

RSOAP API

This API Description accompanies the Py Article located at:

http://www.pyzine.com/Issue005/Section_Articles/article_RSOAP.html

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10. RSOAPManager

newServer() Start a new R Session.
Parameters: (None)
Return value: Port number of the new server

echo(value) Echo the provided parameter.
Parameters:
value: anything
Return value: copy of value

Useful for testing whether the server is alive and whether data has been correctly transmitted.

11. RSOAP Session

11.1 File Access

delFile(name) Delete the file named from the R session directory.
Parameters:
name: filename. For security reasons, file names may not contain any path characters (slashes, backslashes). Filenames containing path characters will be rejected.
Return value: the pair (flag, data). If the file was successfully written, flag=1 and 'data' is the empty string. Otherwise flag=-1 and 'data' contains an error message.

downloadAllFiles() Return the contents of all files in the R session directory.
Parameters: (none)
Return value: A list of (name, base64data) pairs, where 'name' contains the file name and 'base64data' contains the contents of the file in base64 encoding.

downloadFile(name) Return the contents of file 'name' in the R session directory encoded using base64 encoding.

Parameters:

name: filename. For security reasons, file names may not contain any path characters (slashes, backslashes). File names containing path characters will be rejected.

Return value: the pair (flag, data). If the file was successfully read, flag=1 and 'data' contains the file data encoded in base64 format. Otherwise flag=-1 and 'data' contains an error message.

getDirPath() Get the directory path where the R process is running

Parameters: (none)

Return value: String giving the path of the session directory. Note that this call only makes sense for clients on the same host as the R process.

listFiles() Return a directory listing of the R session directory

Parameters: (none)

Return value: List of files present in the R session directory.

uploadFile(name, data) Upload base64 encoded data to a file in the R session directory.

Parameters:

name: filename. For security reasons, file names may not contain any path characters (slashes, backslashes). File names containing path characters will be rejected.

Return value: The pair (flag, message), where flag=1 if the file was successfully written, -1 otherwise. If flag=1, 'message' contains the number of bytes written. Otherwise 'message' contains an error message.

11.2 Code Execution

call(name), {arguments}*) Call the specified R function and return the result

Parameters:

name: Name of R function to call

arguments: (optional) arguments to send to the R function. These may be named or unnamed arguments.

Return value: object resulting from the call

eval(string) Evaluate a series of R commands, returning the final result

Parameters:

string: Text to evaluate in R

Return value: object returned by the (final) command

script(text, sep='\n', echo=1) Evaluate a series of R commands and return the 'text' transcript

Parameters:

text: String giving sequence of R commands (should be syntactically correct!)

sep: Line separator for return transcript (defaults to '\n')

echo: Should prompts and interpreted commands be included in the output transcript? 0=No, Non-zero=Yes.

Return value: Results of evaluating the contents of 'text', with lines separated by sep.

11.3 Variable Manipulation

delObject(name) Delete the R object named

Parameters:

name: string giving the name of the object

Return value: (none)

getObject(name) Retrieve the R object named

Parameters:

name: string giving the name of the object

Return value: Value of the object

putObject(name, value) Assign a value to the R object named

Parameters:

name: string giving the name of the object

value: value to assign to the object.

Return value: Value of the object

Note that SOAP generally handles type conversion properly, but be sure to check or coerce the class of the object type to avoid nasty surprises.

11.4 Session Management

echo(value) Echo the parameter provided.

Parameters:

value: anything

Return value: copy of value

Useful for testing whether the server is alive and whether data has been correctly transmitted.

loadSession(sessiondata) Restore R session (data, libraries, etc) from the provided file.

Parameters:

sessiondata: Base64 encoded object generated by the saveSession call.

Return value: (none)

The 'sessiondata' object is an R data file containing the session data, as well as a few extra variables specifying the search path and active libraries. See the 'session' R package included with RSOAP for details.

quit() Close down the R process.

Parameters: (none)

Return value: (none)

saveSession() Save the current R session (data, libraries, etc) and return the resulting file.

Parameters: (none)

Return value: Base64 encoded session data object.

The returned session data object is an R data file containing the session data, as well as a few extra variables specifying the search path and active libraries. See the 'session' R package included with RSOAP for details



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