Package 'dsROCrate'

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Title 'DataSHIELD' RO-Crate Governance Functions

Version 0.2.4

Description Tools for wrapping 'DataSHIELD' analyses into RO-Crate (Research Object Crate) objects. Provides functions to create structured metadata for federated data analysis projects, enabling governance tracking of data access, project membership, analysis execution and output validation across distributed data sources.

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Depends R (>= 4.1.0)

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URL https://github.com/FederatedMethods/dsROCrate

BugReports https://github.com/FederatedMethods/dsROCrate/issues

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`armadillo_login` *Login to a MOLGENIS' Armadillo server*

Description

Login to a MOLGENIS' Armadillo server. Wrapper for the function `DSMolgenisArmadillo::armadillo.get_credential`

Usage

```
armadillo_login(server)
```

Arguments

`server`	the URL of the Armadillo server

Value

MOLGENIS' Armadillo connection object.

Examples

```
## Not run:
  armadillo_login("https://armadillo-playground.molgenis.net/")

## End(Not run)
```

audit *Create an audit RO-Crate*

Description

Create an audit RO-Crate from a server connection. If given an RO-Crate, it is returned unchanged.

Usage

```
audit(x, ...)

## S3 method for class 'ArmadilloCredentials'
audit(x, ..., intent = NULL)

## S3 method for class 'character'
audit(x, ..., intent = NULL)

## S3 method for class 'cr8tor'
audit(x, ..., intent = NULL)

## S3 method for class 'list'
audit(x, ..., intent = NULL)

## S3 method for class 'opal'
audit(
  x,
  ...,
  intent = NULL,
  profile = "default",
  project = NULL,
  resources = NULL,
  tables = NULL,
  user = NULL,
  logs_from = -Inf,
  logs_to = Inf,
  path = NULL
)

## S3 method for class 'rocrate'
audit(x, ..., intent = NULL)
```

Arguments

x	Object to be audited. This can be • a *connection* to a DataSHIELD server (e.g., OBiBa's Opal). • a *path* pointing to an RO-Crate OR a `cr8tor` archive / governance bundle. • an *RO-Crate* object. If so, returns the input object.

	Alternatively, a list of any of the above.
`...`	Additional arguments.
`intent`	Additional object with governance bundle/specification of the intent of a project. It takes the same types as `x`.
`profile`	String with profile name.
`project`	String with project name(s) from which to extract Safe Project details.
`resources`	Vector of strings with the names of the resources, part of `project`. Optional, if not provided, all the resources associated to `project` will be included in the RO-Crate.
`tables`	Vector of strings with the names of the tables/datasets, part of `project`. Optional, if not provided, all the tables/datasets associated to `project` will be included in the RO-Crate.
`user`	String with the user name for which to extract Safe People details.
`logs_from`	Lower limit timestamp to filter out the outputs generated (default: `-Inf`, everything up to `logs_to`)
`logs_to`	Upper limit timestamp to filter out the outputs generated (default: `Inf`, everything from `logs_from` onwards).
`path`	String with path pointing to the root of the RO-Crate. This will be used to store log files. If not provided, logs will be stored within the RO-Crate returned by this function.

Details

This function handles various audit types, which will be dispatched based on the input object. If the input object is

- a *connection* to a DataSHIELD server (e.g., OBiBa's Opal): generates an RO-Crate object with deployment details, including outputs.
- a *path* pointing to
  - **a** `cr8tor` **archive / governance bundle**: generates an RO-Crate object with pre-deployment governance details.
  - **an RO-Crate object**: generates an RO-Crate object with clearly defined 5 Safes elements.
- an *RO-Crate* object: generates an RO-Crate object with clearly defined 5 Safes elements.

Value

RO-Crate with audit details.

`check_permissions` *Check backend connection permissions*

Description

Validates whether a backend connection has sufficient permissions for `{dsROCrate}` audit operations.

Usage

```
check_permissions(x, ...)

## S3 method for class 'ArmadilloCredentials'
check_permissions(x, ...)

## S3 method for class 'opal'
check_permissions(x, ..., verbose = FALSE)
```

Arguments

`x`	A backend connection object.
`...`	Additional arguments passed to methods.
`verbose`	Boolean value used to indicate if a success message should be displayed (default: FALSE)

Details

Currently, audit or administrator permissions are required.

Value

Returns `TRUE` invisibly if the connection has sufficient permissions.

