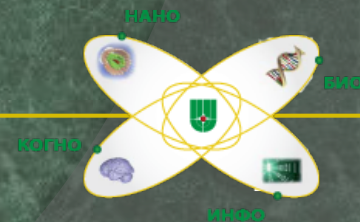




- 1 - Statistical information about our resource centers;
- 2 - Basic infrastructure of the Tier-1 & 2 centers;
- 3 - Some words about the future.



# Tier-1&2 at Kurchatov Institute for the LHC experiments. Current status.



## RRC-KI-T1

Computing array core / HEPSP06  
2160 / 22700

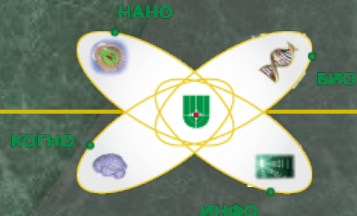
Disk Storage System (DSS)	Tape Storage System (TSS)
2600 TB	2000 TB



## RRC-KI

Computing array core / HEPSP06  
1052 / 12540

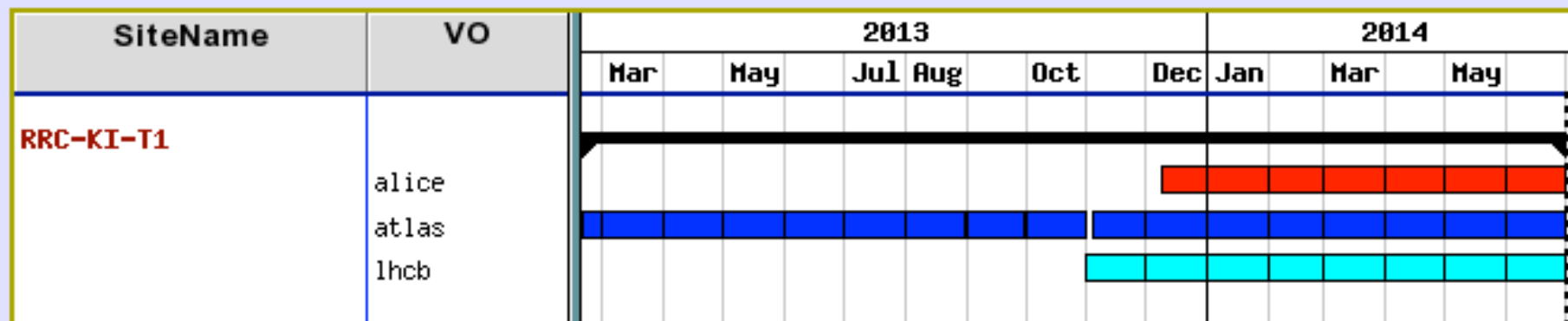
DSS  
636 TB



# Usage statistics of resources of Tier-1 (RRC-KI-T1) for LHC experiments.



This chart shows a summary of the accounting records for this site.  
The records are organised according to VO (only information about LHC VOs is returned).

