

# Package ‘rswipl’

January 8, 2026

**Type** Package

**Title** Embed 'SWI'-Prolog'

**Version** 10.1.1

**Date** 2026-01-05

**Maintainer** Matthias Gondan <Matthias.Gondan-Rochon@uibk.ac.at>

**Description** Interface to 'SWI'-Prolog', <<https://www.swi-prolog.org/>>. This package is normally not loaded directly, please refer to package 'rolog' instead. The purpose of this package is to provide the 'Prolog' runtime on systems that do not have a software installation of 'SWI'-Prolog'.

**License** FreeBSD

**Imports** Rcpp (>= 1.0.7)

**Depends** R (>= 4.3)

**URL** <https://github.com/mgondan/rswipl>

**BugReports** <https://github.com/mgondan/rswipl/issues>

**LinkingTo** Rcpp

**RoxygenNote** 7.3.2

**Encoding** UTF-8

**SystemRequirements** GNU make, CMake (>= 3.20), pandoc, libarchive, libregex, libexpat, liblzma, libzstd, liblz4, libz2, libz, libbcbcrypt

**Suggests** testthat (>= 3.0.0)

**Config/testthat/edition** 3

**NeedsCompilation** yes

**Author** Matthias Gondan [aut, com, cre] (University of Innsbruck), Jan Wielemaker [ctb, cph] (JW is the lead developer of SWI-Prolog. See <https://www.swi-prolog.org/Contributors.html> for a list of contributors.), European Commission [fnd] (Erasmus+ Programme, 2019-1-EE01-KA203-051708)

**Repository** CRAN

**Date/Publication** 2026-01-08 11:50:16 UTC

Contents

clear . . . . .	2
query . . . . .	3
submit . . . . .	4
swipl . . . . .	5
<b>Index</b>	<b>6</b>

---

clear	<i>Clear current query</i>
-------	----------------------------

---

Description

Clear current query

Usage

clear()

Value

TRUE (invisible)

See Also

- [query\(\)](#) for opening a query
- [submit\(\)](#) for submitting a query

Examples

```
query(call("member", expression(X), list(quote(a), "b", 3L, 4)))
submit() # X = a
submit() # X = "b"
clear()
```

query

*Create a query***Description**

Create a query

**Usage**

```
query(
  q = call("member", expression(X), list(quote(a), "b", 3L, 4, TRUE, expression(Y)))
)
```

**Arguments**

**q** an R call. The R call consists of symbols, integers and real numbers, character strings, boolean values, expressions, lists, and other calls. Vectors of booleans, integers, floating point numbers, and strings with length  $N > 1$  are translated to prolog compounds `!/N`, `%/N`, `#/N` and `$$/N`, respectively.

**Details**

SWI-Prolog does not allow multiple open queries. If another query is open, it is closed and a warning is shown.

**Value**

If the creation of the query succeeds, `TRUE`

**See Also**

[submit\(\)](#) for submitting a query

[clear\(\)](#) to close the currently open query

**Examples**

```
query(call("writeLn", function(x) {sin(x)}))
submit()
clear()
```

```
query(call("=", expression(X), function(x) {sin(x)}))
submit()
clear()
```

```
query(call("member", expression(X), list(quote(a), "b", 3L, 4, TRUE, expression(Y),
  NA, NaN, Inf, NULL, NULL, function(x) {y <- sin(x); y^2}, NULL)))
submit() # X = a
submit() # X = "b"
```

```

submit() # X = 3L
submit() # X = 4.0
submit() # X = TRUE
submit() # X = expression(Y) or Y = expression(X)
submit() # X = NA
submit() # X = NaN
submit() # X = Inf
submit() # X = NULL
submit() # X = NULL
submit() # X = function(x) {y <- sin(x); y^2}}
submit() # X = NULL
submit() # FALSE (no more results)
submit() # warning that no query is open

query(call("member", expression(X), list(quote(a), "b", 3L, 4)))
query(call("member", expression(X), list(TRUE, expression(Y)))) # warning that another query is open
clear()

```

---

submit

---

*Submit a query that has been opened with `query()` before.*


---

## Description

Submit a query that has been opened with `query()` before.

## Usage

```
submit()
```

## Value

If the query fails, FALSE is returned. If the query succeeds, a (possibly empty) list is returned that includes the bindings required to satisfy the query.

## See Also

`query()` for a opening a query.

`clear()` for a clearing a query.

## Examples

```

query(call("member", expression(X), list(quote(a), "b", 3L, 4, expression(Y))))
submit() # X = 3L
submit() # X = 4.0
submit() # X = TRUE
submit() # X = expression(Y) or Y = expression(X)
submit() # FALSE
submit() # warning that no query is open

```

```
query(call("member", expression(X), list(quote(a), "b", 3L, 4)))
submit() # X = a
submit() # X = "b"
clear()
```

---

**swipl***Invoke SWI-Prolog*

---

**Description**

This function is internally used to emulate swipl -g goal using the R program: R -e "rswipl::swipl()" -q -no-echo -args -g goal

**Usage**

```
swipl(sigalert = NA)
```

**Arguments**

**sigalert**            Use a different alert signal than SIGUSR2 (ignored on Windows)

**Value**

nothing useful

# Index

clear, [2](#)  
clear(), [3](#), [4](#)  
  
query, [3](#)  
query(), [2](#), [4](#)  
  
submit, [4](#)  
submit(), [2](#), [3](#)  
swipl, [5](#)