

# SHARED INFRASTRUCTURE

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Tenanted solutions for European repositories  
enabling research, CAIRSS, 28 Oct 2019

Ingrid Mason, Deployment Strategist, eResearch @AARNet



Tenanted solutions

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Problems = silos + interop

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CS3MESH4EOSC

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Where to from here?



<https://www.flickr.com/photos/rachelc/5082002715/>

Multi-tenancy solutions

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Economies of scale

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Cost savings

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Common or customised

# MULTI-TENANCY CLOUD STORAGE SERVICES



Cloud Connect Services  
<https://www.aarnet.edu.au/network-and-services/cloud-services/>



## NETWORK & SERVICES

### OUR NETWORK

### HOW TO CONNECT

### CONNECTIVITY SERVICES

### COLLABORATION SERVICES

### CLOUD SERVICES

### DATA SERVICES

### ENTERPRISE SERVICES CONSULTING

### SECURITY SERVICES

## CLOUDSTOR FILE SHARING + STORAGE

**The CloudStor platform makes collaborating and sharing files so easy for AARNet customers.**

CloudStor removes the frustration of slow data transfer rates for very large files by providing a super-fast, easy-to-use and secure file transfer and storage solution hosted on the AARNet network.

Unlike most cloud storage services, CloudStor is designed to meet the specific needs of researchers, and one terabyte of storage is available free to each individual researcher at AARNet-connected institutions.

[LOGIN TO CLOUDSTOR](#)

### Why CloudStor?

- 1TB free storage for individual researchers at AARNet-connected institutions + group storage quotas for research projects.
- Quick and secure file transfer with no file size restrictions.
- Single sign on using home institution credentials (for Australian Access Federation members).
- CloudStor web interface for access to file storage, FileSender, AARNet Mirror and other applications.
- OnlyOffice for collaboratively editing a wide range of document types directly in the CloudStor portal.
- Run and write Jupyter notebooks to analyse data in CloudStor using the SWAN Service for Web-based Analysis.
- Storage located in Australia and directly connected to the AARNet backbone for rapid and convenient access, and



All files

Favourites

Shared with you

Shared with others

Shared by link



Name

Size

Modified ▾



Data Packaging



Shared



9.1 MB

a day ago



Shared



6.6 TB

2 days ago



SWAN\_SESSIONS



117 KB

3 days ago



PublicShare



4 GB

5 days ago



CAUDIT



Shared



2.7 MB

9 days ago



Recordings



547.9 MB

12 days ago



Mahendra



0 KB

15 days ago



<https://www.flickr.com/photos/thelastminute/7485726688/>

Problems = silos + interop

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Duplication of effort + costs

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Common workflow  $\neq$  leveraged

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Common schema  $\neq$  leveraged



# CS3MESH4EOSC



<http://gph.is/SM8qLF>

**CS3 = Cloud Storage *Services* for File  
*Synchronization* and *Sharing***

**MESH = “globally interconnected mesh of  
research clouds without sacrificing any of the  
advantages in privacy, control and security an  
on-premises cloud provides” (Géant)**

