Episciences - SWH SPECS

https://hedgedoc.softwareheritage.org/fc4e-wp6-t6-2-specs-template?edit

Component	Episciences software source code and metadata deposit
Category	**RSAC**
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Version	1.0
Data	

Overview

<Provide a high-level description of the component/service>

Develop APIs and connectors between Software Heritage and Episciences

- *Archival: Source code is already archived on Software Heritage*

- *Reference: expose the corresponding SWHID on the journal's publication record.*

- *Description: enable the deposit and retrieval in Software Heritage of curated metadata for software associated to publications.*

- *Citation: deposit and retrieve the preferred citation information for software associated to publications; export citation information in one or more of the common open citation formats (BibLaTeX, CSL, codemeta.json).*

Objectives

#	Short description
1	Integrate and showcase the Overview into operational infrastructures used by Episciences.
2	ensure the archival of source code in HAL and/or in Software Heritage associated to research articles;
3	expose the corresponding SWHID on the journal's publication record;
4	enable the deposit and retrieval in Software Heritage of curated metadata for software associated to publications;
5	ensure that modifications in the article's metadata will be deposited in Software Heritage.
6	deposit and retrieve the preferred citation information for software associated to publications; add to citation information the reference to software source code.
7	export citation information in one or more of the common open citation formats – BibTeX

Out of Scope	
#	*Short description*
1	automate archival from online public repository using a url in Software Heritage on the Episciences platform (this step will be done by the user and not by the infrastructure)
2	*export citation information in one or more of the common open citation formats (CSL, codemeta.json).*

Requirements

User stories		
#	*Description of the user story*	*Reference*
. *.* *.*	*<Provide 1 or more user stories which are example to using the component/service>*	*<URL to an external reference describing the user story in more detail>*
1	*Episciences directly receives an article with a SWHID for the associated source code.*	*A3* *https://hedgedoc.softwareheritage.org/fc4e-wp6-t6-2-specs-template#2-Requirements*
2	*Episciences adds a reference to the archived software artifact on:* *2.1 reviewer's peer-reviewing form* *2.2 record landing page* *2.3 exported metadata*	*R2* *https://hedgedoc.softwareheritage.org/fc4e-wp6-t6-2-specs-template#2-Requirements*
3	*Researcher adds a reference to the source code on the article's pdf , following requirements of the Episciences journal*	*R1* *https://hedgedoc.softwareheritage.org/fc4e-wp6-t6-2-specs-template#2-Requirements*
4	*Researchers can use Scholarly Repository (HAL, etc.) to enrich metadata with specific software metadata. The metadata will be then visible on the Episciences journal record when using the identifier to reference the record and source code artifacts*	*D1* *https://hedgedoc.softwareheritage.org/fc4e-wp6-t6-2-specs-template#2-Requirements*
5	*Episciences provides export format in BibTeX with software source code reference*	*D2*
6	*Episciences provides best practices and guidelines addressing citation of software.*	*C2* *https://hedgedoc.softwareheritage.org/fc4e-wp6-t6-2-specs-template#2-Requirements*

User requirements (user = Episciences)

#	Short description	Prio rity	Feasib ility	Reference
1	An API to retrieve metadata from scholarly repository	H	5	TBD – link to github Issue
2	An API to retrieve metadata from Software Heritage	M	5	TBD – link to github Issue
3	An API to access source code via SWHID resolution	H	5	TBD – link to github Issue
4	An API to show iframe of the software source code available in Software Heritage	L	3	TBD – link to github Issue

- Priority: H=High, M=Medium, L=Low
- Feasibility: marking between 1 - 5, 5 is easy to implement and 1 is very difficult

Functional requirements

#	Short description	Prio rity	Reference (https://github.com/CCSDForge/episciences)
1.1	**Title: accept SWHID reference on Episciences platform for software artifact** Explanation: add a "related material / software" (or equivalent) field in the submission form where the authors can enter the SWHID of a source code associated with the submitted paper.	H	TBD - link to github Issue
1.2	**Title: accept HAL reference on Episciences platform for software artifact** Explanation: add a "related material / software" (or equivalent) field in the submission form where the authors can enter the HAL identifier of a source code associated with the submitted paper.	H	TBD - link to github Issue (same as above)
2.1	**Title: add a reference to the archived software**	H	TBD - link to github Issue

