Package ‘nhlapi’

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**make_log**

Create a log message

**Description**

Create a log message

**Usage**

```r
make_log(msg, ..., type = "I", dtFormat =getOption("nhlapi_log_datetime"),
    newLine = FALSE, sep = " | ", collapse = " ", lineBreak = "$",
    endNewLine = FALSE)
```

**Arguments**

- **msg** character(1), to be logged.
- **...** additional character() strings to be logged. Will be pasted to msg and collapsed using the collapse argument.
- **type** character(1) ideally 1 uppercase letter.
- **dtFormat** character(1), passed to format for [Sys.time()]
- **newLine** logical(1), if TRUE, new line will be pasted to the beginning of the message.
- **sep** character(1) string, to separate parts of the message.
- **collapse** character(1), to collapse msg and ....
- **lineBreak** character(1), replacing line breaks in msg.
- **endNewLine** logical(1), if TRUE, new line will be pasted to the end of the message.
Value

character(1), constructed log message.

Examples

```
nhlapi:::make_log("Dummy warning", type = "W")
```

---

**nhl_awards**

*Retrieve metadata on NHL awards from the API*

Description

Retrieve metadata on NHL awards from the API

Usage

```
nhl_awards(awardIds = NULL)
```

Arguments

- `awardIds` integer(), vector of one or more award ids or NULL (default) for all awards. The current set of valid ids seems to be 1:24.

Value

data.frame, with information on awards, one row per award.

Examples

```
## Not run:
# Get information on current draft
nhl_awards()

# Get information on 3 historical awards
nhl_awards(1:3)

## End(Not run)
```
nhl_conferences

Retrieve metadata on NHL conferences from the API

Description

Retrieve metadata on NHL conferences from the API

Usage

```
nhl_conferences(conferenceIds = NULL)
```

Arguments

```
conferenceIds  integer(), ids of the conferences or NULL (default) for all conferences As of end of 2019, the valid conference ids seem to be in the 1:7 range.
```

Value

data.frame, with information on conferences, one row per conference.

Examples

```
## Not run:
# Get information on all conferences
nhl_conferences()

# Get information on 2 selected conferences
nhl_conferences(5:6)

## End(Not run)
```

nhl_divisions

Retrieve metadata on NHL divisions from the API

Description

Retrieve metadata on NHL divisions from the API

Usage

```
nhl_divisions(divisionIds = NULL)
```

Arguments

```
divisionIds  integer(), ids of the divisions or NULL (default) for all divisions. As of end of 2019, the valid division ids seem to be in the 1:25 range.
```
**nhl_drafts**

Value

data.frame, with information on divisions, one row per division.

Examples

```r
## Not run:
# Get information on all divisions
nhl_divisions()

# Get information on 2 selected divisions
nhl_divisions(15:16)

## End(Not run)
```

---

**nhl_drafts**

Retrieves metadata on NHL drafts from the API

Description

Retrieve metadata on NHL drafts from the API

Usage

```r
nhl_drafts(draftYears = NULL)
```

Arguments

draftYears

integer(), vector of one or more years in YYYY format or NULL (default) for the current year’s draft. Also accepts a character vector of years in YYYY format.

Value

data.frame, with information on drafts, one row per draft year.

Examples

```r
## Not run:
# Get information on current draft
nhl_drafts()

# Get information on 3 historical drafts
nhl_drafts(2015:2017)

## End(Not run)
```
**nhl_draft_prospects**

Retrieve metadata on NHL draft prospects from the API

**Description**

Retrieve metadata on NHL draft prospects from the API

**Usage**

```r
nhl_draft_prospects(prospectIds = NULL)
```

**Arguments**

- `prospectIds` integer(), vector of one or more ids of draft prospects or NULL (default) for all exposed prospects.

**Value**

data.frame, with information on draft prospects, one row per draft prospect.

**Examples**

```r
## Not run:
# Get information on current draft prospects
nhl_draft_prospects()
## End(Not run)
```

**nhl_from_json**

Get URL using `fromJSON`

**Description**

Get URL using `fromJSON`

**Usage**

```r
nhl_from_json(url, flatten = getOption("nhlapi_flatten"),
              silent = getOption("nhlapi_try_silent"),
              retries = getOption("nhlapi_get_retries"),
              retrySleep = getOption("nhlapi_get_retry_sleep"),
              noRetryPatt = getOption("nhlapi_get_noretry"))
```
Arguments

- **url**: character(1), the URL to get the data from.
- **flatten**: logical(1), if TRUE (default) automatically flattens nested data frames into a single non-nested data frame.
- **silent**: logical(1), passed to `[try()]`.
- **retries**: integer(1), number of retries in case of failed data retrieval (0L for no retries).
- **retrySleep**: integer(1), number of seconds to `[Sys.sleep()]` in between retries.
- **noRetryPatt**: character(1), string pattern. If the error condition’s message contains this pattern, there will be no retries. Useful for e.g. 404 returns where retries are likely useless.

Value

- list, retrieved data if succeeded, a try-error class object otherwise.

---

### nhl_games

**Retrieve metadata on NHL games from the API**

**Description**

Retrieve metadata on NHL games from the API

**Usage**

- `nhl_games(gameIds, element)`
- `nhl_games_content(gameIds)`
- `nhl_games_feed(gameIds)`
- `nhl_games_boxscore(gameIds)`
- `nhl_games_linescore(gameIds)`

**Arguments**

- **gameIds**: numeric(), vector of one or more game ids. The game id is a 10 digit number where the
  - first 4 digits identify the season of the game, for instance 2017 for the 2017-2018 season.
  - next 2 digits give the type of game, where
    - 01 - preseason,
    - 02 - regular season,
nhl_games

- 03 - playoffs,
- 04 - all-star.