**EOSC = European Open Science Cloud**



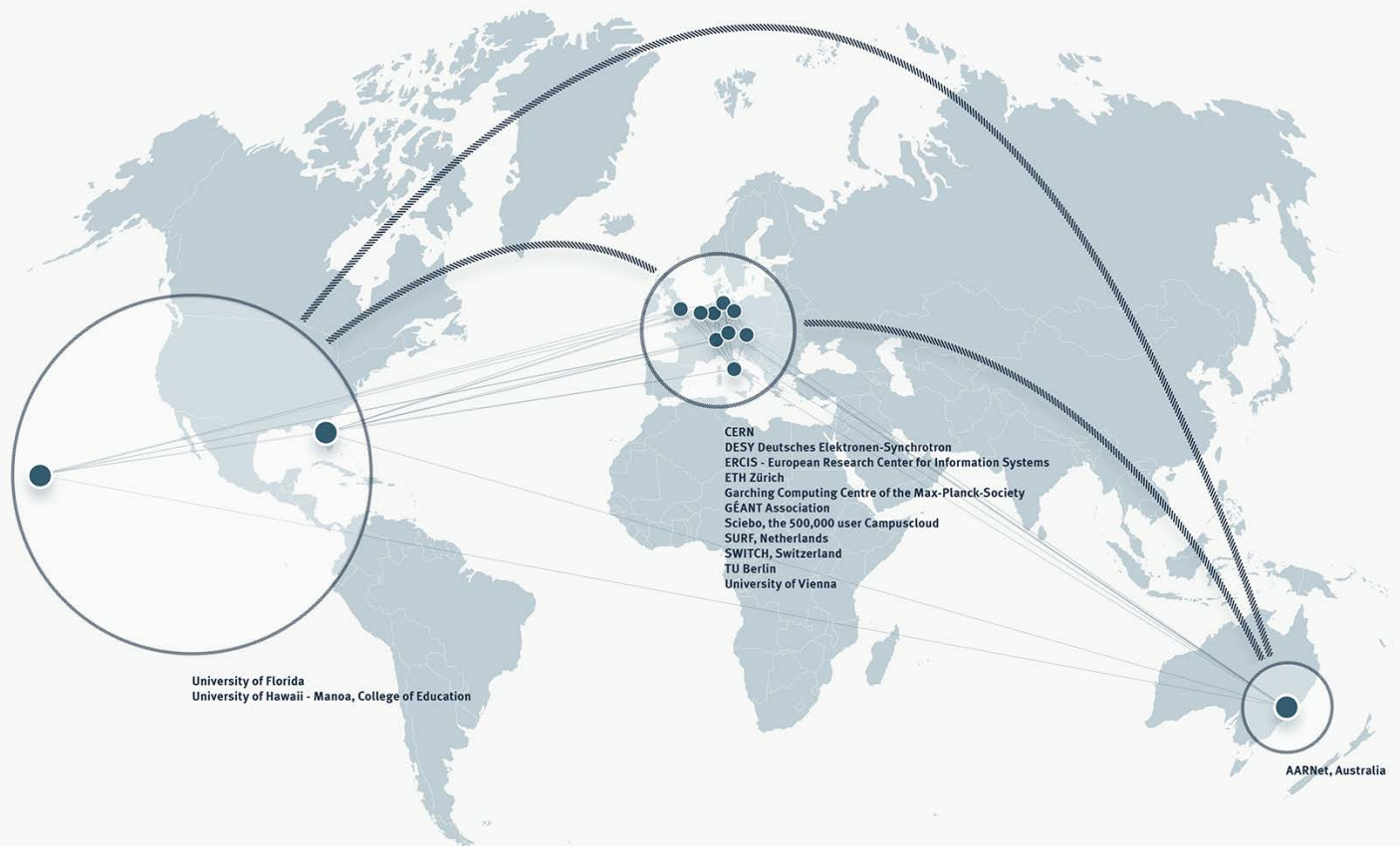
## AARNet is pleased to be a partner in the establishment of the ownCloud Foundation, announced in Nuremberg Germany on 21 August 2018.

The Foundation is dedicated to building a sustainable ecosystem around ownCloud in order to accelerate technology development and industry adoption.

The ownCloud Foundation aims to provide developers, users and the entire global ecosystem with a set of shared resources to grow the footprint of public, private and enterprise ownClouds, as well as assisting developers to produce the best decentralized cloud platform in the industry.

Like the ownCloud software, individual and contributor memberships within the ownCloud Foundation are free and open to all. Organisation members pay a yearly membership fee to help fund the Foundation and are expected to participate in the ownCloud community through technical contributions or community building efforts.












The Foundation will be managed by a board of seven members, including representatives from AARNet, CERN, KonicaMinolta, Gesellschaft für wissenschaftliche Datenverarbeitung Göttingen (GWDG), ownCloud, GEANT and ETH-Zürich



# CS3MESH4EOSC

“CS3MESH4EOSC empowers service providers in delivering state-of-the-art, connected infrastructure to boost effective scientific collaboration across the entire federation and data sharing according to FAIR principles. The project delivers the core of a scientific and educational infrastructure for cloud storage services in Europe through a lightweight federation of existing sync/share services and integration with multidisciplinary application workflows.”

