

Operations in Russian Data Intensive Grid

Andrey Zarochentsev

SPbSU, St. Petersburg

Gleb Stiforov

JINR, Dubna

ALICE T1/T2 workshop in Tsukuba, **Japan**, 3-7 march 2014

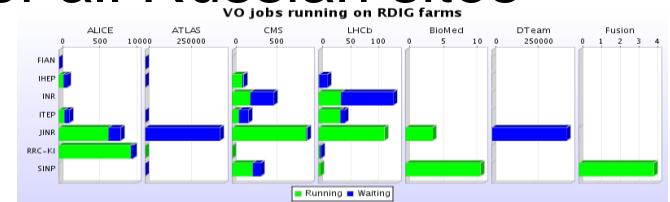
Structure of Russian sites 2013

8 Tier2 sites by 8 institutes of RDIG, involved into ALICE activity:

IHEP , JINR, RRC-KI, ITEP, Troitsk, PNPI, SPbSU

+ MEPHI

Services for all Russian sites



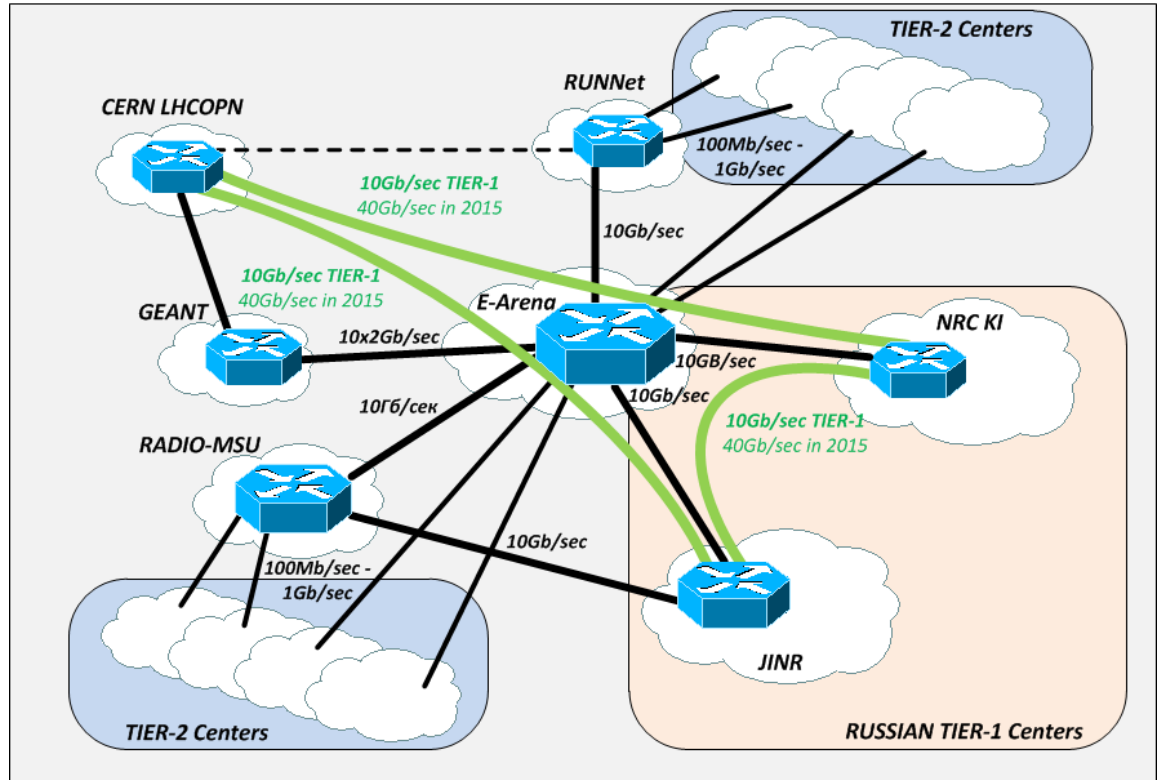
RDIG Russian Data Intensive Grid

home | help(en russian) | You are logged in as zar (logout)

