Package 'ratelimitr'

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Type Package

Title Rate Limiting for R

Version 0.3.9

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Description Allows to limit the rate at which one or more functions can be called.

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LazyData TRUE

RoxygenNote 6.0.1

Suggests testthat, microbenchmark, knitr, rmarkdown, covr

Imports assertthat

VignetteBuilder knitr

URL https://github.com/tarakc02/ratelimitr

BugReports https://github.com/tarakc02/ratelimitr/issues

NeedsCompilation no

Repository CRAN

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R topics documented:

limit_rate *Limit the rate at which a function will execute*

Description

Limit the rate at which a function will execute

Usage

```
limit_rate(f, ..., precision = 60)

## S3 method for class 'list'
limit_rate(f, ..., precision = 60)

## S3 method for class 'function_list'
limit_rate(f, ..., precision = 60)

## S3 method for class 'function'
limit_rate(f, ..., precision = 60)
```

Arguments

f	A single function to be rate-limited, or a named list of functions
...	One or more rates, created using rate
precision	The precision with which time intervals can be measured, in hertz

Value

If f is a single function, then a new function with the same signature and (eventual) behavior as the original function, but rate limited. If f is a named list of functions, then a new list of functions with the same names and signatures, but collectively bound by a shared rate limit.

See Also

rate

Examples

```
## limiting a single function
f <- limit_rate(Sys.time, rate(n = 5, period = .1))
res <- replicate(10, f())
## show the elapsed time between each function call:
round(res[-1] - head(res, -1), 3)

## for multiple functions, make sure the list is named:
f <- function() 1
g <- function() 2
limited <- limit_rate(list(f = f, g = g), rate(n = 1, period = .1))
```

```
system.time({limited$f(); limited$g()})
```

`rate` *Create a new rate*

Description

Create a new rate

Usage

```
rate(n, period)
```

Arguments

`n`	Number of allowed events within a period
`period`	Length (in seconds) of measurement period

See Also

`limit_rate`

Examples

```
## a function
f <- function() NULL

## limit f to 10 calls per second
limited_f <- limit_rate(f, rate(n = 10, period = 1))
```

`reset` *Re-create a rate-limited function*

Description

This function does not modify the original rate-limited function, instead it returns a new function with the same rate limits (but no memory of prior function calls).

Usage

```
reset(f)
```

Arguments

`f`	A rate-limited function or group of functions

Examples

```
f <- function() NULL
f_lim <- limit_rate(f, rate(n = 1, period = .1))
f_lim() ## the next call to f_lim will trigger the rate limit

f_lim2 <- reset(f_lim) ## but f_lim2 has a fresh start

## f_lim2 behaves as though no calls have been made
system.time(f_lim2())

## while f_lim is still constrained
system.time(f_lim())
```

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