



SUNET

Sunet Drive



2021-04-22

Agenda

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 - Sunet Drive Overview
 - Data integration
 - Nodes and buckets
 - Sunet Drive Overview
 - Single Sign On
 - Follow your data
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 - What do I get?
- Sunet Drive Pilot
 - What is the pilot?
 - Limitations
 - Example login
 - How does a bucket look like?
 - Data sharing
 - Upcoming features
 - Future

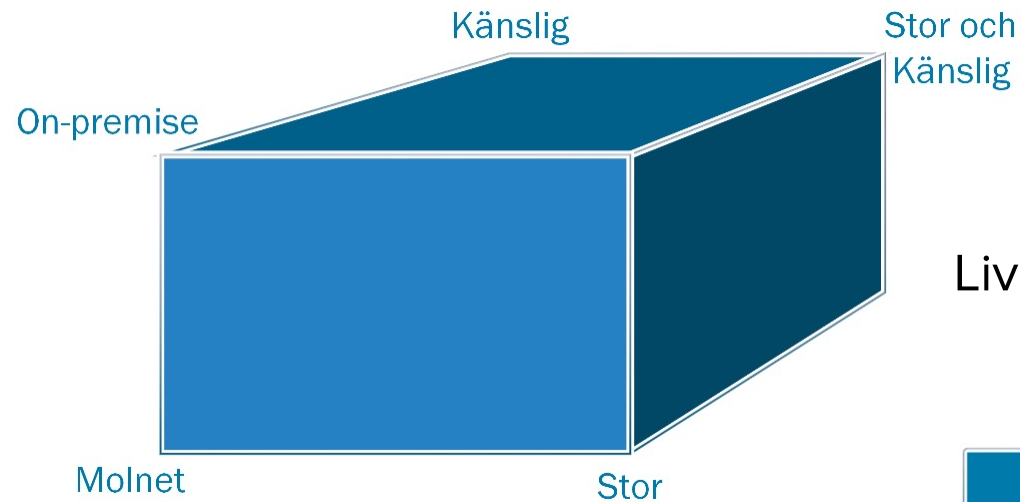
Anecdote

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

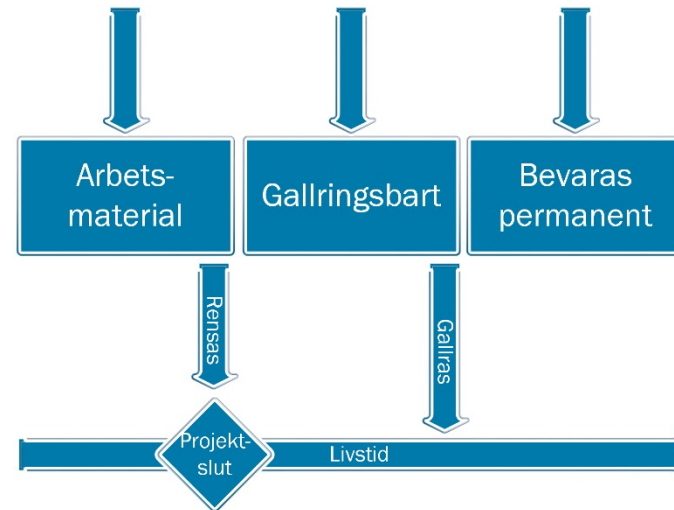
Classification



How do you access data?

Where is my data?

