



OPENCLOUDMESH

Campfire

Presentations

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Panelists

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OPENCLOUDMESH

State of the Art

Giuseppe Lo Presti, CERN

OCM Campfire @ CS3 Workshop 2024 – CERN, Geneva – 12 March 2024

Contents

- **The Open Cloud Mesh standard**
 - Origin and Status Quo
 - Recent ScienceMesh-driven Developments
- **What's in the menu for today's Campfire Session**
 - Ongoing Developments
- **Panel discussion**

Origins of OCM

- **Project initiated in 2013**
 - GÉANT-ownCloud agreement “to introduce services based on ownCloud technology” in NRENs
- **First demonstrator at CS3 2016 (ETH Zurich)**
 - Seeking interest in the community
 - Version **1.0-proposal11** “informally” supported by ownCloud and Nextcloud
- Hosted within **GÉANT** until 2020, then within **CS3ORG** at GitHub



[1.0.0] - 2020-07-01 - Bjoern Schiessle bjoern@schuessle.org

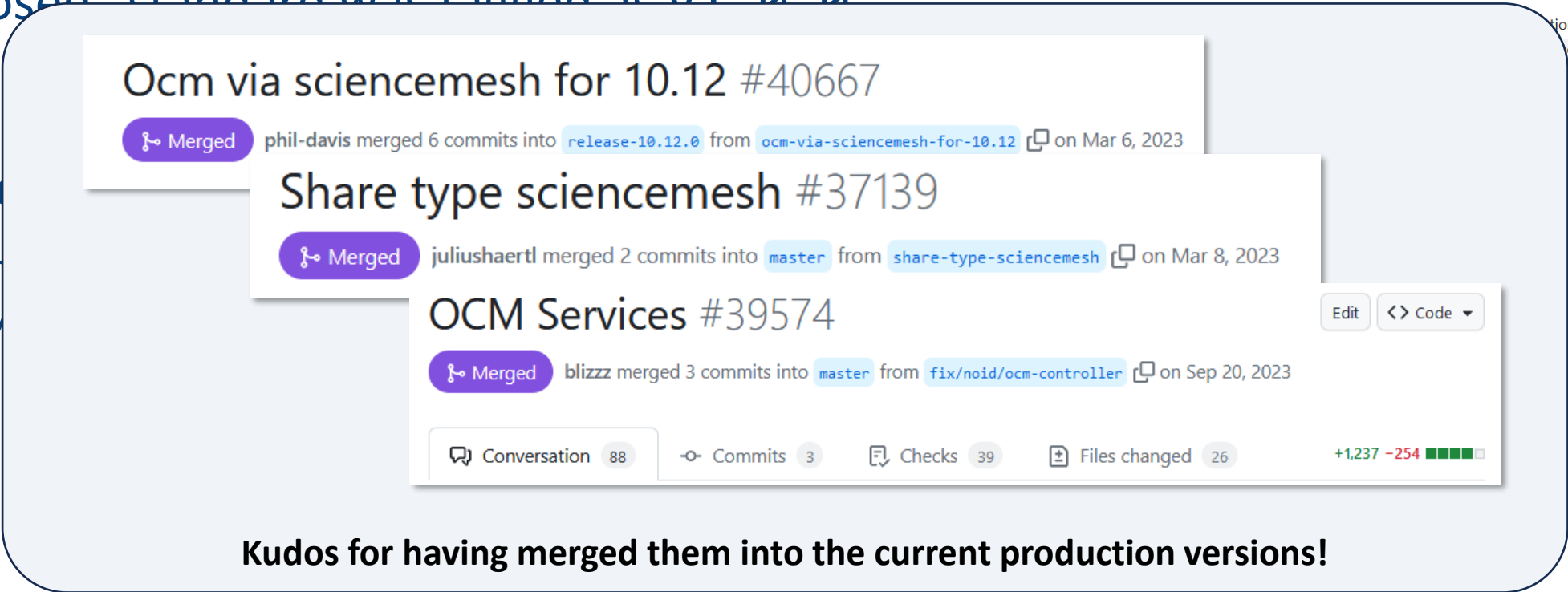
tion, to enable federated
otifications.

The “proposed” standard was tagged as v1.0.0

An *invitation*

A referer
ScienceM

Appropri



The screenshot shows three merged pull requests on GitHub:

- Ocm via sciencemesh for 10.12 #40667**: Merged by phil-davis on Mar 6, 2023. Description: phil-davis merged 6 commits into `release-10.12.0` from `ocm-via-sciencemesh-for-10.12`.
- Share type sciencemesh #37139**: Merged by juliushaertl on Mar 8, 2023. Description: juliushaertl merged 2 commits into `master` from `share-type-sciencemesh`.
- OCM Services #39574**: Merged by blizz on Sep 20, 2023. Description: blizz merged 3 commits into `master` from `fix/noid/ocm-controller`.

At the bottom of the screenshot, a summary bar shows: Conversation 88, Commits 3, Checks 39, Files changed 26, and a green progress bar with +1,237 and -254.

Kudos for having merged them into the current production versions!

The “proposed” standard was tagged as v1.0.0

[1.0.0] - 2020-07-01 - Bjoern Schiessle bjoern@schuessle.org

- First official release of the Open Cloud Mesh (OCM) protocol specification, to enable federated sharing and notifications. The supported endpoints are `/shares` and `/notifications`.

