

Package ‘bupaR’

April 3, 2023

Type Package

Title Business Process Analysis in R

Version 0.5.3

Description Comprehensive Business Process Analysis toolkit. Creates S3-class for event log objects, and related handler functions. Imports related packages for filtering event data, computation of descriptive statistics, handling of 'Petri Net' objects and visualization of process maps. See also packages 'edeaR', 'processmapR', 'eventdataR' and 'processmonitR'.

License MIT + file LICENSE

Encoding UTF-8

RoxygenNote 7.2.3

Depends R (>= 3.5.0)

Imports magrittr, dplyr, data.table, shiny, miniUI, pillar, purrr, tidyrr, tibble, glue, forcats, rlang (>= 1.0.0), cli (>= 3.2.0), eventdataR (>= 0.2.0), stringr, stringi, lubridate, lifecycle, ggplot2

URL <https://bupar.net/>, <https://github.com/bupaverse/bupaR/>,
<https://bupaverse.github.io/bupaR/>

Suggests covr, lintr, edeaR, testthat (>= 3.1.3)

Config/testthat/edition 3

NeedsCompilation no

Author Gert Janssenswillen [aut, cre],
Gerard van Hulzen [ctb],
Felix Mannhardt [ctb],
Niels Martin [ctb],
Greg Van Houdt [ctb]

Maintainer Gert Janssenswillen <gert.janssenswillen@uhasselt.be>

Repository CRAN

Date/Publication 2023-04-02 22:00:06 UTC

R topics documented:

activities	3
activitylog	4
activity_id	5
activity_instance_id	5
activity_labels	6
act_collapse	7
act_recode	8
act_unite	9
add_end_activity	10
as.grouped.data.frame	11
assign_instance_id	11
bupaR	12
cases	12
case_id	13
case_labels	14
case_list	14
convert_timestamps	15
detect_resource_inconsistencies	16
durations	16
eventlog	17
events_to_activitylog	18
first_n	19
fix_resource_inconsistencies	20
grouped_activitylog	21
grouped_eventlog	21
grouped_log	21
group_by_activity	21
group_by_activity_instance	22
group_by_case	22
group_by_ids	23
group_by_resource	23
group_by_resource_activity	24
is.log	24
last_n	25
lifecycles	26
lifecycle_id	27
lifecycle_labels	27
log	28
mapping	28
n_activities	29
n_activity_instances	30
n_cases	31
n_events	31
n_resources	32
n_traces	33
print.eventlog_mapping	34

print.log	34
resources	35
resource_id	36
resource_labels	37
re_map	37
scale_fill_discrete_bupaR	38
select_ids	39
set_activity_id	40
set_activity_instance_id	41
set_case_id	41
set_lifecycle_id	42
set_resource_id	43
set_timestamp	43
simple_eventlog	44
slice_activities	45
slice_events	46
standardize_lifecycle	46
summary.eventlog	47
timestamp	47
timestamps	48
to_activitylog	49
to_eventlog	49
traces	50
trace_list	51
ungroup_eventlog	51
Index	53

activities	<i>Activities</i>
------------	-------------------

Description

Returns a tibble containing a list of all activity types in the event log, with their absolute and relative frequency

Usage

```
activities(log, ..., eventlog)

## S3 method for class 'activitylog'
activities(log, ..., eventlog = deprecated())

## S3 method for class 'grouped_log'
activities(log, ..., eventlog = deprecated())
```

Arguments

log	log : Object of class log or derivatives (grouped_log , eventlog , activitylog , etc.).
...	Unused.
eventlog	[Deprecated] ; please use log instead.

Methods (by class)

- `activities(activitylog)`: Compute activity frequencies
- `activities(grouped_log)`: Compute activity frequencies

See Also

[activity_id](#), [activity_instance_id](#), [eventlog](#)

activitylog	<i>Create activity log</i>
-------------	----------------------------

Description

Create activity log

Usage

```
activitylog(activitylog, case_id, activity_id, resource_id, timestamps, order)
```

Arguments

activitylog	The data object to be used as activity log. This can be a <code>data.frame</code> or <code>tibble</code> .
case_id	The case classifier of the activity log. A character vector containing variable names of length 1 or more.
activity_id	The activity classifier of the activity log. A character vector containing variable names of length 1 or more.
resource_id	The resource identifier of the activity log. A character vector containing variable names of length 1 or more.
timestamps	The columns with timestamps referring to different lifecycle events. A character vector of 1 or more. These should have one of the following names: "schedule", "assign", "reassign", "start", "suspend", "resume", "abort_activity", "abort_case", "complete", "manualsk". These columns should be of the Date or POSIXct class.
order	Configure how to handle sort events with equal timestamps: <code>auto</code> will use the order in the original data, <code>alphabetical</code> will sort the activity labels by alphabet, <code>sorted</code> will assume that the data frame is already correctly sorted and has a column <code>'order'</code> , providing a column name will use this column for ordering (can be numeric or character). The latter will never overrule timestamp orderings.

activity_id	<i>Activity classifier</i>
-------------	----------------------------

Description

Get the activity classifier of an object of class eventlog.

Usage

```
activity_id(x)

## Default S3 method:
activity_id(x)

## S3 method for class 'log_mapping'
activity_id(x)
```

Arguments

x [log](#): Object of class [eventlog](#) or [activitylog](#), or [mapping](#).

Methods (by class)

- `activity_id(default)`: Retrieve activity identifier from log
- `activity_id(log_mapping)`: Retrieve activity identifier from mapping

See Also

[eventlog](#), [activitylog](#), [mapping](#)

Other Classifiers: [activity_instance_id\(\)](#), [case_id\(\)](#), [lifecycle_id\(\)](#), [resource_id\(\)](#), [set_activity_id\(\)](#), [set_activity_instance_id\(\)](#), [set_case_id\(\)](#), [set_lifecycle_id\(\)](#), [set_resource_id\(\)](#), [set_timestamp\(\)](#), [timestamps\(\)](#), [timestamp\(\)](#)

activity_instance_id	<i>Activity instance classifier</i>
----------------------	-------------------------------------

Description

Get the activity instance classifier of an object of class eventlog.

Usage

```

activity_instance_id(x)

## S3 method for class 'eventlog'
activity_instance_id(x)

## S3 method for class 'eventlog_mapping'
activity_instance_id(x)

## S3 method for class 'activitylog'
activity_instance_id(x)

## S3 method for class 'activitylog_mapping'
activity_instance_id(x)

```

Arguments

x An eventlog of eventlog_mapping

Methods (by class)

- `activity_instance_id(eventlog)`: Retrieve activity instance identifier from eventlog
- `activity_instance_id(eventlog_mapping)`: Retrieve activity instance identifier from eventlog mapping
- `activity_instance_id(activitylog)`: Retrieve activity instance identifier from activitylog
- `activity_instance_id(activitylog_mapping)`: Retrieve activity instance identifier from activitylog mapping

See Also

Other Classifiers: [activity_id\(\)](#), [case_id\(\)](#), [lifecycle_id\(\)](#), [resource_id\(\)](#), [set_activity_id\(\)](#), [set_activity_instance_id\(\)](#), [set_case_id\(\)](#), [set_lifecycle_id\(\)](#), [set_resource_id\(\)](#), [set_timestamp\(\)](#), [timestamps\(\)](#), [timestamp\(\)](#)

`activity_labels` *Get vector of activity labels*

Description

Retrieve a vector containing all unique activity labels

Usage

```

activity_labels(log, eventlog = deprecated())

## S3 method for class 'log'
activity_labels(log, eventlog = deprecated())

```

Arguments

log	log: Object of class <code>log</code> or derivatives (<code>grouped_log</code> , <code>eventlog</code> , <code>activitylog</code> , etc.).
eventlog	[Deprecated] ; please use log instead.

