

# Package: tsdrtools (via r-universe)

September 17, 2026

**Type** Package

**Title** Convenience package for installing R-packages on UiO TSD

**Version** 0.1.03

**Description** Some packages are hard to install on the secure closed server of the University of Oslo, TSD This package has some functions to help users more easily install packages to TSD that cannot be installed using the mini-CRAN service within TSD.

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**Encoding** UTF-8

**RoxygenNote** 7.2.0

**Suggests** testthat, covr, knitr, rmarkdown

**Imports** tools, utils

**URL** <https://github.com/LCBC-UiO/tsdrtools>

**BugReports** <https://github.com/LCBC-UiO/tsdrtools/issues>

**VignetteBuilder** knitr

**Repository** <https://lcbc-uio.r-universe.dev>

**Date/Publication** 2022-06-15 10:18:19 UTC

**RemoteUrl** <https://github.com/LCBC-UiO/tsdrtools>

**RemoteRef** HEAD

**RemoteSha** c0a5370426079e39dcd2ee8604ab58eec6d93b88

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|                  |                      |
|------------------|----------------------|
| as_install_error | Create install_error |
|------------------|----------------------|

---

**Description**

Create install\_error

**Usage**

as\_install\_error(x)

**Arguments**

x                   list to make install\_error

---

|                      |                          |
|----------------------|--------------------------|
| as_tsdrtools_install | Create tsdrtools_install |
|----------------------|--------------------------|

---

**Description**

Create tsdrtools\_install

**Usage**

as\_tsdrtools\_install(x)

**Arguments**

x                   list to make tsdrtools\_install

---

|                      |                                |
|----------------------|--------------------------------|
| as_tsdrttools_status | <i>Create tsdrtools_status</i> |
|----------------------|--------------------------------|

---

**Description**

Create tsdrtools\_status

**Usage**

```
as_tsdrttools_status(x)
```

**Arguments**

|   |                               |
|---|-------------------------------|
| x | list to make tsdrtools_status |
|---|-------------------------------|

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|           |                        |
|-----------|------------------------|
| core_pkgs | <i>R core packages</i> |
|-----------|------------------------|

---

**Description**

R core packages

**Usage**

```
core_pkgs()
```

**Value**

character vector of R core-packages

---

|            |                                                          |
|------------|----------------------------------------------------------|
| error_logs | <i>Extract error logs from tsdrstools_install-object</i> |
|------------|----------------------------------------------------------|

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**Description**

Extract error logs from tsdrstools\_install-object

**Usage**

```
error_logs(x, package = NULL)
```

**Arguments**

|         |                                                                              |
|---------|------------------------------------------------------------------------------|
| x       | object of class tsdrstools_install                                           |
| package | NULL or character vector of package errors to extract. If NULL extracts all. |

**Value**

list of errors

**Examples**

```
## Not run:
status <- tsd_package_install("devtools.zip")
error_logs(status)

## End(Not run)
```

---

get\_dependency\_tree     *Get package dependency tree*

---

**Description**

This function will return all package dependencies for any given package, including backwards dependency for all. The function mainly prints out the dependency tree in the console, but also returns all packages required for build (uniquely).

**Usage**

```
get_dependency_tree(
  package,
  i = 1,
  type = c("Depends", "Imports"),
  repos = getOption("repos"),
  verbose = TRUE,
  ...
)
```

**Arguments**

|         |                                                                                            |
|---------|--------------------------------------------------------------------------------------------|
| package | name of package. character.                                                                |
| i       | integer. Used in recursive call to package dependency retrieval.                           |
| type    | Character vector, a subset of c("Depends", "Imports", "LinkingTo", "Suggests", "Enhances") |
| repos   | character vector. Addresses of CRAN mirror(s)                                              |
| verbose | logical. If function should be talkative.                                                  |
| ...     | additional arguments to functions <a href="#">available.packages</a>                       |

**Value**

character vector of unique packages

---

|               |                                      |
|---------------|--------------------------------------|
| install_error | <i>Constructor for install_error</i> |
|---------------|--------------------------------------|

---

**Description**

Constructor for install\_error

**Usage**

install\_error(x)

**Arguments**

x                      named list of installation errors

---

|                  |                               |
|------------------|-------------------------------|
| is.install_error | <i>Validate install_error</i> |
|------------------|-------------------------------|

---

**Description**

Validate install\_error

**Usage**

is.install\_error(x)

**Arguments**

x                      an object

---

|                     |                                  |
|---------------------|----------------------------------|
| is.tsdrtools_status | <i>Validate tsdrtools_status</i> |
|---------------------|----------------------------------|

---

**Description**

Validate tsdrtools\_status

**Usage**

is.tsdrtools\_status(x)

**Arguments**

x                      an object

---

|                  |                               |
|------------------|-------------------------------|
| is_install_error | <i>Validate install_error</i> |
|------------------|-------------------------------|

---

**Description**

Validate install\_error

**Usage**

is\_install\_error(x)

**Arguments**

x                      an object

---

|                      |                                   |
|----------------------|-----------------------------------|
| is_tsdrtools_install | <i>Validate tsdrtools_install</i> |
|----------------------|-----------------------------------|

---

**Description**

Validate tsdrtools\_install

**Usage**

is\_tsdrtools\_install(x)

**Arguments**

x                      an object

---

|                     |                                  |
|---------------------|----------------------------------|
| is_tsdrtools_status | <i>Validate tsdrtools_status</i> |
|---------------------|----------------------------------|

---

**Description**

Validate tsdrtools\_status

**Usage**

is\_tsdrtools\_status(x)

**Arguments**

x                      an object

---

|                     |                                    |
|---------------------|------------------------------------|
| package_workarounds | <i>Retrieve package workaround</i> |
|---------------------|------------------------------------|

---

**Description**

Certain R-packages require workarounds to install on offline servers. This function will check if the given package has such a work-around and return said workaround for the type of process asked (prepare or install).

