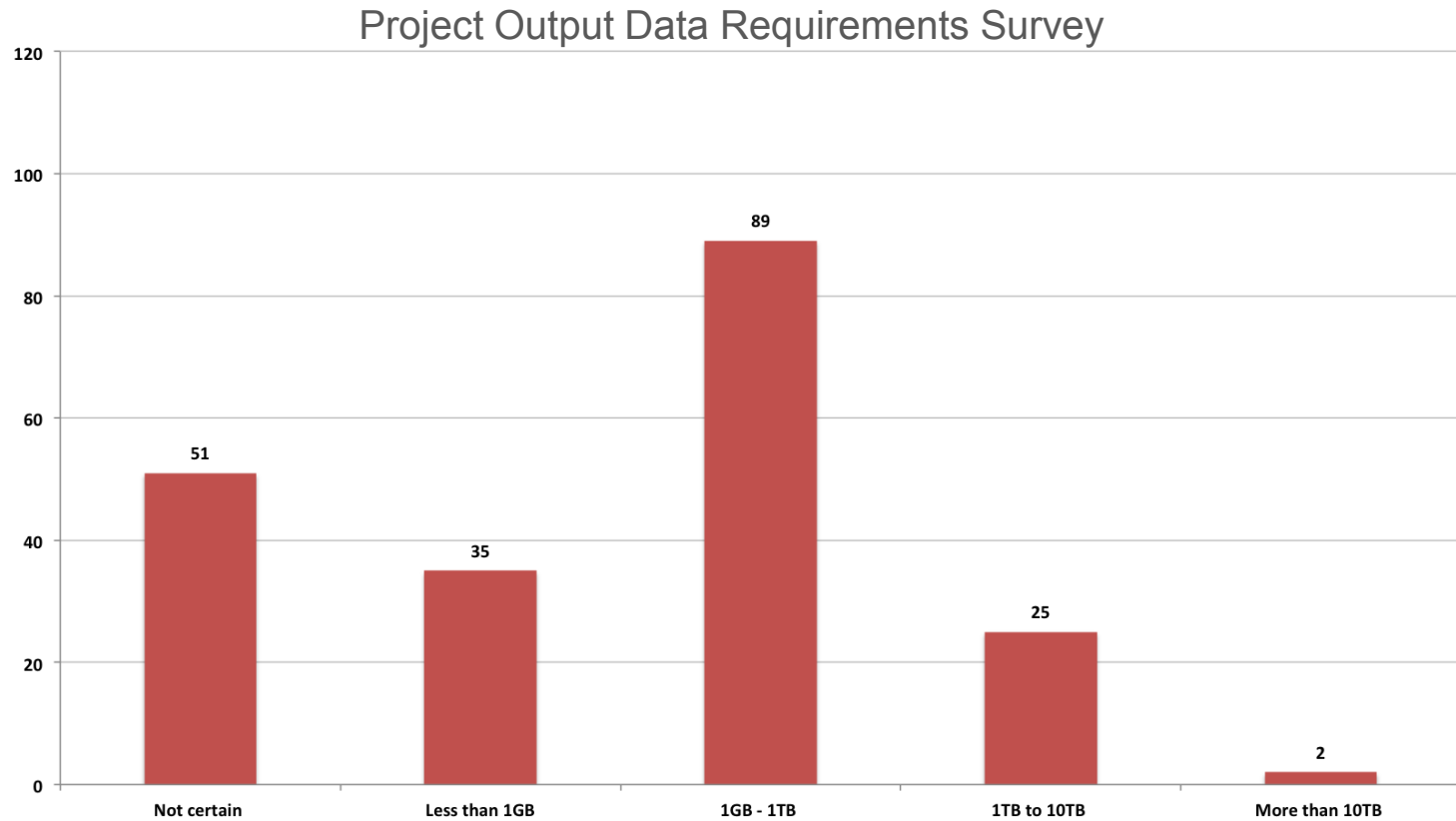


Flexible, Secure and Sharable Storage for Researchers

Stephen McGregor



Research Storage Requirements



Primary Issues With Existing Solutions

- Lack of IT skills
- Cost
- Platform support
- Security and collaboration
- Backups and versioning

