

CSC & T2_FI_HIP Site Report

- Johan Guldmyr



CSC-IT CENTER FOR SCIENCE

CSC News

- Taito.csc.fi – HP & Bull Cluster
 - SL230s Gen8 and Apollo 6000 XL230a Gen9
 - 80 compute nodes with Xeon Phi 7120X or Tesla K40 from Bull
 - 982 compute nodes. Haswell & Sandy Bridge. Slurm constraints.
 - 600 Tflops without Bull nodes
- Sisu.csc.fi – Cray XC 40
 - Haswell – 09.09.2014 – first in Europe
 - 1688 TFlops
- Combined Taito & Sisu = largest HPC provider in the Nordics.

CSC News

- HP XL230a Gen9/Apollo 6000 Issues:
 - Server stops responding. Both iLO and OS. Power button to fix. Firmware might fix.
 - Continuously CPU and Memory replacements.

CSC News

- Openstack - **Csc Common Cloud Platform**
 - Scrum, 6-7 people
 - Used to deploy several Openstack instances
- Monitoring Revamp
 - Opsview-Core – deprecated.
 - Graphite/grafana, collectd

Taito-Shell

- Use slurm as an ssh interactive shell load balancer
 - Replacement of some large memory (>1TB) servers where users could run interactive jobs. Use many nodes with less memory (256GB)
 - Second slurm instance/cluster with the default FIFO scheduler
 - sshd ForceCommand that makes "ssh taito-shell.csc.fi" do:
 - `exec srun -p partition --x11 --pty -u ${SHELL} -i -l`
 - Pros: easy to add nodes, the same work dir, users are already in Taito.
 - Not perfect: Can't use "srun -M normal_slurm_cluster". Sbatch works.
 - How much to overcommit memory?

T2_FI_HIP news

- CSC – the Finnish national center for super computing is a service provider for HIP – Helsinki Institute of Physics
 - CE: 768 x Opteron – HP BL465c G5
 - SE: HP DL360 G7 + D2600 and 1x Sun Fire, several HP BL460c g5
- No hardware updates recently, some planned:
 - Run a whole CE in an Openstack – replace jade.hip.fi
 - dCache hardware renewal – likely HP SL4540
- dCache from 2.6 to 2.10. PostgreSQL from 8.4 to 9.3
- Logstash / ELK stack is great for analyzing dCache billing logs

POOLS

Term	Count	Action
csc_fi_33	15593	🔍 🗑️
csc_fi_36	11758	🔍 🗑️
csc_fi_27	11667	🔍 🗑️
csc_fi_26	11339	🔍 🗑️
csc_fi_34	11088	🔍 🗑️
csc_fi_39	10836	🔍 🗑️
csc_fi_31	9088	🔍 🗑️
csc_fi_29	7215	🔍 🗑️
csc_fi_28	6949	🔍 🗑️
csc_fi_30	6839	🔍 🗑️
Other values	109211	

IP

Term	Count	Action
10.11.3.44	15700	🔍 🗑️
144.92.181.228	9898	🔍 🗑️
144.92.181.151	9852	🔍 🗑️
144.92.181.144	9837	🔍 🗑️
144.92.181.188	9489	🔍 🗑️
144.92.181.154	9329	🔍 🗑️
144.92.181.140	9138	🔍 🗑️
144.92.180.156	8783	🔍 🗑️
144.92.180.160	7413	🔍 🗑️
10.11.3.156	7206	🔍 🗑️
Other values	331973	

ERROR CODES

Term	Count	Action
0	407274	🔍 🗑️
666	11133	🔍 🗑️
10001	8900	🔍 🗑️
451	2828	🔍 🗑️
10011	1117	🔍 🗑️
10006	725	🔍 🗑️
10004	3	🔍 🗑️
Other values	0	

TOTAL TRANSFER SIZE

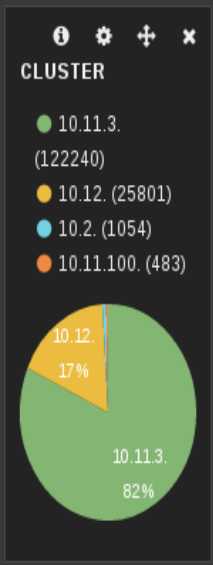
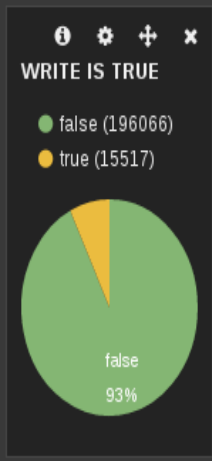
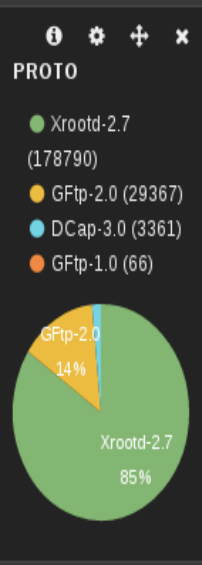
BYTES

