

# SUNET Drive

An O

EOSC



SUNET DRIVE

Welcome to Sunet Drive, a cloud based file sharing and storage service enabling collaboration on large amounts of data within and between organizations.

*Log in using your SWAMID-associated institution credentials:*



ACCESS THROUGH YOUR INSTITUTION

Tutorials on how to use Sunet Drive in the [Sunet Forum](#) | A brief overview of the service and pricing at [sunet.se](#) | Sunet Drive is a part of the [ScienceMesh](#)

SUNET Drive – Sunet Säker Lagring

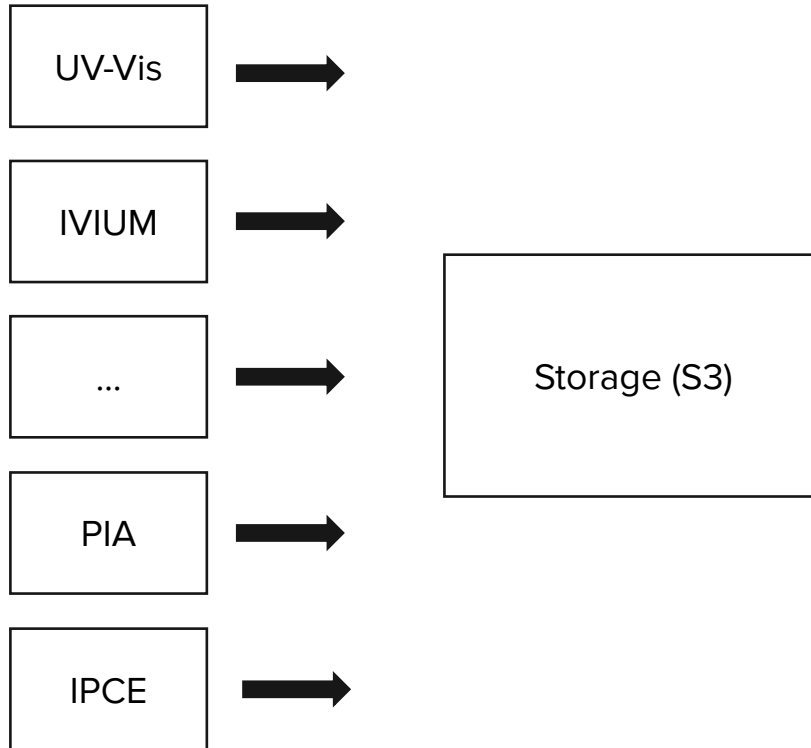
# Sunet Drive – Road to EOSC

## Sunet Drive

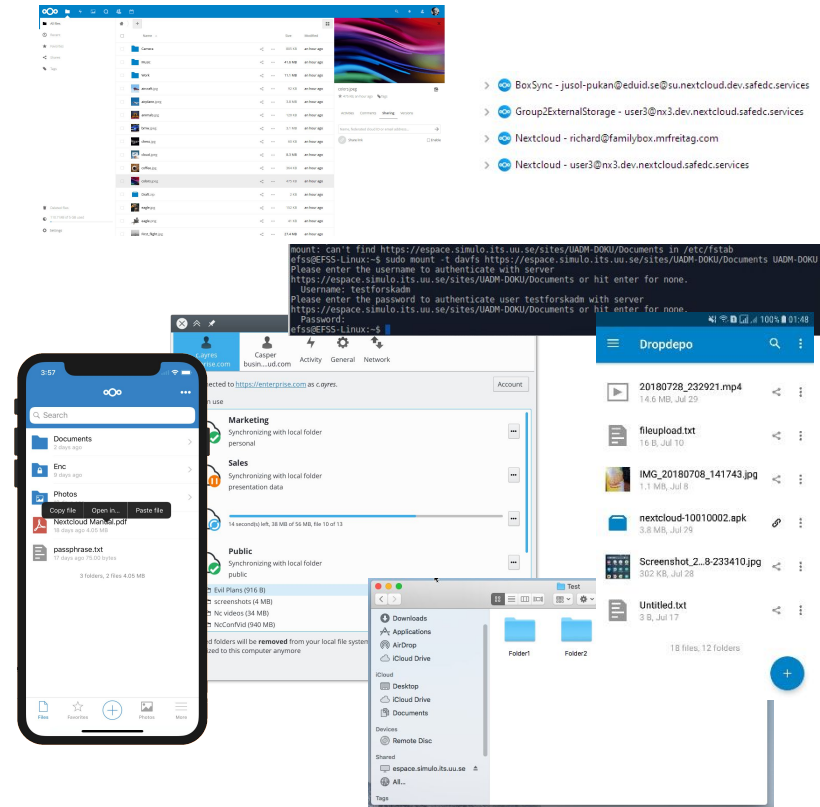
- Current and future architecture
- FAIR Academic Toolbox
- Function, Efficiency, Innovation
- Separation of concern
- Where is EOSC?
- OCM – Practical considerations
- Maturity meets Sovereignty
- Fragmentation

