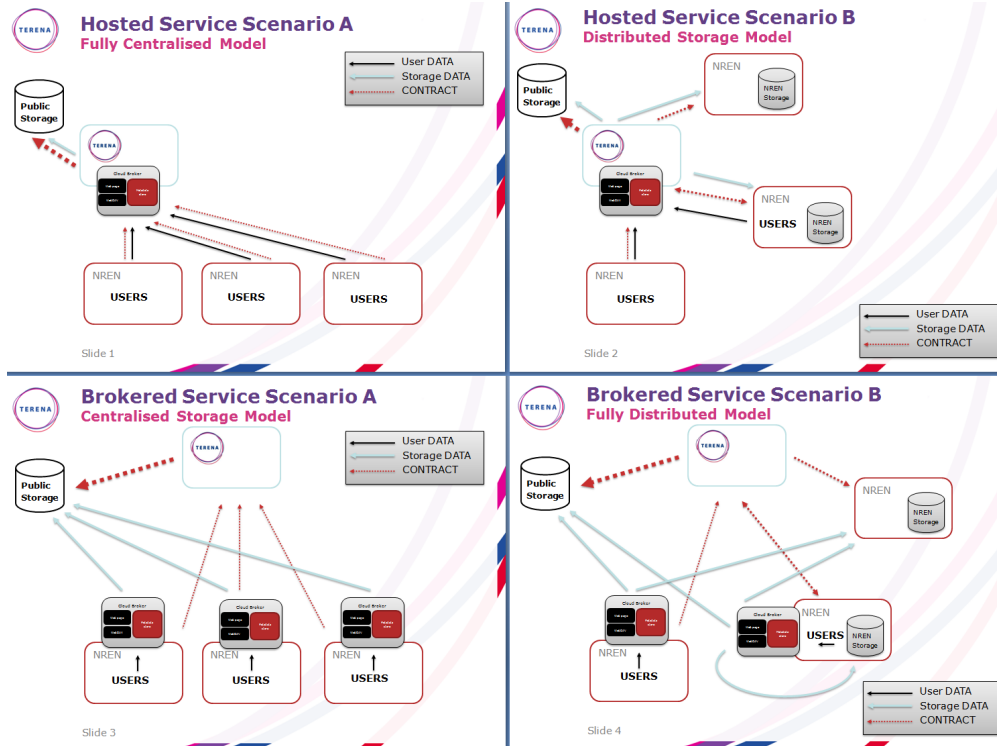


Service Delivery Scenarios

The following preliminary service scenarios are envisioned:

- **Hosted Service Scenarios**
 - A) One cloud broker instance is hosted at a central location (e.g., TERENA offices), metadata is stored at the same place (i.e. inside the broker), storage data is stored in the public cloud contracted by TERENA - **This is the scenario of the current pilot installation!**
 - B) One cloud broker instance is hosted at a central location (e.g., TERENA offices), metadata is stored at the same place (i.e. inside the broker), storage data is either stored in the public cloud or in the data storage facilities provided by NRENs participating in the pilot coordinated by TERENA.
- **Brokered Service Scenarios**
 - A) Several cloud broker instances are hosted by NRENs or end-sites, metadata is stored locally (i.e. inside the distributed brokers), storage data is stored in the public cloud that is brokered to NRENs by TERENA.
 - B) Several cloud broker instances are hosted by NRENs or end-sites, metadata is stored locally (i.e. inside the distributed brokers), storage data is stored in the mix of public cloud and data storage facility of NRENs brokered and coordinated by TERENA.



Other potential scenarios may come up...

Trust Relationship Models

Trust Relationship Model	No Trust <i>(out of scope for TCD)</i>	University Trust <i>(TERENA Franchise)</i>	NREN Trust <i>(Brokered SS A and B)</i>	TERENA Trust <i>(Hosted SS A and B)</i>	Provider Trust <i>(out of scope for TCD)</i>
Global Cloud Storage Provider	Cloud Storage Provider <ul style="list-style-type: none"> • No trust relationship with end-user • Ensure that no personal data is handled by the provider • Maintain client apps 	Cloud storage (opt.)	Cloud storage (opt.)	Cloud storage (opt.) OR NREN storage infrastructure (opt.)	Cloud Storage Provider <ul style="list-style-type: none"> • Trusted relationship with end-users • Keys are stored here. • Maintain client apps

TERENA	<outsourcing agreement> (opt.) <ul style="list-style-type: none"> No trust delegation 	Admin/clearing (opt.)	Admin/clearing (opt.)	Admin/clearing & Cloud Broker <ul style="list-style-type: none"> Personal Data Controller Encryption Keys are stored here Trusted relationship with end-users 	<outsourcing agreement> (opt.) <ul style="list-style-type: none"> Trust delegated to Cloud Provider
NREN / Data centre	<outsourcing agreement> (opt.) <ul style="list-style-type: none"> No trust delegation 	Storage infrastructure <ul style="list-style-type: none"> Raw storage capacity Store encrypted data blob only No personal information leaked 	Storage infrastructure & Cloud Broker <ul style="list-style-type: none"> Personal Data Controller Encryption Keys are stored here Trusted relationship with end-users 	<outsourcing agreement> <ul style="list-style-type: none"> Trust delegated to TERENA Match federations with storage infrastructures (opt.) 	<outsourcing agreement> (opt.) <ul style="list-style-type: none"> Trust delegated to Cloud Provider
University / Institute	<outsourcing agreement> (opt.) <ul style="list-style-type: none"> No trust delegation 	Cloud Broker <ul style="list-style-type: none"> Personal Data Controller Encryption Keys are stored here Trusted relationship with end-users 	<outsourcing agreement> <ul style="list-style-type: none"> Trust delegated to NREN 	<outsourcing agreement> <ul style="list-style-type: none"> Trust delegated to NREN 	<outsourcing agreement> <ul style="list-style-type: none"> Trust delegated to Cloud Provider
End-user	Specific client application is needed <ul style="list-style-type: none"> End-to-end encryption Keys are stored/handled here 	<no client needed>	<no client needed>	<no client needed>	Client might be needed for some features
POTENTIAL USE CASES	Commercial solutions are available such as: <ul style="list-style-type: none"> SpiderOak etc... 	NRENs to follow this model: <ul style="list-style-type: none"> BELNET NIIF 	NRENs to follow this model: <ul style="list-style-type: none"> Scrc/CARNet PSNC CESNET 	Home for Homeless - TBC <ul style="list-style-type: none"> TERENA 	Commercial solutions are available such as: <ul style="list-style-type: none"> DropBox Box.net PowerFolder etc...

TERENA Storage Franchise idea

TERENA Trusted Cloud Drive API Store (for Universities/Institutes, not for End-users)

This is just a concept!

Provider	Item	AUP	SLA	Price
TERENA	Trusted Cloud Broker platform default plugins (S3, local FS) Download...	n/a	n/a	free of charge
NREN X	Storage back-end API plugin Download...	E.g., only national federation Agree (Yes/No)	Availability, MTTR, etc.	Service fee x Pay...
NREN Y	Storage back-end API plugin Download...	E.g, only TERENA countries Agree (Yes/No)	Availability, MTTR, etc.	Service fee x Pay...
Commercial Z	Storage back-end API plugin Download...	E.g, only EU countries Agree (Yes/No)	Availability, MTTR, etc.	Service fee z Pay...
Commercial W	Storage back-end API plugin Download...	E.g, global Agree (Yes/No)	Availability, MTTR, etc.	Service fee w Pay...