WLCG Open Technical Forum #3
Introduction

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WLCG OTF #3 - February 11, 2024

Welcome!

Welcome to the third WLCG Open Technical Forum (OTF#3) meeting!

The focus of this meeting is: Analysis Infrastructures, and the Open Source Program Office at CERN (OSPO).

- We will begin by considering the **security aspects** of new infrastructures and end with **experiment feedback** on Analysis Infrastructure plans, in light of the upcoming WLCG LHCC Referees review.
- There are **live notes** attached to the Indico page - please help write them!
- **This is a hybrid event:** Please raise your hand in the room and on Zoom if you wish to make a point, and please announce your name and affiliation when beginning to speak.

2:00 PM	→ 2:20 PM	**Introduction**
2:30 PM	→ 2:50 PM	**Security of Infrastructures #1**
		Speaker: Jose Carlos Luna Duran (CERN)
3:00 PM	→ 3:20 PM	**Security of Infrastructures #2**
		Speakers: Dr David Crooks (UKRI STFC), David Crooks
3:40 PM	→ 4:00 PM	**Open Source Program Office (OSPO)**
		Speaker: Giacomo Tenaglia (CERN)
4:15 PM	→ 4:45 PM	**Experiment Feedback on Analysis Facility Plans**

Today's Agenda

One of today's main focus topics is analysis infrastructures:

- We would like to put security of infrastructures in the front of everyone's attention.

  - Strongly related to the token transition
  - Current x509-based user authentication to the Grid is going away.
  - An important priority to have a plan **before** facilities are designed, rather than an afterthought!

- We will then get experiment feedback on the LHCC Referees questions (also linked from Indico) and review process.

Time	Session
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4:15 PM → 4:45 PM	**Experiment Feedback on Analysis Facility Plans**

Previous OTF Meetings

OTF#1 focused on the **token transition** timeline and **CVMFS evolution**:

- Lack of consensus about token lifetime and scope, service model impacts on data taking.
- The tape REST API is a crucial functionality that needs more discussion.
- Concern for IAM scalability and support level.
- Need for evaluation of Varnish as possible Squid replacement, deployment plan.
- Concern about scalability of CVMFS; Sharpshooter as a possible new functionality, usefulness of hot patching.

OTF#2 dealt with **storage performance**, including testing jumbo frames, defining bandwidth to storage requirements in line with experiments' needs, and concern about HDD performance evolution in particular.

- The ability to **benchmark an entire site** rather than just a CPU was and agreed need.

The Open Technical Forum - Role and Focus

The OTF is an essential component of this process: a "bottom-up approach … which welcomes the participation of all contributors to the technical evolution of the WLCG community." - *Draft of WLCG MoU Annex 3.1, shown at the July WLCG MB#319 [Indico].*

Today we will hear presentations on security & analysis infrastructures, and OSPO.

In the discussions, we are particularly interested in focusing on identifying:

- any gaps in functionality or scalability foreseen for HL-LHC?
- any lack of consensus on timelines or milestones on the roadmap?
- how can we help facilitate coordination between experiments, sites, developers and other stakeholders?

… how can WLCG TC add value?

There is additional information about WLCG Technical Coordination, including the TCB, in the backup slides, as well as general information about meetings and contact lists.

Open Technical Forum - Next Dates

- ISGC - March 17-22
  - TBD with organizers about a remote presentation
- OTF#4 @HEPiX March 31 - April 4 in Lugano
  - Being discussed with the organizers, tentatively a Tuesday session on HEPiX-related topics such as Facilities
- OTF#5 WLCG Workshop in Saclay, May 5-9
- OTF#6 @CERN Tue & Wed afternoons, June 24-25
- OTF#7 @CERN Tue & Wed afternoons, September 9-10
- OTF#8 Co-located with FTS/xrootd workshop, October 13-17
  - TBD with organiers, tentatively 3h session
- OTF#9 TBD, tentatively late November or early December

Comments or Questions?

