

Package ‘vcr’

March 31, 2020

Title Record 'HTTP' Calls to Disk

Description Record test suite 'HTTP' requests and replays them during future runs. A port of the Ruby gem of the same name (<<https://github.com/vcr/vcr/>>). Works by hooking into the 'webmockr' R package for matching 'HTTP' requests by various rules ('HTTP' method, 'URL', query parameters, headers, body, etc.), and then caching real 'HTTP' responses on disk in 'cassettes'. Subsequent 'HTTP' requests matching any previous requests in the same 'cassette' use a cached 'HTTP' response.

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URL <https://github.com/ropensci/vcr/> (devel)
<https://books.ropensci.org/http-testing/> (user manual)

BugReports <https://github.com/ropensci/vcr/issues>

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as.cassette	<i>Coerce names, etc. to cassettes</i>
-------------	--

Description

Coerce names, etc. to cassettes

Coerce to a cassette path

Usage

```
as.cassette(x, ...)
```

```
as.cassettepath(x)
```

Arguments

`x` Input, a cassette name (character), or something that can be coerced to a cassette
`...` further arguments passed on to `cassettes()` or `[read_cassette_meta()]`

Value

a cassette of class `Cassette`

Examples

```
## Not run:
vcr_configure(dir = tempfile())
insert_cassette("foobar")
cassettes(on_disk = FALSE)
cassettes(on_disk = TRUE)
as.cassette("foobar", on_disk = FALSE)
eject_cassette() # eject the current cassette

# cleanup
unlink(file.path(tempfile(), "foobar.yml"))

## End(Not run)
```

<code>cassettes</code>	<i>List cassettes, get current cassette, etc.</i>
------------------------	---

Description

List cassettes, get current cassette, etc.

Usage

```
cassettes(on_disk = TRUE, verb = FALSE)
current_cassette()
cassette_path()
```

Arguments

`on_disk` (logical) Check for cassettes on disk + cassettes in session (TRUE), or check for only cassettes in session (FALSE). Default: TRUE
`verb` (logical) verbose messages

Details

- `cassettes()`: returns cassettes found in your R session, you can toggle whether we pull from those on disk or not
- `current_cassette()`: returns an empty list when no cassettes are in use, while it returns the current cassette (a `Cassette` object) when one is in use
- `cassette_path()`: just gives you the current directory path where cassettes will be stored

Examples

```
vcr_configure(dir = tempdir())

# list all cassettes
cassettes()
cassettes(on_disk = FALSE)

# list the currently active cassette
insert_cassette("stuffthings")
current_cassette()
eject_cassette()

cassettes()
cassettes(on_disk = FALSE)

# list the path to cassettes
cassette_path()
vcr_configure(dir = file.path(tempdir(), "foo"))
cassette_path()

vcr_configure_reset()
```

check_cassette_names *Check cassette names*

Description

Check cassette names

Usage

```
check_cassette_names(pattern = "test-", behavior = "stop")
```

Arguments

pattern	(character) regex pattern for file paths to check. this is done inside of tests/testthat/. default: "test-"
behavior	(character) "stop" (default) or "warning". if "warning", we use <code>immediate.=TRUE</code> so the warning happens at the top of your tests rather than you seeing it after tests have run (as would happen by default)

Details

This function is meant to be run during your tests, from a `helper-pkgname.R` file inside the `tests/testthat` directory. It only checks that cassette names are not duplicated. A helper function `check_cassette_name()` runs inside `insert_cassette()` that checks that cassettes do not have: spaces, file extensions, unaccepted characters (slashes)

Cassette names

- Should be meaningful so that it's obvious to you what test/function they relate to. Meaningful names are important so that you can quickly determine to what test file or test block a cassette belongs. Note that `vcr` cannot check that your cassette names are meaningful.
- Should not be duplicated. Duplicated cassette names would lead to a test using the wrong cassette.
- Should not have spaces. Spaces can lead to problems in using file paths.
- Should not include a file extension. `vcr` handles file extensions for the user.
- Should not have illegal characters that can lead to problems in using file paths: `'/'`, `'?'`, `'<'`, `'>'`, `'\'`, `':'`, `'*'`, `'|'`, and `'\"'`
- Should not have control characters, e.g., `\n`
- Should not have just dots, e.g., `.` or `..`
- Should not have Windows reserved words, e.g., `com1`
- Should not have trailing dots
- Should not be longer than 255 characters

crul_request

*An HTTP request as prepared by the **crul** package*

Description

The object is a list, and is the object that is passed on to `webmockr` and `vcr` instead of routing through `crul` as normal. Used in `examples/tests`.

Format

A list

eject_cassette	<i>Eject a cassette</i>
----------------	-------------------------

Description

Eject a cassette

Usage

```
eject_cassette(  
  cassette = NULL,  
  options = list(),  
  skip_no_unused_interactions_assertion = NULL  
)
```

Arguments

cassette (character) a single cassette names to eject; see name parameter definition in [insert_cassette\(\)](#) for cassette name rules

options (list) a list of options to apply to the eject process

skip_no_unused_interactions_assertion (logical) If TRUE, this will skip the "no unused HTTP interactions" assertion enabled by the `allow_unused_http_interactions = FALSE` cassette option. This is intended for use when your test has had an error, but your test framework has already handled it - IGNORED FOR NOW

Value

The ejected cassette if there was one

See Also

[use_cassette\(\)](#), [insert_cassette\(\)](#)

Examples

```
vcr_configure(dir = tempdir())  
insert_cassette("hello")  
(x <- current_cassette())  
  
# by default does current cassette  
x <- eject_cassette()  
x  
# can also select by cassette name  
# eject_cassette(cassette = "hello")
```

HTTPInteraction *HTTPInteraction class*

Description

object holds request and response objects

Details

Methods

`to_hash()` Create a hash from the HTTPInteraction object

`from_hash(hash)` Create a HTTPInteraction object from a hash

Public fields

`request` A Request class object

`response` A VcrResponse class object

`recorded_at` (character) Time http interaction recorded at

Methods

Public methods:

- [HTTPInteraction\\$new\(\)](#)
- [HTTPInteraction\\$to_hash\(\)](#)
- [HTTPInteraction\\$from_hash\(\)](#)
- [HTTPInteraction\\$clone\(\)](#)

Method `new()`: Create a new HTTPInteraction object

Usage:

`HTTPInteraction$new(request, response, recorded_at)`

Arguments:

`request` A Request class object

`response` A VcrResponse class object

`recorded_at` (character) Time http interaction recorded at

Returns: A new HTTPInteraction object

Method `to_hash()`: Create a hash from the HTTPInteraction object

Usage:

`HTTPInteraction$to_hash()`

Returns: a named list

Method `from_hash()`: Create a HTTPInteraction object from a hash

Usage:

```
HTTPInteraction$from_hash(hash)
```

Arguments:

hash a named list

Returns: a new HttpInteraction object

Method clone(): The objects of this class are cloneable with this method.

