



ROMANIAN SITES REPORT

RO-02-NIPNE, RO-14-ITIM, RO-16-UAIC

Gabriel Stoicea

Particle Physics Department
National Institute of Physics and Nuclear Engineering "Horia Hulubei"
IFIN-HH

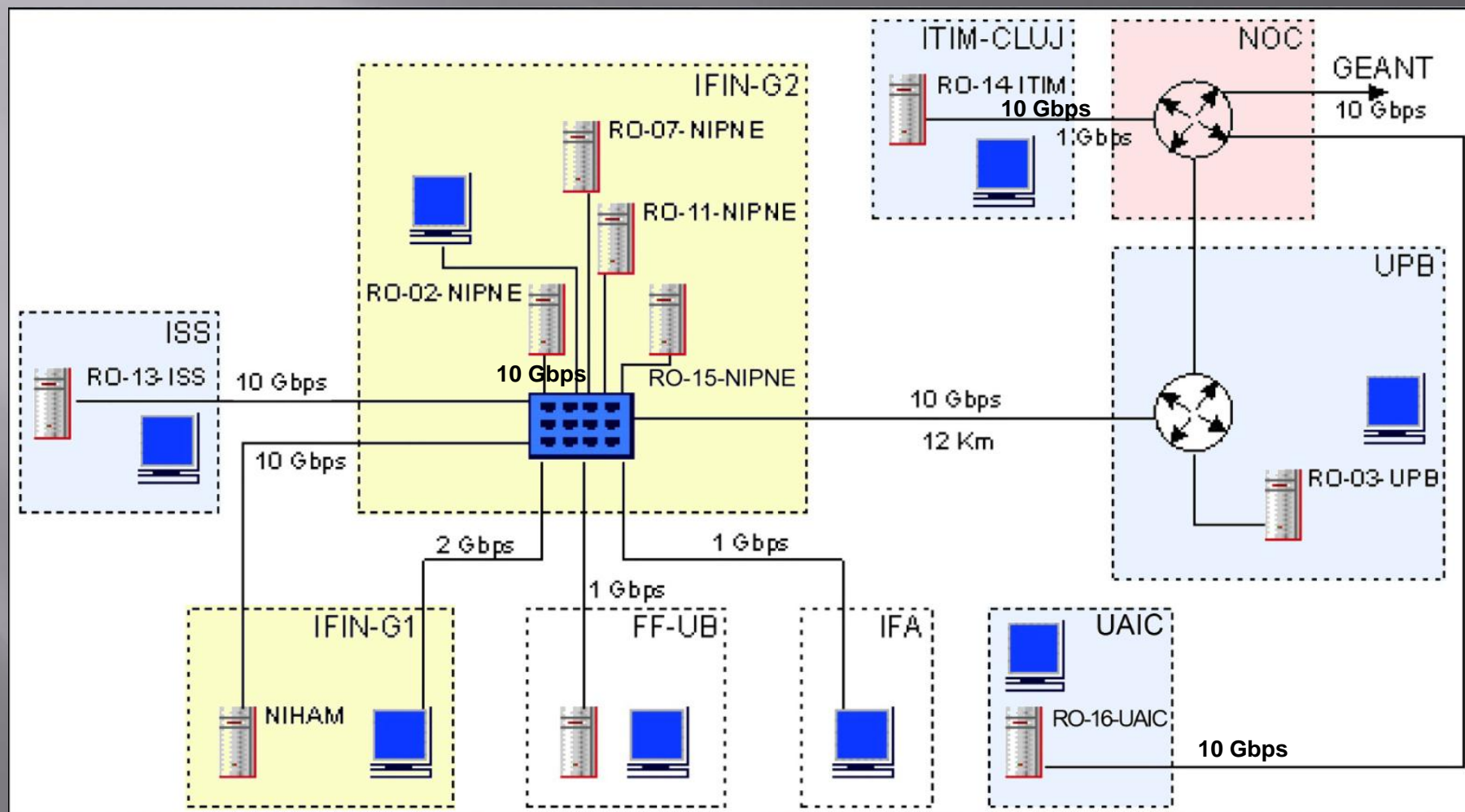
FR-cloud Regional Centers Meeting, LPNHE-Paris, 18.06.2012



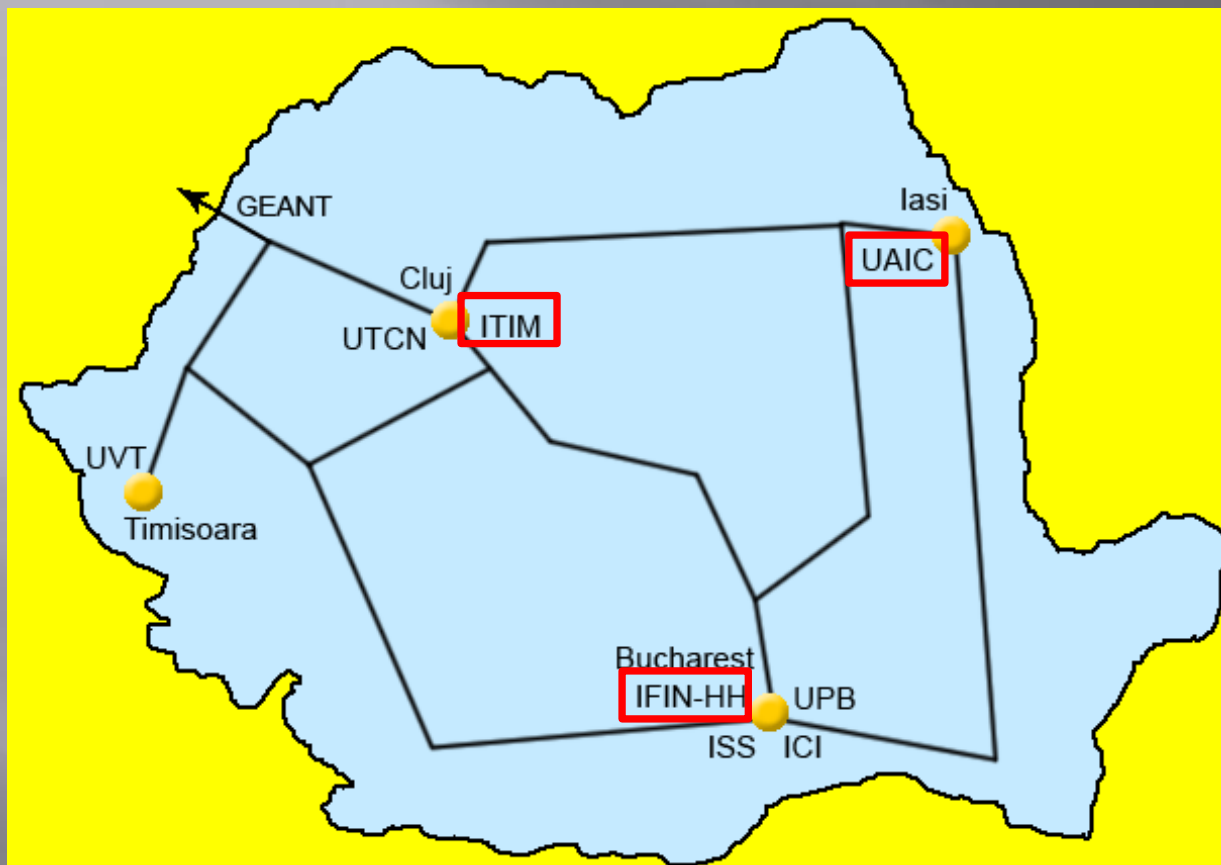
Outline

- RO-LCG Grid network infrastructure
- ATLAS Grid Infrastructure in Romania
- RO-14-ITIM and RO-16-UAIC Grid sites
- RO-02-NIPNE Grid site & Local Analysis Cluster - BAAF (Bucharest ATLAS Analysis Facility)

RO-LCG Grid Network Infrastructure



ATLAS Grid Infrastructure in Romania



- 4 Grid Sites: **RO-02-NIPNE**, **RO-07-NIPNE**, **RO-14-ITIM** and **RO-16-UAIC**
- 2 sites dedicated to ATLAS: **RO-02-NIPNE** and **RO-14-ITIM**
- 2 sites running Production and Analysis jobs: **RO-02-NIPNE** and **RO-07-NIPNE**
- 2 sites running only Production jobs: **RO-14-ITIM** and **RO-16-UAIC**



RO-14-ITIM Grid site

2009 - certified & production

NATIONAL INSTITUTE FOR RESEARCH AND
DEVELOPMENT OF ISOTOPIC AND MOLECULAR
TECHNOLOGIES - Cluj Napoca

Network Configuration and Logical Schema of the Datacenter

CISCO Catalyst 6509

IPv4 and IPv6 addressing

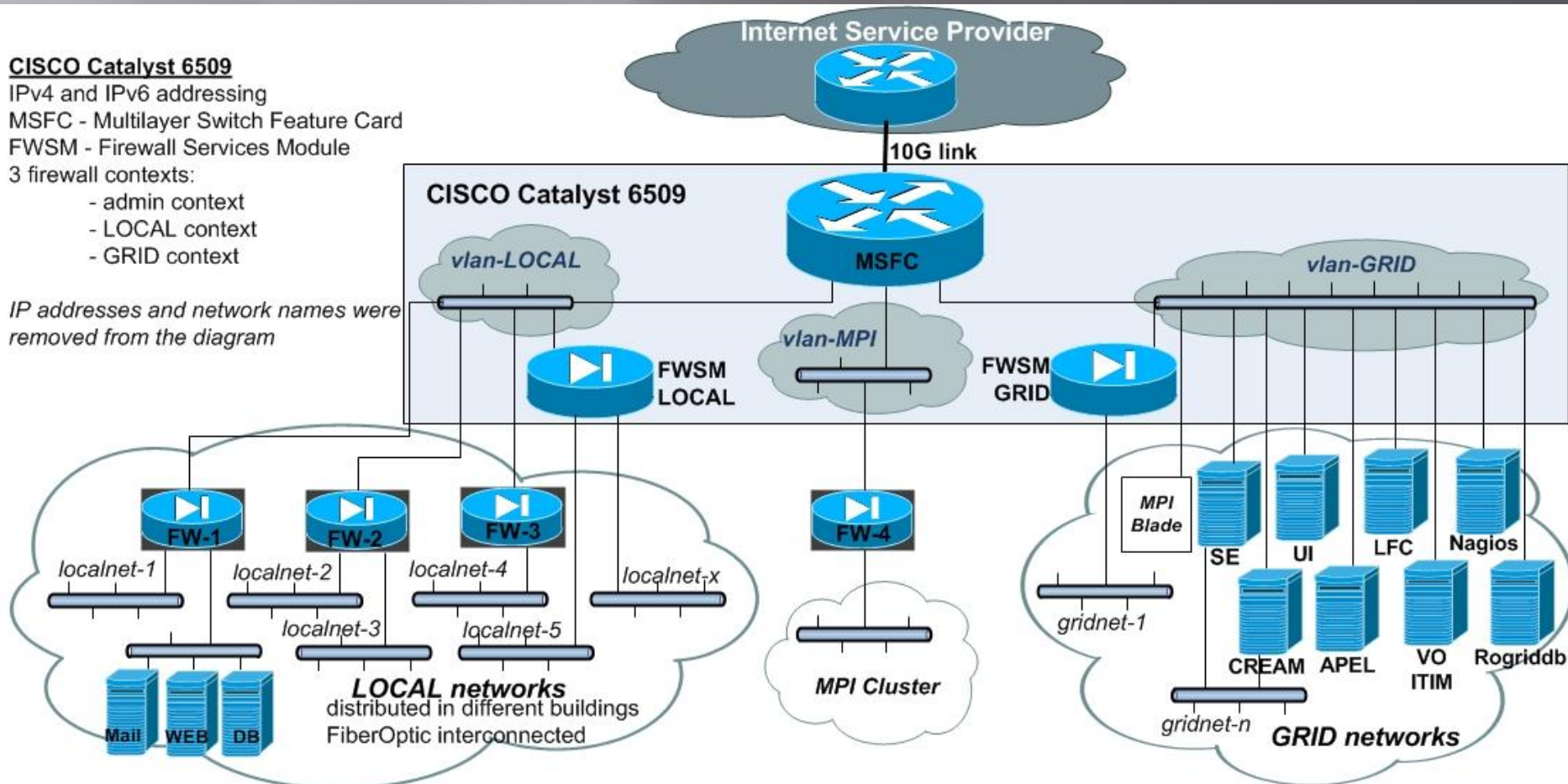
MSFC - Multilayer Switch Feature Card

FWSM - Firewall Services Module

3 firewall contexts:

- admin context
- LOCAL context
- GRID context

IP addresses and network names were
removed from the diagram



RO-14-ITIM Grid site

Site manager:
Dr. Eng. Felix Fărcaș
felix@itim-cj.ro

- ▣ Named **RO-14-ITIM**
- ▣ Processing power: **core** 500, online **250**
- ▣ Storage capacity: 100 TB, online **50 TB**
- ▣ Technology **1U** + **Blade** system (IBM & HP)
- ▣ Virtual Organization (**ATLAS**, **ops**, **voitim**)
- ▣ Operations system Scientific Linux 64 bit
- ▣ **Middleware** we use is **gLite 3.2 for 64 bit**



Blade system and
MSA storage



RO-16-UAIC Grid site

2008 - certified & production

"ALEXANDRU IOAN CUZA" UNIVERSITY OF IAȘI
Digital Communications Department

❖ 3 Gigabit Ethernet switches with 48 Gigabit ports and two Ten Gigabit Ethernet ports

❖ 50 servers used for WN with 8 cores (2.66GHz), 16GB RAM, 2 Gigabit interfaces, 160 GB disk storage per computer

❖ 1 server used for NFS, DHCP, DNS with 8 cores (2.66GHz), 24 GB RAM, 4* 160 GB disks storage

❖ 1 storage with 8 TB in Raid 6 used for atlas software

❖ 1 storage server used for SE with 16 cores (2.4GHz), 24GB RAM(1333MHz), 6 Gigabit interfaces and **80TB** in Raid 6

❖ 2 servers will be used for back-up virtualization system in CREAM, BDII, UI, SQUID, with 12 cores (2.66GHz), 32GB RAM, 2 Ten Gigabit Ethernet

✓ Virtual Organization : **atlas, ops, dteam**

✓ Operations system: **Scientific Linux 5.7 64 bit**

✓ Middleware: **gLite 3.2 for SE**

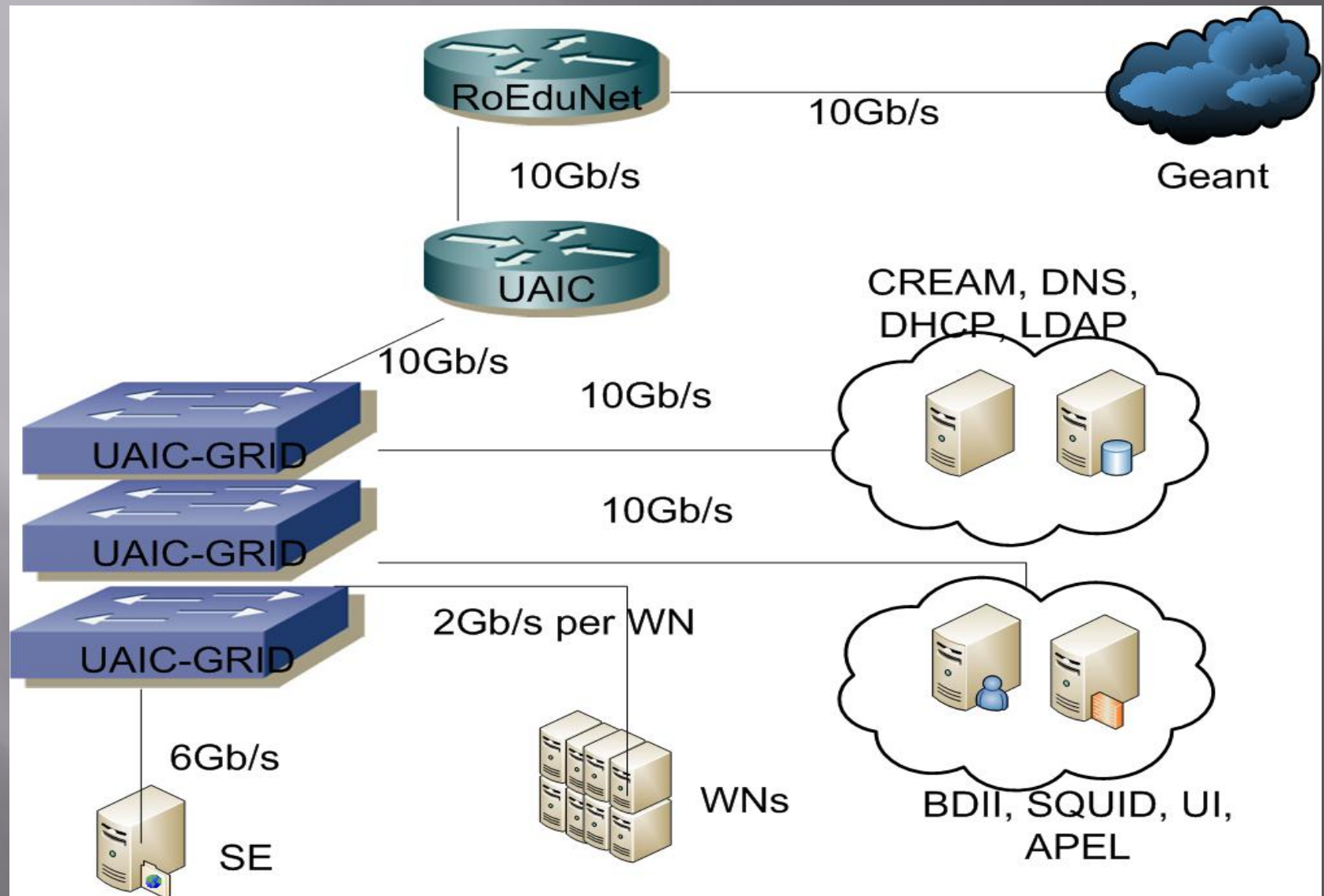
EMI for WN, APEL, UI, BDII, CREAM



System manager:
Pînzaru Ciprian



RO-16-UAIC Network Infrastructure





RO-16-UAIC Power Infrastructure

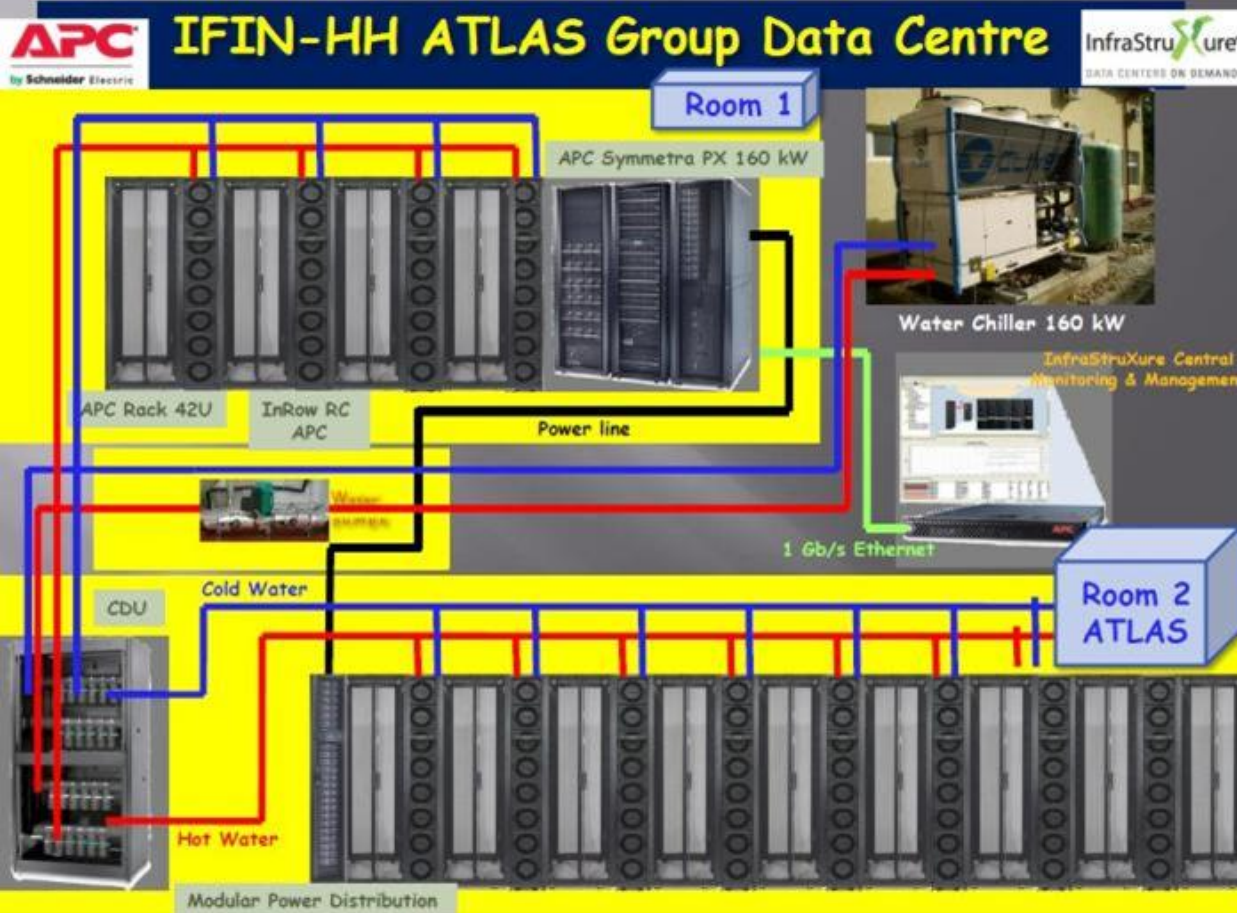


- One UPS have power 54 KW and the other two by 18 KW.
- One generator with a output power by 100KW.



RO-02-NIPNE Grid Site

2005 - certified & production



Uninterruptible Power Supply (UPS): APC Symmetra PX 160KW 400 V w/ Integrated Modular Distribution; high-efficiency 3-phase UPS with integrated modular distribution that can be right-sized to data center power requirements. With hot-scalable power, distribution and run-time this UPS scales with data center up to 160KW/160kVA.

