Requirement Report - Details

differ

Version 1.0 ● Proposed

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Package in package 'Model'

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Version 1.0 Phase 1.0 Proposed
Eugeniu Costetchi created on 29/06/2020. Last modified 29/06/2020

component

Package in package 'differ'

component
Version 1.0 Phase 1.0 Proposed
Eugeniu Costetchi created on 05/07/2020. Last modified 07/07/2020

components diagram

Component diagram in package 'component'

The <<subsystem>> stereotype is used to indicate components/services that are external to the rdf-differ.

components
Version 1.0
Eugeniu Costetchi created on 05/07/2020. Last modified 08/07/2020
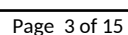
Figure 1:   components

diff manager traces diagram
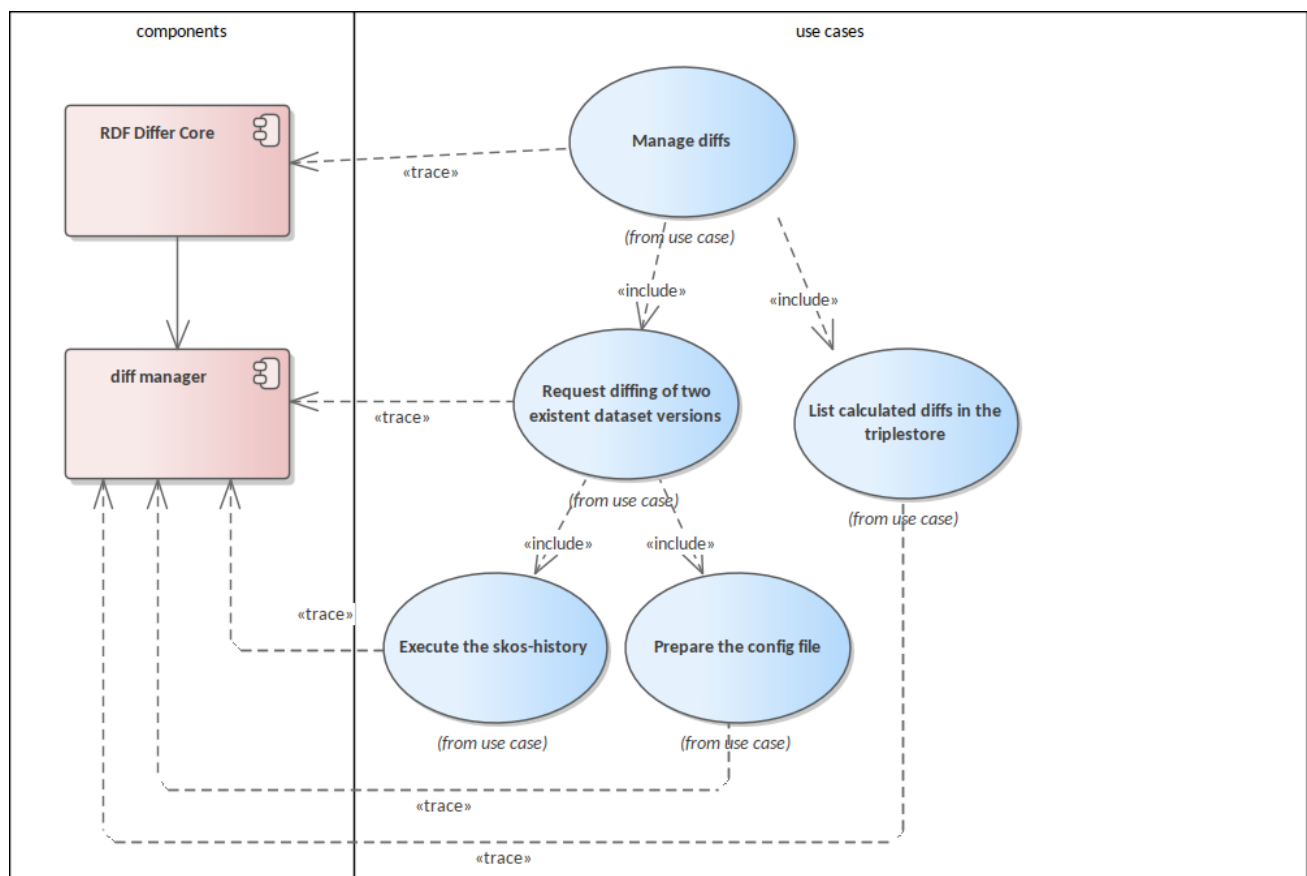
Requirements diagram in package 'component'