Usage:

```
HTTPInteraction$clone(deep = FALSE)
```

Arguments:

deep Whether to make a deep clone.

Examples

```
## Not run:
# make the request
library(vcr)
url <- "https://eu.httpbin.org/post"
body <- list(foo = "bar")
cli <- crul::HttpClient$new(url = url)
res <- cli$post(body = body)

# build a Request object
(request <- Request$new("POST", uri = url,
  body = body, headers = res$response_headers))
# build a VcrResponse object
(response <- VcrResponse$new(
  res$status_http(),
  res$response_headers,
  res$parse("UTF-8"),
  res$response_headers$status))

# make HTTPInteraction object
(x <- HTTPInteraction$new(request = request, response = response))
x$recorded_at
x$to_hash()

# make an HTTPInteraction from a hash with the object already made
x$from_hash(x$to_hash())

# Make an HTTPInteraction from a hash alone
my_hash <- x$to_hash()
HTTPInteraction$new()$from_hash(my_hash)

## End(Not run)
```

HTTPInteractionList *HTTPInteractionList class*

Description

keeps track of all [HTTPInteraction](#) objects

Details

Private Methods

`has_unused_interactions()` Are there any unused interactions? returns boolean

`matching_interaction_index_for()` asdfadf

`matching_used_interaction_for(request)` asdfadfs

`interaction_matches_request(request, interaction)` Check if a request matches an interaction (logical)

`from_hash()` Get a hash back.

`request_summary(z)` Get a request summary (character)

`response_summary(z)` Get a response summary (character)

Public fields

`interactions` (list) list of interaction class objects

`request_matchers` (character) vector of request matchers

`allow_playback_repeats` whether to allow playback repeats

`parent_list` A list for empty objects, see `NullList`

`used_interactions` (list) Interactions that have been used

Methods

Public methods:

- [HTTPInteractionList\\$new\(\)](#)
- [HTTPInteractionList\\$response_for\(\)](#)
- [HTTPInteractionList\\$has_interaction_matching\(\)](#)
- [HTTPInteractionList\\$has_used_interaction_matching\(\)](#)
- [HTTPInteractionList\\$remaining_unused_interaction_count\(\)](#)
- [HTTPInteractionList\\$assert_no_unused_interactions\(\)](#)
- [HTTPInteractionList\\$clone\(\)](#)

Method `new()`: Create a new `HTTPInteractionList` object

Usage:

```

HTTPInteractionList$new(
  interactions,
  request_matchers,
  allow_playback_repeats = FALSE,
  parent_list = NullList$new(),
  used_interactions = list()
)

```

Arguments:

interactions (list) list of interaction class objects

request_matchers (character) vector of request matchers

allow_playback_repeats whether to allow playback repeats or not

parent_list A list for empty objects, see `NullList`

used_interactions (list) Interactions that have been used. That is, interactions that are on disk in the current cassette, and a request has been made that matches that interaction

Returns: A new `HTTPInteractionList` object

Method `response_for()`: Check if there's a matching interaction, returns a response object

Usage:

```
HTTPInteractionList$response_for(request)
```

Arguments:

request The request from an object of class `HTTPInteraction`

Method `has_interaction_matching()`: Check if has a matching interaction

Usage:

```
HTTPInteractionList$has_interaction_matching(request)
```

Arguments:

request The request from an object of class `HTTPInteraction`

Returns: logical

Method `has_used_interaction_matching()`: check if has used interactions matching a given request

Usage:

```
HTTPInteractionList$has_used_interaction_matching(request)
```

Arguments:

request The request from an object of class `HTTPInteraction`

Returns: logical

Method `remaining_unused_interaction_count()`: Number of unused interactions

Usage:

```
HTTPInteractionList$remaining_unused_interaction_count()
```

Returns: integer

Method `assert_no_unused_interactions()`: Checks if there are no unused interactions left.

Usage:

```
HTTPInteractionList$assert_no_unused_interactions()
```

Returns: various

Method clone(): The objects of this class are cloneable with this method.

Usage:

```
HTTPInteractionList$clone(deep = FALSE)
```

Arguments:

deep Whether to make a deep clone.

Examples

```
## Not run:
vcr_configure(
  dir = tempdir(),
  record = "once"
)

# make interactions
## make the request
### turn off mocking
crul::mock(FALSE)
url <- "https://eu.httpbin.org/post"
cli <- crul::HttpClient$new(url = url)
res <- cli$post(body = list(a = 5))

## request
(request <- Request$new("POST", url, body, res$headers))
## response
(response <- VcrResponse$new(
  res$status_http(),
  res$response_headers,
  res$parse("UTF-8"),
  res$response_headers$status))
## make an interaction
(inter <- HTTPInteraction$new(request = request, response = response))

# make an interactionlist
(x <- HTTPInteractionList$new(
  interactions = list(inter),
  request_matchers = vcr_configuration()$match_requests_on
))
x$interactions
x$request_matchers
x$parent_list
x$parent_list$response_for()
x$parent_list$has_interaction_matching()
x$parent_list$has_used_interaction_matching()
x$parent_list$remaining_unused_interaction_count()
x$used_interactions
x$allow_playback_repeats
```

```
x$interactions
x$response_for(request)

## End(Not run)
```

```
http_interactions      Get the http interactions of the current cassette
```

Description

Get the http interactions of the current cassette

Usage

```
http_interactions()
```

Value

object of class HTTPInteractionList if there is a current cassette in use, or NullList if no cassette in use

Examples

```
## Not run:
vcr_configure(dir = tempdir())
insert_cassette("foo_bar")
webmockr::webmockr_allow_net_connect()
library(crul)
cli <- crul::HttpClient$new("https://eu.httpbin.org/get")
one <- cli$get(query = list(a = 5))
z <- http_interactions()
z
z$interactions
z$used_interactions
# on eject, request written to the cassette
eject_cassette("foo_bar")

# insert cassette again
insert_cassette("foo_bar")
# now interactions will be present
z <- http_interactions()
z$interactions
z$used_interactions
invisible(cli$get(query = list(a = 5)))
z$used_interactions

# cleanup
unlink(file.path(tempdir(), "foo_bar.yml"))

## End(Not run)
```

insert_cassette	<i>Insert a cassette to record HTTP requests</i>
-----------------	--