144 KW and 1h21min run-time

Institute Diesel Power Generator
1 MW

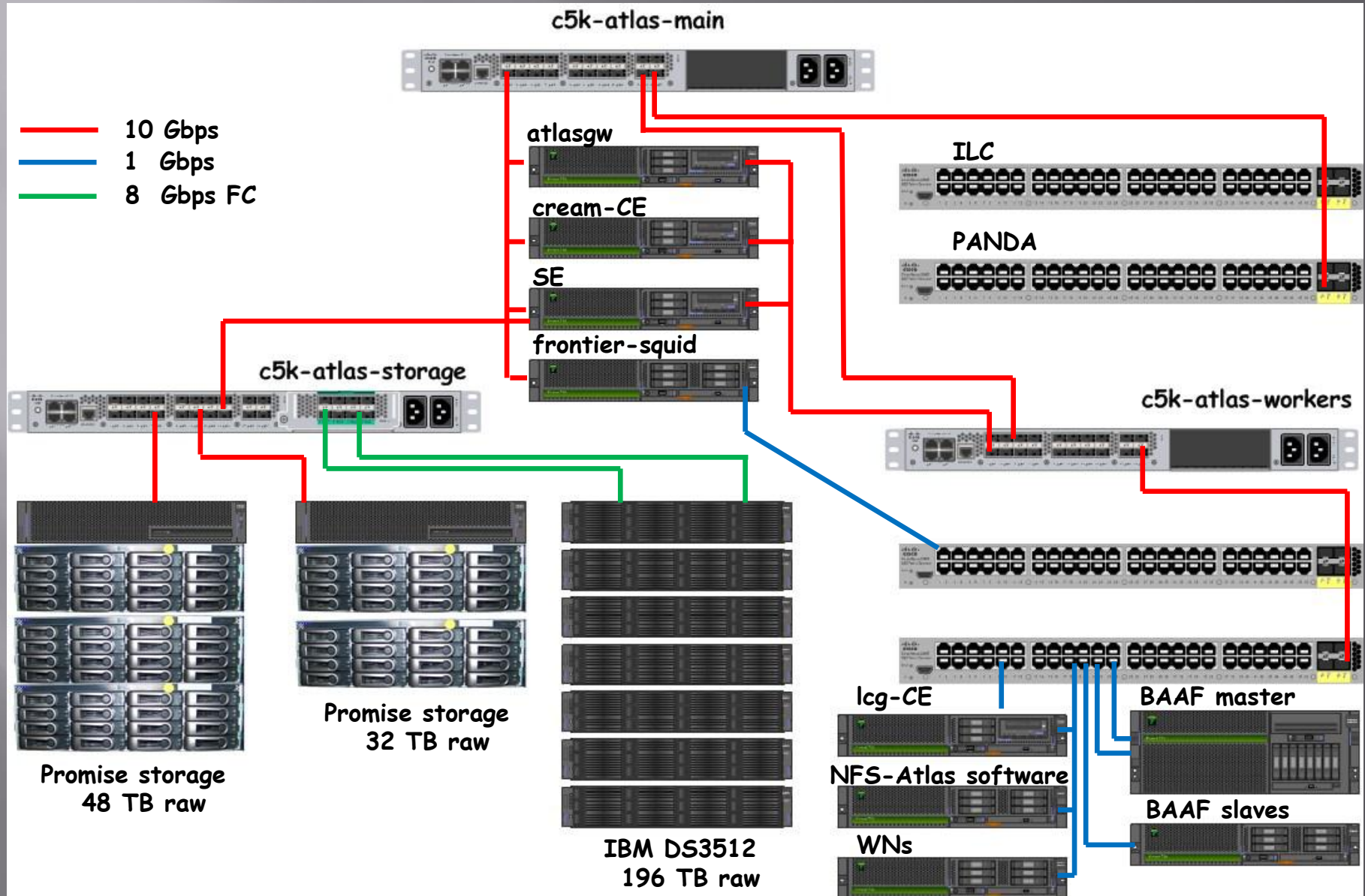
Cooling System APC - based on chilled water topology - hot-aisle/cold-aisle design (see next slide):

- ✓ Water Chiller -160 kW- with expansion tank - around two hours autonomy in case of power-cut.
- ✓ CDU (Cooling Distribution Unit) - Flexible chilled water and glycol distribution system for InRow cooling units - 12 Circuit, Bottom/Top Mains, Top Distribution Piping.
- ✓ 12 In Row RC Chilled Water units, 200-240V 50/60 Hz, IEC 309-16.

InfraStruXure Central Basic - management and monitoring system; It supports capacity management up to 20 racks and change management up to 1,000 IT assets - RHE Linux 5.0 - 1 GB RAM/160 GB HDD data storage

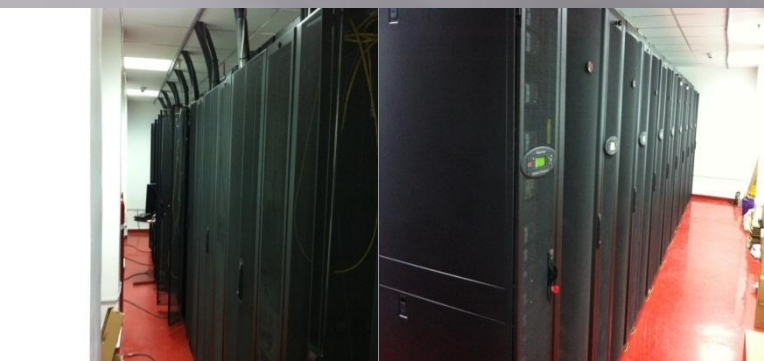


RO-02-NIPNE Grid Site - Network Infrastructure





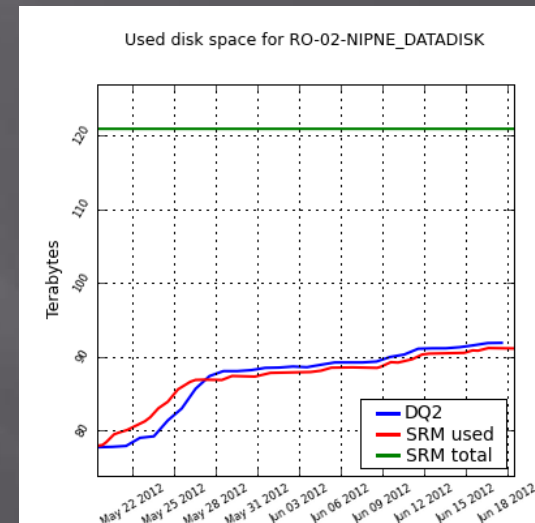
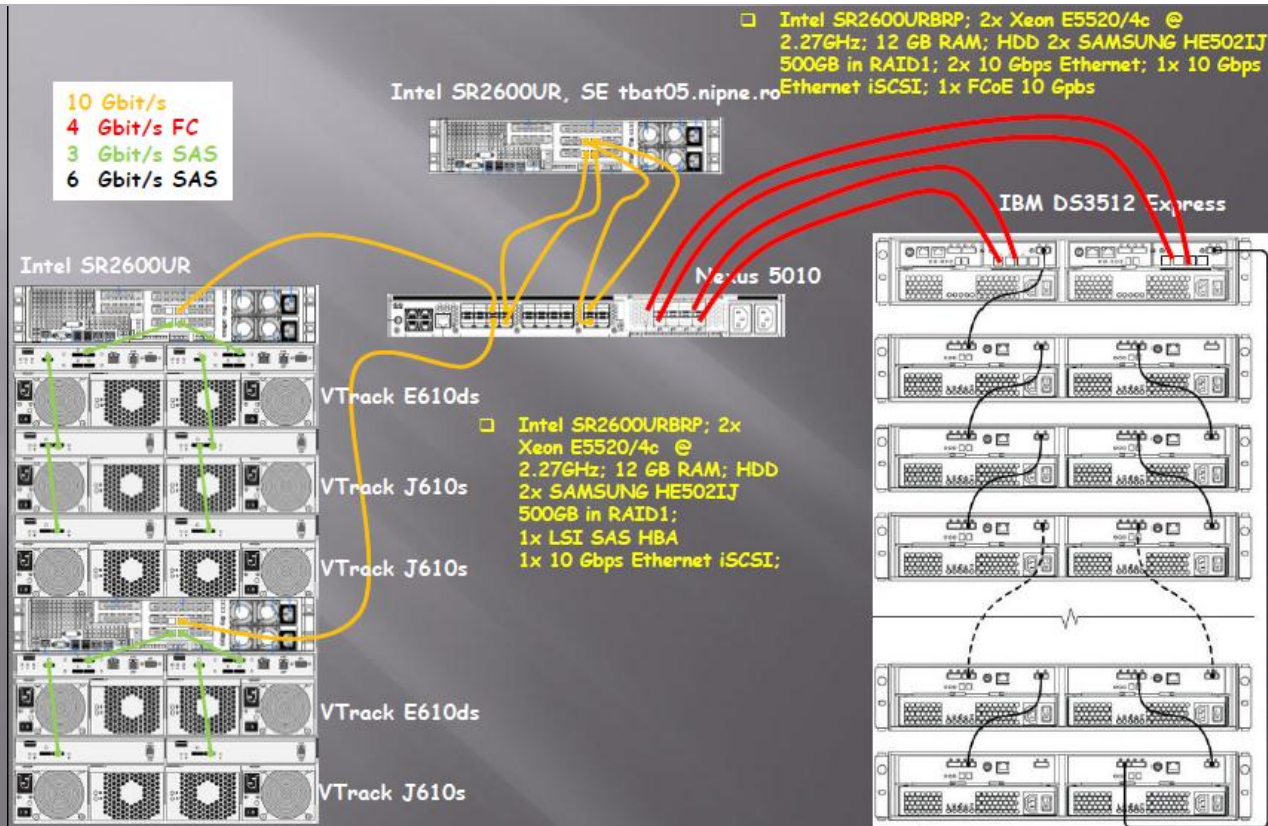
RO-02-NIPNE Grid Site - Grid Services and Computing Hardware



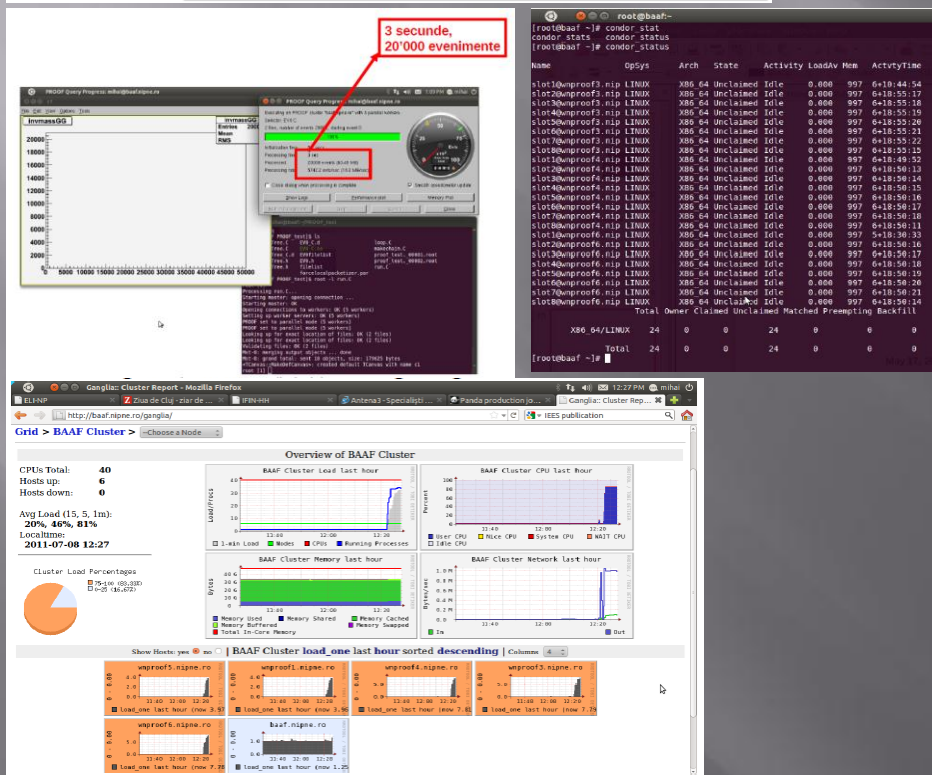
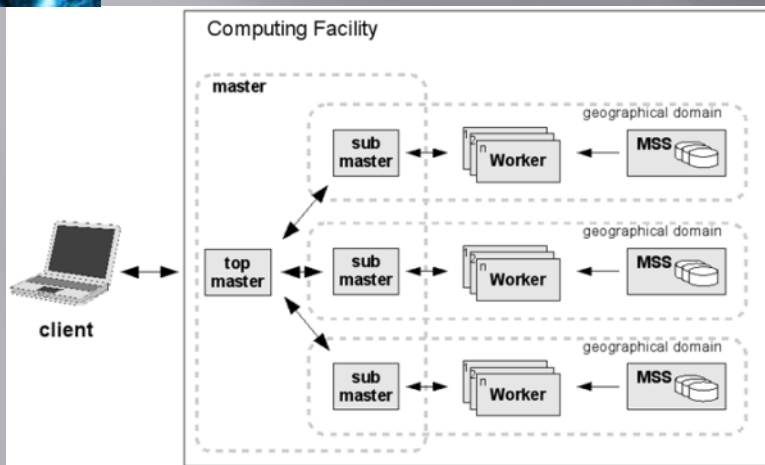
- ❑ Part of RO-LCG / Romanian Tier2 Federation
- ❑ Grid Workers:
 - ❑ 20 x Intel SR1500AL; 2xXeon 5030/2c 2.66GHz, RAM 4x2GB, HDD Seagate 80GB
 - ❑ 32 x Intel SR1500AL; 2xXeon E5335/4c 2.00 GHz, RAM 8x2GB, HDD Seagate ST3250620NS 250GB.
- ❑ Two CEs:
 - ❑ lcg-CE and site-BDII: Intel SR1500AL; 2 x Xeon E5420/4c @ 2.50GHz; 16 GB RAM; HDD Seagate ST3500320NS 500GB; 2 x 1 Gbps Ethernet
 - ❑ cream-CE: Intel SR2600URBRP; 2x Xeon E5520/4c @ 2.27GHz; 12 GB RAM; HDD 2x SAMSUNG HE502IJ 500GB in RAID1; 2x 10 Gbps Ethernet
- ❑ Atlasgw /Gateway machine: Intel SR2600URBRP; 2x Xeon E5520/4c @ 2.27GHz; 12 GB RAM; HDD 2x SAMSUNG HE502IJ 500GB in RAID1; 2x 10 Gbps Ethernet
- ❑ Storage system 250 TB raw capacity
- ❑ SE (DPM/SRM) with 200 TB on-line
- ❑ NFS server for ATLAS software: Intel SR2500AL; 1 x Xeon E5420/4c @ 2.50GHz; 8 GB RAM; HDD Seagate ST3250620NS 250GB; ATLAS soft space 1TB RAID1 2x Segate ST31000340NS; 1 Gbps Ethernet on private WNs network
- ❑ Frontier-squid-cache server serving RO-02, RO-14 and backup for RO-16: Intel SR2500AL; 1 x Xeon E5420/4c @ 2.50GHz; 8 GB RAM; HDD Seagate ST3500320NS 500GB; 1 Gbps Ethernet on private WNs network & 10 Gbps Ethernet on public network

