Package ‘pingr’

December 10, 2023

Title  Check if a Remote Computer is Up
Version  2.0.3
Description  Check if a remote computer is up. It can either just call the
             system ping command, or check a specified TCP port.
License  MIT + file LICENSE
BugReports  https://github.com/r-lib/pingr/issues
Depends  R (>= 3.6)
Imports  processx, utils
Suggests  covr, testthat (>= 3.0.0)
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apple_captive_test  Download Apple’s captive portal test

Description
If the test page, returns "Success" that means that the computer is connected to the Internet.

Usage
apple_captive_test()

Details
Note that this function will fail if the computer is offline. Use \texttt{is\_online()} to check if the computer is online.

Examples

apple_captive_test()

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is_online  Is the computer online?

Description
Check if the computer is online. It does three tries:

- Retrieve Apple’s Captive Portal test page, see \texttt{apple\_captive\_test()}. 
- Queries myip.opendns.com on OpenDNS, see \texttt{my\_ip()}. 
- Retrieves icanhazip.com via HTTPS, see \texttt{my\_ip()}. If any of these are successful, it returns \texttt{TRUE}.

Usage
is_online(timeout = 1)

Arguments

| timeout | Timeout for the queries. (Note: it is currently not used for the DNS query.) |

Value
Possible values:

- \texttt{TRUE} Yes, online.
- \texttt{FALSE} No, not online.
my_ip

Examples

is_online()

---

**my_ip**

*Query the computer’s public IP address*

**Description**

It can use a DNS query to opendns.com, if `method == "dns"`, or an HTTPS query to icanhazip.com, see https://github.com/major/icanhaz. The DNS query is much faster, the HTTPS query is secure.

**Usage**

```r
ggplot2::my_ip(method = c("dns", "https"))
```

**Arguments**

- `method`:
  - Whether to use a DNS or HTTPS query.

**Value**

- Computer’s public IP address as a string.

**Examples**

```r
my_ip()
my_ip(method = "https")
```

---

**nsl**

*DNS query*

**Description**

Perform a DNS query for a domain. It supports custom name servers, and querying DNS records of certain class and type.

**Usage**

```r
nsl(domain, server = NULL, type = 1L, class = 1L)
```
Arguments

domain: Domain to query.
server: Custom name server IP address, to use. Note that this must be an IP address currently. E.g. 8.8.8.8 is Google’s DNS server.
type: Record type to query, an integer scalar. 1L is an A record, 28L is an AAAA record, etc. See e.g. https://en.wikipedia.org/wiki/List_of_DNS_record_types for the record types.
class: Query class. This is usually 1L, i.e. "Internet". See e.g. https://www.iana.org/assignments/dns-parameters/dns-parameters.xhtml#dns-parameters-2 for all DNS classes.

Value

A list of two entries currently, additional entries might be added later:

- answer: a data frame of DNS records, with columns: name, class, type, ttl, data. data is a list column and contains the IP(6) address for A and AAAA records, but it contains other data, e.g. host name for CNAME, for other records. If pingr could not parse a record (it only parses the most common records types: A, AAAA, NA, PTR, CNAME, TXT, MX, SOA), then the data of the record is included as a raw vector.
- flags: a named logical vector of flags aa, tc, rd, ra, ad, cd. See the RFC (https://www.ietf.org/rfc/rfc1035.txt) for these. On Windows they are all set to NA currently.

Examples

```r
nsl("r-project.org")
nsl("google.com", type = 28L)
```

Description

This is the classic ping, using ICMP packages. Only the system administrator can send ICMP packages, so we call out to the system’s ping utility.

Usage

```r
ping(
  destination,
  continuous = FALSE,
  verbose = continuous,
  count = 3L,
  timeout = 1
)
```
ping_port

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>destination</td>
<td>Host name or IP address.</td>
</tr>
<tr>
<td>continuous</td>
<td>Logical, whether to keep pinging until the user interrupts.</td>
</tr>
<tr>
<td>verbose</td>
<td>Whether to print progress on the screen while pinging.</td>
</tr>
<tr>
<td>count</td>
<td>Number of pings to perform.</td>
</tr>
<tr>
<td>timeout</td>
<td>Timeout for a ping response.</td>
</tr>
</tbody>
</table>

Value

Vector of response times. NA means no response, in milliseconds. Currently NAs are always at the end of the vector, and not in their correct position.

Examples

```r
ping("8.8.8.8")
ping("r-project.org")
```

Description

Check if a port of a server is active, measure response time

is_up() checks if a web server is up.

Usage

```r
ping_port(
  destination,
  port = 80L,
  continuous = FALSE,
  verbose = continuous,
  count = 3L,
  timeout = 1
)
```

```r
is_up(
  destination,
  port = 80,
  timeout = 0.5,
  fail_on_dns_error = FALSE,
  check_online = TRUE
)
```
Arguments

destination  Host name or IP address.
port  Port.
continuous  Logical, whether to keep pinging until the user interrupts.
verbose  Whether to print progress on the screen while pinging.
count  Number of pings to perform.
timeout  Timeout, in seconds. How long to wait for a ping to succeed.
fail_on_dns_error  If TRUE then \texttt{is\_up()} fails if the DNS resolution fails. Otherwise it will return \texttt{FALSE}.
check_online  Whether to check first if the computer is online. Otherwise it is possible that the computer is behind a proxy, that hijacks the HTTP connection to \texttt{destination}.

Value

Vector of response times, in milliseconds. NA means no response within the timeout.

Examples

\begin{verbatim}
ping_port("r-project.org")

is_up("google.com")
is_up("google.com", timeout = 0.01)
\end{verbatim}
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