Lifecycle

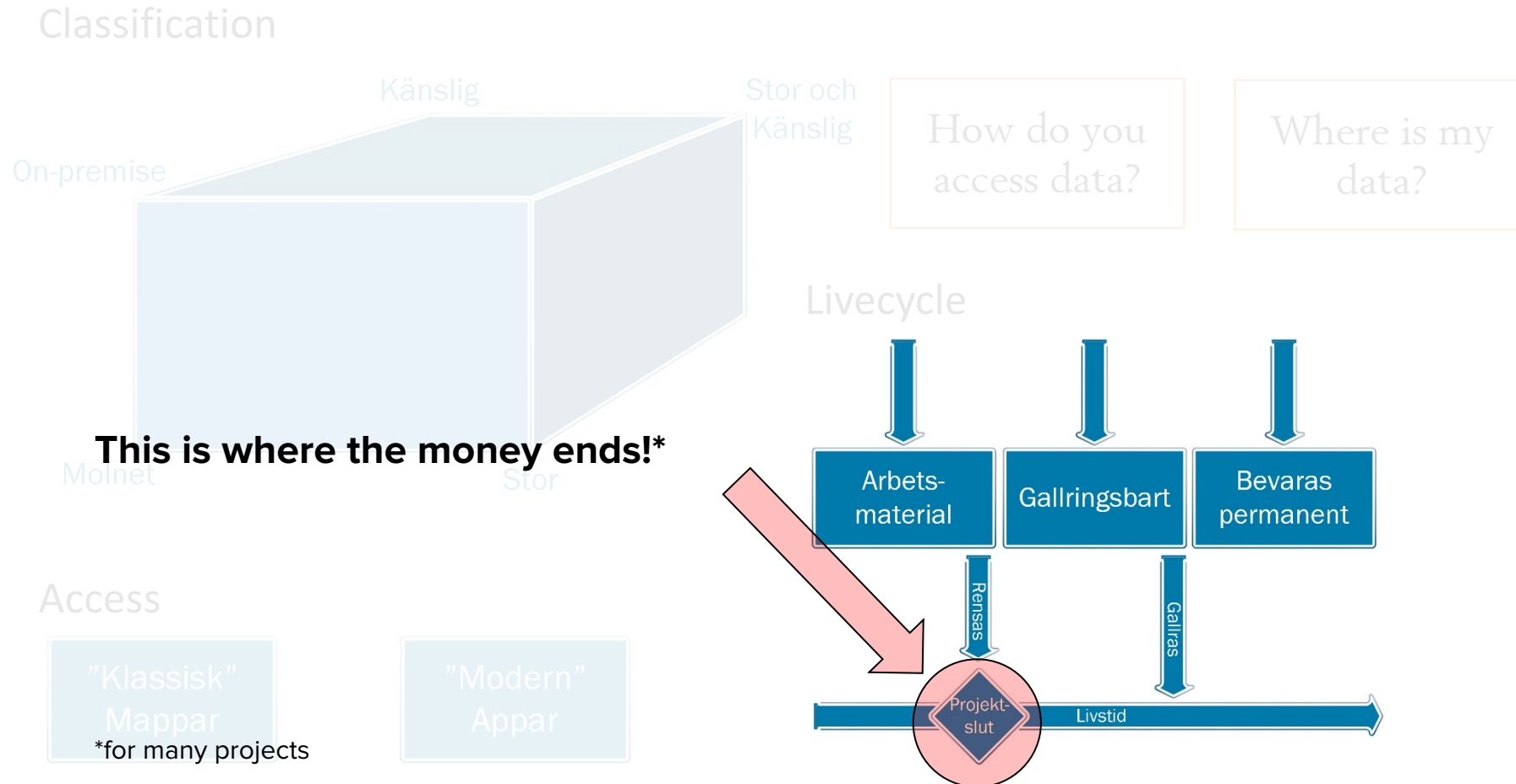


Access

"Klassisk" Mappar

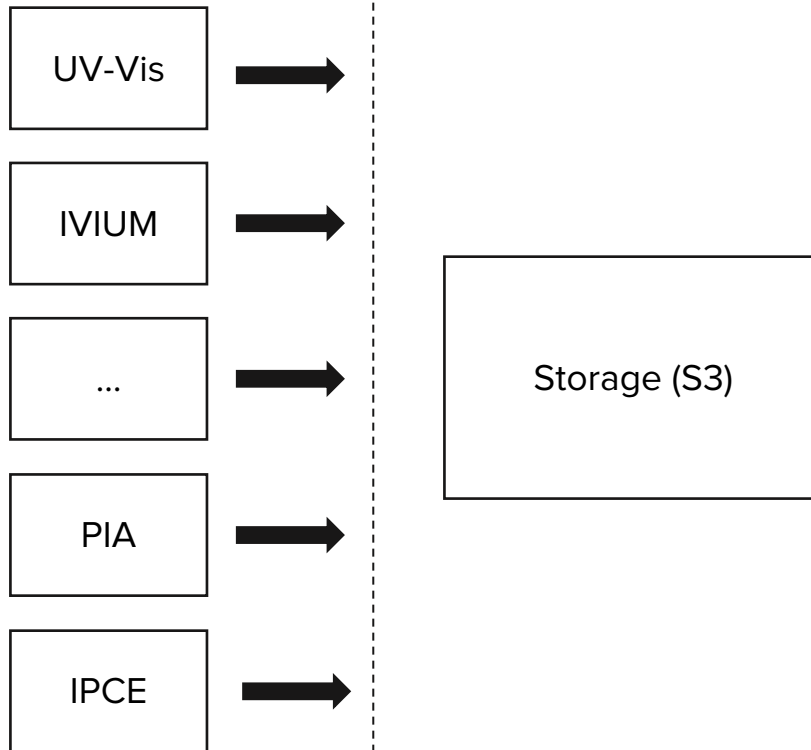
"Modern" Appar

Research data – a model

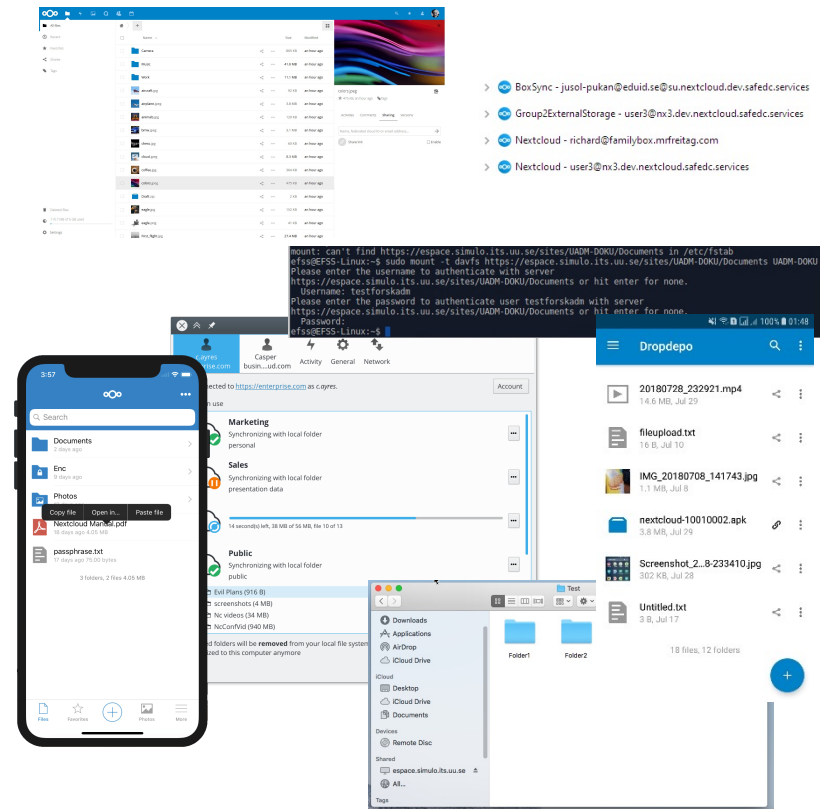


Example - Integration

