

EOS to Castor transfers evaluation: gridftp vs xroot

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GridFTP vs Xroot

- Is it worthy to migrate from gridftp to xroot for moving data EOS -> Castor?
- Currently, Atlas and other VOs are using gridftp for transferring data EOS->Castor
- However,
 - gridftp transfers are limited by the gridftp gateway model in EOS (limiting the throughput)
- A FTS stress test is used in order to evaluate how much it affects.



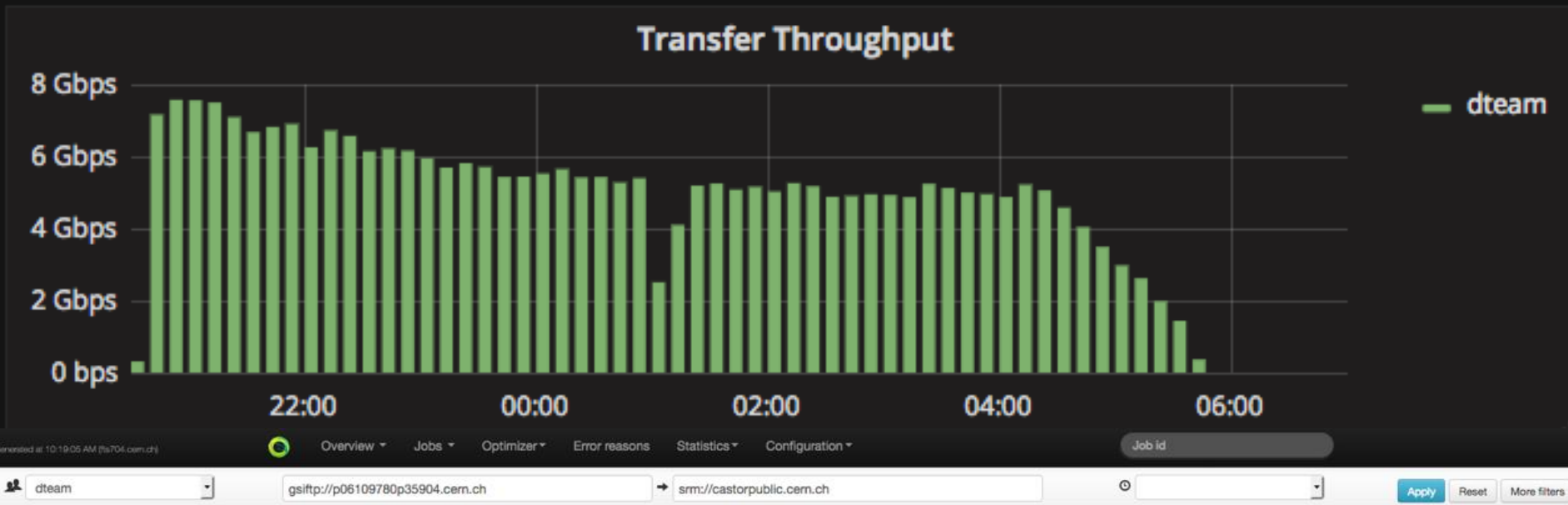
FTS
File Transfer Service

Stress testing

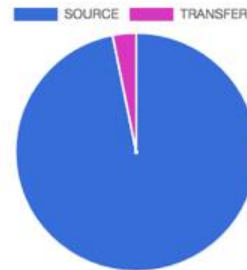
- Transfers EOS -> Castor
- 200 process
- 1M of submission per process
- 100MB filesize
- Min actives = 200
- Max actives = 500
- Protocols: gridftp and xroot
- 1 gridftp gateway dedicated



GridFTP



Errors for gsiftp://p06109780p35904.cern.ch → srm://castorpublic.cern.ch [Filter](#)



