Package: valve (via r-universe)

July 6, 2024

Title Redirects Your Plumbing For You

Version 0.1.3

Description Scales Plumber APIs in parallel on demand. Valve is a Rust library, cli tool, and R package, that spawns plumber APIs in parallel. Valve creates a connection pool of Plumber APIs which are fetched based on availability. Unused connections are terminated. Valve is built using the powerful extendr, tokio, and deadpool libraries.

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URL https://github.com/JosiahParry/valve,
https://josiahparry.r-universe.dev/valve,
https://rsgeo.josiahparry.com/

BugReports https://github.com/JosiahParry/valve/issues/

Encoding UTF-8

Language en

SystemRequirements Cargo (rustc package manager)

Roxygen list(markdown = TRUE)

RoxygenNote 7.2.3

Config/rextendr/version 0.3.1.9000

Imports plumber

Suggests rmarkdown, vetiver

Repository https://josiahparry.r-universe.dev

RemoteUrl https://github.com/josiahparry/valve

RemoteRef HEAD

RemoteSha ab8b177486f11a7bbf40e214b86570e7d5a482b2

Contents

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valve_run   *Start a valve App*

Description

Run a plumber API in parallel using valve. Plumber APIs are spawned on n_threads asynchronous threads on random ports. Incoming requests are handled on a single port and redirected to the plumber APIs in a simple round-robin fashion.

Usage

```
valve_run(
  filepath = "plumber.R",
  host = "127.0.0.1",
  port = 3000,
  n_min = 1,
  n_max = 3,
  workers = n_max,
  check_unused = 10,
  max_age = 300
)
```

Arguments

filepath	default "plumber.R". The path to the Plumber API. Provided to the file argument of plumber::plumb().
host	default "127.0.0.1". Where to host the valve app and Plumber APIs.
port	default 3000. The port to host the valve app on.
n_min	default 1. The minimum number of Plumber APIs made available. Must be smaller than n_max.
n_max	default 3. The maximum number of Plumber APIs to run in parallel.
workers	default n_max. The number of worker threads in the valve app to execute requests. This number should typically mimic n_max.
check_unused	default 10. The time interval, in seconds, to check for unused connections.
max_age	default 300 (five minutes). Specifies how long a connection can go unused without being terminated. If a connection reaches this age it will be terminated in the next pool check (interval determined by check_unused),

Examples

```
if (interactive()) {
  plumber_api_path <- system.file("plumber.R", package = "valve")
  valve_run(plumber_api_path)
}
```

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valve_write_vetiver *Write a Dockerfile for vetiver using valve*

Description

A Valve powered vetiver Dockerfile will run prediction endpoints concurrently.

Usage

```
valve_write_vetiver(
  vetiver_model,
  plumber_file = "plumber.R",
  path = ".",
  port = 8000,
  vetiver_args = list(),
  workers = NULL,
  n_max = NULL,
  check_unused = NULL,
  max_age = NULL
)
```

Arguments

vetiver_model	A deployable vetiver_model() object
plumber_file	A path for your Plumber file, created via vetiver_write_plumber(). Defaults to plumber.R in the working directory.
path	A path to write the Dockerfile and lockfile, capturing the model's package dependencies. Defaults to the working directory.
port	The server port for listening: a number such as 8080 or an expression like 'as.numeric(Sys.getenv("PORT"))' when the port is injected as an environment variable.
vetiver_args	additional arguments passed to vetiver::vetiver_write_docker() as key-value pairs in a list object.

Details

This function is a modification of vetiver::vetiver_write_docker(). It modifies the created Dockerfile to install Valve, changes the ENTRYPOINT to use the Valve executable instead of a single plumber API via an R command.

Value

The content of the Dockerfile, invisibly.

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