RO-02-NIPNE ATLAS Storage

Federation	Site	DATADISK		DATATAPE		GROUPDISK		HOTDISK		MCTAPE		PRODDISK		SCRATCHDISK	
RO-LCG	RO-02-NIPNE	120.9	492.6 (60%)	-	-	3.3	3.3 (0%)	2.2	8.8 (1%)	-	-	6.6	31.9 (3%)	5.5	16.5 (2%)
	RO-07-NIPNE	329.9		-		-		2.2		-		17.6		5.5	
	RO-14-ITIM	15.4		-		-		1.1		-		3.3		-	
	RO-16-UAIC	26.4		-		-		3.3		-		4.4		5.5	



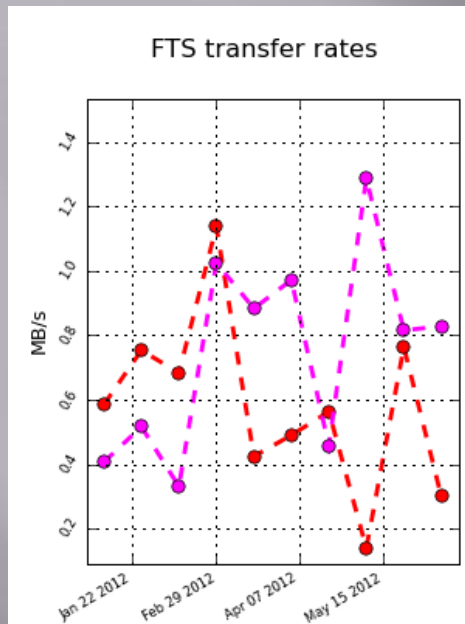
BAAF (Bucharest ATLAS Analysis Facility)



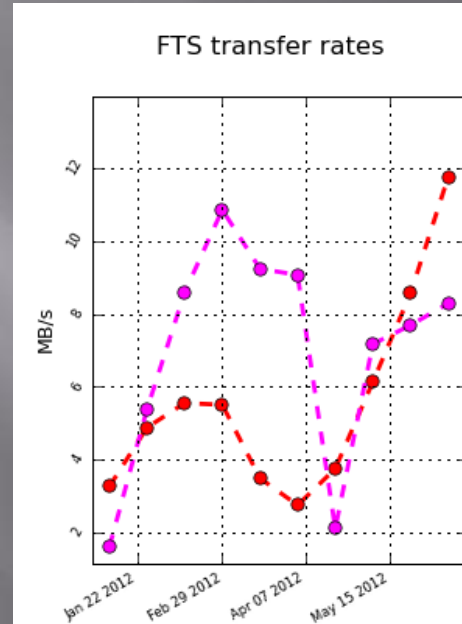
- ❑ consist of a non-homogeneous PROOF cluster
 - ❑ computing cluster driven by Condor
 - ❑ dedicated to members of Bucharest ATLAS group
 - Hardware overview:
 - 1 Masternode - with 8 cores and 7 TB storage
 - configured as glite-UI with dq2-tools
 - CVMFS for ATLAS software
 - configured as masternode of the Proof cluster (for analysis)
 - manager of the Condor cluster; submitting and scheduling jobs (for simulations)
 - configured to store data via xrootd
 - 6 Slavenodes
 - 3 with 8 cores / Dell PowerEdge 1950
 - 2 with 4 cores
- Total of 40 cores
- Network - 1Gbps in a private network; only the masternode can be accessed from Internet
 - Monitoring the cluster with Ganglia

Results for the Grid sites

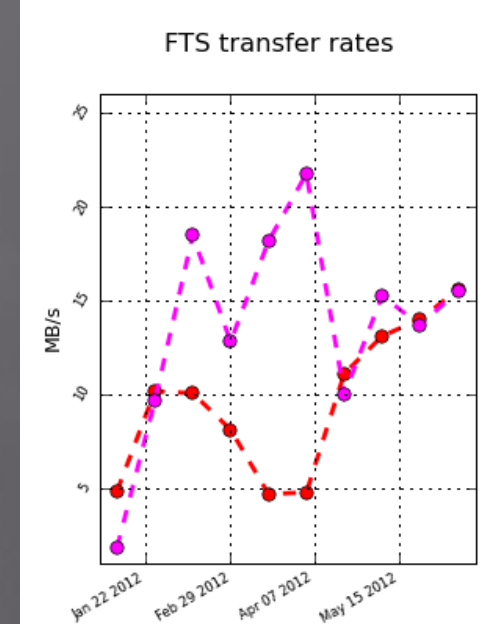
Small files (0 to 100 MB)



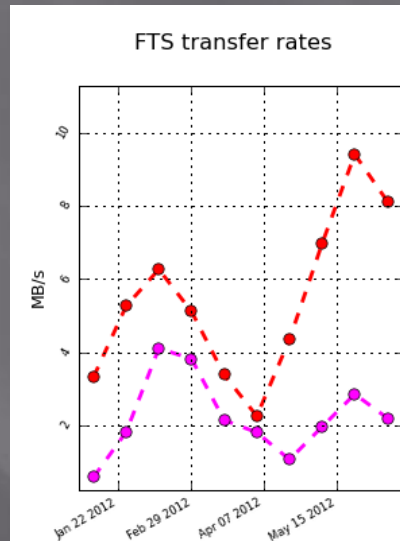
Medium files (100 MB to 1 GB)



Large files (1 GB to infinity)



—●— IN2P3-CC - RO-02-NIPNE
—●— RO-02-NIPNE - IN2P3-CC

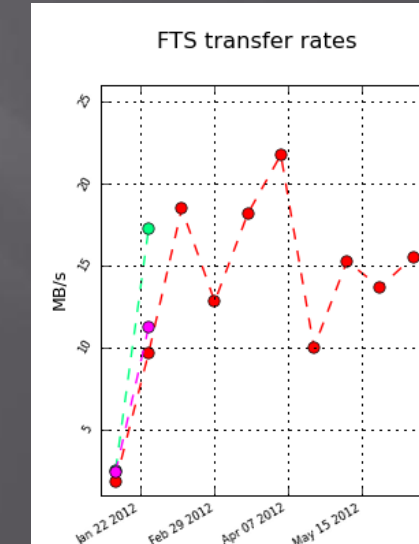
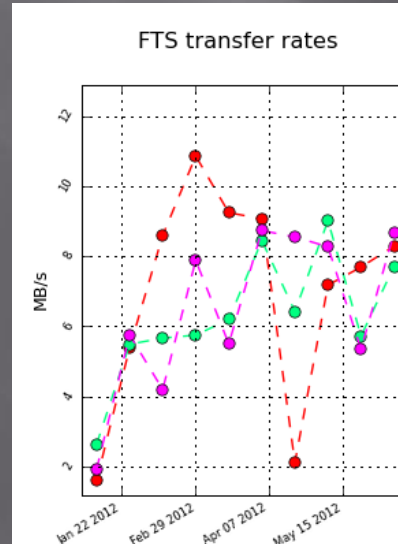
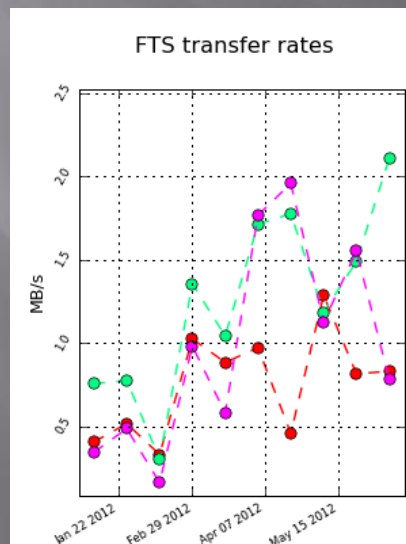
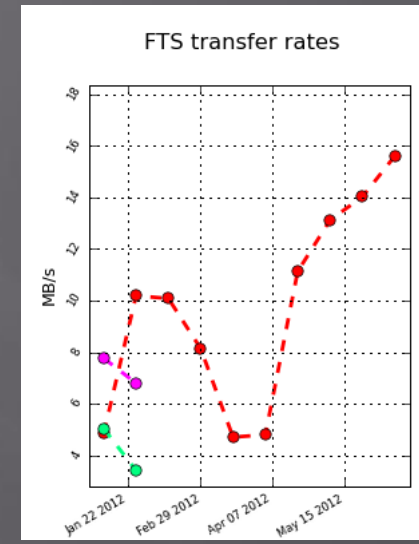
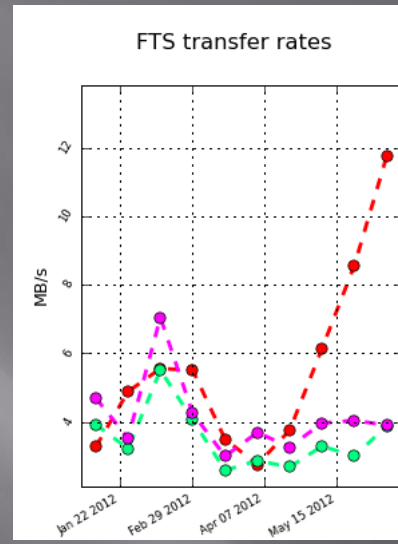
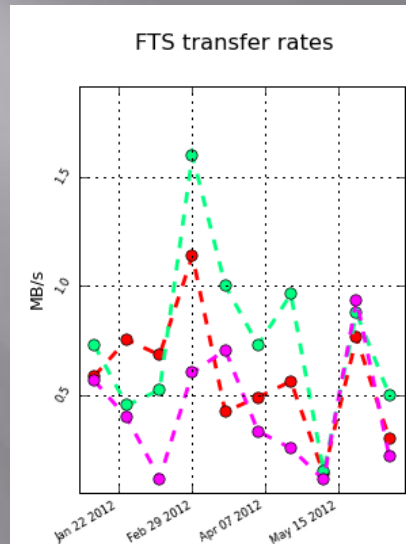


All files (0 to infinity)

Results for the Grid sites

Small files (0 to 100 MB)

Medium files (100 MB to 1 GB) Large files (1 GB to infinity)



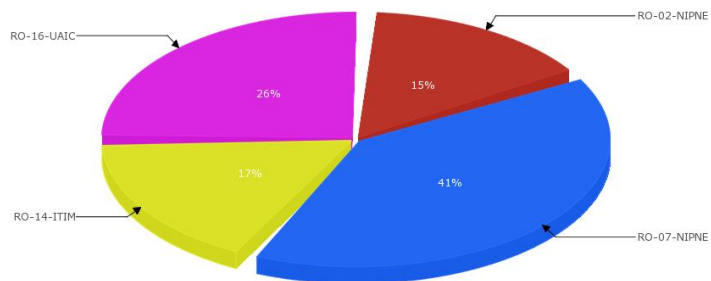
Results for the Grid sites

Developed by CESGA 'E01 View' : / nomcpu-HEPSPEC06 / 2011-7-2012-6 / SITE-VO / custom (*) / GRBAR-LIN / 1

