

Caching over the Network

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Caching over the Network



We have a challenge for the future: how do we deliver the capacity and capability required to do our physics at the HL-LHC scale?

To meet our storage and computing needs will be challenging and one of the tools in our toolbox is better use of our networks to relieve the storage demands we foresee. If we can incorporate effective access to remote storage as a reliable component of our infrastructure, we may be able to help meet HL-LHC requirements.

ESnet Interests and Efforts



ESnet has expressed an interest in working with us on defining tools and technologies to support science data caching within the network.

- Multiply network routes exist from A to B.
 - Some are busy while others are not during certain time of a day/week
 - **ESnet can provide 6-12 hours advance forecast of network congestion**
 - **ESnet may also be able to install cache of some kind on their network paths.**
- None of the capability exists so far
 - ESnet wants to know: can ATLAS (and CMS) utilize it, and HOW?

Networking and Caching



- Network routing
 - Test on alternative network path between CERN and SARA:
 - Thanks to Hiro for the [link](#)
- Proxy and/or cache (e.g. Xcache) on the network path

Next Steps



For this meeting, the most important thing is to plan for our involvement and next steps in a this area.

Let's discuss the details (who, what, when)....

Discussion Notes