Benefits of the Research Storage Service

- Simple to use interface, hides technical detail
- Completely free for clients
- Supports all major operating systems and mobile devices
- Externally accessible and fine grained permission based sharing
- Built-in versioning, server infrastructure with practiced disaster recovery strategy

Files - ownCloud

https://research-storage.griffith.edu.au/

Files ▾ s.mcgregor@griffith.edu.au ▾

All files

Shared with you





Shared with others

Shared by link

Deleted files

⚙

Home > New Upload

<input type="checkbox"/>	Name ▲	Size	Modified
	documents	23 kB	3 days ago
	music	3.6 MB	3 days ago
	photos	663 kB	3 days ago
	ownCloudUserManual.pdf	1.8 MB	3 days ago
3 folders and 1 file		6 MB	

Collaboration

Our existing services are university focused, often restricted to staff and students.

The Research Storage Service allows users to log in using Griffith, Google or LinkedIn accounts.

Cloud storage providers don't restrict who can access them, if we want to compete with these services we need to offer similar functionality. Policy is not enough to sway our users.

Login using one of the following services

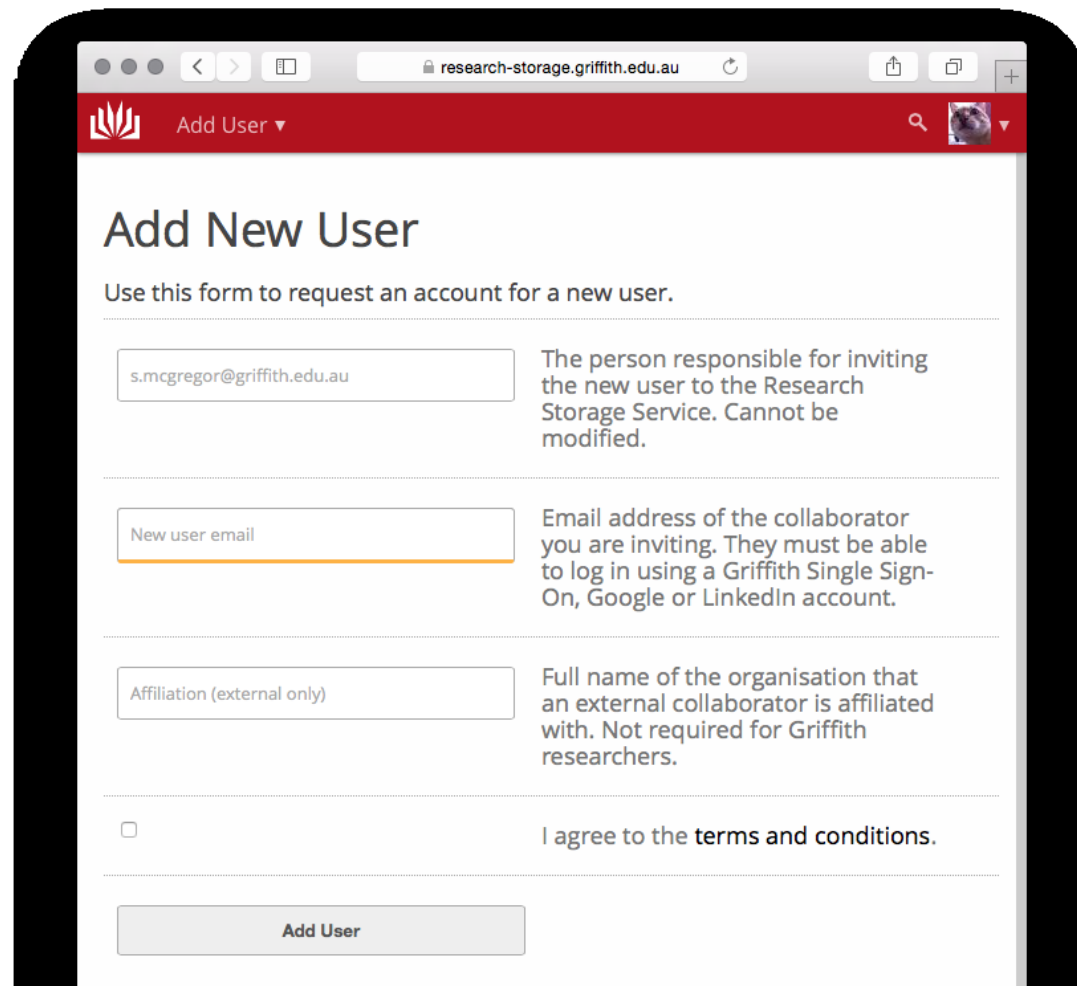


Collaboration

As with other cloud storage providers sharing data is a critical function of the service

Griffith staff can provision new user accounts for staff, students and external collaborators

- Automatic account creation
- No slow approval processes
- Supports Griffith, Google and LinkedIn accounts
- Verbose audit logging



The screenshot shows a web browser window with the URL `research-storage.griffith.edu.au`. The page title is "Add New User". Below the title, there is a sub-header "Add New User" and a description: "Use this form to request an account for a new user." The form consists of several fields and a checkbox:

- Inviter Email:** A text input field containing `s.mcgregor@griffith.edu.au`. To its right, the text reads: "The person responsible for inviting the new user to the Research Storage Service. Cannot be modified."
- New user email:** A text input field with a yellow border. To its right, the text reads: "Email address of the collaborator you are inviting. They must be able to log in using a Griffith Single Sign-On, Google or LinkedIn account."
- Affiliation (external only):** A text input field. To its right, the text reads: "Full name of the organisation that an external collaborator is affiliated with. Not required for Griffith researchers."
- Agreement:** A checkbox followed by the text "I agree to the terms and conditions."
- Submit Button:** A button labeled "Add User".