Figure 2:   diff manager traces

file manager traces diagram

Requirements diagram in package 'component'
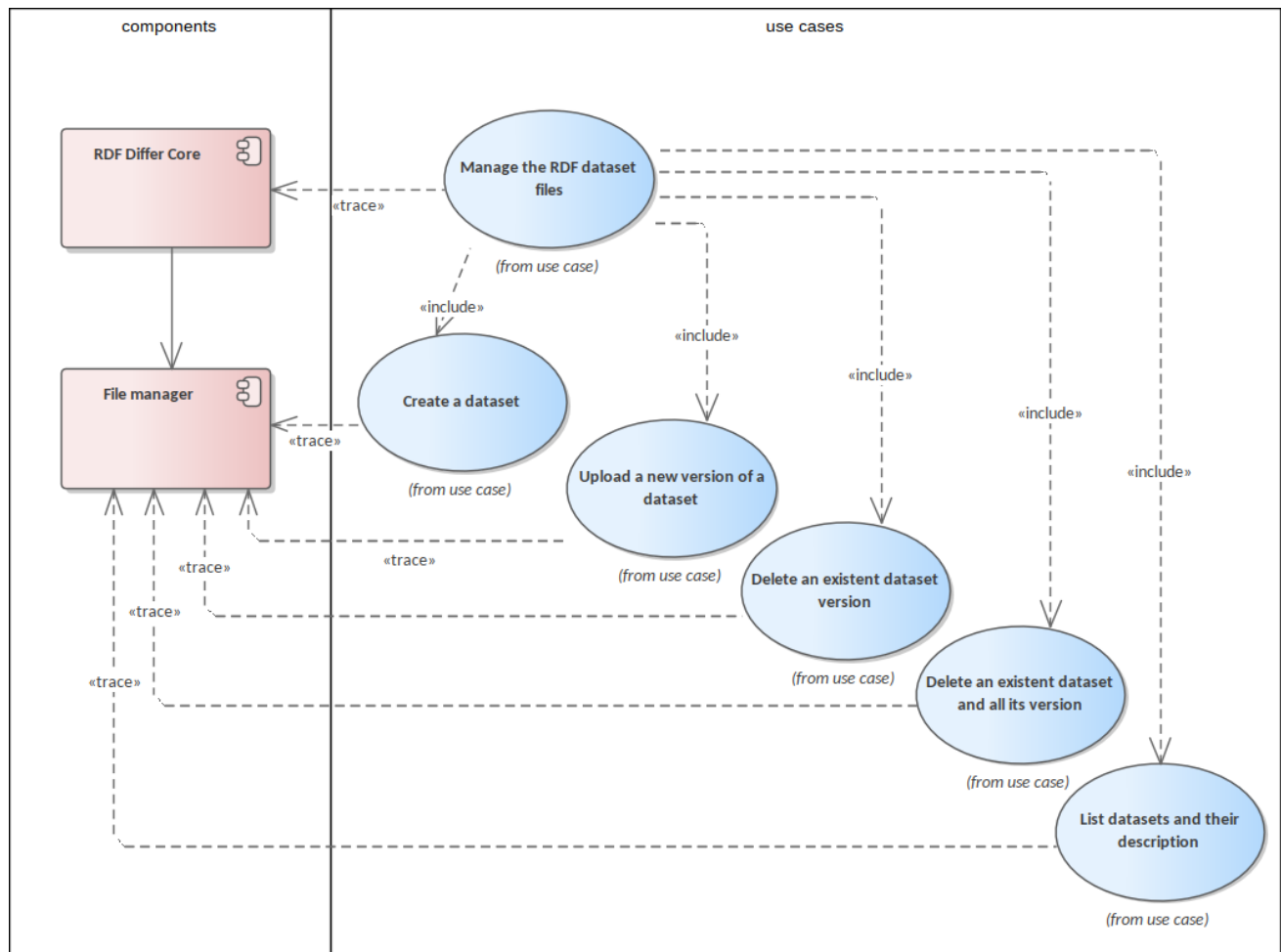
Figure 3:   file manager traces

use case

Package in package 'differ'

use case diagram

Use Case diagram in package 'use case'

Figure 4:   use case

Create a dataset

UseCase in package 'use case'

