The ReDBox and the Data Life Cycle Framework Evolution

June, 2017

ReDBox for Research Data Management

ReDBox is an open source customisable research data registry, providing forms, workflows and system integrations to assist institutions in creating and managing the metadata describing research data collections. It includes the innovative Mint platform to provide a lookup service for researcher information and project details, as well as commonly used research classifications, such as FOR codes. ReDBox supports a variety of metadata formats and provides an OAI-PMH interface for metadata harvesting by repositories including Research Data Australia.

ReDBox is currently the most widely deployed research data collection metadata management tool deployed within Australian Universities. QCIF leads the development and support of ReDBox with the help of an active user community.

ReDBox and Research Data Management Planning

A key feature of ReDBox is the ReDBox Data Management Plan (DMP) tool. This tool allows researchers to document how they plan to collect, store, secure and share their research data. Research data management planning is now encouraged in all Australian Universities and ReDBox provides customisable forms and workflows to assist researchers, supervisors and administrators in creating, tracking and approving DMPs.

ReDBox and the Data Life Cycle Framework

The DLCF is an Australian initiative designed to assist researchers in connecting their research activities with their research data as well as the eResearch infrastructure and services used to store, manage and process the data. QCIF Engineering Services is working with RDS to create a portal available to all researchers to register their research activities. This portal will provide forms for registering for a Research Activity ID (RAID). This RAID can then be used as a universal identifier for linking researchers, research activities and research data. We are also working with RDS to capture group information with the RAID, allowing research activities to be linked with researchers across Australian institutions.

A key outcome of this project is that this functionality is also being embedded in the ReDBox platform. For those institutions using ReDBox their researchers can generate RAIDs at the DMP stage and apply RAIDs to their data collections.

The ReDBox Vision (Future planned enhancements)

ReDBox and Provisioning

A key stage in the DLCF is linking research activities to the infrastructure and services used to store, manage and process research data. Currently the ReDBox DMP tool allows researchers to indicate resource requirements such as expected storage volumes. QCIF plans to extend ReDBox provisioning functions by either automating the provisioning or managing resource requests. For example a researcher could request CloudStor storage and have that automatically provisioned via the CloudStor API. For larger storage requests ReDBox would trigger a workflow to request and track institutional and administrative authorisation.

ReDBox and Data Harvesting

Once researchers have acquired their storage and compute resources, it is planned that ReDBox will assist researchers to directly manage and publish their data files. For example, using the Intersect Collections tool would allow researchers to select the files they want to manage from their CloudStor storage, create a metadata manifest of the files, and harvest the manifest (and optionally the data files) into ReDBox. This places the research data files under ReDBox and institutional control. The files and metadata can then be published for open access.

The Benefits of ReDBox as a Research Data Management Platform

Through this approach researchers will have ReDBox as a single point of access to key elements of the DLCF, including planning, provisioning, data harvesting and publishing. It will give institutions greater visibility into how researchers manage and publish their data while providing assurances that researcher practices conform to Australian standards and expectations.
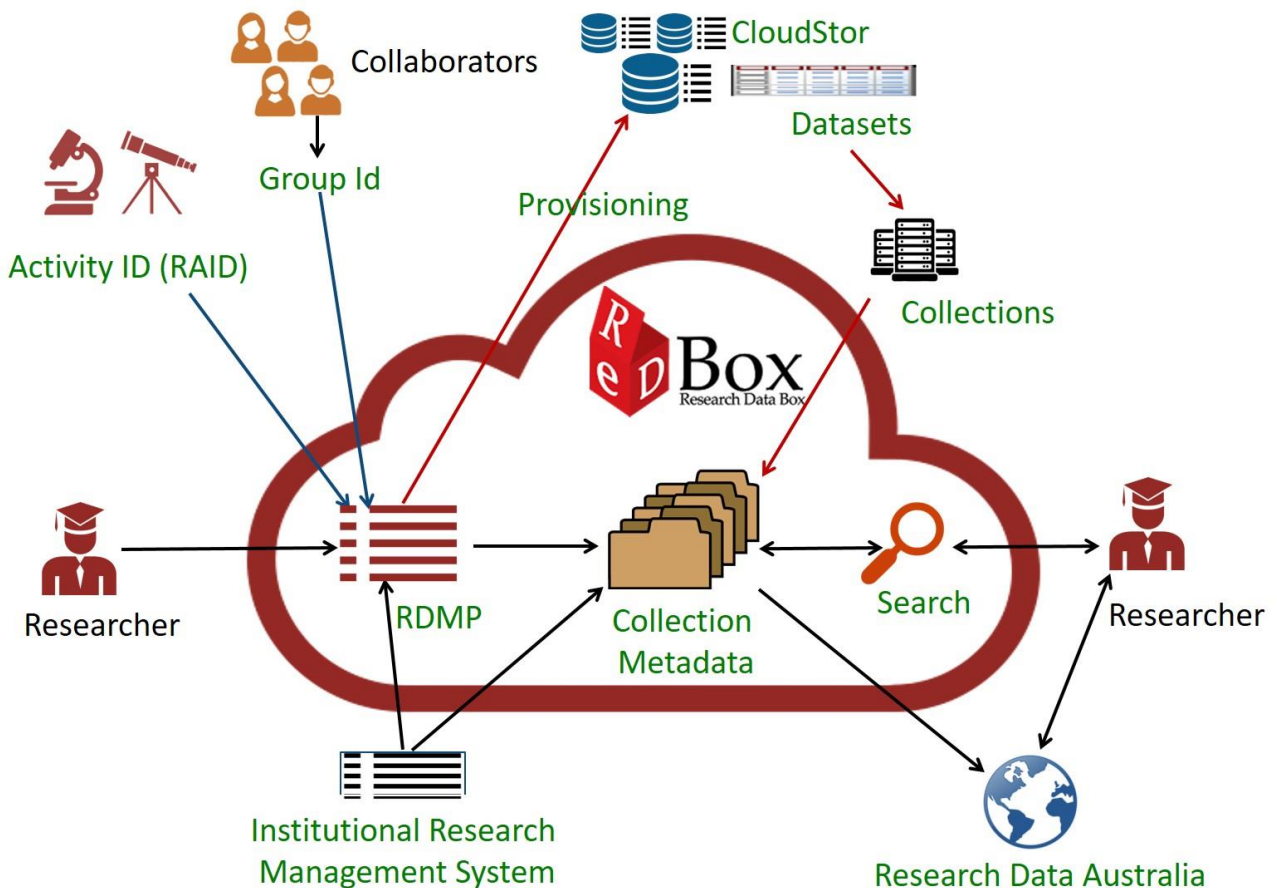
Figure 1 - Data Life Cycle flow in ReDBox

Contact

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