Backup Slides
(for information)

Administrative Matters

There are 3 relevant CERN e-groups:

- **`wlcg-technical-coordinators`** (to contact Ale & James)
- **`wlcg-technical-coordination-board`** (currently with ex-officio members included only, to be populated with the membership of the TCB)
- **`wlcg-open-technical-forum`** (**open to self-subscription, please join!**)

and two new Indico categories:

- WLCG Technical Coordination Board: https://indico.cern.ch/category/18888/
- WLCG Open Technical Forum: https://indico.cern.ch/category/18889/

The GDB e-groups will eventually be archived but for now we are also using project-lcg-gdb to publicize OTF meetings.

WLCG Technical Coordination

WLCG Technical Coordination Board - Goals and Membership

- The primary goal of the TCB is of producing and socializing within the community a **Technical Roadmap** for the evolution of WLCG services and infrastructures, and follow up on its implementation.
- Some of the membership of the Board is *ex officio*. The rest of the membership will be recruited soon. We need to have a small enough board to be functional, productive, and able to build consensus, but also be open, inclusive, and regionally diverse.
- Discussion from WLCG MB #323 [Indico]:
  - We would like to know from the WLCG community if they have suggestions for TCB members.
  - We have received some and have send some nominations to the WLCG MB for their consideration and eventual approval at the next meeting on February 18th [Indico].
  - Kickoff meeting tomorrow afternoon at CERN for the *ex officio* and prospective members.

The TCB is at the service of the WLCG community

Technical Roadmap - timeline

A report on WLCG Evolution was made in November to the WLCG LHCC Referees, describing the status quo of the Data Challenges, Tokens, and in general the WLCG Evolution with the TCB and OTF.

Main comment expressed at the WLCG MB #323 [Indico]:

"Positive statement of the LHCC about the Open Technical Forum as a mechanism to build consensus on the technical roadmap. The LHCC expects some progress from the TCB in defining the structure of such roadmap by mid 2025."

Concrete milestone

Reminder of TCB members profile

- In the TCB we foresee to have:
  - "Core" members, profile here on the right,
  - "Area experts", focused on specific areas: we will have all in the same egroup, same permissions, but not all the area experts should feel obliged to follow all the TCB meetings.
- We foresee to have ~monthly meetings and will adapt as needed.

TCB Member Profiles

Call for TCB members - Influencers in Technology Evolution for Facilities, Storage, Compute, Workflow & Data Management

As a member of the WLCG Technical Coordination Board (TCB), your role is to **provide strategic guidance** and expert input based on your experience participating and/or leading R&D efforts and engaging with funding agencies. Your expertise in the technological evolution of facilities, compute and storage technologies, and data/workflow management will be key in aligning the WLCG technical roadmap with both current and future needs.

You will contribute by offering a broad perspective on the technical and resource challenges WLCG faces, **participating in the development and editing of the roadmap**, and ensuring that it reflects the most relevant and impactful R&D projects. Your ability to **influence and shape discussions** at the funding level is critical to evaluate and understand the support and resources needed and possibly available to realize the technical evolution of the WLCG, while balancing the diverse priorities of funding agencies.

Your role will help shape the long-term sustainability and success of the WLCG's technical objectives.

We are seeking colleagues with strategic vision, results-driven, and able to build consensus.

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Technical Coordination of WLCG Services and Infrastructures

Ultimately we have to deliver, agree on, and execute the Technical Roadmap.

- Format of the "chapters" of the Technical Roadmap - short, about 5 pages per service, functionality, or infrastructure.
- Each chapter driven by one or two people (e.g. TCB members, DOMA coordinators, WLCG Operations Coordinators, etc.) depending on interest or expertise.
- Common format for every chapter: We want a coherent document at the end so we need to agree on this format early in the process as well.
- Major timelines with milestones along the roadmap
- Maps can have more than one path to a destination - where are the decision points?

Future Possible Topics for the TCB & OTF

A non-exhaustive list!

- Data challenge strategic goals
- Token transition
- New storage architectures
- Analysis ecosystems (including how infrastructure will be shared with production activities)
- Networking
- Heterogeneous architectures
- HPC/Cloud/external resources integration
- Distributed computing infrastructures
- Environmental sustainability
- Data and Workflow management
- Services provided by sites, e.g. dCache (DESY), FTS (CERN)
- Onboarding new WLCG sites

Please contact us (wlcg-technical-coordinators AT cern.ch) to propose more topics and/or to propose your contributions on some of the topics.