Package: EDIutils (via r-universe)

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Title An API Client for the Environmental Data Initiative Repository

Version 1.0.3

Description A client for the Environmental Data Initiative repository REST API. The 'EDI' data repository <https://portal.edirepository.org/nis/home.jsp> is for publication and reuse of ecological data with emphasis on metadata accuracy and completeness. It is built upon the 'PASTA+' software stack <https://pastaplus-core.readthedocs.io/en/latest/index.html#> and was developed in collaboration with the US 'LTER' Network <https://lternet.edu/>. 'EDIutils' includes functions to search and access existing data, evaluate and upload new data, and assist other data management tasks common to repository users.

Imports curl, httr, jsonlite, xml2

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Encoding UTF-8

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Contents

`check_status_create` *Check data package creation status*

Description

Check data package creation status

Usage

```
check_status_create(transaction, wait = TRUE, env = "production")
```

Arguments

`transaction`	(character) Transaction identifier
`wait`	(logical) Wait for evaluation to complete? See details below.
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Details

If `wait = TRUE`, then the function will enter a "while" loop checking every 2 seconds for the completed evaluation report. If `wait = FALSE`, then the function will only check once and return the result.

Value

(logical) TRUE if creation has completed, FALSE if in progress, and error if an error was encountered while processing the request

Note

User authentication is required (see `login()`)

See Also

Other Evaluation and Upload: `check_status_evaluate()`, `check_status_update()`, `create_data_package()`, `evaluate_data_package()`, `update_data_package()`

Examples

```
## Not run:

login()

# Create data package
transaction <- create_data_package(
  eml = paste0(tempdir(), "/edi.595.1.xml"),
  env = "staging"
)
transaction
#> [1] "create_163966765080210573__edi.595.1"

# Check creation status
status <- check_status_create(
  transaction = transaction,
  env = "staging"
)
status
#> [1] TRUE

logout()

## End(Not run)
```

check_status_evaluate *Check status of data package evaluation*

Description

Check status of data package evaluation

Usage

```
check_status_evaluate(transaction, wait = TRUE, env = "production")
```

Arguments

transaction	(character) Transaction identifier
wait	(logical) Wait for evaluation to complete? See details below.
env	(character) Repository environment. Can be: "production", "staging", or "development".

Details

If `wait = TRUE`, then the function will enter a "while" loop checking every 2 seconds for the completed evaluation report. If `wait = FALSE`, then the function will only check once and return the result.

Value

(logical) TRUE if evaluation has completed, FALSE if in progress, and error if an error was encountered while processing the request

Note

User authentication is required (see `login()`)

See Also

Other Evaluation and Upload: `check_status_create()`, `check_status_update()`, `create_data_package()`, `evaluate_data_package()`, `update_data_package()`

Examples

```
## Not run:

login()

# Evaluate data package
transaction <- evaluate_data_package(
  eml = paste0(tempdir(), "/edi.595.1.xml"),
  env = "staging"
```

```
)
transaction
#> [1] "evaluate_163966785813042760"

# Check evaluation status
status <- check_status_evaluate(
  transaction = transaction,
  env = "staging"
)
status
#> [1] TRUE

logout()

## End(Not run)
```

`check_status_update` *Check data package update status*

Description

Check data package update status

Usage

```
check_status_update(transaction, wait = TRUE, env = "production")
```

Arguments

`transaction`	(character) Transaction identifier
`wait`	(logical) Wait for evaluation to complete? See details below.
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Details

If `wait = TRUE`, then the function will enter a "while" loop checking every 2 seconds for the completed evaluation report. If `wait = FALSE`, then the function will only check once and return the result.

Value

(logical) TRUE if the update has completed, FALSE if in progress, and error if an error was encountered while processing the request

Note

User authentication is required (see `login()`)

See Also

Other Evaluation and Upload: check_status_create(), check_status_evaluate(), create_data_package(), evaluate_data_package(), update_data_package()

Examples

```
## Not run:

login()

# Update data package
transaction <- update_data_package(
  eml = paste0(tempdir(), "/edi.595.2.xml"),
  env = "staging"
)
transaction
#> [1] "update_edi.595_163966788658131920__edi.595.2"

# Check update status
status <- check_status_update(
  transaction = transaction,
  env = "staging"
)
status
#> [1] TRUE

logout()

## End(Not run)
```

---

create_data_package *Create data package*

Description

Create data package

Usage

```
create_data_package(eml, env = "production")
```

Arguments

eml	(character) Full path to an EML file describing the data package to be created
env	(character) Repository environment. Can be: "production", "staging", or "development".

Details

Each data entity described in `eml` must be accompanied by a web accessible URL at the EML XPath ".//physical/distribution/online/url". The EDI data repository downloads the data entities via this URL. The URLs must be static and not have any redirects otherwise the data entities will not be downloaded.

Value

transaction (character) Transaction identifier. May be used in a subsequent call to `check_status_create()` to determine the operation status

Note

User authentication is required (see `login()`)

See Also

Other Evaluation and Upload: `check_status_create()`, `check_status_evaluate()`, `check_status_update()`, `evaluate_data_package()`, `update_data_package()`

Examples

```
## Not run:

login()

# Create data package
transaction <- create_data_package(
  eml = paste0(tempdir(), "/edi.595.1.xml"),
  env = "staging"
)
transaction
#> [1] "create_163966765080210573__edi.595.1"

# Check creation status
status <- check_status_create(
  transaction = transaction,
  env = "staging"
)
status
#> [1] TRUE

logout()

## End(Not run)
```

create_data_package_archive *Create data package archive (zip)*

Description

This function is DEPRECATED.

Usage

```
create_data_package_archive(packageId, env = "production")
```

Arguments

packageId	(character) Data package identifier
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

transaction (character) Transaction identifier.

See Also

Other Miscellaneous: `create_dn()`, `is_authorized()`

create_dn *Create a users distinguished name*

Description

Create a users distinguished name

Usage

```
create_dn(userId, ou = "EDI")
```

Arguments

userId	(character) User identifier of an EDI data repository account
ou	(character) Organizational unit in which `userId` belongs. Can be "EDI" or "LTER". All `userId` issued after "2020-05-01" have `ou = "EDI"`.

Value

(character) Distinguished name

See Also

Other Miscellaneous: `create_data_package_archive()`, `is_authorized()`

Examples

```
# For an EDI account
dn <- create_dn(userId = "my_userid", ou = "EDI")
dn

# For an LTER account
dn <- create_dn(userId = "my_userid", ou = "LTER")
dn
```

`create_event_subscription`

Create event subscription

Description

Create event subscription

Usage

```
create_event_subscription(packageId, url, env = "production")
```

Arguments

`packageId`	(character) Data package identifier
`url`	(character) Where the event notification will be sent
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(numeric) Event subscription identifier

Note

User authentication is required (see `login()`)

The `url` must have "http" as its scheme and must be able to receive POST requests with MIME type text/plain. Additionally, because the `url` will be passed in an XML body, some characters must be escaped, such as ampersands from & to &.

See Also

Other Event Notifications: `delete_event_subscription()`, `execute_event_subscription()`, `get_event_subscription_schema()`, `get_event_subscription()`, `query_event_subscriptions()`

Examples

```
## Not run:

login()

# Create subscription
subscriptionId <- create_event_subscription(
  packageId = "knb-lter-vcr.340.1",
  url = "https://my.webserver.org/",
  env = "staging"
)
subscriptionId
#> [1] 48

# Execute subscription
execute_event_subscription(subscriptionId, env = "staging")
#> [1] TRUE

# Delete subscription
delete_event_subscription(subscriptionId, env = "staging")
#> [1] TRUE

logout()

## End(Not run)
```

---

create_journal_citation

Create journal citation

Description

Create journal citation

Usage

```
create_journal_citation(
  packageId,
  articleDoi = NULL,
  articleUrl = NULL,
  articleTitle = NULL,
  journalTitle = NULL,
  relationType,
  env = "production"
)
```

Arguments

packageId	(character) Data package identifier
articleDoi	(character) Article DOI. Required if articleUrl is missing.
articleUrl	(character) Article URL. Required if articleDoi is missing.
articleTitle	(character) Article title
journalTitle	(character) Journal title
relationType	(character) Relation between citation and data package. Can be: "IsCitedBy" this data package is formally cited in the manuscript; "IsDescribedBy" - this data package is explicitly described within the manuscript; "IsReferencedBy" - this data package is implicitly described within the manuscript.
env	(character) Repository environment. Can be: "production", "staging", or "development".

Details

Creates a new journal citation entry in the EDI data repository

Value

(numeric) Journal citation identifier

Note

User authentication is required (see login())

See Also

Other Journal Citations: delete_journal_citation(), get_journal_citation(), list_data_package_citations(), list_principal_owner_citations()

Examples

```
## Not run:

login()

# Create journal citation
journalCitationId <- create_journal_citation(
  packageId = "edi.17.1",
  articleDoi = "10.1890/11-1026.1",
  articleTitle = "Corridors promote fire via connectivity and edge effects",
  journalTitle = "Ecological Applications",
  relationType = "IsCitedBy",
  env = "staging"
)
journalCitationId
#> [1] 74

# Delete journal citation
```

```
delete_journal_citation(journalCitationId, env = "staging")
#> [1] TRUE

logout()

## End(Not run)
```

`create_reservation` *Create reservation*

Description

Reserves the next available identifier for the specified scope

Usage

```
create_reservation(scope, env = "production")
```

Arguments

scope	(character) Scope of data package
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(numeric) Identifier of reserved data package

Note

User authentication is required (see `login()`)

See Also

Other Identifier Reservations: `delete_reservation()`, `list_active_reservations()`, `list_reservation_identifiers`

Examples

```
## Not run:

login()

# Create reservation
identifier <- create_reservation(scope = "edi", env = "staging")
identifier
#> [1] 604

# Delete reservation
```

```
delete_reservation(scope = "edi", identifier = identifier, env = "staging")
#> [1] 604

logout()

## End(Not run)
```

`delete_event_subscription` *Delete event subscription*

Description

Delete event subscription

Usage

```
delete_event_subscription(subscriptionId, env = "production")
```

Arguments

`subscriptionId`	(numeric) Event subscription identifier
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Details

After "deletion", the subscription might still exist in the subscription database, but it will be inactive - it will not conflict with future creation requests, it cannot be read, and it will not be notified of events.

Value

(logical) TRUE if the event subscription was deleted

Note

User authentication is required (see `login()`)

See Also

Other Event Notifications: `create_event_subscription()`, `execute_event_subscription()`, `get_event_subscription_schema()`, `get_event_subscription()`, `query_event_subscriptions()`

Examples

```
## Not run:

login()

# Create subscription
subscriptionId <- create_event_subscription(
  packageId = "knb-lter-vcr.340.1",
  url = "https://my.webserver.org/",
  env = "staging"
)
subscriptionId
#> [1] 48

# Execute subscription
execute_event_subscription(
  subscriptionId = subscriptionId,
  env = "staging"
)
#> [1] TRUE

# Delete subscription
delete_event_subscription(subscriptionId, env = "staging")
#> [1] TRUE

logout()

## End(Not run)
```

`delete_journal_citation` *Delete journal citation*

Description

Delete journal citation

Usage

```
delete_journal_citation(journalCitationId, env = "production")
```

Arguments

`journalCitationId`	(numeric) Journal citation identifier
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(logical) TRUE if deleted

Note

User authentication is required (see `login()`)

See Also

Other Journal Citations: `create_journal_citation()`, `get_journal_citation()`, `list_data_package_citations()`, `list_principal_owner_citations()`

Examples

```
## Not run:

login()

# Create journal citation
journalCitationId <- create_journal_citation(
  packageId = "edi.17.1",
  articleDoi = "https://doi.org/10.1890/11-1026.1",
  articleTitle = "Corridors promote fire via connectivity and edge effects",
  journalTitle = "Ecological Applications",
  relationType = "IsCitedBy",
  env = "staging"
)
journalCitationId
#> [1] 74

# Delete journal citation
delete_journal_citation(journalCitationId, env = "staging")
#> [1] TRUE

logout()

## End(Not run)
```

---

delete_reservation *Delete reservation*

Description

Delete reservation

Usage

```
delete_reservation(scope, identifier, env = "production")
```

Arguments

scope	(character) Scope of data package
identifier	(numeric) Identifier of data package
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(numeric) The deleted reservation identifier value

Note

User authentication is required (see `login()`). The same user who originally authenticated to create the reservation must authenticate to delete it.