Description

Insert a cassette to record HTTP requests

Usage

```
insert_cassette(
  name,
  record = NULL,
  match_requests_on = NULL,
  update_content_length_header = FALSE,
  allow_playback_repeats = FALSE,
  serialize_with = NULL,
  persist_with = NULL,
  preserve_exact_body_bytes = NULL,
  re_record_interval = NULL,
  clean_outdated_http_interactions = NULL
)
```

Arguments

name	The name of the cassette. vcr will check this to ensure it is a valid file name. Not allowed: spaces, file extensions, control characters (e.g., \n), illegal characters ('/', '?', '<', '>', '\', ':', '*', ' ', and '\'), dots alone (e.g., '.', '..'), Windows reserved words (e.g., 'com1'), trailing dots (can cause problems on Windows), names longer than 255 characters. See section "Cassette names"
record	The record mode (default: "once"). See recording for a complete list of the different recording modes.
match_requests_on	List of request matchers to use to determine what recorded HTTP interaction to replay. Defaults to ["method", "uri"]. The built-in matchers are "method", "uri", "host", "path", "headers", "body" and "query"
update_content_length_header	(logical) Whether or not to overwrite the Content-Length header of the responses to match the length of the response body. Default: FALSE
allow_playback_repeats	(logical) Whether or not to allow a single HTTP interaction to be played back multiple times. Default: FALSE.
serialize_with	(character) Which serializer to use. Valid values are "yaml" (default), the only one supported for now.
persist_with	(character) Which cassette persister to use. Default: "file_system". You can also register and use a custom persister.

`preserve_exact_body_bytes`
 (logical) Whether or not to base64 encode the bytes of the requests and responses for this cassette when serializing it. See also `preserve_exact_body_bytes` in `vcr_configure()`. Default: FALSE

`re_record_interval`
 (integer) How frequently (in seconds) the cassette should be re-recorded. default: NULL (not re-recorded)

`clean_outdated_http_interactions`
 (logical) Should outdated interactions be recorded back to file? default: FALSE

Value

an object of class `Cassette`

Cassette options

Default values for arguments controlling cassette behavior are inherited from `vcr`'s global configuration. See `vcr_configure()` for a complete list of options and their default settings. You can override these options for a specific cassette by changing an argument's value to something other than NULL when calling either `insert_cassette()` or `use_cassette()`.

Cassette names

- Should be meaningful so that it's obvious to you what test/function they relate to. Meaningful names are important so that you can quickly determine to what test file or test block a cassette belongs. Note that `vcr` cannot check that your cassette names are meaningful.
- Should not be duplicated. Duplicated cassette names would lead to a test using the wrong cassette.
- Should not have spaces. Spaces can lead to problems in using file paths.
- Should not include a file extension. `vcr` handles file extensions for the user.
- Should not have illegal characters that can lead to problems in using file paths: `'/'`, `'?'`, `'<'`, `'>'`, `'\'`, `':'`, `'*'`, `'|'`, and `'\"'`
- Should not have control characters, e.g., `\n`
- Should not have just dots, e.g., `.` or `..`
- Should not have Windows reserved words, e.g, `com1`
- Should not have trailing dots
- Should not be longer than 255 characters

See Also

[use_cassette\(\)](#), [eject_cassette\(\)](#)

Examples

```
## Not run:
library(vcr)
library(crul)
vcr_configure(dir = tempdir())
webmockr::webmockr_allow_net_connect()

(x <- insert_cassette(name = "leo5"))
current_cassette()
x$new_recorded_interactions
cli <- crul::HttpClient$new(url = "https://httpbin.org")
cli$get("get")
x$new_recorded_interactions
# very important when using inject_cassette: eject when done
x$eject() # same as eject_cassette("leo5")

# cleanup
unlink(file.path(tempdir(), "leo5.yml"))

## End(Not run)
```

lightswitch	<i>Turn vcr on and off, check on/off status, and turn off for a given http call</i>
-------------	---

Description

Turn vcr on and off, check on/off status, and turn off for a given http call

Usage

```
turned_off(..., ignore_cassettes = FALSE)

turn_on()

turned_on()

turn_off(ignore_cassettes = FALSE)
```

Arguments

```
...          Any block of code to run, presumably an http request
ignore_cassettes
              (logical) Controls what happens when a cassette is inserted while vcr is turned
              off. If TRUE is passed, the cassette insertion will be ignored; otherwise an error
              will be raised. Default: FALSE
```

Details

- `turned_off()` - Turns vcr off for the duration of a block.
- `turn_off()` - Turns vcr off, so that it no longer handles every HTTP request
- `turn_on()` - turns vcr on
- `turned_on()` - Asks if vcr is turned on, gives a boolean

To turn vcr off completely, for example, if you are using vcr in your package, but you want to run real HTTP requests in your tests, there are a few options:

- Run `turn_off(ignore_cassettes = TRUE)` before running tests. You can do this on the command line e.g., `Rscript -e 'vcr::turn_off(TRUE); devtools::test()'`, or within a running R session the same way.
- Set an environment variable `VCR_TURN_OFF=TRUE`. You can do this on the command line by setting the env var at the beginning of the line like: `VCR_TURN_OFF=TRUE Rscript -e 'devtools::test()'`. Same can be done within an interactive R session. You can also use this approach to turn on or off vcr in CI builds like on Travis or Appveyor by setting this env var in your Travis/Appveyor configuration file or in the settings windows in the respective web apps

The full set of environment variables vcr uses, all of which accept only TRUE or FALSE:

- `VCR_TURN_OFF`: turn off vcr altogether; set to TRUE to skip any vcr usage; default: FALSE
- `VCR_TURNED_OFF`: set the `turned_off` internal package setting; this does not turn off vcr completely as does `VCR_TURN_OFF` does, but rather is looked at together with `VCR_IGNORE_CASSETTES`
- `VCR_IGNORE_CASSETTES`: set the `ignore_cassettes` internal package setting; this is looked at together with `VCR_TURNED_OFF`

See the HTTP testing book for more details <https://books.ropensci.org/http-testing/lightswitch.html>

See ?Startup if you're not sure how to set environment variables

Examples

```
## Not run:
vcr_configure(dir = tempdir())

turn_on()
turned_on()
turn_off()

# turn off for duration of a block
library(crul)
turned_off({
  res <- HttpClient$new(url = "https://eu.httpbin.org/get")$get()
})
res

# turn completely off
turn_off()
library(webmockr)
crul::mock()
# HttpClient$new(url = "https://eu.httpbin.org/get")$get(verbose = TRUE)
```



```
turn_on()  
## End(Not run)
```

`real_http_connections_allowed`
Are real http connections allowed?

