rfslib

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CONTENTS:

This is a documentation of rfslib.

To create a new development enviroment, it is recommended to create python virtual enviroment 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.

CHAPTER

ONE

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*) → 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*) → 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*) → 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*) → 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() → *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*) → 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 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*)

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.

CHAPTER

TWO

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.

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*) → 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() → *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*) → 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 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.

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*) → 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() → *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*) → 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 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

FOUR

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.

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*) → 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() → *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*) → 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 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

FIVE

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.

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*) → 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() → *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*) → 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 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.**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.

CHAPTER

SIX

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*) → 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() → *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*) → 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 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

SEVEN

RFSLIB.PATH_UTILS MODULE

class rfslib.path_utils.**GenericPath**(*path*)
Bases: object

__init__(*path*)

rfslib.path_utils.**add_r_prefix**(*path*)

rfslib.path_utils.**generic_cp**(*conn*, *sources*, *dest*, *recursive=False*)

rfslib.path_utils.**generic_mv**(*conn*, *sources*, *dest*)

rfslib.path_utils.**generic_path_normalize**(*path*)

rfslib.path_utils.**is_remote**(*path*)

rfslib.path_utils.**path_normalize**(*path*)

rfslib.path_utils.**remove_r_prefix**(*path*)

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