Package: aradR (via r-universe)

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Type Package

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Description Provides a reliability-first interface to the public Czech National Bank ARAD API for discovering indicators, browsing human-readable metadata, retrieving and validating time series, working with dimensions and snapshots, reshaping data, and building reproducible data workflows. The package is designed for robust handling of long requests, parsing diagnostics, missing values, retries, caching, and automated tests.

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`arad_cache_clear` *Clear aradR response caches*

Description

Clears raw ARAD API responses stored by aradR in the current R session and/or on disk.

Usage

```
arad_cache_clear(cache = c("all", "session", "disk"), cache_dir = NULL)
```

Arguments

`cache`	Which cache to clear: all, session, or disk.
`cache_dir`	Optional disk cache directory.

Value

Invisibly, TRUE.

`arad_catalog` *Build an enriched catalogue of indicators within an ARAD scope*

Description

Combines basic indicator metadata with hierarchy paths and optional availability metadata for human-facing browsing. Exactly one normal ARAD selector must be supplied.

Usage

```
arad_catalog(
  indicator_ids = NULL,
  set_id = NULL,
  base_id = NULL,
  selection_id = NULL,
  lang = c("cs", "en"),
  include_path = TRUE,
  include_availability = TRUE,
  api_key = NULL,
  base_url = NULL,
  encoding = "windows-1250",
  cache = NULL,
  cache_dir = NULL,
  cache_max_age = NULL
)
```

Arguments

`indicator_ids`	Character vector of indicator IDs.
`set_id`	ARAD set ID.
`base_id`	ARAD base ID.
`selection_id`	ARAD user selection ID.
`lang`	Metadata language, `"cs"` or `"en"`.
`include_path`	Include the ARAD hierarchy path for each indicator.
`include_availability`	Include earliest/latest availability boundaries, latest update timestamp and snapshot-context count. `data_to` is reported by ARAD and can extend into a forecast or reporting horizon; it is not necessarily the latest observed historical date.
`api_key`	ARAD API key. If `NULL`, `ARAD_API_KEY` is used.
`base_url`	ARAD API base URL. Primarily intended for testing.
`encoding`	Response encoding.
`cache`	Response cache mode: none, session, or disk.
`cache_dir`	Optional disk cache directory.
`cache_max_age`	Maximum cache age in seconds.

Value

A tibble with one row per indicator in the selected scope.

`arad_dimensions` *List ARAD indicator dimensions*

Description

Retrieves base and dimensional metadata from the ARAD indicators-dims endpoint. Exactly one ARAD scope selector must be supplied.

Usage

```
arad_dimensions(
  indicator_ids = NULL,
  set_id = NULL,
  base_id = NULL,
  selection_id = NULL,
  lang = c("cs", "en"),
  api_key = NULL,
  base_url = NULL,
  encoding = "windows-1250",
  cache = NULL,
  cache_dir = NULL,
  cache_max_age = NULL
)
```

Arguments

`indicator_ids`	Character vector of indicator IDs.
`set_id`	ARAD set ID.
`base_id`	ARAD base ID.
`selection_id`	ARAD user selection ID.
`lang`	Metadata language: cs or en.
`api_key`	ARAD API key. If NULL, ARAD_API_KEY is used.
`base_url`	ARAD API base URL. Primarily intended for testing.
`encoding`	Response encoding. Defaults to Windows-1250.
`cache`	Response cache mode: none, session, or disk.
`cache_dir`	Optional disk cache directory.
`cache_max_age`	Maximum cache age in seconds.

Value

A tibble describing each indicator's base and dimensions.

arad_find *Find indicators using human-readable metadata*

Description

Searches names, IDs and ARAD hierarchy paths and, by default, base/dimension metadata so a user does not need to know an indicator ID in advance. ARAD metadata endpoints remain scoped, so exactly one selector is required. Results are ordered deterministically: exact ID/name matches first, then partial ID/name matches, hierarchy-path matches and dimension matches, with stable name/ID tie-breaking.