Methods (by class)

- `activity_labels(log)`: Retrieve activity labels

act_collapse	<i>Collapse activity labels of a sub process into a single activity</i>
--------------	---

Description

Collapse activity labels of a sub process into a single activity

Usage

```
act_collapse(log, ..., method, eventlog = deprecated())
```

```
## S3 method for class 'eventlog'  
act_collapse(  
  log,  
  ...,  
  method = c("entry_points", "consecutive"),  
  eventlog = deprecated()  
)
```

```
## S3 method for class 'activitylog'  
act_collapse(  
  log,  
  ...,  
  method = c("entry_points", "consecutive"),  
  eventlog = deprecated()  
)
```

```
## S3 method for class 'grouped_log'  
act_collapse(  
  log,  
  ...,  
  method = c("entry_points", "consecutive"),  
  eventlog = deprecated()  
)
```

Arguments

log	log : Object of class log or derivatives (grouped_log , eventlog , activitylog , etc.).
...	A series of named character vectors. The activity labels in each vector will be collapsed into one activity with the name of the vector.
method	Defines how activities are collapsed: "entry_points" heuristically learns which of the specified activities occur at the start and end of the subprocess and collapses accordingly. "consecutive" collapses consecutive sequences of the activities.
eventlog	[Deprecated] ; please use log instead.

Details

There are different strategies to collapse activity labels (argument 'method'). The "entry_points" method aims to learn the start and end activities of the sub process, by looking at the first and last activity in each case over the whole log. Subsequently, it will create a new instance of the sub process each time there is an end activity followed by a start activity. This strategy will not take into account other activities happening in the mean time. The "consecutive" method will create an instance each time a new sequence of sub activities is started. This strategy will thus only take into account interruptions of the other activity labels.

Methods (by class)

- `act_collapse(eventlog)`: Collapse activity labels of a subprocess into a single activity
- `act_collapse(activitylog)`: Collapse activity labels of a subprocess into a single activity
- `act_collapse(grouped_log)`: Collapse activity labels of a subprocess into a single activity

See Also

Other Activity processing functions: [act_recode\(\)](#), [act_unite\(\)](#)

act_recode	<i>Recode activity labels</i>
------------	-------------------------------

Description

Recode one or more activity labels through specifying their old and new label

Usage

```
act_recode(log, ..., eventlog = deprecated())

## S3 method for class 'log'
act_recode(log, ..., eventlog = deprecated())

## S3 method for class 'grouped_log'
act_recode(log, ..., eventlog = deprecated())
```


Arguments

log	log : Object of class log or derivatives (grouped_log , eventlog , activitylog , etc.).
...	A sequence of named character vectors of length one where the names gives the new label and the value gives the old label. Labels not mentioned will be left unchanged.
eventlog	[Deprecated] ; please use log instead.

Methods (by class)

- `act_recode(log)`: Recode activity labels of event log
- `act_recode(grouped_log)`: Recode activity labels of event log

See Also

[eventlog](#), [activity_id](#), [act_unite](#)

Other Activity processing functions: [act_collapse\(\)](#), [act_unite\(\)](#)

act_unite

Unite activity labels

Description

Recode two or different more activity labels two a uniform activity label

Usage

```
act_unite(log, ..., eventlog = deprecated())
```

```
## S3 method for class 'log'
act_unite(log, ..., eventlog = deprecated())
```

```
## S3 method for class 'grouped_log'
act_unite(log, ..., eventlog = deprecated())
```

Arguments

log	log : Object of class log or derivatives (grouped_log , eventlog , activitylog , etc.).
...	A series of named character vectors. The activity labels in each vector will be replaced with the name.
eventlog	[Deprecated] ; please use log instead.

Methods (by class)

- `act_unite(log)`: Unite activity labels in event log
- `act_unite(grouped_log)`: Unite activity labels of event log

See Also

[eventlog](#), [activity_id](#), [act_recode](#)

Other Activity processing functions: [act_collapse\(\)](#), [act_recode\(\)](#)

add_end_activity *Add Artificial Start/End Activities*

Description

Adds an artificial start or end activity to each case with the specified label.

Usage

```
add_end_activity(log, label = "End", eventlog = deprecated())
```

```
add_start_activity(log, label = "Start", eventlog = deprecated())
```

```
## S3 method for class 'eventlog'
```

```
add_end_activity(log, label = "End", eventlog = deprecated())
```

```
## S3 method for class 'activitylog'
```

```
add_end_activity(log, label = "End", eventlog = deprecated())
```

```
## S3 method for class 'grouped_log'
```

```
add_end_activity(log, label = "End", eventlog = deprecated())
```

```
## S3 method for class 'eventlog'
```

```
add_start_activity(log, label = "Start", eventlog = deprecated())
```

```
## S3 method for class 'activitylog'
```

```
add_start_activity(log, label = "Start", eventlog = deprecated())
```

```
## S3 method for class 'grouped_log'
```

```
add_start_activity(log, label = "Start", eventlog = deprecated())
```

Arguments

<code>log</code>	log : Object of class <code>log</code> or derivatives (<code>grouped_log</code> , <code>eventlog</code> , <code>activitylog</code> , etc.).
<code>label</code>	character : Start (default "Start") or end (default "End") activity label. This must be an activity label that is not already present in <code>log</code> .
<code>eventlog</code>	[Deprecated] ; please use <code>log</code> instead.

Methods (by class)

- `add_end_activity(eventlog)`: Adds end activity to an [eventlog](#).
- `add_end_activity(activitylog)`: Adds end activity to an [activitylog](#).
- `add_end_activity(grouped_log)`: Adds end activity to a [grouped_log](#).

Functions

- `add_start_activity(eventlog)`: Adds start activity to an [eventlog](#).
- `add_start_activity(activitylog)`: Adds start activity to an [activitylog](#).
- `add_start_activity(grouped_log)`: Adds start activity to a [grouped_log](#).

`as.grouped.data.frame` *as.grouped.data.frame*

Description

`as.grouped.data.frame`

Usage

`as.grouped.data.frame(data, groups)`

Arguments

<code>data</code>	Data
<code>groups</code>	Names of grouping variables as character vector (e.g. by using <code>dplyr::group_vars</code>)

`assign_instance_id` *Assign activity instance identifier to events*

Description

Apply heuristics to create an activity instance identifier, so that an eventlog can be made.

Usage

`assign_instance_id(eventlog, case_id, activity_id, timestamp, lifecycle_id)`

Arguments

<code>eventlog</code>	data.frame with events
<code>case_id</code>	Case identifier
<code>activity_id</code>	Activity identifier
<code>timestamp</code>	Timestamp
<code>lifecycle_id</code>	Lifecycle identifier

See Also

Other Eventlog construction helpers: [convert_timestamps\(\)](#)

 bupaR

bupaR - Business Process Analysis in R

Description

Functionalities for process analysis in R. This packages implements an S3-class for event log objects, and related handler functions. Imports related packages for subsetting event data, computation of descriptive statistics, handling of Petri Net objects and visualization of process maps.

 cases

Cases

Description

Provides a fine-grained summary of an event log with characteristics for each case: the number of events, the number of activity types, the timespan, the trace, the duration, and the first and last event type.

Usage

```
cases(log, ..., eventlog = deprecated())
```

```
## S3 method for class 'log'
cases(log, ..., eventlog = deprecated())
```

```
## S3 method for class 'eventlog'
cases(log, ..., eventlog = deprecated())
```

```
## S3 method for class 'activitylog'
cases(log, ..., eventlog = deprecated())
```

Arguments

`log` [log](#): Object of class [log](#) or derivatives ([grouped_log](#), [eventlog](#), [activitylog](#), etc.).

`...` Other (optional) arguments passed on to methods. See [durations](#) for more options.

`eventlog` **[Deprecated]**; please use `log` instead.

Methods (by class)

- cases(log): Construct list of cases in a [log](#).
- cases(eventlog): Construct list of cases in an [eventlog](#).
- cases(activitylog): Construct list of cases in a [activitylog](#).

See Also

[case_list,durations](#)

case_id	<i>Case classifier</i>
---------	------------------------

Description

Get the case classifier of an object of class eventlog

Usage

```
case_id(x)

## S3 method for class 'eventlog'
case_id(x)

## S3 method for class 'eventlog_mapping'
case_id(x)

## S3 method for class 'activitylog'
case_id(x)

## S3 method for class 'activitylog_mapping'
case_id(x)
```

Arguments

x [log](#): Object of class [eventlog](#) or [activitylog](#), or [mapping](#).