See Also

Other Identifier Reservations: `create_reservation()`, `list_active_reservations()`, `list_reservation_identifiers`

Examples

```
## Not run:

login()

# Create reservation
identifier <- create_reservation(scope = "edi", env = "staging")
identifier
#> [1] 604

# Delete reservation
delete_reservation(scope = "edi", identifier = identifier, env = "staging")
#> [1] 604

logout()

## End(Not run)
```

---

evaluate_data_package *Evaluate data package*

Description

Evaluate data package

Usage

```
evaluate_data_package(eml, useChecksum = FALSE, env = "production")
```

Arguments

eml	(character) Full path to an EML file describing the data package to be evaluated
useChecksum	(logical) Use data entities from a previous version of the data package? See details below.
env	(character) Repository environment. Can be: "production", "staging", or "development".

Details

Each data entity described in eml must be accompanied by a web accessible URL at the EML XPath ".//physical/distribution/online/url". The EDI data repository downloads the data entities via this URL. The URLs must be static and not have any redirects otherwise the data entities will not be downloaded.

An optional query parameter, "useChecksum", can be appended to the URL. When specified, the useChecksum query parameter directs the repository to determine whether it can use an existing copy of a data entity from a previous revision of the data package based on matching a metadata-documented checksum value (MD5 or SHA-1) to the checksum of the existing copy. If a match is found, the repository will skip the upload of the data entity from the remote URL and instead use its matching copy. Specifying "useChecksum" can save time by eliminating data uploads, but clients should take care to ensure that metadata-documented checksum values are accurate and up to date.

Value

transaction (character) Transaction identifier. May be used in a subsequent call to:

- check_status_evaluate() to determine the operation status
- read_evaluate_report() to read the evaluation report
- read_evaluate_report_summary() to summarize the evaluation report and raise exceptions

Note

User authentication is required (see login())

See Also

Other Evaluation and Upload: check_status_create(), check_status_evaluate(), check_status_update(), create_data_package(), update_data_package()

Examples

```
## Not run:

login()

transaction <- evaluate_data_package(
  eml = paste0(tempdir(), "/edi.595.1.xml"),
  env = "staging"
)
transaction
```

```
#> [1] "evaluate_163966785813042760"

# Check evaluation status
status <- check_status_evaluate(transaction, env = "staging")
status
#> [1] TRUE

# Read evaluation report
report <- read_evaluate_report(transaction, env = "staging")
report
#> {xml_document}
#> <qualityReport schemaLocation="eml://ecoinformatics.org/qualityReport ...
#> [1] <creationDate>2021-12-15T17:46:33</creationDate>
#> [2] <packageId>edi.595.1</packageId>
#> [3] <includeSystem>lter</includeSystem>
#> [4] <includeSystem>knb</includeSystem>
#> [5] <datasetReport>\n  <qualityCheck qualityType="metadata" system=" ...
#> [6] <entityReport>\n  <entityName>data.txt</entityName>\n  <qualityC ...

# Summarize evaluation report
read_evaluate_report_summary(transaction, env = "staging")
#> ================================================
#>   EVALUATION REPORT
#> ================================================
#>
#> PackageId: edi.595.1
#> Report Date/Time: 2021-12-15T17:46:33
#> Total Quality Checks: 29
#> Valid: 21
#> Info: 8
#> Warn: 0
#> Error: 0

logout()

## End(Not run)
```

`execute_event_subscription` *Execute event subscription*

Description

Execute event subscription

Usage

```
execute_event_subscription(subscriptionId, env = "production")
```

Arguments

subscriptionId	(numeric) Event subscription identifier
env	(character) Repository environment. Can be: "production", "staging", or "development".

Details

Upon notification, the event manager queries its database for the subscription matching the specified subscriptionId. POST requests are then made (asynchronously) to the matching subscription.

Value

(logical) TRUE if the event subscription was executed

Note

User authentication is required (see `login()`)

See Also

Other Event Notifications: `create_event_subscription()`, `delete_event_subscription()`, `get_event_subscription_schema()`, `get_event_subscription()`, `query_event_subscriptions()`

Examples

```
## Not run:

login()

# Create subscription
subscriptionId <- create_event_subscription(
  packageId = "knb-lter-vcr.340.1",
  url = "https://my.webserver.org/",
  env = "staging"
)
subscriptionId
#> [1] 48

# Execute subscription
execute_event_subscription(
  subscriptionId = subscriptionId,
  env = "staging"
)
#> [1] TRUE

# Delete subscription
delete_event_subscription(subscriptionId, env = "staging")
#> [1] TRUE

logout()
```

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

`get_audit_count` *Get audit count*

Description

Get audit count

Usage

```
get_audit_count(query, env = "production")
```

Arguments

`query`	(character) Query (see details below)
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Details

Query parameters are specified as key=value pairs, multiple pairs must be delimited with ampersands (&), and only a single value should be specified for a particular key. The following query parameter keys are allowed:

- category - Can be: debug, info, error, warn
- service - Any of the EDI data repository services
- serviceMethod - Any of the EDI data repository service Resource class JAX-RS methods
- user - Any user
- group - Any group
- authSystem - A valid auth system identifier
- status - A valid HTTP Response Code
- resourceId - An EDI data repository resource identifier, e.g. https://pasta.lternet.edu/package/eml/knb-lter-and/2719/6, or a substring thereof (see details below)
- fromTime - An ISO8601 timestamp
- toTime - An ISO8601 timestamp
- limit - A positive whole number

The query parameters fromTime and optionally toTime should be used to indicate a time span. When toTime is absent, the count will include of all matching records up to the current time. Either of these parameters may only be used once. The query parameter limit sets an upper limit on the number of audit records returned. For example, "limit=1000". The query parameter resourceId will match any audit log entry whose resourceId value contains the specified string value. Thus, a query parameter of "resourceId=knb-lter-and" will match any audit log entry whose resourceId value contains the substring "knb-lter-and", while a query parameter of "resourceId=knb-lter-and/2719/6" will match any audit log entry whose resourceId value contains the substring "knb-lter-and/2719/6".

Value

(numeric) Returns a count of the number of audit records matching the query parameters as specified in the request.

Note

User authentication is required (see `login()`)

See Also

Other Audit Manager Services: `get_audit_record()`, `get_audit_report()`, `get_docid_reads()`, `get_packageid_reads()`, `get_recent_uploads()`

Examples

```
## Not run:

login()

# Count the number of warnings issued between 2021-12-01 and 2021-12-05
res <- get_audit_count(
  query = "category=warn&fromTime=2021-12-01&toTime=2021-12-05"
)
res
#> [1] 10022

logout()

## End(Not run)
```

---

get_audit_record *Get audit record*

Description

Get audit record

Usage

```
get_audit_record(oid, as = "data.frame", env = "production")
```

Arguments

`oid`	(numeric) Audit identifier
`as`	(character) Format of the returned object. Can be: "data.frame" or "xml".
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) An audit record

Note

User authentication is required (see `login()`)

See Also

Other Audit Manager Services: `get_audit_count()`, `get_audit_report()`, `get_docid_reads()`, `get_packageid_reads()`, `get_recent_uploads()`

Examples

```
## Not run:

login()

# Get audit report
auditReport <- get_audit_record(oid = "121606334")

logout()

## End(Not run)
```

`get_audit_report` *Get audit report*

Description

Get audit report

Usage

```
get_audit_report(query, as = "data.frame", env = "production")
```

Arguments

`query`	(character) Query (see details below)
`as`	(character) Format of the returned object. Can be: "data.frame" or "xml".
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Details

Query parameters are specified as key=value pairs, multiple pairs must be delimited with ampersands (&), and only a single value should be specified for a particular key. The following query parameter keys are allowed:

- category - Can be: debug, info, error, warn
- service - Any of the EDI data repository services
- serviceMethod - Any of the EDI data repository service Resource class JAX-RS methods
- user - Any user
- group - Any group
- authSystem - A valid auth system identifier
- status - A valid HTTP Response Code
- resourceId - An EDI data repository resource identifier, e.g. https://pasta.lternet.edu/package/eml/knb-lter-and/2719/6, or a thereof (see details below)
- fromTime - An ISO8601 timestamp
- toTime - An ISO8601 timestamp
- limit - A positive whole number

The query parameters fromTime and optionally toTime should be used to indicate a time span. When toTime is absent, the report will consist of all matching records up to the current time. Either of these parameters may only be used once. The query parameter limit sets an upper limit on the number of audit records returned. For example, "limit=1000". The query parameter resourceId will match any audit log entry whose resourceId value contains the specified string value. Thus, a query parameter of "resourceId=knb-lter-and" will match any audit log entry whose resourceId value contains the substring "knb-lter-and", while a query parameter of "resourceId=knb-lter-and/2719/6" will match any audit log entry whose resourceId value contains the substring "knb-lter-and/2719/6".

Value

(data.frame or xml_document) Zero or more audit records matching the query parameters as specified in the request (see details below).

Note

User authentication is required (see `login()`)

See Also

Other Audit Manager Services: `get_audit_count()`, `get_audit_record()`, `get_docid_reads()`, `get_packageid_reads()`, `get_recent_uploads()`

Examples

```
## Not run:

login()

# Get audit report for data reads between 2021-12-01 and 2021-12-02
query <- "serviceMethod=readDataEntity&fromTime=2021-12-01&toTime=2021-12-02"
auditReport <- get_audit_report(query)

logout()

## End(Not run)
```

`get_docid_reads` *Get doc ID reads*

Description

Get doc ID reads

Usage

```
get_docid_reads(scope, identifier, as = "data.frame", env = "production")
```

Arguments

`scope`	(character) Scope of data package
`identifier`	(numeric) Identifier of data package
`as`	(character) Format of the returned object. Can be: "data.frame" or "xml".
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) Summary of all the successful reads (total reads and non-robot reads) for all the resources of a given `scope` and `identifier`.

See Also

Other Audit Manager Services: `get_audit_count()`, `get_audit_record()`, `get_audit_report()`, `get_packageid_reads()`, `get_recent_uploads()`

Examples

```
## Not run:

# Get all reads
resourceReads <- get_docid_reads(scope = "knb-lter-sgs", identifier = 817)

## End(Not run)
```

`get_event_subscription` *Get event subscription*

Description

Get event subscription

Usage

```
get_event_subscription(subscriptionId, as = "data.frame", env = "production")
```

Arguments

`subscriptionId`	(numeric) Event subscription identifier
`as`	(character) Format of the returned object. Can be: "data.frame" or "xml".
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) Subscription metadata

Note

User authentication is required (see `login()`)

See Also

Other Event Notifications: `create_event_subscription()`, `delete_event_subscription()`, `execute_event_subscription()`, `get_event_subscription_schema()`, `query_event_subscriptions()`

Examples

```
## Not run:

login()

# Get subscription
subscription <- get_event_subscription(
  subscriptionId = 21,
  env = "staging"
)

logout()

## End(Not run)
```

`get_event_subscription_schema` *Get event subscription schema*

Description

Get event subscription schema

Usage

```
get_event_subscription_schema(env = "production")
```

Arguments

env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(xml_document) Schema for event subscription creation request entities.

See the xml2 library for more on working with XML.

See Also

Other Event Notifications: `create_event_subscription()`, `delete_event_subscription()`, `execute_event_subscription()`, `get_event_subscription()`, `query_event_subscriptions()`

Examples

```
## Not run:

# Get schema
schema <- get_event_subscription_schema()
schema
#> {xml_document}
#> <schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
#> [1] <xs:element name="subscription">\n  <xs:complexType>\n    <xs:    ...

# Show schema structure
xml2::xml_structure(schema)
#> <schema [xmlns:xs]>
#>   <element [name]>
#>     <complexType>
#>       <all>
#>         <element [name, type, minOccurs, maxOccurs]>
#>         <element [name, type, minOccurs, maxOccurs]>
#>       <attribute [name, type, use, fixed]>

## End(Not run)
```

---

get_journal_citation *Get journal citation*

Description

Get journal citation

Usage

```
get_journal_citation(journalCitationId, as = "data.frame", env = "production")
```

Arguments

journalCitationId	(numeric) Journal citation identifier
as	(character) Format of the returned object. Can be: "data.frame" or "xml".
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) Journal citation

See Also

Other Journal Citations: create_journal_citation(), delete_journal_citation(), list_data_package_citations(), list_principal_owner_citations()

Examples

```
## Not run:

# Get citation
journalCitation <- get_journal_citation(381)

## End(Not run)
```

`get_packageid_reads` *Get package ID reads*

Description

Get package ID reads

Usage

```
get_packageid_reads(packageId, as = "data.frame", env = "production")
```

Arguments

`packageId`	(character) Data package identifier
`as`	(character) Format of the returned object. Can be: "data.frame" or "xml".
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) Summary of all the successful reads (total reads and non-robot reads) of `packageId`

See Also

Other Audit Manager Services: `get_audit_count()`, `get_audit_record()`, `get_audit_report()`, `get_docid_reads()`, `get_recent_uploads()`

Examples

```
## Not run:

# Get packageId reads
resourceReads <- get_packageid_reads("knb-lter-sgs.817.17")

## End(Not run)
```

`get_provenance_metadata` *Get provenance metadata*

Description

Generates the provenance metadata of a source data package

Usage

```
get_provenance_metadata(packageId, env = "production")
```

Arguments

`packageId`	(character) Data package identifier
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(xml_document) Provenance metadata of `packageId`, representing a <methodStep> element that can be inserted into the <methods> section of a dependent data package.