Supporter Options	Update Ticket								
Ticket Options <ul style="list-style-type: none">Create TicketMy Tickets (0)My Groups' Tickets (5)Unassigned Tickets (2)Recent Tickets (7)Search For Ticket Ticket # <input type="text"/> _get_	Ticket #02593 GOU8/101480 Create printable version Ticket Opened: February 22, 2014, 10:50 pm Last Update: February 22, 2014, 10:50 pm GOU8 internal diary Attachments:								
Supporter Options <ul style="list-style-type: none">Edit ProfileView Groups	Supporter info <table border="1"><tr><td>Supporter Group:</td><td>RCC Russia</td><td>supporter:</td><td>support_pool</td></tr><tr><td>Ticket Priority:</td><td>urgent</td><td>Ticket Status:</td><td>new</td></tr></table>	Supporter Group:	RCC Russia	supporter:	support_pool	Ticket Priority:	urgent	Ticket Status:	new
Supporter Group:	RCC Russia	supporter:	support_pool						
Ticket Priority:	urgent	Ticket Status:	new						

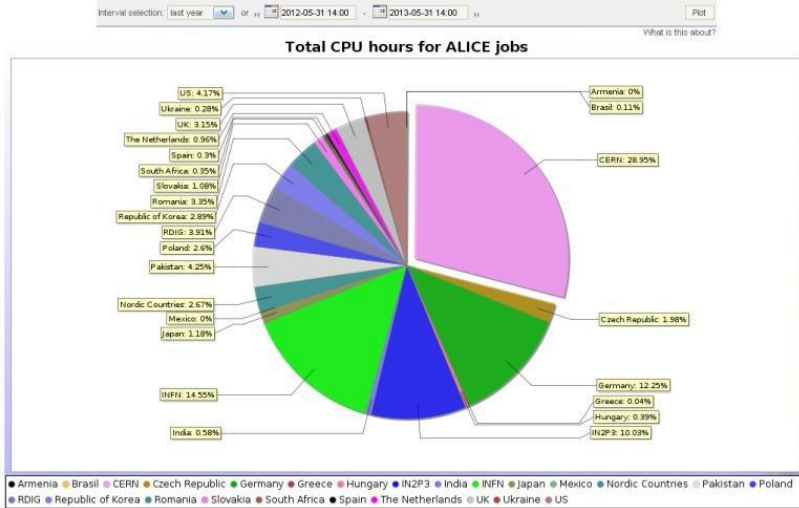
Network Structure 2013

All sites,
(except SPbSU),
worked via
one provider
to GEANT -
via E-ARENA

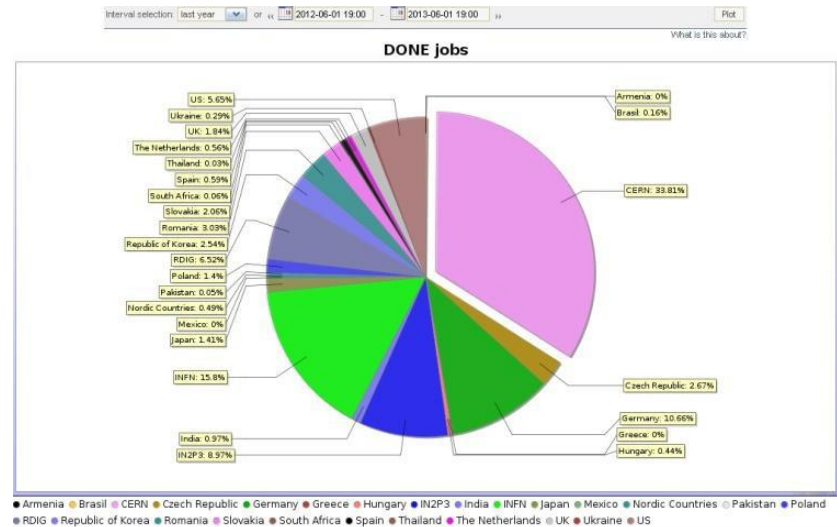


Results of Russian sites on 1 June 2013

(workshop in Lion)