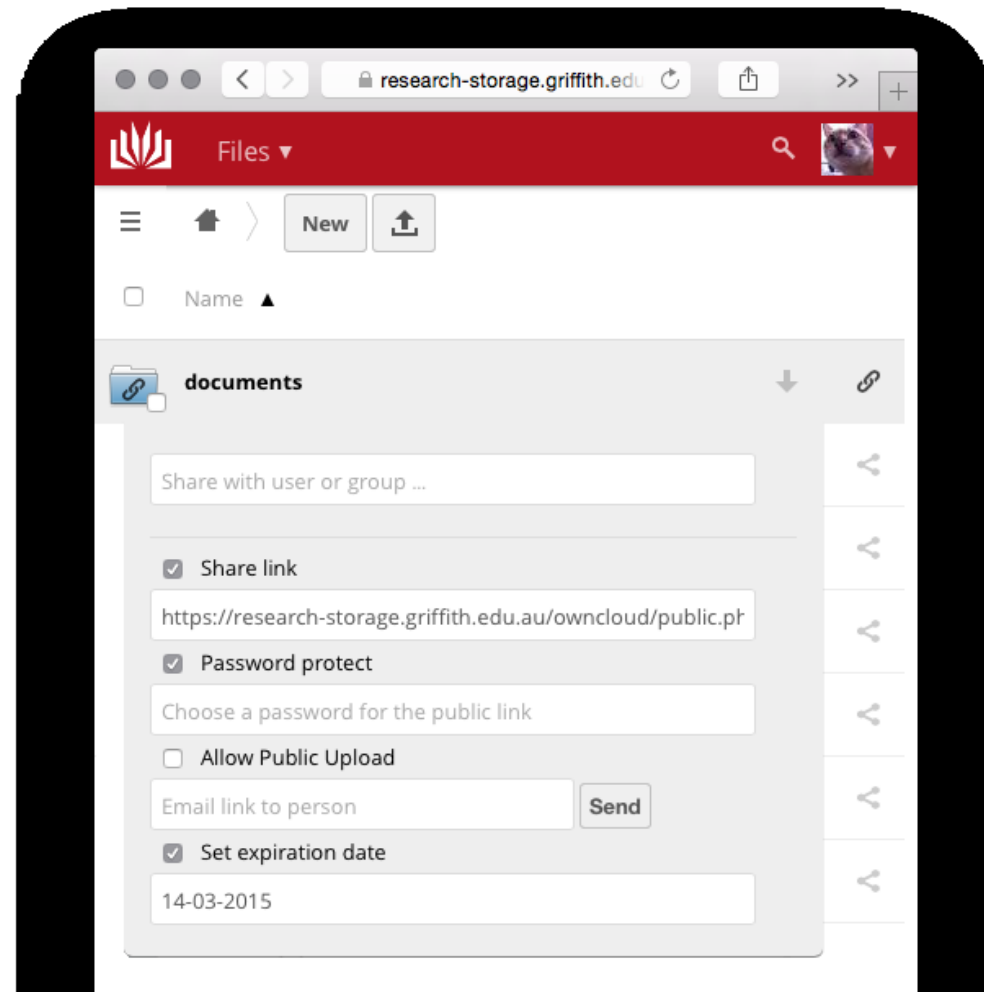
Collaboration

To enable collaboration between researchers we provide multiple ways to share

Internal Sharing allows for restriction of editing and deleting of documents, can share with multiple users by name

External sharing provides a web URL from which to retrieve documents.

- Password protection
- Allow for upload from externals
- Auto expire the share link

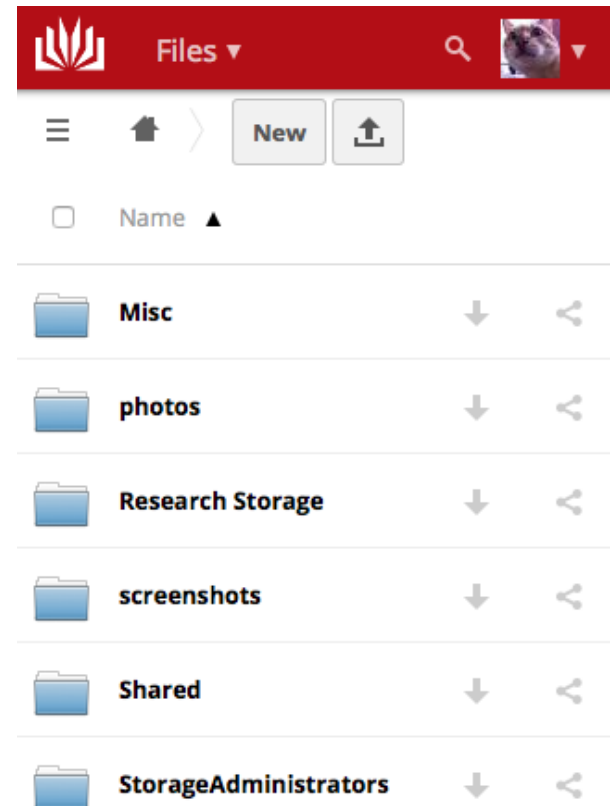


Device support

With such a large range of devices available it is important we support their research efforts from wherever they happen to be located.

- Major web browser support
- Desktop sync apps
- Mobile rich web experience
- Mobile apps for major operating systems

With the uptake of BYOD, being fully functional in any web browser on any device is extremely important. More systems are moving to the web, we decided to start there.