See the emld library for more on working with EML as a list or JSON-LD. See the xml2 library for working with EML as XML.

Examples

```
## Not run:

methodStep <- get_provenance_metadata("knb-lter-pal.309.1")
methodStep
#> {xml_document}
#> <methodStep>
#> [1] <description>\n  <para>This method step describes provenance-based ...
#> [2] <dataSource>\n  <title>Stable isotope composition (d18O) of seawat ...

## End(Not run)
```

`get_recent_uploads` *Get recent uploads*

Description

Get recent uploads

Usage

```
get_recent_uploads(query, as = "data.frame", env = "production")
```

Arguments

`query`	(character) Query (see details below)
`as`	(character) Format of the returned object. Can be: "data.frame" or "xml".
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Details

Query parameters are specified as key=value pairs, multiple pairs must be delimited with ampersands (&), and only a single value should be specified for a particular key. The following query parameter keys are allowed:

- serviceMethod - Can be: createDataPackage, updateDataPackage
- fromTime - An ISO8601 timestamp
- limit - A positive whole number

The query parameter serviceMethod should have the value "createDataPackage" (to retrieve recent inserts) or "updateDataPackage" (to retrieve recent updates). The query parameter fromTime is used to specify the date/time in the past that represents the oldest audit records that should be returned. Data packages uploaded prior to that time are not considered recent uploads and are thus filtered from the query results. The query parameter limit sets an upper limit on the number of audit records returned. For example, "limit=3".

Value

(data.frame or xml_document) A list of zero or more audit records of either recently inserted or recently updated data packages.

See Also

Other Audit Manager Services: `get_audit_count()`, `get_audit_record()`, `get_audit_report()`, `get_docid_reads()`, `get_packageid_reads()`

Examples

```
## Not run:

# Get the 5 most recently created data packages
auditReport <- get_recent_uploads(
 query = "serviceMethod=createDataPackage&limit=5"
)

## End(Not run)
```

`is_authorized` *Is authorized to read*

Description

Is authorized to read

Usage

```
is_authorized(resourceId, env = "production")
```

Arguments

`resourceId`	(character) Resource identifier
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(logical) TRUE if the authenticated user has permission to read the specified resource

Note

User authentication is required (see `login()`)

See Also

Other Miscellaneous: `create_data_package_archive()`, `create_dn()`

Examples

```
## Not run:

login()

# Get the most recently created data package
auditReport <- get_recent_uploads(
  query = "serviceMethod=createDataPackage&limit=1"
)
```

```
# Get the resourceId
resourceId <- xml2::xml_text(
  xml2::xml_find_all(auditReport, ".//resourceId")
)
resourceId
#> [1] "https://pasta.lternet.edu/package/eml/knb-lter-hbr/345/1"

# Check read authorization
is_authorized(resourceId)
#> [1] TRUE

logout()

## End(Not run)
```

`list_active_reservations` *List active reservations*

Description

List active reservations

Usage

```
list_active_reservations(as = "data.frame", env = "production")
```

Arguments

as	(character) Format of the returned object. Can be: "data.frame" or "xml".
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) The set of data package identifiers that users have actively reserved. Note that data package identifiers that have been successfully uploaded are no longer considered active reservations and thus are not included in this list.

See Also

Other Identifier Reservations: `create_reservation()`, `delete_reservation()`, `list_reservation_identifiers()`

Examples

```
## Not run:

# List reservations
reservations <- list_active_reservations()

## End(Not run)
```

`list_data_descendants` *List data descendants*

Description

Data descendants are data packages that are known to be derived, in whole or in part, from the specified source data package.

Usage

```
list_data_descendants(packageId, as = "data.frame", env = "production")
```

Arguments

`packageId`	(character) Data package identifier
`as`	(character) Format of the returned object. Can be: "data.frame" or "xml".
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) Descendants of `packageId`

See Also

Other Listing: `list_data_entities()`, `list_data_package_identifiers()`, `list_data_package_revisions()`, `list_data_package_scopes()`, `list_data_sources()`, `list_deleted_data_packages()`, `list_recent_changes()`, `list_recent_uploads()`, `list_service_methods()`, `list_user_data_packages()`

Examples

```
## Not run:

# List descendants
dataDescendants <- list_data_descendants("knb-lter-bnz.501.17")

## End(Not run)
```

`list_data_entities` *List data entities*

Description

List data entities

Usage

```
list_data_entities(packageId, env = "production")
```

Arguments

`packageId`	(character) Data package identifier
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(character) Identifiers for all data entities in `packageId`

See Also

Other Listing: `list_data_descendants()`, `list_data_package_identifiers()`, `list_data_package_revisions()`, `list_data_package_scopes()`, `list_data_sources()`, `list_deleted_data_packages()`, `list_recent_changes()`, `list_recent_uploads()`, `list_service_methods()`, `list_user_data_packages()`

Examples

```
## Not run:

entityIds <- list_data_entities("knb-lter-and.2732.7")
entityIds
#> [1] "0464a1d9262fc6e609cb0b24adb7e5ba"
#> [2] "cc3ade83d3655edd2ca674721a52ef46"

## End(Not run)
```

`list_data_package_citations` *List data package citations*

Description

List data package citations

Usage

```
list_data_package_citations(
  packageId,
  as = "data.frame",
  list_all = FALSE,
  env = "production"
)
```

Arguments

`packageId`	(character) Data package identifier
`as`	(character) Format of the returned object. Can be: "data.frame" or "xml".
`list_all`	(logical) Return all citations within a data package series?
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) A list of journal citations

See Also

Other Journal Citations: `create_journal_citation()`, `delete_journal_citation()`, `get_journal_citation()`, `list_principal_owner_citations()`

Examples

```
## Not run:

# List citations
journalCitations <- list_data_package_citations("edi.845.1")

## End(Not run)
```

`list_data_package_identifiers` *List data package identifiers*

Description

List data package identifiers

Usage

```
list_data_package_identifiers(scope, env = "production")
```

Arguments

`scope`	(character) Scope of data package
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(numeric) Identifiers of data packages within a specified `scope`

See Also

Other Listing: `list_data_descendants()`, `list_data_entities()`, `list_data_package_revisions()`, `list_data_package_scopes()`, `list_data_sources()`, `list_deleted_data_packages()`, `list_recent_changes()`, `list_recent_uploads()`, `list_service_methods()`, `list_user_data_packages()`

Examples

```
## Not run:

# List identifiers
identifiers <- list_data_package_identifiers("knb-lter-ble")
identifiers
#> [1]  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 23

## End(Not run)
```

`list_data_package_revisions` *List data package revisions*

Description

List data package revisions

Usage

```
list_data_package_revisions(
  scope,
  identifier,
  filter = NULL,
  env = "production"
)
```

Arguments

`scope`	(character) Scope of data package
`identifier`	(numeric) Identifier of data package
`filter`	(character) Filter results by "newest" or "oldest"
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(numeric) Revisions of a data package within a specified `scope` and `identifier`

See Also

Other Listing: `list_data_descendants()`, `list_data_entities()`, `list_data_package_identifiers()`, `list_data_package_scopes()`, `list_data_sources()`, `list_deleted_data_packages()`, `list_recent_changes()`, `list_recent_uploads()`, `list_service_methods()`, `list_user_data_packages()`

Examples

```
## Not run:

# List revisions
revisions <- list_data_package_revisions("knb-lter-arc", 20131)
revisions
#> [1] 1 2

## End(Not run)
```

list_data_package_scopes *List data package scopes*

Description

List data package scopes

Usage

```
list_data_package_scopes(env = "production")
```

Arguments

env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(numeric) Scopes within a specified env

See Also

Other Listing: list_data_descendants(), list_data_entities(), list_data_package_identifiers(), list_data_package_revisions(), list_data_sources(), list_deleted_data_packages(), list_recent_changes(), list_recent_uploads(), list_service_methods(), list_user_data_packages()

Examples

```
## Not run:

# List scopes
scopes <- list_data_package_scopes()
scopes
#>  [1] "ecotrends"           "edi"                 "knb-lter-and"
#>  [4] "knb-lter-arc"        "knb-lter-bes"        "knb-lter-ble"
#>  [7] "knb-lter-bnz"        "knb-lter-cap"        "knb-lter-cce"
#> [10] "knb-lter-cdr"        "knb-lter-cwt"        "knb-lter-fce"
#> [13] "knb-lter-gce"        "knb-lter-hbr"        "knb-lter-hfr"
#> [16] "knb-lter-jrn"        "knb-lter-kbs"        "knb-lter-knz"
#> [19] "knb-lter-luq"        "knb-lter-mcm"        "knb-lter-mcr"
#> [22] "knb-lter-nes"        "knb-lter-nin"        "knb-lter-ntl"
#> [25] "knb-lter-nwk"        "knb-lter-nwt"        "knb-lter-pal"
#> [28] "knb-lter-pie"        "knb-lter-sbc"        "knb-lter-sev"
#> [31] "knb-lter-sgs"        "knb-lter-vcr"        "lter-landsat"
#> [34] "lter-landsat-ledaps" "msb-cap"             "msb-paleon"
#> [37] "msb-tempbiodev"

## End(Not run)
```

`list_data_sources` *List data sources*

Description

Data sources are data packages, or other online digital objects, that are known to be inputs to the specified derived data package.

Usage

```
list_data_sources(packageId, as = "data.frame", env = "production")
```

Arguments

`packageId`	(character) Data package identifier
`as`	(character) Format of the returned object. Can be: "data.frame" or "xml".
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Details

Data sources can be either internal or external to the EDI data repository. Internal data sources include a packageId value and a URL to the source metadata. For data sources external to PASTA, the packageId element will be empty and a URL value may or not be documented.

Value

(data.frame or xml_document) Data sources to `packageId`

See Also

Other Listing: `list_data_descendants()`, `list_data_entities()`, `list_data_package_identifiers()`, `list_data_package_revisions()`, `list_data_package_scopes()`, `list_deleted_data_packages()`, `list_recent_changes()`, `list_recent_uploads()`, `list_service_methods()`, `list_user_data_packages()`

Examples

```
## Not run:

# List sources
dataSources <- list_data_sources("edi.275.4")

## End(Not run)
```

`list_deleted_data_packages` *List deleted data packages*

Description

List deleted data packages

Usage

```
list_deleted_data_packages(env = "production")
```

Arguments

`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(character) All data packages (excluding revision values) that have been deleted from the data package registry.

See Also

Other Listing: `list_data_descendants()`, `list_data_entities()`, `list_data_package_identifiers()`, `list_data_package_revisions()`, `list_data_package_scopes()`, `list_data_sources()`, `list_recent_changes()`, `list_recent_uploads()`, `list_service_methods()`, `list_user_data_packages()`

Examples

```
## Not run:

# List deleted data packages
deleted <- list_deleted_data_packages()
head(deleted)
#> [1] "edi.10"  "edi.222" "edi.419" "edi.511" "edi.857" "edi.878"

## End(Not run)
```

`list_principal_owner_citations` *List principal owner citations*

Description

List principal owner citations

Usage

```
list_principal_owner_citations(
  principalOwner,
  as = "data.frame",
  env = "production"
)
```

Arguments

`principalOwner`	(character) Principal owner in the format returned by `create_dn()`
`as`	(character) Format of the returned object. Can be: "data.frame" or "xml".
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) Journal citations metadata for all entries owned by the specified principal owner

See Also

Other Journal Citations: `create_journal_citation()`, `delete_journal_citation()`, `get_journal_citation()`, `list_data_package_citations()`

Examples

```
## Not run:

# List citations
dn <- create_dn(userId = "FCE", ou = "EDI")
journalCitations <- list_principal_owner_citations(principalOwner = dn)

## End(Not run)
```

`list_recent_changes` *List recent changes*

Description

List all data package insert, update, and delete operations, optionally specifying the date and time to and/or from which the changes should be listed. An optional scope value can be specified to filter results for a particular data package scope.