Description

Are real http connections allowed?

Usage

```
real_http_connections_allowed()
```

Value

boolean, TRUE if real HTTP requests allowed; FALSE if not

Examples

```
real_http_connections_allowed()
```

`recording` *vcr recording options*

Description

vcr recording options

once

The once record mode will:

- Replay previously recorded interactions.
- Record new interactions if there is no cassette file.
- Cause an error to be raised for new requests if there is a cassette file.

It is similar to the `new_episodes` record mode, but will prevent new, unexpected requests from being made (i.e. because the request URI changed or whatever).

`once` is the default record mode, used when you do not set one.

none

The none record mode will:

- Replay previously recorded interactions.
- Cause an error to be raised for any new requests.

This is useful when your code makes potentially dangerous HTTP requests. The none record mode guarantees that no new HTTP requests will be made.

new_episodes

The new_episodes record mode will:

- Record new interactions.
- Replay previously recorded interactions.

It is similar to the once record mode, but will **always** record new interactions, even if you have an existing recorded one that is similar (but not identical, based on the `match_request_on` option).

all

The all record mode will:

- Record new interactions.
- Never replay previously recorded interactions.

This can be temporarily used to force **vcr** to re-record a cassette (i.e. to ensure the responses are not out of date) or can be used when you simply want to log all HTTP requests.

request-matching	<i>vcr request matching</i>
------------------	-----------------------------

Description

There are a number of options, some of which are on by default, some of which can be used together, and some alone.

matching on method

Use the **method** request matcher to match requests on the HTTP method (i.e. GET, POST, PUT, DELETE, etc). You will generally want to use this matcher. The **method** matcher is used (along with the **uri** matcher) by default if you do not specify how requests should match.

matching on uri

Use the **uri** request matcher to match requests on the request URI. The **uri** matcher is used (along with the **method** matcher) by default if you do not specify how requests should match.

matching on host

Use the **host** request matcher to match requests on the request host. You can use this (alone, or in combination with **path**) as an alternative to **uri** so that non-deterministic portions of the URI are not considered as part of the request matching.

matching on path

Use the **path** request matcher to match requests on the path portion of the request URI. You can use this (alone, or in combination with **host**) as an alternative to **uri** so that non-deterministic portions of the URI

matching on query string

Use the **query** request matcher to match requests on the query string portion of the request URI. You can use this (alone, or in combination with others) as an alternative to **uri** so that non-deterministic portions of the URI are not considered as part of the request matching.

matching on body

Use the **body** request matcher to match requests on the request body.

matching on headers

Use the **headers** request matcher to match requests on the request headers.

RequestHandler

RequestHandler

Description

Base handler for http requests, deciding whether a request is stubbed, to be ignored, recordable, or unhandled

Details**Private Methods**

`request_type(request)` Get the request type

`externally_stubbed()` just returns FALSE

`should_ignore()` should we ignore the request, depends on request ignorer infrastructure that's not working yet

`has_response_stub()` Check if there is a matching response stub in the http interaction list

`get_stubbed_response()` Check for a response and get it

`request_summary(request)` get a request summary

`on_externally_stubbed_request(request)` on externally stubbed request do nothing

`on_ignored_request(request)` on ignored request, do something

`on_recordable_request(request)` on recordable request, record the request

`on_unhandled_request(request)` on unhandled request, run UnhandledHTTPRequestError

Public fields

request_original original, before any modification
 request the request, after any modification
 vcr_response holds [VcrResponse](#) object
 stubbed_response the stubbed response
 cassette the cassette holder

Methods**Public methods:**

- [RequestHandler\\$new\(\)](#)
- [RequestHandler\\$handle\(\)](#)
- [RequestHandler\\$clone\(\)](#)

Method new(): Create a new RequestHandler object

Usage:

```
RequestHandler$new(request)
```

Arguments:

request The request from an object of class `HttpRequest`

Returns: A new RequestHandler object

Method handle(): Handle the request (request given in \$initialize())

Usage:

```
RequestHandler$handle()
```

Returns: handles a request, outcomes vary

Method clone(): The objects of this class are cloneable with this method.

Usage:

```
RequestHandler$clone(deep = FALSE)
```

Arguments:

deep Whether to make a deep clone.

Examples

```
## Not run:
# record mode: once
vcr_configure(
  dir = tempdir(),
  record = "once"
)

data(crul_request)
crul_request$url$handle <- curl::new_handle()
crul_request
x <- RequestHandler$new(crul_request)
```

```
# x$handle()

# record mode: none
vcr_configure(
  dir = tempdir(),
  record = "none"
)
data(crul_request)
crul_request$url$handle <- curl::new_handle()
crul_request
insert_cassette("testing_record_mode_none", record = "none")
file.path(vcr_c$dir, "testing_record_mode_none.yml")
x <- RequestHandlerCrul$new(crul_request)
# x$handle()
crul_request$url$url <- "https://api.crossref.org/works/10.1039/c8sm90002g/"
crul_request$url$handle <- curl::new_handle()
z <- RequestHandlerCrul$new(crul_request)
# z$handle()
eject_cassette("testing_record_mode_none")

## End(Not run)
```

RequestHandlerCrul *RequestHandlerCrul*

Description

Methods for the crul package, building on [RequestHandler](#)

Super class

[vcr::RequestHandler](#) -> RequestHandlerCrul

Methods

Public methods:

- [RequestHandlerCrul\\$clone\(\)](#)

Method `clone()`: The objects of this class are cloneable with this method.

Usage:

```
RequestHandlerCrul$clone(deep = FALSE)
```

Arguments:

`deep` Whether to make a deep clone.