- final 4 digits identify the specific game number
  - for regular season and preseason games, this ranges from 0001 to the number of games played. That is 1271 for seasons with 31 teams and 1230 for seasons with 30 teams.
  - for playoff games, the
    * second digit gives the round of the playoffs
    * third digit specifies the match-up
    * fourth digit specifies the game (out of 7)

The `element` character() vector of one or more valid elements. Currently the valid elements seem to be:

- "linescore"
- "boxscore"
- "content"
- "feed/live"

**Value**

list, with information on games, one element per game and element combination.

**Functions**

- `nhl_games_content`: Complex endpoint returning multiple types of media relating to the game including videos of shots, goals and saves.
- `nhl_games_feed`: returns all data about a specified game id including play data with on-ice coordinates and post-game details like first, second and third stars and details about shootouts. Note that the data returned is sizable, often over 30 000 lines.
- `nhl_games_boxscore`: Returns far less detail than `nhl_games_feed()` and may be more suitable for analyzing post-game statistics including goals, shots, penalty minutes, blocked, takeaways, etc.
- `nhl_games_linescore`: Returns even fewer details than `nhl_games_boxscore()`. Has goals, shots on goal, power-play and goalie pulled status, number of skaters and shootout information if applicable.

**Examples**

```r
## Not run:
# Get content for one game
nhl_games(2017010001, "content")

# Get both box score and content for 2 games
nhl_games(c(2017010001, 2017010002), c("content", "boxscore"))

## End(Not run)
```

## Not run:
nhl_get_data

Get data from the API for one or more URLs

Description
Get data from the API for one or more URLs

Usage

nhl_get_data(urls, flatten = getOption("nhlapi_flatten"))

Arguments

urls character(), vector of URLs to retrieve the data from.
flatten logical(1), if TRUE (default) automatically flattens nested data frames into a single non-nested data frame.

Value

list, results retrieved using nhl_get_data_worker(). One element per url. The elements contain the retrieved data if retrieval succeeded, otherwise an nhl_get_data_error class object.

See Also

nhl_get_data_worker()

Examples

## Not run:

```
  nhl_get_data(c(
    "https://statsapi.web.nhl.com/api/v1/teams/1",
    "https://statsapi.web.nhl.com/api/v1/people/8477474"
  ))
```
nhl_get_data_worker

nhl_get_data(
  "https://statsapi.web.nhl.com/api/v1/teams/1",
  flatten = FALSE
)

## End(Not run)

---

**nhl_get_data_worker**  
*Get data from the API for 1 URL*

---

**Description**

Gets data from the NHL API using `nhl_from_json()`.

**Usage**

```r
nhl_get_data_worker(url, flatten = getOption("nhlapi_flatten"),
                     silent = getOption("nhlapi_try_silent"),
                     retries = getOption("nhlapi_get_retries"),
                     retrySleep = getOption("nhlapi_get_retry_sleep"))
```

**Arguments**

- **url** character(1), the URL to get the data from.
- **flatten** logical(1), if TRUE (default) automatically flattens nested data frames into a single non-nested data frame.
- **silent** logical(1), passed to `[try()]`.
- **retries** integer(1), number of retries in case of failed data retrieval (0L for no retries).
- **retrySleep** integer(1), number of seconds to `[Sys.sleep()]` in between retries.

**Value**

list, with the retrieved data or class `nhl_get_data_error`.

**See Also**

- `nhl_from_json()`, `nhl_url()`
**nhl_make_seasons**  
*Make a vector of seasons consumable by the API*

**Description**

The NHL API wants seasons defined in format "YYYYZZZZ" where ZZZZ = YYYY + 1. This is a helper to take a vector of years in "YYYY" format and create a vector of such seasons to be used with the API.

**Usage**

```r
nhl_make_seasons(seasons = 1950:2019)
```

**Arguments**

- `seasons` numeric(), integer() or character(), vector of starting years of desired seasons in YYYY format, e.g. 1995 or "1995" for season 1995-1996. Accepts vectors such as `c(1995:2000,2010)` to generate multiple seasons. Alternatively, also accepts character() with seasons in the format "YYYYZZZZ", where ZZZZ = YYYY + 1, e.g. "19951996". This is the format that ultimately gets sent to the NHL API.

Some API endpoints, notably seasons exposed via `nhl_seasons()` also allow the value "current" to passed. This value will be returned unchanged.

**Value**

character(), vector of seasons suited for the NHL API.

**Examples**

```r
nhlapi::nhl_make_seasons()
nhlapi::nhl_make_seasons(c(1995, 2015))
nhlapi::nhl_make_seasons(c("1995", "2015"))
```

**nhl_md_event_types**  
*Get event types metadata*

**Description**

Get event types metadata

**Usage**

```r
nhl_md_event_types()
```
nhl_md_game_statuses

Value
    list, with metadata on event types.

nhl_md_game_statuses  Get game status metadata

Description
    Get game status metadata

Usage
    nhl_md_game_statuses()

Value
    list, with metadata on game statuses.

nhl_md_game_types  Get game type metadata

Description
    Get game type metadata

Usage
    nhl_md_game_types()

Value
    list, with metadata on game types.

nhl_md_play_types  Get play types metadata

Description
    Get play types metadata

Usage
    nhl_md_play_types()

Value
    list, with metadata on play types.
**nhl_md_standings_types**

*Get standings types metadata*

**Description**
Get standings types metadata

**Usage**

nhl_md_standings_types()

**Value**
list, with metadata on standings types.

---

**nhl_md_stat_types**

*Get stat types metadata*

**Description**
Get stat types metadata

**Usage**

nhl_md_stat_types()

**Value**
list, with metadata on stat types.

---

**nhl_md_tournament_types**

*Get tournament types metadata*

**Description**
Get tournament types metadata

**Usage**

nhl_md_tournament_types()

**Value**
list, with metadata on tournament types.
nhl_players

Retrieve metadata for players based on names or ids

Description

Retrieves information on players from the NHL API based on playerName or playerId. If playerName are provided, they take precedence over playerId.

Usage

nhl_players(playerName, playerId = NULL)

Arguments

playerName character(), vector of one or more player names. Not case sensitive for convenience.

playerId integer(), vector of one or more ids of the players. The ids correspond to the ids expected by the NHL API people endpoint. For most cases the playerName argument can be provided for more convenient usage.

