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NI4OS-Europe

National Initiatives for Open Science in Europe

Deliverable D4.6

Second set of data management and certification tools

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Abstract: This document is accompanying the deliverable D4.6, which delivers the NI4OS-Europe License Clearance Tool.

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IIAP NAS RA	Beneficiary	Armenia
GRENA	Beneficiary	Georgia

Document Revision History

Date	Issue	Author/Editor/Contributor	Summary of main changes
22.12.2021	Draft	Eleni Toli, Christos Liatas	ToC defined, all sections added
23.12.2021	Final	Branko Marović, Eleni Toli, Christos Liatas	Minor edits; summary of new features

Table of contents

References

[1] Project NI4OS-Europe-857645 – Annex I – Description of the Action

[2] D4.1 Incentives for Supporting ORDM and FAIR
     (https://zenodo.org/record/3736148#.Xqq7ZagzY2w)

[3] D4.2 Data repository integration and ORDM/FAIR compliance guidelines
     (https://zenodo.org/record/3736150#.Xqq8GqgzY2w)

[4] D4.3 Mapping of legal, technical and procedural tools
     https://zenodo.org/record/3820880#.Xvsf-Sgzbc8

[5] Collected tools catalogue:
     https://docs.google.com/spreadsheets/d/1Sk8YmcUbxoMDelcyEKyXGPxDG61zEmDc/edit#gid=739815483

[6] OpenMinTeD License Compatibility Matrix
     https://services.openminted.eu/support/licenseCompatibilityMatrix

Executive summary

What is the focus of this Deliverable?

The deliverable D4.6 is the outcome of T4.4 Certification schemes for a "free flow of data". It develops and deploys the NI4OS-Europe tool related to data management & certification. This document provided an update of the development reported in D4.4 "Delivery of data management and certification tools".

What is next in the process to deliver the NI4OS-Europe results?

D4.6 is the final version, featuring all planned elements and characteristics of the LCT tool. It follows several intermediate versions. Its development run in parallel to the development of the deliverables D4.5 and D4.7, which deliver the legal, technical and procedural tool. The above deliverables complete the NI4OS-Europe contribution to the development of tools supporting ORDM.

What are the deliverable contents?

This is only an accompanying document. The actual deliverable is a demonstrator accessible through a link. The related documentation is available at the NI4OS-Europe project public wiki.

Conclusions and recommendations

The WP4 deliverables contribute to ORDM and FAIR. The deliverables submitted in the first eight months of the project offer analysis and categorization of the existing guidelines, policies, technical solutions, tools and models addressing FAIR and open science issues. This work has essentially contributed to the identification of gaps in the current scenery and steered the development of the NI4OS-Europe demonstrators.

1. Overview

This deliverable is part of Work Package 4 (WP4) of the NI4OS-Europe project and the work related to the support of ORDM and FAIR.

D4.6 delivers the NI4OS-Europe License Clearance Tool (LCT). The tool aims to facilitate and automate the clearance of rights (copyright) for resources (data, software, hardware, fonts, audio, etc.) that are to be cleared before they are publicly released under an open license and/or stored at a publicly trusted FAIR repository.

This document provides only the accompanying information, as the actual deliverable is a demonstrator. In the current version, all planned functionalities have been implemented and the tool is released and fully operational. Two workflows are foreseen, the resource-driven clearance, for clearing derivative work licenses, and the license-driven clearance, for understanding license compatibility for currently unlicensed resources but with specific licensing out requirements. The tool can be used either in a guest mode or as a registered user. The second option comes with additional options for the users, such as the possibility to save the work and complete the clearance at a later stage, access to the clearance history and possibility to edit earlier submissions.

Acces to the tool	https://lct.ni4os.eu
GitHub link to the LCT backend service	https://github.com/ni4os-europe/license-clearance-application
Documentation and architecture	https://wiki.ni4os.eu/index.php/Data_Clearance_Tool_Description_and_Documentation
Detailed user manual	https://lct.ni4os.eu/files/lct-manual.pdf

2. Summary of changes since the initial version

Following the design and research phase that mostly occurred until June 2020, LCT's first release (Release 1.0) was in September 2020. This included a single working workflow – Workflow I (resource driven clearance), a contact/issues form, a reworked back-end license compatibility algorithm, a reworked user interface, mandatory fields validation, and various branding updates such as a name change to match the wider purpose of the tool and a new branding logo. This release also included policy and privacy updates. An initial documentation draft was created based on available at the time features and functionality. LCT stable version was moved to a public facing production server, while the development branch is maintained in a restricted development server.

