

SCIDATAMOVER

eResearch NZ 2021 | Ryan Fraser



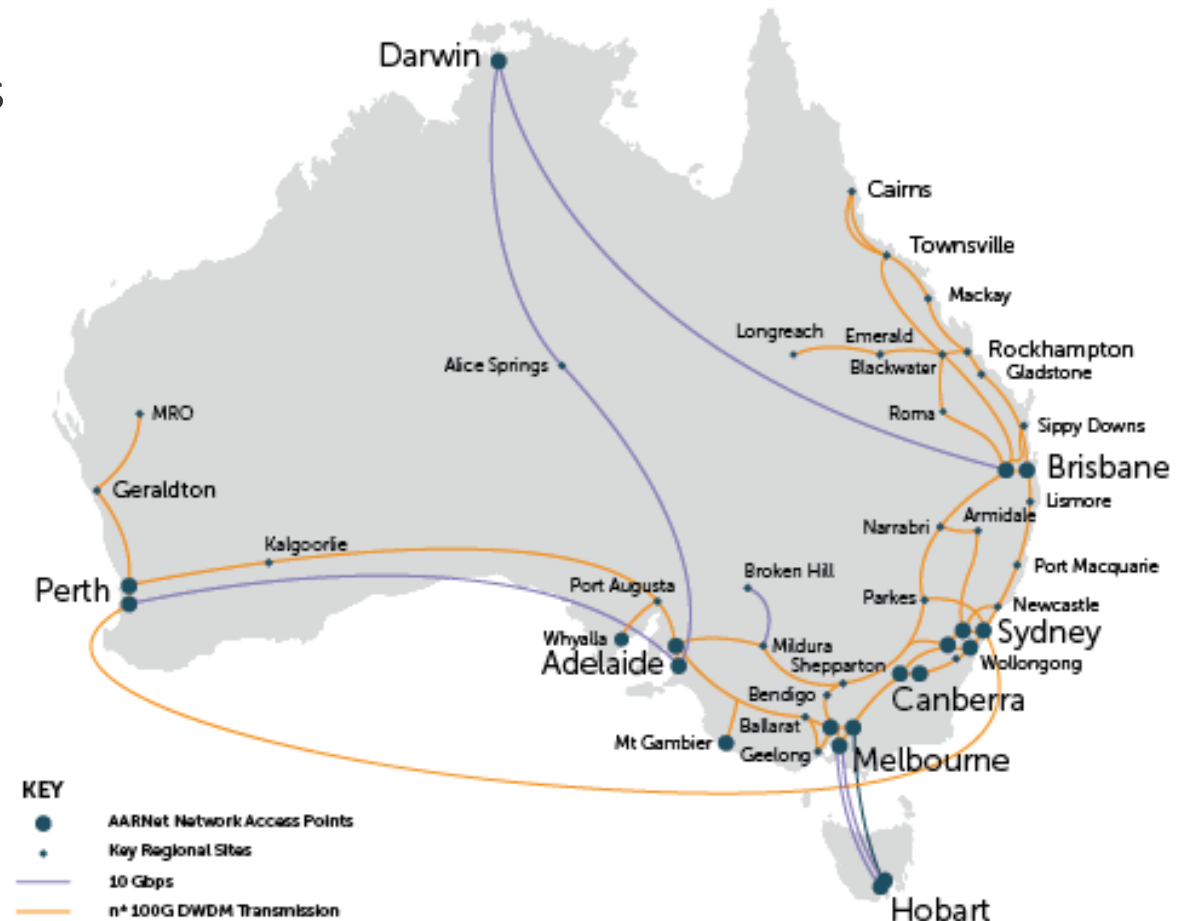
MOVING DATA IS STILL AN ISSUE

- Despite World-leading networks, cutting-edge IT systems, data transfers still fail
- Examples include:
 - Unreliable/incomplete transfers of large data between peak facilities
 - Untimely transfers from facilities to users
 - Restricted access to facilities limiting timely access to data (particularly during recent lockdowns)
- Courier industry still making \$ moving data for us!