**Usage**

```
package_workarounds(package, folder, type, verbose = TRUE)
```

**Arguments**

|         |                                                                                                                                                |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------|
| package | name of package. character.                                                                                                                    |
| folder  | character. folder to place all necessary files in                                                                                              |
| type    | character vector of either "prepare" or "install". This indicates if the workaround for install-process or prepare-process should be returned. |
| verbose | logical. If function should be talkative.                                                                                                      |

---

|                    |                                        |
|--------------------|----------------------------------------|
| stringi_workaround | <i>Function for stringi workaround</i> |
|--------------------|----------------------------------------|

---

**Description**

stringi requires download of a bundle to work. If we want to install offline, the bundle needs to be downloaded and ported with the package tar. For type = "prepare" the bundle is downloaded into the folder with the package tars. For install, the call to R CMD INSTALL is given the path to the bundle during installation, which will stop it from attempting to download the bundle during install.

**Usage**

```
stringi_workaround(folder, type, verbose = TRUE)
```

**Arguments**

|         |                                                                                                                                                |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------|
| folder  | character. folder to place all necessary files in                                                                                              |
| type    | character vector of either "prepare" or "install". This indicates if the workaround for install-process or prepare-process should be returned. |
| verbose | logical. If function should be talkative.                                                                                                      |

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|                     |                                            |
|---------------------|--------------------------------------------|
| tsd_package_install | <i>Install package on TSD from archive</i> |
|---------------------|--------------------------------------------|

---

## Description

After downloading and preparing the packages for install outside of TSD using the [tsd\\_package\\_prepare](#) function, install said packages using this function.

## Usage

```
tsd_package_install(  
  zip_file,  
  lib = .libPaths()[1],  
  opts = "",  
  verbose = TRUE,  
  ...  
)
```

## Arguments

|          |                                                                    |
|----------|--------------------------------------------------------------------|
| zip_file | path to zipped file                                                |
| lib      | library folder to install to                                       |
| opts     | optional arguments to ‘R CMD INSTALL’                              |
| verbose  | logical. If function should be talkative.                          |
| ...      | additional arguments to functions <a href="#">install.packages</a> |

## Value

vector of successful or failed package installs

## Examples

```
## Not run:  
# prepare a package first  
tsd_package_prepare("devtools")  
  
tsd_package_install("devtools.zip")  
  
## End(Not run)
```

---

|                     |                                          |
|---------------------|------------------------------------------|
| tsd_package_prepare | <i>Prepare R package for TSD install</i> |
|---------------------|------------------------------------------|

---

### Description

This function will download a package with all its dependencies to a zipped archive, to them be installed within TSD using [tsd\\_package\\_install](#).

### Usage

```
tsd_package_prepare(  
  package,  
  folder = package,  
  repos = getOption("repos"),  
  verbose = TRUE,  
  zip = TRUE,  
  ...  
)
```

### Arguments

|         |                                                                                                           |
|---------|-----------------------------------------------------------------------------------------------------------|
| package | name of package. character.                                                                               |
| folder  | character. folder to place all necessary files in                                                         |
| repos   | character vector. Addresses of CRAN mirror(s)                                                             |
| verbose | logical. If function should be talkative.                                                                 |
| zip     | logical, if folder should be zipped at the end                                                            |
| ...     | additional arguments to functions <a href="#">install.packages</a> and <a href="#">available.packages</a> |

### Value

returns nothing, but creates a folder and zip archive

### Examples

```
## Not run:  
tsd_package_prepare("devtools")  
  
tsd_package_prepare("dplyr", folder = "dplyr_pkg")  
  
tsd_package_prepare("dplyr", repos = "https://cran.uib.no/", verbose = FALSE)  
  
## End(Not run)
```

---

|                   |                                          |
|-------------------|------------------------------------------|
| tsdrtools_install | <i>Constructor for tsdrtools_install</i> |
|-------------------|------------------------------------------|

---

**Description**

Constructor for tsdrtools\_install

**Usage**

```
tsdrtools_install(success, error_logs)
```

**Arguments**

|            |                                      |
|------------|--------------------------------------|
| success    | data.frame of class tsdrtools_status |
| error_logs | list of class install_error          |

---

|                  |                                         |
|------------------|-----------------------------------------|
| tsdrtools_status | <i>Constructor for tsdrtools_status</i> |
|------------------|-----------------------------------------|

---

**Description**

Constructor for tsdrtools\_status

**Usage**

```
tsdrtools_status(success, pkg, version)
```

**Arguments**

|         |                                           |
|---------|-------------------------------------------|
| success | character vector of "success" or "failed" |
| pkg     | character vector of packages              |
| version | character vector of versions              |

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