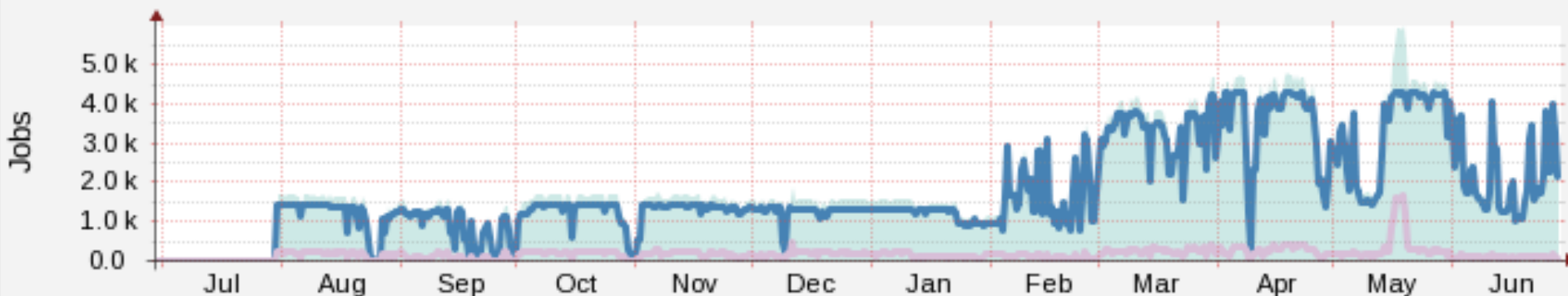


today

(C) CESGA 'EGI View': / normcpu / 2013:2-2014:6 / SITE-VO / lhc (x) / GRBAR-LIN / i

2014-06-30 10:22 UTC

Job Number (Site: RRC-KI-T1)



TotalJobs	NOW: 1.87k	MAX: 5.97k	AVG: 1.91k
RunningJobs	NOW: 1.79k	MAX: 4.31k	AVG: 1.74k
WaitingJobs	NOW: 83.89	MAX: 1.67k	AVG: 173.01

# Usage statistics of resources of Tier-2 (RRC-KI) for LHC experiments



This chart shows a summary of the accounting records for this site. The records are organised according to VO (only information about LHC VOs is returned).

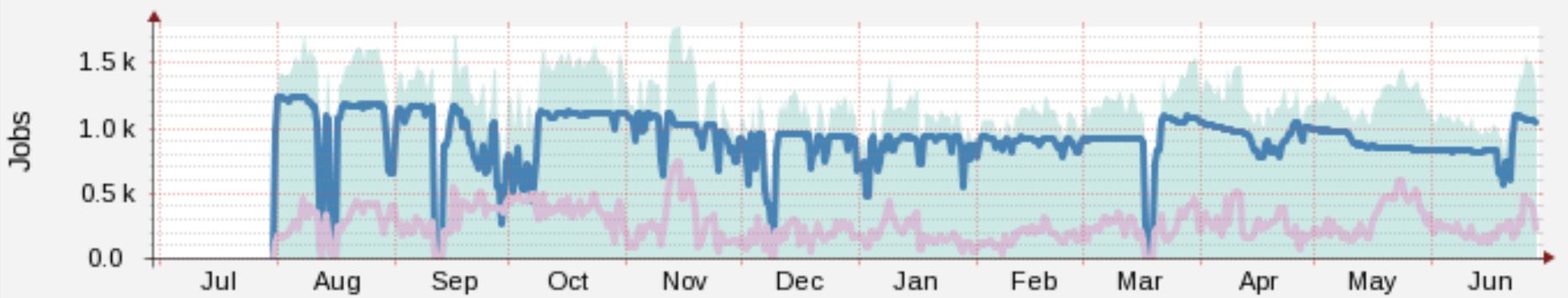
SiteName	VO	2006	2007	2008	2009	2010	2011	2012	2013
RRC-KI	alice	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]
	atlas	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]
	cms	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]
	lhcb	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]

today

(C) CESGA 'EGI View': / njobs / 2004:1-2014:6 / SITE-VO / lhc (x) / GRBAR-LIN / i