<https://cordis.europa.eu/project/rcn/224732/factsheet/en>

<b>DANMARKS TEKNISKE UNIVERSITET</b>  Denmark	EU Contribution <b>€ 894 000</b>
<b>SURFSARA BV</b>  Netherlands	EU Contribution <b>€ 835 750</b>
<b>INSTYTUT CHEMII BIOORGANICZNEJ POLSKIEJ AKADEMII NAUK</b>  Poland	EU Contribution <b>€ 786 500</b>
<b>CESNET ZAJMOVE SDRUZENI PRÁVNICKÝCH OSOB</b>  Czechia	EU Contribution <b>€ 244 125</b>
<b>AARNET PTY LTD</b>  Australia	
<b>SWITCH</b>  Switzerland	EU Contribution <b>€ 393 000</b>
<b>WESTFAELISCHE WILHELMS-UNIVERSITAET MUENSTER</b>  Germany	EU Contribution <b>€ 285 093,75</b>
<b>AILLERON SA</b>  Poland	EU Contribution <b>€ 486 750</b>
<b>CUBBIT SRL</b>  Italy	EU Contribution <b>€ 95 375</b>
<b>JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION</b>  Belgium	EU Contribution <b>€ 81 977,50</b>
<b>FUNDACION ESADE</b>  Spain	EU Contribution <b>€ 88 500</b>

# WHERE TO FROM HERE? CONTACT US

1

## Early adopters

Gavin Kennedy  
Cloud Services

[gavin.kennedy\[at\]  
aarnet.edu.au](mailto:gavin.kennedy[at]aarnet.edu.au)

2

## Digital preservation

Adam Bell  
Customer Rel

[adam.bell\[at\] aarnet.edu.au](mailto:adam.bell[at]aarnet.edu.au)

3

## Open research

Dr Carina Kemp  
eResearch

[carina.kemp\[at\] aarnet.edu.au](mailto:carina.kemp[at]aarnet.edu.au)

4

## Jupyter notebooks

Dr Sara King  
eResearch

[sara.king\[at\] aarnet.edu.au](mailto:sara.king[at]aarnet.edu.au)

# WHERE TO FROM HERE?

AARNet is providing cloud storage services to CAVAL and CAUL to support the collation of learning material arising out of the My Digital Dexterity program.

