InvenioRDM integration for the CERN Digital Memory Platform

CERN Openlab Summer Student Lightning Talks

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Digital Memory Platform

Introduction: Background knowledge

• Large amount of data generated at CERN that must be preserved
  • Papers, reports and presentations
  • Department meetings and lectures
  • Code and Datasets

• Digital CERN Memory Platform is created based on the OAIS model
  • Provide a level of trust for CERN’s digital repositories
  • CERN data and information must remain accessible for a long period of time
InvenioRDM

*Introduction: Background knowledge*

- **Turn-key research data management repository powered by CERN**
  - Provide reliable open-source management repository platform

- **InvenioRDM Record** is a data model to describe a primary resource of the repository
  - Version of a record
  - Parent record
  - Draft

- **InvenioRDM Request** is a method of communicating with the system
  - Creator
  - Receiver
  - Status
Definitions

Introduction

• **Restful API service**
  • Interface that two computer systems use to exchange information securely over the internet

• **Django**
  • High-level open-source framework used to build web applications.

• **Django Model**
  • A Django model defines different structures of the stored data, including field types, maximum size, default values, etc.
Base Implementation

Design and implementation of the new functionality

• HTTP Requests to implement the REST API service
  • Define a JSON schema
  • Define the endpoint
  • Post request for draft
  • Post request for record publication

• Integration with the CERN Digital Memory Platform
  • Create a new step
  • Modification of the pipeline
  • Creation of the artifact
Versioning

Design and implementation of the new functionality

Creation of the new InvenioRDM step

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Versioning

Design and implementation of the new functionality

InvenioRDM step finished successfully with the Invenio Parent ID

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Design and implementation of the new functionality

InvenioRDM artifact generated

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Design and implementation of the new functionality

InvenioRDM artifact, first version of the archive

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Design and implementation of the new functionality

New InvenioRDM step to fix errors

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Versioning

Design and implementation of the new functionality

Modernising the CERN CMS Trigger Rates Monitoring software

Vivace, Antonio

Citation


Description

Source: cds
Link: https://cds.cern.ch/record/2798105

New version artifact

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Versioning

Design and implementation of the new functionality

Harvest a new archive of the same resource

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Design and implementation of the new functionality

New record of the same resource created with same Invenio Parent ID

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Versioning

Design and implementation of the new functionality

InvenioRDM step created in the new archive

Carmen Marcos Sánchez de la Blanca (IT-CA-IR, Digital Memory Platform)
Versioning

Design and implementation of the new functionality

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Vivace, Antonio

Published August 8, 2022 | Version 1, Archive 11

Citation


Description

Source: cds
Link: https://cds.cern.ch/record/2798105

New artifact for the first version of the second archive

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Versioning

Design and implementation of the new functionality

Carmen Marcos Sánchez de la Blanca (IT-CA-IR, Digital Memory Platform)
New Model

Design and implementation of the new functionality

RESOURCE:
Source: GDS
RecordID: 14500
InvenioParentID: kds73giw

CDS: 14500

A1v1 → A2v1 → A3v1 → A4v1 → A5v1
QUESTIONS?

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