# Package 'tinysnapshot'

July 18, 2025

**Type** Package

**Title** Snapshots for Unit Tests using the 'tinytest' Framework

**Version** 0.2.0

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**Description** Snapshots for unit tests using the 'tinytest' framework for R. Includes expectations to test base R and 'ggplot2' plots as well as console output from print().

**License** GPL (>= 3)

**URL** https://github.com/vincentarelbundock/tinysnapshot

**BugReports** https://github.com/vincentarelbundock/tinysnapshot/issues

**Imports** diffobj, magick (>= 2.7.4), tinytest (>= 1.4.1)

**Suggests** fontquiver, ggplot2, ragg, rsvg, svglite

**Encoding** UTF-8

**RoxygenNote** 7.3.2

**NeedsCompilation** no

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**Repository** CRAN

**Date/Publication** 2025-07-18 05:00:03 UTC

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### Description

Snapshots for unit tests using the 'tinytest' framework for R. Includes expectations to test base R and 'ggplot2' plots as well as console output from print().

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expect_equivalent_images
                        *Test if two image files are equivalent*

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### Description

Test if two image files are equivalent

### Usage

```
expect_equivalent_images(
  current,
  target,
  tol = getOption("tinysnapshot_tol", default = 0),
  metric = getOption("tinysnapshot_metric", default = "AE"),
  fuzz = getOption("tinysnapshot_fuzz", default = 0),
  style = getOption("tinysnapshot_plot_diff_style", default = c("old", "new", "diff")),
```

```
    review = getOption("tinysnapshot_plot_review", default = TRUE),
    diffpath = NULL
)
```

## Arguments

| | |
|---|---|
| current | path to an image file |
| target | path to an image file |
| tol | distance estimates larger than this threshold will trigger a test failure. Scale depends on the metric argument. With the default metric="AE" (absolute error), the tolerance corresponds roughly to the number of pixels of difference between the plot and the reference image. |
| metric | string with a metric from magick::metric_types() such as "AE" or "phash". |
| fuzz | relative color distance between 0 and 100 to be considered similar. |
| style | A character vector to control the panels of the diff image saved to file. The order and number of entries controls the side-by-side panels. Allowable values are: "old", "new", "diff". |
| review | logical. TRUE if a diff plot should be saved to file for review when the expectation fails. |
| diffpath | path where to save an image which shows the differences between current and target. NULL means that the diff image is not saved. |

## Value

A tinytest object. A tinytest object is a logical with attributes holding information about the test that was run

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expect_snapshot_plot     *Test if the new plot matches a target (snapshot) plot*

---

## Description

This expectation can be used with tinytest to check if the new plot matches a target plot.

When the expectation is checked for the first time, the expectation fails and a reference plot is saved to the inst/tinytest/_tinysnapshot folder.

When the expectation fails, the reference plot, the new plot, and a diff are saved to the inst/tinytest/label folder. Call the review() function to compare.

To update a snapshot, delete the reference file from the _tinysnapshot folder and run the test suite again.

See the package README file or website for detailed examples.

**Usage**

```
expect_snapshot_plot(
  current,
  label,
  width = getOption("tinysnapshot_width", default = NULL),
  height = getOption("tinysnapshot_height", default = NULL),
  tol = getOption("tinysnapshot_tol", default = 0),
  metric = getOption("tinysnapshot_metric", default = "AE"),
  fuzz = getOption("tinysnapshot_fuzz", default = 0),
  device = getOption("tinysnapshot_device", default = "svg"),
  device_args = getOption("tinysnapshot_device_args", default = list()),
  par_args = getOption("tinysnapshot_par_args", default = NULL),
  style = getOption("tinysnapshot_plot_diff_style", default = c("old", "new", "diff")),
  review = getOption("tinysnapshot_plot_review", default = TRUE),
  os = getOption("tinysnapshot_os", default = Sys.info()["sysname"]),
  skip = getOption("tinysnapshot_plot_skip", default = !interactive() &&
    !identical(Sys.getenv("NOT_CRAN"), "true"))
)
```

**Arguments**

| | |
|---|---|
| current | an object of class ggplot or a function which returns a base R plot. |
| label | a string to identify the snapshot (alpha-numeric, hyphens, or underscores). Each plot in the test suite must have a unique label. |
| width | of the snapshot. PNG default: 480 pixels. SVG default: 7 inches. |
| height | of the snapshot. PNG default: 480 pixels. SVG default: 7 inches. |
| tol | distance estimates larger than this threshold will trigger a test failure. Scale depends on the metric argument. With the default metric="AE" (absolute error), the tolerance corresponds roughly to the number of pixels of difference between the plot and the reference image. |
| metric | string with a metric from magick::metric_types() such as "AE" or "phash". |
| fuzz | relative color distance between 0 and 100 to be considered similar. |
| device | "svg", "png", "ragg" or "svglite" |
| device_args | list of arguments to pass to the device call (e.g., user_fonts for svglite device). |
| par_args | named list of arguments to pass to graphics::par() for setting graphical parameters. Only used when device is "png" or "ragg". Default is NULL. |
| style | A character vector to control the panels of the diff image saved to file. The order and number of entries controls the side-by-side panels. Allowable values are: "old", "new", "diff". |
| review | logical. TRUE if a diff plot should be saved to file for review when the expectation fails. |
| os | character vector of operating systems on which the test should be run (e.g., "Windows", "Linux", "Darwin"). Tests are skipped when no element of the vector matches the output of: Sys.info()["sysname"] |

| | |
|---|---|
| skip | logical. If TRUE, the test is skipped. Default: TRUE when not interactive and NOT_CRAN environment variable is not "true". |

### Value

A `tinytest` object. A `tinytest` object is a `logical` with attributes holding information about the test that was run

---

expect_snapshot_print     *Test if printed output matches a target printout*

---

### Description

This expectation can be used with `tinytest` to check if the new plot matches a target plot.

When the expectation is checked for the first time, the expectation fails and a reference text file is saved to the `inst/tinytest/_tinysnapshot` folder.

To update a snapshot, delete the reference file from the `_tinysnapshot` folder and run the test suite again.

See the package README file or website for detailed examples.

### Usage

```
expect_snapshot_print(
  current,
  label,
  mode = getOption("tinysnapshot_mode", default = "unified"),
  format = getOption("tinysnapshot_format", default = "ansi256"),
  ignore_white_space = getOption("tinysnapshot_ignore_white_space", default = FALSE),
  fn_current = getOption("tinysnapshot_fn_current", default = identity),
  fn_target = getOption("tinysnapshot_fn_target", default = identity),
  ...
)
```

### Arguments

| | |
|---|---|
| current | an object which returns text to the console when calling `print(x)`' |
| label | a string to identify the snapshot (alpha-numeric, hyphens, or underscores). Each plot in the test suite must have a unique label. |
| mode | "unified", "sidebyside", "context", or "auto". See ?`diffobj::diffPrint` |
| format | "raw", "ansi8", "ansi256", "html", or "auto". See ?`diffobj::diffPrint` |
| ignore_white_space | |
| | TRUE to ignore horizontal white space and empty lines. |
| fn_current | A function to apply to the current output before comparison. |
| fn_target | A function to apply to the target output before comparison. |
| ... | Additional arguments are passed to `diffobj::diffPrint()` |

## Value

A `tinytest` object. A `tinytest` object is a `logical` with attributes holding information about the test that was run

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