



Cloud Storage Synchronization and Sharing by RENATER

29 january 2020

Copenhagen





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Goals and Constraints



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- **Our Goals**

- Promote cross collaborations inside our community
- Deliver a sync and share service
- Integrated within our ecosystem

- **Who is it for?**

- The establishments of our community that still do not have this kind of service

- **Technical challenge:**

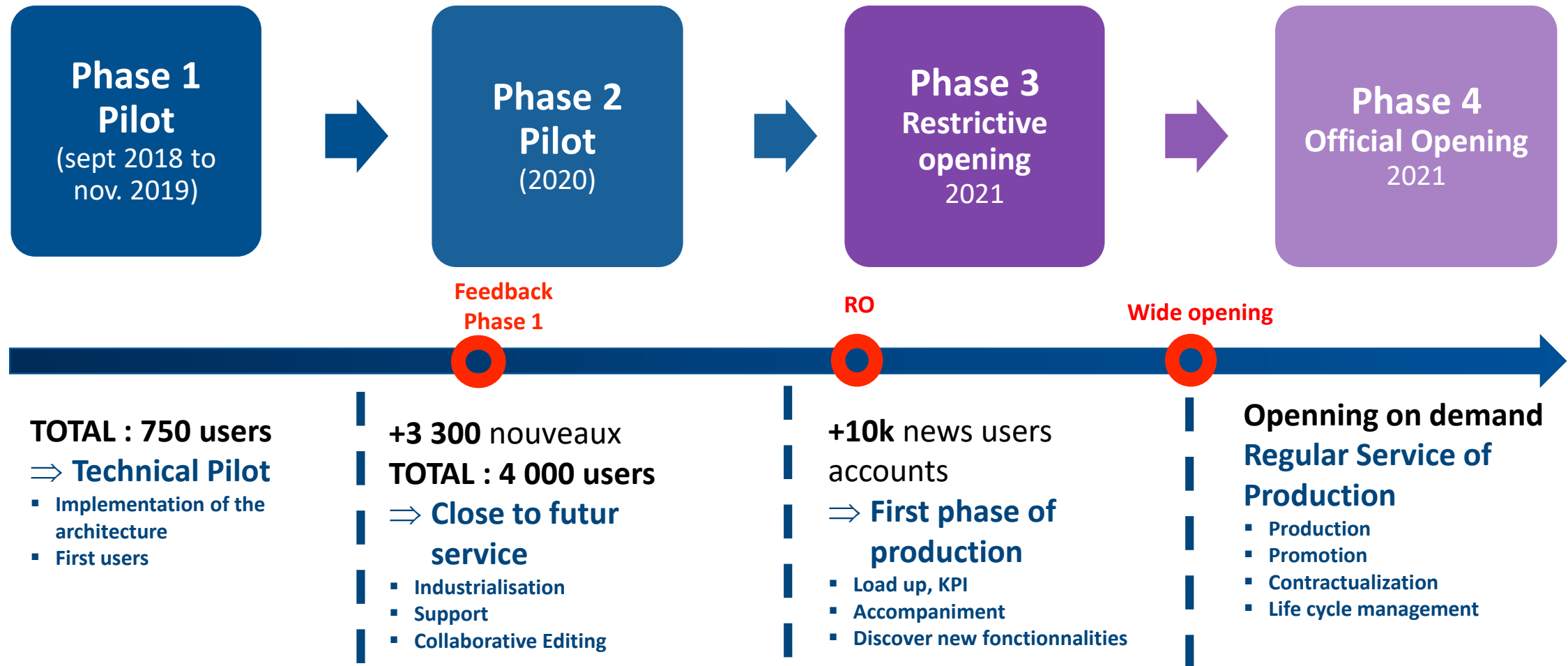
- make the demonstration of the scale out capacities



- **Constraints**

- On RENATER's infrastructures self hosting
- Open Source Softwares
- Integrated to the french federation of identity
- Compatible with object storage by design
- Geo-distribution Capacities