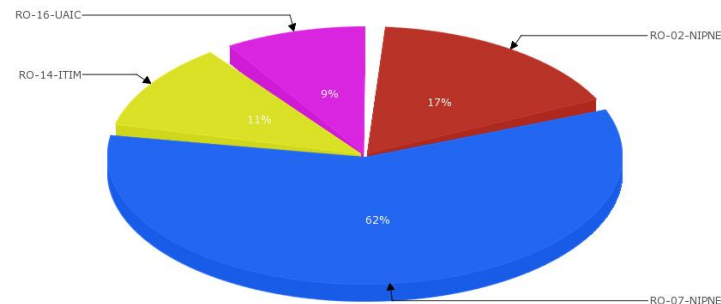
Developed by CESGA 'E01 View' : / njobs / 2011-7-2012-6 / SITE-VO / custom (*) / GRBAR-LIN / 1

2012-06-17 23:57

RO-LCG Normalised CPU time (HEPSPEC06) per SITE



RO-LCG Total number of jobs per SITE



Total number of jobs run by SITE and VO

SITE	atlas		Total	%
RO-02-NIPNE	1,408,053		1,408,053	17.48%
RO-07-NIPNE	4,967,999		4,967,999	61.69%
RO-14-ITIM	925,808		925,808	11.50%
RO-16-UAIC	751,590		751,590	9.33%
Total	8,053,450		8,053,450	
Percentage	100.00%			

Monitoring

Service	Status	Last Update	Description
DM_GSIFTP	OK	06-18-2012 15:16:12	DM-GFTF OK - Test passed
DM_RFIO	OK	06-18-2012 15:16:01	DM-RFIO OK - Test passed
HTTP	WARNING	04-30-2012 14:03:39	HTTP WARNING: HTTP/1.1 403 Forbidden - 4029 bytes in 0.001 second response time
PING	OK	06-18-2012 15:19:10	PING OK - Packet loss = 0%, RTA = 0.04 ms
Root Partition	OK	06-18-2012 15:19:29	DISK OK - free space: / 93681 MB (94% inode=99%):
SSH	OK	06-18-2012 15:14:54	SSH OK - OpenSSH_4.3 (protocol 2.0)
Swap Usage	OK	06-18-2012 15:16:18	SWAP OK - 100% free (5951 MB out of 5951 MB)
Total Processes	OK	06-18-2012 15:16:18	PROCS OK: 25 processes with STATE = RSZDT
DM_CERT	OK	06-18-2012 15:16:18	DM-CERT OK - The host certificate expires in 213 days
DM_CPU	OK	06-18-2012 15:16:46	DM-CPU OK - Idle=93.50%
DM_DPM_PERF	OK	06-18-2012 15:17:15	DM-DPM-PERF OK - 25 functions executed (234.84ms / functions)
DM_DPNS_PERF	OK	06-18-2012 15:16:18	DM-DPNS-PERF OK - 96 functions executed (3.53ms / functions)
DM_GRIDFTP_TRANSFER	OK	06-18-2012 15:15:01	DM-GRIDFTP-TRANSFER OK - 0 read operation (0.00B/s for 0.00B), 0 write operation (0.00B/s for 0.00B),
DM_INFOSYS	OK	06-18-2012 15:16:18	DM-INFOSYS OK - Published information OK
DM_NET	OK	06-18-2012 15:16:51	DM-NET OK - eth0 (in: 31204.00 KB/s out: 138.00 KB/s err: 0.00%): eth1 (in: 20.00 KB/s out: 0.00 KB/s err: 0.00%): eth2 (in: 0.00 KB/s out: 0.00 KB/s err: 0.00%): eth3 (in: 0.00 KB/s out: 0.00 KB/s err: 0.00%): eth4 (in: 4.00 KB/s out: 166.00 KB/s err: 0.00%): eth5 (in: 150.00 KB/s out: 32368.00 KB/s err: 0.00%): lo (in: 37.00 KB/s out: 37.00 KB/s err: 0.00%): sit0 (in: 0.00 KB/s out: 0.00 KB/s err: 0.00%)
DM_PART	OK	06-18-2012 15:16:18	DM-PART OK - dm-0 (r: 0 KB/s, w: 0 KB/s) dm-1 (r: 0 KB/s, w: 0 KB/s) dm-2 (r: 0 KB/s, w: 0 KB/s) dm-3 (r: 0 KB/s, w: 1 KB/s) dm-4 (r: 0 KB/s, w: 0 KB/s) dm-5 (r: 0 KB/s, w: 0 KB/s) dm-6 (r: 0 KB/s, w: 0 KB/s) dm-7 (r: 0 KB/s, w: 1 KB/s) dm-8 (r: 0 KB/s, w: 0 KB/s) md0 (r: 0 KB/s, w: 483 KB/s) md1 (r: 0 KB/s, w: 2 KB/s) md2 (r: 0 KB/s, w: 0 KB/s) sda1 (r: 0 KB/s, w: 491 KB/s) sda2 (r: 0 KB/s, w: 4 KB/s) sda3 (r: 0 KB/s, w: 0 KB/s) sdb1 (r: 0 KB/s, w: 491 KB/s) sdb2 (r: 0 KB/s, w: 0 KB/s) sdb3 (r: 0 KB/s, w: 0 KB/s) sdc1 (r: 0 KB/s, w: 0 KB/s) sdf1 (r: 0 KB/s, w: 0 KB/s) sdi1 (r: 0 KB/s, w: 0 KB/s) sdk1 (r: 0 KB/s, w: 1 KB/s) sdm1 (r: 0 KB/s, w: 0 KB/s) sdo1 (r: 0 KB/s, w: 0 KB/s) sdp1 (r: 0 KB/s, w: 0 KB/s) sdr1 (r: 0 KB/s, w: 0 KB/s) sdt1 (r: 0 KB/s, w: 0 KB/s) sdt2 (r: 0 KB/s, w: 10698 KB/s) sdu1 (r: 0 KB/s, w: 0 KB/s) sdu2 (r: 0 KB/s, w: 0 KB/s) sdv1 (r: 0 KB/s, w: 0 KB/s) sdv2 (r: 0 KB/s, w: 2 KB/s) sdw1 (r: 0 KB/s, w: 0 KB/s) sdw2 (r: 0 KB/s, w: 0 KB/s) sdx1 (r: 0 KB/s, w: 0 KB/s) sdx2 (r: 153 KB/s,
DM_POOL	WARNING	06-18-2012 15:19:41	NRPE: Unable to read output
DM_PROC	OK	06-18-2012 15:16:26	DM-PROC OK - All parameters OK
DM_RFIO_TRANSFER	OK	06-18-2012 15:17:59	DM-RFIO-TRANSFER OK - 0 read operation (0.00B/s for 0.00B), 0 write operation (0.00B/s for 0.00B),

- Local monitoring using Nagios - first service is DPM
- Grid services monitored with Nagios at RO-LCG and NGI-RO level

Monitoring problems

- RO-02-NIPNE :

- reconfiguring data centre network basic infrastructure; more segmented lowering the network traffic load on switches.
- start tuning and optimization for the storage system.

Principal errors for file transfers:

- Failed to complete PutDone request [0cf466a8-846a-4eb0-8aa1-e851429e2f77] on remote SRM
[httpg://tbat05.nipne.ro:8446/srm/managerv2]: [SRM_FAILURE] Failed for all SURLs.The PutDone request has been successfully aborted
- No status updates received since more than [360] seconds. Probably the process serving the transfer is stuck

RO-07-NIPNE

status and current development

Mihai Ciubancan

IT Department

National Institute of Physics and Nuclear Engineering “Horia Hulubei”
IFIN-HH

CONTENT

RO-07-NIPNE general info
Networking
Running jobs
Monitoring

RO-07-NIPNE: GENERAL

- ➔ Running ATLAS, LHCb, and also ALICE soon.
- ➔ More than 1400 cores:
 - ➔ 1100 available for ATLAS ,LHCb and GRIDIFIN(local VO)
 - ➔ 300 available for ALICE
- ➔ About 420 TB of storage, ~220TB used
 - 330 TB DATADISK, 17,5 TB PRODDISK, 5,5 TB SCRATCHDISK, 2,2 TB HOTDISK, ~65 TB for other VO's

RO-07-NIPNE: GENERAL

→CE:

- CREAM1 – dedicated to ATLAS, LHCb and GRIDFIN.
- CREAM2 – dedicated to ALICE

→SE: glite-SE_dpm_mysql, 15 DPM_DISKS

→WN for ATLAS, LHCb and GRIDFIN:

- 46x8 cores – 500GB HDD, 62,5GB/core, 2 GB/core
- 31x16 cores – 1TB HDD, 62,5GB/core, 2GB/core
- 7x32 cores – 1TB HDD, 31,25GB/core, 2GB/core
- SLC5-x86_64

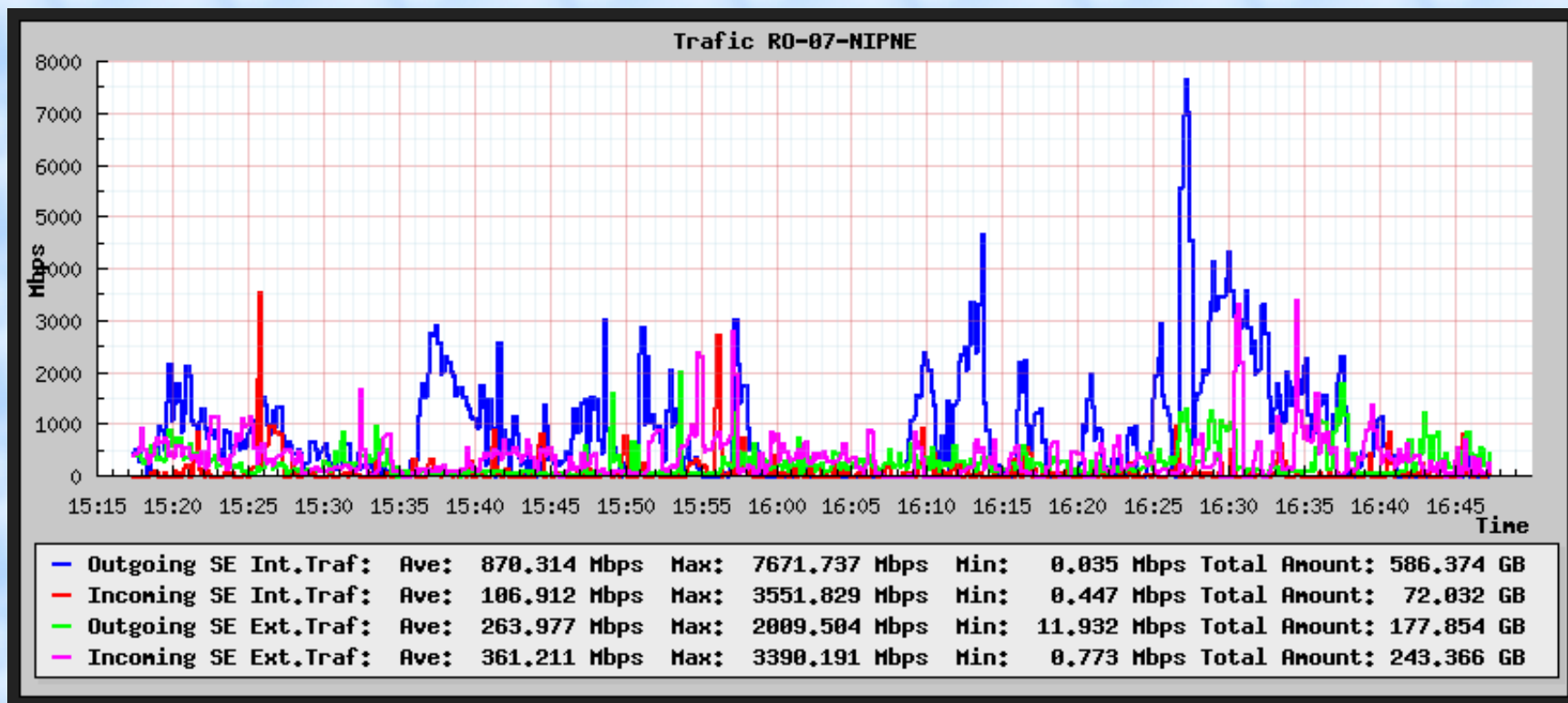
RO-07-NIPNE: GENERAL

- BDII-top: setup a local BDII-top which improved the successful jobs rate
- SQUID server for CVMFS on the WN's gateway
- CVMFS deployed on all worker nodes for ATLAS
- Still having NFS server for ATLAS, ALICE, LHCb and local VO
- VO-BOX installed for ALICE
- WN for ALICE:
 - 28x8 cores – 500GB HDD, 62,5GB/core, 2GB/core
- Deployed a LFC, VOMS, MyProxy and WMS for local VO's