An *invitation workflow* was designed, to ease discovery of external collaborators

A reference implementation was incorporated in Reva, the *Interoperability Platform of ScienceMesh*

Appropriate extensions have been developed for ownCloud and Nextcloud

Sharing capabilities were extended

The improved API was tagged as v1.1.0, ensuring backwards compatibility with v1.0 implementations

[1.1.0] - 2023-05-15 - Giuseppe Lo Presti lopresti@cern.ch

- Added a new `/invite-accepted` endpoint to support an invitation workflow in the context of the ScienceMesh.
- Officially added the `/ocm-provider` discovery endpoint, already in use by several implementations. Within this endpoint clarified which are the minimal capabilities required to

Credits to the CS3MESH collaborators for their work

New Endpoints in OCM v1.1

- **/ocm-provider**
 - A discovery endpoint, standardized following Nextcloud implementation
 - Includes an optional **capabilities** property, to expose extra capabilities on top of basic sharing
- **/ocm/invite-accepted**
 - The receiver EFSS informs the sender EFSS that an invitation was accepted
 - The sender returns the user's details, to establish mutual trust
- **/ocm/share: extended**
 - **protocol** supports now multiple types (**webdav**, **webapp**, **datatx**) and includes permissions
 - New property **sender**

This enables apps for remote users in collaborative mode

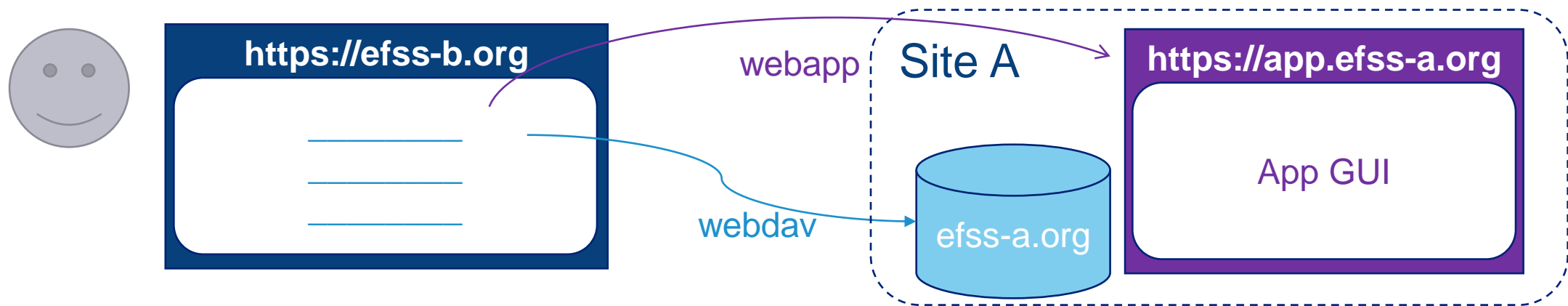
Applications over OCM shares

Model: a user at site EFSS-A shares

- A resource, accessible via WebDAV
- An application to manipulate that resource, accessible via a Web App URL

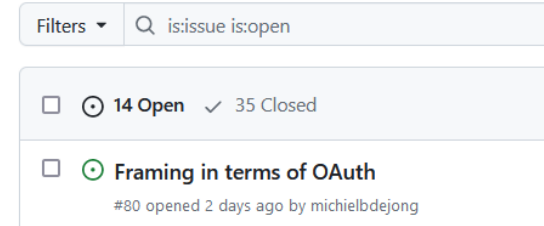
Consequence: remote users are enabled to

- Browse the remote storage from their **local EFSS**
- Access the application(s) available at the **remote EFSS**
 - **Local** applications might be enabled in read-only mode, to prevent conflicts with remote ones



Current status

- **The CS3MESH4EOSC project just ended, the momentum remains high**
 - **A funded project is currently running**, more in this campfire
 - We have a development branch with interesting proposals for a **v1.2.0**
- **Several open issues still on the table at the technical level**
 - <https://github.com/cs3org/OCM-API/issues>
 - Partly being addressed, contributions from the community more than welcome



Filters ▾ 🔍 is:issue is:open

🕒 14 Open ✓ 35 Closed

🕒 Framing in terms of OAuth
#80 opened 2 days ago by michielbdejong

What's next

OCM State of the Art 503/1-001 - Council Chamber, CERN	<i>Giuseppe Lo Presti</i> 11:15 - 11:30
Federated groups via OCM 503/1-001 - Council Chamber, CERN	<i>Tom Wezepoel</i> 11:30 - 11:35
Trusted servers and MFA with OCM 503/1-001 - Council Chamber, CERN	<i>Micke Nordin</i> 11:35 - 11:40
OCM discoverability through DNS 503/1-001 - Council Chamber, CERN	<i>Hugo Gonzalez Labrador</i> 11:40 - 11:45
Evolving the OCM test suite to ease implementations' compliance 503/1-001 - Council Chamber, CERN	<i>Mr Sandro Mesterheide</i> 11:45 - 11:50
Standardizing Open Cloud Mesh as an open standard 503/1-001 - Council Chamber, CERN	<i>Mr Michiel de Jong</i> 11:50 - 12:00
OCM panel: where do we go from here? 503/1-001 - Council Chamber, CERN	<i>Giuseppe Lo Presti et al.</i> 12:00 - 12:45

OCM Panel Discussion

Where do we go from here?