

Requirement Report - Details

different

Version 1.0 • Proposed



Date/Time Generated:

08/07/2020 19:09:46

Author:

Eugeniu Costetchi

EA Repository : Z:\home\lps\work\workspace-charm\rdf-differ\doc\spec\rdf-differ-model.eapx

Table of Contents

differ	3
components	3
system components diagram	3
diff manager traces diagram	4
file manager traces diagram	4
use cases	6
system use cases diagram	6
Create a dataset	6
Manage diff reports	7
Prepare the folder structure	7
View the diff results	8
Execute a query and view the query results	8
Manage diffs	9
List calculated diffs in the triplestore	9
Request diffing of two existent dataset versions	10
Prepare the config file and the folder structure	11
Execute the skos-history	11
Manage the RDF dataset files	12
Delete an existent dataset version	13
Delete an existent dataset and all its version	13
List datasets and their description	14
Upload a new version of a dataset	14
Specify the endpoint configuration	15
Logging	15
Notifications for asynchronous actions	15

Package in package 'Model'

Version 1.0 Phase 1.0 Proposed

Package in package 'differ'

Version 1.0 Phase 1.0 Proposed

Version 1.0

Page 3 of 15

Figure 1: system components

diff manager traces diagram

Requirements diagram in package 'components'

diff manager traces

Version 1.0

Eugeniu Costetchi created on 07/07/2020. Last modified 08/07/2020

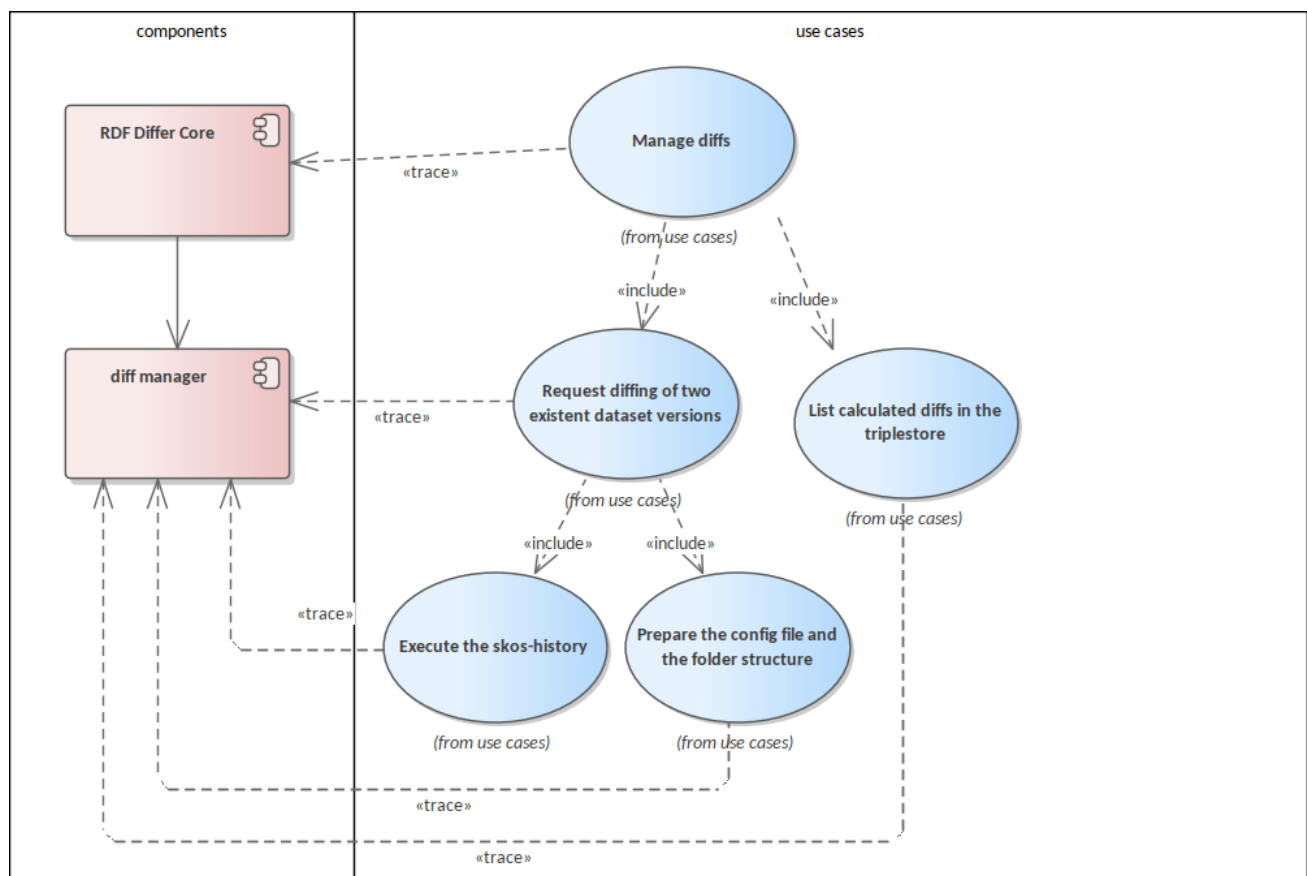


Figure 2: diff manager traces

file manager traces diagram

Requirements diagram in package 'components'