2014-07-01 11:28 UTC

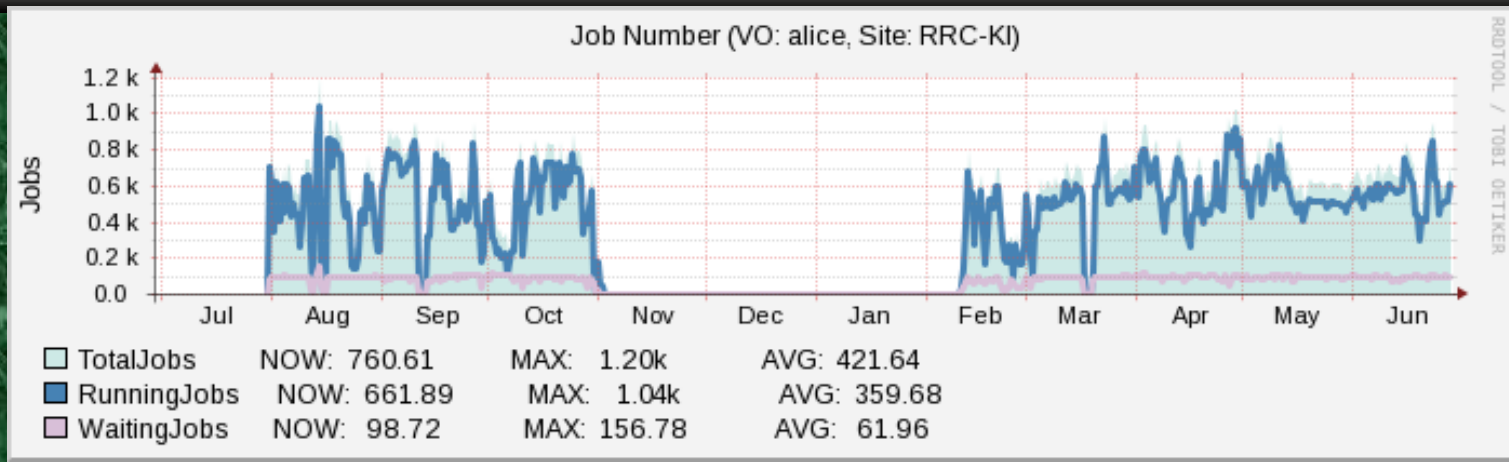
Job Number (Site: RRC-KI)



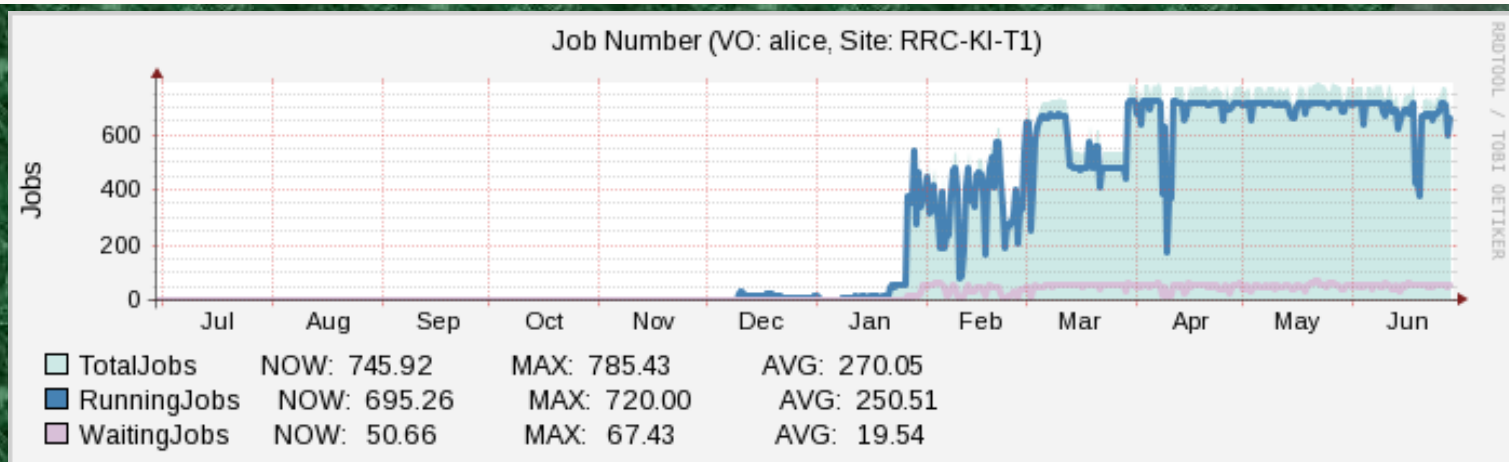
□ TotalJobs	NOW: 1.24k	MAX: 1.77k	AVG: 1.18k
■ RunningJobs	NOW: 1.03k	MAX: 1.24k	AVG: 914.57
■ WaitingJobs	NOW: 213.57	MAX: 738.08	AVG: 260.95