Usage

```
list_recent_changes(
  fromDate = NULL,
  toDate = NULL,
  scope = NULL,
  as = "data.frame",
  env = "production"
)
```

Arguments

`fromDate`	(character) Start date in the format "YYYY-MM-DDThh:mm:ss"
`toDate`	(character) End date in the format "YYYY-MM-DDThh:mm:ss"
`scope`	(character) Scope of data package
`as`	(character) Format of the returned object. Can be: "data.frame" or "xml".
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) Recent changes and their corresponding packageId, scope, identifier, revision, principal, doi, serviceMethod, and date.

See Also

Other Listing: `list_data_descendants()`, `list_data_entities()`, `list_data_package_identifiers()`, `list_data_package_revisions()`, `list_data_package_scopes()`, `list_data_sources()`, `list_deleted_data_packa`
`list_recent_uploads()`, `list_service_methods()`, `list_user_data_packages()`

Examples

```
## Not run:

# Changes occurring in the first 3 days of 2021 for all scopes
dataPackageChanges <- list_recent_changes(
 fromDate = "2021-01-01T00:00:00",
 toDate = "2021-01-03T00:00:00"
```

```
)

## End(Not run)
```

`list_recent_uploads` *List recent uploads*

Description

List recent uploads

Usage

```
list_recent_uploads(type, limit = 5, as = "data.frame", env = "production")
```

Arguments

`type`	(character) Upload type. Can be: "insert" or "update".
`limit`	(numeric) Maximum number of results to return
`as`	(character) Format of the returned object. Can be: "data.frame" or "xml".
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) Data package uploads

See Also

Other Listing: `list_data_descendants()`, `list_data_entities()`, `list_data_package_identifiers()`, `list_data_package_revisions()`, `list_data_package_scopes()`, `list_data_sources()`, `list_deleted_data_packa`
`list_recent_changes()`, `list_service_methods()`, `list_user_data_packages()`

Examples

```
## Not run:

# Get the 3 newest revisions
dataPackageUploads <- list_recent_uploads("update", 3)

## End(Not run)
```

`list_reservation_identifiers` *List reservation identifiers*

Description

List reservation identifiers

Usage

```
list_reservation_identifiers(scope, env = "production")
```

Arguments

`scope`	(character) Scope of data package
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(numeric) The set of identifiers for the specified `scope` that end users have actively reserved for future upload

See Also

Other Identifier Reservations: `create_reservation()`, `delete_reservation()`, `list_active_reservations()`

Examples

```
## Not run:

# List reservations
reservations <- list_reservation_identifiers(scope = "edi")
reservations
#>   [1]   11  130  131  132  142  152  154  156  158  159  161  162  171
#>  [14]  172  173  174  175  177  178  180  182  183  185  196  203  ...

## End(Not run)
```

`list_service_methods` *List service methods*

Description

List service methods

Usage

```
list_service_methods(env = "production")
```

Arguments

`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(character) A simple list of web service methods supported by the Data Package Manager web service

See Also

Other Listing: `list_data_descendants()`, `list_data_entities()`, `list_data_package_identifiers()`, `list_data_package_revisions()`, `list_data_package_scopes()`, `list_data_sources()`, `list_deleted_data_packa`
`list_recent_changes()`, `list_recent_uploads()`, `list_user_data_packages()`

Examples

```
## Not run:

# All service methods
services <- list_service_methods()
services
#>  [1] "appendProvenance"              "createDataPackage"
#>  [3] "createDataPackageArchive"      "createReservation"
#>  [5] "deleteReservation"             "deleteDataPackage"
#>  [7] "evaluateDataPackage"           "getProvenanceMetadata"
#>  [9] "isAuthorized"                  "listActiveReservations"
#> [11] "listDataEntities"              "listDataDescendants"
#> [13] "listDataSources"               "listRecentChanges"
#> [15] "listDataPackageIdentifiers"    "listDataPackageRevisions"
#> [17] "listDataPackageScopes"         "listDeletedDataPackages"
#> [19] "listRecentUploads"             "listReservationIdentifiers"
#> [21] "listServiceMethods"            "listUserDataPackages"
#> [23] "listWorkingOn"                 "readDataEntity"
#> [25] "readDataEntityAcl"             "readDataEntityRmd"
#> [27] "readDataEntityChecksum"        "readDataEntityDoi"
#> [29] "readDataEntityName"            "readDataEntityNames"
```

```
#> [31] "readDataEntitySize"            "readDataEntitySizes"
#> [33] "readDataPackage"               "readDataPackageAcl"
#> [35] "readDataPackageRmd"            "readDataPackageArchive"
#> [37] "readDataPackageDoi"            "readDataPackageError"
#> [39] "readDataPackageFromDoi"        "readDataPackageReport"
#> [41] "readDataPackageReportAcl"      "readDataPackageReportRmd"
#> [43] "readDataPackageReportChecksum" "readDataPackageReportDoi"
#> [45] "readEvaluateReport"            "readMetadata"
#> [47] "readMetadataDublinCore"        "readMetadataAcl"
#> [49] "readMetadataRmd"               "readMetadataChecksum"
#> [51] "readMetadataDoi"               "readMetadataFormat"
#> [53] "searchDataPackages"            "updateDataPackage"
#> [55] "createSubscription"            "deleteSubscription"
#> [57] "executeSubscription"           "getMatchingSubscriptions"
#> [59] "getSubscriptionWithId"         "notifyOfEvent"
#> [61] "createJournalCitation"         "deleteJournalCitation"
#> [63] "getCitationWithId"             "listDataPackageCitations"
#> [65] "listPrincipalOwnerCitations"

## End(Not run)
```

`list_user_data_packages` *List user data packages*

Description

List all data packages (including their revision values) uploaded to the repository by a particular user, specified by a distinguished name. Data packages that were uploaded by the specified user but have since been deleted are excluded from the list.

Usage

```
list_user_data_packages(dn, env = "production")
```

Arguments

dn	(character) Distinguished name of user. Create with `create_dn()`.
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(character) Data package identifiers belonging to a dn

See Also

Other Listing: `list_data_descendants()`, `list_data_entities()`, `list_data_package_identifiers()`, `list_data_package_revisions()`, `list_data_package_scopes()`, `list_data_sources()`, `list_deleted_data_packa`
`list_recent_changes()`, `list_recent_uploads()`, `list_service_methods()`

Examples

```
## Not run:

# List user data packages
dn <- create_dn(userId = "dbjourneynorth")
packageIds <- list_user_data_packages(dn)
packageIds
#> [1] "edi.948.1" "edi.949.1"

## End(Not run)
```

`list_working_on` *List working on*

Description

List working on

Usage

```
list_working_on(as = "data.frame", env = "production")
```

Arguments

as	(character) Format of the returned object. Can be: "data.frame" or "xml".
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) The set of data packages the EDI repository is currently working on inserting or updating. Note that data packages currently being evaluated by the EDI repository are not included in the list.

Examples

```
## Not run:

list_working_on()

## End(Not run)
```

`login` *Login to the EDI repository*

Description

Login to the EDI repository

Usage

```
login(userId = NULL, userPass = NULL, config = NULL)
```

Arguments

`userId`	(character) User identifier of an EDI data repository account. If using
`userPass`	(character) Password of `userId`
`config`	(character) Path to config.txt, which contains `userId` and `userPass` (see details below)

Details

If `userId`, `userPass`, and `config` are NULL, the console will prompt for credentials.

`config`: Supplying credentials in a file named config.txt facilitates authentication within automated/unassisted processes. Contents of this file should be new line separated and have the form "<argument> = <value>" (e.g. userId = myname).

Value

(character) A temporary (~10 hour) authentication token written to the system variable "EDI_TOKEN".

Note

Only works when authenticating with EDI credentials. Does not work when authenticating with ORCiD, GitHub, or Google credentials.

Be careful not to accidentally share your `userId` and `userPass`. Some tips to avoid this:

- Don't write code that explicitly lists your credentials.
- Don't save your workspace when exiting an R session.
- Do store your credentials as environmental variables and reference these.
- Do use `config` but if using version control ensure the config.txt file is listed in your .gitignore.

If you may have shared your credentials, please reset your password at https://dashboard.edirepository.org/dashboard/auth/reset_password_init.

See Also

Other Authentication: `logout()`

Examples

```
## Not run:

# Interactively at the console
login()
#> User name: "my_name"
#> User password: "my_secret"

# Programmatically with function arguments
login(userId = "my_name", userPass = "my_secret")

# Programmatically with a file containing userId and userPass arguments
login(config = paste0(tempdir(), "/config.txt"))

## End(Not run)
```

---

logout *Logout of the EDI repository*

Description

Logout of the EDI repository

Usage

```
logout()
```

Details

Removes the temporary authentication token system variable "EDI_TOKEN".

Value

(NULL) No return value.

See Also

Other Authentication: `login()`

Examples

```
## Not run:
logout()

## End(Not run)
```

`query_event_subscriptions` *Query event subscriptions*

Description

Query event subscriptions

Usage

```
query_event_subscriptions(query = NULL, as = "data.frame", env = "production")
```

Arguments

`query`	(character) Query (see details below)
`as`	(character) Format of the returned object. Can be: "data.frame" or "xml".
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Details

Query parameters are specified as key=value pairs, multiple pairs must be delimited with ampersands (&), and only a single value should be specified for a particular key. The following query parameter keys are allowed:

- creator
- scope
- identifier
- revision
- url

If a query parameter is specified, and a subscription's respective attribute does not match it, that subscription will not be included in the group of subscriptions returned. If scope, identifier, or revision are used, their values must together constitute a syntactically and semantically correct EML packageId (i.e. "scope.identifier.revision") - either partial or complete. If url is used, its value must not contain ampersands. Therefore, if a subscription's URL contains ampersands, it cannot be filtered based on its URL.

Value

(data.frame or xml_document) A list of the subscriptions whose attributes match those specified in the query string (see details below). If a query string is omitted, all subscriptions in the subscription database will be returned for which the requesting user is authorized to read. If query parameters are included, they are used to filter that set of subscriptions based on their attributes.

Note

User authentication is required (see `login()`)

See Also

Other Event Notifications: `create_event_subscription()`, `delete_event_subscription()`, `execute_event_subscription()`, `get_event_subscription_schema()`, `get_event_subscription()`

Examples

```
## Not run:

login()

# Query subscriptions
query <- "scope=edi"
subscriptions <- query_event_subscriptions(query, env = "staging")

logout()

## End(Not run)
```

`read_data_entity` *Read data entity*

Description

Read data entity

Usage

```
read_data_entity(packageId, entityId, env = "production")
```

Arguments

`packageId`	(character) Data package identifier
`entityId`	(character) Data entity identifier
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(raw) Raw bytes (i.e. application/octet-stream) to be parsed by a reader function appropriate for the data type

See Also

Other Accessing: read_data_entity_checksum(), read_data_entity_names(), read_data_entity_name(), read_data_entity_resource_metadata(), read_data_entity_sizes(), read_data_entity_size(), read_data_package_archive(), read_data_package_citation(), read_data_package_doi(), read_data_package_error(), read_data_package_from_doi(), read_data_package_report_checksum(), read_data_package_report_resource_metadata(), read_data_package_report_summary(), read_data_package_report(), read_data_package_resource_metadata(), read_data_package(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_entity(), read_metadata_format(), read_metadata_resource_met read_metadata()