See Also

```
vignette("audit-permissions", package = "dsROCrate")
```

`init` *Initialise a Five Safes RO-Crate*

Description

Creates a new RO-Crate configured for Five Safes auditing.

Usage

```
init(x, ...)

## S3 method for class 'ArmadilloCredentials'
init(x, ...)

## S3 method for class 'opal'
init(
  x,
  ...,
  rocrate = rocrateR::rocrate_5s(),
  profile = "default",
  project = NULL,
  resources = NULL,
  tables = NULL,
  path = NULL,
  user = NULL
)

## S3 method for class 'rocrate'
init(
  x,
  ...,
  connection = attr(x, "connection"),
  path = attr(x, "path"),
  profile = attr(x, "profile"),
  project = attr(x, "project"),
  resources = attr(x, "resources"),
  tables = attr(x, "tables"),
  user = attr(x, "user")
)
```

Arguments

`x`	This can be a connection to a 'DataSHIELD' server (e.g., object with the `opal` or `ArmadilloCredentials` classes), an RO-Crate (rocrate class) or a string with the path to an RO-Crate.
`...`	Further arguments passed on to the methods, which are documented as separate arguments below.

rocrate	RO-Crate object. Optional, if x is either an RO-Crate object or a path to a valid RO-Crate. If so, then connection is required (default: rocrateR::rocrate_5s()).
profile	String with profile name.
project	String with the name of the Safe Project.
resources	Vector of strings with the names of the resources, part of project. Optional, if not provided, all the resources associated to project will be included in the RO-Crate.
tables	Vector of strings with the names of the tables/datasets, part of project. Optional, if not provided, all the tables/datasets associated to project will be included in the RO-Crate.
path	String with path pointing to the root of the RO-Crate. This will be used to store log files. If not provided, logs will be stored within the RO-Crate returned by this function.
user	List (or entity object) with details for the Safe People, it must include @id and name entries. Alternatively, this can be a string with the name of the current user.
connection	Connection object for the 'DataSHIELD' server where the values will be extracted from (e.g., OBiBa's Opal). Optional, if x is set to a connection object. If so, then rocrate is required.

Value

Five Safes RO-Crate object.

References

Wilkinson, M., Dumontier, M., Aalbersberg, I. et al. (2016) The FAIR Guiding Principles for scientific data management and stewardship. Sci Data 3, 160018. https://doi.org/10.1038/sdata.2016.18

---

report *Create an RO-Crate report*

Description

Create an RO-Crate report

Usage

```
report(x, ...)

## S3 method for class 'ArmadilloCredentials'
report(x, ...)

## S3 method for class 'character'
report(
  x,
```

```
  ...,
  title = "DataSHIELD Report",
  filepath = tempfile(fileext = ".md"),
  render = TRUE,
  doc_format = "html",
  overwrite = FALSE,
  include_user_perm = TRUE,
  diag_title = "DataSHIELD server",
  diag_width = NULL,
  diag_height = NULL,
  max_line_length = 200
)

## S3 method for class 'list'
report(
  x,
  ...,
  title = "DataSHIELD Report",
  filepath = tempfile(fileext = ".md"),
  render = TRUE,
  doc_format = "html",
  overwrite = FALSE,
  include_user_perm = TRUE,
  diag_title = "DataSHIELD server",
  diag_width = NULL,
  diag_height = NULL,
  max_line_length = 200
)

## S3 method for class 'rocrate'
report(
  x,
  ...,
  title = "DataSHIELD Report",
  filepath = tempfile(fileext = ".md"),
  render = TRUE,
  doc_format = "html",
  overwrite = FALSE,
  include_user_perm = TRUE,
  diag_title = "DataSHIELD server",
  diag_width = NULL,
  diag_height = NULL,
  max_line_length = 200
)
```

Arguments

x	This can be an RO-Crate (rocrate class) or a string with the path to an RO-Crate.

...	Further arguments passed on to the methods, which are documented as separate arguments below.
title	String with title for the report (default: 'DataSHIELD Report').
filepath	String with file path for Markdown report with the summary of the given object, x.
render	Boolean flag to indicate whether to render the markdown report.
doc_format	String with file format for the markdown report.
overwrite	Boolean flag to indicate whether to overwrite a previous version of markdown report.
include_user_perm	Boolean flag to indicate whether to include user permissions in the report overview's diagram.
diag_title	String with title for the 'root' of the diagram (default: 'DataSHIELD server').
diag_width	Numeric value with width (in inches) for the report overview's diagram (default: NULL, estimated based on number of nodes).
diag_height	Numeric value with height (in inches) for the report overview's diagram (default: NULL, estimated based on number of nodes).
max_line_length	Integer with the maximum number of characters per line in the RO-Crate to be printed in the report.

