CS3 MESH4 EOSC

Connecting European Data

ScienceMesh: Low Barrier ScienceMesh User Access to EGI Services

Milan Daneček

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About ScienceMesh #1

* Federated infrastructure to enable data and application sharing across various types of Sync&Share systems
  * Such as ownCloud, Nextcloud, Seafile, ...
  * Independently operated
* Technical prerequisites: API (OCM) for peer-to-peer sharing
  * Needs 1:1 configuration -> not scalable
  * Requires users to know each other's identities -> not suitable for general public
* We built a federation out of independently operated Sync&Share systems
  * ScienceMesh
  * Reference implementation of a ScienceMesh site: Interoperability Platform (IOP)

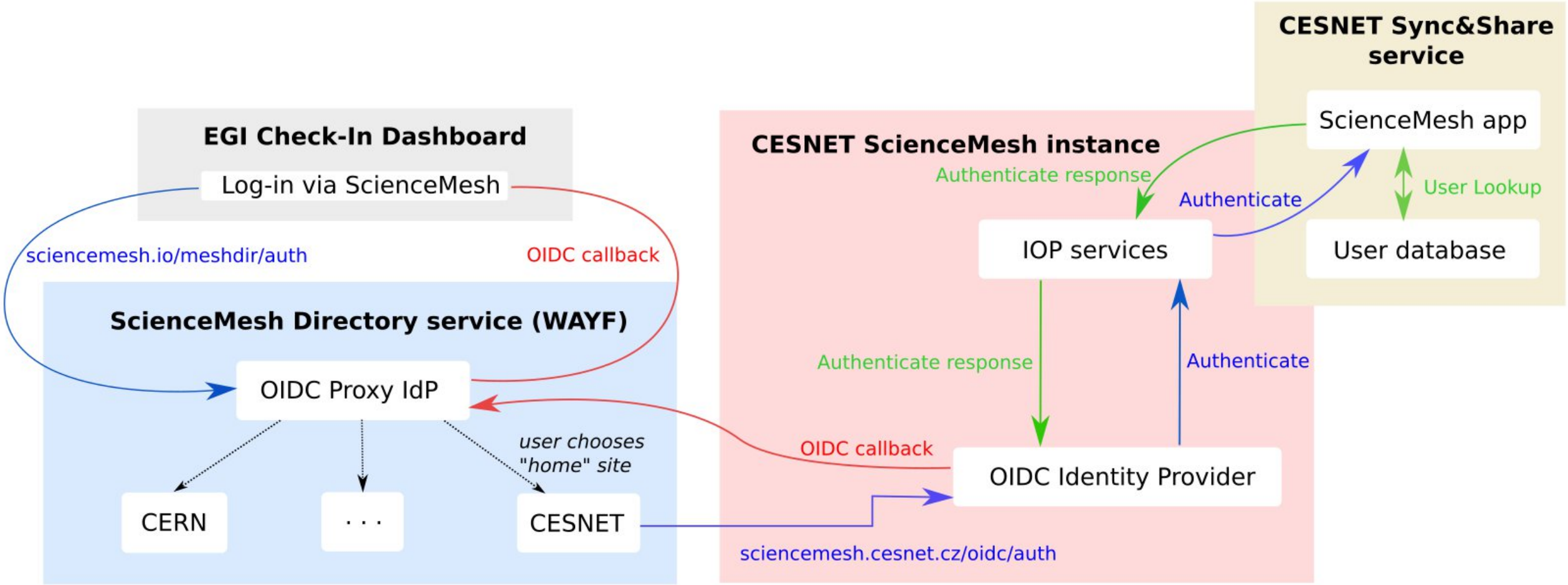
About ScienceMesh #2

* Federated infrastructure: ScienceMesh metadata (incl. services), monitoring, accounting, policies&governance, ...
  * Sync&Share systems serve as the source of user identities
    * No centralised AAI available (nor realistically expected)
* **Key concepts:** invitation workflow, user discovery
  * Users can invite colleagues to share resources regardless of what end system they use
  * Users can be invited by mail/chat/... = something the users know and use regularly
  * Identity resolution = similar to WAYF in standard federations
* Resources&services that can be shared
  * File and folder access
  * Access to applications
  * Data transfers

CS3MESH OIDC Proxy IdP

* For the purpose of “invitation workflow,” we’ve developed the ScienceMesh Directory service
  * Similar to WAYF in identity federations
  * Serves users to choose/reveal their “home” organization to log in
* ScienceMesh Directory service based on metadata from central database
  * List of sites, deployed services, …
* Although not originally designed as such, the ScienceMesh can act as an identity federation
  * Metadata very similar
  * ScienceMesh Sites as Identity Providers
* Currently working on extended functionality of an OIDC Proxy IdP provider for EGI Check-in
  * Interoperability Platform
  * Login through the ScienceMesh can ensure access to the data during the process
* Lightweight login - PoC with Jupyter notebooks

Integration Schema



Conclusion

* Access to EGI services through a Sync&Share infrastructure
* Sharing the data to Jupyter notebooks from ScienceMesh sites
* Synergy between ScienceMesh and EGI services

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Thank you!

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