Examples

```

## Not run:
vcr_configure(
  dir = tempdir(),
  record = "once"
)

data(crul_request)
crul_request$url$handle <- curl::new_handle()
crul_request
x <- RequestHandlerCurl$new(crul_request)
# x$handle()

library(crul)
data(crul_request_post_json)
crul_request_post_json$request$url$handle <- curl::new_handle()
crul_request_post_json
crul_request_post_json$request
x <- RequestHandlerCurl$new(crul_request_post_json$request)
# x$handle()

# body matching
library(vcr)
library(crul)
vcr_configure(dir = tempdir(), log = TRUE)
cli <- HttpClient$new(url = "https://httpbin.org")

## testing, same uri and method, changed body in 2nd block
use_cassette(name = "apple7", {
  resp <- cli$post("post", body = list(foo = "bar"))
}, match_requests_on = c("method", "uri", "body"))
## should error, b/c record="once"
use_cassette(name = "apple7", {
  resp <- cli$post("post", body = list(foo = "bar"))
  resp2 <- cli$post("post", body = list(hello = "world"))
}, match_requests_on = c("method", "uri", "body"))
cas <- insert_cassette(name = "apple7",
  match_requests_on = c("method", "uri", "body"))
resp2 <- cli$post("post", body = list(hello = "world"))
eject_cassette("apple7")

## testing, same body, changed method in 2nd block
use_cassette(name = "apple8", {
  x <- cli$post("post", body = list(hello = "world"))
}, match_requests_on = c("method", "body"))
use_cassette(name = "apple8", {
  x <- cli$get("post", body = list(hello = "world"))
}, match_requests_on = c("method", "body"))

## testing, same body, changed uri in 2nd block
use_cassette(name = "apple9", {
  x <- cli$post("post", body = list(hello = "world"))
}

```

```
w <- cli$post("get", body = list(hello = "world"))
}, match_requests_on = c("method", "body"))
use_cassette(name = "apple9", {
  NOTHING HERE
}, match_requests_on = c("method", "body"))
unlink(file.path(vcr_configuration()$dir, "apple9.yml"))

jsonlite::fromJSON(resp$parse())

## End(Not run)
```

RequestHandlerHttr *RequestHandlerHttr*

Description

Methods for the httr package, building on [RequestHandler](#)

Super class

`vcr::RequestHandler` -> RequestHandlerHttr

Methods

Public methods:

- [RequestHandlerHttr\\$new\(\)](#)
- [RequestHandlerHttr\\$clone\(\)](#)

Method `new()`: Create a new RequestHandlerHttr object

Usage:

```
RequestHandlerHttr$new(request)
```

Arguments:

`request` The request from an object of class `HttpInteraction`

Returns: A new RequestHandlerHttr object

Method `clone()`: The objects of this class are cloneable with this method.

Usage:

```
RequestHandlerHttr$clone(deep = FALSE)
```

Arguments:

`deep` Whether to make a deep clone.

Examples

```

## Not run:
vcr_configure(
  dir = tempdir(),
  record = "once"
)

# GET request
library(httr)
load("~/httr_req.rda")
req
x <- RequestHandlerHttr$new(req)
# x$handle()

# POST request
library(httr)
webmockr::httr_mock()
mydir <- file.path(tempdir(), "testing_httr")
invisible(vcr_configure(dir = mydir))
use_cassette(name = "testing2", {
  res <- POST("https://httpbin.org/post", body = list(foo = "bar"))
}, match_requests_on = c("method", "uri", "body"))

load("~/httr_req_post.rda")
insert_cassette("testing3")
httr_req_post
x <- RequestHandlerHttr$new(httr_req_post)
x
# x$handle()
self=x

## End(Not run)

```

RequestMatcherRegistry

RequestMatcherRegistry

Description

handles request matchers

Public fields

registry initialize registry list with a request, or leave empty
default_matchers request matchers to use. default: method, uri

Methods

Public methods:

- [RequestMatcherRegistry\\$new\(\)](#)
- [RequestMatcherRegistry\\$register\(\)](#)
- [RequestMatcherRegistry\\$register_built_ins\(\)](#)
- [RequestMatcherRegistry\\$try_to_register_body_as_json\(\)](#)
- [RequestMatcherRegistry\\$clone\(\)](#)

Method `new()`: Create a new RequestMatcherRegistry object

Usage:

```
RequestMatcherRegistry$new(  
  registry = list(),  
  default_matchers = list("method", "uri")  
)
```

Arguments:

`registry` initialize registry list with a request, or leave empty
`default_matchers` request matchers to use. default: method, uri

Returns: A new RequestMatcherRegistry object

Method `register()`: Register a custom matcher

Usage:

```
RequestMatcherRegistry$register(name, func)
```

Arguments:

`name` matcher name
`func` function that describes a matcher, should return a single boolean

Returns: no return; registers the matcher

Method `register_built_ins()`: Register all built in matchers

Usage:

```
RequestMatcherRegistry$register_built_ins()
```

Returns: no return; registers all built in matchers

Method `try_to_register_body_as_json()`: Try to register body as JSON

Usage:

```
RequestMatcherRegistry$try_to_register_body_as_json(r1, r2)
```

Arguments:

`r1`, `r2` [Request](#) class objects

Returns: no return; registers the matcher

Method `clone()`: The objects of this class are cloneable with this method.

Usage:

```
RequestMatcherRegistry$clone(deep = FALSE)
```

Arguments:

`deep` Whether to make a deep clone.

Note

r1=from new request; r2=from recorded interaction

Examples

```
## Not run:
(x <- RequestMatcherRegistry$new())
x$default_matchers
x$registry

## End(Not run)
```

testing

*Using **vcr** for unit testing*

Description

Using **vcr** for unit testing

Using **vcr with **testthat****

vcr supports use with the **testthat** package. Here's the steps to follow:

First, note that **vcr** only works with a single HTTP client for now: **crul**

- In addition to **testthat**, add **vcr** and **webmockr** to your Suggests in your DESCRIPTION file
- Add a file (named e.g., `vcr-config.R`) to your tests/testthat/ directory. In that file add your **vcr** configuration settings. See [vcr_configure](#) for help on configuration settings.
- For any given test use the following:

```
use_cassette("foobar", {
  aa <- hello::world()
  expect_is(aa, "SomeClass")
  expect_equal(length(aa), 3)
})
```

And the tests will behave as normally.

The first request will make a real HTTP request. Following requests will pull from the cached responses on cassette.

UnhandledHTTPRequestError
UnhandledHTTPRequestError

Description

Handle http request errors

Usage

`vcr_last_error()`

Details

How this error class is used: If `record="once"` we trigger this.