Examples

```
## Not run:

# Read names and IDs of data entities in package "edi.1047.1"
res <- read_data_entity_names(packageId = "edi.1047.1")
res
#>                            entityId               entityName
#> 1 3abac5f99ecc1585879178a355176f6d       Environmentals.csv
#> 2 f6bfa89b48ced8292840e53567cbf0c8              ByCatch.csv
#> 3 c75642ddccb4301327b4b1a86bdee906              Chinook.csv
#> 4 2c9ee86cc3f3ffc729c5f18bfe0a2a1d            Steelhead.csv
#> 5 785690848dd20f4910637250cdc96819 TrapEfficiencyRelease.csv
#> 6 58b9000439a5671ea7fe13212e889ba5 TrapEfficiencySummary.csv
#> 7 86e61c1a501b7dcf0040d10e009bfd87       TrapOperations.csv

# Read raw bytes of the 3rd data entity
raw <- read_data_entity(packageId = "edi.1047.1", entityId = res$entityId[3])
head(raw)
#> [1] ef bb bf 44 61 74

# Parse with .csv reader
data <- readr::read_csv(file = raw)
data
#> # A tibble: 105,325 x 20
#> Date   trapVisitID subSiteName  catchRawID releaseID commonName     n
#> <chr>        <dbl> <chr>             <dbl>     <dbl> <chr>      <dbl>
#>   1 1/8/2~         330 North Chann~      32409         0 Chinook s~     1
#> 2 1/8/2~         330 North Chann~      32412         0 Chinook s~     1
#> 3 1/8/2~         330 North Chann~      32410         0 Chinook s~     1
#> 4 1/8/2~         330 North Chann~      32408         0 Chinook s~     1
#> 5 1/8/2~         330 North Chann~      32406         0 Chinook s~     1
#> 6 1/8/2~         322 North Chann~      31958         0 Chinook s~     1
#> 7 1/8/2~         322 North Chann~      31975         0 Chinook s~     1
#> 8 1/8/2~         322 North Chann~      31974         0 Chinook s~     1
#> 9 1/8/2~         322 North Chann~      31973         0 Chinook s~     1
#> 10 1/8/2~         322 North Chann~      31972         0 Chinook s~     1
#> # ... with 105,315 more rows, and 13 more variables:
#> #   atCaptureRun <chr>, finalRun <chr>, finalRunMethod <chr>,
#> #   lifeStage <chr>, forkLength <dbl>, weight <dbl>, mort <chr>,
```

```
#> #   fishOrigin <chr>, markType <chr>, CatchRaw.comments <chr>,
#> #   specimenTypeID <dbl>, physicalSpecimenCode <chr>,
#> #   Specimen.comments <lgl>

## End(Not run)
```

`read_data_entity_checksum` *Read data entity checksum*

Description

Read data entity checksum

Usage

```
read_data_entity_checksum(packageId, entityId, env = "production")
```

Arguments

`packageId`	(character) Data package identifier
`entityId`	(character) Data entity identifier
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(character) A 40-character SHA-1 checksum value of `entityId` in `packageId`

See Also

Other Accessing: `read_data_entity_names()`, `read_data_entity_name()`, `read_data_entity_resource_metadata()`, `read_data_entity_sizes()`, `read_data_entity_size()`, `read_data_entity()`, `read_data_package_archive()`, `read_data_package_citation()`, `read_data_package_doi()`, `read_data_package_error()`, `read_data_package_from_doi()`, `read_data_package_report_checksum()`, `read_data_package_report_resource_r`, `read_data_package_report_summary()`, `read_data_package_report()`, `read_data_package_resource_metadata()`, `read_data_package()`, `read_evaluate_report_summary()`, `read_evaluate_report()`, `read_metadata_checksum()`, `read_metadata_dublin_core()`, `read_metadata_entity()`, `read_metadata_format()`, `read_metadata_resource_met`, `read_metadata()`

Examples

```
## Not run:

# List data entities
entityIds <- list_data_entities(packageId = "knb-lter-ble.1.7")
entityIds
#> [1] "a1723e0e5f3c4881f1a7ede1b036aba6"
```

```
#> [2] "b698644419ea88ab1072f4fcbef9083c"
#> [3] "617415426847fd900b644283d86c1c66"
#> [4] "9942544de7e794ce84a62151bd41e6b3"

# Read checksum
checksum <- read_data_entity_checksum(
 packageId = "knb-lter-ble.1.7",
 entityId = entityIds[1]
)
checksum
#> [1] "22b189095bc9a166c3891e80b67b2a636eae60a4"

## End(Not run)
```

`read_data_entity_name` *Read data entity name*

Description

Read data entity name

Usage

```
read_data_entity_name(packageId, entityId, env = "production")
```

Arguments

`packageId`	(character) Data package identifier
`entityId`	(character) Data entity identifier
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(character) Name of `entityId` in `packageId`

See Also

Other Accessing: `read_data_entity_checksum()`, `read_data_entity_names()`, `read_data_entity_resource_metada`
`read_data_entity_sizes()`, `read_data_entity_size()`, `read_data_entity()`, `read_data_package_archive()`,
`read_data_package_citation()`, `read_data_package_doi()`, `read_data_package_error()`,
`read_data_package_from_doi()`, `read_data_package_report_checksum()`, `read_data_package_report_resource_r`
`read_data_package_report_summary()`, `read_data_package_report()`, `read_data_package_resource_metadata()`,
`read_data_package()`, `read_evaluate_report_summary()`, `read_evaluate_report()`, `read_metadata_checksum()`,
`read_metadata_dublin_core()`, `read_metadata_entity()`, `read_metadata_format()`, `read_metadata_resource_met`
`read_metadata()`

Examples

```
## Not run:

# List entities
entityIds <- list_data_entities(packageId = "knb-lter-cap.691.2")
entityIds
#> [1] "f6e4efd0b04aea3860724824ca05c5dd"
#> [2] "d2263480e75cc7888b41928602cda4c6"
#> [3] "d5cb83e4556408e48f636157e4dee49e"

# Read name
entityName <- read_data_entity_name(
 packageId = "knb-lter-cap.691.2",
 entityId = entityIds[1]
)
entityName
#> [1] "691_arthropods_00742cd00ab0d3d02337e28d1c919654.csv"

## End(Not run)
```

`read_data_entity_names`

Read data entity names

Description

Read data entity names

Usage

```
read_data_entity_names(packageId, env = "production")
```

Arguments

`packageId`	(character) Data package identifier
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame) Names and identifiers of all data entities in `packageId`

See Also

Other Accessing: `read_data_entity_checksum()`, `read_data_entity_name()`, `read_data_entity_resource_metadat`
`read_data_entity_sizes()`, `read_data_entity_size()`, `read_data_entity()`, `read_data_package_archive()`,
`read_data_package_citation()`, `read_data_package_doi()`, `read_data_package_error()`,
`read_data_package_from_doi()`, `read_data_package_report_checksum()`, `read_data_package_report_resource_`

read_data_package_report_summary(), read_data_package_report(), read_data_package_resource_metadata(), read_data_package(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_entity(), read_metadata_format(), read_metadata_resource_met read_metadata()

Examples

```
## Not run:

read_data_entity_names("knb-lter-cap.691.2")
#>                           entityId
#> 1 f6e4efd0b04aea3860724824ca05c5dd
#> 2 d2263480e75cc7888b41928602cda4c6
#> 3 d5cb83e4556408e48f636157e4dee49e
#>                                                 entityName
#> 1      691_arthropods_00742cd00ab0d3d02337e28d1c919654.csv
#> 2        691_captures_e5f57a98ae0b7941b10d4a600645495a.csv
#> 3 691_sampling_events_e8d76d7e76385e4ae84bcafb754d0093.csv

## End(Not run)
```

`read_data_entity_resource_metadata`

Read data entity resource metadata

Description

Read data entity resource metadata

Usage

```
read_data_entity_resource_metadata(
  packageId,
  entityId,
  as = "data.frame",
  env = "production"
)
```

Arguments

packageId	(character) Data package identifier
entityId	(character) Data entity identifier
as	(character) Format of the returned object. Can be: "data.frame" or "xml".
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) The resource metadata of entityId in packageId

See Also

Other Accessing: read_data_entity_checksum(), read_data_entity_names(), read_data_entity_name(), read_data_entity_sizes(), read_data_entity_size(), read_data_entity(), read_data_package_archive(), read_data_package_citation(), read_data_package_doi(), read_data_package_error(), read_data_package_from_doi(), read_data_package_report_checksum(), read_data_package_report_resource_, read_data_package_report_summary(), read_data_package_report(), read_data_package_resource_metadata(), read_data_package(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_entity(), read_metadata_format(), read_metadata_resource_met, read_metadata()

Examples

```
## Not run:

# List entities
entityIds <- list_data_entities(packageId = "knb-lter-cce.310.1")
head(entityIds)
#> [1] "4aaaff61e0d316130be0b445d3013877"
#> [2] "088775341e7fb65206af8c9e67d076e2"
#> [3] "6982dd80cba66470c49a2f3dc0f82459"
#> [4] "782fbaa20ea62987c838378e9eadcfa6"
#> [5] "ae8ecd148df1275b30358577d0fa6b4a"
#> [6] "a53b312efe0a176fdfc74ab7ccb0916b"

# Read resource metadata for first entity
resourceMetadata <- read_data_entity_resource_metadata(
 packageId = "knb-lter-cce.310.1",
 entityId = entityIds[1]
)

## End(Not run)
```

---

read_data_entity_size *Read data entity size*

Description

Read data entity size

Usage

```
read_data_entity_size(packageId, entityId, env = "production")
```

Arguments

packageId	(character) Data package identifier
entityId	(character) Data entity identifier
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(numeric) Size, in bytes, of `entityId` in `packageId`

See Also

Other Accessing: `read_data_entity_checksum()`, `read_data_entity_names()`, `read_data_entity_name()`, `read_data_entity_resource_metadata()`, `read_data_entity_sizes()`, `read_data_entity()`, `read_data_package_archive()`, `read_data_package_citation()`, `read_data_package_doi()`, `read_data_package_error()`, `read_data_package_from_doi()`, `read_data_package_report_checksum()`, `read_data_package_report_resource_metadata()`, `read_data_package_report_summary()`, `read_data_package_report()`, `read_data_package_resource_metadata()`, `read_data_package()`, `read_evaluate_report_summary()`, `read_evaluate_report()`, `read_metadata_checksum()`, `read_metadata_dublin_core()`, `read_metadata_entity()`, `read_metadata_format()`, `read_metadata_resource_met`
`read_metadata()`

Examples

```
## Not run:

# List data entities
entityIds <- list_data_entities(packageId = "knb-lter-cdr.711.1")
entityIds
#> [1] "c61703839eac9a641ea0c3c69dc3345b"

# Read size
size <- read_data_entity_size(
 packageId = "knb-lter-cdr.711.1",
 entityId = entityIds
)
size
#> [1] 707094

## End(Not run)
```

`read_data_entity_sizes` *Read data entity sizes*

Description

Read data entity sizes

Usage

```
read_data_entity_sizes(packageId, env = "production")
```

Arguments

packageId	(character) Data package identifier
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame) Size (in bytes) and identifiers of data entities in packageId

See Also

Other Accessing: read_data_entity_checksum(), read_data_entity_names(), read_data_entity_name(), read_data_entity_resource_metadata(), read_data_entity_size(), read_data_entity(), read_data_package_archive(), read_data_package_citation(), read_data_package_doi(), read_data_package_error(), read_data_package_from_doi(), read_data_package_report_checksum(), read_data_package_report_resource_metadata(), read_data_package_report_summary(), read_data_package_report(), read_data_package_resource_metadata(), read_data_package(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_entity(), read_metadata_format(), read_metadata_resource_met read_metadata()

Examples

```
## Not run:

# Read entity sizes
sizes <- read_data_entity_sizes(packageId = "knb-lter-bnz.786.3")
sizes
#>                            entityId   size
#> 1 66bf513405f7799c35f24e4b33f7d835  19513
#> 2 33d2d8cedeea9d5dbefc973680d4557e  26429
#> 3 197b0d4372ecabd697cfd5ff1157e41b   2295
#> 4 bb8cdcf1d6f06f61007620bfa5333f2a 123366
#> 5 0916ac12f9896c35a27ea156c653718e  46475

## End(Not run)
```

---

read_data_package *Read data package*

Description

Read data package

Usage

```
read_data_package(packageId, ore = FALSE, env = "production")
```

Arguments

packageId	(character) Data package identifier
ore	(logical) Return an OAI-ORE compliant resource map in RDF-XML format
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(character or xml_document) A resource map with reference URLs to each of the metadata, data, and quality report resources that comprise the packageId.

