

Package ‘xptr’

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Type Package

Title Manipulating External Pointers

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URL <https://github.com/eddelbuettel/xptr/>,
<https://eddelbuettel.github.io/xptr/>

Description There is limited native support for external pointers in the R interface.
This package provides some basic tools to verify, create and modify 'externalptr' objects.

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NeedsCompilation yes

Encoding UTF-8

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| | |
|--------------|---|
| is_null_xptr | <i>Check if the external pointer is null.</i> |
|--------------|---|

Description

Check if the external pointer is null.

Usage

is_null_xptr(s)

Arguments

s An externalptr object

Value

A boolean

| | |
|---------|---|
| is_xptr | <i>Check if an object is an external pointer.</i> |
|---------|---|

Description

Check if an object is an external pointer.

Usage

is_xptr(s)

Arguments

s An externalptr object

Value

A boolean

| | |
|----------|------------------------------------|
| new_xptr | Create an external pointer object. |
|----------|------------------------------------|

Description

Create an external pointer object.

Usage

```
new_xptr(address = "", tag = NULL, protected = NULL)
```

```
null_xptr(tag = NULL, protected = NULL)
```

Arguments

| | |
|-----------|---|
| address | A string of pointer address |
| tag | An optional tag |
| protected | an objected to be protected from gc within the lifetime of the external pointer |

Value

An externalptr object

| | |
|-------------------------|--|
| register_xptr_finalizer | Register a finalizer for external pointer. |
|-------------------------|--|

Description

Register a finalizer for external pointer.

Usage

```
register_xptr_finalizer(s, f, onexit = FALSE)
```

Arguments

| | |
|--------|---------------------------------------|
| s | An externalptr object |
| f | An R function |
| onexit | should the finalizer execute on exit? |

Value

No return value as the function is called for its side effect

See Also[reg.finalizer](#)

| | |
|------------------|---|
| set_xptr_address | <i>Set the address of the external pointer.</i> |
|------------------|---|

Description

Set the address of the external pointer.

Usage

```
set_xptr_address(s, p)
```

Arguments

| | |
|---|-----------------------------|
| s | An externalptr object |
| p | A string of pointer address |

Value

No return value as the function is called for its side effect

| | |
|--------------------|--|
| set_xptr_protected | <i>Set a protected R object to the external pointer.</i> |
|--------------------|--|

Description

Set a protected R object to the external pointer.

Usage

```
set_xptr_protected(s, protected)
```

Arguments

| | |
|-----------|-----------------------|
| s | An externalptr object |
| protected | An R object |

Value

No return value as the function is called for its side effect

| | |
|--------------|---|
| set_xptr_tag | <i>Set a tag to the external pointer.</i> |
|--------------|---|

Description

Set a tag to the external pointer.

Usage

```
set_xptr_tag(s, tag)
```

Arguments

| | |
|-----|-----------------------|
| s | An externalptr object |
| tag | An R object |

Value

No return value as the function is called for its side effect

| | |
|------|---------------------------------------|
| xptr | <i>Manipulating External Pointers</i> |
|------|---------------------------------------|

Description

There is limited native support for external pointers in the R interface. This package provides some basic tools to verify, create and modify 'externalptr' objects.

Author(s)

Randy Lai and Dirk Eddelbuettel

References

<https://cran.r-project.org/doc/manuals/r-release/R-exts.html#External-pointers-and-weak-references>

Examples

```
library(xptr)
a <- new_xptr("0x11a888090")
b <- new_xptr("0x11a888098")
is_xptr(a)
xptr_address(a)
xptr_clear(a)
is_null_xptr(a)
set_xptr_address(a, xptr_address(b))
xptr_address(a)
xptr_address(a, FALSE)
```

| | |
|--------------|----------------------------------|
| xptr_address | <i>External pointer address.</i> |
|--------------|----------------------------------|

Description

External pointer address.

Usage

```
xptr_address(s, pf = TRUE)
```

Arguments

| | |
|----|--|
| s | An externalptr object |
| pf | A logical selecting ‘pointer’ format (default) or ‘character’ output |

Value

A string of pointer address

| | |
|------------|---|
| xptr_clear | <i>Clear the pointer address of the external pointer.</i> |
|------------|---|

Description

Clear the pointer address of the external pointer.

Usage

```
xptr_clear(s)
```

Arguments

| | |
|---|-----------------------|
| s | An externalptr object |
|---|-----------------------|

Value

No return value as the function is called for its side effect

| | |
|----------------|--|
| xptr_protected | <i>Protected R object of the external pointer.</i> |
|----------------|--|

Description

Protected R object of the external pointer.

Usage

```
xptr_protected(s)
```

Arguments

| | |
|---|-----------------------|
| s | An externalptr object |
|---|-----------------------|

Value

An R object

| | |
|----------|-------------------------------------|
| xptr_tag | <i>Tag of the external pointer.</i> |
|----------|-------------------------------------|

Description

Tag of the external pointer.

Usage

```
xptr_tag(s)
```

Arguments

| | |
|---|-----------------------|
| s | An externalptr object |
|---|-----------------------|

Value

The R object stored in the tag slot

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