User:
- provide the dataset name and URI and optionally a description

System:
- saves the information

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Create a dataset
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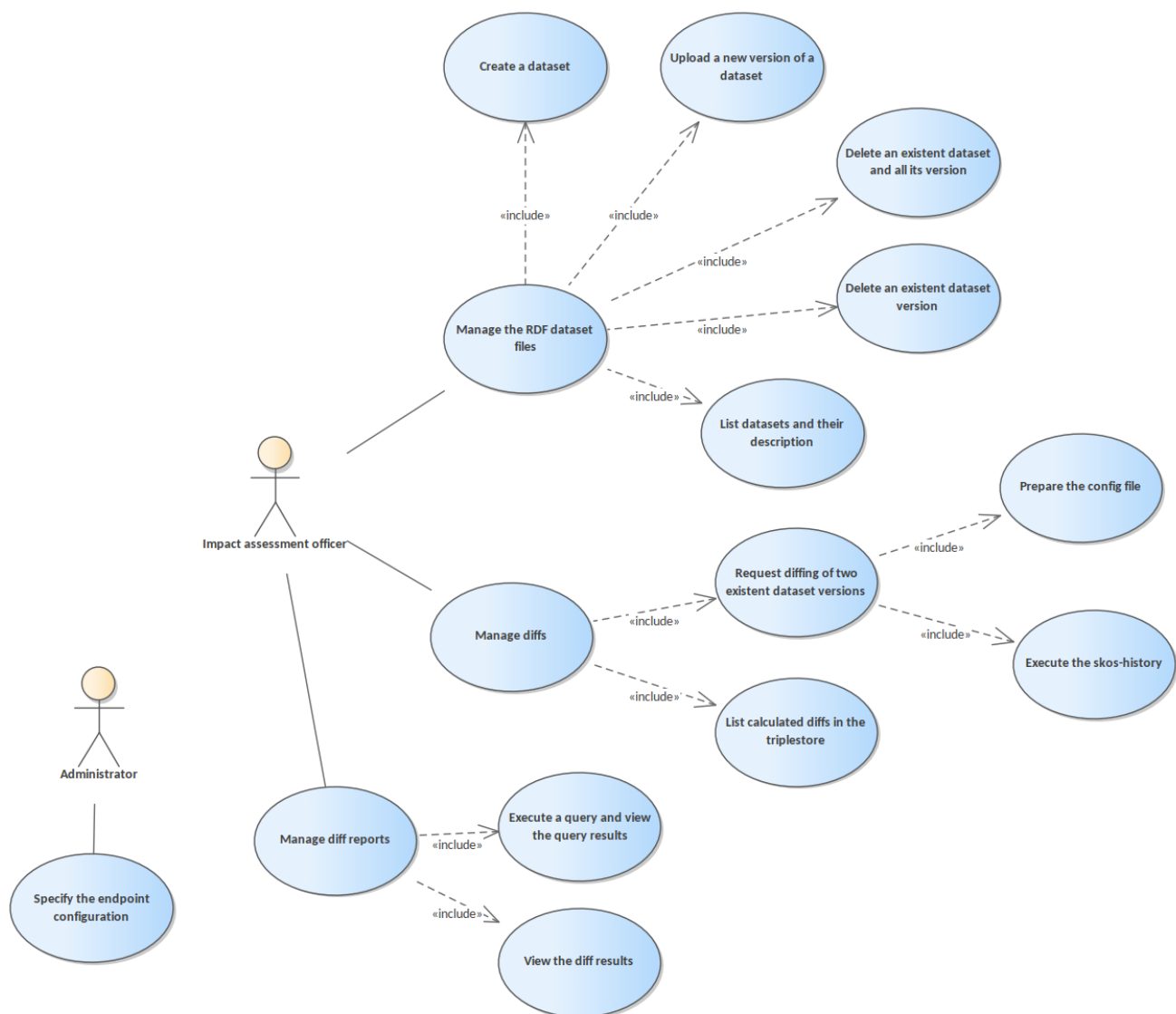| CONNECTORS |
| --- |
| ↗ **Trace** «trace»   Source -> Destination
From: Create a dataset : UseCase, Public
To: File manager : Component, Public |
| ↗ **Include** «include»   Source -> Destination
From: Manage the RDF dataset files : UseCase, Public
To: Create a dataset : UseCase, Public |

Manage diff reports

UseCase in package 'use case'

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Manage diff reports
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CONNECTORS
↗ **Include** «include»   Source -> Destination From: Manage diff reports : UseCase, Public To: View the diff results : UseCase, Public
↗ **Include** «include»   Source -> Destination From: Manage diff reports : UseCase, Public To: Execute a query and view the query results : UseCase, Public

View the diff results

UseCase in package 'use case'

User:
- select an aspect of the diff in question (and implicitly a query)
- query the selected diff from a given dataset

System:
- execute the query on the dataset diff
- provide the resultset corresponding to the query

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View the diff results
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ELEMENTS OWNED BY View the diff results