Methods (by class)

- case_id(eventlog): Retrieve case identifier from eventlog
- case_id(eventlog_mapping): Retrieve case identifier from eventlog mapping
- case_id(activitylog): Retrieve case identifier from activitylog
- case_id(activitylog_mapping): Retrieve case identifier from activitylog mapping

See Also

[eventlog](#), [activitylog](#), [mapping](#)

Other Classifiers: [activity_id\(\)](#), [activity_instance_id\(\)](#), [lifecycle_id\(\)](#), [resource_id\(\)](#), [set_activity_id\(\)](#), [set_activity_instance_id\(\)](#), [set_case_id\(\)](#), [set_lifecycle_id\(\)](#), [set_resource_id\(\)](#), [set_timestamp\(\)](#), [timestamps\(\)](#), [timestamp\(\)](#)

case_labels

Case labels

Description

Retrieve a vector containing all unique case labels

Usage

```
case_labels(log, eventlog = deprecated())
```

```
## S3 method for class 'log'
```

```
case_labels(log, eventlog = deprecated())
```

Arguments

log [log](#): Object of class [log](#) or derivatives ([grouped_log](#), [eventlog](#), [activitylog](#), etc.).

eventlog **[Deprecated]**; please use log instead.

Methods (by class)

- `case_labels(log)`: Retrieve case labels from log

case_list

Case list

Description

Construct list of cases

Usage

```
case_list(log, .keep_trace_list, eventlog = deprecated())
```

```
## S3 method for class 'eventlog'
```

```
case_list(log, .keep_trace_list = FALSE, eventlog = deprecated())
```

```
## S3 method for class 'activitylog'
```

```
case_list(log, .keep_trace_list = FALSE, eventlog = deprecated())
```

Arguments

log	log : Object of class log or derivatives (grouped_log , eventlog , activitylog , etc.).
.keep_trace_list	Logical (default is FALSE): If TRUE, keeps the trace as a list. If FALSE, only the concatenated string representation of the trace is kept.
eventlog	[Deprecated] ; please use <code>log</code> instead.

Methods (by class)

- `case_list(eventlog)`: Return case list
- `case_list(activitylog)`: Return case list

convert_timestamps	<i>Convert timestamp format</i>
--------------------	---------------------------------

Description

Function converting the timestamps in the data frame to the appropriate format.

Usage

```
convert_timestamps(x, columns, format)
```

Arguments

x	Data.frame containing events or activities.
columns	A character vector with one or more names of columns to convert
format	The format of the timestamps in the original dataset (either <code>ymd_hms</code> , <code>dmy_hms</code> , <code>ymd_hm</code> , <code>ymd</code> , <code>dmy</code> , <code>dmy</code> , ...). To be provided without quotation marks!

Value

Data.frame with converted timestamps

See Also

Other Eventlog construction helpers: [assign_instance_id\(\)](#)

detect_resource_inconsistencies
Detect resource inconsistencies

Description

Function to detect inconsistencies in resource information between related events.

Usage

```
detect_resource_inconsistencies(eventlog, filter_condition)
```

Arguments

eventlog	Event log object
filter_condition	Condition that is used to extract a subset of the activity log prior to the application of the function

durations *Durations*

Description

Computes the throughput times of each case. Throughput time is defined as the interval between the start of the first event and the completion of the last event.

Usage

```
durations(  
  log,  
  units = c("auto", "secs", "mins", "hours", "days", "weeks"),  
  eventlog = deprecated()  
)
```

Arguments

log	log : Object of class log or derivatives (grouped_log , eventlog , activitylog , etc.).
units	character (default "auto"): The time unit in which the throughput times should be reported. Should be one of the following values: "auto" (default), "secs", "mins", "hours", "days", "weeks". See also the units argument of difftime .
eventlog	[Deprecated] ; please use log instead.

eventlog	<i>Eventlog</i>
----------	-----------------

Description

A function to instantiate an object of class `eventlog` by specifying a `data.frame` or `tibble` and appropriate case, activity and timestamp classifiers.

Usage

```
eventlog(
  eventlog,
  case_id,
  activity_id,
  activity_instance_id,
  lifecycle_id,
  timestamp,
  resource_id,
  order,
  validate
)
```

```
ieventlog(eventlog)
```

Arguments

<code>eventlog</code>	The data object to be used as event log. This can be a <code>data.frame</code> or <code>tibble</code> .
<code>case_id</code>	The case classifier of the event log. A character vector containing variable names of length 1 or more.
<code>activity_id</code>	The activity classifier of the event log. A character vector containing variable names of length 1 or more.
<code>activity_instance_id</code>	The activity instance classifier of the event log.
<code>lifecycle_id</code>	The life cycle classifier of the event log.
<code>timestamp</code>	The timestamp of the event log. Should refer to a <code>Date</code> or <code>POSIXct</code> field.
<code>resource_id</code>	The resource identifier of the event log. A character vector containing variable names of length 1 or more.
<code>order</code>	Configure how to handle sort events with equal timestamps: <code>auto</code> will use the order in the original data, <code>alphabetical</code> will sort the activity labels by alphabet, <code>sorted</code> will assume that the data frame is already correctly sorted and has a column <code>'order'</code> , providing a column name will use this column for ordering (can be numeric or character). The latter will never overrule timestamp orderings.
<code>validate</code>	When <code>TRUE</code> some basic checks are run on the contents of the event log such as that activity instances are not connected to more than one case or activity. Using <code>FALSE</code> improves the performance by skipping those checks.

See Also

[case_id](#), [activity_id](#), [activity_instance_id](#), [lifecycle_id](#), [timestamp](#)

Examples

```
## Not run:
data <- data.frame(case = rep("A",5),
  activity_id = c("A","B","C","D","E"),
  activity_instance_id = 1:5,
  lifecycle_id = rep("complete",5),
  timestamp = 1:5,
  resource = rep("resource 1", 5))
eventlog(data,case_id = "case",
  activity_id = "activity_id",
  activity_instance_id = "activity_instance_id",
  lifecycle_id = "lifecycle_id",
  timestamp = "timestamp",
  resource_id = "resource")

## End(Not run)
```

events_to_activitylog *Events to activities*

Description

[Deprecated] Create an activity log starting from an event log or regular data.frame. This function is deprecated and replaced by the function `activitylog` (for dataframe) and `to_activitylog` for eventlogs.

Usage

```
events_to_activitylog(
  eventlog,
  case_id,
  activity_id,
  activity_instance_id,
  lifecycle_id,
  timestamp,
  resource_id,
  ...
)
```

Arguments

<code>eventlog</code>	The event log to be converted. An object of class <code>eventlog</code> or <code>data.frame</code>
<code>case_id</code>	If <code>eventlog</code> is <code>data.frame</code> , the case classifier of the event log. A character vector containing variable names of length 1 or more.

activity_id	If eventlog is data.frame, the activity classifier of the event log. A character vector containing variable names of length 1 or more.
activity_instance_id	If eventlog is data.frame, the activity instance classifier of the event log.
lifecycle_id	If eventlog is data.frame, the life cycle classifier of the event log.
timestamp	If eventlog is data.frame, the timestamp of the event log. Should refer to a Date or POSIXct field.
resource_id	If eventlog is data.frame, the resource identifier of the event log. A character vector containing variable names of length 1 or more.
...	Additional arguments, i.e. for fixing resource inconsistencies

first_n	<i>first_n</i>
---------	----------------

Description

Select first n activity instances.

Usage

```
first_n(log, n, eventlog = deprecated())

## S3 method for class 'eventlog'
first_n(log, n, eventlog = deprecated())

## S3 method for class 'activitylog'
first_n(log, n, eventlog = deprecated())

## S3 method for class 'grouped_log'
first_n(log, n, eventlog = deprecated())
```

Arguments

log	log : Object of class log or derivatives (grouped_log , eventlog , activitylog , etc.).
n	integer : The number of activity instances to select.
eventlog	[Deprecated] ; please use log instead.

Methods (by class)

- `first_n(eventlog)`: Select first n activity instances of an [eventlog](#).
- `first_n(activitylog)`: Select first n activity instances of an [activitylog](#).
- `first_n(grouped_log)`: Select first n activity instances of a [grouped_log](#).

