CS3 2021- Cloud Storage Synchronization and Sharing

Monday 25 January 2021 - Thursday 28 January 2021

Programme

CS3 2021 will be held online (25-29 January 2021). We want the new online format of the conference to be as much informative, collaborative and entertaining as all the previous physical editions. We will therefore favour shorter sessions with more opportunities for interactive networking. The final agenda will be compiled once we collect all the contributions.

The **main CS3 session** will be followed by two additional thematic workshops:
OCM workshop
ScienceMesh workshop

Keynote

The triangle of digitalization – sustainability and democracy within digital collaboration, Christoph Bals, Germanwatch e.V.

The presentation discusses three theses concerning the triangle of digitalization, sustainability and democracy.

First: How we design this triangle will determine to a large extent the quality of our livelihoods and of our democracy. The question is not whether digitalization plays a crucial role, but how it will play out regarding sustainability and democracy.

Second: Digitalization has the potential to be a driving force for the needed transformation of the energy, transportation, building, industry and housing sectors on the path towards greenhouse gas neutrality and circular economy (e.g. European Green Deal). But so far it is more a driver for increased emissions and the use of resources than a limiting factor.

Third: The legitimization of democracy is based on two pillars: representation and deliberation. Digitalization has a huge potential to improve both representation (without people even being physically present) and deliberation. However, currently it rarely improves representation and it rapidly undermines deliberation in society. Digitalization can be used to increase transparency of governments and businesses and to limit their power, but it can also be used as an instrument to control people and cement power of businesses and governments.

At the end, the question will be raised whether time has come to stop using naively all kinds of digitalization as if different kinds of digitalization did not create very different but decisive path dependencies determining our future.

Christoph Bals is a policy director at Germanwatch NGO. Germanwatch is dedicated to sustainable development and topics such as World Trade and Food Security, Climate Protection and Adaptation, Corporate Accountability, the Financial Sector and Sustainability as well as the Financing of Development Cooperation.

Main session

Our new reality: "tele-everything" in post-COVID-19 era... and what it means for CS3 community?

We are entering the new era where most of our daily activities will happen online... tele-working, tele-learning, ... This will almost certainly affect our community as a whole. What it means for the CS3 services and for our users? Should we adapt or re-focus our services? We invite contributions reflecting in general on this subject and participation in the campfire discussion.

Future research with European Open Science Cloud

EOSC will be the future ecosystem for European research and digital collaboration. This changing European landscape presents new opportunities and challenges for the CS3 community. This session will allow to understand the latest evolution of EOSC and to discuss how the CS3 community results could fit into EOSC and what the EOSC could mean for the CS3 community in a short and longer term.

CS3 Community Site Reports

There is a growing number of sync&share services deployed and operated in the CS3 community. This session is an opportunity to present current status and plans, user feedback as well as share operational experience: main issues and concerns for your service. This session will provide a sort-of-family-photograph and a competence map of all CS3 services.

In particular we welcome newcomers to the community to introduce themselves.

User Voice: Novel Applications, Data Science Environments & Open Data

This track is for novel applications and user scenarios which are enabled by the CS3 services with innovative data access and sharing functionality.

Many CS3 institutes are experimenting with new ways to support data science on their collaborative storage fabric. Activities such as quick-prototyping, educational and outreach tools have been quite successful.

One such example is the usage of interactive notebooks which enable collaborative data processing. Notebooks naturally become environments for data curation, data preservation, educational and outreach. The ease of access and the self-documenting feature of notebook-based environments complement and cooperate with sync and share environment.

Likewise, examples of successful production-grade data analytics environments are also available. Analysis platforms have the potential to become the aggregation point for other services, notably specialised data viewers, collaboration tools, documentation and more.

More recently direction has been emerging where CS3 services may become the fabric to implement new classes of services focusing on open-data access and data preservation.

Keywords: JupyterLab & Notebooks, FAIR, ORCID, OpenAIRE, GPUs, Spark, Analytics, DTN, FTS, Grid.

Collaborative Platforms

This track focuses on collaborative platforms and techniques to enhance sharing at the application level (Office, Groupware and Productivity). As a matter of fact more and more web-based tools are becoming available and become accessible as web-based applications within Sync&Share platforms. CS3 sites are proposing ways to host such services in a coherent way augmenting their final value, e.g. via combining Office functionality and sharing capabilities.

File Sync&Share Products

This is the presentation session for software companies developing File Sync&Share products: evolution and latest releases, planned new features and development roadmap.

Past speakers included: Dropbox, Nextcloud, Owncloud, Powerfolder, Pydio, Seafile, Syncany

Scalable Storage Backends for Cloud, HPC and Global Science

This storage track is the place for providers, advanced users and integrators of innovative storage solutions. The need of selecting and supporting effective storage solutions (notably in the multi-PB area) should not overshadow the difficulty and costs to maintain these solutions without creating long-term support nightmares. Nowadays cloud storage is required to deliver multiple functionalities within a single data repository, e.g. serving sync&share mobile access along with high-performance HPC access. Solutions from vendors and experience from the sites will be discussed in this track.

Technology & Research

Classic CS3 track presenting and discussing technical building blocks of CS3 services: technology, design, experimentation and engineering results. It includes topic like:
Interoperability: CS3APIs, OCM
Algorithms and protocols for file sync and sharing;
Sharing and metadata semantics;
Service reliability and data integrity;
Innovative desktop and mobile integration;
Monitoring and performance analysis;
New user interfaces;
APIs and command-line tools.

OCM thematic workshop

This is the follow up from last June workshop: https://indico.cern.ch/e/ocm.

Agenda:
Status of the release v.1.0.0
Testing & validation infrastructure
Extensions
Community & governance
AOB

ScienceMesh thematic workshop

This is a followup from last year track at CS3 2020: Meet CS3MESH

The CS3MESH4EOSC (https://cs3mesh4eosc.eu) is an EU-funded project aimed at expanding on the collective experience of the CS3 community and providing a sustainable framework for future technical collaboration within the CS3 community in a larger context of the European Open Science Cloud. The project develops ScienceMesh — a global collaboration service for researchers, educators, data curators and analysts based on OCM and CS3APIs. It provides an interoperable platform to easily share & deploy application and software components, while providing rich collaborative workflows. Topics:
The Science Mesh demo
Responding to the Goals of the CS3 community
Research outreach for EFSS product development
Future collaboration

Main session