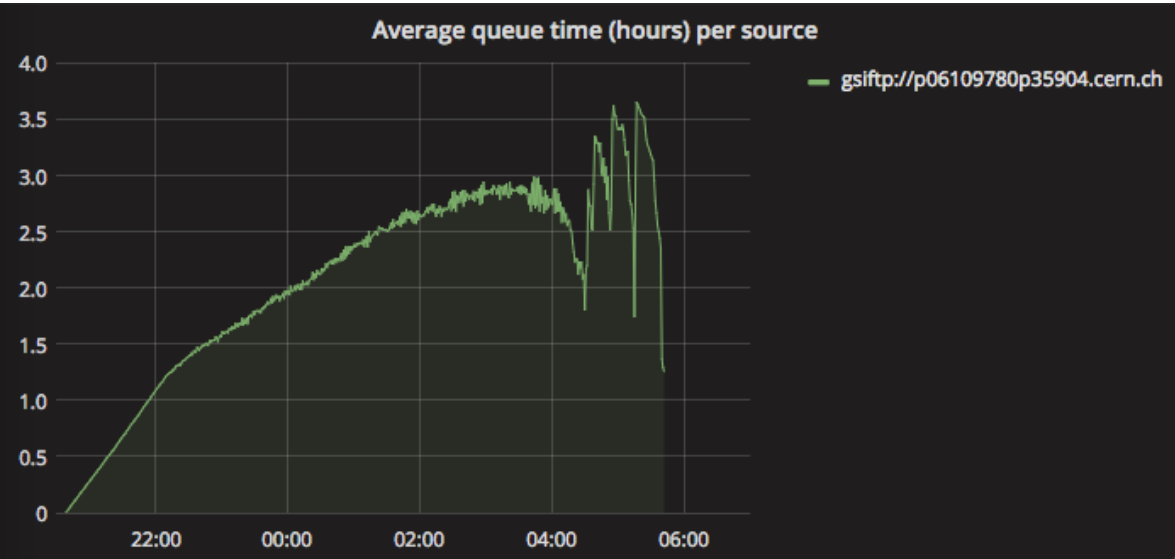
First Previous 1 Next Last

vo	Count	Reason
dteam	2523	SOURCE [70] globus_xio: Unable to connect to p06109780p35904.cern.ch:2811 globus_xio: System error in connect: Connection refused globus_xio: A system call failed: Connection refused