`fix_resource_inconsistencies`*Fix resource inconsistencies*

Description

Fix resource inconsistencies

Usage

```
fix_resource_inconsistencies(  
    eventlog,  
    filter_condition,  
    overwrite_missings,  
    detected_problems,  
    details  
)  
  
## S3 method for class 'activitylog'  
fix_resource_inconsistencies(  
    eventlog,  
    filter_condition = NULL,  
    overwrite_missings = FALSE,  
    detected_problems = NULL,  
    details = TRUE  
)  
  
## S3 method for class 'eventlog'  
fix_resource_inconsistencies(  
    eventlog,  
    filter_condition = NULL,  
    overwrite_missings = FALSE,  
    detected_problems = NULL,  
    details = TRUE  
)
```

Arguments

<code>eventlog</code>	Event log object
<code>filter_condition</code>	Condition that is used to extract a subset of the activity log prior to the application of the function
<code>overwrite_missings</code>	If events are missing, overwrite the resource if other events within activity instance are performed by single resource. Default FALSE.

detected_problems	If available, the problems detected that need to be fixed. If not available, the function detect_resource_inconsistencies will be called.
details	Show details

Methods (by class)

- fix_resource_inconsistencies(activitylog): activitylog Fix activitylog
- fix_resource_inconsistencies(eventlog): eventlog Fix eventlog

grouped_activitylog *Grouped activitylog object*

Description

Lorem ipsum

grouped_eventlog *Grouped eventlog object*

Description

Lorem ipsum

grouped_log *Grouped log object*

Description

Lorem ipsum

group_by_activity *Group event log on activity id*

Description

Group an event log by activity identifier

Usage

group_by_activity(log)

Arguments

log [log](#): Object of class [log](#) or derivatives ([grouped_log](#), [eventlog](#), [activitylog](#), etc.).

group_by_activity_instance
Group event log on activity instance id

Description

Group an event log by activity instance identifier

Usage

```
group_by_activity_instance(log)
```

Arguments

log [log](#): Object of class [log](#) or derivatives ([grouped_log](#), [eventlog](#), [activitylog](#), etc.).

group_by_case *Group event log on case id*

Description

Group an event log by case identifier

Usage

```
group_by_case(log)
```

Arguments

log [log](#): Object of class [log](#) or derivatives ([grouped_log](#), [eventlog](#), [activitylog](#), etc.).

group_by_ids	<i>Group log on identifiers</i>
--------------	---------------------------------

Description

Group log on identifiers

Usage

```
group_by_ids(log, ...)

## S3 method for class 'log'
group_by_ids(log, ...)
```

Arguments

log	log: Object of class <code>log</code> or derivatives (<code>grouped_log</code> , <code>eventlog</code> , <code>activitylog</code> , etc.).
...	One or more of the following: <code>activity_id</code> , <code>case_id</code> , <code>activity_instance_id</code> , <code>resource_id</code> , <code>lifecycle_id</code>

Value

Grouped log

Methods (by class)

- `group_by_ids(log)`: Group log on identifiers

group_by_resource	<i>Group event log on resource id</i>
-------------------	---------------------------------------

Description

Group an event log by resource identifier

Usage

```
group_by_resource(log)
```

Arguments

log	log: Object of class <code>log</code> or derivatives (<code>grouped_log</code> , <code>eventlog</code> , <code>activitylog</code> , etc.).
-----	---

group_by_resource_activity

Group event log on resource and activity id

Description

Group an event log by resource and activity identifier

Usage

```
group_by_resource_activity(log)
```

Arguments

log [log](#): Object of class [log](#) or derivatives ([grouped_log](#), [eventlog](#), [activitylog](#), etc.).

is.log

Test if the Object is a Log

Description

This function returns TRUE if x inherits from the specified class, and FALSE for all other objects.

Usage

```
is.log(x)
```

```
is.eventlog(x)
```

```
is.activitylog(x)
```

```
is.grouped_log(x)
```

```
is.grouped_eventlog(x)
```

```
is.grouped_activitylog(x)
```

Arguments

x Any R object.

Value

is.log returns TRUE if the object inherits from the [log](#) class, otherwise FALSE.

is.eventlog returns TRUE if the object inherits from the [eventlog](#) class, otherwise FALSE.

is.activitylog returns TRUE if the object inherits from the [activitylog](#) class, otherwise FALSE.

is.grouped_log returns TRUE if the object inherits from the [grouped_log](#) class, otherwise FALSE.

is.grouped_eventlog returns TRUE if the object inherits from the [grouped_eventlog](#) class, otherwise FALSE.

is.grouped_activitylog returns TRUE if the object inherits from the [grouped_activitylog](#) class, otherwise FALSE.

See Also

[log](#), [eventlog](#), [activitylog](#), [grouped_log](#), [grouped_eventlog](#), [grouped_activitylog](#)

last_n	<i>last_n</i>
--------	---------------

Description

Select last n activity instances

Usage

```
last_n(log, n, eventlog = deprecated())
```

```
## S3 method for class 'eventlog'
last_n(log, n, eventlog = deprecated())
```

```
## S3 method for class 'activitylog'
last_n(log, n, eventlog = deprecated())
```

```
## S3 method for class 'grouped_log'
last_n(log, n, eventlog = deprecated())
```

Arguments

log [log](#): Object of class [log](#) or derivatives ([grouped_log](#), [eventlog](#), [activitylog](#), etc.).

n [integer](#): The number of activity instances to select.

eventlog **[Deprecated]**; please use log instead.

Methods (by class)

- last_n(eventlog): Select last n activity instances of an [eventlog](#).
- last_n(activitylog): Select last n activity instances of an [activitylog](#).
- last_n(grouped_log): Select last n activity instances of a [grouped_log](#).

`lifecycles`*Life cycles*

Description

Returns a [tibble](#) containing a list of all life cycle types in the log, with their absolute and relative frequency (# events).

Usage

```
lifecycles(log, eventlog = deprecated())

## S3 method for class 'eventlog'
lifecycles(log, eventlog = deprecated())

## S3 method for class 'grouped_eventlog'
lifecycles(log, eventlog = deprecated())

## S3 method for class 'activitylog'
lifecycles(log, eventlog = deprecated())

## S3 method for class 'grouped_activitylog'
lifecycles(log, eventlog = deprecated())
```

Arguments

`log` [log](#): Object of class [log](#) or derivatives ([grouped_log](#), [eventlog](#), [activitylog](#), etc.).

`eventlog` **[Deprecated]**; please use `log` instead.

Methods (by class)

- `lifecycles(eventlog)`: Generate lifecycle list for an [eventlog](#).
- `lifecycles(grouped_eventlog)`: Generate lifecycle list for a [grouped_eventlog](#).
- `lifecycles(activitylog)`: Generate lifecycle list for an [activitylog](#).
- `lifecycles(grouped_activitylog)`: Generate lifecycle list for an [grouped_activitylog](#).

See Also

[lifecycle_id](#)

lifecycle_id	<i>Life cycle classifier</i>
--------------	------------------------------

Description

Get the life_cycle_id of an object of class eventlog

Usage

```
lifecycle_id(x)

## S3 method for class 'eventlog'
lifecycle_id(x)

## S3 method for class 'eventlog_mapping'
lifecycle_id(x)
```

Arguments

x [eventlog](#): Object of class [eventlog](#), or [mapping](#).

Methods (by class)

- `lifecycle_id(eventlog)`: Retrieve lifecycle identifier from eventlog
- `lifecycle_id(eventlog_mapping)`: Retrieve lifecycle identifier from eventlog mapping

See Also

Other Classifiers: [activity_id\(\)](#), [activity_instance_id\(\)](#), [case_id\(\)](#), [resource_id\(\)](#), [set_activity_id\(\)](#), [set_activity_instance_id\(\)](#), [set_case_id\(\)](#), [set_lifecycle_id\(\)](#), [set_resource_id\(\)](#), [set_timestamp\(\)](#), [timestamps\(\)](#), [timestamp\(\)](#)

lifecycle_labels	<i>Get vector of lifecycle labels.</i>
------------------	--

Description

Retrieve a vector containing all unique lifecycle labels.

Usage

```
lifecycle_labels(log, eventlog = deprecated())

## S3 method for class 'eventlog'
lifecycle_labels(log, eventlog = deprecated())

## S3 method for class 'activitylog'
lifecycle_labels(log, eventlog = deprecated())
```

Arguments

log	log : Object of class log or derivatives (grouped_log , eventlog , activitylog , etc.).
eventlog	[Deprecated] ; please use log instead.