file manager traces

Version 1.0

Eugeniu Costetchi created on 07/07/2020. Last modified 08/07/2020

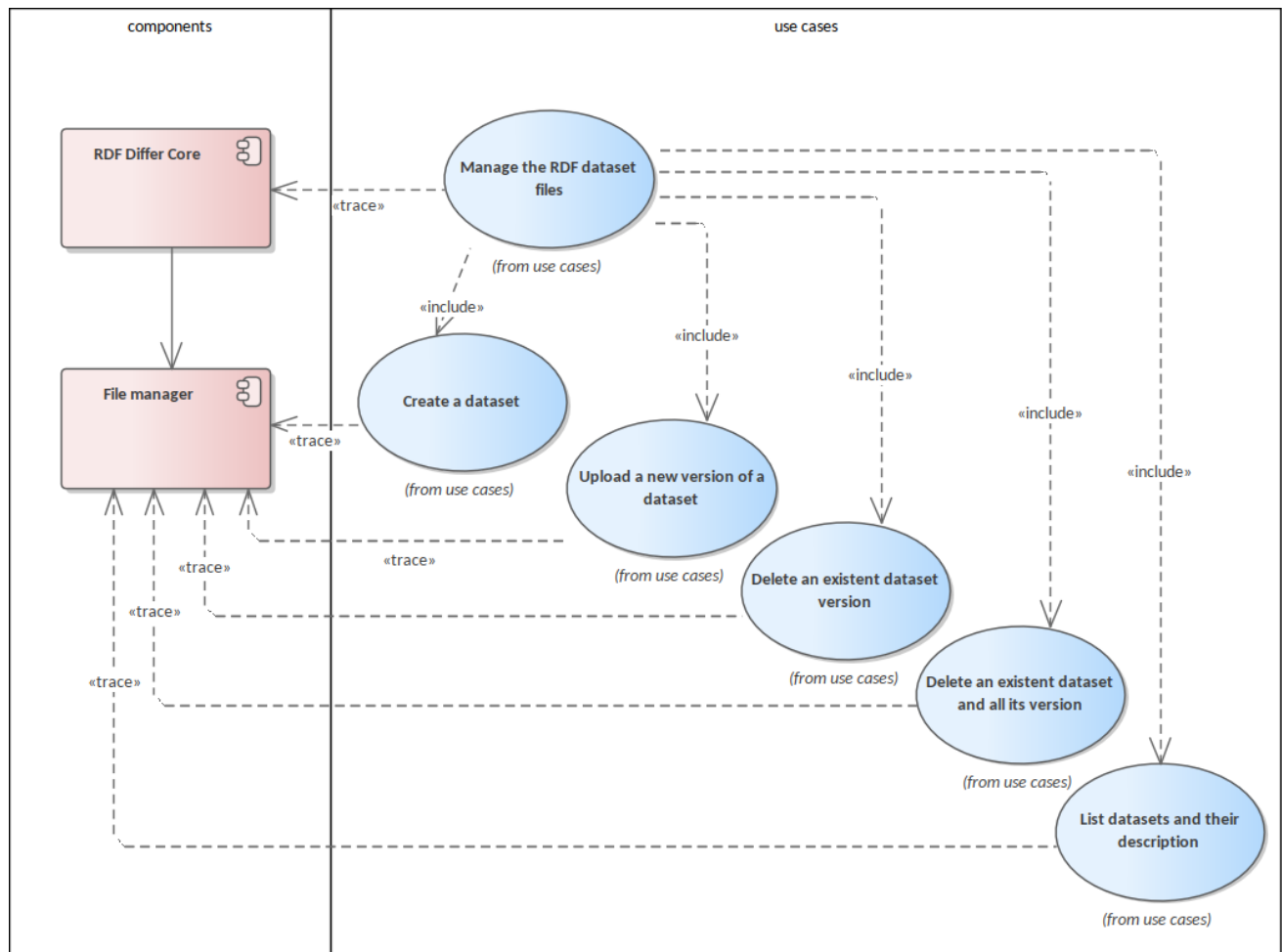


Figure 3: file manager traces

use cases

Package in package 'differ'