PROTOCOL / TORI OETIKER

# Usage statistics of resources of centers for VO-ALICE.



Name	Status	Size	Used	Free	Usage	No of files	Type	ADD test
ALICE::RRC_KI_T1::EOS	OK	150 TB	23.6%	114.6 TB	35.4 TB	764.7 K	FILE	OK



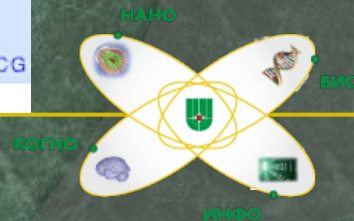
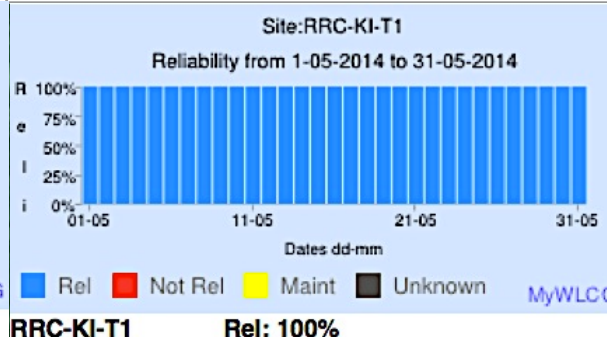
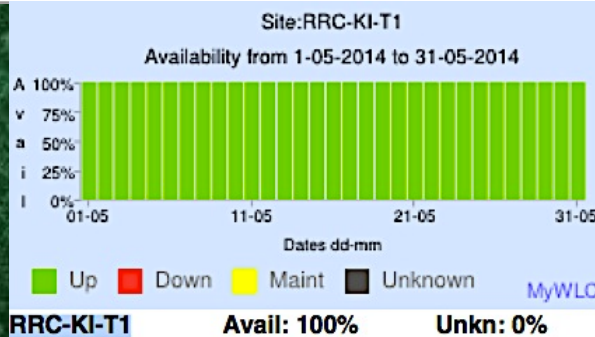
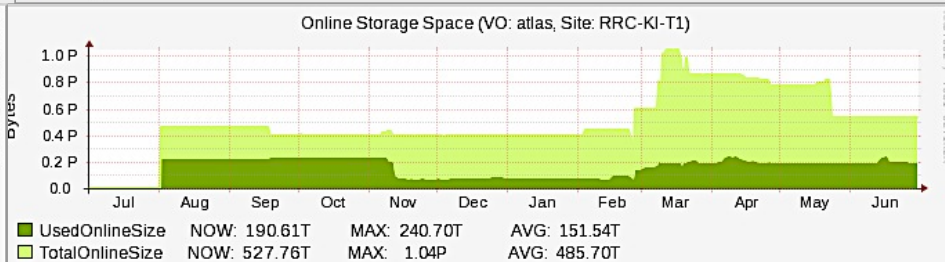
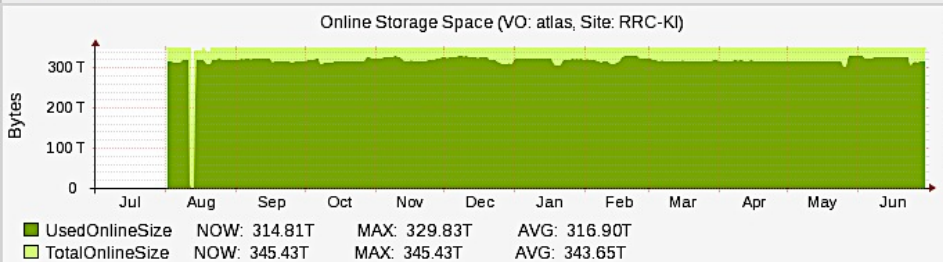
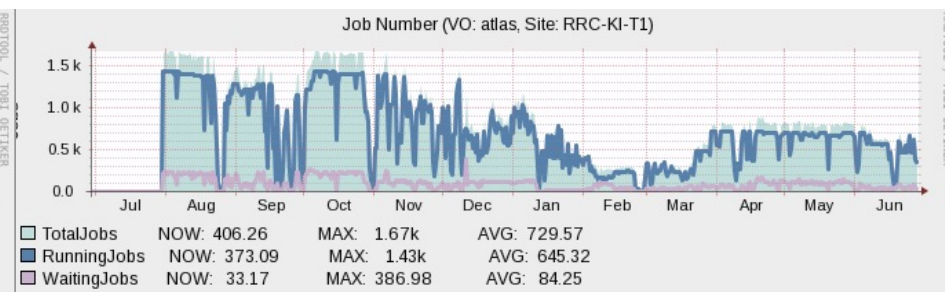
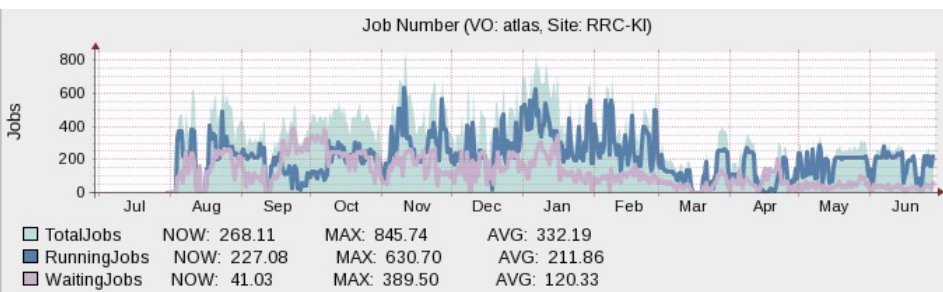
<b>Federation</b>	<b>May 2014</b>	<b>Availability</b>	<b>Reliability</b>
RRC-KI-T1		100 %	100 %