📄 Execute a query and view the query results : UseCase

CONNECTORS

↗ **Include** «include»   Source -> Destination
From: Manage diff reports : UseCase, Public
To: View the diff results : UseCase, Public

Execute a query and view the query results

UseCase owned by 'View the diff results', in package 'use case'

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Execute a query and view the query results
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CONNECTORS

↗ **Include** «include»   Source -> Destination
From: Manage diff reports : UseCase, Public
To: Execute a query and view the query results : UseCase, Public

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Manage diffs

UseCase in package 'use case'

User:
- load the dataset versions into triplestore
- request diffing of dataset versions
- request the list existent diffs in the triplestore

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Manage diffs
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ELEMENTS OWNED BY Manage diffs

📄 List calculated diffs in the triplestore : UseCase

📄 Request diffing of two existent dataset versions : UseCase

CONNECTORS

CONNECTORS

↗ **Include** «include»   Source -> Destination
From: Manage diffs : UseCase, Public
To: Request diffing of two existent dataset versions : UseCase, Public

↗ **Trace** «trace»   Source -> Destination
From: Manage diffs : UseCase, Public
To: RDF Differ Core : Component, Public

↗ **Include** «include»   Source -> Destination
From: Manage diffs : UseCase, Public
To: List calculated diffs in the triplestore : UseCase, Public

List calculated diffs in the triplestore

UseCase owned by 'Manage diffs', in package 'use case'

User:
- request the inventory of datasets and diffs

System:
- lists the existent datasets
- for each dataset: query the version/delta graph to extract diff information

List calculated diffs in the triplestore
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CONNECTORS

↗ **Trace** «trace»   Source -> Destination
From: List calculated diffs in the triplestore : UseCase, Public
To: query executer and result viewer : Component, Public

↗ **Trace** «trace»   Source -> Destination
From: List calculated diffs in the triplestore : UseCase, Public
To: diff manager : Component, Public

↗ **Include** «include»   Source -> Destination
From: Manage diffs : UseCase, Public
To: List calculated diffs in the triplestore : UseCase, Public

Request diffing of two existent dataset versions

UseCase owned by 'Manage diffs', in package 'use case'

User:
- provides the complete information about the datasets

System:
- setup the configuration (folder structure, config file, etc.)

- execute skos-history

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Request diffing of two existent dataset versions
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ELEMENTS OWNED BY Request diffing of two existent dataset versions

⊟ Prepare the config file : UseCase

⊟ Execute the skos-history : UseCase

CONNECTORS

↗ **Trace** «trace»   Source -> Destination
From: Request diffing of two existent dataset versions : UseCase, Public
To: diff manager : Component, Public

↗ **Include** «include»   Source -> Destination
From: Request diffing of two existent dataset versions : UseCase, Public
To: Execute the skos-history : UseCase, Public

↗ **Include** «include»   Source -> Destination
From: Request diffing of two existent dataset versions : UseCase, Public
To: Prepare the config file : UseCase, Public

↗ **Include** «include»   Source -> Destination
From: Manage diffs : UseCase, Public
To: Request diffing of two existent dataset versions : UseCase, Public

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Prepare the config file

UseCase owned by 'Request diffing of two existent dataset versions', in package 'use case'

User:
- provides the information about
  - the dataset name and (scheme) URI
  - the two version ids
  - the location of alpha and beta versions of the dataset
- the endpoint service is known at the system level

System:
- prepares the folder structure required by skos-history
- copies the files from the provided locations into the right place
- generates the database (if not already existent) in the triplestore) that corresponds to teh dataset
- generates the configuration file using the provided info

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Prepare the config file
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CONNECTORS

CONNECTORS

↗ **Trace** «trace»   Source -> Destination
From: Prepare the config file : UseCase, Public
To: diff manager : Component, Public

↗ **Include** «include»   Source -> Destination
From: Request diffing of two existent dataset versions : UseCase, Public
To: Prepare the config file : UseCase, Public

Execute the skos-history

UseCase owned by 'Request diffing of two existent dataset versions', in package 'use case'

User:
- request execution of skos-history

System:
- executes in a new thread the bash command
- logs the results

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Execute the skos-history
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CONNECTORS

↗ **Trace** «trace»   Source -> Destination
From: Execute the skos-history : UseCase, Public
To: diff manager : Component, Public

↗ **Include** «include»   Source -> Destination
From: Request diffing of two existent dataset versions : UseCase, Public
To: Execute the skos-history : UseCase, Public

Manage the RDF dataset files

UseCase in package 'use case'