Methods (by class)

- `lifecycle_labels(eventlog)`: Retrieve lifecycle labels from an [eventlog](#).
- `lifecycle_labels(activitylog)`: Retrieve lifecycle labels from an [activitylog](#).

See Also

[lifecycle_id](#)

log	<i>Log object</i>
-----	-------------------

Description

Lorem ipsum

mapping	<i>Mapping</i>
---------	----------------

Description

Prints the mapping of an event log object.

Usage

```
mapping(log, eventlog = deprecated())
```

```
## S3 method for class 'eventlog'
mapping(log, eventlog = deprecated())
```

```
## S3 method for class 'activitylog'
mapping(log, eventlog = deprecated())
```

Arguments

log	log : Object of class log or derivatives (grouped_log , eventlog , activitylog , etc.).
eventlog	[Deprecated] ; please use log instead.

Methods (by class)

- `mapping(eventlog)`: Retrieve identifier mapping from eventlog
- `mapping(activitylog)`: Retrieve identifier mapping from activitylog

n_activities	<i>n_activities</i>
--------------	---------------------

Description

Returns the number of activities in an event log

Usage

```
n_activities(log, eventlog = deprecated())

## S3 method for class 'log'
n_activities(log, eventlog = deprecated())

## S3 method for class 'grouped_log'
n_activities(log, eventlog = deprecated())
```

Arguments

log	log : Object of class log or derivatives (grouped_log , eventlog , activitylog , etc.).
eventlog	[Deprecated] ; please use log instead.

Methods (by class)

- `n_activities(log)`: Count the number of activities in a log
- `n_activities(grouped_log)`: Count the number of activities for a grouped log

See Also

Other Counters: [n_activity_instances\(\)](#), [n_cases\(\)](#), [n_events\(\)](#), [n_resources\(\)](#), [n_traces\(\)](#)

`n_activity_instances` *n_activity_instances*

Description

Returns the number of activity instances in an event log

Usage

```
n_activity_instances(log, eventlog = deprecated())

## S3 method for class 'eventlog'
n_activity_instances(log, eventlog = deprecated())

## S3 method for class 'grouped_eventlog'
n_activity_instances(log, eventlog = deprecated())

## S3 method for class 'activitylog'
n_activity_instances(log, eventlog = deprecated())

## S3 method for class 'grouped_activitylog'
n_activity_instances(log, eventlog = deprecated())
```

Arguments

<code>log</code>	<code>log</code> : Object of class <code>log</code> or derivatives (<code>grouped_log</code> , <code>eventlog</code> , <code>activitylog</code> , etc.).
<code>eventlog</code>	[Deprecated] ; please use <code>log</code> instead.

Methods (by class)

- `n_activity_instances(eventlog)`: `eventlog`
- `n_activity_instances(grouped_eventlog)`: `grouped_eventlog`
- `n_activity_instances(activitylog)`: `eventlog`
- `n_activity_instances(grouped_activitylog)`: `grouped_activitylog`

See Also

Other Counters: `n_activities()`, `n_cases()`, `n_events()`, `n_resources()`, `n_traces()`

n_cases	<i>n_cases</i>
---------	----------------

Description

Returns the number of cases in an event log.

Usage

```
n_cases(log, eventlog = deprecated())

## S3 method for class 'log'
n_cases(log, eventlog = deprecated())

## S3 method for class 'grouped_log'
n_cases(log, eventlog = deprecated())
```

Arguments

log	log : Object of class log or derivatives (grouped_log , eventlog , activitylog , etc.).
eventlog	[Deprecated] ; please use log instead.

Methods (by class)

- `n_cases(log)`: Count number of cases in a [log](#).
- `n_cases(grouped_log)`: Count number of cases in a [grouped_log](#).

See Also

Other Counters: [n_activities\(\)](#), [n_activity_instances\(\)](#), [n_events\(\)](#), [n_resources\(\)](#), [n_traces\(\)](#)

n_events	<i>n_events</i>
----------	-----------------

Description

Returns the number of events in an event log.

Usage

```

n_events(log, eventlog = deprecated())

## S3 method for class 'eventlog'
n_events(log, eventlog = deprecated())

## S3 method for class 'grouped_eventlog'
n_events(log, eventlog = deprecated())

## S3 method for class 'activitylog'
n_events(log, eventlog = deprecated())

## S3 method for class 'grouped_activitylog'
n_events(log, eventlog = deprecated())

```

Arguments

log [log](#): Object of class [log](#) or derivatives ([grouped_log](#), [eventlog](#), [activitylog](#), etc.).

eventlog **[Deprecated]**; please use [log](#) instead.

Methods (by class)

- `n_events(eventlog)`: Count number of events in an [eventlog](#).
- `n_events(grouped_eventlog)`: Count number of events in a [grouped_eventlog](#).
- `n_events(activitylog)`: Count number of events in an [activitylog](#).
- `n_events(grouped_activitylog)`: Count number of events in an [grouped_activitylog](#).

See Also

Other Counters: [n_activities\(\)](#), [n_activity_instances\(\)](#), [n_cases\(\)](#), [n_resources\(\)](#), [n_traces\(\)](#)

n_resources

n_resources

Description

Returns the number of resources in an event log

Usage

```

n_resources(log, eventlog = deprecated())

## S3 method for class 'log'
n_resources(log, eventlog = deprecated())

## S3 method for class 'grouped_log'
n_resources(log, eventlog = deprecated())

```


Arguments

- log [log](#): Object of class [log](#) or derivatives ([grouped_log](#), [eventlog](#), [activitylog](#), etc.).
- eventlog **[Deprecated]**; please use log instead.

Methods (by class)

- `n_resources(log)`: Count number of resources in log
- `n_resources(grouped_log)`: Count number of resources in grouped log

See Also

Other Counters: [n_activities\(\)](#), [n_activity_instances\(\)](#), [n_cases\(\)](#), [n_events\(\)](#), [n_traces\(\)](#)

n_traces	<i>n_traces</i>
----------	-----------------

Description

Returns the number of traces in an event log

Usage

```
n_traces(log, eventlog = deprecated())

## S3 method for class 'log'
n_traces(log, eventlog = deprecated())

## S3 method for class 'grouped_log'
n_traces(log, eventlog = deprecated())
```

Arguments

- log [log](#): Object of class [log](#) or derivatives ([grouped_log](#), [eventlog](#), [activitylog](#), etc.).
- eventlog **[Deprecated]**; please use log instead.

Methods (by class)

- `n_traces(log)`: Count number of traces for eventlog
- `n_traces(grouped_log)`: Count number of traces for grouped eventlog

See Also

Other Counters: [n_activities\(\)](#), [n_activity_instances\(\)](#), [n_cases\(\)](#), [n_events\(\)](#), [n_resources\(\)](#)

print.eventlog_mapping

Generic print function for mapping.

Description

Generic print function for mapping.

Usage

```
## S3 method for class 'eventlog_mapping'  
print(x, ...)
```

Arguments

x	Mapping of eventlog or activitylog
...	Additional Arguments

print.log

Generic print function for eventlog

Description

Generic print function for eventlog

Usage

```
## S3 method for class 'log'  
print(x, ...)
```

Arguments

x	log : Object of class eventlog or activitylog .
...	Additional Arguments

resources	<i>Resources</i>
-----------	------------------

Description

Returns a tibble containing a list of all resources in the event log, with there absolute and relative frequency

Usage

```
resources(log, eventlog = deprecated())

## S3 method for class 'eventlog'
resources(log, eventlog = deprecated())

## S3 method for class 'activitylog'
resources(log, eventlog = deprecated())

## S3 method for class 'grouped_log'
resources(log, eventlog = deprecated())
```

Arguments

log	log : Object of class log or derivatives (grouped_log , eventlog , activitylog , etc.).
eventlog	[Deprecated] ; please use log instead.

Methods (by class)

- `resources(eventlog)`: Generate resource list for eventlog
- `resources(activitylog)`: Generate resource list for activitylog
- `resources(grouped_log)`: Compute activity frequencies

See Also

[resource_id](#), [eventlog](#)

resource_id	<i>Resource classifier</i>
-------------	----------------------------

Description

Get the resource classifier of an object of class eventlog.