Resources usage 3,91%
Done jobs 6.5%

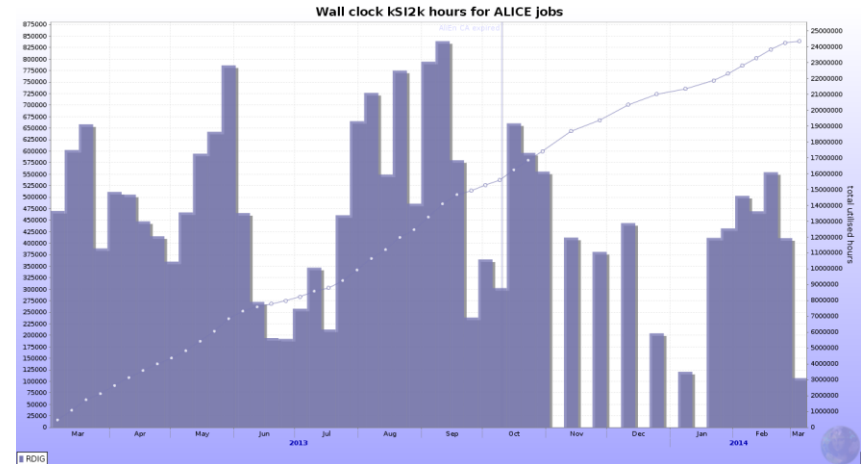
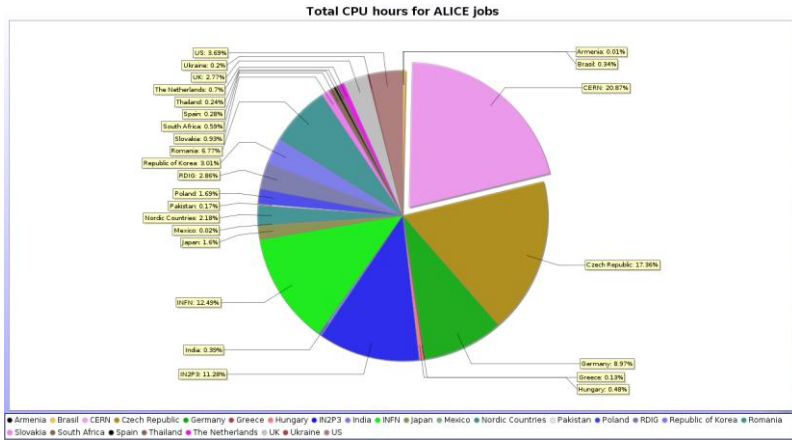


Changes in 2013!!!

In the Autumn of 2013 E-Arena terminated connection of Russian institutes with GEANT.

Sites were forced to create new network infrastructure .

Some loss of production happend as result



01/06/2013-01/01/2014 usage 2,86%

New Structure of Russian T2 sites

2014

Institutes

4 sites are unified to Regional Research Center Kurchatov Ints. (KI):

RRC-KI, IHEP, ITEP, PNPI

3 independent Russian sites:

SPbSU, Troitsk, MEPHI

International site:

JINR

Services for all russian sites - ok

The screenshot shows the RDIG support ticket interface. At the top, it says "RDIG Russian Data Intensive Grid". Below that, there are sections for "Supporter Options" (Create Ticket, My Tickets (0), My Group's Tickets (8), Unassigned Tickets (2), Recent Tickets (7), Search For Ticket) and "Supporter Info" (Edit Profile, View Groups). The main content area shows "Update Ticket" for ticket #02093 GOU5101490, with details like "Ticket Opened: February 22, 2014, 10:50 pm" and "Last Update: February 22, 2014, 10:50 pm". There are also fields for "Supporter Group" (ROC Russia), "supporter" (support_pool), "Ticket Priority" (urgent), and "Ticket Status" (new).