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Manage the RDF dataset files
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Eugeniu Costetchi created on 05/07/2020. Last modified 05/07/2020

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ELEMENTS OWNED BY Manage the RDF dataset files

▤ Delete an existent dataset version : UseCase

▤ Delete an existent dataset and all its version : UseCase

ELEMENTS OWNED BY Manage the RDF dataset files
🗎 List datasets and their description : UseCase
🗎 Upload a new version of a dataset : UseCase

CONNECTORS

↗ **Include** «include»   Source -> Destination
From: Manage the RDF dataset files : UseCase, Public
To: Delete an existent dataset and all its version : UseCase, Public

↗ **Include** «include»   Source -> Destination
From: Manage the RDF dataset files : UseCase, Public
To: Delete an existent dataset version : UseCase, Public

↗ **Include** «include»   Source -> Destination
From: Manage the RDF dataset files : UseCase, Public
To: List datasets and their description : UseCase, Public

↗ **Include** «include»   Source -> Destination
From: Manage the RDF dataset files : UseCase, Public
To: Upload a new version of a dataset : UseCase, Public

↗ **Include** «include»   Source -> Destination
From: Manage the RDF dataset files : UseCase, Public
To: Create a dataset : UseCase, Public

↗ **Trace** «trace»   Source -> Destination
From: Manage the RDF dataset files : UseCase, Public
To: RDF Differ Core : Component, Public

Delete an existent dataset version

UseCase owned by 'Manage the RDF dataset files', in package 'use case'

User:
- select a dataset version
- user request deletion of that dataset version

System:
- deletes the record of the selected dataset version description
- deletes the associated file(s)

Delete an existent dataset version
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Eugeniu Costetchi created on 05/07/2020. Last modified 05/07/2020

CONNECTORS

CONNECTORS

↗ **Trace** «trace»   Source -> Destination
From: Delete an existent dataset version : UseCase, Public
To: File manager : Component, Public

↗ **Include** «include»   Source -> Destination
From: Manage the RDF dataset files : UseCase, Public
To: Delete an existent dataset version : UseCase, Public

Delete an existent dataset and all its version

UseCase owned by 'Manage the RDF dataset files', in package 'use case'

User:
- select a dataset
- request deletion of that dataset

System:
- deletes the record of the selected dataset version description
- deletes all the associated versions
- deletes the associated file(s) and folders for each dataset version

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Delete an existent dataset and all its version
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CONNECTORS

↗ **Trace** «trace»   Source -> Destination
From: Delete an existent dataset and all its version : UseCase, Public
To: File manager : Component, Public

↗ **Include** «include»   Source -> Destination
From: Manage the RDF dataset files : UseCase, Public
To: Delete an existent dataset and all its version : UseCase, Public

List datasets and their description

UseCase owned by 'Manage the RDF dataset files', in package 'use case'

User:
- request the inventory of datasets

System:
- provides the list of known datasets and their version

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List datasets and their description
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CONNECTORS

CONNECTORS

↗ **Trace** «trace»   Source -> Destination
From: List datasets and their description : UseCase, Public
To: File manager : Component, Public

↗ **Include** «include»   Source -> Destination
From: Manage the RDF dataset files : UseCase, Public
To: List datasets and their description : UseCase, Public

Upload a new version of a dataset

UseCase owned by 'Manage the RDF dataset files', in package 'use case'

User:
- select a dataset
- provides the version identifier (valid folder name)
- provides the RDF file

System:
- creates a new dataset version description
- saves the provided file

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Upload a new version of a dataset
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CONNECTORS

↗ **Trace** «trace»   Source -> Destination
From: Upload a new version of a dataset : UseCase, Public
To: File manager : Component, Public

↗ **Include** «include»   Source -> Destination
From: Manage the RDF dataset files : UseCase, Public
To: Upload a new version of a dataset : UseCase, Public

Specify the endpoint configuration

UseCase in package 'use case'

Initially this is a pre-defined triplestore that is running along the differ.

Eventually we can foresee configuring multiple triple stores on which the diffing may be calculated.

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Specify the endpoint configuration
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Logging

Requirement in package 'use case'

System:
- log each user request and the execution result
- logging is classified on three levels: INFO, DEBUG, ERROR

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Logging
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Eugeniu Costetchi created on 07/07/2020. Last modified 07/07/2020

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Notifications for asynchronous actions

Requirement in package 'use case'

System:
- for asynchronous actions instantiate a publish/subscribe messaging mechanism
- place notification messages when actions start (the action request and parameters) and when the action ends (the action results or errors)

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Notifications for asynchronous actions
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