

Package: xptr (via r-universe)

September 30, 2026

Type Package

Title Manipulating External Pointers

Version 1.2.0

Date 2025-10-03

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

License MIT + file LICENSE

NeedsCompilation yes

Encoding UTF-8

RoxygenNote 7.3.3

Repository <https://eddelbuettel.r-universe.dev>

Date/Publication 2026-03-13 00:49:13 UTC

RemoteUrl <https://github.com/eddelbuettel/xptr>

RemoteRef HEAD

RemoteSha 331f7ec2c3dcbea08912c6f150b8ccfb396fbce1

Contents

is_null_xptr	2
is_xptr	2
new_xptr	3
register_xptr_finalizer	3
set_xptr_address	4
set_xptr_protected	4
set_xptr_tag	5
xptr	5
xptr_address	6

xptr_clear	6
xptr_protected	7
xptr_tag	7

Index	8
--------------	----------

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

Index

`is_null_xptr`, [2](#)

`is_xptr`, [2](#)

`new_xptr`, [3](#)

`null_xptr (new_xptr)`, [3](#)

`reg.finalizer`, [4](#)

`register_xptr_finalizer`, [3](#)

`set_xptr_address`, [4](#)

`set_xptr_protected`, [4](#)

`set_xptr_tag`, [5](#)

`xptr`, [5](#)

`xptr_address`, [6](#)

`xptr_clear`, [6](#)

`xptr_protected`, [7](#)

`xptr_tag`, [7](#)