Project Spaces

A logical grouping of data

Often the body of work for a research project

Metadata stored about each project

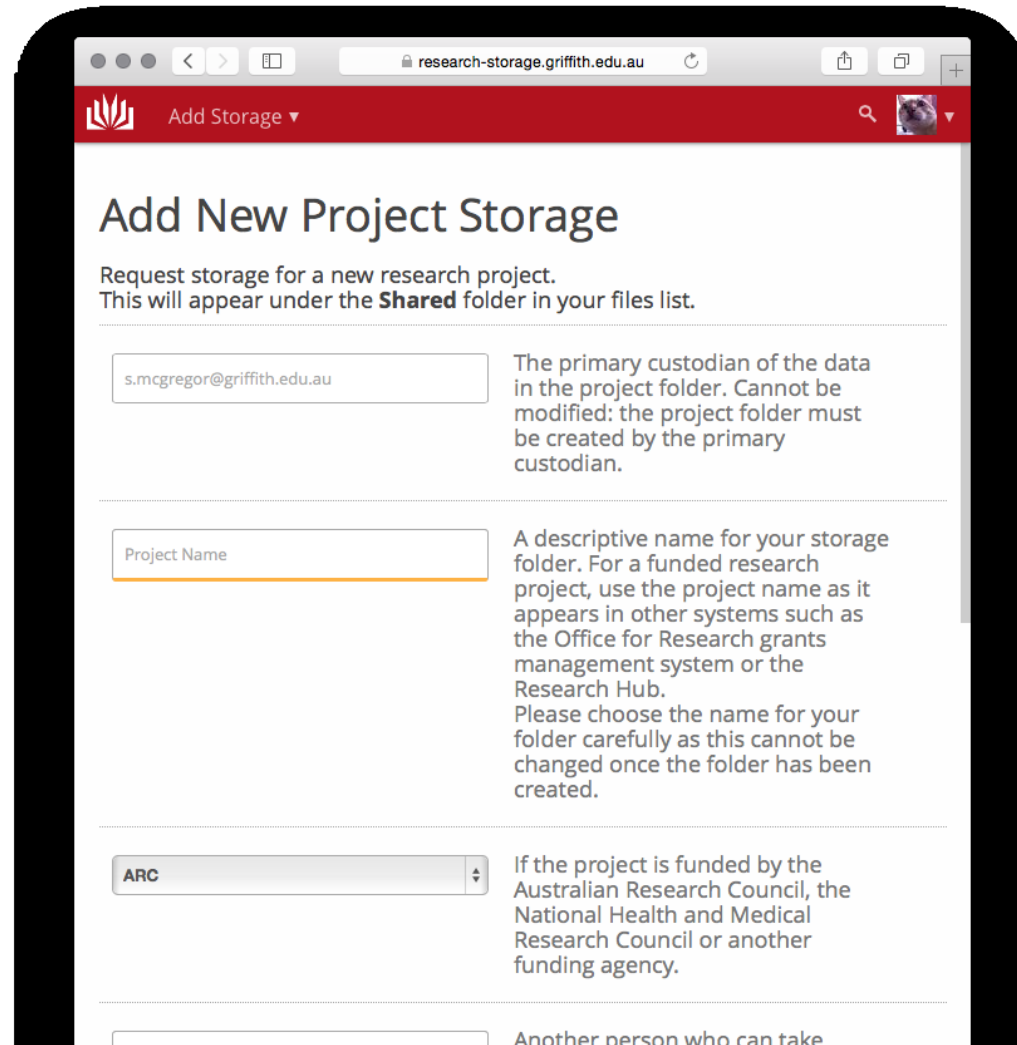
Used administratively for reporting and archiving purposes

Instant approval and provisioning

We don't want to get in the way of progress, only know what data we are storing and who owns it

Unlimited storage space

Each project share is quota free and can hold an *unlimited* amount of data



research-storage.griffith.edu.au

Add Storage

Add New Project Storage

Request storage for a new research project.
This will appear under the **Shared** folder in your files list.

The primary custodian of the data in the project folder. Cannot be modified: the project folder must be created by the primary custodian.