Primary data sources



Access



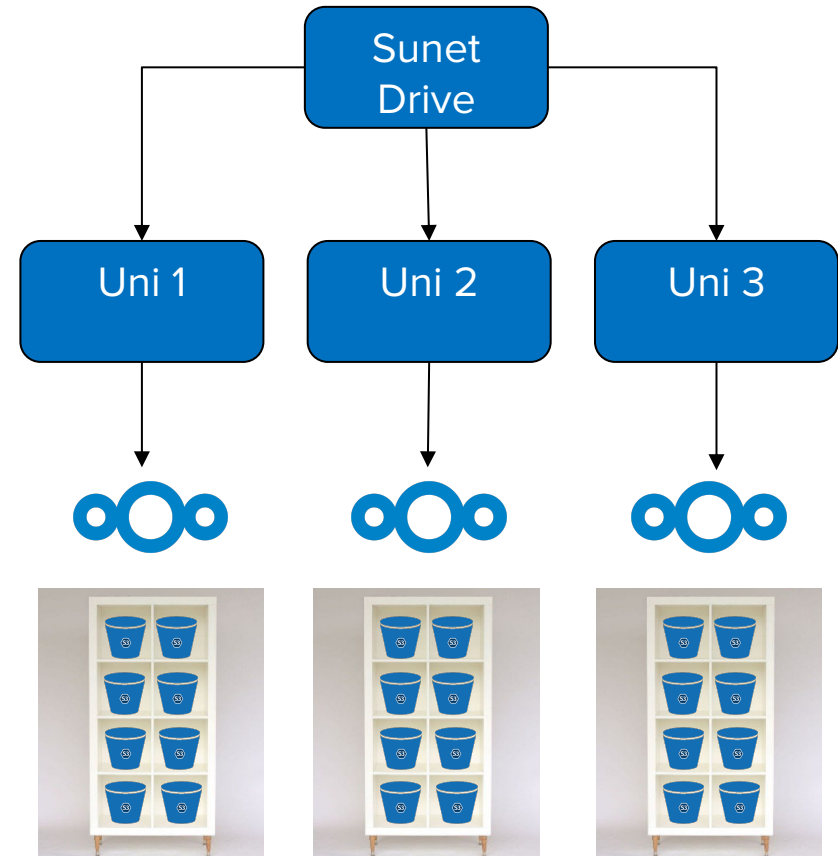
Nodes and buckets

- Main storage unit is an S3-bucket
- A bucket is comparable to a virtual hard disk
- NextCloud is the access layer to the bucket
- Individual buckets represent "storage entities" (research project, lab, institution)
- Core-data resides in the bucket independent from NextCloud
- Buckets are (relatively) agnostic and can be migrated easily