# Usage statistics of resources of centers for VO-ATLAS



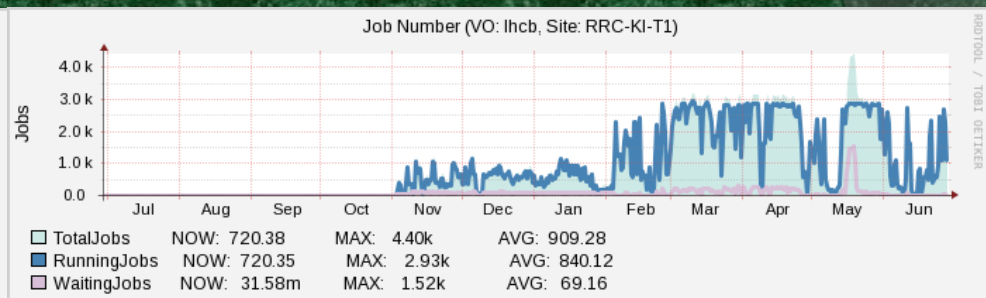
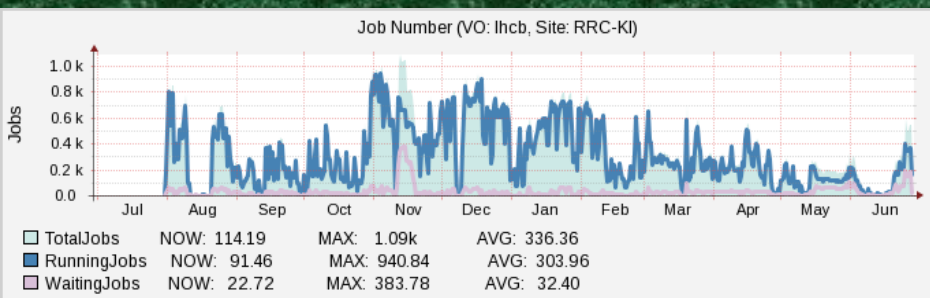
VO name	ATLAS Name	State	ATLAS TIER	Site	PANDA Sites	Regional Center	CLOUD
atlas	<a href="#">RRC-KI</a>	ACTIVE	<a href="#">T2D</a>	RRC-KI	<a href="#">RRC-KI</a>	<a href="#">RU-RDIG</a>	<a href="#">NL</a>
atlas	<a href="#">RRC-KI-T1</a>	ACTIVE	<a href="#">T1</a>	RRC-KI-T1	<a href="#">RRC-KI-T1</a>	<a href="#">RU-RRC-KI</a>	<a href="#">RU</a>