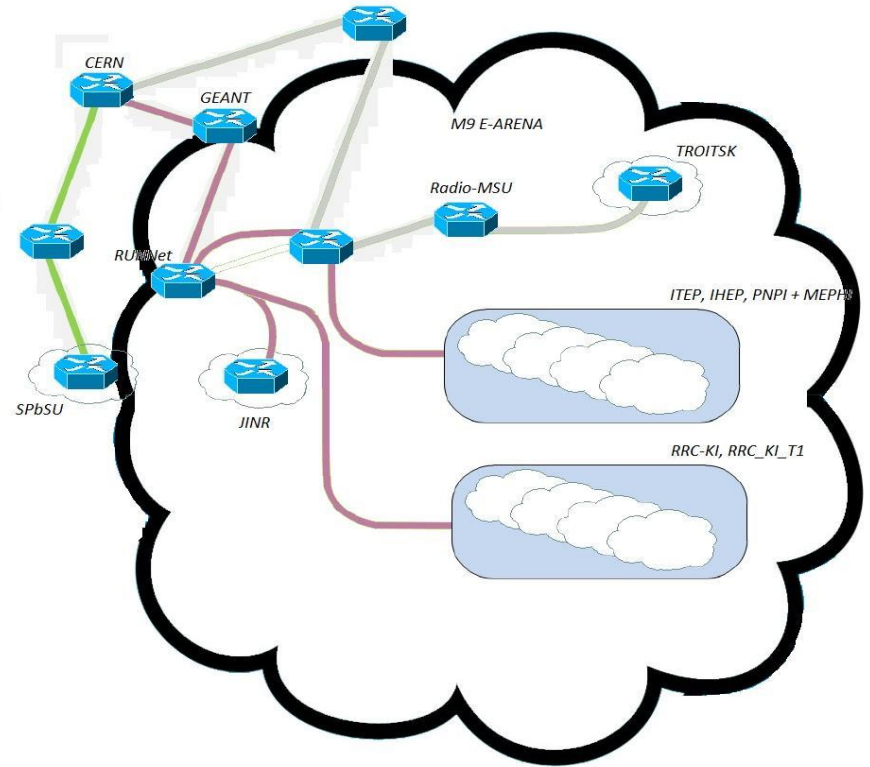
URL	Status	Message	Time	Priority	Details
ing web PWS-Supplier-Apps	OK	02-25-2014 08:58:18	884 18h 18m 54s	1/0	v033 OK: 2.4.0-1
ing web gencat-CA-Admin-Apps	OK	02-25-2014 09:11:05	5at 19h 41m 48s	1/0	OK: success
ing web gencat-CA-Admin-Apps	OK	02-25-2014 09:11:05	5at 19h 36m 48s	1/0	OK: success
ing web gencat-CA-Admin-Apps	OK	02-25-2014 09:39:33	884 18h 18m 25s	1/0	v033 OK: success
ing web gencat-CA-Admin-Apps	OK	02-25-2014 09:40:16	406 18h 18m 55s	1/4	OK: success=0, warning=0
ing web gencat-CA-Admin-Apps	OK	02-25-2014 09:49:59	104 18h 30m 52s	1/4	OK: success=0, warning=1
ing web gencat-CA-Admin-Apps	OK	02-25-2014 09:39:57	154 18h 18m 4s	1/4	LDAP OK - 0.092 seconds response time
ing web gencat-CA-Admin-Apps	OK	02-25-2014 09:49:26	164 18h 1m 26s	1/4	OK: success=0, warning=0
ing web gencat-CA-Admin-Apps	OK	02-25-2014 09:50:04	734 22h 46m 49s	1/4	OK: success=0, warning=1
ing web gencat-CA-Admin-Apps	OK	02-25-2014 09:50:00	854 22h 46m 5s	1/4	OK - error 0, warning 0, info 9
ing web gencat-CA-Admin-Apps	OK	02-25-2014 09:39:57	854 22h 46m 5s	1/4	LDAP OK - 0.077 seconds response time
ing web gencat-CA-Admin-Apps	OK	02-25-2014 09:49:37	924 2h 46m 50s	1/0	HTTP OK: gencat/ru/CA/DEF OK - The official version is 1.95. Using AAAACertificateServices to get CA distribution version. CA distribution is correctly installed.
ing web gencat-CA-Admin-Apps	OK	02-25-2014 07:51:54	124 22h 46m 49s	1/0	LDAP LIFETIME OK - Certificate will expire in 377.27 days (Mar 9 09:30:00 2015 GMT)
ing web gencat-CA-Admin-Apps	OK	02-25-2014 05:54:04	834 14h 46m 3s	1/0	goc-accounting-grid-support.ac.uk: OK (last published 5 days ago 2014-02-24)
ing web gencat-CA-Admin-Apps	OK	02-25-2014 03:57:19	834 14h 46m 7s	1/0	goc-accounting-grid-support.ac.uk: OK (Minor discrepancy in event numbers)

