Sunet Drive

An academic EFSS packaged for EOSC

Information for new and interested customers

2023-04-18

Agenda

General and background

- Research data – a model
- Data Integration
- Follow your data

Sunet Drive Concepts

- Co-management
- Private Cloud Security
- MSBFS 2020:7
- Follow your data
- Single Sign On

- ## Documentation and Onboarding

  - Sunet Drive Forum
  - Sunet Drive Today
  - Onboarding Process
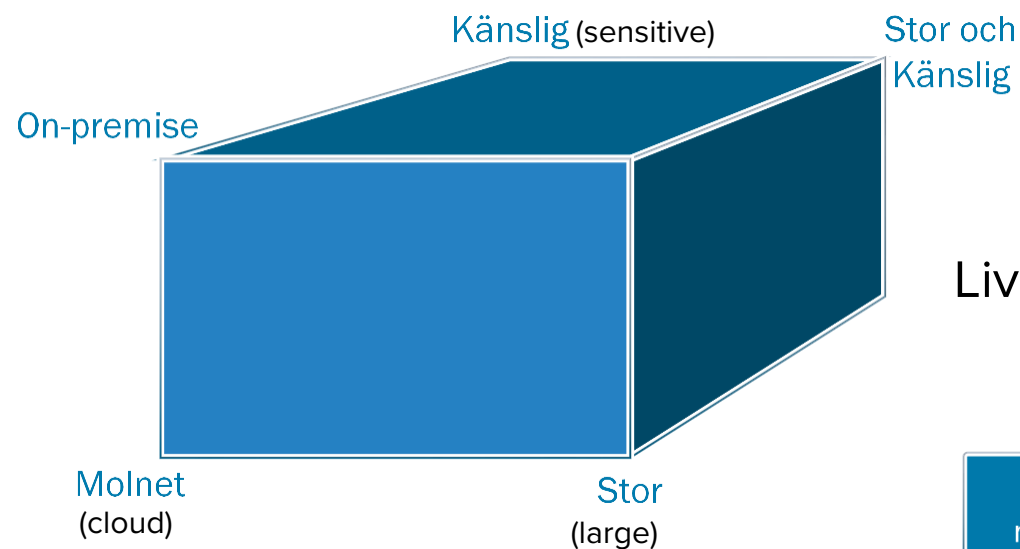 - Features and Planned Functionality
  - Feature Survey

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Anecdote

Thanks for the detaljer information! I will be ending my employment this Saturday, so am looking for some solution where the data will not be deleted due to the deactivation of my akka id and where it would be accessible by my PI in the future.

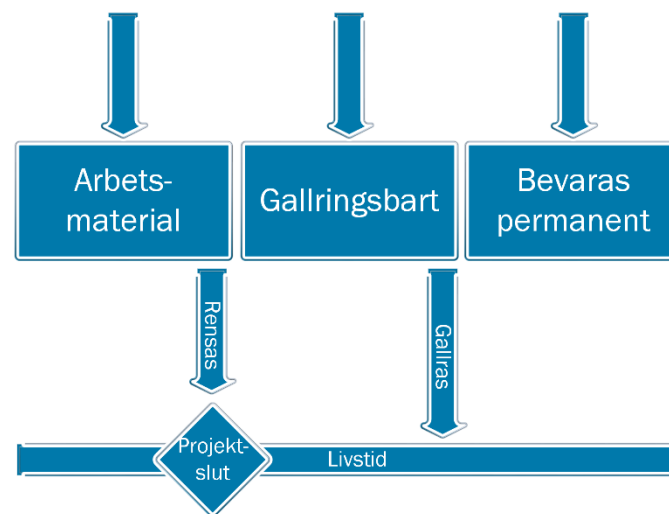Wednesday, 10:51

Research Data – A model

Classification

On-premise

Känslig (sensitive)

Stor och Känslig

Molnet (cloud)

Stor (large)

How do you access data?

Where is my data?

Livecycle

Arbets-material

Gallringsbart

Bevaras permanent

- Working material
- Data retention
- Archival

Rensas

Gallras

Projekt-slut

Livstid

Access

"Klassisk" Mappar

"Modern" Appar

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Research Data – A model

Classification

Känslig

Stor och Känslig

On-premise

This is where the money ends!*

Molnet

Stor

How do you access data?

Where is my data?

