Package ‘winch’

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Title  Portable Native and Joint Stack Traces
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Description  Obtain the native stack trace and fuse it with R’s stack trace for easier debugging of R packages with native code.
License  GPL-3
BugReports  https://github.com/r-prof/winch/issues
Imports  lifecycle, procmaps (>= 0.0.2)
Suggests  DBI, knitr, magrittr, purrr, rlang (>= 0.4.8), rmarkdown, RSQLite, testthat (>= 3.0.0), vctrs
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R topics documented:

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Description

Returns TRUE if `winch_trace_back()` is supported on this platform.

Usage

```
winch_available()
```

Value

A scalar logical.

Examples

```
winch_available()
```

Description

Primarily intended for testing.

Usage

```
winch_call(fun, env = parent.frame())
```

Arguments

- `fun` A function callable without arguments.
- `env` The environment in which to evaluate the function call.

Value

The return value of `fun()`.

See Also

`winch_stop()`
Examples

```r
foo <- function() {
  winch_call(bar)
}

bar <- function() {
  writeLines("Hi!")
}

foo()
```

---

**Description**

On Windows, function names in native stack traces can be obtained for only one library at a time. Call this function to set the library for which to obtain symbols.

**Usage**

```r
winch_init_library(path = NULL, force = FALSE)
```

**Arguments**

- `path`: Path to the DLL.
- `force`: Reinitialize even if the path to the DLL is unchanged from the last call.

**Value**

This function is called for its side effects.

**See Also**

- `winch_call()`

**Examples**

```r
winch_init_library(getLoadedDLLs()[["rlang"]][["path")])
```
**winch_stop**  
*Raise an error from native code*

**Description**
Primarily intended for testing.

**Usage**
`winch_stop(message)`

**Arguments**
- **message**  
The error message.

**Value**
This function throws an error and does not return.

**See Also**
`winch_call()`

**Examples**
```r
try(winch_stop("Test"))
```

---

**winch_trace_back**  
*Native stack trace*

**Description**
This function returns the native stack trace as a data frame. Each native stack frame corresponds to one row in the returned data frame. Deep function calls come first, the last row corresponds to the running process’s entry point.

**Usage**
`winch_trace_back()`

**Details**
On Windows, call `winch_init_library()` to return function names for a specific package.
Value

A data frame with the columns:

- `func`: function name
- `ip`: instruction pointer
- `pathname`: path to shared library
- `is_libr`: a logical, `TRUE` if this entry is from R’s shared library, determined via `procmaps::path_is_libr()`

on the `pathname` component

See Also

`sys.calls()` for the R equivalent.

Examples

```r
winch_trace_back()

foo <- function() {
  winch_call(bar)
}

bar <- function() {
  winch_trace_back()
}

foo()
```
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