Package: rJavaEnv (via r-universe)

September 28, 2024

Title Java Environments for R Projects

Version 0.0.1

Description Install specific version of Java runtime environment at the R project level. The goal of rJavaEnv is to manage multiple Java JDKs in R projects by automatingthe process of downloading, installing, and configuring Java environments on a per-project basis. This package is inspired by the renv <https://rstudio.github.io/renv/> package for managing R environments in R projects. You can request a specific Java Development Kit (JDK) in your project, and rJavaEnv will download and install the requested Java environment in a project-specific directory and set the PATH and JAVA_HOME for when you are using this project. Therefore, you can have different Java versions for different projects without contaminating your system with different Java versions.

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Suggests knitr, rmarkdown, rJava, testthat (>= 3.0.0)

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Encoding UTF-8

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.1

Imports checkmate, cli, curl, jsonlite, utils

URL https://github.com/e-kotov/rJavaEnv, http://www.ekotov.pro/rJavaEnv/

VignetteBuilder knitr

BugReports https://github.com/e-kotov/rJavaEnv/issues

Repository https://r-multiverse-staging.r-universe.dev

RemoteUrl https://github.com/e-kotov/rJavaEnv

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Contents

java_check_version_cmd

Check installed Java version using terminal commands

Description

Check installed Java version using terminal commands

Usage

```
java_check_version_cmd(java_home = NULL)
```

Arguments

`java_home`	Path to Java home directory. If NULL, the function uses the JAVA_HOME environment variable.

Value

TRUE if successful, otherwise FALSE.

Examples

```
java_check_version_cmd()
```

java_check_version_rjava   *Check Java Version with a Specified JAVA_HOME Using a Separate R Session*

Description

This function sets the JAVA_HOME environment variable, initializes the JVM using rJava, and prints the Java version that would be used if the user sets the given JAVA_HOME in the current R session. This check is performed in a separate R session to avoid having to reload the current R session. The reason for this is that once Java is initialized in an R session, it cannot be uninitialized unless the current R session is restarted.

Usage

```
java_check_version_rjava(java_home = NULL, verbose = TRUE)
```

Arguments

`java_home`	The path to the desired JAVA_HOME. If NULL, uses the current JAVA_HOME environment variable.
`verbose`	Whether to print detailed messages. Defaults to TRUE.

Value

TRUE if successful, otherwise FALSE.

Examples

```
java_check_version_rjava()
```

java_clear   *Manage Java installations and distributions caches*

Description

Wrapper function to clear the Java symlinked in the current project, installed, or distributions caches.

Usage

```
java_clear(
  type = c("project", "installed", "distrib"),
  target_dir = NULL,
  check = TRUE,
  delete_all = FALSE
)
```

Arguments

`type` What to clear: "project" - remove symlinks to install cache in the current project, "installed" - remove installed Java versions, "distrib" - remove downloaded Java distributions.

`target_dir` The directory to clear. Defaults to current working directory for "project" and user-specific data directory for "installed" and "distrib". Not recommended to change.

`check` Whether to list the contents of the cache directory before clearing it. Defaults to TRUE.

`delete_all` Whether to delete all items without prompting. Defaults to FALSE.

Value

A message indicating whether the cache was cleared or not.

Examples

```
java_clear("project")
java_clear("installed")
java_clear("distrib")
```

java_clear_distrib_cache

Clear the Java distributions cache folder

Description

Clear the Java distributions cache folder

Usage

```
java_clear_distrib_cache(
  check = TRUE,
  delete_all = FALSE,
  cache_dir = tools::R_user_dir("rJavaEnv", which = "cache")
)
```

Arguments

`check` Whether to list the contents of the cache directory before clearing it. Defaults to TRUE.

`delete_all` Whether to delete all distributions without prompting. Defaults to FALSE.

`cache_dir` The cache directory to clear. Defaults to the user-specific data directory.

Value

A message indicating whether the cache was cleared or not.