- The gateway was saturated

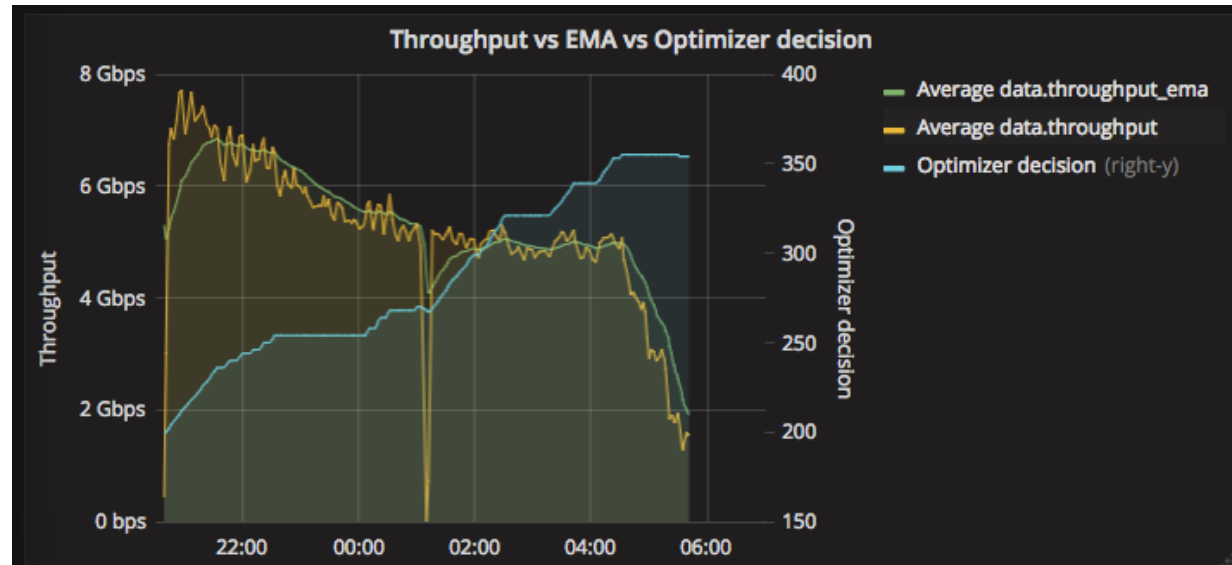


GridFTP



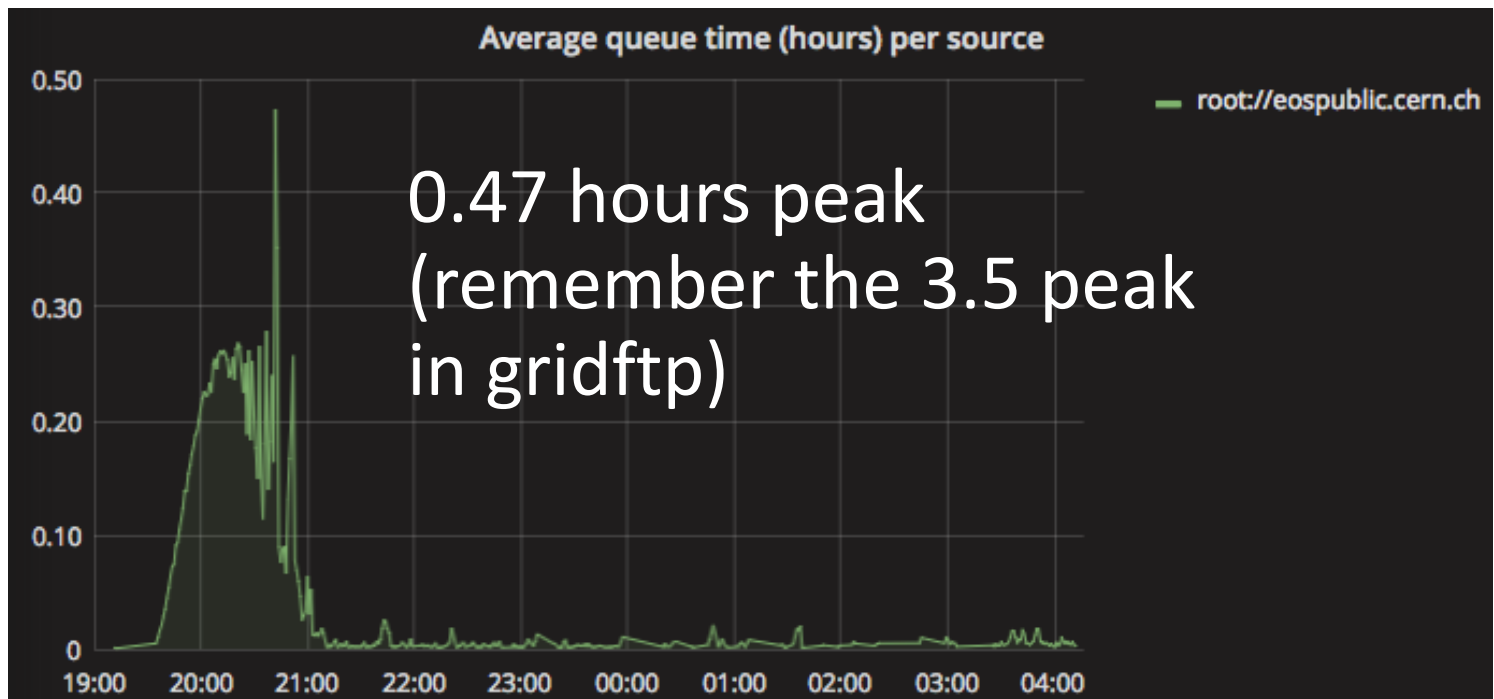
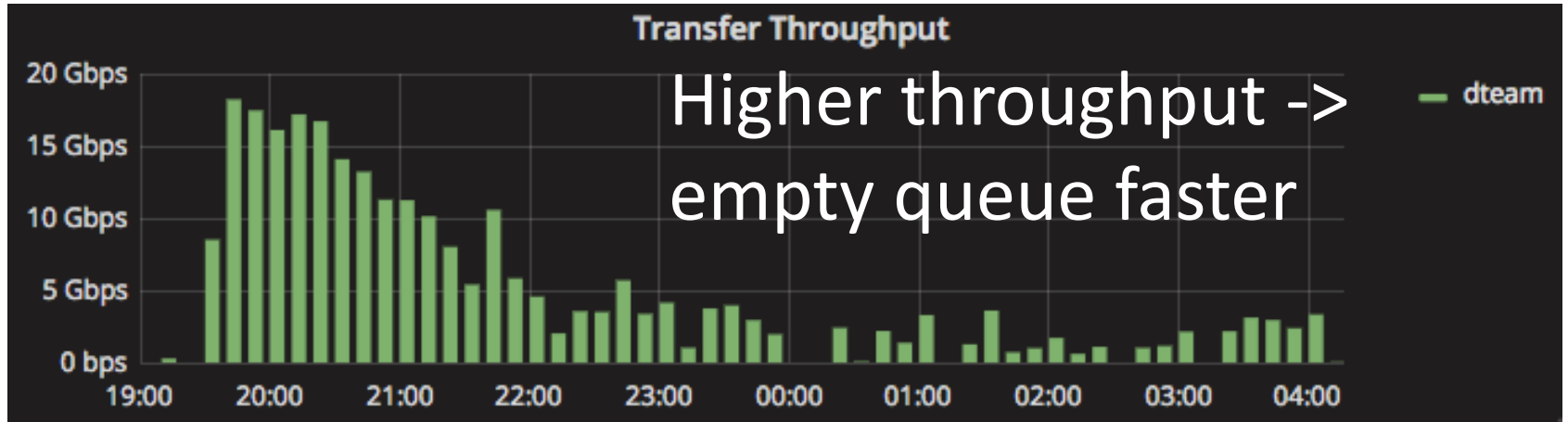
- High average queue time
- 3.5 hours peak

- FTS optimizer pushing according to the throughput





Xroot





FTS
File Transfer Service

GridFTP vs Xroot

- We could conclude that using Xroot for EOS to Castor transfers ensure:
 - better throughput
 - less risk of saturation (as the errors caused by the gridftp gateway)
 - less queue time
 - srm free! (at least for internal transfers – EOS/CTA evolution)