

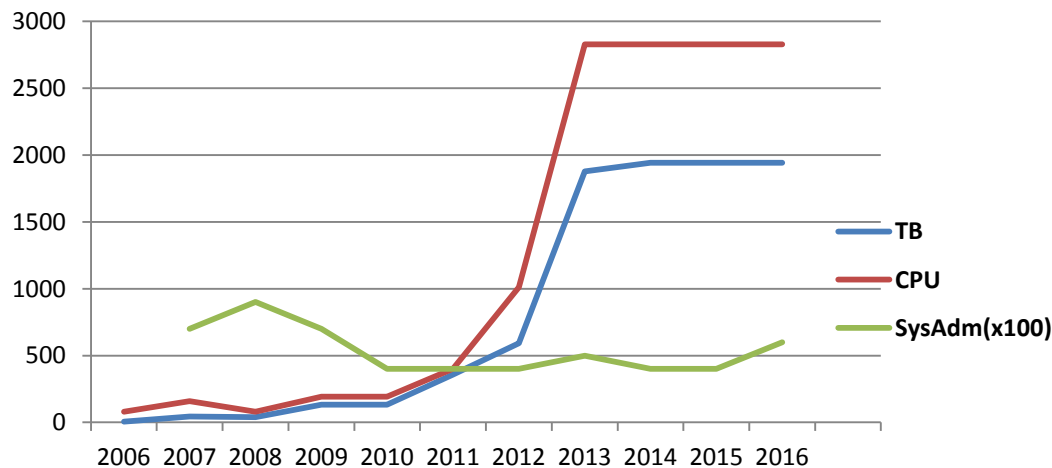


Tier-2 RU-Protvino-IHEP site readiness for the LHC run in
2016
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History

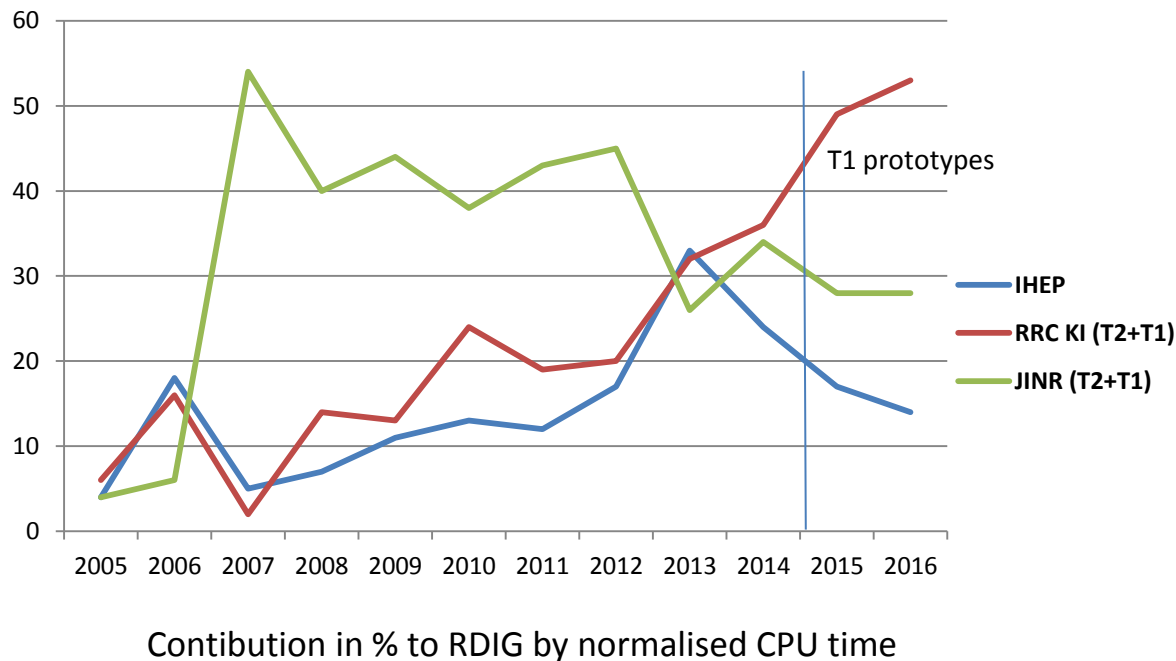
- In WLCG since 2003;
- One of eight sites former members of RDIG;
- Supports: Atlas, Alice, CMS, LHCb;



growth of the IHEP grid resources by year in TB and CPU

Current status

- 2828 CPU, 2439 HEP-SPEC06;
- 1942 TB: Atlas 1185, CMS 395, Alice 297, LHCb 65;
- 2x10Gb/s Internet channels
(LHCONE shared with RDIG 10Gb/s);
- Manpower – 5 people;
- one of three big grid-sites in Russia:



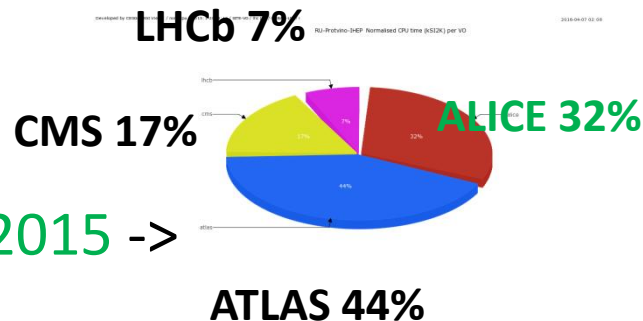
Contribution in % to RDIG ALICE by normalized CPU time

	IHEP	RRC KI	JINR	ITEP	ru-PNPI	RU-SPbSU	Ru-Troitsk-INR-LCG
2011	9	35	35	5	7	4	3
2012	10	38	36	5	6	3	3
2013	38	27	23	3	5	4	1
2014	31	39	20	2	3	3	1
2015	16	62	13	3	2	2	1

Current fairshare setup:

- ATLAS 52%
- CMS 30%
- ALICE 12%
- LHCb 6%

Real usage for 2015 ->

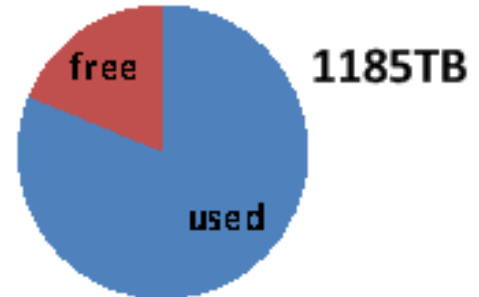


IHEP site in WLCG

24396 HEP-SPEC06
2828 CPU (2GB per CPU, HT on)



SE ATLAS



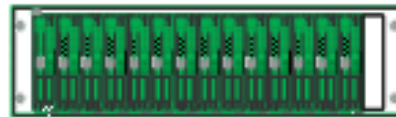
WN's



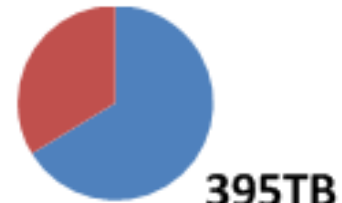
Site BDII



Mon APEL



SE CMS



VO BOX
CMS



CE



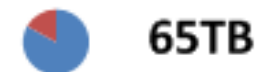
VO BOX
Alice

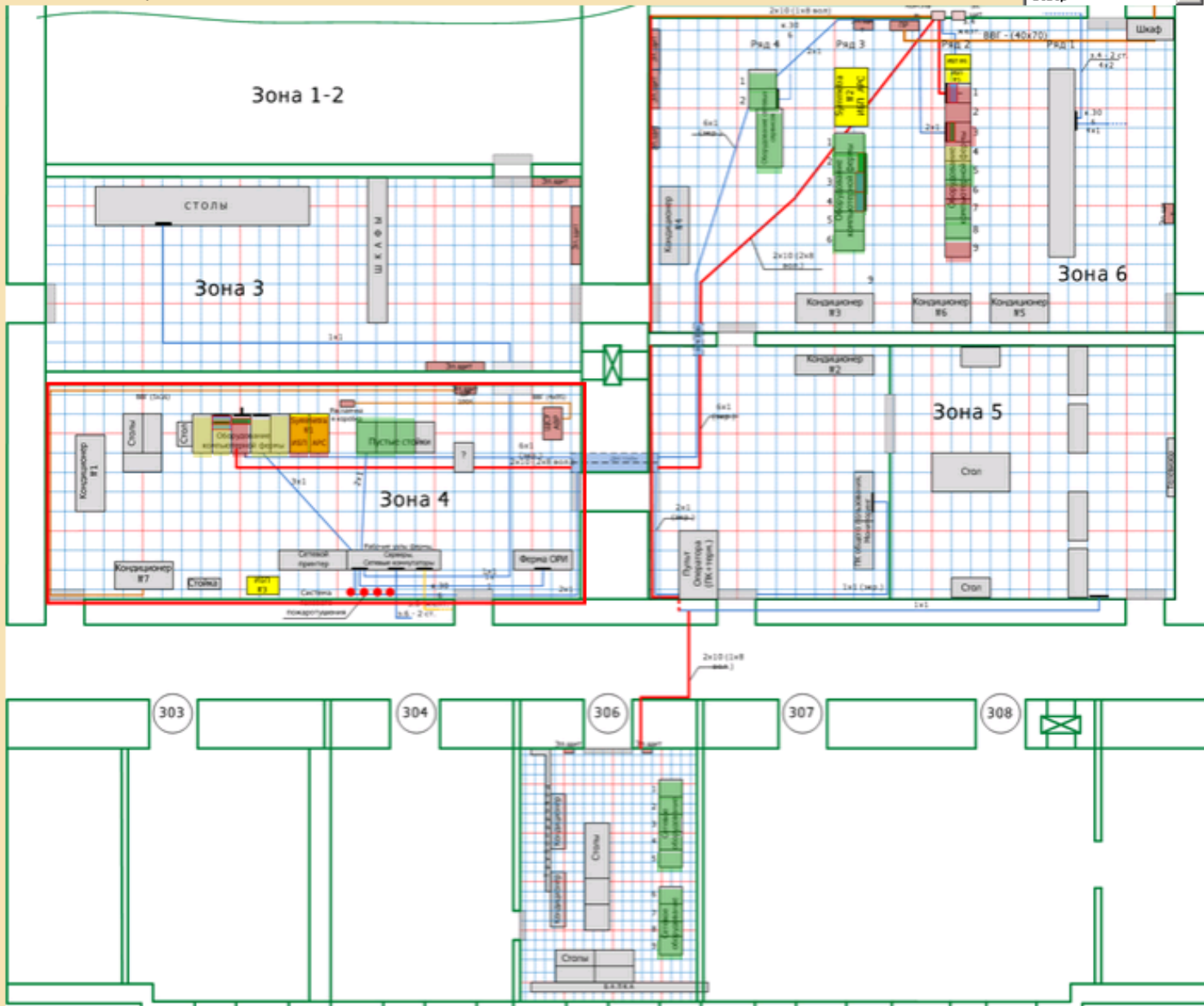


SE Alice



SE LHCb





Preparations for LHC RUN3 2016

- IHEP data center modernization to renew cooling capacities; **V**
- Manpower increasing; **V**
- System and middleware software upgrade; **V**
- Works focused in supporting current infrastructure: availability, reliability, efficiency; **V**