Value

data.frame, with information on selected players.

Examples

## Not run:
# With playerName
nhl_players(c("joe SAKIC", "patrick roy"))

# With playerId
nhl_players(playerId = c(8451101, 8458554))

## End(Not run)

nhl_players_allseasons

Retrieve all seasons statistics for players

Description

Retrieve all seasons statistics for players

Usage

nhl_players_allseasons(playerName, playerId = NULL)
Arguments

playerNames character(), vector of one or more player names. Not case sensitive for convenience.

playerIds integer(), vector of one or more ids of the players. The ids correspond to the ids expected by the NHL API people endpoint. For most cases the playerNames argument can be provided for more convenient usage.

Value
data.frame, with all season statistics for selected players.

Examples

## Not run:
# With player names
nhl_players_allseasons(c("joe sakic", "Peter Forsberg"))

# With player ids
nhl_players_allseasons(c(8451101, 8458554))

## End(Not run)

nhl_players_seasons Retrieve selected seasons statistics for players

Description

Retrieve selected seasons statistics for players

Usage

nhl_players_seasons(playerNames, seasons, playerIds = NULL, 
                   playoffs = FALSE)

Arguments

playerNames character(), vector of one or more player names. Not case sensitive for convenience.

seasons numeric(), integer() or character(), vector of starting years of desired seasons in YYYY format, e.g. 1995 or "1995" for season 1995-1996. Accepts vectors such as c(1995:2000, 2010) to generate multiple seasons. Alternatively, also accepts character() with seasons in the format "YYYYZZZZ", where ZZZZ = YYYY + 1, e.g. "19951996". This is the format that ultimately gets sent to the NHL API.
Some API endpoints, notably seasons exposed via nhl_seasons() also allow the value "current" to passed. This value will be returned unchanged.
nhl_schedule

 playerIds integer(), vector of one or more ids of the players. The ids correspond to the ids expected by the NHL API people endpoint. For most cases the playerNames argument can be provided for more convenient usage.

 playoffs logical(1), if FALSE (default) get the regular seasons data, if TRUE, get the data for the playoffs.

Value
data.frame, with selected season statistics for selected players.

Examples

## Not run:
nhl_players_seasons(
  playerIds = c(8451101, 8458554),
  seasons = "19951996",
  playoffs = TRUE
)

## End(Not run)

nhl_schedule Retrieve metadata on NHL schedule from the API

Description

The general-purpose nhl_schedule() exposes many parameters, some useful helpers are exposed as separate functions to reflect common use cases. Arguments can be passed to the named via ....

• nhl_schedule_today()
• nhl_schedule_seasons()
• nhl_schedule_date_range()

Usage

nhl_schedule(seasons = NULL, teamIds = NULL, startDate = NULL, endDate = NULL, gameTypes = NULL, expand = NULL)

nhl_schedule_today(...)

nhl_schedule_seasons(seasons, ...)

nhl_schedule_date_range(startDate, endDate, ...)
Arguments

seasons numeric(), integer() or character(), vector of starting years of desired seasons in YYYY format, e.g. 1995 or "1995" for season 1995-1996. Accepts vectors such as c(1995:2000, 2010) to generate multiple seasons. Alternatively, also accepts character() with seasons in the format "YYYYZZZZ", where ZZZZ = YYYY + 1, e.g. "19951996". This is the format that ultimately gets sent to the NHL API.

Some API endpoints, notably seasons exposed via nhl_seasons() also allow the value "current" to passed. This value will be returned unchanged.

teamIds integer(), ids of the teams or NULL (default) for all teams. As of end of 2019, the valid team ids seem to be in the 1:54 range.

startDate character(1), date in the format "YYYY-MM-DD" defining the start of the date interval for which the schedule is to be retrieved.

endDate character(1), date in the format "YYYY-MM-DD" defining the end of the date interval for which the schedule is to be retrieved.

gameTypes character(), defining the game types to retrieve. Valid game types are for example "R" for regular season or "P" for playoffs. See nhl_md_game_types() for all values and their descriptions.

expand character(), of parameters passed as expand to the API URL. Some valid examples seem to be "round.series" and "schedule.broadcasts", "schedule.linescore", "schedule.ticket". NULL for no expand parameter.

... other named parameters passed to nhl_schedule().

Value

list, with information on schedule, depending on provided arguments.

Functions

- nhl_schedule_today: Shortcut to get information on today's schedule.
- nhl_schedule_seasons: Shortcut to get information on schedule for one or more seasons.
- nhl_schedule_date_range: Shortcut to get information on schedule for a range of dates in "YYYY-MM-DD" format.

Examples

## Not run:
# Get current schedule
nhl_schedule()

# Get schedule for historical seasons
nhl_schedule(seasons = 2015:2016)

# Get schedule for a date range
nhl_schedule(startDate = "2018-01-02", endDate = "2018-01-02")

# Get schedule for a date range, specific teams
# and expand on line scores
nhl_schedule(
  startDate = "2018-01-02",
  endDate = "2018-01-02",
  teamIds = c(29, 30),
  expand = "schedule.linescore"
)

## End(Not run)

## Not run:
nhl_schedule_today()

## End(Not run)

## Not run:
  # Schedule for seasons starting in 2015 and 2016
  nhl_schedule_seasons(2015:2016)

  # Schedule for seasons starting in 2015 and 2016
  # Only 1 team and expand line scores
  nhl_schedule_seasons(
    2015:2016,
    teamIds = 1,
    expand = "schedule.linescore"
  )

## End(Not run)

## Not run:
  # Schedule for October and November 2015
  nhl_schedule_date_range(
    startDate = "2015-10-01",
    endDate = "2015-11-30"
  )

  # Schedule for October and November 2015
  # Regular seasons only, specific team and expand line scores
  nhl_schedule_date_range(
    startDate = "2015-10-01", endDate = "2015-11-30",
    gameTypes = "R",
    teamIds = 2,
    expand = "schedule.linescore"
  )

  ## End(Not run)

---

table

<table>
<thead>
<tr>
<th>nhl_seasons</th>
<th>Retrieve metadata on NHL seasons from the API</th>
</tr>
</thead>
</table>

**Description**

Retrieve metadata on NHL seasons from the API
Usage

```r
nhl_seasons(seasons = NULL)
```

Arguments

  Alternatively, also accepts character() with seasons in the format "YYYYZZZZ", where `ZZZZ = YYYY + 1`, e.g. "19951996". This is the format that ultimately gets sent to the NHL API.
  Some API endpoints, notably seasons exposed via `nhl_seasons()` also allow the value "current" to passed. This value will be returned unchanged.