- Collaboration
- Resource Sharing
- Mediated Access

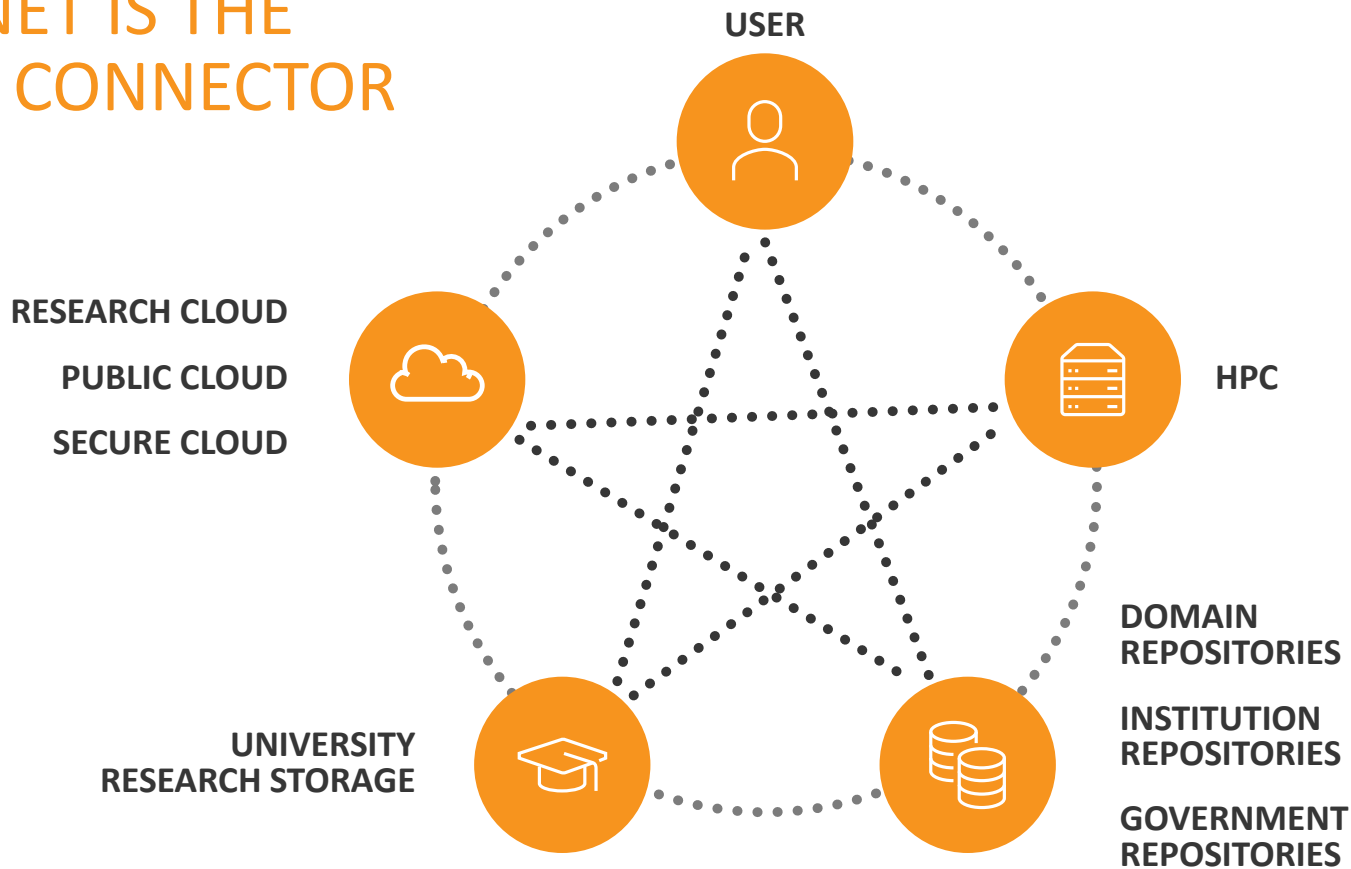
AARNet is working on a proof of concept with Artefactual on the means to integrate Archivematica and with other platform and service providers.

- Digital Curation
- Digital Preservation
- Digitisation
- Research Data Management

AARNet is gathering requirements for sensitive data storage infrastructure to support controlled access to research inputs and outputs.