Value

RO-Crate report as markdown (.md) file and/or HTML.

`safe_data` *Safe Data details*

Description

Safe Data details for the RO-Crate.

Usage

```
safe_data(x, ...)

## S3 method for class 'ArmadilloCredentials'
safe_data(x, ...)

## S3 method for class 'character'
safe_data(
  x,
  ...,
  profile = attr(x, "profile"),
```

```
  project = attr(x, "project"),
  resources = attr(x, "resources"),
  tables = attr(x, "tables"),
  asset_id_suffix = "#asset:",
  project_id_suffix = "#project:",
  connection = attr(x, "connection"),
  path = attr(x, "path"),
  user = attr(x, "user")
)

## S3 method for class 'opal'
safe_data(
  x,
  ...,
  rocrate = rocrateR::rocrate_5s(),
  profile = "default",
  project = NULL,
  resources = NULL,
  tables = NULL,
  include = c("tables", "resources"),
  asset_id_suffix = "#asset:",
  project_id_suffix = "#project:",
  path = NULL,
  user = NULL
)

## S3 method for class 'rocrate'
safe_data(
  x,
  ...,
  profile = attr(x, "profile"),
  project = attr(x, "project"),
  resources = attr(x, "resources"),
  tables = attr(x, "tables"),
  asset_id_suffix = "#asset:",
  project_id_suffix = "#project:",
  connection = attr(x, "connection"),
  path = attr(x, "path"),
  user = attr(x, "user")
)
```

Arguments

x	This can be a connection to a 'DataSHIELD' server (e.g., object with the `opal` or `ArmadilloCredentials` classes), an RO-Crate (rocrate class) or a string with the path to an RO-Crate.
...	Further arguments passed on to the methods, which are documented as separate arguments below.

`profile`	String with profile name.
`project`	String with the name of the Safe Project.
`resources`	Vector of strings with the names of the resources, part of `project`. Optional, if not provided, all the resources associated to `project` will be included in the RO-Crate.
`tables`	Vector of strings with the names of the tables/datasets, part of `project`. Optional, if not provided, all the tables/datasets associated to `project` will be included in the RO-Crate.
`asset_id_suffix`	String with ID suffix for the tables/datasets entities in the RO-Crate (default: `"#asset:"`).
`project_id_suffix`	String with ID suffix for the project entities in the RO-Crate (default: `"#project:"`).
`connection`	Connection object for the 'DataSHIELD' server where the values will be extracted from (e.g., OBiBa's Opal). Optional, if `x` is set to a connection object. If so, then `rocrate` is required.
`path`	String with path pointing to the root of the RO-Crate. This will be used to store log files. If not provided, logs will be stored within the RO-Crate returned by this function.
`user`	List (or entity object) with details for the Safe People, it must include `@id` and `name` entries. Alternatively, this can be a string with the `name` of the current user.
`rocrate`	RO-Crate object. Optional, if `x` is either an RO-Crate object or a path to a valid RO-Crate. If so, then `connection` is required (default: `rocrateR::rocrate_5s()`).
`include`	Vector of strings with types of assets to be included, either `"resources"`, `"tables"` or both.

Details

Researchers only use de-identified data that is relevant to their study.

In compliance with the Digital Economy Act, data is effectively anonymised within TREs (Trusted Research Environments).

This means any sensitive information that might lead to an individual being identified, such as names and addresses, is either removed or replaced with a random code. Researchers are not processing personal data when using data prepared in this way and when the other Safes are in place. Find out more about de-identification: https://www.researchdata.scot/engage-and-learn/data-explainers/what-is-data-de-identification/

Value

Updated RO-Crate object with Safe Data information.

Source

- Research Data Scotland, 2025. "What is the Five Safes framework?". https://www.researchdata.scot/engage-and-learn/data-explainers/what-is-the-five-safes-framework/

safe_output *Safe Output details*

Description

Safe Output details for the RO-Crate.