# Sunet Drive – Current Architecture

## Primary data sources



## Access



# Sunet Drive – Future Architecture

## Primary data sources

UV-Vis

IVIUM

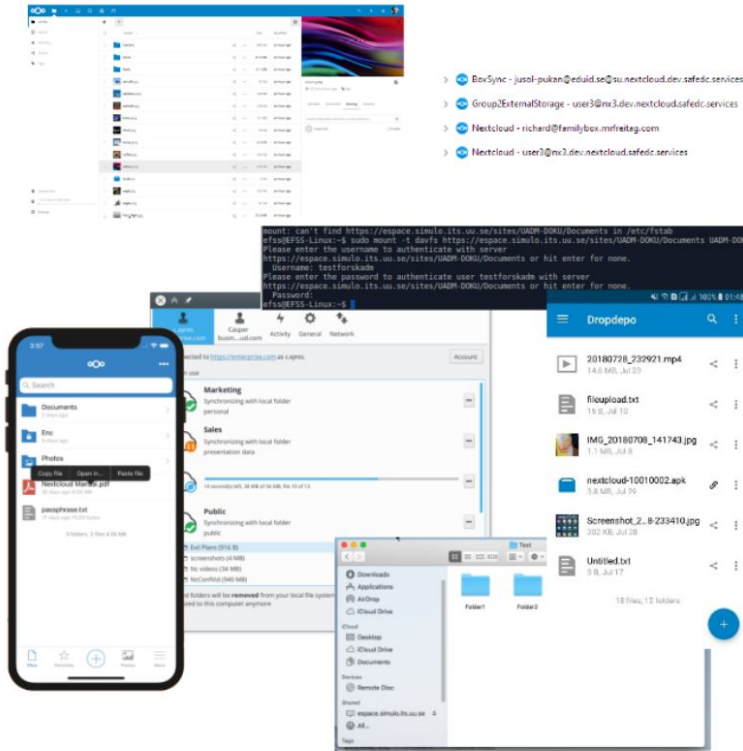
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PIA

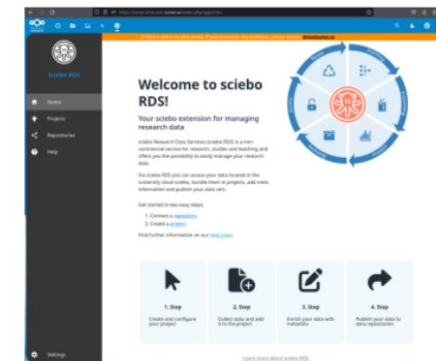
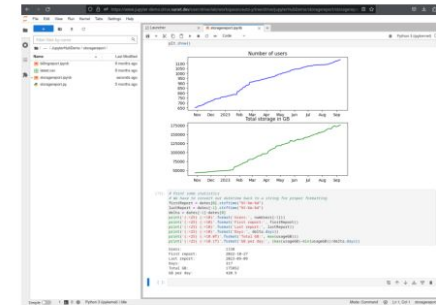
IPCE



## Secure Storage



## Analyze and Publish



# Sunet Drive – Future Architecture

Primary data sources

Secure Storage

Analyze and Publish

UV-Vis



IVIUM



...