Road map



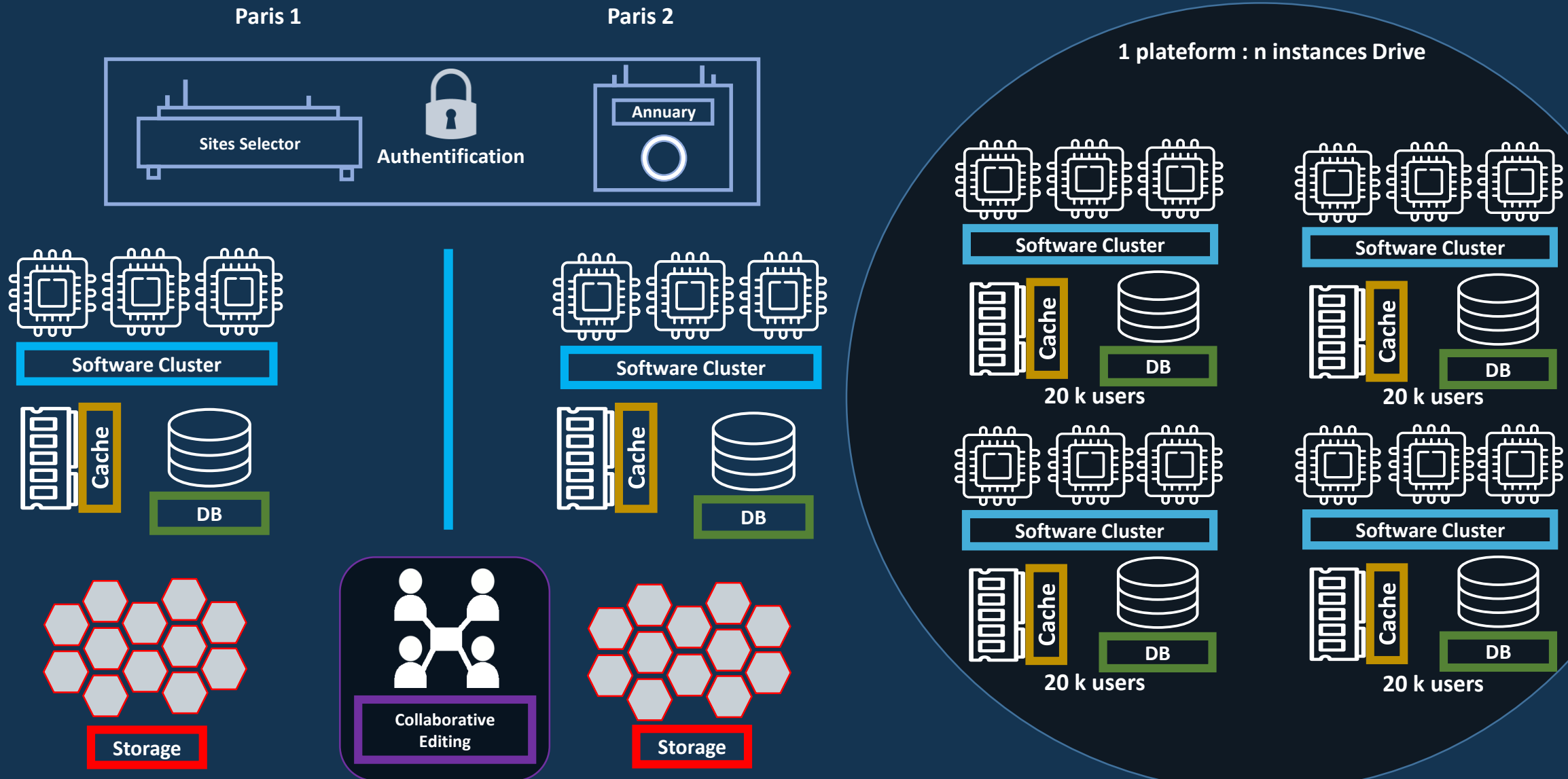


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**Architecture
Implementation
of the technical pilot**