Network Structure in 2014

Russian sites have
different paths to CERN:

- (1) some via GEANT
- (2) some sites - without
GEANT

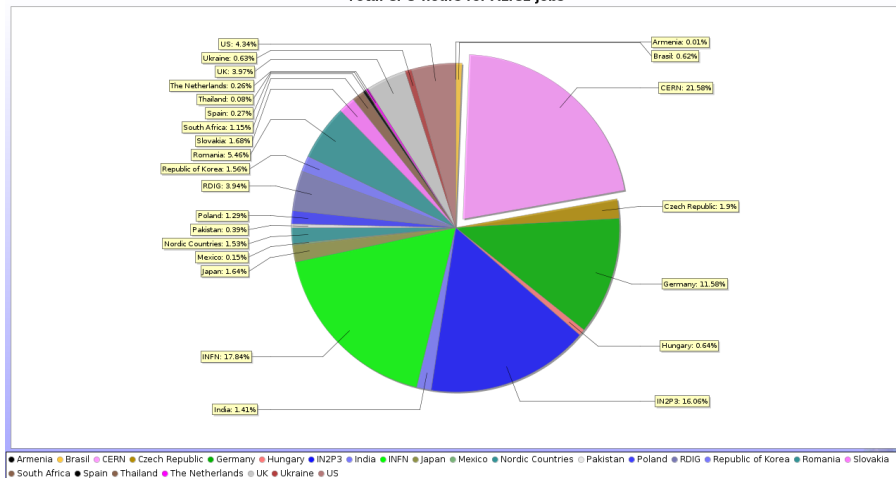
All sites have local
connections with each
other



First Results in new structure

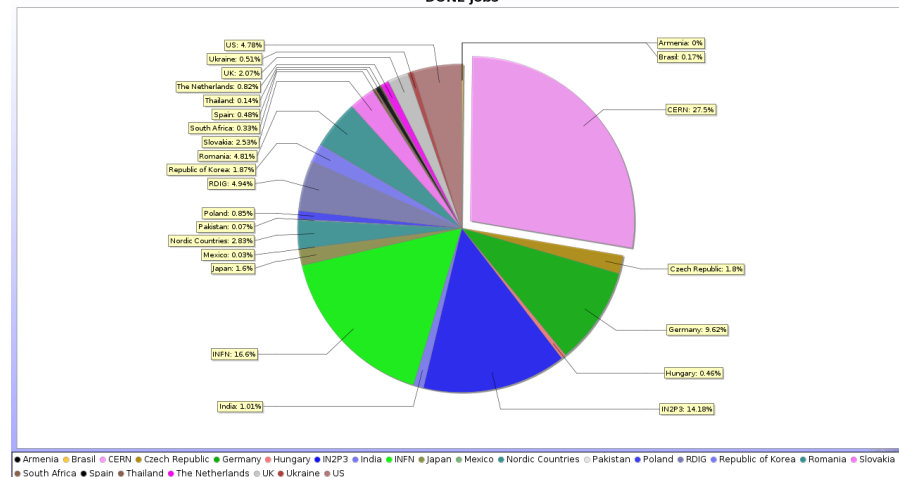
result from the last month

Total CPU hours for ALICE jobs



Resources
usage 3,94%
Done jobs 4,94%

DONE jobs



Resources of Russian sites 2013 (CPU)