See Also

Other Accessing: read_data_entity_checksum(), read_data_entity_names(), read_data_entity_name(), read_data_entity_resource_metadata(), read_data_entity_sizes(), read_data_entity_size(), read_data_entity(), read_data_package_archive(), read_data_package_citation(), read_data_package_doi(), read_data_package_error(), read_data_package_from_doi(), read_data_package_report_checksum(), read_data_package_report_resource_metadata(), read_data_package_report_summary(), read_data_package_report(), read_data_package_resource_metadata(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_entity(), read_metadata_format(), read_metadata_resource_metadata(), read_metadata()

Examples

```
## Not run:
# Get resource map
resourceMap <- read_data_package(packageId = "knb-lter-cwt.5026.13")
resourceMap
#> [1] "https://pasta.lternet.edu/package/data/eml/knb-lter-cwt/5026/13/ ...
#> [2] "https://pasta.lternet.edu/package/data/eml/knb-lter-cwt/5026/13/ ...
#> [3] "https://pasta.lternet.edu/package/metadata/eml/knb-lter-cwt/5026 ...
#> [4] "https://pasta.lternet.edu/package/report/eml/knb-lter-cwt/5026/1 ...
#> [5] "https://pasta.lternet.edu/package/eml/knb-lter-cwt/5026/13"

# Get resource map in ORE format
resourceMap <- read_data_package(
 packageId = "knb-lter-cwt.5026.13",
 ore = TRUE
)
resourceMap
#> {xml_document}
#> <RDF xmlns:cito="http://purl.org/spar/cito/" xmlns:dc="http://purl.or ...
#> [1] <rdf:Description rdf:about="https://pasta.lternet.edu/package/eml ...
#> [2] <rdf:Description rdf:about="https://pasta.lternet.edu/package/eml ...
#> [3] <rdf:Description rdf:about="https://pasta.lternet.edu/package/eml ...
#> [4] <rdf:Description rdf:about="https://pasta.lternet.edu/package/eml ...
#> [5] <rdf:Description rdf:about="https://pasta.lternet.edu/package/eml ...
#> [6] <rdf:Description rdf:about="https://pasta.lternet.edu/package/eml ...
#> [7] <rdf:Description rdf:about="http://environmentaldatainitiative.or ...
#> [8] <rdf:Description rdf:about="http://www.openarchives.org/ore/terms ...
```

```
#> [9] <rdf:Description rdf:about="http://www.openarchives.org/ore/terms ...

## End(Not run)
```

`read_data_package_archive` *Read data package archive*

Description

Read data package archive

Usage

```
read_data_package_archive(packageId, transaction, path, env = "production")
```

Arguments

`packageId`	(character) Data package identifier
`transaction`	(character) Transaction identifier. This parameter is DEPRECATED.
`path`	(character) Path of directory in which the result will be written
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(.zip file) The data package archive of `packageId` requested by `transaction`

See Also

Other Accessing: `read_data_entity_checksum()`, `read_data_entity_names()`, `read_data_entity_name()`, `read_data_entity_resource_metadata()`, `read_data_entity_sizes()`, `read_data_entity_size()`, `read_data_entity()`, `read_data_package_citation()`, `read_data_package_doi()`, `read_data_package_error()`, `read_data_package_from_doi()`, `read_data_package_report_checksum()`, `read_data_package_report_resource_r` `read_data_package_report_summary()`, `read_data_package_report()`, `read_data_package_resource_metadata()`, `read_data_package()`, `read_evaluate_report_summary()`, `read_evaluate_report()`, `read_metadata_checksum()`, `read_metadata_dublin_core()`, `read_metadata_entity()`, `read_metadata_format()`, `read_metadata_resource_met` `read_metadata()`

Examples

```
## Not run:

# Download zip archive
read_data_package_archive("knb-lter-sev.31999.1", path = tempdir())
#> |============================================================| 100%
dir(tempdir())
#> [1] "knb-lter-sev.31999.1.zip"
```

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

`read_data_package_citation` *Read data package citation*

Description

Read data package citation

Usage

```
read_data_package_citation(
  packageId,
  access = TRUE,
  style = "ESIP",
  ignore = NULL,
  as = "char",
  env = "production"
)
```

Arguments

`packageId`	(character) Data package identifier
`access`	(logical) Return a datestamp in the citation of the current UTC date. This is recommended by the ESIP citation style guide.
`style`	(character) Set the style for which to format the citation. Can be: "ESIP", "DRYAD", "BIBTEX", "RAW".
`ignore`	(character) Ignore individuals, organizations, or positions in the author list. Can be: "INDIVIDUALS", "ORGANIZATIONS", or "POSITIONS". See details below.
`as`	(character) Format of the returned citation. Can be: "char", "html", "json".
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Details

A citation may consist of a list of authors, publication year, title, data package version, publisher, digital object identifier, and access date. The order and presence of these components depends on the `style` requested for the citation (see query parameters above).

A brief discussion of the fields in a citation:

- Authors - This function uses content extracted from the science metadata described by an Ecological Metadata Language (EML) document to generate the author list. Specifically, it uses the creator section of EML to generate the list of authors, including individuals, organizations, and positions.

  This function preserves the order of the creator list as defined within the EML document. As such, if you would like the citation to begin with an organization name, you should position the creator element that describes the organization at the beginning of the creator list in the EML document.

  This function also assumes that a creator element contains information pertaining to only a single "creator", although EML allows for multiple identities in a single creator element. It will do its best to accommodate multi-named subjects within a creator element, but mileage will vary.

  This function is opinionated in how it determines an author: individuals, take precedence over organizations and positions, and organizations take precedence over positions. What this means is if an individual and organization and position are all defined in a single creator element, this function sets the author to the named information within the individual element; and, if only an organization and position exist within a single creator element, this function will set the author to the named information within the organization element. Finally, if only a position is defined within a single creator element, this function will set the author to the named information within the position element. It is important to note that this function respects the creator content as defined in the EML document and will set a position name to an author if it is present and meets the above hierarchy. If you believe that a position should not be displayed as data package author, then you should not include it as a data package creator.

  Finally, this function does not collect or use tertiary information (e.g., phone number, addresses, emails) from within the creator element since this type of information is not used as part of a data package citation.

- Publication Year - The publication year is defined by the calendar year when the data package was archived into the EDI data repository. The publication year may differ from the year of the publication date entered into the EML, which is often set to the date when the data package became publicly available, although not yet archived into the EDI data repository.
- Title - This function uses the title section of EML as the citation title. EML title elements are copied verbatim into the citation.
- Version Number - The citation version number represents the revision step (or increment) of the data package as archived in the EDI data repository. Revision values are whole numbers and have a one-to-one correspondence to the revision of the data package in the repository.
- Publisher - By default, the publisher field of the citation is permanently set to "Environmental Data Initiative". This value will not change during the tenure of the EDI data repository.
- DOI - The Digital Object Identifier (DOI) is the EDI generated DOI value that is registered with DataCite, and is displayed using the fully qualified "doi.org" URL. This DOI URL will resolve to the corresponding "landing page" of the data package as displayed on the EDI Data Portal.
- Access Date - The access date is the UTC date in which the citation was requested.

Value

(character or html_document or json) The data package citation

See Also

Other Accessing: read_data_entity_checksum(), read_data_entity_names(), read_data_entity_name(), read_data_entity_resource_metadata(), read_data_entity_sizes(), read_data_entity_size(), read_data_entity(), read_data_package_archive(), read_data_package_doi(), read_data_package_error(), read_data_package_from_doi(), read_data_package_report_checksum(), read_data_package_report_resource_r read_data_package_report_summary(), read_data_package_report(), read_data_package_resource_metadata(), read_data_package(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_entity(), read_metadata_format(), read_metadata_resource_met read_metadata()

Examples

```
## Not run:

packageId <- "edi.460.1"

# Retrieve "ESIP" stylized citation (default) in plain text format
citation <- read_data_package_citation(packageId)
citation
#> [1] "Armitage, A.R., C.A. Weaver, J.S. Kominoski, and S.C. Pennings. ..."

# Retrieve "DRYAD" stylized citation in plain text format
citation <- read_data_package_citation(packageId, style = "DRYAD")
citation
#> [1] "Armitage AR, Weaver CA, Kominoski JS, and Pennings SC (2020) Hur..."

# Retrieve "ESIP" stylized citation (default) in HTML format
citation <- read_data_package_citation(packageId, as = "html")
citation
#> {html_document}
#> <html>
#> [1] <body><p>Armitage, A.R., C.A. Weaver, J.S. Kominoski, and S.C. Pen...

# Retrieve "ESIP" stylized citation (default), ignoring individuals, in
# plain text format
citation <- read_data_package_citation(packageId, ignore = "INDIVIDUALS")
citation
#> [1] "Texas A&M University at Galveston, Texas A&M University - Corpu ..."

## End(Not run)
```

---

read_data_package_doi *Read data package Digital Object Identifier*

Description

Read data package Digital Object Identifier

Usage

```
read_data_package_doi(packageId, as_url = FALSE, env = "production")
```

Arguments

packageId	(character) Data package identifier
as_url	(logical) Returns the DOI as a URL if TRUE.
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(character) The Digital Object Identifier for packageId

See Also

Other Accessing: read_data_entity_checksum(), read_data_entity_names(), read_data_entity_name(), read_data_entity_resource_metadata(), read_data_entity_sizes(), read_data_entity_size(), read_data_entity(), read_data_package_archive(), read_data_package_citation(), read_data_package_error(), read_data_package_from_doi(), read_data_package_report_checksum(), read_data_package_report_resource_r, read_data_package_report_summary(), read_data_package_report(), read_data_package_resource_metadata(), read_data_package(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_entity(), read_metadata_format(), read_metadata_resource_met, read_metadata()

Examples

```
## Not run:

# Read package DOI
doi <- read_data_package_doi("knb-lter-jrn.210548103.15")
doi
#> [1] "doi:10.6073/pasta/c80c0c03d22791524d4b870d2193c843"

# Read package DOI as URL
doi <- read_data_package_doi("knb-lter-jrn.210548103.15", as_url = TRUE)
doi
#> [1] "https://doi.org/10.6073/pasta/c80c0c03d22791524d4b870d2193c843"

## End(Not run)
```

---

read_data_package_error

Read data package error

Description

Read data package error

Usage

```
read_data_package_error(transaction, env = "production")
```

Arguments

transaction	(character) Transaction identifier
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

An error is returned if an error occurred while processing the request, otherwise NULL is returned if no error was encountered or if processing is still underway.

Note

User authentication is required (see login())

See Also

Other Accessing: read_data_entity_checksum(), read_data_entity_names(), read_data_entity_name(), read_data_entity_resource_metadata(), read_data_entity_sizes(), read_data_entity_size(), read_data_entity(), read_data_package_archive(), read_data_package_citation(), read_data_package_doi(), read_data_package_from_doi(), read_data_package_report_checksum(), read_data_package_report_resource_, read_data_package_report_summary(), read_data_package_report(), read_data_package_resource_metadata(), read_data_package(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_entity(), read_metadata_format(), read_metadata_resource_met, read_metadata()

---

read_data_package_from_doi

Read data package from Digital Object Identifier

Description

Read data package from Digital Object Identifier

Usage

```
read_data_package_from_doi(doi, ore = FALSE)
```

Arguments

doi	(character) Digital Object Identifier of data package in the format "shoulder/pasta/md5"
ore	(logical) Return an OAI-ORE compliant resource map in RDF-XML format

Value

(character or xml_document) A resource map with reference URLs to each of the metadata, data, and quality report resources that comprise the data package.

See Also

Other Accessing: read_data_entity_checksum(), read_data_entity_names(), read_data_entity_name(), read_data_entity_resource_metadata(), read_data_entity_sizes(), read_data_entity_size(), read_data_entity(), read_data_package_archive(), read_data_package_citation(), read_data_package_doi(), read_data_package_error(), read_data_package_report_checksum(), read_data_package_report_resource_meta, read_data_package_report_summary(), read_data_package_report(), read_data_package_resource_metadata(), read_data_package(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_entity(), read_metadata_format(), read_metadata_resource_met, read_metadata()

Examples

```
## Not run:

# Get resource map
resourceMap <- read_data_package_from_doi(
 doi = "doi:10.6073/pasta/b202c11db7c64943f6b4ed9f8c17fb25"
)
resourceMap
#> [1] "https://pasta.lternet.edu/package/data/eml/knb-lter-fce/1233/2/5 ...
#> [2] "https://pasta.lternet.edu/package/metadata/eml/knb-lter-fce/1233/2"
#> [3] "https://pasta.lternet.edu/package/report/eml/knb-lter-fce/1233/2"
#> [4] "https://pasta.lternet.edu/package/eml/knb-lter-fce/1233/2"

# Get resource map in ORE format
resourceMap <- read_data_package_from_doi(
 doi = "doi:10.6073/pasta/b202c11db7c64943f6b4ed9f8c17fb25",
 ore = TRUE
)
resourceMap
#> {xml_document}
#> <RDF xmlns:cito="http://purl.org/spar/cito/" xmlns:dc="http://purl.or ...
#> [1] <rdf:Description rdf:about="https://pasta.lternet.edu/package/eml ...
#> [2] <rdf:Description rdf:about="https://pasta.lternet.edu/package/eml ...
#> [3] <rdf:Description rdf:about="https://pasta.lternet.edu/package/eml ...
#> [4] <rdf:Description rdf:about="https://pasta.lternet.edu/package/eml ...
#> [5] <rdf:Description rdf:about="https://pasta.lternet.edu/package/eml ...
#> [6] <rdf:Description rdf:about="http://environmentaldatainitiative.or ...
#> [7] <rdf:Description rdf:about="http://www.openarchives.org/ore/terms ...
#> [8] <rdf:Description rdf:about="http://www.openarchives.org/ore/terms ...

## End(Not run)
```