Value

data.frame, with information on seasons, one row per year.

Examples

```r
## Not run:
# Get information on current draft
nhl_seasons()

# Get information on 3 historical seasons
nhl_seasons(2015:2017)
## End(Not run)
```

---

**nhl_standings**

Retrieves metadata on NHL standings from the API

Description

Retrieve metadata on NHL standings from the API

Usage

```r
nhl_standings(seasons = NULL, standingsTypes = NULL, expand = NULL)
```

Arguments

  Alternatively, also accepts character() with seasons in the format "YYYYZZZZ", where `ZZZZ = YYYY + 1`, e.g. "19951996". This is the format that ultimately gets sent to the NHL API.
Some API endpoints, notably seasons exposed via `nhl_seasons()` also allow the value "current" to passed. This value will be returned unchanged.

`standingsTypes` character(), defining the standings types to retrieve. Valid standings types are for example "regularSeason" or "byDivision". See `nhl_md_standings_types()` for all values and their descriptions.

`expand` character(), of parameters passed as expand to the API URL. A valid example seems to be "standings.record". NULL for no expand parameter.

**Value**

list, with information on standings depending on provided arguments.

**Examples**

```r
## Not run:
# Get current standings
nhl_standings()

# Get standings for historical seasons
nhl_standings(seasons = 2015:2016)

# Get standings for historical seasons
nhl_standings(
  seasons = 2015:2016,
  standingsType = "byDivision",
  expand = "standings.record"
)

## End(Not run)
```

---

`nhl_teams` Retrieve metadata on NHL teams from the API

**Description**

Retrieves team metadata such as the teams names, abbreviations, locations, conferences, venues, etc.

**Usage**

`nhl_teams(teamIds = NULL, params = NULL)`

**Arguments**

- `teamIds` integer(), ids of the teams or NULL (default) for all teams. As of end of 2019, the valid team ids seem to be in the 1:54 range.
- `params` named list(), further parameters passed to `nhl_url_teams`. 
The API allows to retrieve data on all teams at once, which is achieved by the default NULL value for the team id.

Value
data.frame, with data on teams, one row per team.

Examples

```r
## Not run:
nhl_teams()
nhl_teams(1:3)
## End(Not run)
```

nhl_teams_rosters Get rosters for teams

Description
Get rosters for teams

Usage

```r
nhl_teams_rosters(teamIds = NULL, seasons = NULL)
```

Arguments
teamIds integer(), ids of the teams or NULL (default) for all teams. As of end of 2019, the valid team ids seem to be in the 1:54 range.
seasons numeric(), integer() or character(), vector of starting years of desired seasons in YYYY format, e.g. 1995 or "1995" for season 1995-1996. Accepts vectors such as c(1995:2000, 2010) to generate multiple seasons. Alternatively, also accepts character() with seasons in the format "YYYYZZZZ", where ZZZZ = YYYY + 1, e.g. "19951996". This is the format that ultimately gets sent to the NHL API. Some API endpoints, notably seasons exposed via `nhl_seasons()` also allow the value "current" to passed. This value will be returned unchanged.

Value
data.frame, with an element called roster.roster that in itself is a data.frame with the roster data.
Examples

## Not run:
# Current rosters for all teams
nhl_teams_rosters()

# Rosters for all teams for past seasons
nhl_teams_rosters(seasons = c("19931994", "19931994"))

# Roster for Devils and Islanders
nhl_teams_rosters(
  teamIds = 1:2,
  seasons = c("19931994", "19931994")
)

## End(Not run)

---

nhl_teams_schedule_next

*Get details for the teams’ upcoming game*

Description

Get details for the teams’ upcoming game.

Usage

```r
nhl_teams_schedule_next(teamIds = NULL)
```

Arguments

- `teamIds` *integer()*, ids of the teams or `NULL` (default) for all teams. As of end of 2019, the valid team ids seem to be in the `1:54` range.

Value

data.frame, with elements with names starting with `nextGameSchedule` that contain data on the teams’ upcoming game. One row per team.

Examples

## Not run:
# Next game for all teams
nhl_teams_schedule_next()

# Next game for selected teams
nhl_teams_schedule_next(c(1,3,5))

## End(Not run)
nhl_teams_schedule_previous

Get details for the teams’ previous game

Description
Get details for the teams’ previous game

Usage
nhl_teams_schedule_previous(teamIds = NULL)

Arguments

teamIds          integer(), ids of the teams or NULL (default) for all teams. As of end of 2019, the valid team ids seem to be in the 1:54 range.

Value
data.frame, with elements with names starting with previousGameSchedule that contain data on the teams’ previous game. One row per team.

Examples
## Not run:
# Next game for all teams
nhl_teams_schedule_previous()

# Next game for selected teams
nhl_teams_schedule_previous(c(1,3,5))

## End(Not run)

nhl_teams_stats

Get team statistics per seasons

Description
Get team statistics per seasons

Usage

nhl_teams_stats(teamIds = NULL, seasons = NULL)
nhl_tournaments

Retrieve data on tournaments from the API

Description

Retrieve data on tournaments from the API

Usage

nhl_tournaments(tournamentTypes, seasons = NULL, expand = NULL)

nhl_tournaments_playoffs(seasons = NULL, expand = NULL)

nhl_tournaments_olympics(seasons = NULL, expand = NULL)

nhl_tournaments_worldcups(seasons = NULL, expand = NULL)
Arguments

tournamentTypes
character(), vector of one or more tournament types. Currently supported types seem to be

• "playoffs"
• "olympics"
• "worldCup"

Those are exposed via shorthand functions

• nhl_tournaments_playoffs()
• nhl_tournaments_olympics()
• nhl_tournaments_worldcups()

seasons
numeric(), integer() or character(), vector of starting years of desired seasons in YYYY format, e.g. 1995 or "1995" for season 1995-1996. Accepts vectors such as c(1995:2000, 2010) to generate multiple seasons.