- External network modernisation; **V**

Some tips after upgrade xrootd

- Very easy build on debian

```
./xrd3-installer --install --prefix /opt/xrootd-4.2.3/ -  
-compiledir /home/xrootd/tmp-4.2.3/ --noclean -  
-version 4.2.3
```

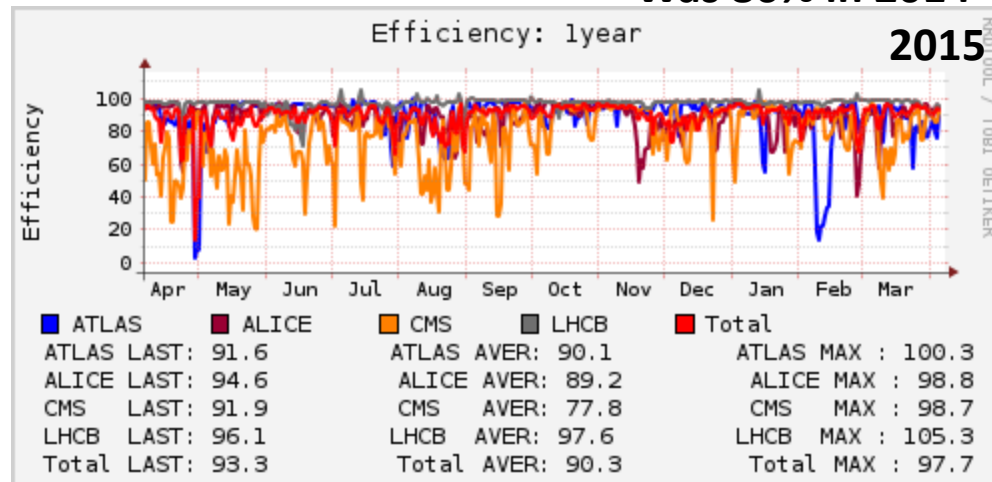
- Installed on Debian Wheezy and Jessie works without crashes! (3.2.3 crushed)
- 4.2.3 allowed to efficiently setup dual network configuration (all traffic now goes through internal cluster network)

Future plans 2016

CPU&DISC increase 0

- Better integration to the LHCONE network (now without CERN);
- System software upgrade (next long term support Debian);
- Works focused in supporting current infrastructure: availability, reliability, efficiency;

ALICE 89% for 2015-2016!
Was 86% in 2014-



Questions for Alice

- What is the future plans for xrootd storage?
- We use Debian Linux will the future xrootd storage support it?
- Is Alice going to use Multicore?
- Is Alice going to use GPU, XenonPhi?
- Migration to centos 7 on WNs and VOBOX when?
- Memory 4GB per job when?