Livecycle

| Arbets-material | Gallringsbart | Bevaras permanent |

Rensas

Gallras

Projekt-slut

Livstid
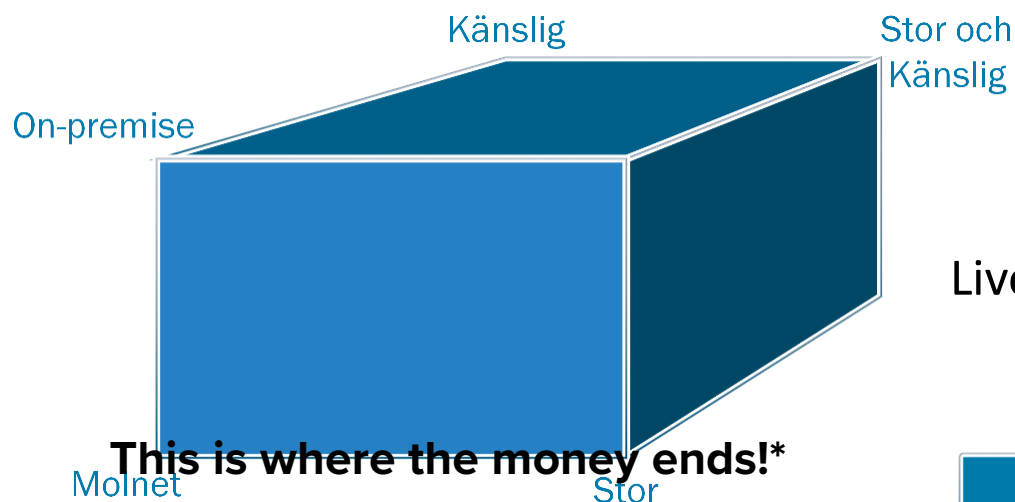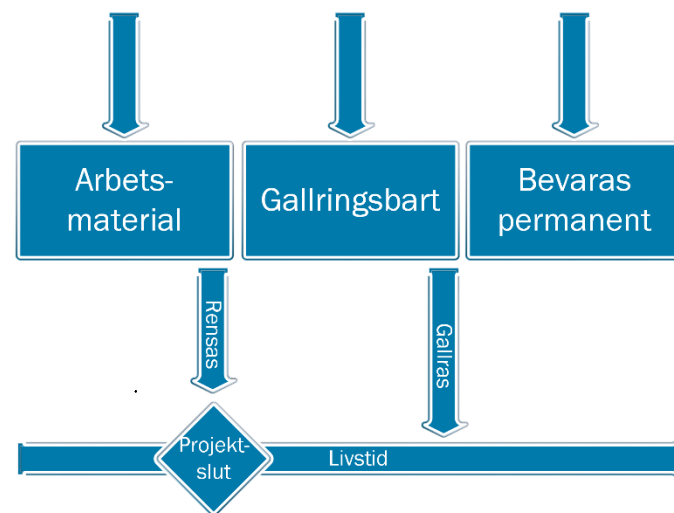
Access

"Klassisk" Mappar
*for many projects

"Modern" Appar

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Example - Integration

Primary data sources

Access

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

| Storage (S3) |

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Co-management of nodes

The main storage unit is an S3-bucket
Sunet Drive is a cloud-based file storage and collaboration service that utilises the S3 (Simple Storage Service) infrastructure as its main storage unit. S3 is a highly scalable, reliable, and secure object storage service that can store and retrieve any amount of data from anywhere on the web.

Every university has its own Sunet Drive node
Sunet Drive is a service provided by the Swedish University Network (SUNET), which is a collaboration between Swedish universities and colleges. Each university has its own Sunet Drive node, which provides a secure and dedicated file storage environment for its faculty, staff, and students.

Data can be shared between nodes
One of the benefits of the Sunet Drive service is that data can be easily shared between nodes, enabling collaboration and knowledge-sharing between different universities and departments. This is achieved through the use of access control lists (ACLs), which allow node administrators to grant or revoke permissions to specific users or groups.

### Separation of access and ownership
Another important feature of Sunet Drive is the separation of access and ownership. This means that while data can be shared between nodes, the ownership of the data remains with the original uploader. Additionally, access permissions can be finely-grained, allowing administrators to control who can view, edit, or delete files and folders on a per-user or per-group basis. This helps ensure the security and privacy of sensitive data.

Buckets can be lifecycle managed
In S3, buckets (a container for objects stored in S3) can be lifecycle-managed using rules to transition objects to different storage classes automatically, archive them to Glacier for long-term retention, or even delete them when they are no longer needed. Sunet Drive uses this feature to help manage data storage costs and optimise data retention policies.