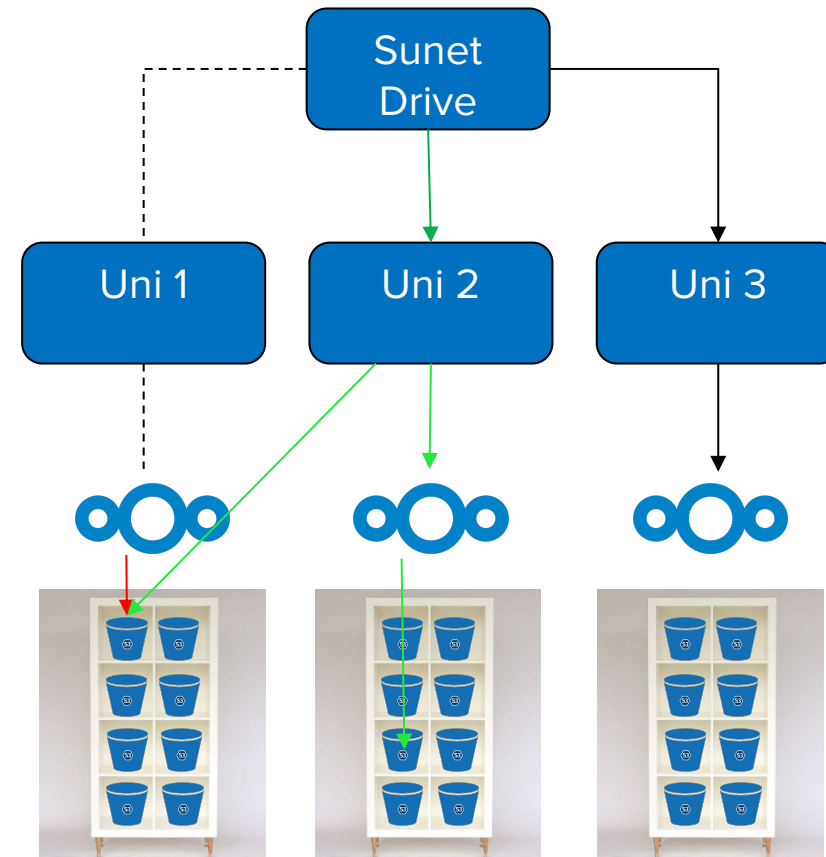
Sunet Drive overview

- Every university gets their own NextCloud node
- The node is part of a "global scale" and can collaborate with other nodes
- The node is co-managed with Sunet
- **Separation of access vs ownership**



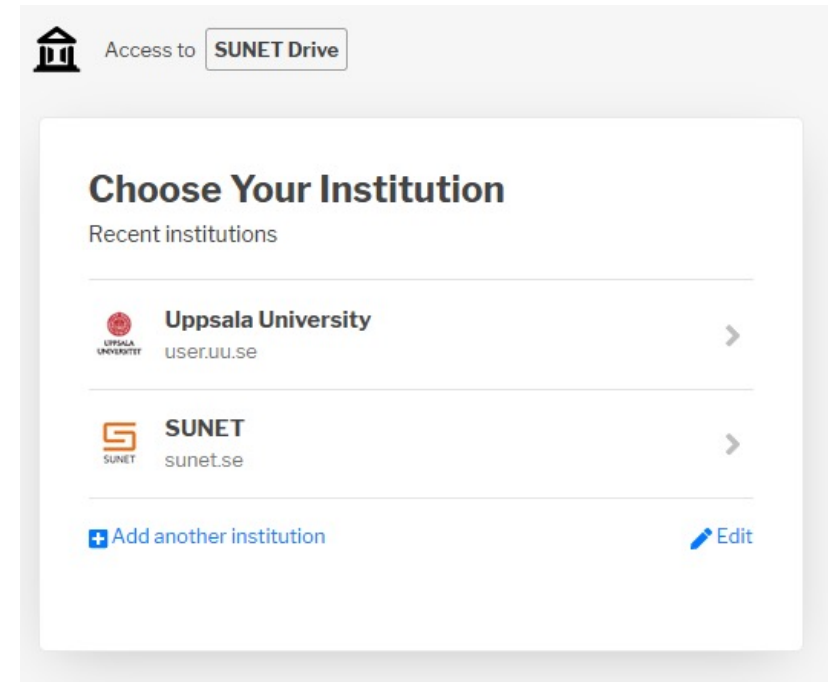
Follow your data

- Most researchers change institutions frequently
- Many researchers take their research data with them
- With NextCloud you can follow your data even from a new organisation