`read_data_package_report` *Read data package report*

Description

Read data package report

Usage

```
read_data_package_report(packageId, as = "xml", env = "production")
```

Arguments

packageId	(character) Data package identifier
as	(character) Format of the returned report. Can be: "xml", "html", or "char".
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(xml_document) Data package report

See Also

Other Accessing: read_data_entity_checksum(), read_data_entity_names(), read_data_entity_name(), read_data_entity_resource_metadata(), read_data_entity_sizes(), read_data_entity_size(), read_data_entity(), read_data_package_archive(), read_data_package_citation(), read_data_package_doi(), read_data_package_error(), read_data_package_from_doi(), read_data_package_report_checksum(), read_data_package_report_resource_metadata(), read_data_package_report_summary(), read_data_package_resource_metadata(), read_data_package(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_entity(), read_metadata_format(), read_metadata_resource_metadata(), read_metadata()

Examples

```
## Not run:

# Read as XML
qualityReport <- read_data_package_report("knb-lter-knz.260.4")
qualityReport
#> {xml_document}
#> <qualityReport schemaLocation="eml://ecoinformatics.org/qualityReport ...
#>  [1] <creationDate>2020-02-04T16:38:38</creationDate>
#>  [2] <packageId>knb-lter-knz.260.4</packageId>
#>  [3] <includeSystem>lter</includeSystem>
#>  [4] <includeSystem>knb</includeSystem>
#>  [5] <datasetReport>\n  <qualityCheck qualityType="metadata" system=" ...
```

```
#>  [6] <entityReport>\n  <entityName>GIS600</entityName>\n  <qualityChe ...
#>  [7] <entityReport>\n  <entityName>KMZGIS600</entityName>\n  <quality ...
#>  [8] <entityReport>\n  <entityName>GIS605</entityName>\n  <qualityChe ...
#>  [9] <entityReport>\n  <entityName>KMZGIS605</entityName>\n  <quality ...
#> [10] <entityReport>\n  <entityName>GIS610</entityName>\n  <qualityChe ...
#> ...

# Read as HTML
qualityReport <- read_data_package_report(
 packageId = "knb-lter-knz.260.4",
 as = "html"
)
qualityReport
#> {html_document}
#> <html>
#> [1] <body><table xmlns:qr="eml://ecoinformatics.org/qualityReport"><t ...

# Read as character
qualityReport <- read_data_package_report(
 packageId = "knb-lter-knz.260.4",
 as = "char"
)
# writeLines(qualityReport, paste0(tempdir(), "/report.txt"))

## End(Not run)
```

`read_data_package_report_checksum`
Read data package report checksum

Description

Read data package report checksum

Usage

```
read_data_package_report_checksum(packageId, env = "production")
```

Arguments

`packageId`	(character) Data package identifier
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(character) A 40 character SHA-1 checksum value for the report

See Also

Other Accessing: read_data_entity_checksum(), read_data_entity_names(), read_data_entity_name(), read_data_entity_resource_metadata(), read_data_entity_sizes(), read_data_entity_size(), read_data_entity(), read_data_package_archive(), read_data_package_citation(), read_data_package_doi(), read_data_package_error(), read_data_package_from_doi(), read_data_package_report_resource_metadata(), read_data_package_report_summary(), read_data_package_report(), read_data_package_resource_metadata(), read_data_package(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_entity(), read_metadata_format(), read_metadata_resource_met read_metadata()

Examples

```
## Not run:

# Read report checksum
packageId <- "knb-lter-luq.208.1"
checksum <- read_data_package_report_checksum(packageId)
checksum
#> "980dbf3f3cdb7395933b711b005722033bdcd12f"

## End(Not run)
```

---

read_data_package_report_resource_metadata

Read data package report resource metadata

Description

Read data package report resource metadata

Usage

```
read_data_package_report_resource_metadata(
  packageId,
  as = "data.frame",
  env = "production"
)
```

Arguments

packageId	(character) Data package identifier
as	(character) Format of the returned object. Can be: "data.frame" or "xml".
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) Report resource metadata

See Also

Other Accessing: read_data_entity_checksum(), read_data_entity_names(), read_data_entity_name(), read_data_entity_resource_metadata(), read_data_entity_sizes(), read_data_entity_size(), read_data_entity(), read_data_package_archive(), read_data_package_citation(), read_data_package_doi(), read_data_package_error(), read_data_package_from_doi(), read_data_package_report_checksum(), read_data_package_report_summary(), read_data_package_report(), read_data_package_resource_metadata(), read_data_package(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_entity(), read_metadata_format(), read_metadata_resource_met read_metadata()

Examples

```
## Not run:

# Read resource metadata
resourceMetadata <- read_data_package_report_resource_metadata(
  packageId = "knb-lter-mcm.9129.3"
)

## End(Not run)
```

---

read_data_package_report_summary

Summarize the data package quality report

Description

Summarize the data package quality report

Usage

```
read_data_package_report_summary(
  packageId,
  with_exceptions = TRUE,
  env = "production"
)
```

Arguments

packageId	(character) Data package identifier
with_exceptions	(logical) Convert quality report warnings and errors to R warnings and errors
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(message/warning/error) A message listing the total number of checks resulting in valid, info, warn, and error status. Exceptions are raised if warnings and errors are found and `with_exceptions` is TRUE.

See Also

Other Accessing: `read_data_entity_checksum()`, `read_data_entity_names()`, `read_data_entity_name()`, `read_data_entity_resource_metadata()`, `read_data_entity_sizes()`, `read_data_entity_size()`, `read_data_entity()`, `read_data_package_archive()`, `read_data_package_citation()`, `read_data_package_doi()`, `read_data_package_error()`, `read_data_package_from_doi()`, `read_data_package_report_checksum()`, `read_data_package_report_resource_metadata()`, `read_data_package_report()`, `read_data_package_resource_m`, `read_data_package()`, `read_evaluate_report_summary()`, `read_evaluate_report()`, `read_metadata_checksum()`, `read_metadata_dublin_core()`, `read_metadata_entity()`, `read_metadata_format()`, `read_metadata_resource_met`, `read_metadata()`

Examples

```
## Not run:

# Read report summary
read_data_package_report_summary("knb-lter-knz.260.4")
#> ==================================================
#>   EVALUATION REPORT
#> ==================================================
#>
#> PackageId: knb-lter-knz.260.4
#> Report Date/Time: 2020-02-04T16:38:38
#> Total Quality Checks: 213
#> Valid: 139
#> Info: 73
#> Warn: 1
#> Error: 0
#>
#>
#> Warning message:
#> One or more quality checks resulted in 'warn'

## End(Not run)
```

`read_data_package_resource_metadata`

Read data package resource metadata

Description

Read data package resource metadata

Usage

```
read_data_package_resource_metadata(
  packageId,
  as = "data.frame",
  env = "production"
)
```

Arguments

packageId	(character) Data package identifier
as	(character) Format of the returned object. Can be: "data.frame" or "xml".
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) Resource metadata of packageId

See Also

Other Accessing: read_data_entity_checksum(), read_data_entity_names(), read_data_entity_name(), read_data_entity_resource_metadata(), read_data_entity_sizes(), read_data_entity_size(), read_data_entity(), read_data_package_archive(), read_data_package_citation(), read_data_package_doi(), read_data_package_error(), read_data_package_from_doi(), read_data_package_report_checksum(), read_data_package_report_resource_metadata(), read_data_package_report_summary(), read_data_package_report(), read_data_package(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_entity(), read_metadata_format(), read_metadata_resource_metadata(), read_metadata()

Examples

```
## Not run:

# Read resource metadata
resourceMetadata <- read_data_package_resource_metadata(
 packageId = "edi.613.1"
)

## End(Not run)
```

---

read_evaluate_report *Read evaluate report*

Description

Read evaluate report

Usage

```
read_evaluate_report(transaction, as = "xml", env = "production")
```

Arguments

transaction	(character) Transaction identifier
as	(character) Format of the returned report. Can be: "xml", "html", or "char".
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(xml_document or html_document or character) The evaluate quality report document

Note

User authentication is required (see `login()`)

See Also

Other Accessing: `read_data_entity_checksum()`, `read_data_entity_names()`, `read_data_entity_name()`, `read_data_entity_resource_metadata()`, `read_data_entity_sizes()`, `read_data_entity_size()`, `read_data_entity()`, `read_data_package_archive()`, `read_data_package_citation()`, `read_data_package_doi()`, `read_data_package_error()`, `read_data_package_from_doi()`, `read_data_package_report_checksum()`, `read_data_package_report_resource_metadata()`, `read_data_package_report_summary()`, `read_data_package_report()`, `read_data_package_resource_metadata()`, `read_data_package()`, `read_evaluate_report_summary()`, `read_metadata_checksum()`, `read_metadata_dublin_core()`, `read_metadata_entity()`, `read_metadata_format()`, `read_metadata_resource_metadata()`, `read_metadata()`

Examples

```
## Not run:

login()

# Evaluate data package
transaction <- evaluate_data_package(
  eml = paste0(tempdir(), "/edi.595.1.xml"),
  env = "staging"
)
transaction
#> [1] "evaluate_163966785813042760"

# Read as HTML and write to file for a web browser view
qualityReport <- read_evaluate_report(
  transaction = transaction,
  as = "html",
  env = "staging"
)
```

```
writeLines(qualityReport, paste0(tempdir(), "/report.html"))

# Read as character and write to file for browsing
qualityReport <- read_evaluate_report(
  transaction = transaction,
  as = "char",
  env = "staging"
)
writeLines(qualityReport, paste0(tempdir(), "/report.txt"))

# Read as XML
qualityReport <- read_evaluate_report(
  transaction = transaction,
  env = "staging"
)
qualityReport
#> {xml_document}
#> <qualityReport schemaLocation="eml://ecoinformatics.org/qualityReport ...
#> [1] <creationDate>2021-12-16T22:15:38</creationDate>
#> [2] <packageId>edi.606.1</packageId>
#> [3] <includeSystem>lter</includeSystem>
#> [4] <includeSystem>knb</includeSystem>
#> [5] <datasetReport>\n  <qualityCheck qualityType="metadata" system=" ...
#> [6] <entityReport>\n  <entityName>data.txt</entityName>\n  <qualityC ...

logout()

## End(Not run)
```

`read_evaluate_report_summary` *Summarize the evaluate quality report*

Description

Summarize the evaluate quality report

Usage

```
read_evaluate_report_summary(
  transaction,
  with_exceptions = TRUE,
  env = "production"
)
```

Arguments

`transaction`	(character) Transaction identifier

with_exceptions
: (logical) Convert quality report warnings and errors to R warnings and errors

env
: (character) Repository environment. Can be: "production", "staging", or "development".

Details

Get `transaction` from `evaluate_data_package()`

Value

(message/warning/error) A message listing the total number of checks resulting in valid, info, warn, and error status. Exceptions are raised if warnings and errors are found and `with_exceptions` is TRUE.

Note

User authentication is required (see `login()`)

See Also

Other Accessing: `read_data_entity_checksum()`, `read_data_entity_names()`, `read_data_entity_name()`, `read_data_entity_resource_metadata()`, `read_data_entity_sizes()`, `read_data_entity_size()`, `read_data_entity()`, `read_data_package_archive()`, `read_data_package_citation()`, `read_data_package_doi()`, `read_data_package_error()`, `read_data_package_from_doi()`, `read_data_package_report_checksum()`, `read_data_package_report_resource_metadata()`, `read_data_package_report_summary()`, `read_data_package_report()`, `read_data_package_resource_metadata()`, `read_data_package()`, `read_evaluate_report()`, `read_metadata_checksum()`, `read_metadata_dublin_core()`, `read_metadata_entity()`, `read_metadata_format()`, `read_metadata_resource_metadata()`, `read_metadata()`

Examples

```
## Not run:

login()

# Evaluate data package
transaction <- evaluate_data_package(
  eml = paste0(tempdir(), "/edi.595.1.xml"),
  env = "staging"
)
transaction
#> [1] "evaluate_163966785813042760"


# Summarize report
read_evaluate_report_summary(transaction, env = "staging")
#> ================================================
#>   EVALUATION REPORT
#> ================================================
#>
```

```
#> PackageId: edi.595.1
#> Report Date/Time: 2021-12-16T22:49:25
#> Total Quality Checks: 29
#> Valid: 21
#> Info: 8
#> Warn: 0
#> Error: 0


logout()

## End(Not run)
```

`read_metadata` *Read metadata*

Description

Read metadata

Usage

```
read_metadata(packageId, env = "production")
```

Arguments

`packageId`	(character) Data package identifier
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(xml_document) EML metadata document.