DATA WHERE, WHEN AND HOW YOU NEED IT

- We really want researchers to use the “Australia’s Academic and Research Network” operated by AARNet to its full capability & capacity
- Establish a series of services to support improving the reliability of transfer large data collections, that provide:
 - Support reoccurring, scheduled, secure transfers
 - failsafe, transfer verification, reliability



MULTI-PRONG SOLUTION FOR DATA MOVEMENT

- Not a “one-size fits all” solution
 - Not all research and infrastructure is the same
 - Not all users and organisations are the same
- Provision a managed, supported solution for the Australian R&E sector, that supports differing:
 - Research workflows and user needs
 - Infrastructure needs
 - Organisational needs

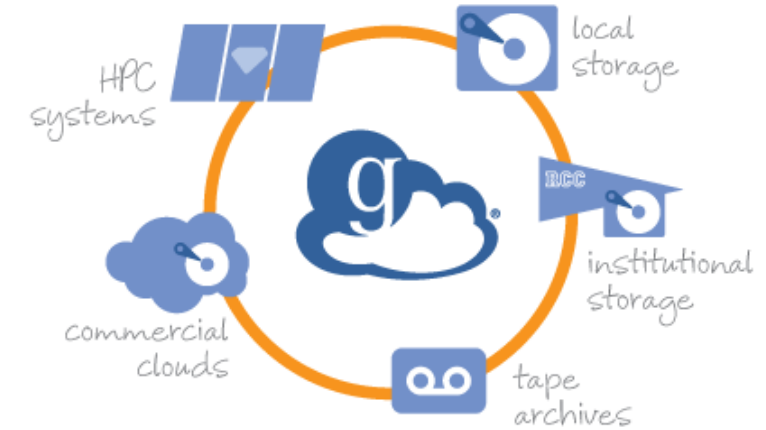


SCIDATAMOVER

Reliable, secure, scalable: fast data transfers to major data facilities and institutes across Australia and the world!

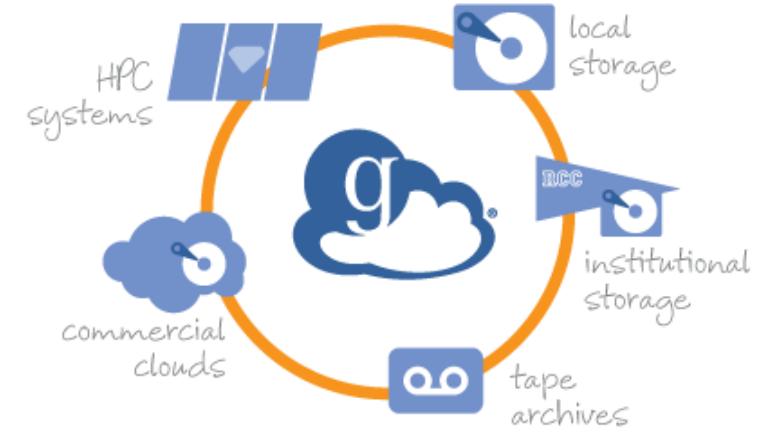
Orchestration: Scheduled & orchestrated transfers

**Sending files: send 1000s of files all at once
(files to anyone, anywhere, securely)**



GLOBUS

- AARNet's Globus offering supports Managed Endpoints at sites across Australia accessible on the AARNet Network
- Easy access to these Endpoints from your own laptop/PC
- Allows for third-party transfers
- Transfer data from endpoints around the world (for example NZ to AU!)
- Accessible through API, commandline and Web Interface
- Opportunity to deploy across the R&E sector
- Standardised contracting and subscriptions for the R&E sector



GLOBUS: STATUS OF SERVICE

Globus

- “whole of AU research sector” subscription for at least 3years
- Finalising legal framework with Globus
- We currently have 8 universities trialling Globus as part of a PoC and CSIRO have subscribed directly for 3 years of service
- Another 6+ universities have active interest in deploying Globus in a Pilot (2021)
- AARNet is committed to support/fund the service in a “Pilot” (2021) and welcomes any other groups that would like to partake/utilise

RUCIO



- Managed the Rucio stack and support end-point deployments in Australia on the AARNet Network
- Accessible through API & command line Interface