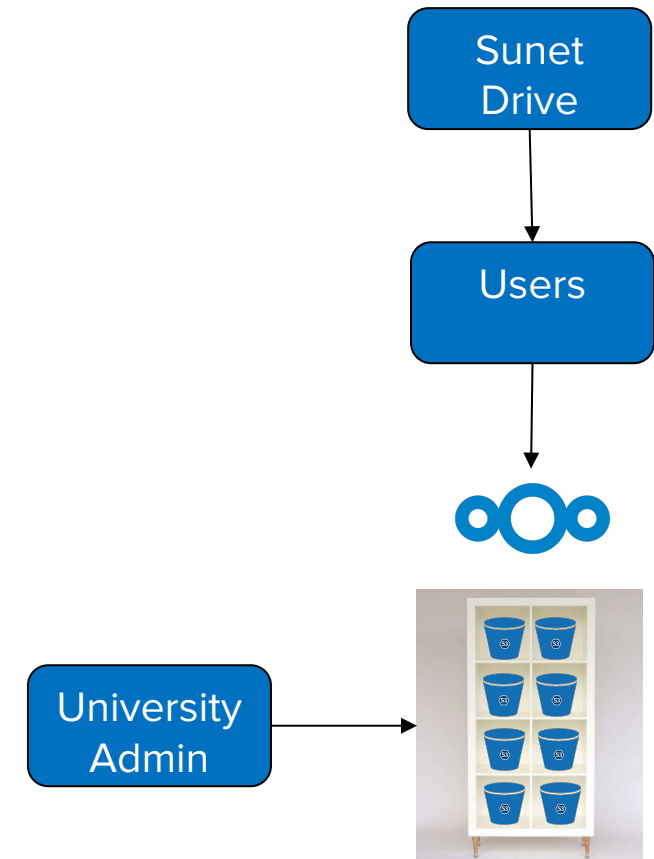
SWAMID/eduGAIN/SeamlessAccess

- Single Sign On using your organization or institution account
- Nextcloud lacks support for Discovery Service
- Use SaToSa for SAML2<->SAML2
- Users can log on using any federated provider using Seamless Access
- ~6000 IdP world wide
- Easy collaboration
- **Follow your data (as a researcher)**
- **Own your data (as an institution)**



Own your data

- Universities administrate their own storage (buckets)
- Universities can create as many buckets for research projects or labs as needed and integrate them into NextCloud
- Existing data can be migrated into buckets and indexed by NextCloud (i.e. external hard disks or other "Shadow-IT")



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>

Pricing

Post	Antal block om 500 anv. licenser	SEK/månad
Grundpris	---	24 800
Instans-pris (beroende på antalet användare i block om 500)	1	3 190
	2-3	6 380
	4-11	15 950
	12 -->	31 900
Per användarlicens (*) (minsta antal 500, köps i block om 500 st.)		2.00
Tillval:		
Lagring för kunder som inte har köpt tjänsten "Sunet lagring i privat moln". Minsta volym 5 TB, köps i block om 5 TB.		10 öre per GB/månad

Example 1: Small Institution

License blocks	Licenses	Base price	Instance price	License price	Total/Month	Per User/Month
1	500	24800	3190	1000	28990	58*

(*) plus storage

Example 1: Medium Institution

License blocks	Licenses	Base price	Instance price	License price	Total/Month	Per User/Month
7	3500	24800	15950	7000	47750	14*

(*) plus storage

Example 1: Large Institution

License blocks	Licenses	Base price	Instance price	License price	Total/Month	Per User/Month
13	6500	24800	31900	13000	69700	11*

(*) plus storage

What do I get for the price?

- Base-price
 - Sunet operations
 - Shared Infrastructure Servers
 - Sunet product ownership
 - Customer Support*
- Instance-price
 - 12 servers per instance
 - 6 production
 - 6 test
- License-price
 - Nextcloud enterprise
 - Bulk user price

(*) Customer = institution (lärosäte)

SUNET Drive Pilot

- <https://pilot.drive.sunet.se>



SUNET DRIVE PILOT

Login options:

Direct log in

EduID

SWAMID/eduGAIN/Seamlessaccess

SUNET

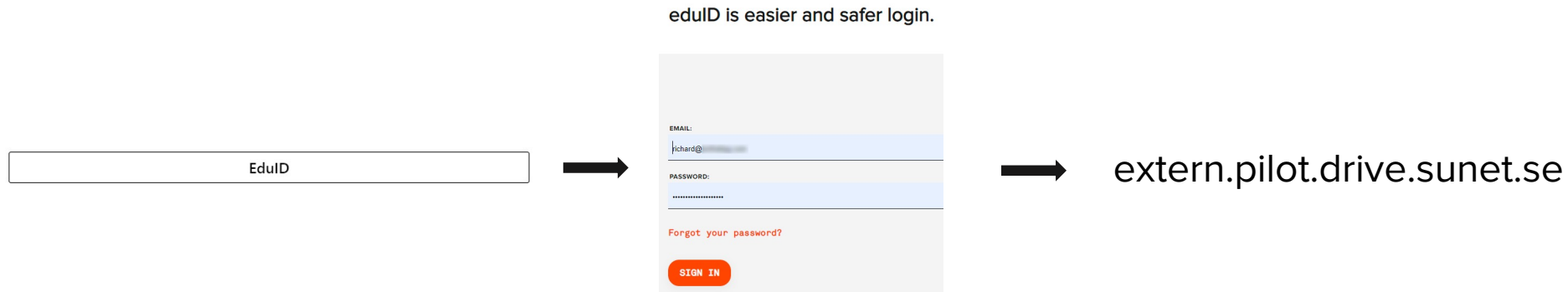
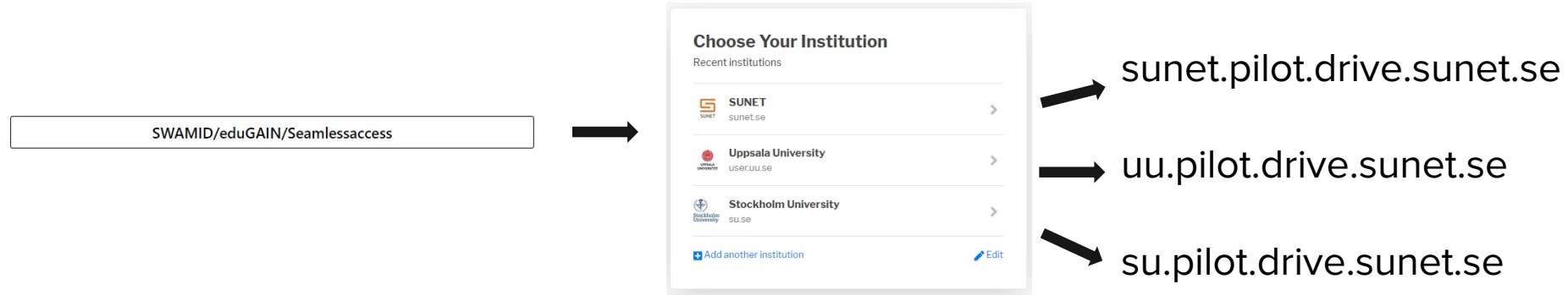
What is Sunet Drive Pilot?

- Sunet Drive Pilot is a small reference implementation of Sunet Drive reflecting the architecture of Sunet Drive. E.g., every Swedish IdP has their own instance of Nextcloud within the federation.
- With the Sunet Drive Pilot, new customers can try before they buy and existing customers can evaluate new features and apps that might not necessarily make it into the production environment.

Limitations of Sunet Drive Pilot?

- Smaller setup than Sunet Drive
- For testing and evaluation only
- No redundancy
- No backup
- Not for production data(!)
- Lower availability
- Occasional downtime
- Can be terminated

SUNET Drive Pilot - Example



S3 buckets

- An S3-bucket is nothing else than a folder in NextCloud
- They are logically separate entities
- Ownership can be changed after a project ends
- The contents of a bucket can be locked
- Different buckets can have different settings



Data Sharing

su.pilot.drive.sunet.se

The screenshot shows the sharing options for a folder named 'ResearchProject' (0 B, seconds ago). The 'Sharing' tab is active, displaying a search bar with 'jusol' and a list of sharing options: 'Share link', 'Richard Freitag (remote)', 'Others with access', 'Internal link' (with subtext 'Only works for users with access to this folder'), and 'Add to a project' (with subtext 'Connect items to a project to make them easier to find').