Usage

```
resource_id(x)

## S3 method for class 'eventlog'
resource_id(x)

## S3 method for class 'eventlog_mapping'
resource_id(x)

## S3 method for class 'activitylog'
resource_id(x)

## S3 method for class 'activitylog_mapping'
resource_id(x)
```

Arguments

x [log](#): Object of class [eventlog](#) or [activitylog](#), or [mapping](#).

Methods (by class)

- `resource_id(eventlog)`: Retrieve resource identifier from eventlog
- `resource_id(eventlog_mapping)`: Retrieve resource identifier from eventlog mapping
- `resource_id(activitylog)`: Retrieve resource identifier from activitylog
- `resource_id(activitylog_mapping)`: Retrieve resource identifier from activitylog mapping

See Also

[eventlog](#), [mapping](#)

Other Classifiers: [activity_id\(\)](#), [activity_instance_id\(\)](#), [case_id\(\)](#), [lifecycle_id\(\)](#), [set_activity_id\(\)](#), [set_activity_instance_id\(\)](#), [set_case_id\(\)](#), [set_lifecycle_id\(\)](#), [set_resource_id\(\)](#), [set_timestamp\(\)](#), [timestamps\(\)](#), [timestamp\(\)](#)

resource_labels	<i>Get vector of resource labels</i>
-----------------	--------------------------------------

Description

Retrieve a vector containing all unique resource labels

Usage

```
resource_labels(log, eventlog = deprecated())
```

```
## Default S3 method:
```

```
resource_labels(log, eventlog = deprecated())
```

Arguments

log [log](#): Object of class [log](#) or derivatives ([grouped_log](#), [eventlog](#), [activitylog](#), etc.).

eventlog **[Deprecated]**; please use `log` instead.

Methods (by class)

- `resource_labels(default)`: Retrieve resource labels from eventlog

re_map	<i>Re map</i>
--------	---------------

Description

Construct an eventlog using an existing mapping.

Usage

```
re_map(x, mapping)
```

Arguments

x [log](#): Object of class [eventlog](#) or [activitylog](#).

mapping An existing mapping created by the mapping function

scale_fill_discrete_bupaR
bupaR color scales

Description

bupaR color scales

Usage

```
scale_fill_discrete_bupaR(  
  guide = "legend",  
  na.value = "grey50",  
  name = waiver()  
)  
  
scale_color_discrete_bupaR(  
  guide = "legend",  
  na.value = "grey50",  
  name = waiver()  
)  
  
scale_fill_continuous_bupaR(  
  guide = "colourbar",  
  na.value = "grey50",  
  name = waiver(),  
  palette = c("green", "orange")  
)  
  
scale_color_continuous_bupaR(  
  guide = "colourbar",  
  na.value = "grey50",  
  name = waiver()  
)  
  
scale_fill_gradient_bupaR(  
  guide = "colourbar",  
  na.value = "grey50",  
  name = waiver()  
)  
  
scale_color_gradient_bupaR(  
  guide = "colourbar",  
  na.value = "grey50",  
  name = waiver()  
)
```

```

scale_fill_gradient2_bupaR(
  guide = "colourbar",
  na.value = "grey50",
  name = waiver(),
  midpoint = 0
)

scale_color_gradient2_bupaR(
  guide = "colourbar",
  na.value = "grey50",
  name = waiver(),
  midpoint = 0
)

```

Arguments

guide	Type of legend. Use "colourbar" for continuous colour bar, or "legend" for discrete colour legend.
na.value	Colour to use for missing values
name	The name of the scale. Used as the axis or legend title. If waiver(), the default, the name of the scale is taken from the first mapping used for that aesthetic. If NULL, the legend title will be omitted.
palette	Color palette to be used for scale_._continuous_bupaR. Can be "green" (default) or "orange".
midpoint	The midpoint (in data value) of the diverging scale. Defaults to 0.

select_ids	<i>Select identifiers from log</i>
------------	------------------------------------

Description

Select identifiers from log

Usage

```

select_ids(log, ...)

## S3 method for class 'log'
select_ids(log, ...)

```

Arguments

log	log : Object of class log , eventlog , or activitylog .
...	One or more of the following: activity_id , case_id , activity_instance_id , resource_id , lifecycle_id

Methods (by class)

- `select_ids(log)`: Select identifiers from log

Examples

```
library(eventdataR)

patients %>% select_ids(activity_id, case_id)
```

set_activity_id	<i>Set activity id of log</i>
-----------------	-------------------------------

Description

Set activity id of log

Usage

```
set_activity_id(log, activity_id, eventlog = deprecated())

## Default S3 method:
set_activity_id(log, activity_id, eventlog = deprecated())
```

Arguments

log	<code>log</code> : Object of class <code>log</code> or derivatives (<code>grouped_log</code> , <code>eventlog</code> , <code>activitylog</code> , etc.).
activity_id	New activity id
eventlog	[Deprecated] ; please use <code>log</code> instead.

Methods (by class)

- `set_activity_id(default)`: Set activity id

See Also

Other Classifiers: `activity_id()`, `activity_instance_id()`, `case_id()`, `lifecycle_id()`, `resource_id()`, `set_activity_instance_id()`, `set_case_id()`, `set_lifecycle_id()`, `set_resource_id()`, `set_timestamp()`, `timestamps()`, `timestamp()`

set_activity_instance_id
Set activity instance id of log

Description

Set activity instance id of log

Usage

```
set_activity_instance_id(log, activity_instance_id, eventlog = deprecated())

## S3 method for class 'eventlog'
set_activity_instance_id(log, activity_instance_id, eventlog = deprecated())
```

Arguments

log **log**: Object of class **log** or derivatives (**grouped_log**, **eventlog**, **activitylog**, etc.).

activity_instance_id New activity_instance id

eventlog **[Deprecated]**; please use log instead.

Methods (by class)

- set_activity_instance_id(eventlog): Set activity_instance_id of eventlog

See Also

Other Classifiers: [activity_id\(\)](#), [activity_instance_id\(\)](#), [case_id\(\)](#), [lifecycle_id\(\)](#), [resource_id\(\)](#), [set_activity_id\(\)](#), [set_case_id\(\)](#), [set_lifecycle_id\(\)](#), [set_resource_id\(\)](#), [set_timestamp\(\)](#), [timestamps\(\)](#), [timestamp\(\)](#)

set_case_id *Set case id of log*

Description

Set case id of log

Usage

```
set_case_id(log, case_id, eventlog = deprecated())

## Default S3 method:
set_case_id(log, case_id, eventlog = deprecated())
```

Arguments

log	log : Object of class log or derivatives (grouped_log , eventlog , activitylog , etc.).
case_id	New case id
eventlog	[Deprecated] ; please use log instead.

Methods (by class)

- `set_case_id(default)`: Set case id

See Also

Other Classifiers: [activity_id\(\)](#), [activity_instance_id\(\)](#), [case_id\(\)](#), [lifecycle_id\(\)](#), [resource_id\(\)](#), [set_activity_id\(\)](#), [set_activity_instance_id\(\)](#), [set_lifecycle_id\(\)](#), [set_resource_id\(\)](#), [set_timestamp\(\)](#), [timestamps\(\)](#), [timestamp\(\)](#)

set_lifecycle_id	<i>Set lifecycle id of log</i>
------------------	--------------------------------

Description

Set lifecycle id of log

Usage

```
set_lifecycle_id(log, lifecycle_id, eventlog = deprecated())
```

```
## Default S3 method:
```

```
set_lifecycle_id(log, lifecycle_id, eventlog = deprecated())
```

Arguments

log	log : Object of class log or derivatives (grouped_log , eventlog , activitylog , etc.).
lifecycle_id	New lifecycle id. Can be multiple in case of activitylog
eventlog	[Deprecated] ; please use log instead.