Users can use `vcr` in the context of both `use_cassette` and `insert_cassette`.

For the former, all requests go through the `call_block`. But for the latter, requests go through `webmockr`.

Where is one place where we can put `UnhandledHTTPRequestError` that will handle both `use_cassette` and `insert_cassette`?

Error situations where this is invoked

- `record=once` AND there's a new request that doesn't match the one in the cassette on disk
 - in `webmockr`: if no stub found and there are recorded interactions on the cassette, and `record = once`, then error with `UnhandledHTTPRequestError`
 - * but if `record != once`, then allow it, unless `record == none`
- others?

Public fields

`request` a [Request](#) object

`cassette` a cassette name

Methods

Public methods:

- [UnhandledHTTPRequestError\\$new\(\)](#)
- [UnhandledHTTPRequestError\\$run\(\)](#)
- [UnhandledHTTPRequestError\\$construct_message\(\)](#)
- [UnhandledHTTPRequestError\\$request_description\(\)](#)
- [UnhandledHTTPRequestError\\$current_matchers\(\)](#)
- [UnhandledHTTPRequestError\\$match_request_on_headers\(\)](#)
- [UnhandledHTTPRequestError\\$match_request_on_body\(\)](#)

- `UnhandledHTTPRequestError$formatted_headers()`
- `UnhandledHTTPRequestError$cassettes_description()`
- `UnhandledHTTPRequestError$cassettes_list()`
- `UnhandledHTTPRequestError$get_help()`
- `UnhandledHTTPRequestError$formatted_suggestions()`
- `UnhandledHTTPRequestError$format_bullet_point()`
- `UnhandledHTTPRequestError$format_foot_note()`
- `UnhandledHTTPRequestError$suggestion_for()`
- `UnhandledHTTPRequestError$suggestions()`
- `UnhandledHTTPRequestError$no_cassette_suggestions()`
- `UnhandledHTTPRequestError$record_mode_suggestion()`
- `UnhandledHTTPRequestError$has_used_interaction_matching()`
- `UnhandledHTTPRequestError$match_requests_on_suggestion()`
- `UnhandledHTTPRequestError$clone()`

Method `new()`: Create a new `UnhandledHTTPRequestError` object

Usage:

```
UnhandledHTTPRequestError$new(request, cassette)
```

Arguments:

`request` (`Request`) a `Request` object

`cassette` (character) a cassette name

Returns: A new `UnhandledHTTPRequestError` object

Method `run()`: Run unhandled request handling

Usage:

```
UnhandledHTTPRequestError$run()
```

Returns: various

Method `construct_message()`: Construct and execute stop message for why request failed

Usage:

```
UnhandledHTTPRequestError$construct_message()
```

Returns: a stop message

Method `request_description()`: construct request description

Usage:

```
UnhandledHTTPRequestError$request_description()
```

Returns: character

Method `current_matchers()`: get current request matchers

Usage:

```
UnhandledHTTPRequestError$current_matchers()
```

Returns: character

Method `match_request_on_headers()`: are headers included in current matchers?

Usage:

`UnhandledHTTPRequestError$match_request_on_headers()`

Returns: logical

Method `match_request_on_body()`: is body included in current matchers?

Usage:

`UnhandledHTTPRequestError$match_request_on_body()`

Returns: logical

Method `formatted_headers()`: get request headers

Usage:

`UnhandledHTTPRequestError$formatted_headers()`

Returns: character

Method `cassettes_description()`: construct description of current or lack thereof cassettes

Usage:

`UnhandledHTTPRequestError$cassettes_description()`

Returns: character

Method `cassettes_list()`: cassette details

Usage:

`UnhandledHTTPRequestError$cassettes_list()`

Returns: character

Method `get_help()`: get help message for non-verbose error

Usage:

`UnhandledHTTPRequestError$get_help()`

Returns: character

Method `formatted_suggestions()`: make suggestions for what to do

Usage:

`UnhandledHTTPRequestError$formatted_suggestions()`

Returns: character

Method `format_bullet_point()`: add bullet point to beginning of a line

Usage:

`UnhandledHTTPRequestError$format_bullet_point(lines, index)`

Arguments:

`lines` (character) vector of strings

`index` (integer) a number

Returns: character

Method `format_foot_note()`: make a foot note

Usage:

`UnhandledHTTPRequestError$format_foot_note(url, index)`

Arguments:

`url` (character) a url

`index` (integer) a number

Returns: character

Method `suggestion_for()`: get a suggestion by key

Usage:

`UnhandledHTTPRequestError$suggestion_for(key)`

Arguments:

`key` (character) a character string

Returns: character

Method `suggestions()`: get all suggestions

Usage:

`UnhandledHTTPRequestError$suggestions()`

Returns: list

Method `no_cassette_suggestions()`: get all no cassette suggestions

Usage:

`UnhandledHTTPRequestError$no_cassette_suggestions()`

Returns: list

Method `record_mode_suggestion()`: get the appropriate record mode suggestion

Usage:

`UnhandledHTTPRequestError$record_mode_suggestion()`

Returns: character

Method `has_used_interaction_matching()`: are there any used interactions

Usage:

`UnhandledHTTPRequestError$has_used_interaction_matching()`

Returns: logical

Method `match_requests_on_suggestion()`: match requests on suggestion

Usage:

`UnhandledHTTPRequestError$match_requests_on_suggestion()`

Returns: list

Method `clone()`: The objects of this class are cloneable with this method.

Usage:

`UnhandledHTTPRequestError$clone(deep = FALSE)`

Arguments:

`deep` Whether to make a deep clone.

