

Package ‘rqualify’

October 9, 2026

Type Package

Title Qualification of R Software Installations

Version 1.2.0

Description Qualify R software installations using R Markdown as the foundation for the Installation Qualification (IQ) and Operational Qualification (OQ) when used in environments (such as regulated clinical trials) where such processes may be required.

License GPL-2

URL <https://github.com/Medtronic-Biostatistics/rqualify>,
<https://medtronic-biostatistics.github.io/rqualify/>

BugReports <https://github.com/Medtronic-Biostatistics/rqualify/issues>

Depends R (>= 4.4.0)

Imports pandoc, quarto, rmarkdown, tinytex

Suggests knitr, testthat (>= 3.1.7), withr

Encoding UTF-8

VignetteBuilder knitr

Config/testthat/edition 3

Config/roxygen2/version 8.0.0

RoxygenNote 7.3.3

NeedsCompilation no

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Description

Run IQ-OQ on an installation of R software

Usage

```
rqualify(
  path_save,
  setup_tinytex = TRUE,
  setup_pandoc = TRUE,
  render_latex = TRUE,
  engine = "latex",
  verbose = TRUE,
  details = FALSE
)
```

Arguments

path_save	Character. Existing, writable directory in which to create the R-validation folder. That folder must not already exist.
setup_tinytex	Logical. Allow installation of TinyTeX and the grfext package when PDF compilation requires LaTeX and no existing installation is available. Existing LaTeX installations are reused. Ignored for Quarto.
setup_pandoc	Logical. Allow installation of Pandoc when none is available for R Markdown. Existing system, IDE, or managed installations are reused. Ignored for Quarto, which includes Pandoc.
render_latex	Logical. Compile the LaTeX report to PDF when engine = "latex". If FALSE, generate only the LaTeX file. Ignored for Quarto, which always generates a PDF through Typst.
engine	Character. Either "latex" or "quarto".
verbose	Logical. Print progress messages.
details	Logical. Return structured qualification results instead of just the output directory. Defaults to FALSE for compatibility.

Details

Arguments, the destination, and engine-specific prerequisites are checked before output directories are created. Quarto uses its bundled Pandoc and Typst and does not require TinyTeX or a separate Pandoc install. The selected R installation must include its installed tests.

Both report formats use the same subprocess runner. Passing a suite requires a zero exit status and exactly one explicit PASS completion result. Crashes and incomplete results cannot pass. The core system tests use `tools::testInstalledBasic(scope = "basic")`; development and internet test scopes are not run. Base and recommended package examples, vignettes, and tests are checked separately.

The output includes the report source, subprocess scripts and logs, `IQ-OQ-TestOutput/test_summary.csv`, and `validation_result.rds`. Failed qualification, missing summaries, and invalid summaries produce warnings. Inspect the returned details or saved results to distinguish these outcomes. Rendering errors stop execution and leave diagnostic files in the output directory. Temporary environment changes are restored.

Value

By default, the path to the R-validation folder. With `details = TRUE`, a `rqualify_result` list containing status ("ok", "fail", "missing", or "invalid"), the per-suite summary, `output_dir`, artifact paths in files, engine, `core_test_scope`, R and tool versions, and start and finish times. This list is also saved as `validation_result.rds` for either return mode.

Examples

```
## Not run:
# Reuse installed LaTeX and Pandoc.
rqualify(path_save = tempdir(), setup_tinytex = FALSE, setup_pandoc = FALSE)

# Quarto uses its bundled tools; choose a fresh output location.
destination <- tempfile()
dir.create(destination)
result <- rqualify(destination, engine = "quarto", details = TRUE)
result$status
result$summary

## End(Not run)
```

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