



<http://chep2018.org/>

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# CHEP 2018

- First participation to a CHEP conference for me
- Biggest conference I have been to
  - 607 participants
  - 4 days and half long
  - 8 Tracks ( 7 in parallel)
- Very nice venue in Sofia
  - National Palace of Culture, “the largest multifunctional conference and exhibition center in Southeastern Europe”
- High quality organization
  - Just some problem with the posters area..



# My contributions – EOS talks

- T4 – Data handling : **Scaling the EOS namespace**
  - <https://indico.cern.ch/event/587955/contributions/2936873/>
  - It was part of the EOS afternoon at CHEP☺
  - Good participation and questions from the audience
- T5 – Software development: **Testing of complex, large-scale distributed storage systems: a CERN disk storage case study**
  - <https://indico.cern.ch/event/587955/contributions/2938243/>
  - Main hall, UN Style
  - Quite empty... and not so much interest from the audience



# My contributions - Poster sessions

- 2 hours poster sessions
- ~180 posters
- My Poster:
  - **“Last Mile Transfer and Ready2go” supporting the long tail of science**
    - <https://indico.cern.ch/event/587955/contributions/2936900/>
    - Moderate interest
  - Not any particular poster to mention, just 2 in my area:
    - **Estimating Time To Complete for ATLAS data transfers**
      - <https://indico.cern.ch/event/587955/contributions/2936907/>
      - Rucio estimation based on FTS and network data
    - **An open source data transfer toolkit for research data**
      - <https://indico.cern.ch/event/587955/contributions/2936885/>
      - They basically implemented a Webfts-like interface in DIRAC

# Summary - Plenaries

- Talks from the sponsor T-systems about HNSciCloud
- One plenary session dedicated to Machine Learning
  - Dedicated parallel track as well
- Reports from other experiments: Belle II, SKA, Dune
- Nice talk from Philippe Charpentier
  - LHC Computing: past, present and future
  - <https://indico.cern.ch/event/587955/contributions/3012256/attachments/1683494/2705949/CHEP2018-LHCComputing-PhC.pptx>
- **“File Transfer System (FTS): very successful generic transfer service**
  - Successful as the requirement is “simple”: transfer this file from A to B”

# Summary - Plenaries

- I believe the best plenaries were on Thursday
  - **“Blockchain for Large Scale Scientific Computing”**, by L. Gray
    - [https://indico.cern.ch/event/587955/contributions/3012566/attachments/1684718/2709901/CHEPBlockchain\\_Lindsey\\_Gray\\_12072018.pdf](https://indico.cern.ch/event/587955/contributions/3012566/attachments/1684718/2709901/CHEPBlockchain_Lindsey_Gray_12072018.pdf)
  - **“Beyond X.509: Token-based Authentication and Authorization for HEP”**, by A. Ceccanti
    - <https://indico.cern.ch/event/587955/contributions/3012583/attachments/1685421/2709996/CHEP-2018-Beyond-X.509-AC.pdf>
  - Of course the EOS talk by Andreas 😊
    - [https://indico.cern.ch/event/587955/contributions/3012718/attachments/1685472/2710106/EOS\\_CHEP\\_2018\\_v4.pdf](https://indico.cern.ch/event/587955/contributions/3012718/attachments/1685472/2710106/EOS_CHEP_2018_v4.pdf)

# Summary - T4 – Data handling

- This is the track I have attended most of the time
- Quite some talks from our group and other CERN groups (DB, DI)
- **“The ATLAS & Google "Data Ocean" Project for the HL-LHC era”**, by M. Lassnig
  - <https://indico.cern.ch/event/587955/contributions/2947395/attachments/1679191/2697081/ATL-COM-SOFT-2018-044.pdf>
  - FTS used for transferring to Google Cloud
- **“Storage Events: distributed users, federation and beyond”**, by P. Millar
  - <https://indico.cern.ch/event/587955/contributions/2936829/attachments/1685426/2710011/storage-events.pdf>
  - dCache Server-Sent Events (SSE), useful for file staging without the need of polling

