

Package ‘trustedtimestamping’

July 22, 2025

Title Create Trusted Timestamps of Datasets and Files

Description Trusted Timestamps (tts) are created by incorporating a hash of a file or dataset into a transaction on the decentralized blockchain (Stellar network). The package makes use of a free service provided by <<https://stellarapi.io>>.

Version 0.2.6

License AGPL-3

Encoding UTF-8

LazyData true

RoxygenNote 6.1.1

Depends R (>= 3.0.0)

Imports digest, jsonlite, httr

BugReports <https://github.com/ttspackage/tts/issues>

NeedsCompilation no

Author Peter Muller [aut, cre] (ORCID:
<<https://orcid.org/0000-0002-5748-6270>>)

Maintainer Peter Muller <ttspackage@gmail.com>

Repository CRAN

Date/Publication 2019-07-30 21:50:02 UTC

Contents

| | |
|---|---|
| convert_stellarHash | 2 |
| create_hashFile | 2 |
| create_hashObject | 3 |
| create_ttsFile | 3 |
| create_ttsObject | 4 |
| get_hash | 4 |
| get_timestamp | 5 |
| get_url_blockchaintransaction | 6 |
| validate_hashFile | 6 |
| validate_hashObject | 7 |

Index**8**

| | |
|---------------------|---|
| convert_stellarHash | <i>Convert hash on STELLAR network (base64 encoded) to standard hexadecimal value</i> |
|---------------------|---|

Description

Convert hash on STELLAR network (base64 encoded) to standard hexadecimal value

Usage

```
convert_stellarHash(data)
```

Arguments

| | |
|------|---------------------|
| data | base64 encoded hash |
|------|---------------------|

Value

hex hexadecimal hash

Examples

```
convert_stellarHash("KMOVhSYRAqk3lPpz1jU4SytQSawsTz1aeB+PoKFaf0=")
```

| | |
|-----------------|-------------------------------------|
| create_hashFile | <i>Create sha256 hash of a file</i> |
|-----------------|-------------------------------------|

Description

Create sha256 hash of a file

Usage

```
create_hashFile(path)
```

Arguments

| | |
|------|---|
| path | filename (and path, if outside working directory) of a file |
|------|---|

Value

hash

Examples

```
create_hashFile("test.rds")
```

create_hashObject *Create sha256 hash of an object/dataset*

Description

Create sha256 hash of an object/dataset

Usage

```
create_hashObject(data)
```

Arguments

data any dataset or object

Value

hash

Examples

```
create_hashObject(data)
```

create_ttsFile *Create trusted timestamp of a file*

Description

Create trusted timestamp of a file

Usage

```
create_ttsFile(path, proxy_ip = NULL, proxy_port = NULL)
```

Arguments

path filename (and path, if outside working directory)
proxy_ip if needed, provide proxy ip
proxy_port if needed, provide proxy port

Value

url

Examples

```
create_ttsFile("test.rds")
```

```
create_ttsObject      Create trusted timestamp of an object/dataset
```

Description

Create trusted timestamp of an object/dataset

Usage

```
create_ttsObject(data, proxy_ip = NULL, proxy_port = NULL)
```

Arguments

| | |
|------------|-------------------------------|
| data | any dataset or object |
| proxy_ip | if needed, provide proxy ip |
| proxy_port | if needed, provide proxy port |

Value

url

Examples

```
create_ttsObject(data)
```

```
get_hash      Retrieve hash from STELLAR network
```

Description

Retrieve hash from STELLAR network

Usage

```
get_hash(url, proxy_ip = NULL, proxy_port = NULL)
```

Arguments

| | |
|------------|-------------------------------|
| url | url |
| proxy_ip | if needed, provide proxy ip |
| proxy_port | if needed, provide proxy port |

Value

hash

Examples

```
get_hash("https://horizon.stellar.org/transactions/ea0ae0etc")
```

| | |
|----------------------------|--|
| <code>get_timestamp</code> | <i>Retrieve timestamp from STELLAR network</i> |
|----------------------------|--|

Description

Retrieve timestamp from STELLAR network

Usage

```
get_timestamp(url, proxy_ip = NULL, proxy_port = NULL)
```

Arguments

| | |
|-------------------------|-------------------------------|
| <code>url</code> | url |
| <code>proxy_ip</code> | if needed, provide proxy ip |
| <code>proxy_port</code> | if needed, provide proxy port |

Value

GMT GMT-timestamp

Examples

```
get_timestamp("https://horizon.stellar.org/transactions/ea0ae0etc")
```

```
get_url_blockchaintransaction
```

Get url of the transaction on STELLAR network (stellarchain.io (non-json))

Description

Get url of the transaction on STELLAR network (stellarchain.io (non-json))

Usage

```
get_url_blockchaintransaction(url)
```

Arguments

```
url          url
```

Value

url url of blockchain transaction

Examples

```
get_url_blockchaintransaction("https://horizon.stellar.org/transactions/ea0ae0etc")
```

```
validate_hashFile
```

Validate hash of a file (created on the fly) with hash on STELLAR network p.s. stellar transactions take between 5-7 seconds. If you validate to soon after creating a timestamp, it will fail...

Description

Validate hash of a file (created on the fly) with hash on STELLAR network p.s. stellar transactions take between 5-7 seconds. If you validate to soon after creating a timestamp, it will fail...

Usage

```
validate_hashFile(url, path, proxy_ip = NULL, proxy_port = NULL)
```

Arguments

```
url          url
path         filename (and path, if outside working directory)
proxy_ip     if needed, provide proxy ip
proxy_port   if needed, provide proxy port
```

Value

res result of validation

Examples

```
validate_hashFile("https://horizon.stellar.org/transactions/ea0ae0etc", "test.rds")
```

validate_hashObject *Validate hash of an object/dataset (created on the fly) with hash on STELLAR network p.s. stellar transactions take between 5-7 seconds. If you validate to soon after creating a timestamp, it will fail...*

Description

Validate hash of an object/dataset (created on the fly) with hash on STELLAR network p.s. stellar transactions take between 5-7 seconds. If you validate to soon after creating a timestamp, it will fail...

Usage

```
validate_hashObject(url, data, proxy_ip = NULL, proxy_port = NULL)
```

Arguments

| | |
|------------|-------------------------------|
| url | url |
| data | any dataset or object |
| proxy_ip | if needed, provide proxy ip |
| proxy_port | if needed, provide proxy port |

Value

res result of validation

Examples

```
validate_hashObject("https://horizon.stellar.org/transactions/ea0ae0etc", data)
```

Index

[convert_stellarHash](#), 2
[create_hashFile](#), 2
[create_hashObject](#), 3
[create_ttsFile](#), 3
[create_ttsObject](#), 4

[get_hash](#), 4
[get_timestamp](#), 5
[get_url_blockchaintransaction](#), 6

[validate_hashFile](#), 6
[validate_hashObject](#), 7