A modular Architecture



Authentication and self provisioning



User SAML

1

User with SAML Attributes hold the value of the EPPN

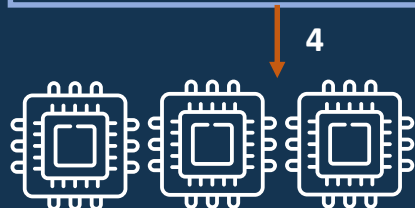
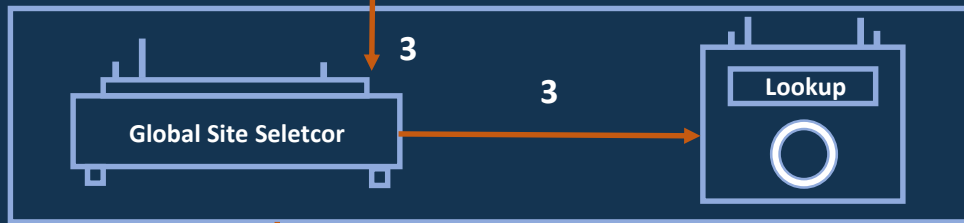
1

The scope (domain of the IDP) is extract and use for the user mapping

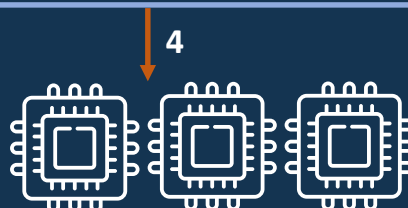
2

```
{
  "renater.fr" :
    "https://drive1.demo.renater.fr",
    "couperin.org" :
    "https://drive2.demo.renater.fr",
    "univ-toulouse.fr" :
    "https://drive2.demo.renater.fr",
    "criann.fr": "https://drive1.demo.renater.fr",
    "umontpellier.fr":
    "https://drive1.demo.renater.fr",
    "univ-perp.fr":
    "https://drive2.demo.renater.fr",
    "univ-guyane.fr":
    "https://drive1.demo.renater.fr",
    "univ-tln.fr": "https://drive2.demo.renater.fr",
    "cirad.fr": "https://drive1.demo.renater.fr"
}
```

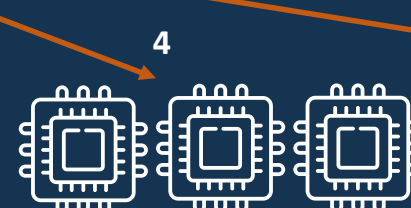
- 1) The user selects his IDP from the list and set his credentials
- 2) The mapping file is read
- 3) GSS request the lookup server, in case of new user the lookup server registers the user
- 4) The user is redirected to his node or the account is self provisionned at the first login