Methods (by class)

- `set_lifecycle_id(default)`: Set lifecycle id

See Also

Other Classifiers: [activity_id\(\)](#), [activity_instance_id\(\)](#), [case_id\(\)](#), [lifecycle_id\(\)](#), [resource_id\(\)](#), [set_activity_id\(\)](#), [set_activity_instance_id\(\)](#), [set_case_id\(\)](#), [set_resource_id\(\)](#), [set_timestamp\(\)](#), [timestamps\(\)](#), [timestamp\(\)](#)

set_resource_id	<i>Set resource id of log</i>
-----------------	-------------------------------

Description

Set resource id of log

Usage

```
set_resource_id(log, resource_id, eventlog = deprecated())
```

```
## Default S3 method:
```

```
set_resource_id(log, resource_id, eventlog = deprecated())
```

Arguments

log [log](#): Object of class [log](#) or derivatives ([grouped_log](#), [eventlog](#), [activitylog](#), etc.).

resource_id New resource id

eventlog **[Deprecated]**; please use log instead.

Methods (by class)

- set_resource_id(default): Set resource id

See Also

Other Classifiers: [activity_id\(\)](#), [activity_instance_id\(\)](#), [case_id\(\)](#), [lifecycle_id\(\)](#), [resource_id\(\)](#), [set_activity_id\(\)](#), [set_activity_instance_id\(\)](#), [set_case_id\(\)](#), [set_lifecycle_id\(\)](#), [set_timestamp\(\)](#), [timestamps\(\)](#), [timestamp\(\)](#)

set_timestamp	<i>Set timestamp of eventlog</i>
---------------	----------------------------------

Description

Set timestamp of eventlog

Usage

```
set_timestamp(log, timestamp, eventlog = deprecated())
```

```
## S3 method for class 'eventlog'
```

```
set_timestamp(log, timestamp, eventlog = deprecated())
```

Arguments

log	log: Object of class <code>log</code> or derivatives (<code>grouped_log</code> , <code>eventlog</code> , <code>activitylog</code> , etc.).
timestamp	New timestamp
eventlog	[Deprecated] ; please use <code>log</code> instead.

Methods (by class)

- `set_timestamp(eventlog)`: Set timestamp of eventlog

See Also

Other Classifiers: `activity_id()`, `activity_instance_id()`, `case_id()`, `lifecycle_id()`, `resource_id()`, `set_activity_id()`, `set_activity_instance_id()`, `set_case_id()`, `set_lifecycle_id()`, `set_resource_id()`, `timestamps()`, `timestamp()`

simple_eventlog	<i>Simple Eventlog</i>
-----------------	------------------------

Description**[Superseded]**

A function to instantiate an object of class `eventlog` by specifying a `data.frame` or `tibble` and the minimally required case identifier, activity identifier and timestamp.

This function is superseded by the introduction of the `activitylog` format. Eventlogs in this 'simple' format can be seen as log of activities, and be created with `activitylog()`. If required, the resulting activity log can be transformed back to the `eventlog` format using `to_eventlog`.

Usage

```
simple_eventlog(
  eventlog,
  case_id = NULL,
  activity_id = NULL,
  timestamp = NULL,
  resource_id = NULL,
  order = "auto",
  return_type = c("eventlog", "activitylog")
)

isimple_eventlog(eventlog)
```

Arguments

eventlog	The data object to be used as event log. This can be a data.frame or tibble.
case_id	The case classifier of the event log.
activity_id	The activity classifier of the event log.
timestamp	The timestamp of the event log.
resource_id	The resource classifier of the event log (optional).
order	Configure how to handle sort events with equal timestamps: auto will use the order in the original data, alphabetical will sort the activity labels by alphabet, sorted will assume that the data frame is already correctly sorted and has a column '.order', providing a column name will use this column for ordering (can be numeric or character). The latter will never overrule timestamp orderings.
return_type	Whether to return eventlog (default) or activitylog object.

See Also

[eventlog](#), [case_id](#), [activity_id](#), [activity_instance_id](#), [lifecycle_id](#), [timestamp](#)

Examples

```
## Not run:
data <- data.frame(case = rep("A", 5),
  activity_id = c("A", "B", "C", "D", "E"),
  timestamp = date_decimal(1:5))
simple_eventlog(data, case_id = "case",
  activity_id = "activity_id",
  timestamp = "timestamp")

## End(Not run)
```

slice_activities	<i>Slice Activities</i>
------------------	-------------------------

Description

Take a slice of activity instances from event log

Usage

```
slice_activities(.data, ...)
```

Arguments

.data	log: Object of class eventlog or activitylog .
...	Slice index

slice_events *Slice Events*

Description

Take a slice of events from event log

Usage

```
slice_events(.data, ...)
```

Arguments

.data [log](#): Object of class [eventlog](#) or [activitylog](#)
... Slice index

standardize_lifecycle *Standardize format of lifecycle types*

Description

Standardize format of lifecycle types

Usage

```
standardize_lifecycle(eventlog)  
  
## S3 method for class 'eventlog'  
standardize_lifecycle(eventlog)
```

Arguments

eventlog The event log to be converted. An object of class eventlog.

Methods (by class)

- standardize_lifecycle(eventlog): Standardize lifecycle types for eventlog

summary.eventlog	<i>Generic summary function for eventlog class</i>
------------------	--

Description

Generic summary function for eventlog class

Usage

```
## S3 method for class 'eventlog'  
summary(object, ...)  
  
## S3 method for class 'grouped_eventlog'  
summary(object, ...)
```

Arguments

object	log : Object of class eventlog or activitylog
...	Ignored.

Methods (by class)

- summary(grouped_eventlog): Summary of grouped event log

timestamp	<i>Timestamp classifier</i>
-----------	-----------------------------

Description

Get the timestamp classifier of an object of class eventlog

Usage

```
timestamp(x)  
  
## S3 method for class 'eventlog'  
timestamp(x)  
  
## S3 method for class 'eventlog_mapping'  
timestamp(x)  
  
## S3 method for class 'activitylog'  
timestamp(x)  
  
## S3 method for class 'activitylog_mapping'  
timestamp(x)
```

Arguments

x Object of class [eventlog](#), or [mapping](#).

Methods (by class)

- `timestamp(eventlog)`: Retrieve timestamp identifier from eventlog
- `timestamp(eventlog_mapping)`: Retrieve timestamp identifier from eventlog mapping
- `timestamp(activitylog)`: Retrieve timestamp identifier from activitylog
- `timestamp(activitylog_mapping)`: Retrieve timestamp identifier from activitylog mapping

See Also

[eventlog](#), [mapping](#)

Other Classifiers: [activity_id\(\)](#), [activity_instance_id\(\)](#), [case_id\(\)](#), [lifecycle_id\(\)](#), [resource_id\(\)](#), [set_activity_id\(\)](#), [set_activity_instance_id\(\)](#), [set_case_id\(\)](#), [set_lifecycle_id\(\)](#), [set_resource_id\(\)](#), [set_timestamp\(\)](#), [timestamps\(\)](#)

timestamps

Timestamp classifiers

Description

Get the timestamps classifier of an object of class `activitylog`

Usage

```
timestamps(x)

## S3 method for class 'eventlog'
timestamps(x)

## S3 method for class 'eventlog_mapping'
timestamps(x)

## S3 method for class 'activitylog'
timestamps(x)

## S3 method for class 'activitylog_mapping'
timestamps(x)
```

Arguments

x Object of class [activitylog](#), or [mapping](#).

Methods (by class)

- `timestamps(eventlog)`: Retrieve timestamp identifier from eventlog
- `timestamps(eventlog_mapping)`: Retrieve timestamp identifier from eventlog mapping
- `timestamps(activitylog)`: Retrieve timestamp identifier from activitylog
- `timestamps(activitylog_mapping)`: Retrieve timestamp identifier from activitylog mapping

See Also

[activitylog, mapping](#)

Other Classifiers: [activity_id\(\)](#), [activity_instance_id\(\)](#), [case_id\(\)](#), [lifecycle_id\(\)](#), [resource_id\(\)](#), [set_activity_id\(\)](#), [set_activity_instance_id\(\)](#), [set_case_id\(\)](#), [set_lifecycle_id\(\)](#), [set_resource_id\(\)](#), [set_timestamp\(\)](#), [timestamp\(\)](#)

<code>to_activitylog</code>	<i>Convert eventlog object to activitylog object.</i>
-----------------------------	---

Description

Convert eventlog object to activitylog object.