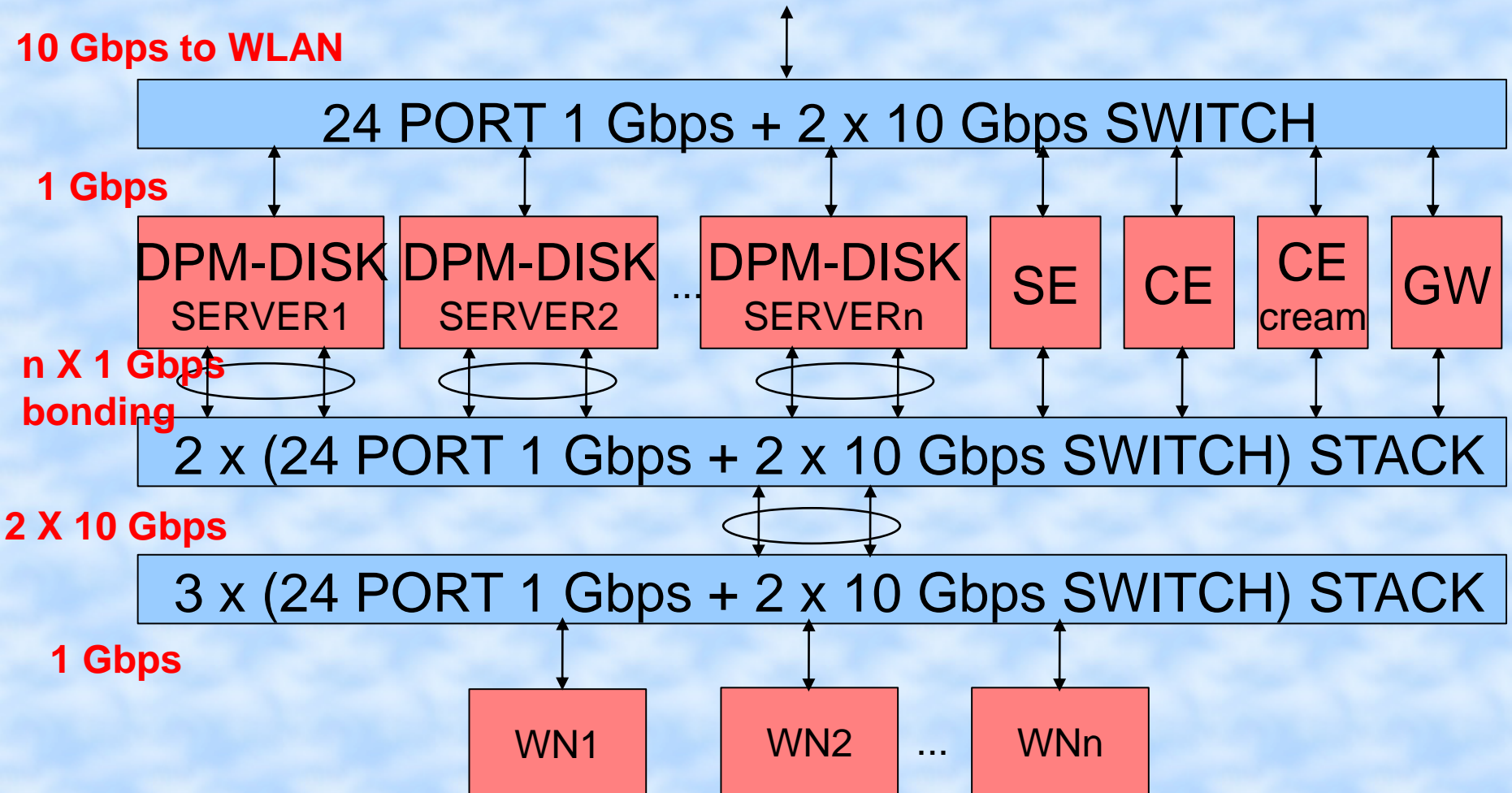
NETWORKING

- WAN link (site) 10 Gbps with the provider (ROEDUNET, (10 Gbps in GEANT).
- CREAM1: 1 Gbps
- CREAM2: 1 Gbps
- SE:
 - internal link (WN's) : minimum 100Mbps/1TB of storage
- WN: 1 Gbps for 8 cores.
- GW: 1 Gbps
- Monitoring the traffic with Cacti and local developed tool

NETWORKING

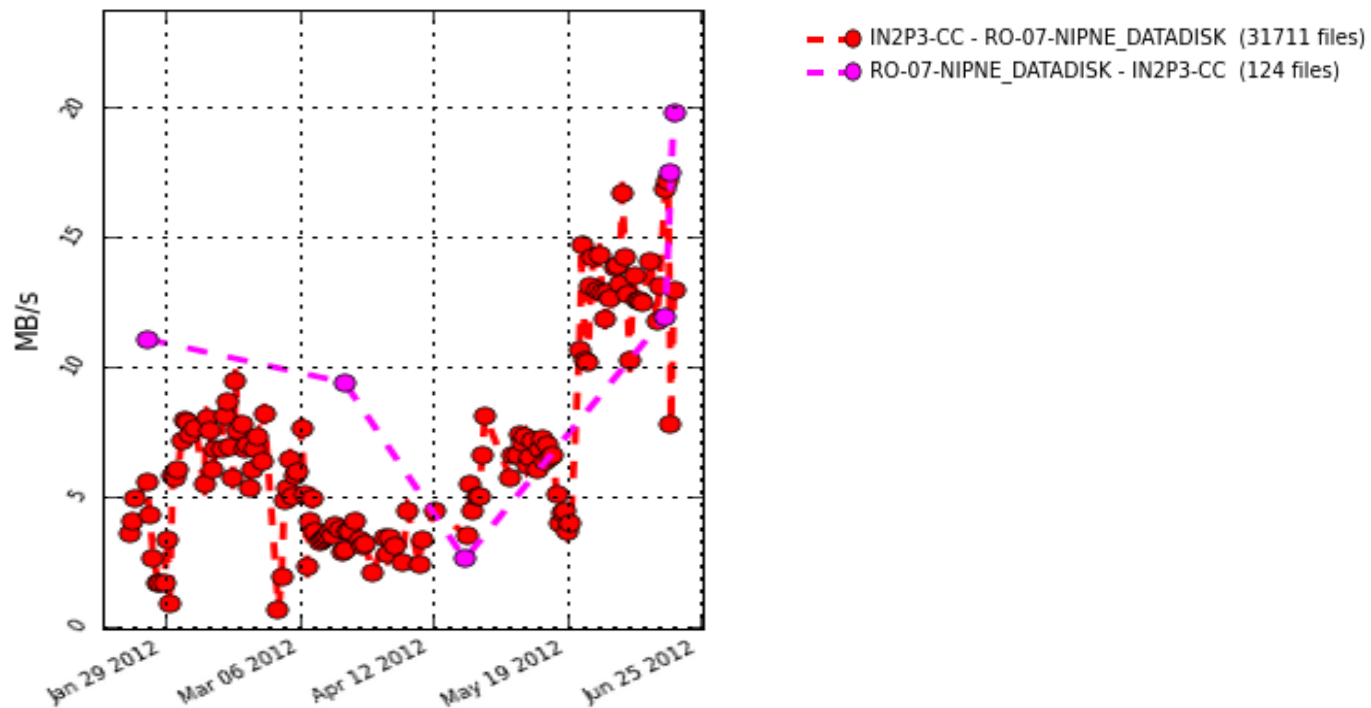


RO-07-NIPNE NETWORK LAYOUT



NETWORKING

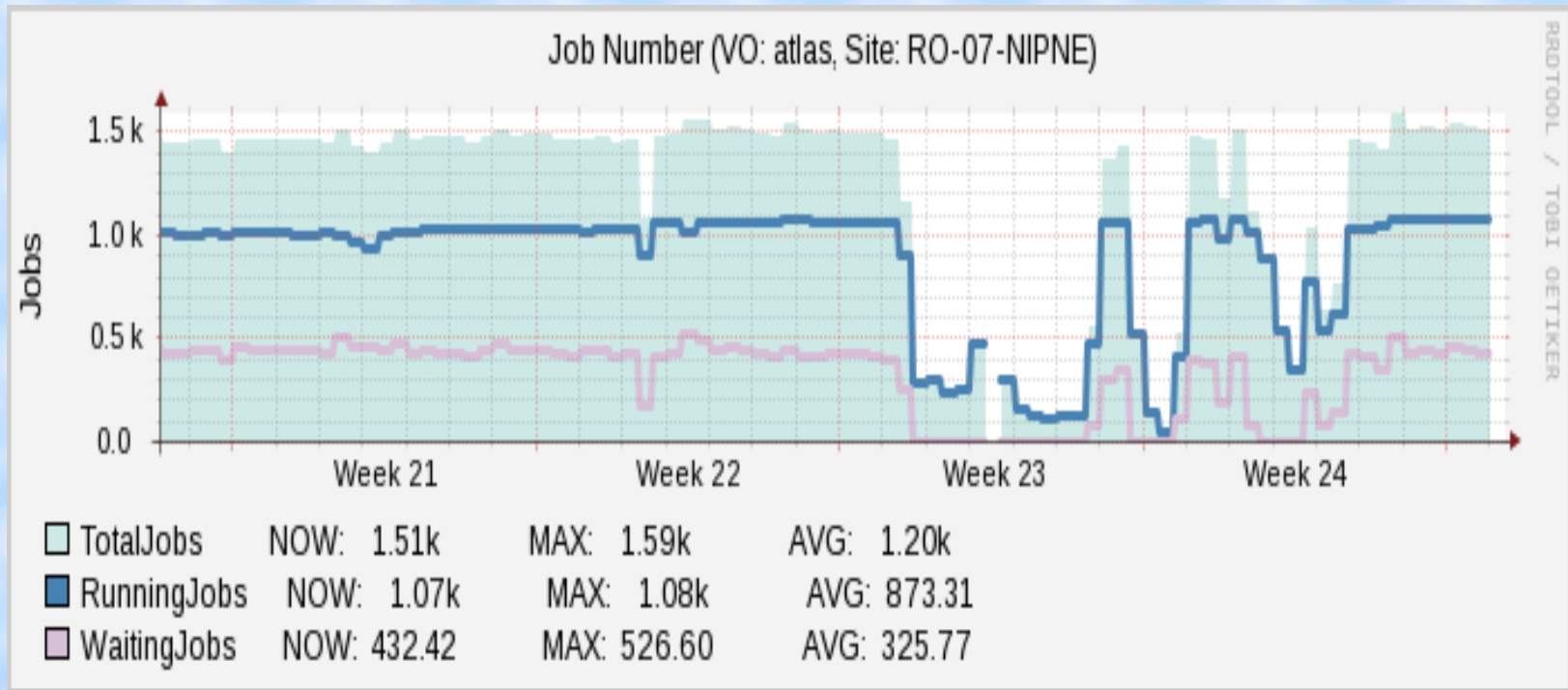
FTS transfer rates



RUNNING JOBS

- Running mostly production jobs - ATLAS and LHCb.
- Running analysis jobs concurrently - maximum 150 simultaneous jobs.
- Maximum ATLAS load: 1090 jobs (May-June).
- Maximum LHCb load 430 jobs (January).