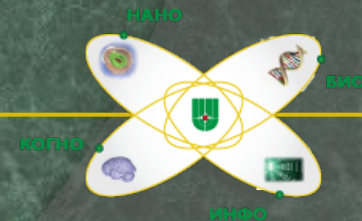
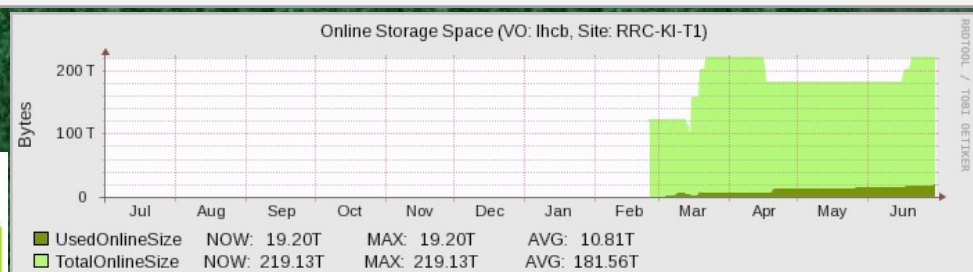
# Usage statistics of resources of centers for VO-LHCb.



Name	Tier	GridType	Country ▲	MaskStatus	Efficiency (%)	Status
<input type="checkbox"/> LCG.KIAE.ru	Tier-2	LCG	Russia	Active	99.0	Good
<input type="checkbox"/> LCG.RRCKI.ru	Tier-2	LCG	Russia	Active	97.8	Good



Federation	May 2014	Availability	Reliability
RRC-KI-T1		100 %	100 %





## Data processing subsystem:

Processor array  
2160 / 22700  
core / HEPSPEC06

## Telecommunications subsystem:

External links;  
Internal telecommunications  
topology

## Storage subsystem:

Disks / Tapes  
2600/2000  
Terabyte

## Service subsystem:

**EGI services:** APEL; Top-BDII; Site-BDII; CREAM  
CE; ngi-SAM; SRM; VO-BOX

### Tier-1 Grid services:

dCache 2.2.24 + Enstore (ATLAS) tape instance  
dCache 2.2.24 (ATLAS) disk instance  
dCache 2.6.22 (LHCb) disk instance  
xrootd - EOS 0.3.19 (Alice) disk instance

