

# Package ‘xptr’

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**Type** Package

**Title** Manipulating External Pointers

**Version** 1.2.0

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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.

**License** MIT + file LICENSE

**NeedsCompilation** yes

**Encoding** UTF-8

**RoxygenNote** 7.3.3

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is_null_xptr	<i>Check if the external pointer is null.</i>
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**Description**

Check if the external pointer is null.

**Usage**

is\_null\_xptr(s)

**Arguments**

s                    An externalptr object

**Value**

A boolean

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is_xptr	<i>Check if an object is an external pointer.</i>
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**Description**

Check if an object is an external pointer.

**Usage**

is\_xptr(s)

**Arguments**

s                    An externalptr object

**Value**

A boolean

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new\_xptr                      *Create an external pointer object.*

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**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

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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](#)

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

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

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

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xptr	<i>Manipulating External Pointers</i>
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**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)
```

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xptr_address	<i>External pointer address.</i>
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**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

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xptr_clear	<i>Clear the pointer address of the external pointer.</i>
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**Description**

Clear the pointer address of the external pointer.

**Usage**

```
xptr_clear(s)
```

**Arguments**

s	An externalptr object
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**Value**

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

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xptr_protected	<i>Protected R object of the external pointer.</i>
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**Description**

Protected R object of the external pointer.

**Usage**

xptr\_protected(s)

**Arguments**

s                    An externalptr object

**Value**

An R object

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xptr_tag	<i>Tag of the external pointer.</i>
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**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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