Examples

```

vcr_configure(dir = tempdir())
cassettes()
insert_cassette("turtle")
request <- Request$new("post", 'https://eu.httpbin.org/post?a=5',
  "", list(foo = "bar"))

err <- UnhandledHTTPRequestError$new(request)
err$request_description()
err$current_matchers()
err$match_request_on_headers()
err$match_request_on_body()
err$formatted_headers()
cat(err$formatted_headers(), "\n")
cat(err$cassettes_description(), "\n")
cat(err$cassettes_list(), "\n")
err$formatted_suggestions()
cat(err$format_bullet_point('foo bar', 1), "\n")
err$suggestion_for("use_new_episodes")
err$suggestions()
err$no_cassette_suggestions()
err$record_mode_suggestion()
err$has_used_interaction_matching()
err$match_requests_on_suggestion()

# err$construct_message()

# cleanup
eject_cassette("turtle")
unlink(tempdir())
## Not run:
# vcr_last_error()

## End(Not run)

```

use_cassette

Use a cassette to record HTTP requests

Description

Use a cassette to record HTTP requests

Usage

```

use_cassette(
  name,
  ...,
  record = NULL,
  match_requests_on = NULL,

```

```

update_content_length_header = FALSE,
allow_playback_repeats = FALSE,
serialize_with = NULL,
persist_with = NULL,
preserve_exact_body_bytes = NULL,
re_record_interval = NULL,
clean_outdated_http_interactions = NULL
)

```

Arguments

name	The name of the cassette. vcr will check this to ensure it is a valid file name. Not allowed: spaces, file extensions, control characters (e.g., \n), illegal characters ('/', '?', '<', '>', '\', ':', '*', ' ', and '\\'), dots alone (e.g., '.', '..'), Windows reserved words (e.g., 'com1'), trailing dots (can cause problems on Windows), names longer than 255 characters. See section "Cassette names"
...	a block of code containing one or more requests (required). Use curly braces to encapsulate multi-line code blocks. If you can't pass a code block use insert_cassette() instead.
record	The record mode (default: "once"). See recording for a complete list of the different recording modes.
match_requests_on	List of request matchers to use to determine what recorded HTTP interaction to replay. Defaults to ["method", "uri"]. The built-in matchers are "method", "uri", "host", "path", "headers", "body" and "query"
update_content_length_header	(logical) Whether or not to overwrite the Content-Length header of the responses to match the length of the response body. Default: FALSE
allow_playback_repeats	(logical) Whether or not to allow a single HTTP interaction to be played back multiple times. Default: FALSE.
serialize_with	(character) Which serializer to use. Valid values are "yaml" (default), the only one supported for now.
persist_with	(character) Which cassette persister to use. Default: "file_system". You can also register and use a custom persister.
preserve_exact_body_bytes	(logical) Whether or not to base64 encode the bytes of the requests and responses for this cassette when serializing it. See also <code>preserve_exact_body_bytes</code> in vcr_configure() . Default: FALSE
re_record_interval	(integer) How frequently (in seconds) the cassette should be re-recorded. default: NULL (not re-recorded)
clean_outdated_http_interactions	(logical) Should outdated interactions be recorded back to file? default: FALSE

Details

A run down of the family of top level **vcr** functions

- `use_cassette` Initializes a cassette. Returns the inserted cassette.
- `insert_cassette` Internally used within `use_cassette`
- `eject_cassette` ejects the current cassette. The cassette will no longer be used. In addition, any newly recorded HTTP interactions will be written to disk.

Value

an object of class `Cassette`

Cassette options

Default values for arguments controlling cassette behavior are inherited from `vcr`'s global configuration. See `vcr_configure()` for a complete list of options and their default settings. You can override these options for a specific cassette by changing an argument's value to something other than `NULL` when calling either `insert_cassette()` or `use_cassette()`.

Behavior

This function handles a few different scenarios:

- when everything runs smoothly, and we return a `Cassette` class object so you can inspect the cassette, and the cassette is ejected
- when there is an invalid parameter input on cassette creation, we fail with a useful message, we don't return a cassette, and the cassette is ejected
- when there is an error in calling your passed in code block, we return with a useful message, and since we use `on.exit()` the cassette is still ejected even though there was an error, but you don't get an object back

Cassettes on disk

Note that "*eject*" only means that the R session cassette is no longer in use. If any interactions were recorded to disk, then there is a file on disk with those interactions.

Using with tests (specifically `testthat`)

There's a few ways to get correct line numbers for failed tests and one way to not get correct line numbers:

Correct: Either wrap your `test_that()` block inside your `use_cassette()` block, OR if you put your `use_cassette()` block inside your `test_that()` block put your `testthat` expectations outside of the `use_cassette()` block.

Incorrect: By wrapping the `use_cassette()` block inside your `test_that()` block with your **testthat** expectations inside the `use_cassette()` block, you'll only get the line number that the `use_cassette()` block starts on.

Cassette names

- Should be meaningful so that it's obvious to you what test/function they relate to. Meaningful names are important so that you can quickly determine to what test file or test block a cassette belongs. Note that vcr cannot check that your cassette names are meaningful.
- Should not be duplicated. Duplicated cassette names would lead to a test using the wrong cassette.
- Should not have spaces. Spaces can lead to problems in using file paths.
- Should not include a file extension. vcr handles file extensions for the user.
- Should not have illegal characters that can lead to problems in using file paths: '/', '?', '<', '>', '\', ':', '*', '|', and '\"'
- Should not have control characters, e.g., \n
- Should not have just dots, e.g., . or ..
- Should not have Windows reserved words, e.g, com1
- Should not have trailing dots
- Should not be longer than 255 characters

See Also

[insert_cassette\(\)](#), [eject_cassette\(\)](#)

Examples

```
## Not run:
library(vcr)
library(crul)
vcr_configure(dir = tempdir())

use_cassette(name = "apple7", {
  cli <- HttpClient$new(url = "https://httpbin.org")
  resp <- cli$get("get")
})
readLines(file.path(tempdir(), "apple7.yml"))

# preserve exact body bytes - records in base64 encoding
use_cassette("things4", {
  cli <- crul::HttpClient$new(url = "https://httpbin.org")
  bbb <- cli$get("get")
}, preserve_exact_body_bytes = TRUE)
## see the body string value in the output here
readLines(file.path(tempdir(), "things4.yml"))

# cleanup
unlink(file.path(tempdir(), c("things4.yml", "apple7.yml")))

# with httr
library(vcr)
library(httr)
```

```

vcr_configure(dir = tempdir(), log = TRUE)

use_cassette(name = "stuff350", {
  res <- GET("https://httpbin.org/get")
})
readLines(file.path(tempdir(), "stuff350.yml"))

use_cassette(name = "catfact456", {
  res <- GET("https://catfact.ninja/fact")
})

# record mode: none
library(crul)
vcr_configure(dir = tempdir())

## make a connection first
conn <- crul::HttpClient$new("https://eu.httpbin.org")
## this errors because 'none' disallows any new requests
# use_cassette("none_eg", (res2 <- conn$get("get")), record = "none")
## first use record mode 'once' to record to a cassette
one <- use_cassette("none_eg", (res <- conn$get("get")), record = "once")
one; res
## then use record mode 'none' to see it's behavior
two <- use_cassette("none_eg", (res2 <- conn$get("get")), record = "none")
two; res2

## End(Not run)

```

use_vcr

Setup vcr for a package

Description

Setup vcr for a package

Usage

```
use_vcr(dir = ".", verbose = TRUE)
```

Arguments

`dir` (character) path to package root. default's to current directory
`verbose` (logical) print progress messages. default: TRUE

Value

only messages about progress, returns invisible()

vcr

vcr: Record HTTP Calls to Disk

Description

vcr records test suite 'HTTP' requests and replay them during future runs.

