Interdisciplinary research data management service for the whole universities and research institutions in Japan that emphasizes research integrity

Wednesday, 10 October 2018 17:10 (5 minutes)

This research describes the development progress as of 2018 of GakuNin RDM (1), a nationwide research data management (RDM) service promoted by the Cabinet Office of the Japanese government. GakuNin (2) means the academic access management federation in Japan. Also, RDM is an acronym for research data management.

First, in Japan, the results of public fund research are becoming public in principle. Besides, researchers are obliged to submit a data management plan to save research data for ten years from the viewpoint of research integrity. Although infrastructure and guidelines for unified research data management do not yet exist, it is requested by the government that academic institutions should develop them as soon as possible.

Second, The National Institute of Informatics (NII) of Research Organization of Information and Systems (ROIS) in Japan provides research data infrastructure to 850 domestic academic institutions. For example, SINET (3) is 100 Gbps high-speed network for science that is connected to GÉANT and Internete2. GakuNin is authentication federation that it has corresponded eduGAIN, GakuNin Cloud is Cloud consulting service for a university, CiNii (4) Research is a discovery service of academic information for research data, JAIRO Cloud is SaaS of an institutional repository that is based on the repository software WEKO (5). OpenAIRE is harvesting all research article metadata from the institutional repository database by NII.

Third, The Research Center for Open Science and Data Platform (RCOS) of NII began developing GakuNin RDM to respond to the request for support of research data management from academic institutions IT centers, libraries, university research administrators, legal intellectual property departments and boards since 2016. We have adopted the Open Science Framework (OSF) (6) for the core system of GakuNin RDM. In open science promotion in Japan, it is focused on preventing scientific misconduct. In particular, we extended the function of stamping commercial timestamps for file operations and provided operation logs to store aggregated research data. Also, We have developed functions for administrators to customize the user interface for each university and research institution. It includes functions to control the use of GakuNin RDM add-ons, create usage statistics reports and announce them to administrators and functions for announcing to end users by institution managers. Furthermore, we developed several add-ons not found in OSF and strengthened GakuNin RDM as research data infrastructure. For example, an add-on to WEKO that is used more than 500 organizations in Japan, a cooperation add-on between JupyterHub, a data analysis platform, and workflow tool Galaxy. In this research, we introduce Japanese research data management service and discuss whether we can collaborate with European research data infrastructure.

References

(1): https://doi.org/10.1109/IIAI-AAI.2017.144

(2): https://doi.org/10.1109/SAINT.2010.14

(3): https://doi.org/10.1109/ICUFN.2016.7536928

(4): http://dl.acm.org/citation.cfm?id=1670638.1670658

(5): https://doi.org/10.1007/978-3-319-23207-2_40

(6): https://doi.org/10.5195/jmla.2017.88

Type of abstract

Presentation

Summary

In Japan, the results of public fund research are becoming public in principle. Besides, researchers are obliged to submit a data management plan to save research data for ten years from the viewpoint of research integrity. Although infrastructure and guidelines for unified research data management (RDM) do not yet exist, it is

requested by the government that academic institutions should develop them as soon as possible. National Institute of Informatics in Japan provides research data infrastructure to 850 domestic academic institutions. NII began developing GakuNin RDM to respond to the request for support of RDM from academic institutions since 2016.

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Session Classification: Lightning Talks

Track Classification: Lightning Talks