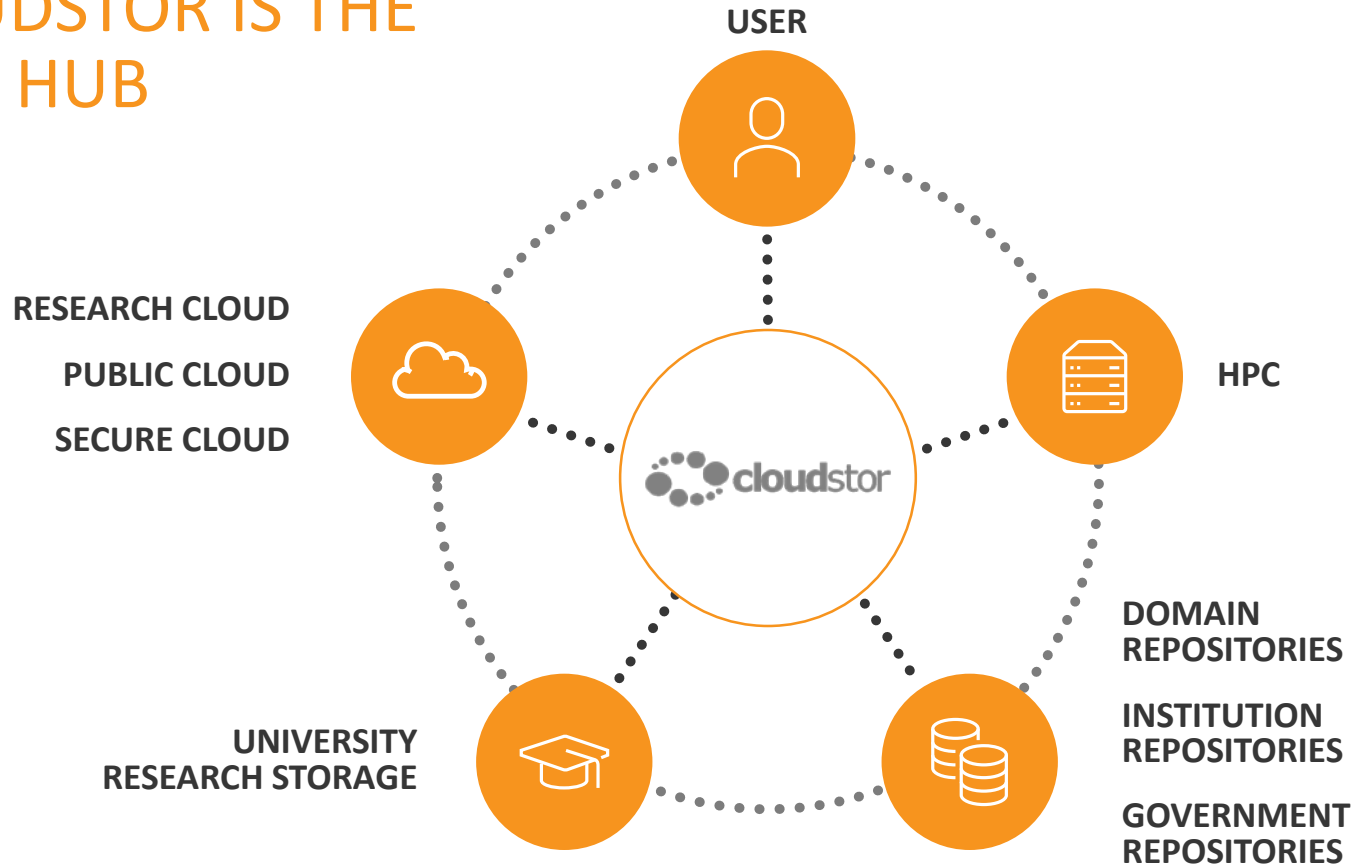
- Collaboration
- Resource Sharing
- Controlled Access