STATUS OF SERVICE

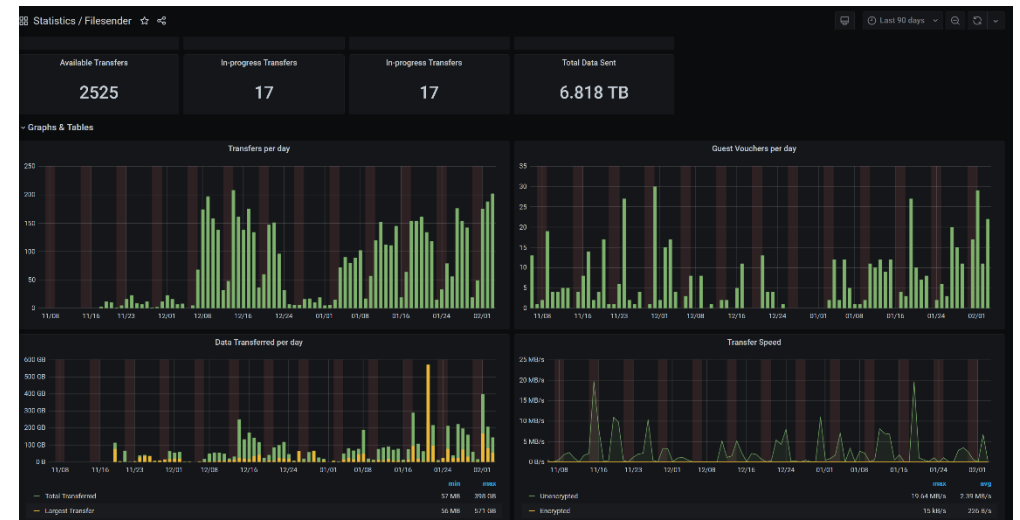
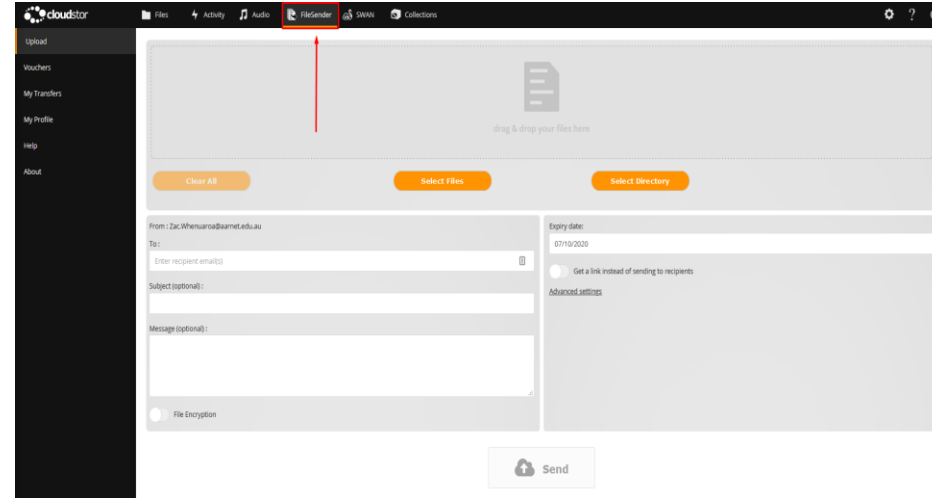
- Planning phase – establish PoC Q2 2021
- Strong connections with CERN, developers and early adopter groups
- Link Rucio-Globus and Cloudstor

FILE SENDER

- Send & receive files from anyone, anywhere
- Secure, Encrypted transfers
- Send 1000s of files, TBs in size
- Simple, secure web interface and API

STATUS OF SERVICE

- Available in Production (through CloudStor)



SOLUTIONS

- AARNet is provisioning multiple solutions to support moving data across the network
- Provide improved reliability and security of data movement
- Globus, Rucio, FileSender
- 2021 Pilot to Production (Globus, Rucio)
- Inviting interested parties to get in contact

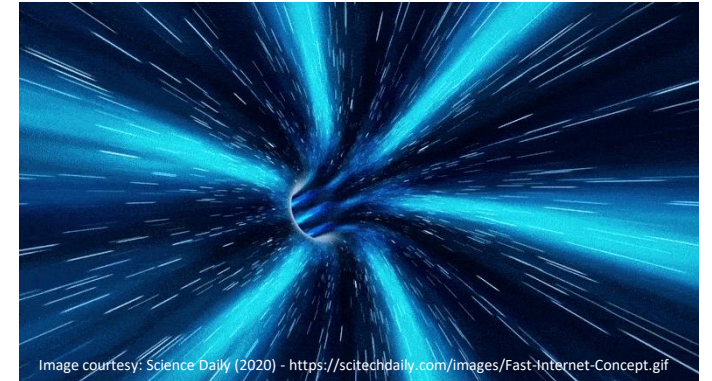


Image courtesy: Science Daily (2020) - <https://scitechdaily.com/images/Fast-Internet-Concept.gif>

WHAT TO MOVE DATA?

Contact:

Ryan Fraser

ryan.fraser@aarnet.edu.au

Chris Myers

chris.meyers@aarnet.edu.au

Guido Aben

guido.aben@aarnet.edu.au