

Package ‘random’

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Title True random numbers using random.org

Description This package provides an interface to the true random number service provided by the random.org website created by Mads Haahr. The random.org web service samples atmospheric noise via radio tuned to an unused broadcasting frequency together with a skew correction algorithm due to John von Neumann. More background is available in the included vignette based on an essay by Mads Haahr. In its current form, the package offers functions to retrieve random integers, randomized sequences and random strings.

Depends R (>= 2.8.0)

License GPL-2

URL <http://www.random.org>

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R topics documented:

random	2
Index	4

 random

True random numbers from random.org

Description

The `random` package provides several functions that access the true random number service at <http://random.org>.

`randomNumber` retrieves random integers with duplicates, `randomSequence` retrieves random sequences without duplicates and `randomStrings` retrieves strings.

`randomQuota` returns the number of available retrievals, and `quotaCheck` does a simple binary comparison of remaining numbers under the quota.

Usage

```
randomNumbers(n=100, min=1, max=100, col=5, base=10, check=TRUE)
randomSequence(min=1, max=20, col=1, check=TRUE)
randomStrings(n=10, len=5, digits=TRUE, upperalpha=TRUE, loweralpha=TRUE, unique=TRUE)
randomQuota()
quotaCheck()
```

Arguments

<code>n</code>	The number of random integers, or bytes, to be retrieved.
<code>min</code>	The minimum value for the returned numbers.
<code>max</code>	The maximum value for the returned numbers.
<code>col</code>	The number of columns for the return object.
<code>base</code>	The base for the random numbers: one of 2, 8, 10 or 16.
<code>len</code>	The length of strings returned by <code>randomStrings()</code> .
<code>digits</code>	Select whether digits are part of random strings.
<code>upperalpha</code>	Select whether uppercase characters part of random strings.
<code>loweralpha</code>	Select whether lowercase characters part of random strings.
<code>unique</code>	Select whether random strings must be unique.
<code>check</code>	Select whether quota at server should be checked first.

Details

The <http://random.org> services uses atmospheric noise sample via a radio tuned to an unused broadcast frequency together with a skew correction originally due to John von Neumann. Please see the included vignette for more details.

Value

Each function returns a matrix. For `randomNumbers`, it contains `col` columns of a total of `n` integers between `min` and `max`, possibly containing duplicates. For `randomSequence`, it contains the shuffled sequence denoted by `min` and `max`. For `randomStrings`, `n` strings of length `len` are returned.

`randomQuota` returns the number of bits remaining for retrieval at the given day under the currently used IP address. `quotaCheck` is a simple convenience wrapper which tests whether the return from `randomBufferStatus()` is a positive number.

Author(s)

Dirk Eddelbuettel (edd@debian.org) for the R interface; Mads Haahr for [random.org](http://www.random.org).

References

The [random.org](http://www.random.org) website at <http://www.random.org>. Also see the included vignette for further references.

Examples

```
## Cannot run these as we may not have an internet connection
## Not run:
  rn <- randomNumbers(100, 1, 100, 5)
  rs <- randomSequence(1, 20)

## End(Not run)
```

Index

*Topic **misc**

random, [2](#)

quotaCheck (*random*), [2](#)

random, [2](#)

randomNumbers (*random*), [2](#)

randomQuota (*random*), [2](#)

randomSequence (*random*), [2](#)

randomStrings (*random*), [2](#)