Site name	Resource (CPU)	HEP-SPEC2006/slot	HEPSPEC2006/VO	SE (TB)
SPbSU	128	10,13	648,32	43
PNPI	224	10,8	604,8	40
JINR	2400	10,76	6456	350
RRC-KI	1272	11,81	3755,58	339
Troitsk	114	9,59	273,315	95
ITEP	180	10,26	461,7	140
IHEP	2828	10,33	7303,31	270
SUM	7146		19503,03 (106,8%)	1238 (95,2 %)
need by rebus			18256	1301

New resources of Russian sites 2014

Requested by REBUS (<http://wlcg-rebus.cern.ch/apps/pledges/resources/>):
(T2 only) DISK = 1645 TB , CE = 20467 HEPSPEC2006

information on 28 February 2014 year:

SPbSU: + 20 TB (old server)+ 66 TB (New), +96 Cores (new) (11.53 HS2006)

MEPHI: + 40 TB + 112 Cores (10.41 HS2006)

JINR: +0

Troitsk: +0

RRC-KIAE (ITEP only): +0

Sum: DISK=1238+ 126=**1364TB (82 %)** ,

CE~19503+1107+1166 =**21775 HEPSPEC2006 (106 %)**

Alice requirements to Russian sites on middleware: all ok in 2014.

Site name	cvmfs version	OS version	EMI (UMD) version	xrootd version
SPbSU	2.1.15	6.4	2	v3.2.6
PNPI	2.1.15	6.5	2	v3.3.4 (rpm)
JINR	2.1.15	6.5	3	v3.3.4
RRC-KI	2.1.15	5.9	2	20100510-1509_dbg
Troitsk	2.1.15	6.4	2	20100510-1509_dbg
ITEP	2.1.15	6.5	2	v3.2.6
IHEP	2.1.15	6.4	3	v3.2.4
MEPHI	2.1.15	6.5	3	-----

Questions from site admins:

1) Xrootd from RPM - instruction?

We have the experience with installation of xrootd from rpm (PNPI) from EOS repository, but eos-apmon is not working for xrootd. We created a new package, but may be somebody has a normal package??

2) Migration of xrootd to EOS (with saved data)?

Some sites think about migration to EOS , but we have no instruction how to save data.

3) Future alice computing (network) model. What is more important: the internal connection or relationship with CERN provided for each individual site?

What is more important – high connection to CERN (or GEANT) or high interconnections between sites in one group (maybe in one cloud)?

Additional computing activity for ALICE:

1) Proof cluster at JINR - JRAF

Master PC

8 cores with RAM = 32Gb

Slaves PCs

48 cores summary.

Disk space for data is equal **14.13TB**

2) Setting cloudstack for mCVM at SPbSU

Patching cloudstack for work EC2-API through ssl,
running test tasks, etc.

Conclusions

- 1) Change of Structure of Russian sites and network
- 2) ALICE requirements to RDIG in 2013 for middleware are ok
- 3) Russian pledges for ALICE for 2013 are satisfied 107% for CPU and 95% for SE.
- 4) We expect to be ok in 2014 for SE.....
- 5) Questions from site admins - it would be nice to discuss here...

Thank for support to administrators of Russian Tier-2 sites:

**IHEP V.Kotlyar, JINR V.Mitsyn,
RRC-KI E. Ryabinkin, ITEP Y.Lyublev,
PNPI A.Kiryanov, MEPHI S. Smirnov,
Troitsk L.Stepanova**

Thank you!