Co-management of nodes

- S3-bucket storage
- Share data between nodes
- Access ownership separation
- Lifecycle managed buckets
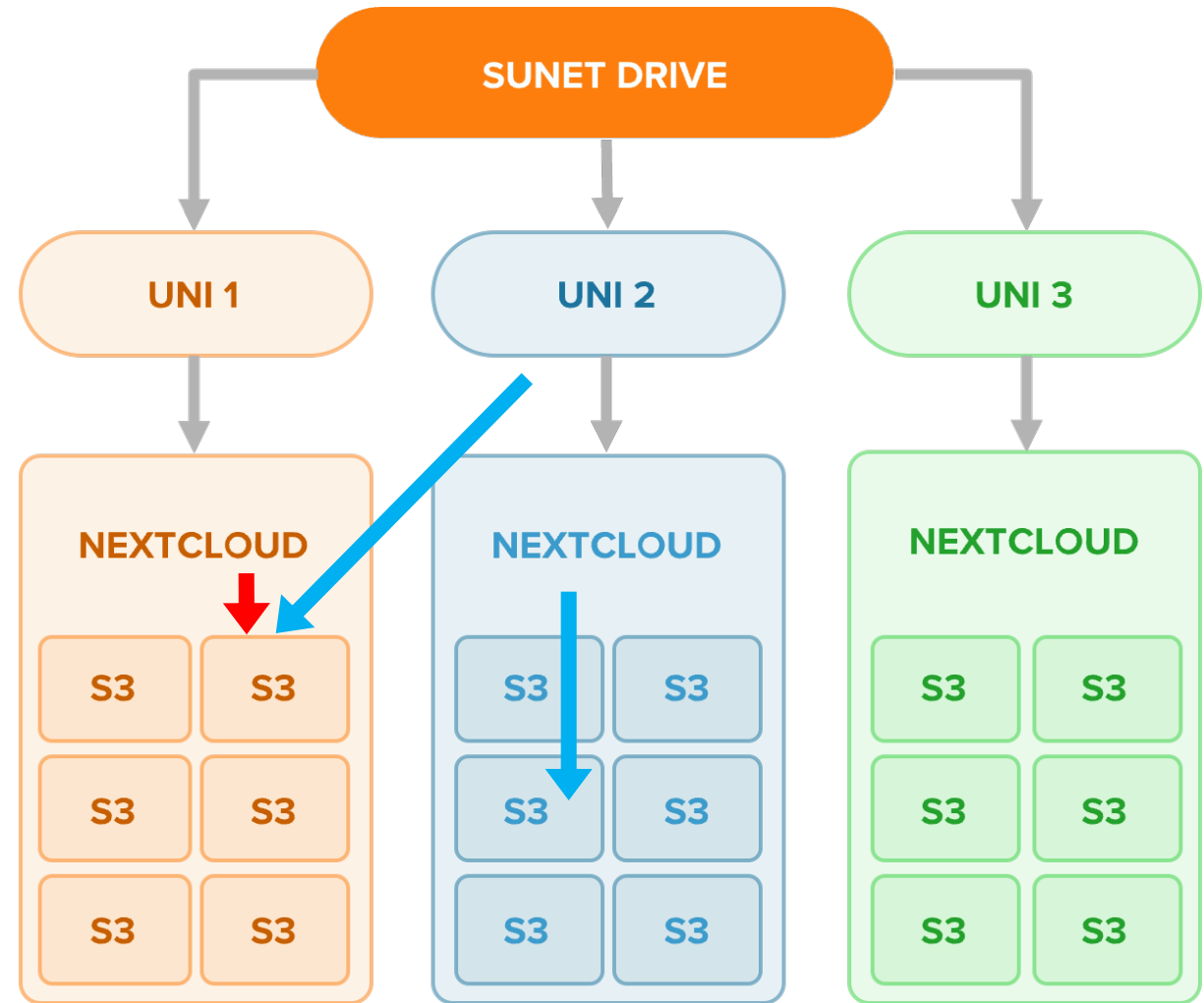
Private Cloud Security

- Personnel control
  - Background checks
  - Data center staff
  - Trusted consultants
  - Third party vendors

- Data center security
  - Availability
  - Fire Protection
  - Facility Access Controls
  - Physical Intrusion Controls

- Network Access Controls
  - Public Network Access
  - Management Network Access

- Systems Management

- Auditing

- Process Description and Configuration Management

- Infrastructure & Storage as a Service
  - Iaas high level architecture
  - Network exposure management
  - IaaS/STaas – Auditing
  - Data Privacy

- Third Party Review

https://www.safespring.com/documents/sunet/safespring-sunet-private-cloud-security-controls.pdf

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MSBFS 2020:7 och Sunet Drive