# Summary - T4 – Data handling

- **“Bootstrapping a New LHC Data Transfer Ecosystem”** by B. Bockelman
  - <https://indico.cern.ch/event/587955/contributions/2936880/attachments/1682171/2702926/DataEcosystem-CHEP18.pdf>
  - Introducing HTTP TPC for HEP
- **“Capability-Based Authorization for HEP”** by B. Bockelman
  - <https://indico.cern.ch/event/587955/contributions/2936866/attachments/1683367/2705655/SciTokens-CHEP2018.pdf>
  - SciTokens for HEP replacing X509 and GSI
- **“Echo - Experiences running an erasure coded object store”** by R. Appleyard
  - [https://indico.cern.ch/event/587955/contributions/2936815/attachments/1679215/2707374/Echo\\_CHEP\\_v4.pdf](https://indico.cern.ch/event/587955/contributions/2936815/attachments/1679215/2707374/Echo_CHEP_v4.pdf)
  - In production for ATLAS and CMS, LHCb and ALICE setup ongoing



# Summary – T7 – Network and facilities

- I attended only the first session
- Again...lots of CERN talks
- **“Using Kytos SDN platform to enhance international big data transfers”** by B. Costa Leal
  - <https://indico.cern.ch/event/587955/contributions/2937937/attachments/1679291/2705599/KytosCHEP18-v4.pdf>
  - Extended gfal2-sdn to create a circuit (with QoS) before transfer starts. Ease the integration in FTS.
- **“Integrating Networking into ATLAS”** by S. McKee
  - <https://indico.cern.ch/event/587955/contributions/2937891/attachments/1678210/2695187/ATL-SOFT-SLIDE-2018-427.pdf>
  - Analytic platform for network metrics
  - Sometimes FTS does not push as they would like... already discussed in ATLAS Jamboree

# Summary – T7 – Network and facilities

- **“Integration and evaluation of QUIC and TCP-BBR in long-haul WLCG data transfers”** by R. Lopes
  - <https://indico.cern.ch/event/587955/contributions/2937942/attachments/1679644/2705403/3.pdf>
- **“IPv6 in production: its deployment and usage in WLCG”** by D. Kelsey
  - <https://indico.cern.ch/event/587955/contributions/2937932/attachments/1681869/2705229/Kelsey9jul18-chep18-v4.pdf>
  - 32% Tier2 traffic is IPV6 now
- **“CMS Site in a Box: Deploying a Tier-3 Site using Local Resources and Central Services via a Centrally Managed Server”** by C. Lundsedt
  - [https://indico.cern.ch/event/587955/contributions/2937939/attachments/1678184/2708936/Talk\\_Draft\\_final.pdf](https://indico.cern.ch/event/587955/contributions/2937939/attachments/1678184/2708936/Talk_Draft_final.pdf)

# BoF (**Birds of a feather**) sessions

- <https://docs.google.com/spreadsheets/d/12YrAeqXonSnFJ8Wd0YKWrMkBQNLIT51FJ146b91nr2A/edit#gid=0>
- ~20 informal sessions ( private or public)
- I followed the WLCG DOMA (Data Organization, Management and Access) BoF, where it has been decided to create a DOMA TPC subgroup
  - Mandate: replace gridftp protocol for bulk transfers
  - Representatives from our group

# General Thoughts

- 7 parallel tracks do not help in case you are interested in 2/3 of them
  - + we didn't spread in different tracks
- Too many contributions per track
  - Presentation time was too short...no time for discussions
- A looooooot of people from CERN..
  - You easily end up chatting among colleagues..
- I see CHEP mainly as a good networking opportunity
  - In particular with non-EU people
- Many references to our technologies EOS, FTS, DPM, Dynafed, gfal2, etc..

# Questions?

