected method which returns a list of files in the folder including hidden files. Undefined if the remote file doesn't exist or isn't a folder.

Parameters remote_path – The remote path of a remote folder.

Returns List of files in the remote folder

_mkdir(remote path)

Protected method which creates a new directory. Behavior is undefined if remote folder already exist, or destination folder doesn't exist.

Parameters remote_path – A path of a new remote directory.

_pull(remote_path, local_path)

Protected method which downloads/pulls a nondirectory file from a remote storage to a local storage in the binary form. Behavior is undefined if source file or destination folder doesn't exist.

Parameters

- remote_path Path of a remote file to download.
- local_path Path of a local file, where to download/pull a remote file or local file already
 exists.

_push(local_path, remote_path)

Protected method which uploads/pushes a nondirectory file from a local storage to a remote storage in the binary form. Behavior is undefined if destination folder or source file doesn't exist, source is directory or remote file already exists.

Parameters

- local_path Path of a local file to upload.
- **remote_path** Path on the remote storage, where to upload/push a local file.

_rename(old_name, new_name)

Protected method which renames/moves a file. Behavior is undefined, if *new_name* file exists or *old_name* file doesn't exist.

Parameters

- **old_name** Remote path a file to move.
- **new_name** Remote path to which move the file.

_rmdir(remote_path)

Protected method which removes an empty remote directory. Behavior is undefined if remote directory doesn't exist or it isn't empty.

Parameters remote_path – Path of an empty remote directory to delete.

```
_stat(remote_path)
```

Protected method which returns statistics of a file (eg. size, last date modified,...) Follows symlinks to a destination file. Undefined behavior if remote file doesn't exist or it is a broken symlink.

Parameters remote_path – Path of a remote file.

Returns True, if remote file exist. False, if remote file doesn't exist.

_unlink(remote path)

Protected method which removes a nondirectory file. Behavior is undefined if remote file doesn't exist or is a directory.

Parameters remote_path – Path of a remote regular file to delete.

close()

Method to close the opened connection.

```
cp(old_names, new_name, recursive=False)
```

dcp(old_names, target_dir, recursive=False)

dmv(old_names, target_dir)

```
exists(remote\_path: str) \rightarrow bool
```

Method which checks, whether a remote file exist. Returns False for broken symlinks.

Parameters remote_path – Path of a remote file.

```
Returns True, if remote file exists. False, if remote file doesn't exist.
fcp(old name, new name)
find(remote_path, child_first=False)
fmv(old_name, new_name)
get_settings() \rightarrow rfslib.abstract\ pconnection.p\ connection\ settings
     The procedure sets all generic settings for PConnection.
         Returns A p_connection_settings object with all generic settings of PConnection.
isdir(remote_path)
lexists(remote path)
     Method which checks, whether a remote file exist. Returns True for broken symlinks.
         Parameters remote_path – Path of a remote file.
         Returns True, if remote file exists. False, if remote file doesn't exist.
listdir(remote path)
ls(remote_path)
lstat(remote\_path: str) \rightarrow os.stat_result
     Returns statistics of a file (eg. size, last date modified,...) Doesn't follow symlinks.
         Parameters remote_path – Path of a remote file.
         Returns True, if remote file is exist. False, if remote file doesn't exist.
mkdir(remote_path)
mv(old_names, new_name)
pmkdir(remote path)
pull(remote_path, local_path)
push(local_path, remote_path)
     Uploads/pushes a file from a local storage to a remote storage in the binary form.
         Parameters
              • local_path – Path of a local file to upload.
              • remote_path – Path on the remote storage, where to upload/push a local file.
rename(old_name, new_name)
rm(remote path, recursive=False)
rmdir(remote path)
rpull(remote_path, local_path)
rpush(local_path, remote_path)
set_settings(settings: rfslib.abstract_pconnection.p_connection_settings)
     The procedure sets all generic settings for PConnection.
         Parameters settings - A p_connection_settings object with all generic settings for PConnec-
              tion.
stat(remote_path: str) → os.stat_result
     Returns statistics of a file (eg. size, last date modified,...) Follows symlinks to a destination file.
```

Parameters remote_path – Path of a remote file.

Returns True, if remote file exist. False, if remote file doesn't exist.

touch(remote_path)
unlink(remote_path)

 $xls(remote_path)$

CHAPTER

SEVEN

RFSLIB.PATH_UTILS MODULE

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