CS3 2023 - Cloud Storage Synchronization and Sharing

Monday, March 6, 2023 - Wednesday, March 8, 2023

Programme

CS3 2023 will be held **in person** in magnificent Barcelona!

This is the perfect opportunity to get together after two long years of teleconferencing and on/off teleworking. Meet old colleagues and get to know new members of the CS3 community. Reconnect, inspire and get inspired, learn from each other and have some fun together, too.

The final agenda will be compiled once we collect all the contributions.

The **main CS3 session** will integrate thematic workshops and co-located meetings:
OCM workshop
ScienceMesh workshop
SIG-CISS meeting

Keynotes

Technical and scientific challenges in biomedicine; an European perspective
Prof. Alfonso Valencia
Prof. Alfonso Valencia is ICREA research Professor, Director of the Life Sciences Department of the Barcelona Supercomputing Center, and Director of the Spanish National Bioinformatics Institute INB-ELIXIR-ES. His research interest is the development of Computational Biology methods and their application to biomedical problems. Some of the computational methods he developed are considered pioneering work in areas such as biological text mining, protein coevolution, disease networks and more recently modelling cellular systems (digital twins). He participates in some of the key cancer related international consortia. In terms of community services, he is one of the initial promoters of what is now the ELIXIR infrastructure, founder of the Spanish Bioinformatics network and founder member and former president of ISCB the professional association of Bioinformaticians and the Executive Editor of the main journal in the field (Bioinformatics OUP).
Stop data sharing
Prof. Barend Mons

Barend Mons is professor in Biosemantics at the LUMC and also a board member of the Leiden Centre of Data Science. He is one of the founders of the FAIR principles for Open Science and the concept of Data Stewardship. In 2015 he was the chair of the High Level Expert Group of the European Commission on the European Open Science Cloud. he is currently the scientific director of the international office of GO FAIR, situated in the 'Poortgebouw' building of the LUMC campus.

Main session

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

Interoperable Cloud Infrastructure Stacks

Cloud infrastructure stacks are operated by many actors in the community: on-premises by research organizations and NRENs or as a hosting service by commercial providers.

Initiatives such as GEANT's Cloudy Interoperable Software Stacks (SIG-CISS) or projects such as Sovereign Cloud Stack aim at understanding common requirements to build interoperable Cloud infrastructure, including a hybrid cloud service provisioning model, orchestration, storage and EFSS services.

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.

Science Mesh Workshop - Global Platform for Scientific Collaboration

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It is about time to get to know what has been going on with the ScienceMesh, since the ScienceMesh Workshop at CS3 2022. We invite you all to attend the 3rd edition of the workshop, once again co-located at the CS3 Conference, to get to know all the details about the latest ScienceMesh developments and, more specially, how you can use the tool and add your EFSS service to this European mesh!

ScienceMesh (sciencemesh.io) is a global collaboration service for researchers, educators, data curators and analysts based on OCM (Open Cloud Mesh) and CS3APIs (Connect Storage and Application Providers).

It provides an interoperable platform to easily share & deploy application and software components, while providing rich collaborative workflows and research data lifecycle.

This workshop will be focused on the technical aspects of the ScienceMesh, namely how its built

and how you can use it or even add your software and your cloud storage solutions.

Before the summer break 2023, we will organise a follow-up event to demonstrate focused on the ScienceMesh is an important component for the EOSC (European Open Science Cloud), FAIR landscape, the ERA Policy Agenda and is fostering of European partnerships (a priority under future projects within Horizon Europe Programme). Subscribe to our newsletter to not miss any updates.

Highlights
See how you can join the Science Mesh federation
Understand how we aim to ensure long-term sustainability and
interoperability with European Open Science Cloud

Learn how to retain control of datasets while becoming FAIR
compatible and integrated with EOSC.

Use services and applications available at another site,
without a federated login, while easily and efficiently sharing and
managing data in efficient way to both research and industry
communities.

Access new software applications and sell your own software
to new target audiences, while translating them into commercial and
business applications

Get to know standardised tools that facilitate researchers
collaboration

Get to know new research communities and ESFRI
infrastructures (Environmental Studies, Photon and Neutron Science,
Humanities and Social Studies, Astrophysics and Particle Physics)

Who should attend

· Researchers

· Service Providers (also from Commercial sector)

· Software Developers

· Research Infrastructures

· Policy Makers

Science Mesh is developed by the EU-funded Horizon 2020 CS3MESH4EOSC project (https://cs3mesh4eosc.eu) which aims 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.

Interoperability protocols and APIs: thematic workshop

All things interoperability: OCM,CS3APIs, REVA, ...

This is the follow up from previous workshops.

Topics will include:
Release Status
Testing & validation infrastructure
Extensions
Community & governance
AOB

SIG-CISS Meeting

Co-located event: 10th SIG-CISS meeting

The SIG brings together those who are building/operating R&E clouds and are willing to share strategy, design, deployment, performance optimization, application integration, interoperability, security and other related information, knowledge and best practices as well as participate in joint efforts aimed at addressing needs of academic environment related to building, operating, brokering cloud services and infrastructure and ensuring their interoperability.

More information:

https://wiki.geant.org/display/CISS/SIG-CISS+Home