Usage

```
safe_output(x, ...)

## S3 method for class 'ArmadilloCredentials'
safe_output(x, ...)

## S3 method for class 'character'
safe_output(
  x,
  ...,
  path = attr(x, "path"),
  user = attr(x, "user"),
  logs_to = Sys.time(),
  logs_from = logs_to - 24 * 60^2,
  connection = attr(x, "connection"),
  profile = attr(x, "profile"),
  project = attr(x, "project"),
  resources = attr(x, "resources"),
  tables = attr(x, "tables")
)

## S3 method for class 'opal'
safe_output(
  x,
  ...,
  rocrate = rocrateR::rocrate_5s(),
  path = NULL,
  user = NULL,
  logs_to = Sys.time(),
  logs_from = logs_to - 24 * 60^2,
  profile = "default",
  project = NULL,
  resources = NULL,
  tables = NULL
)

## S3 method for class 'rocrate'
safe_output(
  x,
```

```
  ...,
  path = attr(x, "path"),
  user = attr(x, "user"),
  logs_to = Sys.time(),
  logs_from = logs_to - 24 * 60^2,
  connection = attr(x, "connection"),
  profile = attr(x, "profile"),
  project = attr(x, "project"),
  resources = attr(x, "resources"),
  tables = attr(x, "tables")
)
```

Arguments

x	This can be a connection to a 'DataSHIELD' server (e.g., object with the `opal` or `ArmadilloCredentials` classes), an RO-Crate (rocrate class) or a string with the path to an RO-Crate.
...	Further arguments passed on to the methods, which are documented as separate arguments below.
path	String with path pointing to the root of the RO-Crate. This will be used to store log files. If not provided, logs will be stored within the RO-Crate returned by this function.
user	List (or entity object) with details for the Safe People, it must include `@id` and `name` entries. Alternatively, this can be a string with the `name` of the current user.
logs_to	Upper limit timestamp to filter out the outputs generated (default: `Sys.time()`, current system time).
logs_from	Lower limit timestamp to filter out the outputs generated (default: `Sys.time() - 24 * 60 ^ 2`, last 24 hours).
connection	Connection object for the 'DataSHIELD' server where the values will be extracted from (e.g., OBiBa's Opal). Optional, if `x` is set to a connection object. If so, then `rocrate` is required.
profile	String with profile name.
project	String with the name of the Safe Project.
resources	Vector of strings with the names of the resources, part of `project`. Optional, if not provided, all the resources associated to `project` will be included in the RO-Crate.
tables	Vector of strings with the names of the tables/datasets, part of `project`. Optional, if not provided, all the tables/datasets associated to `project` will be included in the RO-Crate.
rocrate	RO-Crate object. Optional, if `x` is either an RO-Crate object or a path to a valid RO-Crate. If so, then `connection` is required (default: `rocrateR::rocrate_5s()`).

Details

All research outputs are checked to ensure individuals cannot be identified even in the public domain.

This means the other four Safes no longer apply.

Before outputs are released from the TRE, they are checked to make sure it is reasonably unlikely that any individuals can be identified on publication. Compliance with the Digital Economy Act also requires that the TRE applies methods and standards for output checking that are accredited by the UK Statistics Authority.

Value

Updated RO-Crate object with Safe Outputs information.

Source

- Research Data Scotland, 2025. "What is the Five Safes framework?". https://www.researchdata.scot/engage-and-learn/data-explainers/what-is-the-five-safes-framework/

---

safe_people *Safe People details*

Description

Safe People details for the RO-Crate.

Usage

```
safe_people(x, ...)

## S3 method for class 'ArmadilloCredentials'
safe_people(x, ...)

## S3 method for class 'character'
safe_people(
  x,
  ...,
  user = attr(x, "user"),
  user_id_suffix = "#person:",
  set_author = TRUE,
  set_project = TRUE,
  connection = attr(x, "connection"),
  path = attr(x, "path"),
  profile = attr(x, "profile"),
  project = attr(x, "project"),
  resources = attr(x, "resources"),
  tables = attr(x, "tables")
)

## S3 method for class 'opal'
safe_people(
```

```
  x,
  ...,
  rocrate = rocrateR::rocrate_5s(),
  user = NULL,
  user_id_suffix = "#person:",
  set_author = TRUE,
  set_project = TRUE,
  path = NULL,
  profile = "default",
  project = NULL,
  resources = NULL,
  tables = NULL
)

## S3 method for class 'rocrate'
safe_people(
  x,
  ...,
  user = attr(x, "user"),
  user_id_suffix = "#person:",
  set_author = TRUE,
  set_project = TRUE,
  connection = attr(x, "connection"),
  path = attr(x, "path"),
  profile = attr(x, "profile"),
  project = attr(x, "project"),
  resources = attr(x, "resources"),
  tables = attr(x, "tables")
)
```