Alternatively, also accepts character() with seasons in the format "YYYYZZZZ", where ZZZZ = YYYY + 1, e.g. "19951996". This is the format that ultimately gets sent to the NHL API.

Some API endpoints, notably seasons exposed via nhl_seasons() also allow the value "current" to passed. This value will be returned unchanged.

expand
character(), of parameters passed as expand to the API URL. Two valid examples seem to be "round.series" and "schedule.game.seriesSummary". NULL for no expand parameter.

Value

list, with information on tournaments, one element per tournamentTypes and parameters (seasons and expand) combinations.

Functions

• nhl_tournaments_playoffs: Shortcut to get information on playoffs.
• nhl_tournaments_olympics: Shortcut to get information on Olympics.
• nhl_tournaments_worldcups: Shortcut to get information on world cups.

Examples

```r
## Not run:
# Get info on playoffs in one season
nhl_tournaments("playoffs", 2015)

# Get info on playoffs in 2 seasons, expand rounds
nhl_tournaments("playoffs", 2015:2016, "round.series")

## End(Not run)
```

## Not run:
Create an NHL API URL

Description

Create an NHL API URL

Usage

```
nhl_url(endPoint = NULL, suffixes = NULL, params = NULL, 
       baseUrl = getOption("nhlapi_baseurl"))
```

Arguments

- **endPoint** character(1), the API endpoint.
- **suffixes** list(), of suffixes that will be concatenated to the end of the URLs, separated by `/`.
- **params** named list() of parameters that will be concatenated to the end of the URLs after `?`. Parameters can have multiple values, in which case multiple URLs are created. Multiple parameters are separated by `&`.
- **baseUrl** character(1), URL of the NHL API base location.

Value

character(), the created URLs.

Examples

```
nhlapi::nhl_url("people", "8477474")
```
**Description**

Add parameters to URLs

**Usage**

```r
dh_url_add_params(url, params = NULL)
```

**Arguments**

- `url` : character(), vector of URLs.
- `params` : named list() of parameters that will be concatenated to the end of the URLs after `?`. Parameters can have multiple values, in which case multiple URLs are created. Multiple parameters are separated by `&`.

**Value**

character(), URLs with parameters added. Same length as all the combinations of `url` and `params`.

---

**Description**

Add suffixes to URLs

**Usage**

```r
dh_url_add_suffixes(url, suffixes)
```

**Arguments**

- `url` : character(), vector of URLs.
- `suffixes` : list(), of suffixes that will be concatenated to the end of the URLs, separated by `/`.

**Value**

character(), URLs with suffixes added. Same length as all the combinations of `url` and `suffixes`.
nhl_url_awards  

Create an NHL API URL for awards

Description
Create an NHL API URL for awards

Usage
```r
nhl_url_awards(awardIds = NULL)
```

Arguments
- `awardIds` integer(), vector of one or more award ids or NULL (default) for all awards. The current set of valid ids seems to be 1:24.

Value
character(), API URLs, same length as `awardIds` or length 1 if `awardIds` is NULL.

Examples
```r
nhlapi:::nhl_url_awards()
nhlapi:::nhl_url_awards(1:3)
```

---

nhl_url_conferences  

Create an NHL API URL for conferences

Description
Create an NHL API URL for conferences

Usage
```r
nhl_url_conferences(conferenceIds = NULL)
```

Arguments
- `conferenceIds` integer(), ids of the conferences or NULL (default) for all conferences As of end of 2019, the valid conference ids seem to be in the 1:7 range.

Value
character(), API URLs, same length as `teamIds` or length 1 if `teamIds` is NULL.
nhl_url_drafts

Examples

```r
nhlapi::nhl_url_conferences()
nhlapi::nhl_url_conferences(1:3)
```

nhl_url_divisions  

Create an NHL API URL for divisions

Description

Create an NHL API URL for divisions

Usage

```r
nhl_url_divisions(divisionIds = NULL)
```

Arguments

divisionIds  

integer(), ids of the divisions or NULL (default) for all divisions. As of end of 2019, the valid division ids seem to be in the 1:25 range.

Value

character(), of same length as teamIds or length 1 if teamIds is NULL.

Examples

```r
nhlapi::nhl_url_divisions()
nhlapi::nhl_url_divisions(1:3)
```

nhl_url_drafts  

Create an NHL API URL for drafts

Description

Create an NHL API URL for drafts

Usage

```r
nhl_url_drafts(draftYears = NULL)
```

Arguments

draftYears  

integer(), vector of one or more years in YYYY format or NULL (default) for the current year’s draft. Also accepts a character vector of years in YYYY format.
Value

character(), API URLs, same length as draftYears or length 1 if draftYears is NULL.

Examples

nhlapi:::nhl_url_drafts()
nhlapi:::nhl_url_drafts(2015:2017)

Description

Create an NHL API URL for draft prospects

Usage

nhl_url_draft_prospects(prospectIds = NULL)

Arguments

prospectIds integer(), vector of one or more ids of draft prospects or NULL (default) for all exposed prospects.

Value

character(), API URLs, same length as prospectIds or length 1 if prospectIds is NULL.