use cases

Version 1.0 Phase 1.0 Proposed

Eugeniu Costetchi created on 04/07/2020. Last modified 08/07/2020

system use cases diagram

Use Case diagram in package 'use cases'

system use cases

Version 1.0

Eugeniu Costetchi created on 04/07/2020. Last modified 08/07/2020

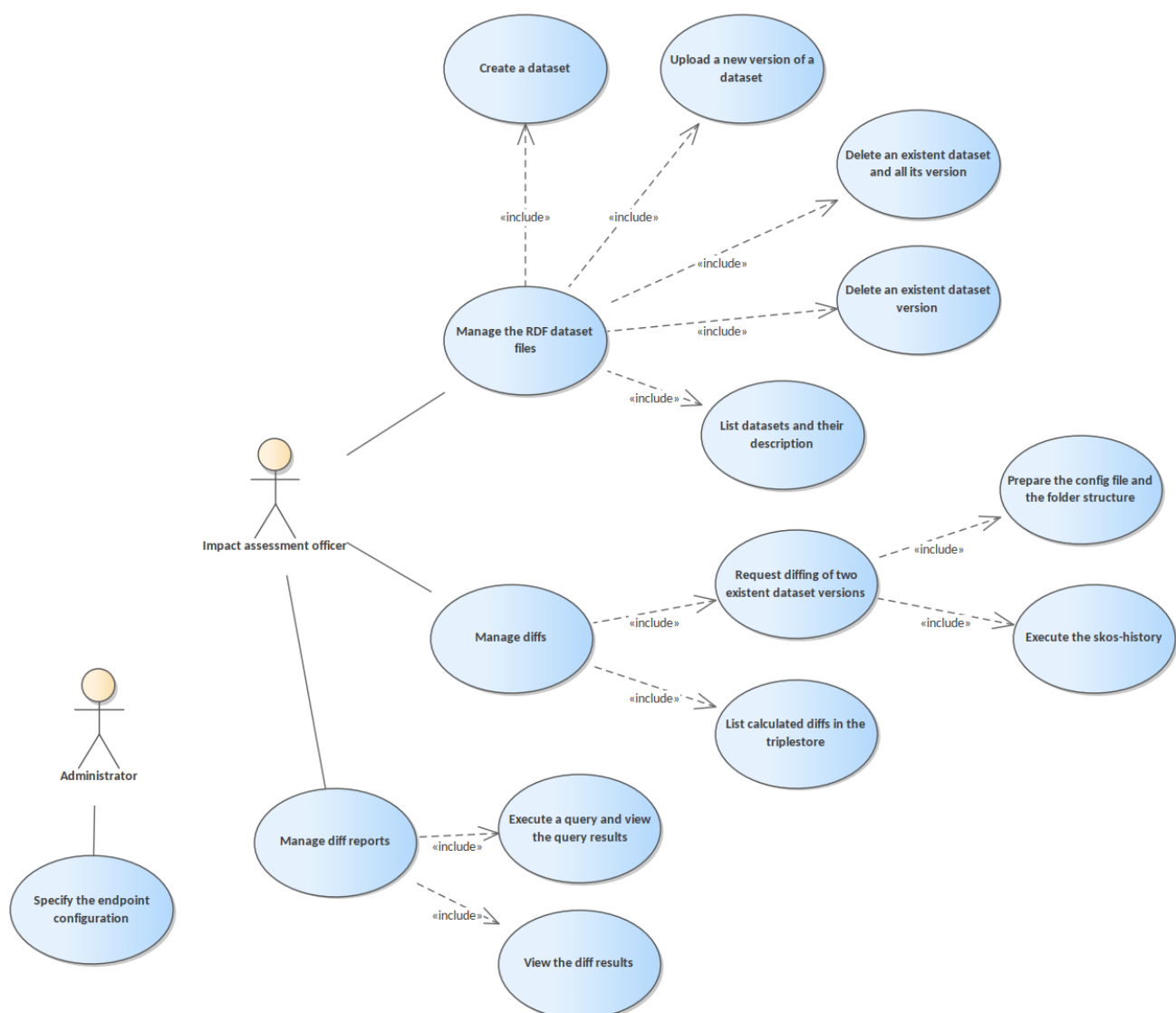


Figure 4: system use cases

Create a dataset

UseCase in package 'use cases'

User:

- provide the dataset name and URI and optionally a description



System:

- saves the information

Create a dataset

Version 1.0 Phase 1.0 Proposed

Eugeniu Costetchi created on 05/07/2020. Last modified 08/07/2020

CONNECTORS	
 Trace «trace» Source -> Destination	
From: Create a dataset : UseCase, Public	
To: File manager : Component, Public	
<hr/>	
 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 cases'

Manage diff reports

Version 1.0 Phase 1.0 Proposed

Eugeniu Costetchi created on 08/07/2020. Last modified 08/07/2020

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

Peper the folder structure

UseCase in package 'use cases'

User:

- request execution of skos-history


System:

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

Peper the folder structure

Version 1.0 Phase 1.0 Proposed
Eugeniu Costetchi created on 08/07/2020. Last modified 08/07/2020

CONNECTORS

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

View the diff results

UseCase in package 'use cases'

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

View the diff results
Version 1.0 Phase 1.0 Proposed
Eugeniu Costetchi created on 05/07/2020. Last modified 07/07/2020

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 cases'

Execute a query and view the query results
Version 1.0 Phase 1.0 Proposed
Eugeniu Costetchi created on 05/07/2020. Last modified 05/07/2020

CONNECTORS

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

Manage diffs

UseCase in package 'use cases'

User:


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

Manage diffs

Version 1.0 Phase 1.0 Proposed


Eugeniu Costetchi created on 05/07/2020. Last modified 07/07/2020


ELEMENTS OWNED BY Manage diffs


 List calculated diffs in the triplestore : UseCase

 Request diffing of two existent dataset versions : UseCase

CONNECTORS

 **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

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

List calculated diffs in the triplestore

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

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


Version 1.0 Phase 1.0 Proposed


Eugeniu Costetchi created on 05/07/2020. Last modified 07/07/2020

CONNECTORS

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

CONNECTORS

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

User:

- provides the complete information about the datasets

System:


- setup the configuration (folder structure, config file, etc.)
- execute skos-history

Request diffing of two existent dataset versions

Version 1.0 Phase 1.0 Proposed


Eugeniu Costetchi created on 05/07/2020. Last modified 07/07/2020


ELEMENTS OWNED BY Request diffing of two existent dataset versions


 Prepare the config file and the folder structure : UseCase


 Execute the skos-history : UseCase

CONNECTORS


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

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

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

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

CONNECTORS

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

Prepare the config file and the folder structure

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

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 the dataset
- generates the configuration file using the provided info


Prepare the config file and the folder structure

Version 1.0 Phase 1.0 Proposed

Eugeniu Costetchi created on 05/07/2020. Last modified 08/07/2020

CONNECTORS

 **Trace** «trace» Source -> Destination
 From: Prepare the config file and the folder structure : 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 and the folder structure : UseCase, Public

Execute the skos-history

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

User:

- request execution of skos-history

System:

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


Execute the skos-history


Version 1.0 Phase 1.0 Proposed

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

CONNECTORS

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 cases'


Manage the RDF dataset files

Version 1.0 Phase 1.0 Proposed

Eugeniu Costetchi created on 05/07/2020. Last modified 05/07/2020

ELEMENTS OWNED BY Manage the RDF dataset files


 Delete an existent dataset version : UseCase


 Delete an existent dataset and all its version : UseCase


 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: List datasets and their description : UseCase, Public

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

CONNECTORS**Include** «include» Source -> Destination

From: Manage the RDF dataset files : UseCase, Public

To: Delete an existent dataset version : 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 cases'

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

Version 1.0 Phase 1.0 Proposed

Eugeniu Costetchi created on 05/07/2020. Last modified 05/07/2020

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 cases'

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


Delete an existent dataset and all its version

Version 1.0 Phase 1.0 Proposed

Eugeniu Costetchi created on 05/07/2020. Last modified 07/07/2020

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 cases'

User:

- request the inventory of datasets

System:


- provides the list of known datasets and their version


List datasets and their description

Version 1.0 Phase 1.0 Proposed

Eugeniu Costetchi created on 05/07/2020. Last modified 07/07/2020

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 cases'

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

Upload a new version of a dataset

Version 1.0 Phase 1.0 Proposed

Eugeniu Costetchi created on 05/07/2020. Last modified 07/07/2020

CONNECTORS

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 cases'

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.

Specify the endpoint configuration

Version 1.0 Phase 1.0 Proposed

Eugeniu Costetchi created on 05/07/2020. Last modified 07/07/2020

Logging

Requirement in package 'use cases'

System:

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

Logging

Version 1.0 Phase 1.0 Proposed

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

Notifications for asynchronous actions

Requirement in package 'use cases'

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)

Notifications for asynchronous actions

Version 1.0 Phase 1.0 Proposed

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