Functional requirements			
	artifact on reviewer's peer-reviewing form *Explanation: expose the archived software artifact on the peer reviewing form, so that the reviewer has access to it when peer reviewing the submitted paper.*		
2.2	*Title: add a reference to the archived software artifact on record landing page* *Explanation: once the article has been published, a specific section should be visible on the article's landing page and display the reference (some metadata) and a link to the archived software artifact (whether it is on SWH or on a scholarly repository).)*	*M*	*TBD – link to github Issue*
2.3	*Title: add a reference to the archived software artifact on exported metadata* *Explanation: Record's exported metadata (harvestable through an API) should include a reference to the archived software.*	*H*	*TBD – link to github Issue*
5.1	*Title: Add @software / @softwareversion BibTeX entry to the BibTeX export.* *Explanation: For example, in this export add the entry below the @article BibTeX entry:* *https://jtcam.episciences.org/10110/bibtex* *link to BibLaTeX* *TODO: add example*	*M/L*	*TBD – link to github Issue*
x	*Title: Push/send notification (from Publisher) to SWH upon publication.* *Explanation: Send notification or push updated metadata (from Publisher) to SWH or scholarly repository, when a source code is related to a an article, which has just been published.*	*M*	*TBD – link to github Issue*

- Priority: H=High, M=Medium, L=Low

Non-functional requirements

#	Short description	Priority	Reference
1	**Title : request from the authors submitting a manuscript that they first archive the associated source code in SWH** *Explanation : Add a section in the Episciences documentation to explain to authors that, if they have a related source code, it must be first (self-) archived in SWH and then linked with the paper's submission (via the Episciences interface – functional requirement 1.1).*	H	TBD – link to github Issue
2	**Title: add on the documentation or/and requirements of the Episciences journal how to add a reference to the source code on the article's pdf** *Explanation: Add a section in the Episciences documentation dedicated to referencing the source code in the article's pdf, so that the journals running on the platform know how to expose related software artifacts directly in the article's pdf.*	M	TBD – link to github Issue
3	**Title: add on the documentation of the Episciences journal a section explaining how to cite software.** *Explanation: providing best practices and guidelines addressing citation of software.*	L	TBD – link to github Issue

- Priority: H=High, M=Medium, L=Low

Specifications

Architectural design

<Provide a high-level architectural design diagram of the component/service>

Researchers submit to a journal Episcience an identifier from Scholarly Repository + SWHID for source code archived and related to publication. After reviewing and publication Episciences show publications metadata and at least link to source code archived on software Heritage.
One publication could have several SWHId.

Functional specifications

#	Short description	Priority	Reference
...	*<Provide a short description of functional technical specification>*	[H|M|L]	*<JIRA issue number> or* *<URL to external reference>*
1	*Episcience should use the same workflow between HAL and software Heritage already done*	H	

- Priority: H=High, M=Medium, L=Low

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Service specifications

#	Short description	Priority	Reference
1	<Provide a short description of service specifications>	[H|M|L]	<JIRA issue number> or <URL to external reference>
…			

- Priority: H=High, M=Medium, L=Low

Operational specifications

#	Short description	Priority	Reference
1	<Provide a short description of operational specifications>	[H|M|L]	<JIRA issue number> or <URL to external reference>
…			

- Priority: H=High, M=Medium, L=Low

Integration with EOSC Core components

#	Short description	Priority	Reference
1	<Provide a short description of operational specifications>	[H|M|L]	<JIRA issue number> or <URL to external reference>
…			

- Priority: H=High, M=Medium, L=Low

External references

External references - subcomponent name

#	Short description	Reference
1	<Provide a short description of external reference>	<url>
…		

External references - SWH		
#	*Short description*	*Reference*
1	*<Provide a short description of external reference>*	*<url>*
…		

Annexe

Annexe A: Sequence diagram