University of Sydney Supported Research Data Platforms

The University offers a suite of different tools to aid with managing your research data. These platforms were acquired after consultation with the University community and meet standards for best practice Research Data Management (RDM) as outlined by the University's Research Data Management Policy 2014.

It is expected that researchers will use the supported University platforms as others may not comply with RDM requirements. Any number can be used together to satisfy the needs of your research and collaborative processes.

The below tools are provided for use by University staff, students and affiliates. Unless otherwise noted, accounts do not require approval to be generated – navigating to the linked login page and signing in with your Unikey and password will create an account for you to begin using.

Descriptions and Recommendations

eNotebook: A web-based electronic notebook provided by LabArchives for managing research documentation, observations and data. With detailed administrative functions and intellectual property controls, **the eNotebook is ideal for overseeing research students and large collaborative groups.** Additionally, there is integration with the University's Research Data Store, expanding the functionality of the eNotebook.

REDCap: Research Electronic Data Capture (REDCap) is a secure web-based database application maintained by the University of Sydney. It is **ideal for collecting and managing participant data and administering online surveys**, with features supporting longitudinal data collection, complex team workflows and exports to a range of statistical analysis programs.

Office365: A package of Microsoft programs, both desktop and web-based for **collaborative document editing and data management**. Storage of data is through OneDrive, which has a desktop syncing application. OneNote can be used to collate research-based contextual information e.g. research process journals and metadata, although files from OneDrive cannot be linked.

Dropbox (Enterprise): Cloud-based storage with **desktop syncing to your devices** and additional features such as Paper, a collaborative document editing and record keeping tool which is ideal for research administration and task management. A personal Dropbox account can be managed side-by-side with an Enterprise account, including syncing both accounts to your devices.

Please be aware that retention of older versions and deleted files in both Dropbox and Paper is only for 120 days. In the event of unintentional deletion, files/documents can only be recovered during that window. **Dropbox therefore should not be used as the primary/only storage method for research data and important documentation.**

An account can be generated by visiting dropbox.com and creating an account with a @sydney.edu.au email address. Students with an @uni.sydney.edu.au email address can request an invitation by visiting this page.

Code Repository: A web-based Git repository management platform using an enterprise edition of GitHub. Providing features to help with code management, version control, code review, and collaboration, GitHub is **ideal for any code-based research, particularly in collaborative environments.** Although predominantly meant to store text files like code and documentation, GitHub allows uploading of supporting files up to 100MB. For larger files, we also support Git Large File Storage.

CloudStor: A secure storage and file transfer (FileSender) solution to support collaboration with desktop syncing functionality mediated through OwnCloud. File storage is limited to 100GB for individual researchers and other University platforms are preferred due to more rigorous backup and recovery protocols. While not recommended for file storage, CloudStor's FileSender function is **suggested for transferring files up to 2TB,** with the additional option to encrypt files for secure sending of confidential and highly confidential data.

RDS/RCOS: Research Data Store (RDS) is a central networked drive maintained by the University of Sydney to store your digital research data and is **recommended for large files and file series**. There are two types of storage offered, Classic RDS and Research Computing Optimised Storage (RCOS), the latter which is ideal for working with the University's High Performance Computing (HPC) service, Artemis.

Storage can be requested by creating a project in the Researcher Dashboard (DashR). The listed Chief Investigator must approve the project before space is provisioned.

Portable Devices: portable devices include laptops (University owned or personal), USB drives and other removable media. We do not recommend that research data is primarily managed and stored on portable devices as they lack many of the features required for best practice research data management. Any portable devices should be encrypted. See the AskSydney ICT encryption guides.

Features

A table comparing the main features of the aforementioned platforms is below.

Features for best-practice Research Data Management	eNotebook (LabArchives)	REDCap	Office365 (OneDrive)	Dropbox (Enterprise)	Code Repository (GitHub)	Cloudstor	RDS RCOS	Portable Devices
Sensitive data?	⚠️[1]	✅	⚠️[1]	⚠️[1]	⚠️[1]	⚠️[1]	⚠️[1]	⚠️[1]
Stored in Australia	✅	✅	✅	❌[2]	✅	✅	✅	⚠️
Accessible off campus	✅	✅	✅	✅	✅	✅	⚠️[3]	⚠️
External collaborator access	✅	✅	✅	✅	⚠️[4]	⚠️[5]	⚠️[4]	❌
Syncing with local copy	❌	❌	✅	✅	✅[6]	✅	⚠️[7]	-
Unlimited storage: staff (@sydney.edu.au)	✅	✅	3TB	✅	✅	100GB	✅	❌
Unlimited storage: students (@uni.sydney.edu.au)	✅	✅	1TB	15GB	✅	100GB	✅	❌
Individual file size limit	**4GB** *browser* **Unlimited** *RDS integration*	**200MB**	**15GB**	**20GB** *browser* **Unlimited** *client*	**100MB** *standard* **2GB** *Git LFS*	**2GB** *browser* **2TB** *FileSender*	**Unlimited**	**Device storage**
Ability to enter and manage contextual information, notation and commentary	✅	⚠️[8]	⚠️[9]	✅	✅	❌	❌	⚠️
Full audit trail (IP and research integrity)	✅	✅	✅	✅	✅	❌	❌	❌
All versioning kept for >min retention (5 years)	✅	✅	✅	❌[10]	✅	❌	❌	❌
Backup and disaster recovery	✅	✅	✅	⚠️[10]	✅	⚠️[11]	✅	❌

⚠️ 1-12 See footnotes below

Footnotes

1 - Refer to Research Data Platforms: Security Guide

2 - Dropbox data is stored in the United States. If the data you work with requires storage within Australia or NSW, for example, health information containing personal identifiers, Dropbox cannot be used. For more information see How do I use my University Dropbox Account?

3 - RDS access off campus requires use of a Virtual Private Network, for more information see How do I download and install the VPN client to access the University Network?. RCOS is accessible off campus for SFTP connections.

4 - Requires a Unikey for access, Unikeys may be requested through ICT's Self Service Portal by the project's Chief Investigator for ongoing collaborators external to the University.

5 - Access for users of the Australian Access Federation (AAF, list of member institutions), the FileSender function of CloudStor can be used by AAF members to send files to any email address (regardless of institutional affiliation).

6 - Command line or client-based push/pull requests to and from the repository can be used to sync files with a local copy.

7 - RDS does not necessarily require file syncing, as the version on the RDS can be the primary or working copy of the file. Local files may be kept in sync with RCOS with rsync.

8 - Commentary and notation can be made on individual fields and data points within the REDCap project, but there is no place to enter and update details on broader study design and associated processes.

9 - While the Office365 suite offers OneNote for note and ideas collation, file embedding is restricted to small file sizes and there is no ease of linking OneDrive files, limiting utility for contextualisation of research data.

10 - While a record of when changes were made to documents is always retained in Dropbox, previous versions of files and documents and deleted files are only retained for 120 days, so is not recommended for long term retention of research data.

11 - Less rigorous than other University systems, not recommended for long term retention/backup of research data.