Examples

```
## Not run:
java_clear_distrib_cache()

## End(Not run)
```

---

java_clear_installed_cache

Clear the Java installations cache folder

Description

Clear the Java installations cache folder

Usage

```
java_clear_installed_cache(
  check = TRUE,
  delete_all = FALSE,
  cache_dir = tools::R_user_dir("rJavaEnv", which = "cache")
)
```

Arguments

check	Whether to list the contents of the cache directory before clearing it. Defaults to TRUE.
delete_all	Whether to delete all installations without prompting. Defaults to FALSE.
cache_dir	The cache directory to clear. Defaults to the user-specific data directory.

Value

A message indicating whether the cache was cleared or not.

Examples

```
## Not run:
java_clear_installed_cache()

## End(Not run)
```

java_clear_in_project *Clear the Java versions symlinked in the current project*

Description

Clear the Java versions symlinked in the current project

Usage

```
java_clear_in_project(project_dir = getwd(), check = TRUE, delete_all = FALSE)
```

Arguments

project_dir	The project directory to clear. Defaults to the current working directory.
check	Whether to list the symlinked Java versions before clearing them. Defaults to TRUE.
delete_all	Whether to delete all symlinks without prompting. Defaults to FALSE.

Value

A message indicating whether the symlinks were cleared or not.

Examples

```
## Not run:
java_clear_in_project()

## End(Not run)
```

java_download *Download a Java distribution*

Description

Download a Java distribution

Usage

```
java_download(
  version = 21,
  distribution = "Corretto",
  dest_dir = tools::R_user_dir("rJavaEnv", which = "cache"),
  platform = platform_detect()$os,
  arch = platform_detect()$arch,
  verbose = TRUE
)
```

Arguments

`version` The Java version to download. If not specified, defaults to the latest LTS version.

`distribution` The Java distribution to download. If not specified, defaults to "Corretto".

`dest_dir` The destination directory to download the Java distribution to. Defaults to a user-specific data directory.

`platform` The platform for which to download the Java distribution. Defaults to the current platform.

`arch` The architecture for which to download the Java distribution. Defaults to the current architecture.

`verbose` Whether to print detailed messages. Defaults to TRUE.

Value

The path to the downloaded Java distribution file.

Examples

```
## Not run:
java_download(version = "17", distribution = "Corretto")
java_download(distribution = "Corretto")
java_download()

## End(Not run)
```

`java_env_set` *Set the JAVA_HOME and PATH environment variables to a given path*

Description

Set the JAVA_HOME and PATH environment variables to a given path

Usage

```
java_env_set(java_home, where = c("both", "session", "project"), verbose = T)
```

Arguments

`java_home` The path to the desired JAVA_HOME.

`where` Where to set the JAVA_HOME: "session", "project", or "both". Defaults to "both". When "both" or "project" is selected, the function updates the .Rprofile file in the project directory to set the JAVA_HOME and PATH environment variables at the start of the R session.

`verbose` Whether to print detailed messages. Defaults to TRUE.

Value

Nothing. Sets the JAVA_HOME and PATH environment variables.

Examples

```
## Not run:
java_env_set("/path/to/java", "both")

## End(Not run)
```

---

java_env_unset *Unset the JAVA_HOME and PATH environment variables in the project .Rprofile*

Description

Unset the JAVA_HOME and PATH environment variables in the project .Rprofile

Usage

```
java_env_unset(verbose = TRUE)
```

Arguments

verbose	Whether to print detailed messages. Defaults to TRUE.

Value

Nothing. Removes the JAVA_HOME and PATH environment variables settings from the project .Rprofile.

Examples

```
## Not run:
java_env_unset()

## End(Not run)
```

java_install *Install Java from a distribution file*

Description

Install Java from a distribution file

Usage

```
java_install(
  java_path,
  project = NULL,
  autoset_java_path = TRUE,
  verbose = TRUE
)
```

Arguments

`java_path`	The path to the Java distribution file.
`project`	The project directory where Java should be installed. Defaults to the current working directory.
`autoset_java_path`	Whether to set the JAVA_HOME and PATH environment variables to the installed Java directory. Defaults to TRUE.
`verbose`	Whether to print detailed messages. Defaults to TRUE.