Usage

```
arad_find(
  term,
  indicator_ids = NULL,
  set_id = NULL,
  base_id = NULL,
  selection_id = NULL,
  frequency = NULL,
  search_dimensions = TRUE,
  details = TRUE,
  regex = FALSE,
  ignore_case = TRUE,
  lang = c("cs", "en"),
  api_key = NULL,
  base_url = NULL,
  encoding = "windows-1250",
  cache = NULL,
  cache_dir = NULL,
  cache_max_age = NULL
)
```

Arguments

`term`	Non-empty text or regular expression to search for.
`indicator_ids`	Character vector of indicator IDs.
`set_id`	ARAD set ID.
`base_id`	ARAD base ID.
`selection_id`	ARAD user selection ID.
`frequency`	Optional frequency code(s) to retain.
`search_dimensions`	Search base and dimension labels/codes as well as names, IDs and hierarchy paths.

details	Add availability/update columns for matched indicators. data_to is the ARAD-reported availability boundary and can extend into a forecast or reporting horizon; it is not necessarily the latest observed historical date.
regex	Interpret term as a regular expression.
ignore_case	Ignore case while matching.
lang	Metadata language, "cs" or "en".
api_key	ARAD API key. If NULL, ARAD_API_KEY is used.
base_url	ARAD API base URL. Primarily intended for testing.
encoding	Response encoding.
cache	Response cache mode: none, session, or disk.
cache_dir	Optional disk cache directory.
cache_max_age	Maximum cache age in seconds.

Value

A filtered, path-aware indicator catalogue ordered by relevance. relevance_score is an ordinal score intended only to order results for the current query, and matched_in records which metadata sources matched. With details = TRUE, availability columns are included.

---

arad_get *Retrieve time series from ARAD*

Description

Reliability-first retrieval of ARAD time series. Exactly one selector must be supplied. With strategy = "auto", long date ranges are split into deterministic, non-overlapping chunks; omitted boundaries are resolved through the ARAD updates endpoint. Optional raw-response caching is explicit and disabled by default.

Usage

```
arad_get(
  indicator_ids = NULL,
  set_id = NULL,
  base_id = NULL,
  selection_id = NULL,
  from = NULL,
  to = NULL,
  months_before = NULL,
  snapshot_ids = NULL,
  strategy = c("auto", "direct"),
  chunk_days = getOption("aradR.chunk_days", 3650L),
  api_key = NULL,
  base_url = NULL,
```

```
  encoding = "windows-1250",
  cache = NULL,
  cache_dir = NULL,
  cache_max_age = NULL
)
```

Arguments

indicator_ids	Character vector of indicator IDs.
set_id	ARAD set ID.
base_id	ARAD base ID.
selection_id	ARAD user selection ID.
from	Start date as a Date, YYYY-MM-DD, or YYYYMMDD.
to	End date as a Date, YYYY-MM-DD, or YYYYMMDD.
months_before	Optional positive integer; an ARAD-native alternative to from/to.
snapshot_ids	Optional snapshot IDs, or ALL / LAST.
strategy	Retrieval strategy. auto uses bounded requests; direct makes one data request.
chunk_days	Maximum inclusive date span of each automatic chunk. The 3650-day default is calibrated by the package's live reliability audit.
api_key	ARAD API key. If NULL, ARAD_API_KEY is used.
base_url	ARAD API base URL. Primarily intended for testing.
encoding	Response encoding. Defaults to Windows-1250.
cache	Response cache mode: none, session, or disk. NULL uses the aradR.cache option, defaulting to none.
cache_dir	Optional disk cache directory.
cache_max_age	Maximum cache age in seconds. NULL uses the aradR.cache_max_age option, defaulting to Inf.

Value

A tibble with columns indicator_id, snapshot_id, period, and value. Retrieval diagnostics are stored in the arad_diagnostics attribute.

---

arad_indicators *List ARAD indicators and basic metadata*

Description

Retrieves basic metadata from the ARAD indicators endpoint. Exactly one ARAD scope selector must be supplied.

