

# Data Challenges

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# Data Challenges

- Aim: verify we can fully exploit the network bandwidth and optimize the traffic where we can
- DC have to be useful to experiments not be just demonstrators
- DC different from but overlapping with
  - Exp workflows (local and remote stage-in/out, streaming)
  - Data Carousel (tape stage-in/out & data distr T1 - T2)
  - Networking R&D
  - HPC challenges
- All use networking and eventually we will have to integrate everything
- But approach should be step by step
  - Develop the tests methodology
  - Work in parallel if we can



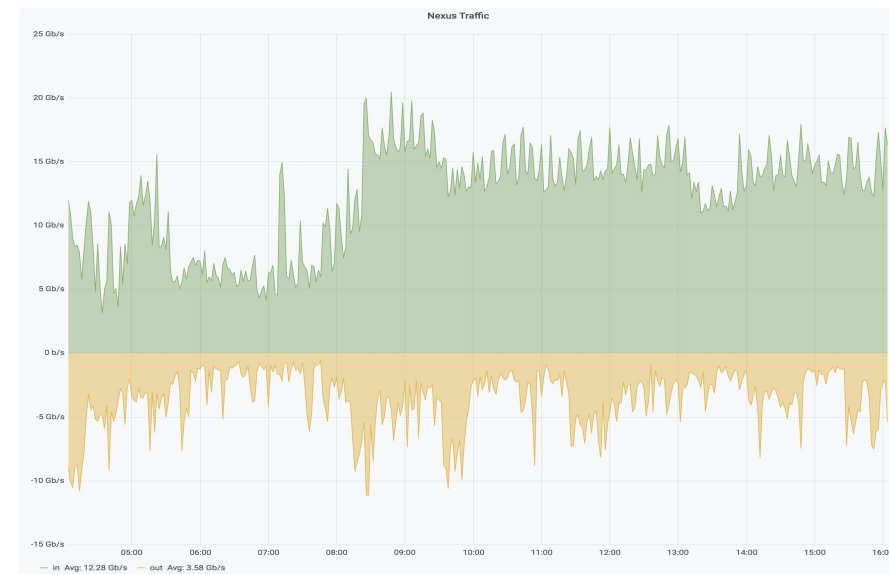
# Infrastructure

- Infrastructure will have to be reusable for further challenges
  - Challenges every couple of years
    - 10% of the target 2021, 30% in 2023, 60% in 2025 and 100% in 2027
  - Possible optimisation from networking R&D needs to be integrated in the experiments frameworks
- Can we use the experiments data management and transfer systems?
  - If a testbed is used better to be similar to production
    - Easier to integrate changes
    - Alternative system may be used for comparison
- It is easy to inject data in parallel to current activities
  - But not enough



# Monitoring

- Most important part to get right
- Do we have all the monitoring we need?
  - Do we have all the metrics we want to evaluate
- Is the aggregate WLCG transfer monitoring enough? 🤔
  - Can we integrate more information?
- Sites have network bandwidth monitoring can we collect that too?
  - perfsonar not the right tool for this
  - We need real time traffic at sites



# People

- WLCG/Common to all experiments: Rizart Dona, Riccardo Di Maria
- ATLAS: Shawn McKee, Alessandra Forti, Petr Vokac
- CMS: Brian Bockelman, Diego Davila
- LHCb: Christophe Haen
- Alice: Latchezar Betev, Maarten Litmaath
- Sites: T1s and major T2s
- Data management & transfer services: devs
- Storage: devs

Most people already participating in TPC



# Communication

- Email [wlcg-doma-tpc@cern.ch](mailto:wlcg-doma-tpc@cern.ch)
- Or chat [Mattermost channel](#)
  - Probably both
- Propose to kickstart activity with topical meeting at the next TPC meeting 3rd March
  - Meeting is now on 1st and 3rd Wednesdays



# Links

- [HL-LHC network needs and data transfer challenges](#)