Next followed three minor releases, Releases 1.2 – 1.4 that added features on existing functionality, fixed bugs and included some routines' refactoring to prepare for the next major release. Specifically Release 1.1 introduced the AAI mechanism utilising NI4OS-Europe AAI, while at the same time editable profile pages for registered users were added. These two components enable additional benefits for registered users, such as

automatically saving clearance reporting history for each registered user and being able to re-download previous clearance reports. Cookies policy and a simple cookies consent form was also packed with this release in addition to an updated privacy policy to coply with GDPR.

In May 2021, release 1.2 added the first iteration for the second LCT workflow – Workflow II (license driven clearance). An initial attempt was made, with this release, to submit LCT to EOSC catalogue through the NI4OS pre-production platform. The attempt was not completed at this stage as there were requirements that could not be met at this stage. Some of these requirements were met immediately such as the creation of a "user manual" in a pdf form that can be accessed through the application and the addition of a dedicated "Terms of Use" page. The code for the license clearance service running on LCT's backend was publicly released on a Github repository. Other EOSC catalogue requirements such as some management information (e.g. training), helpdesk and maintenance information, maturity information and financial information among others could not be completed at these stage, as they required sustainability considerations and plans that will occur at a later stage of the project.

Release 1.3, in July 2021 added administration functionality and corresponding administration pages for LCT's maintainers. This reduces the maintenance burden from the developers as it provides UI based functionality for most usual maintenance tasks, such as database cleaning and registered users' reporting. Minor bug fixes were included in this release as well as minor UI updates having to do with easy access links for the user manual (related to requirement of EOSC catalogue) and updates to privacy policy and terms of use that occurred from the first interactions of actual end users with LCT.

LCT's latest stable release, Release 2.0, is published end of December 2021 alongside deliverable D4.6 and encompasses all planned features and functionality. This major release aims at fixing all bugs that were collected having the tool exposed to public for a condsiderable amount of time up to this point, but most importantly at advancing LCT to a complete OS product. Particular attention has been given to assist users in license choice. Extensive work was done by both leagal experts and developers to characterize licenses based on a list of specific attributes. This enabled the integration of a license recommendation functionality in both workflows (resource driven clearance and license driven clearance). This added user experience comes as a response to relevant user feedback and observations from competitive applications and is completed with the addition of a new page that providea information for each license based on these attributes. This assists users to easily compare and filter the initially suggested list of compatible licenses. This added functionality effectively reduces a wide list of numerous compatible licenses down to even a single choice. In addition, refactoring of various routines provided a significant performance improvent of the form wizard. Consering analytics, a custom cookie banner implementation was added to allow users to accept or decline the usage of analytics, and at the same time Google analytics were integrated to enable detailed measuring and monitoring abitlities of various usage metrics. In terms of user feedback, a custom emoji rating widget was introduced to collect quick and basic responses from end users while using the application.

- Better application name, logo and branding
- Users based on NI4OS-Europe AAI
- User profiles and access to earlier submissions and reports
- Pages for application administrators

- Resource- and license-driven workflows
- Users can contact support or report issues from the application
- Integrated documentation and standalone user manual
- Revamped user interface
- Free text notes and validation of mandatory fields
- Performance improvements
- Elaborates Privacy Policy, Terms of Use, Cookies Policy and cookies consent
- Integration with Google analytics

3. Next steps

The current version of the License Clearance Tool concludes the related work in the frame of the NI4OS-Europe project. It includes three distinct, yet interoperating components: a user management, a data management, and a license compatibility component.

The tool has reached a high maturity level, both in terms of technical deployment and legal advice support. Thus, there is no need for major updates in the course of the project. NI4OS-Europe is implementing, however, an assessment process for all WP4 tools, to make sure that they are understood and reflect the needs of the research communities. Based on the feedback we will receive, and in line with the original planning and project priorities, minor updates may be performed to LCT, in the form of fine-tuning features and/or functionalities. An example of this, is an interesting enhancement idea that has been submitted during the testing period in November and December 2021: to, provide the possibility to allow batch import of resources lists and their licenselicenses.

Finally, the License Compatibility Tool will be onboarded to EOSC through the NI4OS-Europe pre-production platform.