PIA



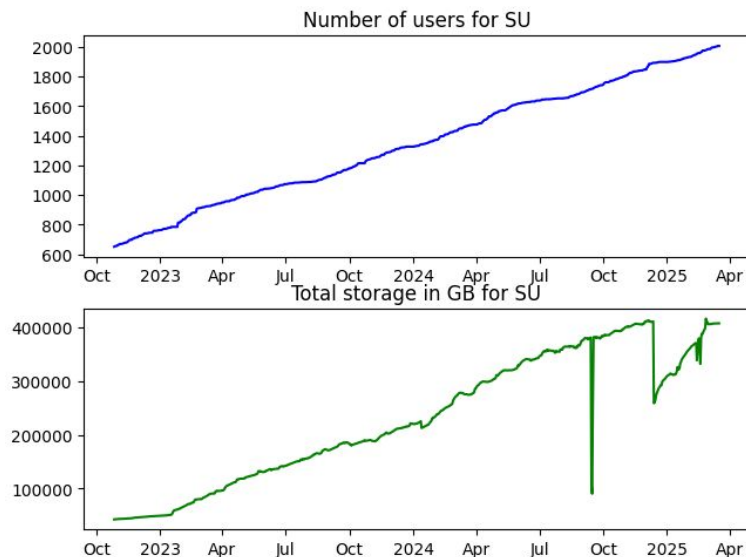
IPCE



**An Academic Toolbox**  
following FAIR principles

# Sunet drive today

- 2x54 nodes on 300+ servers in ~~three~~ two data centres
- 100% powered by green energy
- 21 paying customers (+1)
- 854TB data stored with >0.5TB added daily
- 5782 users
- Team size: 5



# Sunet Drive development & projects

- JupyterHub & BridgIT
- SURF Research Cloud
- Secure Zones/MFA/Step-up Authentication
- Security Audit
- Devops: Third data centre & Kubernetes
- AI Assistant with “Ethical AI”

Function

OCM Compliance

Efficiency

Kubernetes

Innovation

Surf Research Cloud

# FEI - Function, Efficiency, Innovation

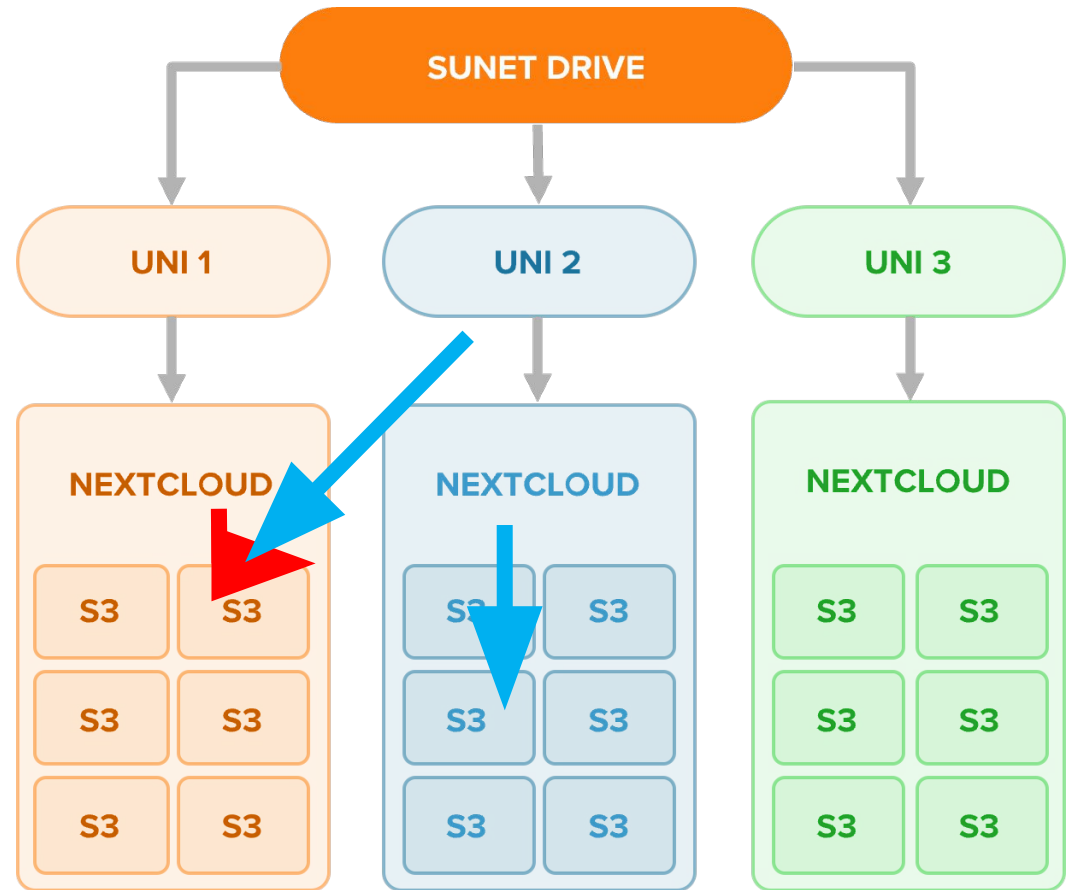
- **FEI Principles**

- **Function** – Sunet Drive provides the core functionality to all of its users. Example: file storage, versioning, backup.
- **Efficiency** – A university can effectively and efficiently manage the system with thousands of users and projects, owning millions of objects and files.
- **Innovation** – New functionality benefiting the users is added to the system and integrated seamlessly. Example: JupyterHub, MFA-Zones, SeamlessAccess, eduid connect.

