

Package ‘thriftr’

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Type Package

Title Apache Thrift Client Server

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Description Pure R implementation of Apache Thrift.

This library doesn't require any code generation.

To learn more about Thrift go to <<https://thrift.apache.org>>.

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URL <https://github.com/systemincloud/thriftr>

BugReports <https://github.com/systemincloud/thriftr/issues>

Suggests testthat

Encoding UTF-8

Imports R6, rly (>= 1.7.4), stringi

RoxygenNote 6.0.1

Collate 'thrift.R' 'transport.R' 'rpc.R' 'parser.R'
'protocol_binary.R' 'server.R' 'transport_buffered.R'
'transport_memory.R' 'transport_socket.R' 'utils.R'

NeedsCompilation no

Repository CRAN

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binary_read_val	<i>Binary protocol: read value from binary buffer</i>
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Description

Binary protocol: read value from binary buffer

Usage

binary_read_val(inbuf, ttype, spec = NA, decode_response = TRUE)

Arguments

- inbuf binary buffor
- ttype type of value
- spec specification of value
- decode_response for string decode binary as chars

Value

value of type ttype

binary_write_val	<i>Binary protocol: write value to binary buffer</i>
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Description

Binary protocol: write value to binary buffer

Usage

binary_write_val(outbuf, ttype, val, spec = NA)

Arguments

- | | |
|--------|------------------------|
| outbuf | binary buffer |
| ttype | type of value |
| val | value to write |
| spec | specification of value |

hexlify	<i>hexlify</i>
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Description

String representation of raw array

Usage

hexlify(byte_array, delimiter = " ")

Arguments

- | | |
|------------|----------------------|
| byte_array | raw array |
| delimiter | separation character |

Value

string

make_client	<i>Create client side thrift API</i>
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Description

Create client side thrift API

Usage

```
make_client(service, host = "localhost", port = 9090,
  proto_factory = TBinaryProtocolFactory$new(),
  trans_factory = TBufferedTransportFactory$new())
```

Arguments

service	parsed service
host	server host
port	server tcp port
proto_factory	factory that generates protocol implementation
trans_factory	factory that generates transport implementation

Examples

```
## Not run:
# File calc.thrift content:
# service Calculator {
#   i32 add(1:i32 a, 2:i32 b);
#   i32 sub(1:i32 a, 2:i32 b);
#   i32 mult(1:i32 a, 2:i32 b);
#   i32 div(1:i32 a, 2:i32 b);
# }
#

calc_thrift <- thriftr::t_load("calc.thrift", module_name="calc_thrift")

cal <- thriftr::make_client(
  calc_thrift$Calculator,
  "127.0.0.1",
  6000)

a <- cal$mult(5, 2)
b <- cal$sub(7, 3)
c <- cal$sub(6, 4)
d <- cal$mult(b, 10)
e <- cal$add(a, d)
f <- cal$div(e, c)
print(f)

## End(Not run)
```

make_server	<i>Create server side thrift API</i>
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Description

Create server side thrift API

Usage

```
make_server(service, handler, host = "localhost", port = 9090,
  proto_factory = TBinaryProtocolFactory$new(),
  trans_factory = TBufferedTransportFactory$new())
```

Arguments

service	parsed service
handler	R6 class implementing service
host	server host
port	port server tcp port
proto_factory	factory that generates protocol implementation
trans_factory	factory that generates transport implementation

Examples

```
## Not run:
# File calc.thrift content:
# service Calculator {
#   i32 add(1:i32 a, 2:i32 b);
#   i32 sub(1:i32 a, 2:i32 b);
#   i32 mult(1:i32 a, 2:i32 b);
#   i32 div(1:i32 a, 2:i32 b);
# }
#

calc_thrift <- thriftr::t_load("calc.thrift", module_name="calc_thrift")

Dispatcher <- R6::R6Class("Dispatcher",
  public = list(
    add = function(a, b) {
      print(sprintf("add -> %s + %s", a, b))
      return(a + b)
    },
    sub = function(a, b) {
      print(sprintf("sub -> %s - %s", a, b))
      return(a - b)
    },
    mult = function(a, b) {
```

```
        print(sprintf("mult -> %s * %s", a, b))
        return(a * b)
    },
    div = function(a, b) {
        print(sprintf("div -> %s / %s", a, b))
        return(a / b)
    }
)
)

server <- thriftr::make_server(
  calc_thrift$Calculator,
  Dispatcher$new(),
  "127.0.0.1",
  6000)

print("serving...")

server$serve()

## End(Not run)
```

parse	<i>Parse a single thrift file to R6 class instance</i>
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Description