Details

Check out the [http testing book](#) for a lot more documentation on vcr, webmockr, and crul

Backstory

A Ruby gem of the same name (VCR, <https://github.com/vcr/vcr>) was created many years ago and is the original. Ports in many languages have been done. Check out that GitHub repo for all the details on how the canonical version works.

Main functions

The [use_cassette](#) function is most likely what you'll want to use. It sets the cassette you want to record to, inserts the cassette, and then ejects the cassette, recording the interactions to the cassette.

Instead, you can use [insert_cassette](#), but then you have to make sure to use [eject_cassette](#).

vcr configuration

[vcr_configure](#) is the function to use to set R session wide settings. See it's manual file for help.

Record modes

See [recording](#) for help on record modes.

Request matching

See [request-matching](#) for help on the many request matching options.

Author(s)

Scott Chamberlain <myrmecocystus@gmail.com>

vcr_configure	<i>Global Configuration Options</i>
---------------	-------------------------------------

Description

Configurable options that define vcr's default behavior.

Usage

```
vcr_configure(...)
vcr_configure_reset()
vcr_configuration()
vcr_config_defaults()
```

Arguments

... configuration settings used to override defaults. See below for a complete list of valid arguments.

Configurable settings**vcr options:***File locations:*

- dir Cassette directory
- write_disk_path (character) path to write files to for any requests that write responses to disk. by default this parameter is NULL. For testing a package, you'll probably want this path to be in your tests/ directory, perhaps next to your cassettes directory, e.g., where your cassettes are in tests/fixtures, your files from requests that write to disk are in tests/files. If you want to ignore these files in your installed package, add them to .Rinstignore. If you want these files ignored on build then add them to .Rbuildignore (though if you do, tests that depend on these files probably will not work because they won't be found; so you'll likely have to skip the associated tests as well).

Contexts:

- turned_off (logical) VCR is turned on by default. Default: FALSE
- allow_unused_http_interactions (logical) Default: TRUE
- allow_http_connections_when_no_cassette (logical) Determines how vcr treats HTTP requests that are made when no vcr cassette is in use. When TRUE, requests made when there is no vcr cassette in use will be allowed. When FALSE (default), an [UnhandledHTTPRequestError](#) error will be raised for any HTTP request made when there is no cassette in use

Filtering:

- `ignore_hosts` (character) Vector of hosts to ignore. e.g., localhost, or google.com. These hosts are ignored and real HTTP requests allowed to go through
- `ignore_localhost` (logical) Default: FALSE
- `ignore_request` List of requests to ignore. NOT USED RIGHT NOW, sorry
- `filter_sensitive_data` named list of values to replace. Format is:
`list(thing_to_replace_it_with = thing_to_replace)`
 We replace all instances of `thing_to_replace` with `thing_to_replace_it_with`. Before recording (writing to a cassette) we do the replacement and then when reading from the cassette we do the reverse replacement to get back to the real data. Before record replacement happens in internal function `write_interactions()`, while before playback replacement happens in internal function `YAML$deserialize_path()`

Errors:

- `verbose_errors` Do you want more verbose errors or less verbose errors when cassette recording/usage fails? Default is FALSE, that is, less verbose errors. If TRUE, error messages will include more details about what went wrong and suggest possible solutions. For testing in an interactive R session, if `verbose_errors=FALSE`, you can run `vcr_last_error()` to get the full error. If in non-interactive mode, which most users will be in when running the entire test suite for a package, you can set an environment variable (`VCR_VERBOSE_ERRORS`) to toggle this setting (e.g., `Sys.setenv(VCR_VERBOSE_ERRORS=TRUE)`; `devtools::test()`)

Internals:

- `cassettes` (list) don't use
- `linked_context` (logical) linked context
- `uri_parser` the uri parser, default: `crul::url_parse()`

Logging:

- `log` (logical) should we log important vcr things? Default: FALSE
- `log_opts` (list) Additional logging options:
 - 'file' either "console" or a file path to log to
 - 'log_prefix' default: "Cassette". We insert the cassette name after that prefix, then the rest of the message.
 - More to come...

Cassette Options:

These settings can be configured globally, using `vcr_configure()`, or locally, using either `use_cassette()` or `insert_cassette()`. Global settings are applied to *all* cassettes but are overridden by settings defined locally for individual cassettes.

- `record` (character) One of 'all', 'none', 'new_episodes', or 'once'. See [recording](#)
- `match_requests_on` vector of matchers. Default: (method, uri) See [request-matching](#) for details.
- `serialize_with`: (character) only option is "yaml"
- `persist_with` (character) only option is "FileSystem"
- `preserve_exact_body_bytes` (logical) preserve exact body bytes for
- `re_record_interval` (numeric) When given, the cassette will be re-recorded at the given interval, in seconds.
- `clean_outdated_http_interactions` (logical) Should outdated interactions be recorded back to file. Default: FALSE

Examples

```
vcr_configure(dir = tempdir())
vcr_configure(dir = tempdir(), record = "all")
vcr_configuration()
vcr_config_defaults()
vcr_configure(dir = tempdir(), ignore_hosts = "google.com")
vcr_configure(dir = tempdir(), ignore_localhost = TRUE)

# logging
vcr_configure(dir = tempdir(), log = TRUE,
  log_opts = list(file = file.path(tempdir(), "vcr.log")))
vcr_configure(dir = tempdir(), log = TRUE, log_opts = list(file = "console"))
vcr_configure(dir = tempdir(), log = TRUE,
  log_opts = list(
    file = file.path(tempdir(), "vcr.log"),
    log_prefix = "foobar"
  ))
vcr_configure(dir = tempdir(), log = FALSE)

# filter sensitive data
vcr_configure(dir = tempdir(),
  filter_sensitive_data = list(foo = "<bar>")
)
vcr_configure(dir = tempdir(),
  filter_sensitive_data = list(foo = "<bar>", hello = "<world>")
)
```

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