**Internal services:** NAT; DNS; Proxy

## Internal monitoring subsystem.

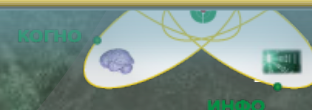
<https://orb.t1.grid.kiae.ru/nagios/>

## Operational management subsystem.

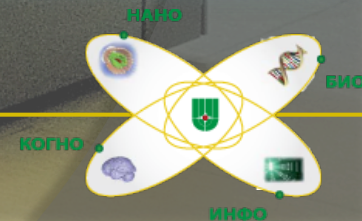
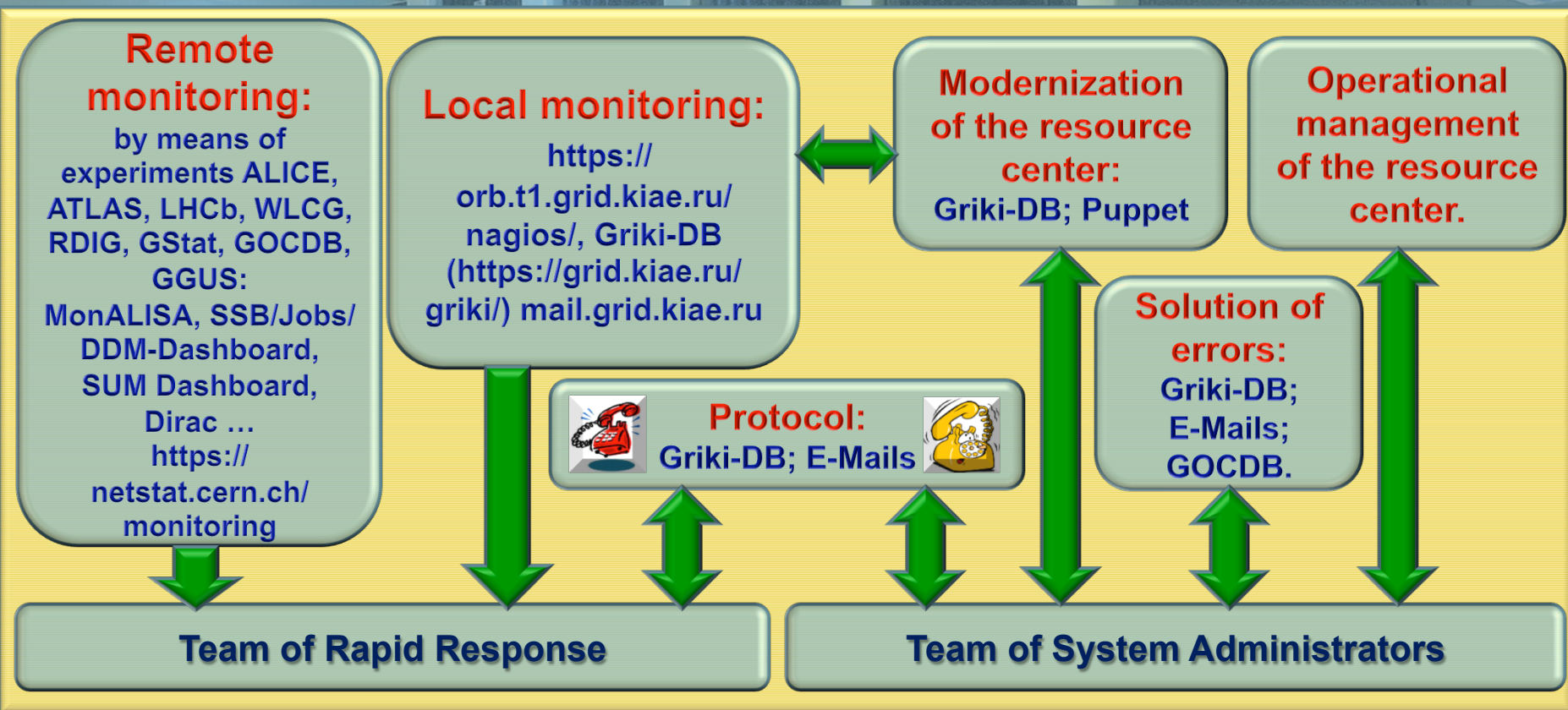
Shifts, resources (Griki-DB, Puppet, e-mails, phone)