Examples

nhlapi:::nhl_url_draft_prospects()
Create an NHL API URL for games

Usage

```
nhl_url_games(gameIds, element)
```

Arguments

gameIds

numeric(), vector of one or more game ids. The game id is a 10 digit number where the

- first 4 digits identify the season of the game, for instance 2017 for the 2017-2018 season.
- next 2 digits give the type of game, where
  - 01 - preseason,
  - 02 - regular season,
  - 03 - playoffs,
  - 04 - all-star.
- final 4 digits identify the specific game number
  - for regular season and preseason games, this ranges from 0001 to the number of games played. That is 1271 for seasons with 31 teams and 1230 for seasons with 30 teams.
  - for playoff games, the
    * second digit gives the round of the playoffs
    * third digit specifies the match-up
    * fourth digit specifies the game (out of 7)

element

character() vector of one or more valid elements. Currently the valid elements seem to be:

- "linescore"
- "boxscore"
- "content"
- "feed/live"

Value

character(), of same length as gameIds.
**nhl_url_players**

Create an NHL API URL for players

**Description**

Create an NHL API URL for players

**Usage**

```r
nhl_url_players(playerIds)
```

**Arguments**

`playerIds` integer(), vector of one or more ids of the players. The ids correspond to the ids expected by the NHL API people endpoint. For most cases the `playerNames` argument can be provided for more convenient usage.

**Value**

character(), API URLs, same length as `playerIds`.

**Examples**

```r
nhlapi:::nhl_url_players(playerIds = c(8477474, 8477475))
```

---

**nhl_url_players_allseasons**

Create an NHL API URL for all players’ seasons statistics

**Description**

Create an NHL API URL for all players’ seasons statistics

**Usage**

```r
nhl_url_players_allseasons(playerIds)
```
Arguments

playerIds integer(), vector of one or more ids of the players. The ids correspond to the ids expected by the NHL API people endpoint. For most cases the playerNames argument can be provided for more convenient usage.

Examples

# Joe Sakic, all seasons
nhlapi:::nhl_url_players_allseasons(8451101L)

Description

Create an NHL API URL for players’ seasons statistics

Usage

nhl_url_players_seasons(playerIds, seasons, playoffs = FALSE)

Arguments

playerIds integer(), vector of one or more ids of the players. The ids correspond to the ids expected by the NHL API people endpoint. For most cases the playerNames argument can be provided for more convenient usage.

seasons numeric(), integer() or character(), vector of starting years of desired seasons in YYYY format, e.g. 1995 or "1995" for season 1995-1996. Accepts vectors such as c(1995:2000,2010) to generate multiple seasons. Alternatively, also accepts character() with seasons in the format "YYYYZZZZ", where ZZZZ = YYYY + 1, e.g. "19951996". This is the format that ultimately gets sent to the NHL API. Some API endpoints, notably seasons exposed via nhl_seasons() also allow the value "current" to passed. This value will be returned unchanged.

playoffs logical(1), if FALSE (default) get the regular seasons data, if TRUE, get the data for the playoffs.

Details

If multiple players and seasons are provided, URLs will be created for all combinations of players and seasons.
Examples

```r
# Joe Sakic, regular season 1995/1996
nhlapi:::nhl_url_players_seasons(8451101L, 1995)

nhlapi:::nhl_url_players_seasons(
  8451101L,
  1995:1997,
  playoffs = TRUE
)
```

---

**Description**

Create an NHL API stats URL for players

**Usage**

```r
nhl_url_players_stats(playerIds, params = NULL)
```

**Arguments**

- `playerIds` integer(), vector of one or more ids of the players. The ids correspond to the ids expected by the NHL API people endpoint. For most cases the `playerNames` argument can be provided for more convenient usage.

- `params` named list() of parameters that will be concatenated to the end of the URLs after ?. Parameters can have multiple values, in which case multiple URLs are created. Multiple parameters are separated by &.

**Value**

character(), of API URLs, same length as `playerIds`.

**Examples**

```r
nhlapi:::nhl_url_players_stats(8477474)
```
Create an NHL API URL for schedules

Usage

```r
nhl_url_schedule(seasons = NULL, teamIds = NULL, startDate = NULL, endDate = NULL, gameTypes = NULL, expand = NULL)
```

Arguments

- `seasons` numeric(), integer() or character(), vector of starting years of desired seasons in YYYY format, e.g. 1995 or "1995" for season 1995-1996. Accepts vectors such as c(1995:2000, 2010) to generate multiple seasons.
  Alternatively, also accepts character() with seasons in the format "YYYYZZZZ", where ZZZZ = YYYY + 1, e.g. "19951996". This is the format that ultimately gets sent to the NHL API.
  Some API endpoints, notably seasons exposed via `nhl_seasons()` also allow the value "current" to passed. This value will be returned unchanged.

- `teamIds` integer(), ids of the teams or NULL (default) for all teams. As of end of 2019, the valid team ids seem to be in the 1:54 range.

- `startDate` character(1), date in the format "YYYY-MM-DD" defining the start of the date interval for which the schedule is to be retrieved.

- `endDate` character(1), date in the format "YYYY-MM-DD" defining the end of the date interval for which the schedule is to be retrieved.

- `gameTypes` character(), defining the game types to retrieve. Valid game types are for example "R" for regular season or "P" for playoffs. See `nhl_md_game_types()` for all values and their descriptions.

- `expand` character(), of parameters passed as expand to the API URL. Some valid examples seem to be "round.series" and "schedule.broadcasts", "schedule.linescore", "schedule.ticket". NULL for no expand parameter.

Value

character(), vector of URLs.

Examples

```r
nhlapi::nhl_url_schedule(seasons = 2015:2016)
nhlapi::nhl_url_schedule(
  startDate = "2018-01-02",
  endDate = "2018-01-02"
)
```
Create an NHL API URL for seasons

**Description**

Create an NHL API URL for seasons

**Usage**

```
nhl_url_seasons(seasons = NULL)
```

**Arguments**

- `seasons` numeric(), integer() or character(), vector of starting years of desired seasons in YYYY format, e.g. 1995 or "1995" for season 1995-1996. Accepts vectors such as `c(1995:2000,2010)` to generate multiple seasons.