523.67TB

TOTAL TRANSFERS

431979

Query	Value
request (actions)	449.71TB
transfer (actions)	73.96TB
remove (actions)	0.00
0 (errors)	478.03TB
666 (errors)	11.42TB
10001 (errors)	13.81TB
451 (errors)	18.55TB
10011 (errors)	1.64TB
10006 (errors)	222.66GB
10004 (errors)	7.43GB
10.11.3. (cluster)	152.13TB
10.12. (cluster)	39.27TB
10.2. (cluster)	158.48GB
10.11.100. (cluster)	0.00



dCache + logstash



Discover Visualize **Dashboard** Settings

dcache_no_groovy *

billing_top_dn

Top 5 dn.raw

Count

/DC=ch/DC=cern/OU=Organic Units/OU=Users/CN=amaltaro/CN=718748/CN=Alan Malta Rodrigues	191511
/DC=ch/DC=cern/OU=Organic Units/OU=Users/CN=fanzago/CN=610896/CN=Federica Fanzago	155470
/DC=org/DC=terena/DC=tcs/C=FI/O=University of Helsinki/CN=Tomas Linden tlinden@helsinki.fi	61349
/DC=ch/DC=cern/OU=Organic Units/OU=Users/CN=sciaba/CN=430796/CN=Andrea Sciaba	46423
/O=Grid/O=NorduGrid/OU=nbi.dk/CN=Robot: Nagios - Petter Urkedal	44461

Top 15 DNs sorted by transfer_size_gigabytes

Top 15 dn.raw

Sum of transfer_size

/DC=ch/DC=cern/OU=Organic Units/OU=Users/CN=fanzago/CN=610896/CN=Federica Fanzago	267404099585963	267TB
/DC=org/DC=terena/DC=tcs/C=FI/O=University of Helsinki/CN=Tomas Linden tlinden@helsinki.fi	119575321812372	119TB
/DC=ch/DC=cern/OU=Organic Units/OU=Users/CN=sciaba/CN=430796/CN=Andrea Sciaba	95644062219123	
/DC=ch/DC=cern/OU=Organic Units/OU=Users/CN=snandan/CN=761727/CN=Saswati Nandan	92411279113588	
/DC=ch/DC=cern/OU=Organic Units/OU=Users/CN=dsalerno/CN=738148/CN=Daniel Nicholas Salerno	91204756934860	
/DC=ch/DC=cern/OU=Organic Units/OU=Users/CN=manuel/CN=660773/CN=Manuel Franco Sevilla	60398264365336	
/C=BE/O=BEGRID/OU=VUB/OU=IIHE/CN=Nadir Daci	52579401806568	
/DC=ch/DC=cern/OU=Organic Units/OU=Users/CN=sregnard/CN=738170/CN=Simon Regnard	43961674559571	
/C=TW/O=AP/OU=GRID/CN=Amandeep Kaur Kalsi 129089	40693103748108	
/DC=ch/DC=cern/OU=Organic Units/OU=Users/CN=slehti/CN=408791/CN=Samu Lehti	35959295538584	35TB

Top 15 Hosts sorted by transfer_size

Top 15 remote_host
Sum of transfer_size

10.11.3.152	26893134532973
10.12.100.20	22734082773780
10.11.3.151	21495847229292
130.246.181.33	20852347602270
130.246.183.213	20737662173107
10.11.3.156	20399207727971
130.246.183.214	20161211168948
130.246.183.202	20146063264739
10.11.3.153	20023972831890
130.246.181.19	19981434783960
130.246.181.32	19592276032995
10.11.3.159	19296766182240
130.246.183.210	19150939678882
10.12.100.22	18946316833009
130.246.181.22	18799445142696

27~TB

Export: [Raw](#) [Formatted](#)

Questions?

- johan.guldmyr@csc.fi