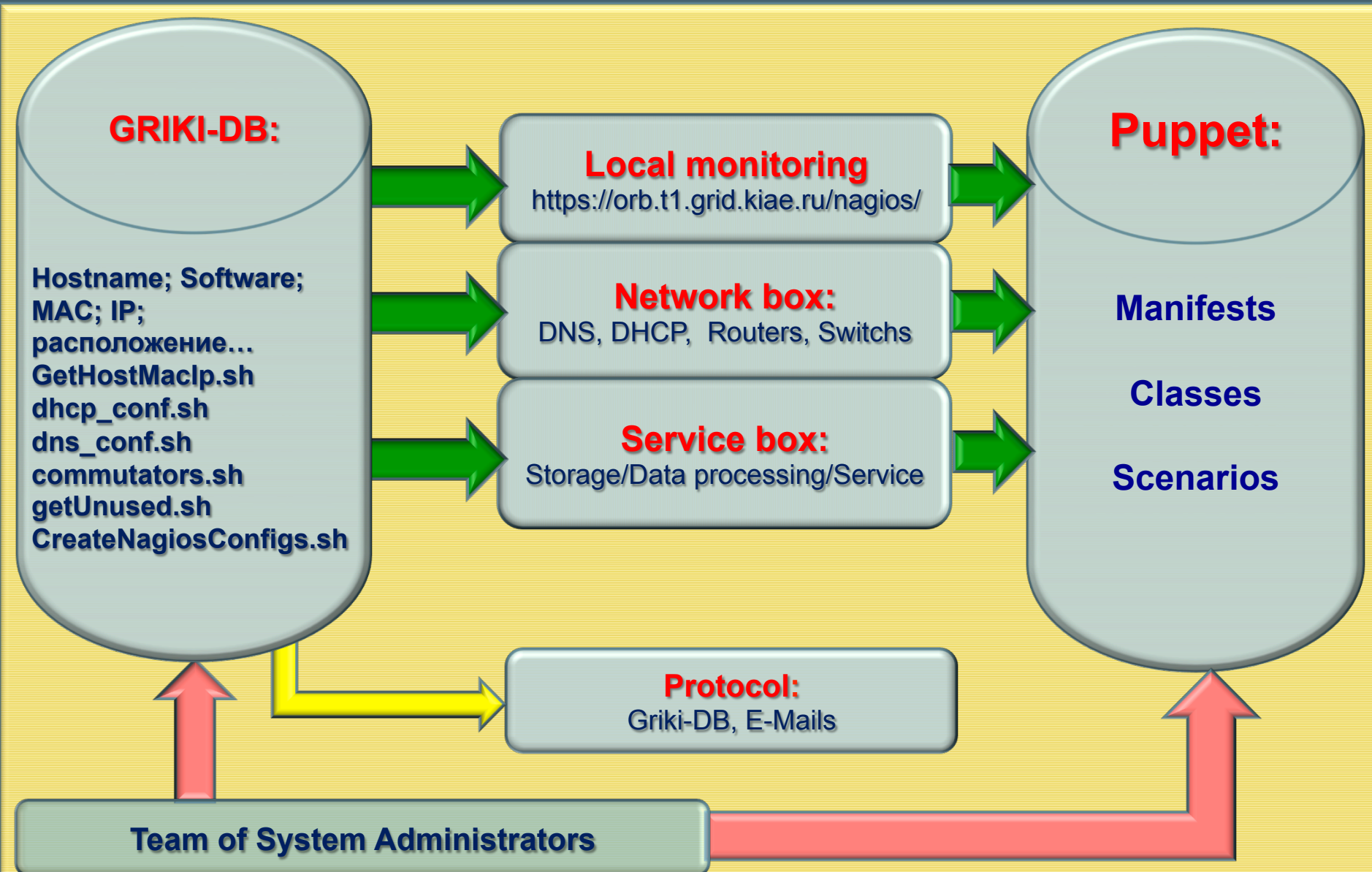
## Engineering subsystems.

Electricity; Battery cabinets; Motor-generators; Refrigeration.





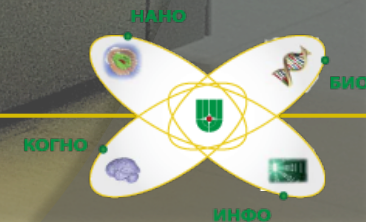






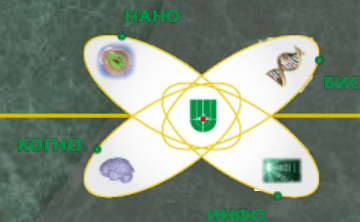
	Currently	By the beginning of the seance in 2015.
CPU, HEP-SPEC06	22700	71000
Disks*, ТБ	2600	6300
Tapes, ТБ	2000	7400

- Disks resources include buffer pool for tapes.





- 1 - We need to clone GRID-admin specialists;
- 2 - Expanding the resource base of Tier-1;
- 3 - We need to sign a Memorandum of Understanding (MoU).



# *Tier-1&2 at Kurchatov Institute for the LHC experiments. Current status.*



*Thanks for your attention!*