Alternatively, also accepts character() with seasons in the format "YYYYZZZZ", where ZZZZ = YYYY + 1, e.g. "19951996". This is the format that ultimately gets sent to the NHL API.

Some API endpoints, notably seasons exposed via `nhl_seasons()` also allow the value "current" to passed. This value will be returned unchanged.

**Value**

character(), of API URLs, same length as seasons or length 1 if seasons is NULL.

**Examples**

```
nhlapi:::nhl_url_seasons()
nhlapi:::nhl_url_seasons("20152016")
```
nhl_url_standings  Create an NHL API URL for standings

Description

Create an NHL API URL for standings

Usage

```r
nhl_url_standings(seasons = NULL, standingsTypes = NULL, expand = NULL)
```

Arguments

- `seasons` numeric(), integer() or character(), vector of starting years of desired seasons in YYYY format, e.g. 1995 or "1995" for season 1995-1996. Accepts vectors such as c(1995:2000,2010) to generate multiple seasons. Alternatively, also accepts character() with seasons in the format "YYYYZZZZ", where ZZZZ = YYYY + 1, e.g. "19951996". This is the format that ultimately gets sent to the NHL API. Some API endpoints, notably seasons exposed via `nhl_seasons()` also allow the value "current" to passed. This value will be returned unchanged.
- `standingsTypes` character(), defining the standings types to retrieve. Valid standings types are for example "regularSeason" or "byDivision". See `nhl_md_standings_types()` for all values and their descriptions.
- `expand` character(), of parameters passed as expand to the API URL. A valid example seems to be "standings.record". NULL for no expand parameter.

Value

character(), vector of URLs.

Examples

```r
nhlapi::nhl_url_standings(seasons = 2015:2016)
nhlapi::nhl_url_standings(
  standingsType = "byDivision",
  expand = "standings.record"
)
```
**nhl_url_teams**

Create an NHL API URL for teams

**Description**

Create an NHL API URL for teams

**Usage**

```r
nhl_url_teams(teamIds = NULL, params = NULL)
```

**Arguments**

- `teamIds` `integer()`, ids of the teams or NULL (default) for all teams. As of end of 2019, the valid team ids seem to be in the 1:54 range.
- `params` `named list()` of parameters that will be concatenated to the end of the URLs after `?`. Parameters can have multiple values, in which case multiple URLs are created. Multiple parameters are separated by `&`.

**Value**

`character()`, API URLs, same length as `teamIds` or length 1 if `teamIds` is `NULL`.

**Examples**

```r
nhlapi:::nhl_url_teams()
nhlapi:::nhl_url_teams(1:3)
```

---

**nhl_url_tournaments**

Create an NHL API URL for tournaments

**Description**

Create an NHL API URL for tournaments

**Usage**

```r
nhl_url_tournaments(tournamentTypes, seasons = NULL, expand = NULL)
```
Arguments

tournamentTypes
character(), vector of one or more tournament types. Currently supported types seem to be
• "playoffs"
• "olympics"
• "worldCup"
Those are exposed via shorthand functions
• nhl_tournaments_playoffs()
• nhl_tournaments_olympics()
• nhl_tournaments_worldcups()

seasons
numeric(), integer() or character(), vector of starting years of desired seasons in YYYY format, e.g. 1995 or "1995" for season 1995-1996. Accepts vectors such as c(1995:2000, 2010) to generate multiple seasons.
Alternatively, also accepts character() with seasons in the format "YYYYZZZZ", where ZZZZ = YYYY + 1, e.g. "19951996". This is the format that ultimately gets sent to the NHL API.
Some API endpoints, notably seasons exposed via nhl_seasons() also allow the value "current" to passed. This value will be returned unchanged.

expand
character(), of parameters passed as expand to the API URL. Two valid examples seem to be "round.series" and "schedule.game.seriesSummary". NULL for no expand parameter.

Value
character(), API URLs, same length as combinations of tournamentTypes, seasons and expand.

See Also

nhl_md_tournament_types()

Examples

nhlapi:::nhl_url_tournaments("olympics")
nhlapi:::nhl_url_tournaments("playoffs", 2015:2016)
nhlapi:::nhl_url_tournaments("playoffs", 2015:2016, "round.series")
nhl_venues

Usage

```r
nhl_url_venues(venueIds = NULL)
```

Arguments

- `venueIds` integer(), vector of one or more venue ids or NULL (default) for all currently exposed venues. The exported values seem incomplete, so it may be worth it to investigate other ids.

Value

character(), API URLs, same length as venueIds or length 1 if venueIds is NULL.

Examples

```r
nhlapi:::nhl_url_venues()
nhlapi:::nhl_url_venues(5000:5006)
```

---

nhl_venues

Retrieve metadata on NHL venues from the API

Description

Retrieve metadata on NHL venues from the API

Usage

```r
nhl_venues(venueIds = NULL)
```

Arguments

- `venueIds` integer(), vector of one or more venue ids or NULL (default) for all currently exposed venues. The exported values seem incomplete, so it may be worth it to investigate other ids.

Value

`data.frame`, with information on venues, one row per venue.

Examples

```r
## Not run:
# Get information on currently exposed venues
nhl_venues()

# Get information on 3 historical venues
nhl_venues(5000:5006)
```

## End(Not run)
util_attributes_to_cols

Add attributes as data frame columns

Description
Take attributes with names specified by `atrs` from object `lst` and adds their value into columns with the same name in `df`.

Usage
util_attributes_to_cols(lst, df, atrs = c("url", "copyright"))

Arguments
- `lst` list, with attributes to be added as columns to `df`.
- `df` data.frame, onto which new columns containing attributes of `lst` should be added.
- `atrs` character(), vector of names of attributes of `lst`.

Value
data.frame, df with added columns.

util_convert_minsonice

Convert "mm:ss" character to numeric minutes

Description
Convert "mm:ss" character to numeric minutes

Usage
util_convert_minsonice(chr, splitter = ":")

Arguments
- `chr` character(), vector in format "mins:secs".
- `splitter` character(1), that splits minutes and seconds in elements of `chr`.

