

Package ‘RcppParallel’

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Type Package

Title Parallel Programming Tools for 'Rcpp'

Version 4.3.20

Description High level functions for parallel programming with 'Rcpp'.
For example, the 'parallelFor()' function can be used to convert the work of a standard serial ``for" loop into a parallel one and the 'parallelReduce()' function can be used for accumulating aggregate or other values.

Depends R (>= 3.0.2)

Suggests Rcpp, RUnit, knitr, rmarkdown

LinkingTo BH (>= 1.60.0-1)

SystemRequirements GNU make, Windows: cmd.exe and cscript.exe,
Solaris: g++ is required

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URL <http://rcppcore.github.io/RcppParallel>,
<https://github.com/RcppCore/RcppParallel>

Collate 'build.R' 'hooks.R' 'options.R'

NeedsCompilation yes

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RcppParallel-package *Parallel programming tools for Rcpp*

Description

High level functions for doing parallel programming with Rcpp. For example, the `parallelFor` function can be used to convert the work of a standard serial "for" loop into a parallel one and the `parallelReduce` function can be used for accumulating aggregate or other values.

The high level interface enables safe and robust parallel programming without direct manipulation of operating system threads. On Windows, OS X, and Linux systems the underlying implementation is based on Intel TBB (Threading Building Blocks). On other platforms a less-performant fallback implementation based on the TinyThread library is used.

For additional documentation see the package website at: <http://rcppcore.github.io/RcppParallel>.

Author(s)

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RcppParallelFlags *Compilation flags for RcppParallel*

Description

Output the compiler or linker flags required to build against RcppParallel.

Usage

```
CxxFlags()
LdFlags()
RcppParallelLibs()
```

Details

These functions are typically called from Makevars as follows:

```
PKG_LIBS += $(shell "${R_HOME}/bin/Rscript/" -e "RcppParallel::LdFlags()")
```

Value

Returns NULL invisibly. The function is not called for it's return value rather for the side effect of outputting the flags.

setThreadOptions	<i>Thread options for RcppParallel</i>
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Description

Set thread options (number of threads to use for task scheduling and stack size per-thread) for RcppParallel.

Usage

```
setThreadOptions(numThreads = "auto",  
                 stackSize = "auto")  
defaultNumThreads()
```

Arguments

numThreads	Number of threads to use for task scheduling (call defaultNumThreads to determine the the default value used for "auto").
stackSize	Stack size (in bytes) to use for worker threads. The default used for "auto" is 2MB on 32-bit systems and 4MB on 64-bit systems (note that this parameter has no effect on Windows).

Details

RcppParallel is automatically initialized with the default number of threads and thread stack size when it loads. You can call setThreadOptions at any time to change the defaults.

Value

The defaultNumThreads returns the default number of threads that are used by RcppParallel if another value isn't specified using setThreadOptions.

Examples

```
library(RcppParallel)  
  
setThreadOptions(numThreads = 4)  
  
defaultNumThreads()
```

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