Parse a single thrift file to R6 class instance

Usage

```
parse(path, module_name = NA, include_dirs = NA, lexer = NA,
      parser = NA, enable_cache = TRUE)
```

Arguments

path	file path to parse, should be a string ending with '.thrift'
module_name	the name for parsed module, the default is the basename without extension of 'path'
include_dirs	directories to find thrift files while processing the 'include' directive, by default: ['.']
lexer	rly lexer to use, if not provided, 'parse' will use a new one
parser	rly parser to use, if not provided, 'parse' will use a new one
enable_cache	if this is set to be 'TRUE', parsed module will be cached, this is enabled by default. If 'module_name' is provided, use it as cache key, else use the 'path'

Value

Thrift module

parse_spec	<i>parse_spec</i>
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Description

String representation of specification

Usage

```
parse_spec(ttype, spec = NA)
```

Arguments

ttype	type
spec	specification

Value

string representation

TBinaryProtocol	<i>TBinaryProtocol</i>
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Description

Binary implementation of the Thrift protocol driver.

Usage

```
TBinaryProtocol
```

Format

An [R6Class](#) generator object

TBinaryProtocolFactory	<i>TBinaryProtocolFactory</i>
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Description

TBinaryProtocolFactory generates TBinaryProtocol driver.

Usage

TBinaryProtocolFactory

Format

An [R6Class](#) generator object

TBufferedTransport	<i>TBufferedTransport</i>
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Description

Class that wraps another transport and buffers its I/O.

Usage

TBufferedTransport

Format

An [R6Class](#) generator object

TBufferedTransportFactory	<i>TBufferedTransportFactory</i>
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Description

TBufferedTransportFactory generates TBufferedTransport.

Usage

TBufferedTransportFactory

Format

An [R6Class](#) generator object

TClient	<i>TClient</i>
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Description

TClient implements client api of thrift service.

Usage

TClient

Format

An [R6Class](#) generator object

TMemoryBuffer	<i>TMemoryBuffer</i>
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Description

Wraps a raw array as a TTransport.

Usage

TMemoryBuffer

Format

An [R6Class](#) generator object

to_proper_struct	<i>to_proper_struct</i>
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Description

Help method for tests. It changes predefined structure to parsed thrift instead of parsing file.

Usage

to_proper_struct(thrift_spec_list, default_spec)

Arguments

thrift_spec_list	raw array
default_spec	separation character

Value

R6 class

TPayload	<i>TPayload</i>
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Description

Base class for all complex types of api.

Usage

TPayload

Format

An [R6Class](#) generator object

TServerSocket	<i>TServerSocket</i>
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Description

Socket implementation for server side.

Usage

TServerSocket

Format

An [R6Class](#) generator object

TSocket	<i>TSocket</i>
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Description

Socket implementation for client side.

Usage

TSocket

Format

An [R6Class](#) generator object

TType	<i>TType</i>
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Description

Identificator of value type.

Usage

TType

Format

An object of class environment of length 18.

t_load	<i>Load thrift file as a R6 instance.</i>
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Description

The module loaded and objects inside may only be pickled if module_name was provided.

Usage

t_load(path, module_name = NA, include_dirs = NA)

Arguments

- | | |
|--------------|--|
| path | file path to parse, should be a string ending with '.thrift' |
| module_name | the name for parsed module, the default is the basename without extension of 'path' |
| include_dirs | directories to find thrift files while processing the 'include' directive, by default: ['.'] |

Value

Thrift R6 class instance

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