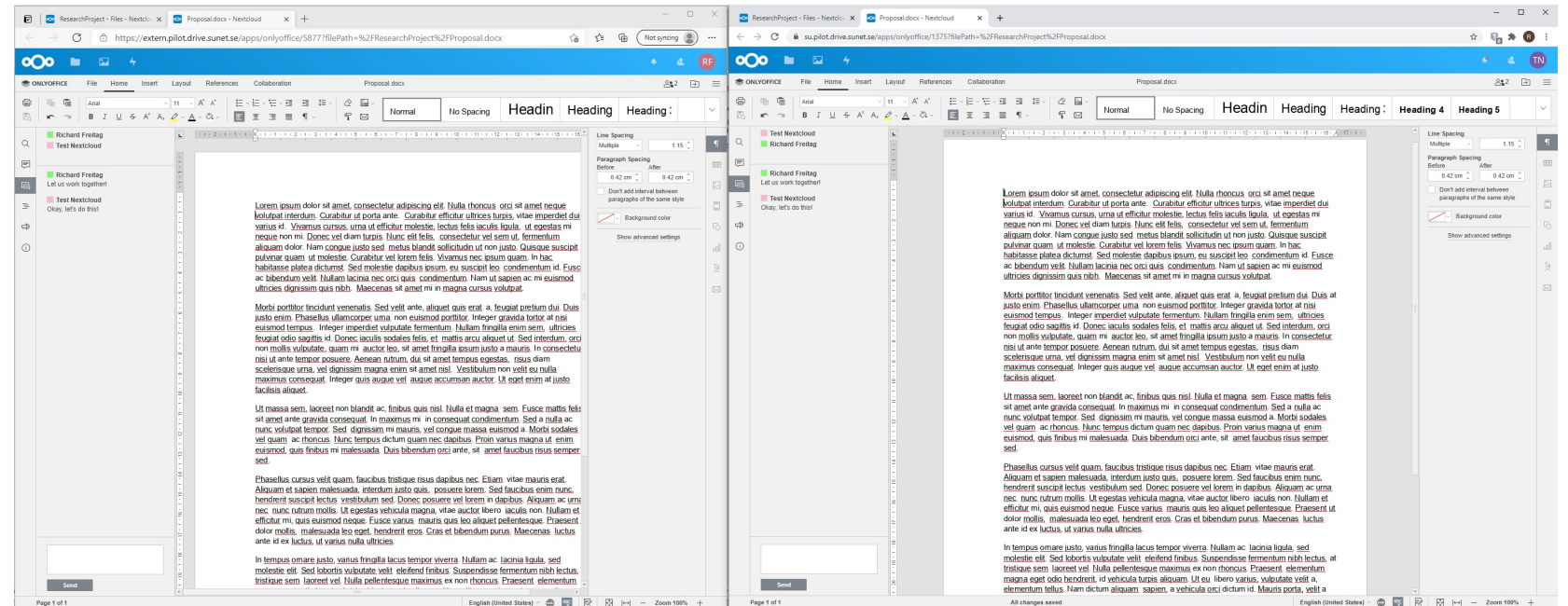


extern.pilot.drive.sunet.se

The screenshot shows a notification window in the 'extern.pilot.drive.sunet.se' interface. The notification text reads: 'You received **ResearchProject** as a remote share from **Test Nextcloud**'. Below the text are two buttons: 'Decline' and 'Accept'. The notification also shows 'seconds ago' and a close button 'X'. The user's profile 'RF' is visible in the top right corner of the interface.

Upcoming features

- Document collaboration using OnlyOffice
- Available in Sunet Drive Pilot, later in Sunet Drive
- Alternatives: Collabora, MS Office Online
- Q3/Q4 2021



Future

- SND-integration of metadata (DORIS)
- More NextCloud-apps
- Nodes for virtual institutions (SNIC, e.g., SciLifeLab)
 - Virtual institution owns and manages a node
 - Access is shared with users from different IdP
 - Solves principality problem (huvudmannaproblematik)
- Process work
 - Data management plans
 - Security and administration

If you are interested

- Contact anders@sUNET.se or freitag@sUNET.se
- Test-run using pilot.drive with S3-buckets and more data
- Provision nodes for test and production
- Regular feedback- and training-sessions

Slut och frågor

Anders Nilsson

Kontaktansvarig för tjänsterna Backup, Lagring och Virtuella servrar

anders@sUNET.se

Richard Freitag

Projektledare

freitag@sUNET.se