Central PhEdEx Server Howto

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Thanks especially be unto Doug & Malina.

Central PheDex

For small T3s, having Phedex served from a central location (FNAL) can save LOTS of time – especially in the configuration step - and is nearly trivial to implement from the T3 side. Princeton, Omaha and FSU have it working; UCLA and TAMU are working on it.

Central PheDex is brought to you by the friendly folks

at Fermilab: Jon Bakken and Paul Rossman.

Following is a short howto.

Howto   Overview

- Step 1 – Make a working SE; test with lcg-cp.
- Step 2 – Email Jon Bakken   (bakkenjona@gmail.com)
- Step 3 – Reply to his requests.
- Step 4 – JB issues a load test command to see if connection is working; you wait 96 hours.
- Step 5 - You're done! Kick back with some good brew.

Howto Details

- Getting your SE going is described by Tanya Levshina in the "Storage Element Installation: BeStMan – gateway" session; follow her instructions to lcg-cp.

- As a guide, we used "lcg-cp -b -D srmv2 –verbose", but be sure to get the proper formats.

- Jon will ask for a copy of your TFC (e.g. "storage.xml") which he will stash at FNAL's Central Phedex Server site, and for your keys.

more details

- Jon will execute a load test to check if all is well (please refer to the PheDex tutorial for details on setting up a load test).

- If 5MB/s during 96 hrs is transferred, your link is up! Check the PheDex>Debug>Activity site for your transfer rates. It should look something like the next slide.

CMS PhEDEx - Transfer Rate
96 Hours from 2010-08-02 20:00 to 2010-08-06 20:00 UTC
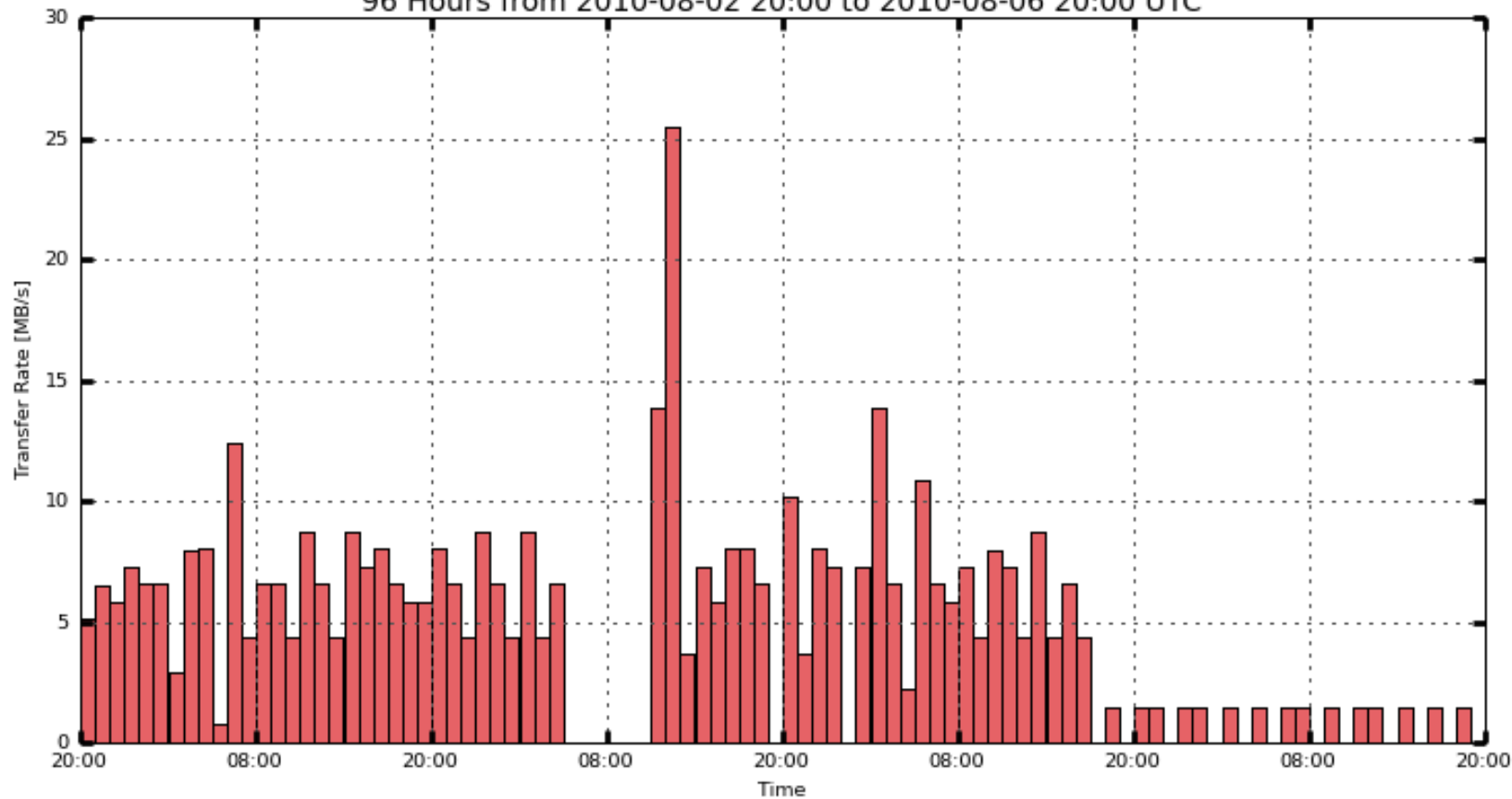
T3_US_FSU

Maximum: 25.44 MB/s, Minimum: 0.00 MB/s, Average: 4.73 MB/s, Current: 1.46 MB/s

Possible Difficulties

- *Central* Phedex means giving up some control, which can be cumbersome at times (for example, no 'hands-on' today as JB is away).

- At FSU, 8 grid-ftp jobs reliably crashed the SE. Dropping the maximum number of jobs to 4 solved this; but it's still not understood why it happens, nor why user-level jobs can crash the host. Doug has been able to reproduce the effect and thus may someday be able to understand the cause.

- If you have similar problems, email me, please:
  - kurtis.johnson@cern.ch
  - (Better still, email Doug:) - drjohn@pizero.Colorado.edu

Conclusions

- For small T3s: its easy, and it's a resource amplifier – do it!