Value

The path to the installed Java directory.

Examples

```
## Not run:
java_install("path/to/any-java-17-aarch64-macos-jdk.tar.gz")

## End(Not run)
```

java_list — *List the contents of the Java cache*

Description

List the contents of the Java cache

Usage

```
java_list(
  type = c("project", "installed", "distrib"),
  output = c("data.frame", "vector"),
  verbose = FALSE,
  target_dir = NULL
)
```

Arguments

type	The type of cache to list: "distrib", "installed", or "project".
output	The format of the output: "data.frame" or "vector". Defaults to "data.frame".
verbose	Whether to print detailed messages. Defaults to FALSE.
target_dir	The cache directory to list. Defaults to the user-specific data directory for "distrib" and "installed", and the current working directory for "project".

Value

A data frame or character vector with the contents of the specified cache directory.

Examples

```
java_list("project")
java_list("installed")
java_list("distrib")
```

java_list_distrib_cache — *List the contents of the Java distributions cache folder*

Description

List the contents of the Java distributions cache folder

Usage

```
java_list_distrib_cache(
  output = c("data.frame", "vector"),
  verbose = FALSE,
  cache_dir = tools::R_user_dir("rJavaEnv", which = "cache")
)
```

Arguments

`output`	The format of the output: "data.frame" or "vector". Defaults to "data.frame".
`verbose`	Whether to print detailed messages. Defaults to FALSE.
`cache_dir`	The cache directory to list. Defaults to the user-specific data directory.

Value

A character vector with the contents of the cache directory.

Examples

```
java_list_distrib_cache()
```

java_list_installed_cache

List the contents of the Java installations cache folder

Description

List the contents of the Java installations cache folder

Usage

```
java_list_installed_cache(
  output = c("data.frame", "vector"),
  verbose = FALSE,
  cache_dir = tools::R_user_dir("rJavaEnv", which = "cache")
)
```

Arguments

`output`	The format of the output: "data.frame" or "vector". Defaults to "data.frame".
`verbose`	Whether to print detailed messages. Defaults to FALSE.
`cache_dir`	The cache directory to list. Defaults to the user-specific data directory. Not recommended to change.

Value

A data frame or character vector with the contents of the cache directory.

Examples

```
java_list_installed_cache()
```

`java_list_in_project` *List the Java versions symlinked in the current project*

Description

List the Java versions symlinked in the current project

Usage

```
java_list_in_project(
  project_dir = getwd(),
  output = c("data.frame", "vector"),
  verbose = FALSE
)
```

Arguments

`project_dir`	The project directory to list. Defaults to the current working directory.
`output`	The format of the output: "data.frame" or "vector". Defaults to "data.frame".
`verbose`	Whether to print detailed messages. Defaults to FALSE.

Value

A data frame or character vector with the symlinked Java versions in the project directory.

Examples

```
java_list_in_project()
```

`java_quick_install`	*Download and install and set Java in current working/project directory*

Description

Download and install and set Java in current working/project directory

Usage

```
java_quick_install(
  version = 21,
  distribution = "Corretto",
  platform = platform_detect()$os,
  arch = platform_detect()$arch,
  verbose = TRUE
)
```

Arguments

`version`	The Java version to download. If not specified, defaults to the latest LTS version.
`distribution`	The Java distribution to download. If not specified, defaults to "Corretto".
`platform`	The platform for which to download the Java distribution. Defaults to the current platform.
`arch`	The architecture for which to download the Java distribution. Defaults to the current architecture.
`verbose`	Whether to print messages. Defaults to TRUE.

Value

Message indicating that Java was installed and set in the current working/project directory.

Examples

```
## Not run:
java_quick_install()

## End(Not run)
```

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