

LFC consolidation at CERN

T1SCM

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Introduction

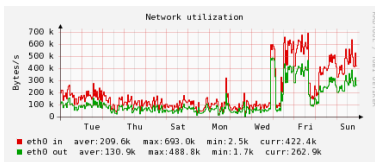
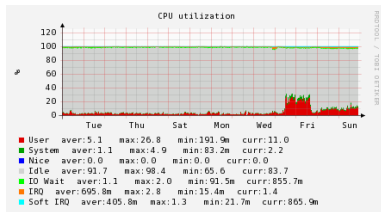
- LFC consolidation at CERN decided beginning of the year after incident on a LFC in a big T1 last year not accessible for ~ 2 weeks.
- Merging script developed by Fabrizio Furano (IT-GT-DMS).
- Many tests were done in July/August on INTR and ADCR + validation campaign of the content of the merged LFC \rightarrow ATLAS is happy with the script.

Consolidation of SARA's (NLT1) LFC

- Beginning of September, migration from the CERN LFC from LCGR to ADCR.
- In September big clean-up done on the CERN and SARA LFC (few millions of bad entries removed).
- Consolidation on W41 (~15M replicas at SARA) :
 - 2 days downtime : 1 day to drain the queues, 1 day for the migration.
 - Migration went very smoothly and faster than expected (5 vs 14 hours during test). Probably due to clean-up done by NL squad.
 - A few GUID clashes found between the 2 LFCs (228) fixed manually.

After SARA consolidation

- Increase of the CPU and network utilisation compatible with the size of the cloud after restarting Panda :



- Current setup consists in 3 nodes under load balancing. Load balancing issues that will be fixed in the next LFC client.
- IP based authentication (no X509) access via trusted host under test.

Consolidation of Taiwan's (ASGC) LFC

- This week consolidation of Taiwan LFC (5M replicas) was run :
 - Cloud blacklisted in DDM/Panda on Tuesday
 - Copy of LFC DB at CERN yesterday. Took a bit long (4 hours for 5 GB).
 - Consolidation this morning.
- Migration just finished at 14:00 and cloud put online in DDM at 15:20.

Next steps (short term)

- Going to LFC central registration for Panda with IP based authentication ASAP.
- Validation of the next LFC client that provide loadbalancing across LFC frontends is a prerequisite before further consolidations.
- New consolidation during W46 for GridKa (KIT) LFC (34M replicas).
- Need to check that the current installation can handle the load.
- Next consolidation on W48. 2 candidates : CNAF (INFN-T1) and RAL.
 - Both sites will be asked to do some clean-up before the consolidation.
 - Site will be chosen after GridKa's LFC consolidation.
- Then no new consolidation before Xmas break.

Next steps (longer term)

- January, no consolidation expected because of migration to 11g.
- Consolidation can only restart on February.
- Still 13 LFC to migrate at this point. If we assume 2 weeks between each consolidation, that's more than 6 months !

Acknowledgment

- Thanks to all people O(10) that helped (and will help for future migrations) : DBAs, site/cloud VO contact, LFC people, people from IT-ES/IT-PES.
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