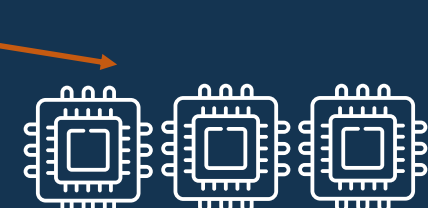
RENATER DRIVE 1



RENATER DRIVE 2



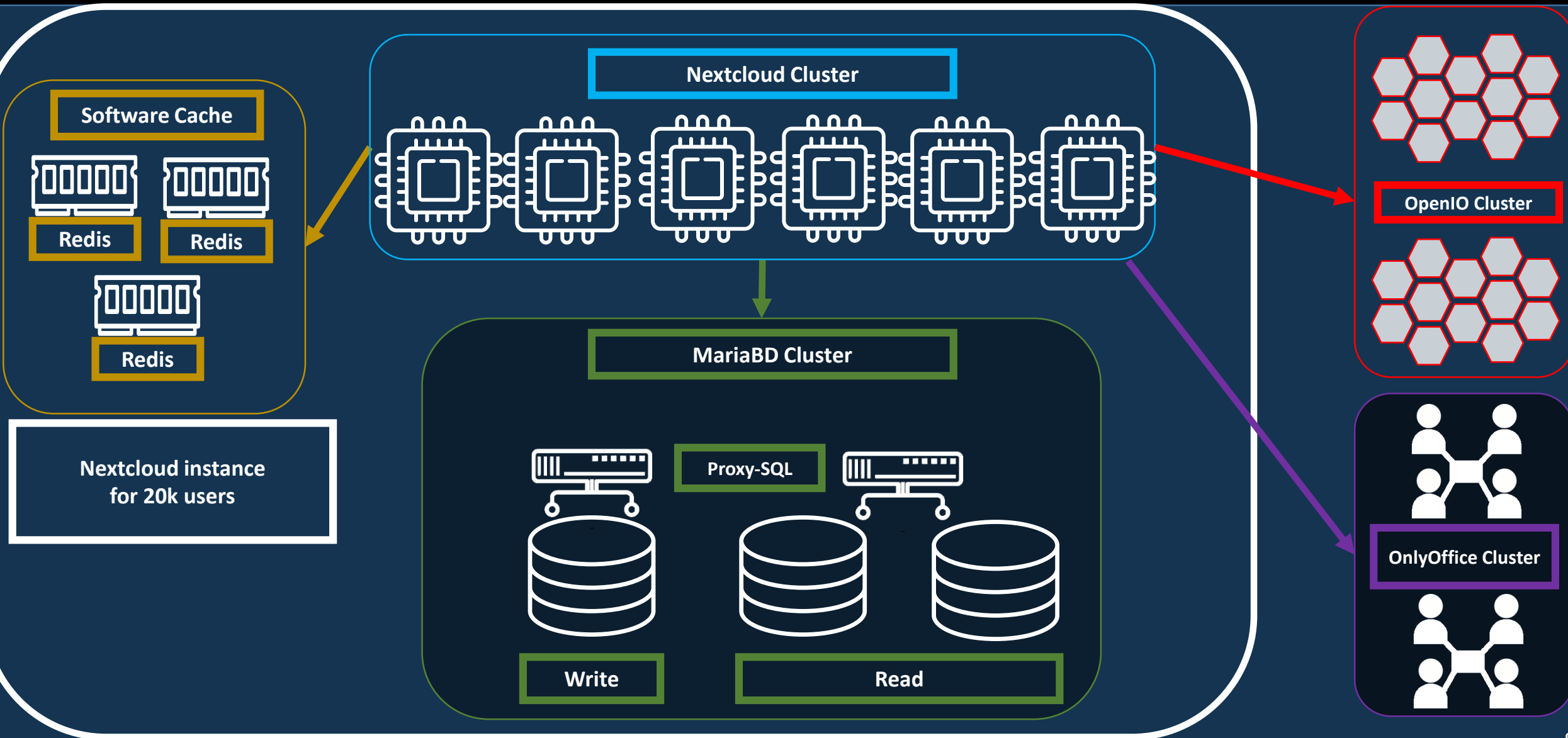
RENATER DRIVE N



RENATER DRIVE N + 1



Template of Drive instance

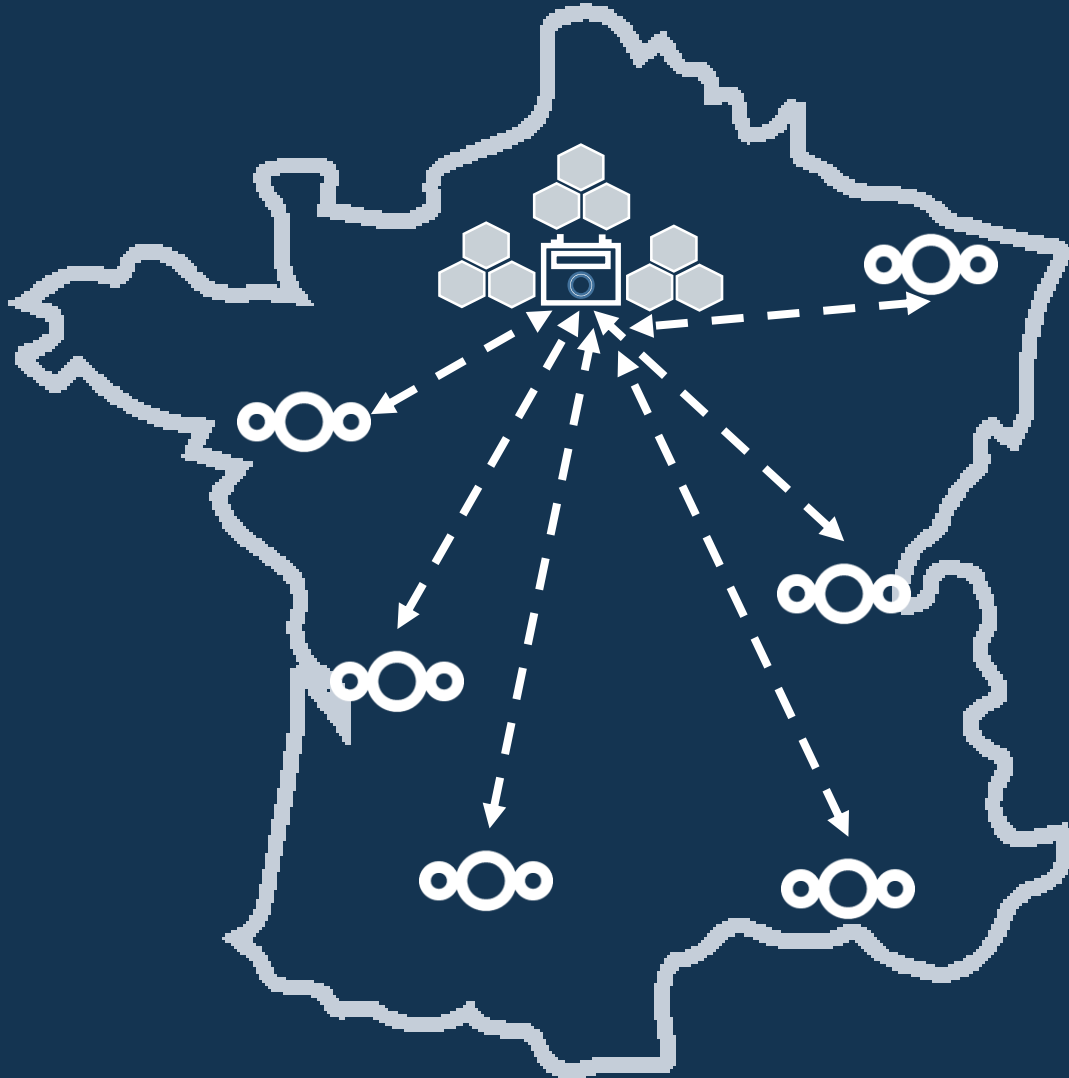




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To a federation of Drives

To a federation of Drives



- Since the version 16 a Nextcloud node can request an external Lookup server by the button « Global Search »
- Bidirectionality of the search can be pretty helpful for a seamless service
- That avoid that the users exchange Cloud Federated ID by mail for exemple
- Actually the user manage the publication of his data to a possible Lookup server
- Actually the users of the GSS instance can't request externals directories
- For this kind of usage, that can be pretty helpful if the node's administrator can manage the publication of datas (mail, display name, node's adress) according to the policy of the establishment

To a federation of Drives

