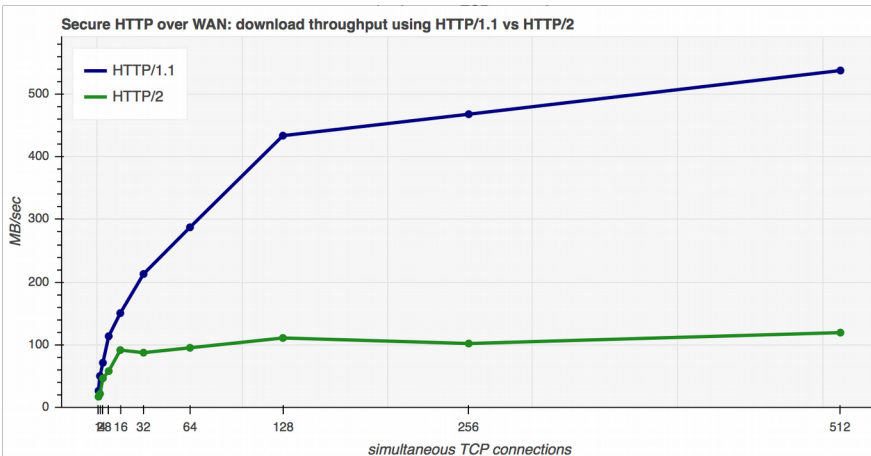
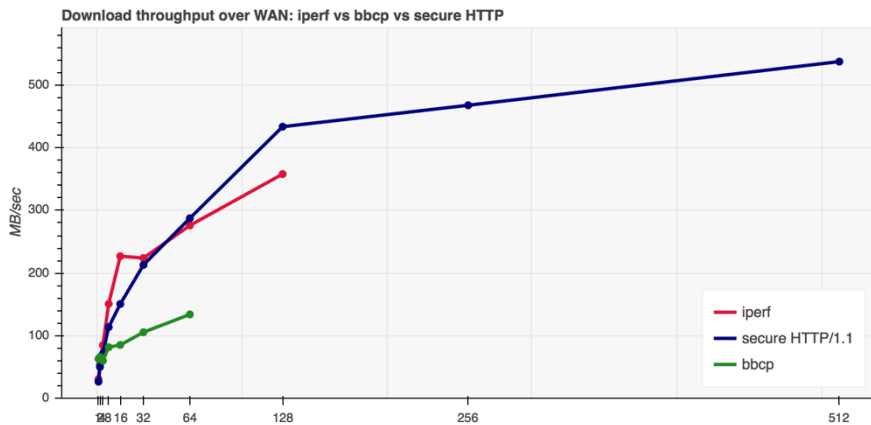
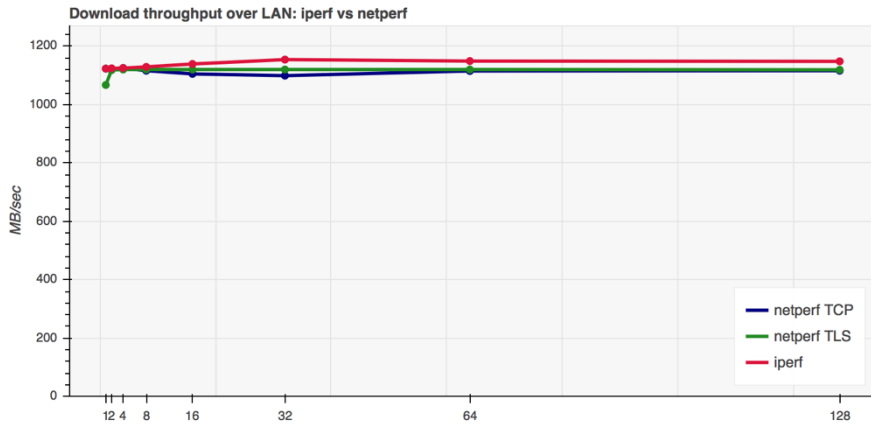


BETA – Bulk Efficient data Transport for Astroparticles physics

Projets IN2P3 R&D transverse "Calcul&Données"

- LSST
 - Will operate for 10 years from 2022
 - Will produce 15TB of images per night, 300 nights per year
 -
 - CC-IN2P3 will store an archive copy of the full raw dataset
- ➡ Massive amounts of data to transfer from NCSA to CC-IN2P3
- How to transfer such an amount of data?
 - Many available tools (Globus Online, Rucio, Phedex, FTS, Aspera, ...)
 - Current standard is GridFTP
 - Sustainability is not guaranteed up to 2032
- ➡ Need for a highly automated, efficient, bulk data transport system

- Prototype a highly automated, efficient, bulk data transport system
 - Oblivious to file contents and data format
 - Oblivious to storage technology used
 - Capacity to pre- and post-process files
 - Capacity to throttle bandwidth
 - REST API for administration purposes
 - No dedicated network needed link
- Milestones
 - Define a GridFTP / iRODS baseline
 - Investigate HTTP/2 as a candidate protocol
 - Assess the performance and overhead
 - Locally
 - At national scale (with Idris)
 - On a transatlantic link



- Work done by F. Hernandez
 - Ask him for more details
- As part of the PRACE-4IP European project
 - Analysis of a new data service to connect large scale scientific instruments with the PRACE RI
- Conclusions of this PoC
 - HTTP is a viable alternative
 - Features make it promising
 - More tests are needed
- Results available as a PRACE whitepaper

- PoC already done, not so much left to publish for a post-doc
- Change in organization chart (CEI team creation)
 - No more manpower to work on this topic
- Lower priority on this project

- Decisions taken
 - Project put on hold for 2018 (with minimal funding)
 - Think of a change of topic (likely on workflows)
 - Submit a new post-doc offer in 2019