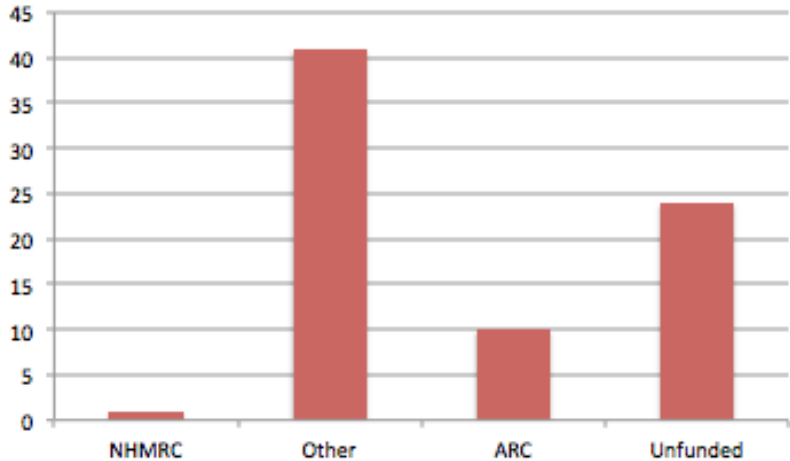
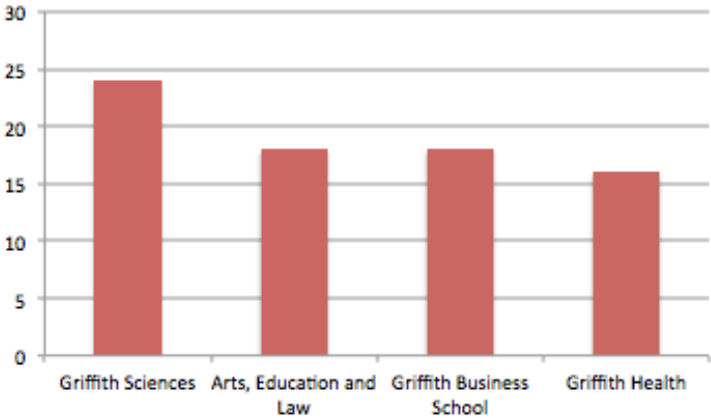
A descriptive name for your storage folder. For a funded research project, use the project name as it appears in other systems such as the Office for Research grants management system or the Research Hub.
Please choose the name for your folder carefully as this cannot be changed once the folder has been created.

If the project is funded by the Australian Research Council, the National Health and Medical Research Council or another funding agency.

Another person who can take

Project Spaces

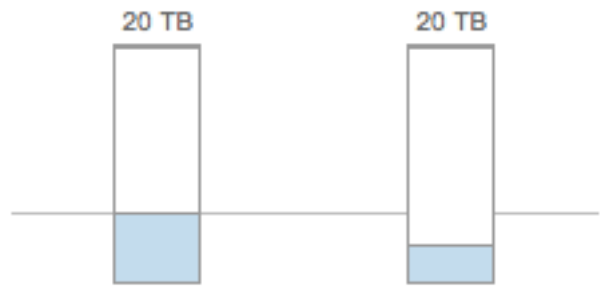
Collected metadata is important for continued support of the service.
 We can see which groups are adopting the service and where we need to focus marketing or training.



By not charging our researchers to use the service we have given 24 projects a secure space to reside

These would have been on external hard drives, client computers and external cloud storage providers without this service

Storage Solution

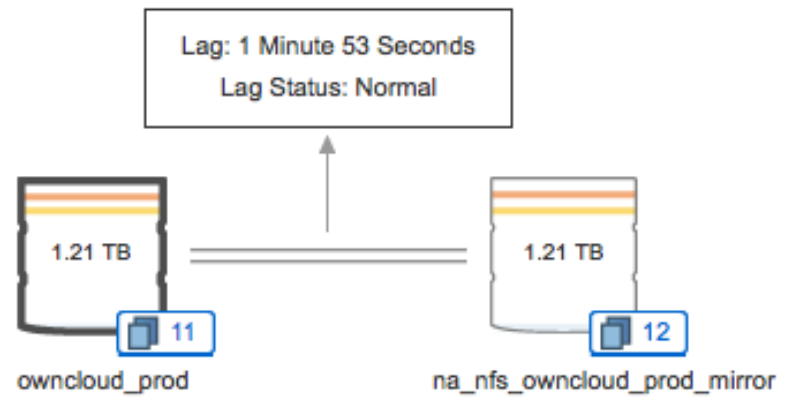


540 GB (46%) of disk space saved by using deduplication. At the time of writing the system contains 1.18 TB of data.

Block level deduplication yields better results than single-instancing and has a lower overhead than compression

Replication is our method of keeping our data safe. Backups become impractical as the storage requirements grow.

Making use of our geographically separated datacenters was an easy decision.



The Future



Research Cloud

Launch



Research Drive

Request



Research Vault

Request