Value
numeric(), vector of times in minutes. Same length as `chr`.

Examples
nhlapi:::util_convert_minsonice(c("20:00", "1500:30"))
util_generate_sysdata  
*Generate the sysdata.rda file*

---

**Description**

Generate the `sysdata.rda` file

**Usage**

```r
util_generate_sysdata(playerIds = 8444849L:8490000L,
                      tgtPath = "sysdata.rda")
```

**Arguments**

- `playerIds`  
  integer(), vector of playerIds.
- `tgtPath`  
  character(1), path where to save the generated object, `NULL` to not save.

**Value**

data.frame, with player name hashes and ids.

---

util_inherit_attributes

*Inherit attributes from another object*

---

**Description**

Take attributes with names specified by `atrs` from object `src` and add them as the same attributes to `tgt`.

**Usage**

```r
util_inherit_attributes(src, tgt, atrs = c("url", "copyright"))
```

**Arguments**

- `src`  
  object, with attributes to be inherited by `tgt`.
- `tgt`  
  object, onto which attributes of `src` should be added.
- `atrs`  
  character(), vector of names of attributes of `src` to be added to `tgt`.

**Value**

object, same as `tgt` with attributes added.
**util_map_player_id**  
Retrieve a player id from the name

**Description**

Using a table of hashed names and ids, get a player id based on the name.

**Usage**

```r
util_map_player_id(x, map = getOption("nhlapi_player_map"))
```

**Arguments**

- `x` character(1) a player's name, not case sensitive for convenience.
- `map` data.frame, with 2 columns:
  - `nameMd5`: character() of hashed player names
  - `id`: integer() of player ids used by the NHL API

**Value**

integer(1), id of the player or NA_integer if not found.

**Examples**

```r
nhlapi:::util_map_player_id(
  "Joe Sakic",
  data.frame(
    nameMd5 = "9d2a915c8610dbc524c1bc800e010fccc",
    id = 19L,
    stringsAsFactors = FALSE
  )
)
```

---

**util_map_player_ids**  
Retrieve a player ids from their names

**Description**

Retrieve a player ids from their names

**Usage**

```r
util_map_player_ids(playerNames, map = getOption("nhlapi_player_map"))
```
Arguments

playerNames character(), vector of one or more player names. Not case sensitive for convenience.

map data.frame, with 2 columns:
• nameMd5: character() of hashed player names
• id: integer() of player ids used by the NHL API

Value

integer(), named vector of player ids, ‘NA_integer” for those names where id was not found.

Examples

```r
nhlapi:::util_map_player_ids(c("Joe SAKIC", "peter Forsberg", "test"))
```

util_md5sum_str

Get MD5 hash for a character vector

Description

Writes x to a temporary file using writeChar() and computes the md5sum() on that file, removing the file afterwards.

Usage

```r
util_md5sum_str(x)
```

Arguments

x character(), vector to compute the MD5 for.

Value

character(1), MD5 hash of a text file created from x using writeChar().

Examples

```r
nhlapi:::util_md5sum_str("test")
```
util_prepare_player_ids

*Prepare player ids based on player names*

**Description**
Prepare player ids based on player names

**Usage**

```r
util_prepare_player_ids(playerNames, map = getOption("nhlapi_player_map"))
```

**Arguments**

- `playerNames` character(), vector of one or more player names. Not case sensitive for convenience.
- `map` data.frame, with 2 columns:
  - nameMd5: character() of hashed player names
  - id: integer() of player ids used by the NHL API

**Value**
integer(), named vector of found valid player ids, those not found omitted.

**Examples**

```r
nhlapi:::util_prepare_player_ids(c("joe sakic", "fake player"))
```

util_process_copyright

*Move copyright information to attribute*

**Description**
Removes the element named `el` from `x` if present and keeps the information as an equally named attribute.

**Usage**

```r
util_process_copyright(x, el = "copyright")
```

**Arguments**

- `x` list(), to be processed.
- `el` character(1), name of the element to remove. Defaults to "copyright" as this is the intended use of the function.
Value

list, with the element removed and added as attribute, if it is present in x. Unchanged x otherwise.

util_process_minsonice

Convert time columns from "mm:ss" to numeric minutes

Description

Convert time columns from "mm:ss" to numeric minutes

Usage

util_process_minsonice(df, patt = "timeOn|TimeOn")

Arguments

df data.frame, data to examine.
patt character(1), pattern to match column names that contain time information in "mm:ss" format.

Value

data.frame, with time columns converted from "mm:ss" characters to numeric minutes.

util_rbindlist

Safely rbind multiple data.frames

Description

Attempts to replace do.call(rbind,lst) taking into consideration that some data frames in lst can have missing columns. Those are filled by NA values.

Usage

util_rbindlist(lst, fill = TRUE)

Arguments

lst list(), of data frames to be rbind-ed into one.
fill logical(1), if FALSE, this function just returns do.call(rbind,lst).

Value

data.frame, the elements of lst, rbind-ed into one.
Examples

```r
nhlapi:::util_rbindlist(list(
  datasets::mtcars[1, 2:3],
  datasets::mtcars[2, 4:5]
))
```

### Description

Report errors encountered during `nhl_get_data`

### Usage

```r
util_report_get_data_errors(x, reporter = log_e, ...)
```

### Arguments

- `x` list, results created by `nhl_get_data()`.
- `reporter` function, used to report the constructed error message, e.g. `message`, `warning`, `writeLines`, etc.
- `...` further arguments passed to `reporter`, e.g. `con = file("~/log.txt")` in case `writeLines` is the reporter.

### Value

character(), URLs for which the retrieval resulted in an error, invisibly. Optional side-effects.

### Examples

```r
## Not run:
# Write errors to a temporary text file
tmpFile <- tempfile()
util_report_get_data_errors(
  nhl_get_data(nhl_url_players(c("none", "8451101", "some"))),
  reporter = writeLines,
  con = tmpFile
)

## End(Not run)
```
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