

# Package ‘reactlog’

October 14, 2022

**Title** Reactivity Visualizer for 'shiny'

**Version** 1.1.1

**Description** Building interactive web applications with R is incredibly easy with 'shiny'. Behind the scenes, 'shiny' builds a reactive graph that can quickly become intertwined and difficult to debug. 'reactlog' (Schloerke 2019) <[doi:10.5281/zenodo.2591517](https://doi.org/10.5281/zenodo.2591517)> provides a visual insight into that black box of 'shiny' reactivity by constructing a directed dependency graph of the application's reactive state at any time point in a reactive recording.

**Depends** R (>= 3.0.2)

**Imports** jsonlite (>= 0.9.16),

**Suggests** shiny (>= 1.5.0), fontawesome (>= 0.3.0), knitr, rmarkdown, htmltools, testthat

**License** GPL-3 | file LICENSE

**Encoding** UTF-8

**RoxygenNote** 7.2.1

**URL** <https://rstudio.github.io/reactlog/>,  
<https://github.com/rstudio/reactlog>,  
<https://community.rstudio.com/tag/reactlog>

**BugReports** <https://github.com/rstudio/reactlog/issues>

**VignetteBuilder** knitr

**Language** en-US

**NeedsCompilation** no

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**Repository** CRAN

**Date/Publication** 2022-09-26 16:20:02 UTC

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reactlog_module_ui	<i>Reactlog Shiny Module</i>
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### Description

Displays an iframe of the reactlog in the given application.

### Usage

```
reactlog_module_ui(include_refresh = TRUE, id = "reactlog_module")

reactlog_module_server(
  id = "reactlog_module",
  width = "100%",
  height = 600,
  ...
)
```

### Arguments

include_refresh	should the iframe refresh button be included?
id	<b>shiny</b> module id to use
width, height	HTML attributes to be applied to the reactlog iframe
...	parameters passed to <a href="#">shiny::actionButton()</a>

### Details

State will not be preserved between refreshes. To open the reactlog at a particular step, be sure to mark your time points with `Cmd+Shift+F3` (Windows: `Ctrl+Shift+F3`)

### See Also

[shiny::moduleServer\(\)](#)

## Examples

```
if (!require("shiny")) {
  message("`shiny` required to run example")
  return()
}

library(shiny)
# Enable reactlog
reactlog_enable()

# Define UI for app that draws a histogram ----
ui <- fluidPage(
  tags$h1("Pythagorean theorem"),
  numericInput("a", "A", 3),
  numericInput("b", "B", 4),
  "C:", verbatimTextOutput("c"),
  ### start ui module
  reactlog_module_ui()
  ### end ui module
)

server <- function(input, output, session) {
  a2 <- reactive({a <- input$a; req(a); a * a}, label = "a^2")
  b2 <- reactive({b <- input$b; req(b); b * b}, label = "b^2")
  c2 <- reactive({a2() + b2()}, label = "c^2")
  c_val <- reactive({sqrt(c2())}, label = "c")

  output$c <- renderText({
    c_val()
  })

  ### start server module
  reactlog_module_server()
  ### end server module

}

if (interactive()) {
  shinyApp(ui = ui, server = server)
}
```

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reactlog\_render

*Reactive Log Visualizer*

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## Description

Provides an interactive browser-based tool for visualizing reactive dependencies and execution in your application.

## Usage

```
reactlog_render(log, session_token = NULL, time = TRUE)
```

```
reactlog_show(log, time = TRUE, ...)
```

## Arguments

<code>log</code>	Log produced by shiny to be processed
<code>session_token</code>	token to be used to subset which session is displayed. Defaults to all sessions.
<code>time</code>	A boolean that specifies whether or not to display the time that each reactive takes to calculate a result.
<code>...</code>	Future parameter expansion. Currently ignored

## Details

To use the reactive log visualizer, start with a fresh R session and run the command `reactlog_enable()`; then launch your application in the usual way (e.g. using `shiny::runApp()`). At any time you can hit

Ctrl+F3

(or for Mac users,

Cmd+F3

) in your web browser to launch the reactive log visualization.

The reactive log visualization only includes reactive activity up until the time the report was loaded. If you want to see more recent activity, refresh the browser.

Note that Shiny does not distinguish between reactive dependencies that "belong" to one Shiny user session versus another, so the visualization will include all reactive activity that has taken place in the process, not just for a particular application or session.

As an alternative to pressing

Ctrl/Cmd+F3

—for example, if you are using reactivities outside of the context of a Shiny application—you can run the `shiny::reactlogShow()` function, which will generate the reactive log visualization as a static HTML file and launch it in your default browser. In this case, refreshing your browser will not load new activity into the report; you will need to call `shiny::reactlogShow()` explicitly.

For security and performance reasons, do not enable the reactlog in production environments. When the option is enabled, it's possible for any user of your app to see at least some of the source code of your reactive expressions and observers.

## See Also

[shiny::reactlogShow\(\)](#) and [reactlog\\_enable\(\)](#)

**Examples**

```
## Not run:
library(shiny)
library(reactlog)

# tell shiny to log reactivity
reactlog_enable()

# run a shiny app
app <- system.file("examples/01_hello", package = "shiny")
runApp(app)

# once app has closed, display reactlog
shiny::reactlogShow()

## End(Not run)
```

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reactlog_write	<i>Write reactlog</i>
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**Description**

Write the reactlog to a file. If a session token is provided, all reactive interactions will be subsetted to either the global session or the session provided.

**Usage**

```
reactlog_write(log, file = stdout(), session_token = NULL)
```

**Arguments**

log	produced by shiny to be written
file	location of output file. If a NULL file is given, the json representation is return.
session_token	Session token identifier to be used when subsetting the complete reactlog

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setReactLog	<i>Enable or disable the reactlog</i>
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**Description**

Before the reactlog can be visualized, it needs to be enabled. For security and performance reasons, you should not enable the reactlog in a shiny app in production.

**Usage**

```
reactlog_enable()
```

```
reactlog_disable(warn = TRUE)
```

**Arguments**

warn           Should a warning message be shown?

**See Also**

[reactlog\\_show\(\)](#)

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