Usage

```
arad_indicators(
  indicator_ids = NULL,
  set_id = NULL,
  base_id = NULL,
  selection_id = NULL,
  lang = c("cs", "en"),
  api_key = NULL,
  base_url = NULL,
  encoding = "windows-1250",
  cache = NULL,
  cache_dir = NULL,
  cache_max_age = NULL
)
```

Arguments

`indicator_ids`	Character vector of indicator IDs.
`set_id`	ARAD set ID.
`base_id`	ARAD base ID.
`selection_id`	ARAD user selection ID.
`lang`	Metadata language: cs or en.
`api_key`	ARAD API key. If NULL, ARAD_API_KEY is used.
`base_url`	ARAD API base URL. Primarily intended for testing.
`encoding`	Response encoding. Defaults to Windows-1250.
`cache`	Response cache mode: none, session, or disk.
`cache_dir`	Optional disk cache directory.
`cache_max_age`	Maximum cache age in seconds.

Value

A tibble with indicator ID, name, frequency, scaling and unit metadata.

`arad_info` *Inspect selected ARAD indicators in detail*

Description

Retrieves a compact path/availability summary plus detailed dimension metadata and raw update rows for candidate indicators selected through discovery.

Usage

```
arad_info(
  indicator_ids,
  lang = c("cs", "en"),
  api_key = NULL,
  base_url = NULL,
  encoding = "windows-1250",
  cache = NULL,
  cache_dir = NULL,
  cache_max_age = NULL
)
```

Arguments

`indicator_ids`	Character vector of indicator IDs to inspect.
`lang`	Metadata language, `"cs"` or `"en"`.
`api_key`	ARAD API key. If `NULL`, `ARAD_API_KEY` is used.
`base_url`	ARAD API base URL. Primarily intended for testing.
`encoding`	Response encoding.
`cache`	Response cache mode: none, session, or disk.
`cache_dir`	Optional disk cache directory.
`cache_max_age`	Maximum cache age in seconds.

Value

A named list with `summary`, `dimensions`, and `updates` tibbles. Availability dates in `summary` are boundaries reported by ARAD; `data_to` can include future forecast or reporting horizons.

`arad_search` *Search indicators within an ARAD scope*

Description

Searches indicator IDs and names returned by the ARAD indicators endpoint. Because ARAD does not expose an unscoped global indicator list through this endpoint, exactly one normal ARAD selector is required.

Usage

```
arad_search(
  term,
  indicator_ids = NULL,
  set_id = NULL,
  base_id = NULL,
  selection_id = NULL,
```

```
  frequency = NULL,
  regex = FALSE,
  ignore_case = TRUE,
  lang = c("cs", "en"),
  api_key = NULL,
  base_url = NULL,
  encoding = "windows-1250",
  cache = NULL,
  cache_dir = NULL,
  cache_max_age = NULL
)
```

Arguments

`term`	Non-empty search text or regular expression.
`indicator_ids`	Character vector of indicator IDs.
`set_id`	ARAD set ID.
`base_id`	ARAD base ID.
`selection_id`	ARAD user selection ID.
`frequency`	Optional frequency code(s) to retain.
`regex`	Interpret term as a regular expression.
`ignore_case`	Ignore case while matching.
`lang`	Metadata language: cs or en.
`api_key`	ARAD API key. If NULL, ARAD_API_KEY is used.
`base_url`	ARAD API base URL. Primarily intended for testing.
`encoding`	Response encoding. Defaults to Windows-1250.
`cache`	Response cache mode: none, session, or disk.
`cache_dir`	Optional disk cache directory.
`cache_max_age`	Maximum cache age in seconds.

Value

A filtered indicator metadata tibble.

`arad_snapshots` *List available ARAD snapshots*

Description

Retrieves the list of ARAD snapshots. Unlike the indicator metadata endpoints, this service does not require an ARAD scope selector.