See the emld library for more on working with EML as a list or JSON-LD. See the xml2 library for working with EML as XML.

See Also

Other Accessing: `read_data_entity_checksum()`, `read_data_entity_names()`, `read_data_entity_name()`, `read_data_entity_resource_metadata()`, `read_data_entity_sizes()`, `read_data_entity_size()`, `read_data_entity()`, `read_data_package_archive()`, `read_data_package_citation()`, `read_data_package_doi()`, `read_data_package_error()`, `read_data_package_from_doi()`, `read_data_package_report_checksum()`, `read_data_package_report_resource_metadata()`, `read_data_package_report_summary()`, `read_data_package_report()`, `read_data_package_resource_metadata()`, `read_data_package()`, `read_evaluate_report_summary()`, `read_evaluate_report()`, `read_metadata_checksum()`, `read_metadata_dublin_core()`, `read_metadata_entity()`, `read_metadata_format()`, `read_metadata_resource_met`

Examples

```
## Not run:

# Read metadata
eml <- read_metadata("edi.100.1")
eml
#> {xml_document}
#> <eml packageId="edi.100.1" system="https://pasta.edirepository.org"   ...
#> [1] <access authSystem="https://pasta.edirepository.org/authenticatio ...
#> [2] <dataset>\n  <alternateIdentifier system="https://doi.org">doi:10 ...

## End(Not run)
```

`read_metadata_checksum`

Read metadata checksum

Description

Read metadata checksum

Usage

```
read_metadata_checksum(packageId, env = "production")
```

Arguments

packageId	(character) Data package identifier
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(character) A 40 character SHA-1 checksum value

See Also

Other Accessing: `read_data_entity_checksum()`, `read_data_entity_names()`, `read_data_entity_name()`, `read_data_entity_resource_metadata()`, `read_data_entity_sizes()`, `read_data_entity_size()`, `read_data_entity()`, `read_data_package_archive()`, `read_data_package_citation()`, `read_data_package_doi()`, `read_data_package_error()`, `read_data_package_from_doi()`, `read_data_package_report_checksum()`, `read_data_package_report_resource_metadata()`, `read_data_package_report_summary()`, `read_data_package_report()`, `read_data_package_resource_metadata()`, `read_data_package()`, `read_evaluate_report_summary()`, `read_evaluate_report()`, `read_metadata_dublin_core()`, `read_metadata_entity()`, `read_metadata_format()`, `read_metadata_resource_metadata()`, `read_metadata()`

Examples

```
## Not run:

# Read checksum
checksum <- read_metadata_checksum("knb-lter-ntl.409.1")
checksum
#> [1] "c89d0ac740f65ef599c6a90619221441e20b8b6e"

## End(Not run)
```

`read_metadata_dublin_core` *Read metadata Dublin Core*

Description

Read metadata Dublin Core

Usage

```
read_metadata_dublin_core(packageId, env = "production")
```

Arguments

packageId	(character) Data package identifier
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(xml_document) Dublin Core metadata.

See the xml2 library for more on working with XML.

See Also

Other Accessing: `read_data_entity_checksum()`, `read_data_entity_names()`, `read_data_entity_name()`, `read_data_entity_resource_metadata()`, `read_data_entity_sizes()`, `read_data_entity_size()`, `read_data_entity()`, `read_data_package_archive()`, `read_data_package_citation()`, `read_data_package_doi()`, `read_data_package_error()`, `read_data_package_from_doi()`, `read_data_package_report_checksum()`, `read_data_package_report_resource_metadata()`, `read_data_package_report_summary()`, `read_data_package_report()`, `read_data_package_resource_metadata()`, `read_data_package()`, `read_evaluate_report_summary()`, `read_evaluate_report()`, `read_metadata_checksum()`, `read_metadata_entity()`, `read_metadata_format()`, `read_metadata_resource_metadata()`, `read_metadata()`

Examples

```
## Not run:

# Read dc metadata
dc <- read_metadata_dublin_core("knb-lter-nes.10.1")
dc
#> {xml_document}
#> <dc schemaLocation="http://www.openarchives.org/OAI/2.0/oai_dc/ http: ...
#> [1] <dc:type/>
#> [2] <dc:identifier/>

## End(Not run)
```

---

read_metadata_entity *Read data entity metadata*

Description

Read data entity metadata

Usage

```
read_metadata_entity(packageId, entityId, env = "production")
```

Arguments

packageId	(character) Data package identifier
entityId	(character) Data entity identifier
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(xml_nodeset) The metadata of `entityId` in `packageId`

See Also

Other Accessing: read_data_entity_checksum(), read_data_entity_names(), read_data_entity_name(), read_data_entity_resource_metadata(), read_data_entity_sizes(), read_data_entity_size(), read_data_entity(), read_data_package_archive(), read_data_package_citation(), read_data_package_doi(), read_data_package_error(), read_data_package_from_doi(), read_data_package_report_checksum(), read_data_package_report_resource_metadata(), read_data_package_report_summary(), read_data_package_report(), read_data_package_resource_metadata(), read_data_package(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_format(), read_metadata_resource_metadata(), read_metadata()

Examples

```
## Not run:

# Read entity names and IDs
packageId <- "knb-lter-cap.691.2"
entities <- read_data_entity_names(packageId)
entities
#>                           entityId
#> 1 f6e4efd0b04aea3860724824ca05c5dd
#> 2 d2263480e75cc7888b41928602cda4c6
#> 3 d5cb83e4556408e48f636157e4dee49e
#>                                                 entityName
#> 1      691_arthropods_00742cd00ab0d3d02337e28d1c919654.csv
#> 2        691_captures_e5f57a98ae0b7941b10d4a600645495a.csv
#> 3 691_sampling_events_e8d76d7e76385e4ae84bcafb754d0093.csv

# Read metadata of the first entity
meta <- read_metadata_entity(packageId, entityId = entities$entityId[1])
meta
#> {xml_nodeset (1)}
#> [1] <dataTable id="691_arthropods_00742cd00ab0d3d02337e28d1c919654.cs ...

## End(Not run)
```

`read_metadata_format` *Read metadata format*

Description

Read metadata format

Usage

```
read_metadata_format(packageId, env = "production")
```

Arguments

`packageId`	(character) Data package identifier
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(character) Metadata format type

See Also

Other Accessing: read_data_entity_checksum(), read_data_entity_names(), read_data_entity_name(), read_data_entity_resource_metadata(), read_data_entity_sizes(), read_data_entity_size(), read_data_entity(), read_data_package_archive(), read_data_package_citation(), read_data_package_doi(), read_data_package_error(), read_data_package_from_doi(), read_data_package_report_checksum(), read_data_package_report_resource_metadata(), read_data_package_report_summary(), read_data_package_report(), read_data_package_resource_metadata(), read_data_package(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_entity(), read_metadata_resource_metadata(), read_metadata()

Examples

```
## Not run:

# Read format
metadataFormat <- read_metadata_format("knb-lter-nwt.930.1")
metadataFormat
#> [1] "eml://ecoinformatics.org/eml-2.1.1"

## End(Not run)
```

---

read_metadata_resource_metadata

Read metadata resource metadata

Description

Read metadata resource metadata

Usage

```
read_metadata_resource_metadata(
  packageId,
  as = "data.frame",
  env = "production"
)
```

Arguments

packageId	(character) Data package identifier
as	(character) Format of the returned object. Can be: "data.frame" or "xml".
env	(character) Repository environment. Can be: "production", "staging", or "development".

Value

(data.frame or xml_document) Resource metadata for the data package metadata resource

See Also

Other Accessing: read_data_entity_checksum(), read_data_entity_names(), read_data_entity_name(), read_data_entity_resource_metadata(), read_data_entity_sizes(), read_data_entity_size(), read_data_entity(), read_data_package_archive(), read_data_package_citation(), read_data_package_doi(), read_data_package_error(), read_data_package_from_doi(), read_data_package_report_checksum(), read_data_package_report_resource_metadata(), read_data_package_report_summary(), read_data_package_report(), read_data_package_resource_metadata(), read_data_package(), read_evaluate_report_summary(), read_evaluate_report(), read_metadata_checksum(), read_metadata_dublin_core(), read_metadata_entity(), read_metadata_format(), read_metadata()

Examples

```
## Not run:

# Read resource metadata
resourceMetadata <- read_metadata_resource_metadata(
 packageId = "knb-lter-pal.309.1"
)

## End(Not run)
```

---

search_data_packages *Search data packages*

Description

Searches data packages in the EDI data repository using the specified Solr query.

Usage

```
search_data_packages(query, as = "data.frame", env = "production")
```

Arguments

query	(character) Query (see details below)
as	(character) Format of the returned object. Can be: "data.frame" or "xml".
env	(character) Repository environment. Can be: "production", "staging", or "development".

Details

Documents in the EDI data repository Solr index can be discovered based on metadata values stored in the following list of searchable fields (not all EML content is queryable):

Single-value fields:

- abstract
- begindate - In ISO format (YYYY-MM-DDThh:mm:ss)

- doi
- enddate - In ISO format (YYYY-MM-DDThh:mm:ss)
- funding
- geographicdescription
- id
- methods
- packageid - Data Id in "scope.identifier.revision" format
- pubdate - In ISO format (YYYY-MM-DDThh:mm:ss)
- responsibleParties
- scope
- singledate
- site
- taxonomic
- title

Multi-value fields:

- author
- coordinates - Use `"IsWithin(West+East+North+South)"` where each cardinal direction is in decimal degrees with South of the equator as negative and East of the prime meridian positive.
- keyword
- organization
- projectTitle
- relatedProjectTitle
- timescale

`query` parser: The optimal query parser (defType=edismax) is added to every query.

See Apache Solr Wiki for how to construct a Solr query.

Value

(data.frame or xml_document) Search results containing the fields:

- abstract
- begindate
- doi
- enddate
- funding
- geographicdescription
- id
- methods

- packageid
- pubdate
- responsibleParties
- scope
- site
- taxonomic
- title
- authors
- spatialCoverage
- sources
- keywords
- organizations
- singledates
- timescales

Note

Only the newest version of data packages are searchable, older versions are not.

When constructing a query note that the 15403 data packages of the ecotrends project and 10492 data packages of the LTER Landsat project, can be excluded from the returned results by including `&fq=-scope:(ecotrends+lter-landsat)` in the query string.

Examples

```
## Not run:

# Search for data packages containing the term "air temperature"
res <- search_data_packages(query = 'q="air+temperature"&fl=*')

# Search for data packages containing the term "air temperature" and
# returning only the packageid, title, and score of each match
res <- search_data_packages(query = 'q="air+temperature"&fl=packageid,title,score')

# Search for data packages containing the term "air temperature", returning
# only the packageid, title, score, and excluding ecotrends and lter-landsat
# scopes from the returned results
query <- paste0('q="air+temperature"&fl=packageid,title,score&',
                'fq=-scope:(ecotrends+lter-landsat)')
res <- search_data_packages(query)

## End(Not run)
```

`update_data_package` *Update data package*

Description

Update data package

Usage

```
update_data_package(eml, useChecksum = FALSE, env = "production")
```

Arguments

`eml`	(character) Full path to an EML file describing the data package to be updated
`useChecksum`	(logical) Use data entities from a previous version of the data package? See details below.
`env`	(character) Repository environment. Can be: "production", "staging", or "development".

Details

Each data entity described in `eml` must be accompanied by a web accessible URL at the XPath ".//physical/distribution/online/url". The EDI data repository uses these links to download the data entities. The URLs must be static and not have any redirects otherwise the data entities will not be downloadable.

Value

transaction (character) Transaction identifier. May be used in a subsequent call to `check_status_update()` to determine the operation status

Note

User authentication is required (see `login()`)

See Also

Other Evaluation and Upload: `check_status_create()`, `check_status_evaluate()`, `check_status_update()`, `create_data_package()`, `evaluate_data_package()`

Examples

```
## Not run:

login()

# Update data package
transaction <- update_data_package(
```

```
  eml = paste0(tempdir(), "/edi.595.2.xml"),
  env = "staging"
)
transaction
#> [1] "update_edi.595_163966788658131920__edi.595.2"

# Check update status
status <- check_status_update(
  transaction = transaction,
  env = "staging"
)
status
#> [1] TRUE

logout()

## End(Not run)
```

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