Usage

```
to_activitylog(eventlog)
```

Arguments

<code>eventlog</code>	Object of class eventlog
-----------------------	--

<code>to_eventlog</code>	<i>Convert activitylog to eventlog</i>
--------------------------	--

Description

Convert activitylog to eventlog

Usage

```
to_eventlog(activitylog)
```

```
## S3 method for class 'activitylog'
to_eventlog(activitylog)
```

```
## S3 method for class 'grouped_activitylog'
to_eventlog(activitylog)
```

Arguments

activitylog Object of class [activitylog](#)

Methods (by class)

- to_eventlog(activitylog): Convert activitylog to eventlog
- to_eventlog(grouped_activitylog): Convert grouped activitylog to grouped eventlog

traces

Traces

Description

traces computes the different activity sequences of an event log together with their absolute and relative frequencies. Activity sequences are based on the start timestamp of activities.

Usage

```
traces(log, ..., eventlog = deprecated())
```

```
## S3 method for class 'log'
traces(log, ..., eventlog = deprecated())
```

```
## S3 method for class 'grouped_log'
traces(log, ..., eventlog = deprecated())
```

Arguments

log [log](#): Object of class [log](#) or derivatives ([grouped_log](#), [eventlog](#), [activitylog](#), etc.).

... Deprecated arguments

eventlog **[Deprecated]**; please use log instead.

Methods (by class)

- traces(log): Construct traces list for eventlog
- traces(grouped_log): Construct list of traces for grouped log

See Also

[cases](#), [eventlog](#)

trace_list	<i>Trace list</i>
------------	-------------------

Description

Construct trace list

Usage

```
trace_list(log, ..., eventlog = deprecated())

## S3 method for class 'eventlog'
trace_list(log, ..., eventlog = deprecated())

## S3 method for class 'activitylog'
trace_list(log, ..., eventlog = deprecated())

## S3 method for class 'grouped_log'
trace_list(log, ..., eventlog = deprecated())
```

Arguments

log	log : Object of class log or derivatives (grouped_log , eventlog , activitylog , etc.).
...	Other arguments. Currently not used.
eventlog	[Deprecated] ; please use log instead.

Methods (by class)

- `trace_list(eventlog)`: Construct trace list for event log
- `trace_list(activitylog)`: Construct trace list for activity log
- `trace_list(grouped_log)`: Construct list of traces for grouped log

ungroup_eventlog	<i>Ungroup event log</i>
------------------	--------------------------

Description

Remove groups from event log

Usage

```
ungroup_eventlog(log)

## S3 method for class 'eventlog'
ungroup_eventlog(log)

## S3 method for class 'grouped_log'
ungroup_eventlog(log)
```

Arguments

log Eventlog

Methods (by class)

- `ungroup_eventlog(eventlog)`: Remove groups from event log
- `ungroup_eventlog(grouped_log)`: Remove groups from [log](#).

Index

- * **Activity processing functions**
 - act_collapse, 7
 - act_recode, 8
 - act_unite, 9
- * **Classifiers**
 - activity_id, 5
 - activity_instance_id, 5
 - case_id, 13
 - lifecycle_id, 27
 - resource_id, 36
 - set_activity_id, 40
 - set_activity_instance_id, 41
 - set_case_id, 41
 - set_lifecycle_id, 42
 - set_resource_id, 43
 - set_timestamp, 43
 - timestamp, 47
 - timestamps, 48
- * **Counters**
 - n_activities, 29
 - n_activity_instances, 30
 - n_cases, 31
 - n_events, 31
 - n_resources, 32
 - n_traces, 33
- * **Eventlog classifiers**
 - mapping, 28
- * **Eventlog construction helpers**
 - assign_instance_id, 11
 - convert_timestamps, 15
- act_collapse, 7, 9, 10
- act_recode, 8, 8, 10
- act_unite, 8, 9, 9
- activities, 3
- activity_id, 4, 5, 6, 9, 10, 14, 18, 27, 36, 40–45, 48, 49
- activity_instance_id, 4, 5, 5, 14, 18, 27, 36, 40–45, 48, 49
- activity_labels, 6
- activitylog, 4, 4, 5, 7–16, 19, 21–26, 28–37, 39–51
- add_end_activity, 10
- add_start_activity (add_end_activity), 10
- as.grouped.data.frame, 11
- assign_instance_id, 11, 15
- bupaR, 12
- case_id, 5, 6, 13, 18, 27, 36, 40–45, 48, 49
- case_labels, 14
- case_list, 13, 14
- cases, 12, 50
- character, 10, 16
- convert_timestamps, 12, 15
- detect_resource_inconsistencies, 16
- difftime, 16
- durations, 12, 13, 16
- eventlog, 4, 5, 7–16, 17, 19, 21–37, 39–51
- events_to_activitylog, 18
- first_n, 19
- fix_resource_inconsistencies, 20
- group_by_activity, 21
- group_by_activity_instance, 22
- group_by_case, 22
- group_by_ids, 23
- group_by_resource, 23
- group_by_resource_activity, 24
- grouped_activitylog, 21, 25, 26, 32
- grouped_eventlog, 21, 25, 26, 32
- grouped_log, 4, 7–12, 14–16, 19, 21, 21, 22–26, 28–33, 35, 37, 40–44, 50, 51
- ieventlog (eventlog), 17
- integer, 19, 25
- is.activitylog (is.log), 24

- is.eventlog (is.log), 24
- is.grouped_activitylog (is.log), 24
- is.grouped_eventlog (is.log), 24
- is.grouped_log (is.log), 24
- is.log, 24
- isimple_eventlog (simple_eventlog), 44

- last_n, 25
- lifecycle_id, 5, 6, 14, 18, 26, 27, 28, 36, 40–45, 48, 49
- lifecycle_labels, 27
- lifecycles, 26
- log, 4, 5, 7–10, 12–16, 19, 21–26, 28, 28, 29–37, 39–47, 50–52

- mapping, 5, 13, 14, 27, 28, 36, 48, 49

- n_activities, 29, 30–33
- n_activity_instances, 29, 30, 31–33
- n_cases, 29, 30, 31, 32, 33
- n_events, 29–31, 31, 33
- n_resources, 29–32, 32, 33
- n_traces, 29–33, 33

- print.eventlog_mapping, 34
- print.log, 34

- re_map, 37
- resource_id, 5, 6, 14, 27, 35, 36, 40–44, 48, 49
- resource_labels, 37
- resources, 35

- scale_color_continuous_bupaR
 (scale_fill_discrete_bupaR), 38
- scale_color_discrete_bupaR
 (scale_fill_discrete_bupaR), 38
- scale_color_gradient2_bupaR
 (scale_fill_discrete_bupaR), 38
- scale_color_gradient_bupaR
 (scale_fill_discrete_bupaR), 38
- scale_fill_continuous_bupaR
 (scale_fill_discrete_bupaR), 38
- scale_fill_discrete_bupaR, 38
- scale_fill_gradient2_bupaR
 (scale_fill_discrete_bupaR), 38
- scale_fill_gradient_bupaR
 (scale_fill_discrete_bupaR), 38
- select_ids, 39

- set_activity_id, 5, 6, 14, 27, 36, 40, 41–44, 48, 49
- set_activity_instance_id, 5, 6, 14, 27, 36, 40, 41, 42–44, 48, 49
- set_case_id, 5, 6, 14, 27, 36, 40, 41, 41, 42–44, 48, 49
- set_lifecycle_id, 5, 6, 14, 27, 36, 40–42, 42, 43, 44, 48, 49
- set_resource_id, 5, 6, 14, 27, 36, 40–42, 43, 44, 48, 49
- set_timestamp, 5, 6, 14, 27, 36, 40–43, 43, 48, 49
- simple_eventlog, 44
- slice_activities, 45
- slice_events, 46
- standardize_lifecycle, 46
- summary.eventlog, 47
- summary.grouped_eventlog
 (summary.eventlog), 47

- tibble, 26
- timestamp, 5, 6, 14, 18, 27, 36, 40–45, 47, 49
- timestamps, 5, 6, 14, 27, 36, 40–44, 48, 48
- to_activitylog, 49
- to_eventlog, 49
- trace_list, 51
- traces, 50

- ungroup_eventlog, 51