Arguments

x	This can be a connection to a 'DataSHIELD' server (e.g., object with the `opal` or `ArmadilloCredentials` classes), an RO-Crate (rocrate class) or a string with the path to an RO-Crate.
...	Further arguments passed on to the methods, which are documented as separate arguments below.
user	List (or entity object) with details for the Safe People, it must include `@id` and `name` entries. Alternatively, this can be a string with the `name` of the current user.
user_id_suffix	String with ID suffix for the people/user entities in the RO-Crate (default: `"#person:"`).
set_author	Boolean flag to indicate if the current user should be set as the author of the RO-Crate.
set_project	Boolean flag to indicate if any `Project` entities found in `x` should be linked to the Safe People entity.
connection	Connection object for the 'DataSHIELD' server where the values will be extracted from (e.g., OBiBa's Opal). Optional, if `x` is set to a connection object. If so, then `rocrate` is required.

path	String with path pointing to the root of the RO-Crate. This will be used to store log files. If not provided, logs will be stored within the RO-Crate returned by this function.
profile	String with profile name.
project	String with the name of the Safe Project.
resources	Vector of strings with the names of the resources, part of project. Optional, if not provided, all the resources associated to project will be included in the RO-Crate.
tables	Vector of strings with the names of the tables/datasets, part of project. Optional, if not provided, all the tables/datasets associated to project will be included in the RO-Crate.
rocrate	RO-Crate object. Optional, if x is either an RO-Crate object or a path to a valid RO-Crate. If so, then connection is required (default: rocrateR::rocrate_5s()).

Details

Researchers must be accredited and trained before accessing the data that has been prepared for them.

The access service provider may require the researcher to sign a statement that they know and understand the regulations of the TRE.

Value

Updated RO-Crate object with Safe People information.

Source

- Research Data Scotland, 2025. "What is the Five Safes framework?". https://www.researchdata.scot/engage-and-learn/data-explainers/what-is-the-five-safes-framework/

---

safe_project *Safe Project details*

Description

Safe Project details for the RO-Crate.

Usage

```
safe_project(x, ...)

## S3 method for class 'ArmadilloCredentials'
safe_project(
  x,
  ...,
  profile = "default",
```

```
  project = NULL,
  rocrate = rocrateR::rocrate_5s(),
  asset_id_suffix = "#asset:",
  project_id_suffix = "#project:",
  path = NULL,
  resources = NULL,
  tables = NULL,
  user = NULL
)

## S3 method for class 'character'
safe_project(
  x,
  ...,
  profile = attr(x, "profile"),
  project = attr(x, "project"),
  asset_id_suffix = "#asset:",
  project_id_suffix = "#project:",
  connection = attr(x, "connection"),
  path = attr(x, "path"),
  resources = attr(x, "resources"),
  tables = attr(x, "tables"),
  user = attr(x, "user")
)

## S3 method for class 'opal'
safe_project(
  x,
  ...,
  profile = "default",
  project = NULL,
  rocrate = rocrateR::rocrate_5s(),
  asset_id_suffix = "#asset:",
  project_id_suffix = "#project:",
  path = NULL,
  resources = NULL,
  tables = NULL,
  user = NULL
)

## S3 method for class 'rocrate'
safe_project(
  x,
  ...,
  profile = attr(x, "profile"),
  project = attr(x, "project"),
  asset_id_suffix = "#asset:",
  project_id_suffix = "#project:",
```

```
  connection = attr(x, "connection"),
  path = attr(x, "path"),
  resources = attr(x, "resources"),
  tables = attr(x, "tables"),
  user = attr(x, "user")
)
```

Arguments

x	This can be a connection to a 'DataSHIELD' server (e.g., object with the opal or ArmadilloCredentials classes), an RO-Crate (rocrate class) or a string with the path to an RO-Crate.
...	Further arguments passed on to the methods, which are documented as separate arguments below.
profile	String with profile name.
project	String with the name of the Safe Project.
rocrate	RO-Crate object. Optional, if x is either an RO-Crate object or a path to a valid RO-Crate. If so, then connection is required (default: rocrateR::rocrate_5s()).
asset_id_suffix	String with ID suffix for the tables/datasets entities in the RO-Crate (default: "#asset:").
project_id_suffix	String with ID suffix for the project entities in the RO-Crate (default: "#project:").
path	String with path pointing to the root of the RO-Crate. This will be used to store log files. If not provided, logs will be stored within the RO-Crate returned by this function.
resources	Vector of strings with the names of the resources, part of project. Optional, if not provided, all the resources associated to project will be included in the RO-Crate.
tables	Vector of strings with the names of the tables/datasets, part of project. Optional, if not provided, all the tables/datasets associated to project will be included in the RO-Crate.
user	List (or entity object) with details for the Safe People, it must include @id and name entries. Alternatively, this can be a string with the name of the current user.
connection	Connection object for the 'DataSHIELD' server where the values will be extracted from (e.g., OBiBa's Opal). Optional, if x is set to a connection object. If so, then rocrate is required.