**The challenge:** Any innovation becomes a function, often increasing the complexity of the system, while its efficiency needs to be maintained over time.

# Separation of Concern

- **Co-Management of EFSS nodes**
- SSO-login to affiliated node
- Catch-all for external collaborations
- S3 as project storage entity
- Separation of access and ownership
- “Follow your data”



Primary data sources

Secure Storage

Analyze and Publish

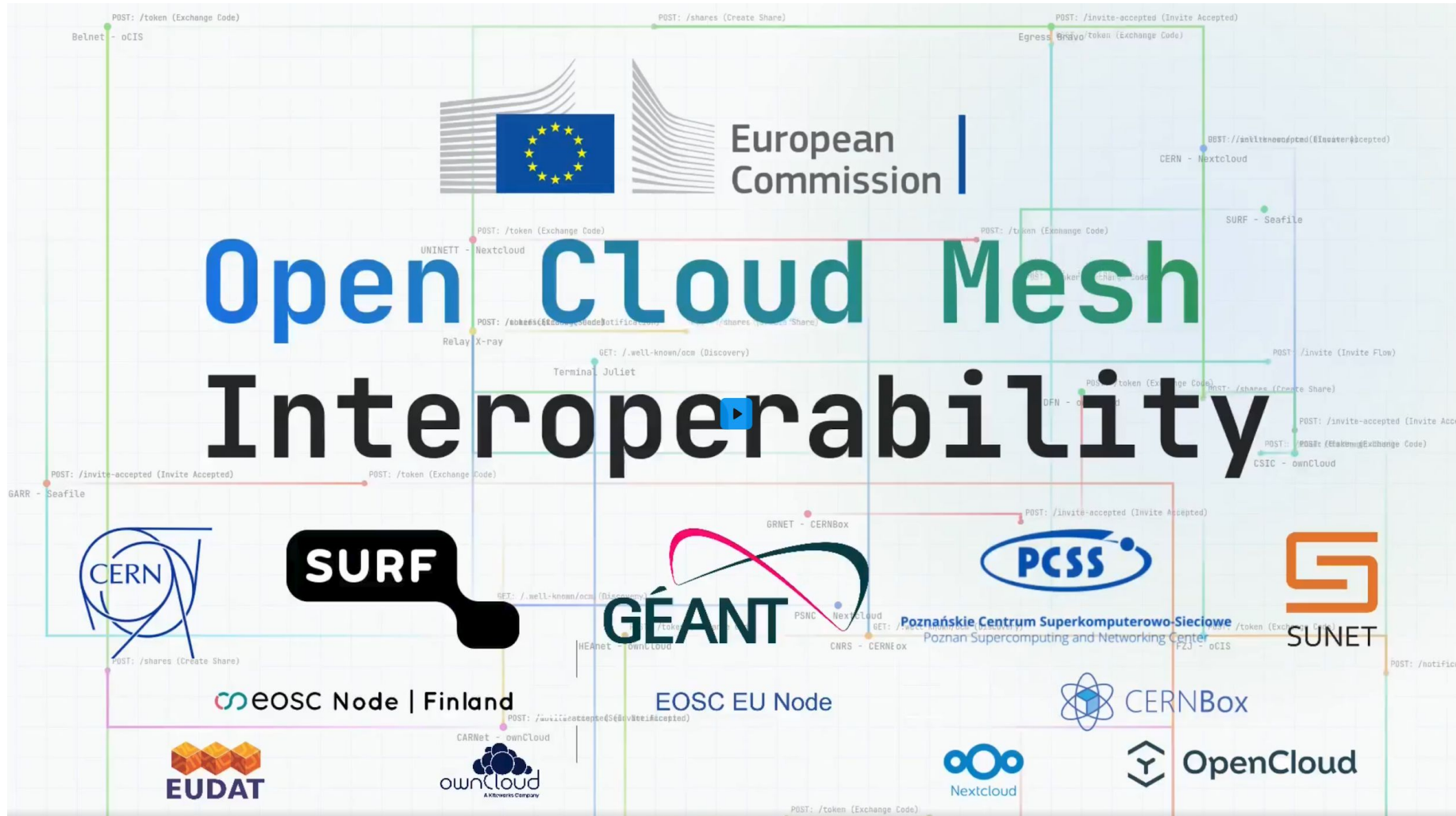
- UV-Vis
- IVIUM
- ...
- PIA
- IPCE



# Where is EOSC?

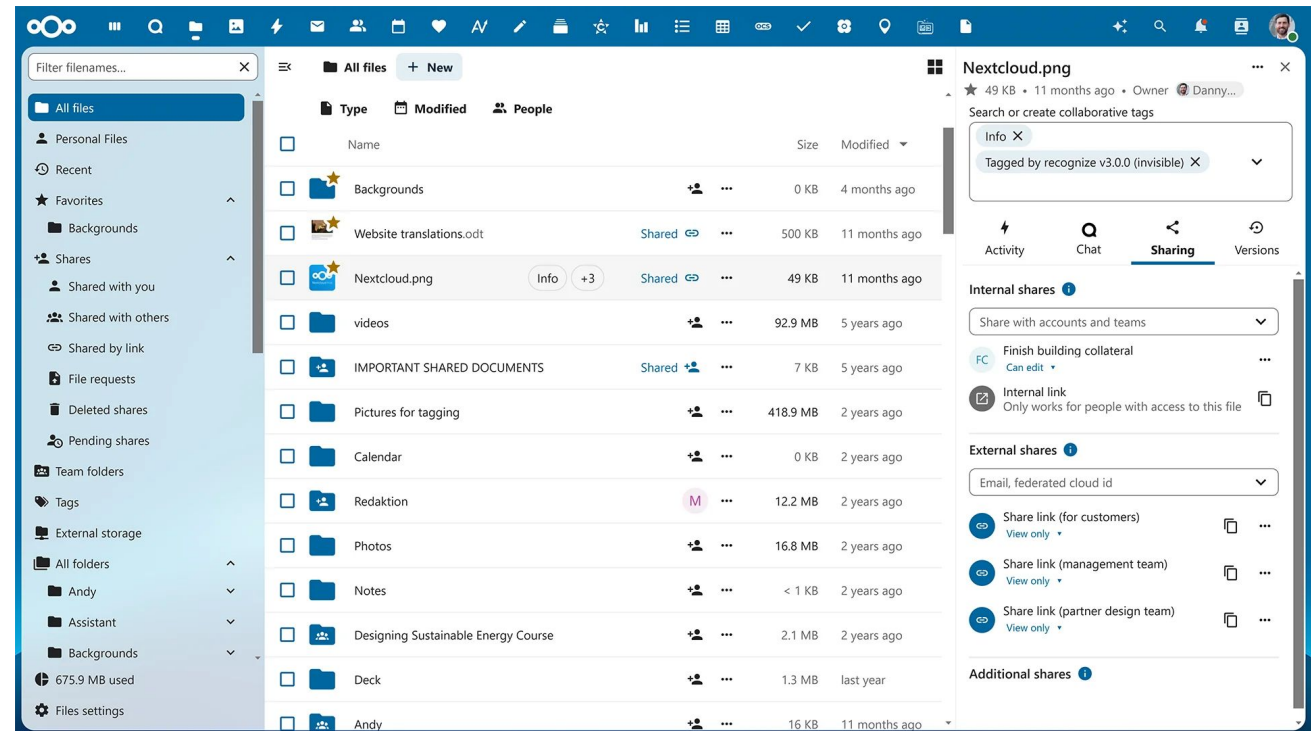


# How close is Sunet Drive to EOSC?



# OCM and sharing – Practical feedback

- OCM is largely invisible to the end user
- Practical implementations support usability
  - Internal shares
  - External shares
- Users and organizations want to be in controls
  - Sharing reports
  - Enforced MFA
  - Concern about delegated sharing



# Maturity meets Sovereignty

- **SEAL – Sovereignty Effectiveness Assurance Level**
- Strategic
- Legal
- Data & AI
- Operational
- Supply Chain
- Technology
- Security & Compliance
- Environment



[https://commission.europa.eu/document/download/09579818-64a6-4dd5-9577-446ab6219113\\_en](https://commission.europa.eu/document/download/09579818-64a6-4dd5-9577-446ab6219113_en)

# Fragmentation – Curse or blessing?

- Sunet Drive
- Same technology for all nodes (Nextcloud/S3)
- Individual configurations, but in line with larger view
- Regressions happen and can be hard to spot
- Need to ensure compliance and compatibility with other ~~EOSC~~ OCM-nodes



# Tack! Frågor?

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