

# Package: xptr (via r-universe)

May 12, 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

<b>Index</b>	<b>8</b>
--------------	----------

---

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	<i>Create an external pointer object.</i>
----------	---

---

**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	<i>Register a finalizer for external pointer.</i>
-------------------------	---

---

**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