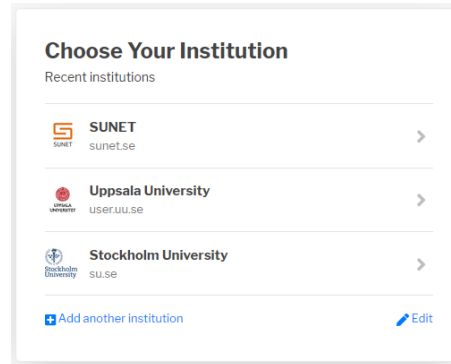| Paragraf	MSBFS 2020:7 Text	Sunet	Kundens eget arbete	Referenser

Beskrivning av alla punkter i MSBFS 2020:7
- Ansvar av Sunet
- Kundens eget arbete
- Referenser

https://wiki.sunet.se/display/Drive/MSBFS+2020%3A7+och+Sunet+Drive

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Identity management: SWAMID/eduGAIN

Swedish Account

Choose Your Institution
Recent institutions

SUNET
sunet.se

Uppsala University
user.uu.se

Stockholm University
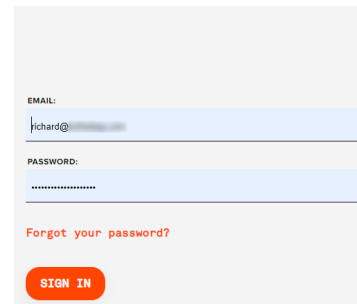su.se

Add another institution   Edit

sunet.drive.sunet.se

uu.drive.sunet.se

su.drive.sunet.se

External Account

eduID is easier and safer login.

EMAIL:
richard@

PASSWORD:
••••••••••••••••

Forgot your password?

SIGN IN

Sunet Drive

extern.drive.sunet.se
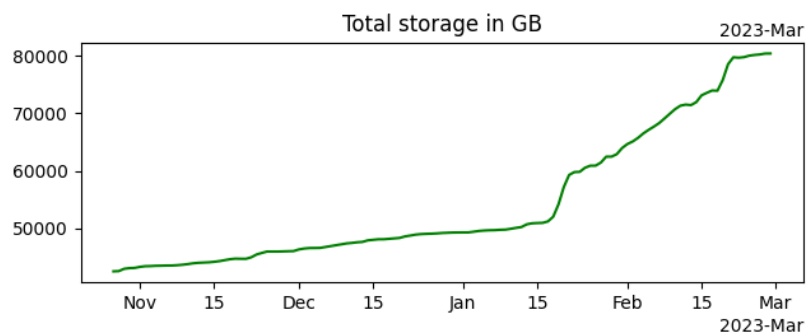
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Sunet Forum

https://forum.sunet.se/s/sunet-drive/

- Central point of documentation for Sunet Drive
- Information Stream
- Files
- Wiki
- Information for users and administrators

≡ **Index**

Sunet drive today

- 2x54 nodes on 300 servers in two data centres
- 100% powered by green energy
- 15 paying customers
- 120TB data stored with 0.5TB added daily
- Nearly 2,000 users

Sunet Drive in the future

- Full RDS-setup in production
- Secure Zones
- Data migration
- Third data centre (Kalix, Sweden)
- Kubernetes

FUTURE APPLICATION
Sciebo Research Data Service

FUTURE APPLICATION
ScienceMesh

Onboarding process

- **Administrative**

  - Sign "avtal" with Anders Nilsson

  - Separate PUBA if necessary

- **Technical**

  - Sunet migrates the existing free node to a paid node setup

  - The front-end does not change, but the backend gains functionality:

    - S3-Storage, Backup, status monitoring, access

  - Add local administrators

  - Trainings for administrators and (potentially) end users

The onboarding process is fully transparent. Users can continue to use their existing accounts.

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Features and Planned Functionality

- **Production Features**

  - File sync and share

  - Co-management of nodes

  - SSO-Login via SWAMID/EduGAIN

  - Off-site backups using duplicity

  - Document collaboration

- Which features do you want to see in Sunet Drive?

https://forum.sunet.se/content/perma?id=26403

- **Under development**

  - Secure Zones – Step-up MFA for certain areas of Sunet Drive

  - Research Data Services (RDS) – Publication of Metadata

  - ScienceMesh integration – European federated EFSS (EOSC)

  - Jupyter Hub – Integration and synchronization

- **Feature ideas/requests**

  - Audit trail/logging

  - EduSign

  - Data migration, ELN, Overleaf

  - Other Apps

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Feature Survey

https://forum.sunet.se/content/perma?id=26403

Tack! Frågor?

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