Details

Data must be used ethically, for research that delivers clear public benefit.

As part of their application, researchers are asked to provide an overview of their project, including how the data will be used and what outputs will be achieved. This allows data providers to make an informed decision about whether they are comfortable preparing data for the researcher to use for ethical purposes serving a public good.

Value

Updated RO-Crate object with Safe Project information.

Source

- Research Data Scotland, 2025. "What is the Five Safes framework?". https://www.researchdata.scot/engage-and-learn/data-explainers/what-is-the-five-safes-framework/

---

safe_setting *Safe Setting details*

Description

Safe Setting details for the RO-Crate.

Usage

```
safe_setting(x, ...)

## S3 method for class 'ArmadilloCredentials'
safe_setting(x, ...)

## S3 method for class 'character'
safe_setting(
  x,
  ...,
  connection = attr(x, "connection"),
  path = attr(x, "path"),
  profile = attr(x, "profile"),
  project = attr(x, "project"),
  tables = attr(x, "tables"),
  resources = attr(x, "resources"),
  user = attr(x, "user")
)

## S3 method for class 'cr8tor'
safe_setting(x, ..., rocrate = rocrateR::rocrate_5s())

## S3 method for class 'opal'
safe_setting(
  x,
  ...,
  rocrate = rocrateR::rocrate_5s(),
  path = NULL,
  profile = "default",
  project = NULL,
  resources = NULL,
```

```
  tables = NULL,
  user = NULL
)

## S3 method for class 'rocrate'
safe_setting(
  x,
  ...,
  connection = attr(x, "connection"),
  path = attr(x, "path"),
  profile = attr(x, "profile"),
  project = attr(x, "project"),
  resources = attr(x, "resources"),
  tables = attr(x, "tables"),
  user = attr(x, "user")
)
```

Arguments

x	This can be a connection to a 'DataSHIELD' server (e.g., object with the opal or ArmadilloCredentials classes), an RO-Crate (rocrate class) or a string with the path to an RO-Crate.
...	Further arguments passed on to the methods, which are documented as separate arguments below.
connection	Connection object for the 'DataSHIELD' server where the values will be extracted from (e.g., OBiBa's Opal). Optional, if x is set to a connection object. If so, then rocrate is required.
path	String with path pointing to the root of the RO-Crate. This will be used to store log files. If not provided, logs will be stored within the RO-Crate returned by this function.
profile	String with profile name.
project	String with the name of the Safe Project.
tables	Vector of strings with the names of the tables/datasets, part of project. Optional, if not provided, all the tables/datasets associated to project will be included in the RO-Crate.
resources	Vector of strings with the names of the resources, part of project. Optional, if not provided, all the resources associated to project will be included in the RO-Crate.
user	List (or entity object) with details for the Safe People, it must include @id and name entries. Alternatively, this can be a string with the name of the current user.
rocrate	RO-Crate object. Optional, if x is either an RO-Crate object or a path to a valid RO-Crate. If so, then connection is required (default: rocrateR::rocrate_5s()).

Details

The organisational and technical settings used to access data are designed to minimise the risk of accidental disclosure of data.

These settings also prevent the deliberate disclosure of data to others.

Physical settings for data access can include locations like SafePods – secured rooms that use controlled door access, CCTV and secure technology to ensure that sensitive data cannot be mishandled or removed from the Safe Setting. Researchers can analyse the data in these secure rooms, but do not have access to the internet, external devices (such as printers), or any other way of removing protected data from the space.

Digital Safe Settings provide secure access to data from a remote location. To be approved for remote data access, researchers will need to prove that their organisation meets physical and IT security standards.

Value

Updated RO-Crate object with Safe Settings information.

Source

- Research Data Scotland, 2025. "What is the Five Safes framework?". https://www.researchdata.scot/engage-and-learn/data-explainers/what-is-the-five-safes-framework/

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