Usage

```
arad_snapshots(
  lang = c("cs", "en"),
  api_key = NULL,
  base_url = NULL,
  encoding = "windows-1250",
  cache = NULL,
  cache_dir = NULL,
  cache_max_age = NULL
)
```

Arguments

lang	Metadata language: cs or en.
api_key	ARAD API key. If NULL, ARAD_API_KEY is used.
base_url	ARAD API base URL. Primarily intended for testing.
encoding	Response encoding. Defaults to Windows-1250.
cache	Response cache mode: none, session, or disk.
cache_dir	Optional disk cache directory.
cache_max_age	Maximum cache age in seconds.

Value

A tibble with snapshot_id and snapshot_name.

---

arad_tree *List ARAD indicator tree paths*

Description

Retrieves indicator placement in the ARAD metadata tree. Exactly one ARAD scope selector must be supplied.

Usage

```
arad_tree(
  indicator_ids = NULL,
  set_id = NULL,
  base_id = NULL,
  selection_id = NULL,
  lang = c("cs", "en"),
  api_key = NULL,
  base_url = NULL,
  encoding = "windows-1250",
  cache = NULL,
```

```
  cache_dir = NULL,
  cache_max_age = NULL
)
```

Arguments

indicator_ids	Character vector of indicator IDs.
set_id	ARAD set ID.
base_id	ARAD base ID.
selection_id	ARAD user selection ID.
lang	Metadata language: cs or en.
api_key	ARAD API key. If NULL, ARAD_API_KEY is used.
base_url	ARAD API base URL. Primarily intended for testing.
encoding	Response encoding. Defaults to Windows-1250.
cache	Response cache mode: none, session, or disk.
cache_dir	Optional disk cache directory.
cache_max_age	Maximum cache age in seconds.

Value

A tibble with indicator_id and ARAD tree path.

---

arad_updates *Retrieve ARAD update metadata*

Description

Retrieves the last update timestamp and available data boundaries from the ARAD updates endpoint. Exactly one selector must be supplied.

Usage

```
arad_updates(
  indicator_ids = NULL,
  set_id = NULL,
  base_id = NULL,
  selection_id = NULL,
  snapshot_ids = NULL,
  api_key = NULL,
  base_url = NULL,
  encoding = "windows-1250",
  cache = NULL,
  cache_dir = NULL,
  cache_max_age = NULL
)
```

Arguments

`indicator_ids`	Character vector of indicator IDs.
`set_id`	ARAD set ID.
`base_id`	ARAD base ID.
`selection_id`	ARAD user selection ID.
`snapshot_ids`	Optional snapshot IDs, or ALL / LAST.
`api_key`	ARAD API key. If NULL, ARAD_API_KEY is used.
`base_url`	ARAD API base URL. Primarily intended for testing.
`encoding`	Response encoding. Defaults to Windows-1250.
`cache`	Response cache mode: none, session, or disk. NULL uses the aradR.cache option, defaulting to none.
`cache_dir`	Optional disk cache directory.
`cache_max_age`	Maximum cache age in seconds. NULL uses the aradR.cache_max_age option, defaulting to Inf.

Value

A tibble with indicator_id, snapshot_id, update_date, data_from, and data_to.

`arad_wide` *Reshape ARAD data to wide format*

Description

Converts the long-format output of `arad_get()` into one row per period and one column per series. Snapshot identifiers are incorporated into column names automatically when they are needed to distinguish multiple snapshot contexts for the same indicator.

Usage

```
arad_wide(
  data,
  snapshot = c("auto", "include", "ignore"),
  names_sep = "__"
)
```

Arguments

`data`	A data frame with `indicator_id`, `period`, and `value` columns, typically returned by `arad_get()`.
`snapshot`	How snapshot identifiers should affect column names: `"auto"` adds them only when an indicator has multiple snapshot contexts, `"include"` always adds them, and `"ignore"` never adds them.
`names_sep`	Separator used between indicator and snapshot identifiers.

Value

A tibble with one `period` column and one numeric column per series. The `arad_diagnostics` attribute is preserved when present on `data`.

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