# AARNET IS THE DATA CONNECTOR

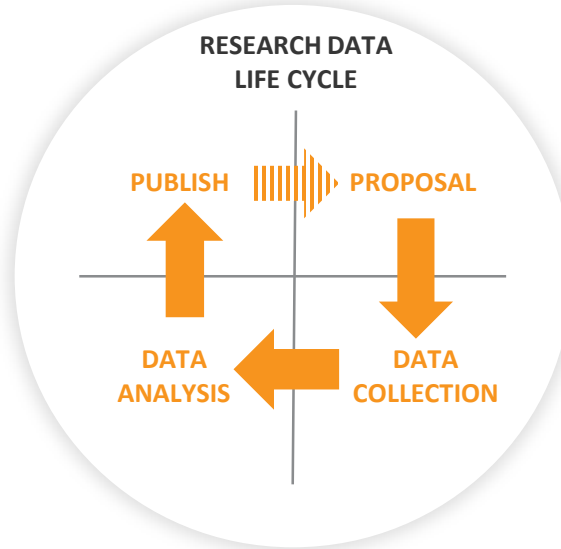




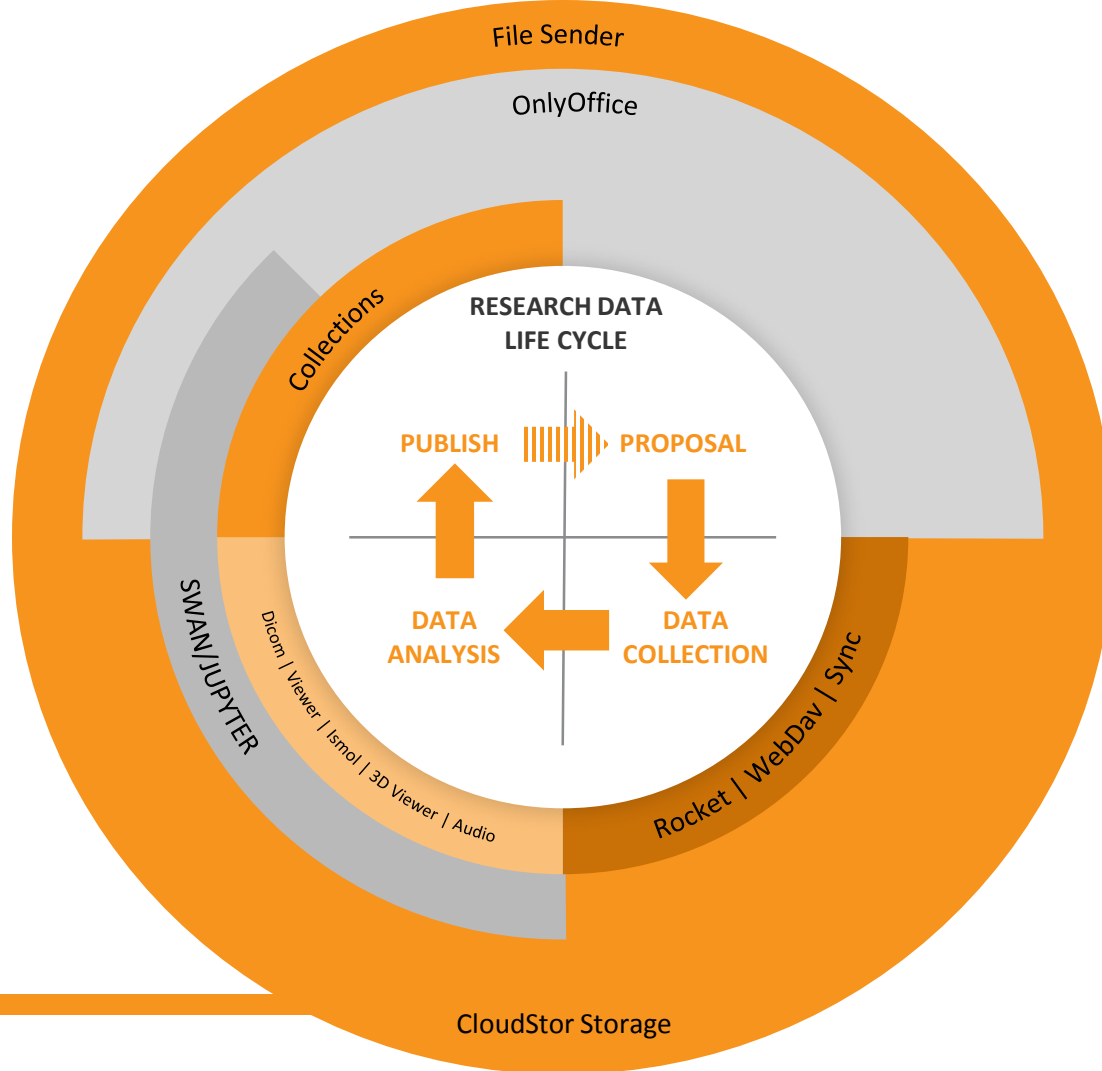
# CLOUDSTOR IS THE DATA HUB



# CLOUDSTOR: USEFUL TOOLS FOR RESEARCH



# CLOUDSTOR: USEFUL TOOLS FOR RESEARCH



### Why AARNet?

- Universities and publicly funded research organisations in AU
- Global partnerships in common open research cloud EOSC

### Why CAIRSS?

**Australian university libraries are key partners in open scholarship and scholarly repository management.**

THANK YOU

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