RUNNING JOBS



RUNNING JOBS

EGI Accounting Portal --> EGI View - Mozilla Firefox

accounting.egi.eu/egi.php?ExecutingSite=RO-07-NIPNE&query=normcpu&startYear=2012&startMonth=1&endYear=2012&endMonth=6&

EGI ACCOUNTING PORTAL

GLOBAL View VO MANAGER View VO MEMBER View SITE ADMIN View USER View REPORTS METRICS PORTAL LINKS

Hierarchical Tree

- Tier1
- Tier2
- Countries
- EGI
 - AsiaPacific
 - CERN
 - EGLeu
 - NGI_AEGIS
 - NGI_AL
 - NGI_ARMGRID
 - NGI_BA
 - NGI_BG
 - NGI_BY
 - NGI_CH
 - NGI_CYGRID
 - NGI_CZ
 - NGI_DE
 - NGI_FI
 - NGI_FRANCE
 - NGI_GE
 - NGI_GRNET
 - NGI_HR
 - NGI_HU
 - NGI_IGRGRID
 - NGI_IE
 - NGI_IL

EGI View --> Production

Data to graph: Norm. Sum CPU (kSI2K-hours) Normalised CPU time to a reference value of 1000 Specint2000

Period: Start year: 2012 Start month: 1 End year: 2012 End month: 6

Groupings: Show data for: SITE as a function of: DATE

VO Groups: ☐ LHC ☐ TOP 10 ☒ ALL ☐ Custom

☐ Group the rest of VOs in a new category

VOs: ☐ alice ☐ atlas ☐ dteam ☐ gridfin ☐ hone ☐ lhcb
☐ ops ☐ see ☐ seegrid

Chart: Type: GROUP BAR Scale: LINEAR

dteam VO: ☐ Exclude dteam and ops VOs jobs information

Refresh

[RO-07-NIPNE Normalised CPU time \(kSI2K\) by SITE and DATE.](#)
ALL VOs. January 2012 - June 2012.

The following table shows the distribution of Normalised CPU time (kSI2K) grouped by SITE and DATE.

Normalised CPU time [units 1K.SI2K.Hours] by SITE and DATE								
SITE	Jan 12	Feb 12	Mar 12	Apr 12	May 12	Jun 12	Total	%
RO-07-NIPNE	491,433	264,329	185,646	500,277	601,981	419,088	2,462,754	100.00%
Total	491,433	264,329	185,646	500,277	601,981	419,088	2,462,754	
Percentage	19.95%	10.73%	7.54%	20.31%	24.44%	17.02%		

[Click here for a CSV dump of this table](#)
[Click here for XML encoded data](#)

European Grid Infrastructure

(C) CESGA 2012

RUNNING JOBS

EGI Accounting Portal --> EGI View - Mozilla Firefox

accounting.egi.eu/egi.php?ExecutingSite=RO-07-NIPNE&query=normcpu&startYear=2012&startMonth=1&endYear=2012&endMonth=6&

EGI ACCOUNTING PORTAL

GLOBAL View VO MANAGER View VO MEMBER View SITE ADMIN View USER View REPORTS METRICS PORTAL LINKS

Hierarchical Tree

- Tier1
- Tier2
- Countries
- EGI
 - AsiaPacific
 - CERN
 - EGI.eu
 - NGI_AEGIS
 - NGI_AL
 - NGI_ARMGRID
 - NGI_BA
 - NGI_BG
 - NGI_BY
 - NGI_CH
 - NGI_CYGRID
 - NGI_CZ
 - NGI_DE
 - NGI_FI
 - NGI_FRANCE
 - NGI_GE
 - NGI_GRNET
 - NGI_HR
 - NGI_HU
 - NGI_IBERGRID
 - NGI_IE
 - NGI_IL

EGI View --> Production

Data to graph: Norm. Sum CPU (kSI2K-hours) Normalised CPU time to a reference value of 1000 Specint2000

Period: Start year: 2012 Start month: 1 End year: 2012 End month: 6

Groupings: Show data for: SITE as a function of: VO

VO Groups: ☐ LHC ☐ TOP 10 ☒ ALL ☐ Custom

VOs: ☐ alice ☐ atlas ☐ dteam ☐ gridifin ☐ lhcb ☐ ops ☐ see ☐ seegrid

Chart: Type: GROUP BAR Scale: LINEAR

dteam VO: ☐ Exclude dteam and ops VOs jobs information

Refresh

RO-07-NIPNE Normalised CPU time (kSI2K) by SITE and VO.
ALL VOs. January 2012 - June 2012.

The following table shows the distribution of Normalised CPU time (kSI2K) grouped by SITE and VO.

Normalised CPU time [units 1K_SI2K.Hours] by SITE and VO								
SITE	alice	atlas	dteam	gridifin	lhcb	ops	Total	%
RO-07-NIPNE	26	2,237,306	0	25,942	199,322	158	2,462,754	100.00%
Total	26	2,237,306	0	25,942	199,322	158	2,462,754	
Percentage	0.00%	90.85%	0.00%	1.05%	8.09%	0.01%		

[Click here for a CSV dump of this table](#)
[Click here for XML encoded data](#)

European Grid Infrastructure

(C) CESGA 2012

RUNNING JOBS

EGI Accounting Portal --> EGI View - Mozilla Firefox

accounting.egi.eu/egi.php?Path=1.29&query=normcpu&startYear=2012&startMonth=1&endYear=2012&endMonth=6&yRange=SITE&xRa

EGI ACCOUNTING PORTAL

GLOBAL View VO MANAGER View VO MEMBER View SITE ADMIN View USER View REPORTS METRICS PORTAL LINKS

dteam VO: ☐ Exclude dteam and ops VOs jobs information

Refresh

[NGI_RO Normalised CPU time \(kSI2K\) by SITE and VO.](#)
CUSTOM VOs. January 2012 - June 2012.

The following table lists the sites that have not published accounting data to GOC during the last 3 months. This probably indicates a major problem in the accounting system of the site so listed sites are encouraged to take the appropriate measures to correct it.

sites NOT publishing accounting data to GOC in the last 3 months

Region	Sites

The following table shows the distribution of Normalised CPU time (kSI2K) grouped by SITE and VO (only information about the **selected VOs** is returned).

Normalised CPU time [units 1K.SI2K.Hours] by SITE and VO

SITE	atlas	Total	%
RO-02-NIPNE	878,575	878,575	14.52%
RO-07-NIPNE	2,237,306	2,237,306	36.99%
RO-14-ITIM	1,373,121	1,373,121	22.70%
RO-16-UAIC	1,559,964	1,559,964	25.79%
Total	6,048,966	6,048,966	
Percentage	100.00%		

[Click here for a CSV dump of this table](#)
[Click here for XML encoded data](#)

Pie Chart showing the share in Normalised CPU time (kSI2K) per VO (only information about the **selected VOs** is returned).

Developed by CESGA "EGI View": / normcpu / 2012:1-2012:6 / SITE-VO / custom (x) / GRBAR-LIN / 1

2012-0

NGI_RO Normalised CPU time (kSI2K) per VO

ESI European Grid Infrastructure

(C) CESGA 2012

NGI W3C HTML 4.01

RO-07-NIPNE: MONITORING

- Monitoring tools:
- For sanity check with nagios done with local VO ifops for all the RO-LCG sites
- For services status of RO-07-NIPNE with nagios
- For number of jobs and ksi2k running for RO-07-NIPNE
- For Cooling and UPS(power consumption)
- E-mail alerts regarding network and temperature inside data centers

RO-07-NIPNE: MONITORING

Nagios Core - Mozilla Firefox

N Nagios Core

tbitui.nipne.ro/nagios/

Google

Nagios®

General

- Home
- Documentation

Current Status

- Tactical Overview
- Map
- Hosts
- Services
- Host Groups
 - Summary
 - Grid
- Service Groups
 - Summary
 - Grid
- Problems
 - Services (Unhandled)
 - Hosts (Unhandled)
 - Network Outages

Quick Search:

Reports

- Availability
- Trends
- Alerts
 - History
 - Summary
 - Histogram
- Notifications
- Event Log

System

- Comments
- Downtime
- Process Info
- Performance Info

Current Network Status
Last Updated: Sun Jun 17 11:27:17 EEST 2012
Updated every 90 seconds
Nagios® Core™ 3.2.3 - www.nagios.org
Logged in as rokg

[View Service Status Detail For All Host Groups](#)
[View Status Overview For All Host Groups](#)
[View Status Summary For All Host Groups](#)
[View Status Grid For All Host Groups](#)

Host Status Totals

Up	Down	Unreachable	Pending
15	0	0	0

Service Status Totals

Ok	Warning	Unknown	Critical	Pending
167	0	0	0	0

Host Status Details For All Host Groups

Host ↑↓	Status ↑↓	Last Check ↑↓	Duration ↑↓	Status Information
on-se1.itm-ci.ro	UP	06-17-2012 11:23:27	16d 16h 19m 50s	PING OK - Packet loss = 0%, RTA = 11.38 ms
cream.itm-ci.ro	UP	06-17-2012 11:24:27	16d 16h 20m 0s	PING OK - Packet loss = 0%, RTA = 7.97 ms
grid-ce.hutcb.ro	UP	06-17-2012 11:25:27	0d 9h 57m 50s	PING OK - Packet loss = 0%, RTA = 0.73 ms
grid-se.hutcb.ro	UP	06-17-2012 11:23:07	0d 9h 57m 20s	PING OK - Packet loss = 0%, RTA = 0.79 ms
lhc-b-ce.nipne.ro	UP	06-17-2012 11:24:57	31d 19h 38m 18s	PING OK - Packet loss = 0%, RTA = 0.16 ms
lhc-b-se.nipne.ro	UP	06-17-2012 11:25:17	5d 21h 22m 20s	PING OK - Packet loss = 0%, RTA = 0.12 ms
se-grid.uaic.ro	UP	06-17-2012 11:22:37	16d 16h 20m 0s	PING OK - Packet loss = 0%, RTA = 5.95 ms
seql.nipne.ro	UP	06-17-2012 11:24:07	36d 22h 9m 18s	PING OK - Packet loss = 0%, RTA = 0.11 ms
tbat01.nipne.ro	UP	06-17-2012 11:22:57	28d 1h 30m 45s	PING OK - Packet loss = 0%, RTA = 0.21 ms
tbat03.nipne.ro	UP	06-17-2012 11:24:27	28d 1h 30m 45s	PING OK - Packet loss = 0%, RTA = 0.10 ms
tbat05.nipne.ro	UP	06-17-2012 11:24:07	9d 14h 53m 20s	PING OK - Packet loss = 0%, RTA = 0.11 ms
tbat00.nipne.ro	UP	06-17-2012 11:25:07	31d 23h 6m 18s	PING OK - Packet loss = 0%, RTA = 0.17 ms
tbat01.nipne.ro	UP	06-17-2012 11:24:57	45d 0h 2m 28s	PING OK - Packet loss = 0%, RTA = 0.19 ms
tbat03.nipne.ro	UP	06-17-2012 11:25:07	40d 19h 55m 18s	PING OK - Packet loss = 0%, RTA = 0.15 ms
tbat06.nipne.ro	UP	06-17-2012 11:24:57	45d 0h 2m 28s	PING OK - Packet loss = 0%, RTA = 0.13 ms

15 Matching Host Entries Displayed

RO-07-NIPNE: MONITORING

Nagios Core - Mozilla Firefox

N Nagios Core

tbitui.nipne.ro/nagios/

Nagios®

General

- Home
- Documentation

Current Status

- Tactical Overview
- Map
- Hosts
- Services
- Host Groups
 - Summary
 - Grid
- Service Groups
 - Summary
 - Grid
- Problems
 - Services (Unhandled)
 - Hosts (Unhandled)
 - Network Outages

Quick Search:

Reports

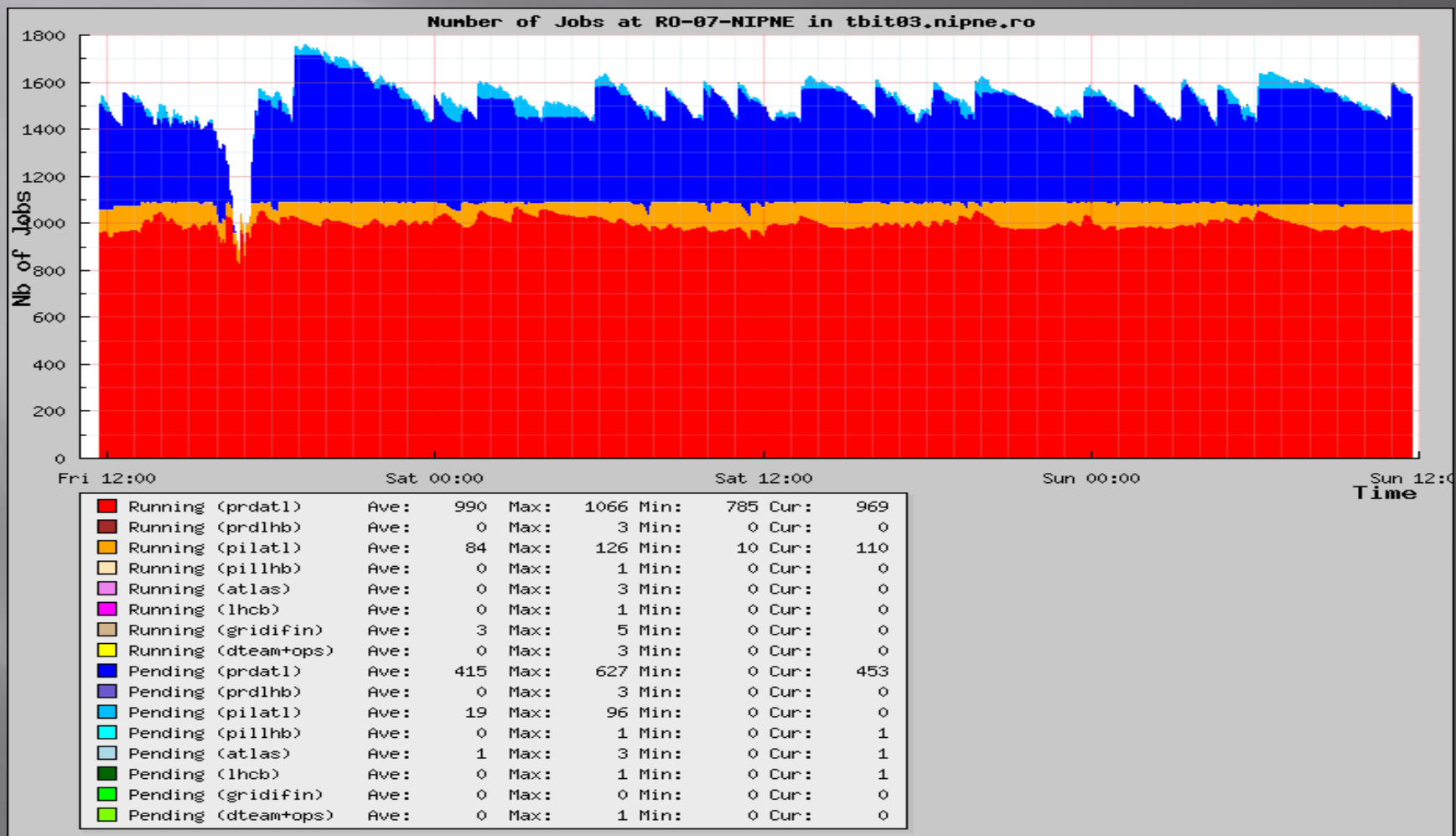
- Availability
- Trends
- Alerts
 - History
 - Summary
 - Histogram
- Notifications
- Event Log

System

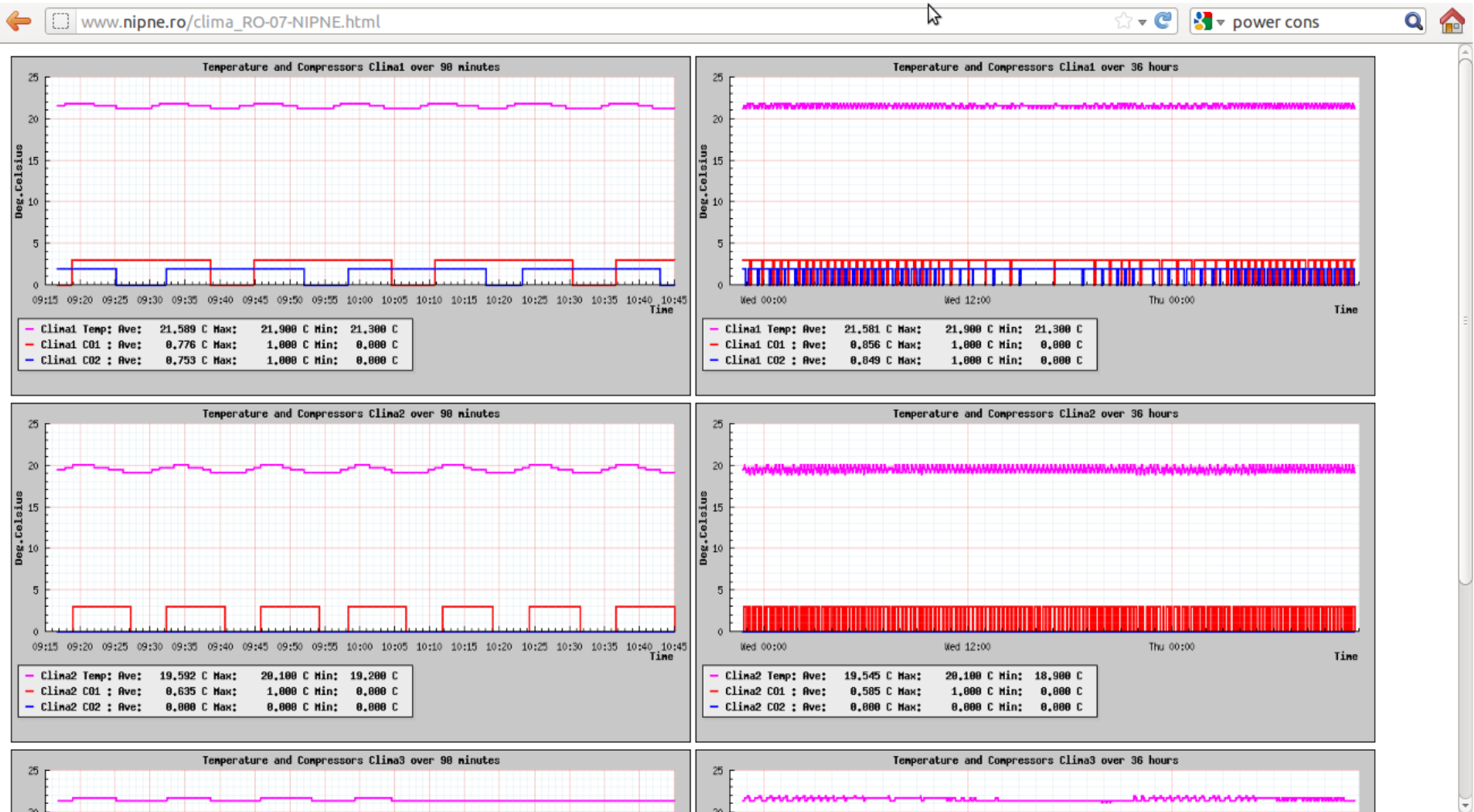
- Comments
- Downtime
- Process Info
- Performance Info

tbit00.nipne.ro	org.sam.SRM-All-/fops/Role-lcadmin	OK	06-17-2012 11:26:44	3d 14h 55m 27s	1/3	OK: Success. [Sun Jun 17 10:25:43 EEST 2012]
	org.sam.SRM-Del-/fops/Role-lcadmin	OK	06-17-2012 11:25:45	15d 23h 2m 26s	1/3	OK: File was deleted from SRM.
	org.sam.SRM-Get-/fops/Role-lcadmin	OK	06-17-2012 11:25:45	15d 23h 2m 26s	1/3	OK: File was copied from SRM. Diff successful.
	org.sam.SRM-GetURLs-/fops/Role-lcadmin	OK	06-17-2012 11:25:45	15d 23h 2m 26s	1/3	OK: Got SRM endpoint(s) and Storage Path(s) from BDII
	org.sam.SRM-GetURLs-/fops/Role-lcadmin	OK	06-17-2012 11:25:45	15d 23h 2m 26s	1/3	OK: protocols OK-[rfio, gsiftp]
	org.sam.SRM-Ls-/fops/Role-lcadmin	OK	06-17-2012 11:25:45	15d 23h 2m 26s	1/3	OK: listing [/dpm/nipne.ro/home/fops/testfile-put-1339917943-6c38f73cf3a5.txt]-ok:
	org.sam.SRM-LsDir-/fops/Role-lcadmin	OK	06-17-2012 11:25:45	15d 23h 2m 26s	1/3	OK: Storage Path[/dpm/nipne.ro/home/fops]-ok:
	org.sam.SRM-Put-/fops/Role-lcadmin	OK	06-17-2012 11:25:45	15d 23h 2m 26s	1/3	OK: File was copied to SRM.
	ro.nipne.SRM-CertLifetime	OK	06-17-2012 11:27:45	28d 1h 18m 26s	1/3	CERT LIFETIME OK - Certificate will expire in 312 days.
tbit01.nipne.ro	hr.srce.CADist-Check-/fops/Role-lcadmin	OK	06-17-2012 11:25:45	13d 23h 56m 26s	1/3	wn1.nipne.ro: OK ! CA DIST OK - The official version is 1.48. Using AACertificateServices to get CA distribution version. CA distribution is correctly installed.
	org.sam.CE-JobState-/fops/Role-lcadmin	OK	06-17-2012 11:27:48	0d 14h 57m 23s	1/3	OK: Running - Submitted [2012-06-17T10:20:36]
	org.sam.CE-JobSubmit-/fops/Role-lcadmin	OK	06-17-2012 11:26:50	3d 23h 4m 22s	1/3	OK: success.
	org.sam.WN-Csh-/fops/Role-lcadmin	OK	06-17-2012 11:26:44	397d 23h 25m 4s	1/3	wn1.nipne.ro: OK
	org.sam.WN-Rep-/fops/Role-lcadmin	OK	06-17-2012 11:26:44	33d 19h 36m 32s	1/3	wn1.nipne.ro: OK
	org.sam.WN-RepCr-/fops/Role-lcadmin	OK	06-17-2012 11:26:44	33d 19h 36m 32s	1/3	wn1.nipne.ro: OK: File was copied to SE and registered in LFC /fops.nipne.ro, CLI
	org.sam.WN-RepDel-/fops/Role-lcadmin	OK	06-17-2012 11:26:44	33d 19h 36m 32s	1/3	wn1.nipne.ro: OK: Replicas for [/fops/grid/fops/SAM/sam-log-rm-cr-wn1.nipne.ro.120617072104.9273476] were deleted. CLI
	org.sam.WN-RepFree-/fops/Role-lcadmin	OK	06-17-2012 11:26:44	36d 21h 33m 32s	1/3	wn1.nipne.ro: OK: ok
	org.sam.WN-RepGet-/fops/Role-lcadmin	OK	06-17-2012 11:26:44	33d 19h 36m 32s	1/3	wn1.nipne.ro: OK. File was copied from SRM. Diff successful. CLI
	org.sam.WN-RepSenv-/fops/Role-lcadmin	OK	06-17-2012 11:26:45	397d 23h 25m 4s	1/3	wn1.nipne.ro: OK: LCG_GFAL_INFOSYS is set to bdii.nipne.ro
	org.sam.WN-RepRep-/fops/Role-lcadmin	OK	06-17-2012 11:26:44	33d 19h 36m 32s	1/3	tbit01.nipne.ro
	org.sam.WN-SoftVer-/fops/Role-lcadmin	OK	06-17-2012 11:26:45	397d 23h 25m 4s	1/3	wn1.nipne.ro: OK: 3.2.0
	ro.nipne.CE-CertLifetime	OK	06-17-2012 11:26:45	15d 0h 16m 26s	1/3	CERT LIFETIME OK - Certificate will expire in 298 days.
tbit03.nipne.ro	hr.srce.CADist-Check-/fops/Role-lcadmin	OK	06-17-2012 11:26:45	54d 20h 16m 20s	1/3	wn90.nipne.ro: OK ! CA DIST OK - The official version is 1.48. Using AACertificateServices to get CA distribution version. CA distribution is correctly installed.

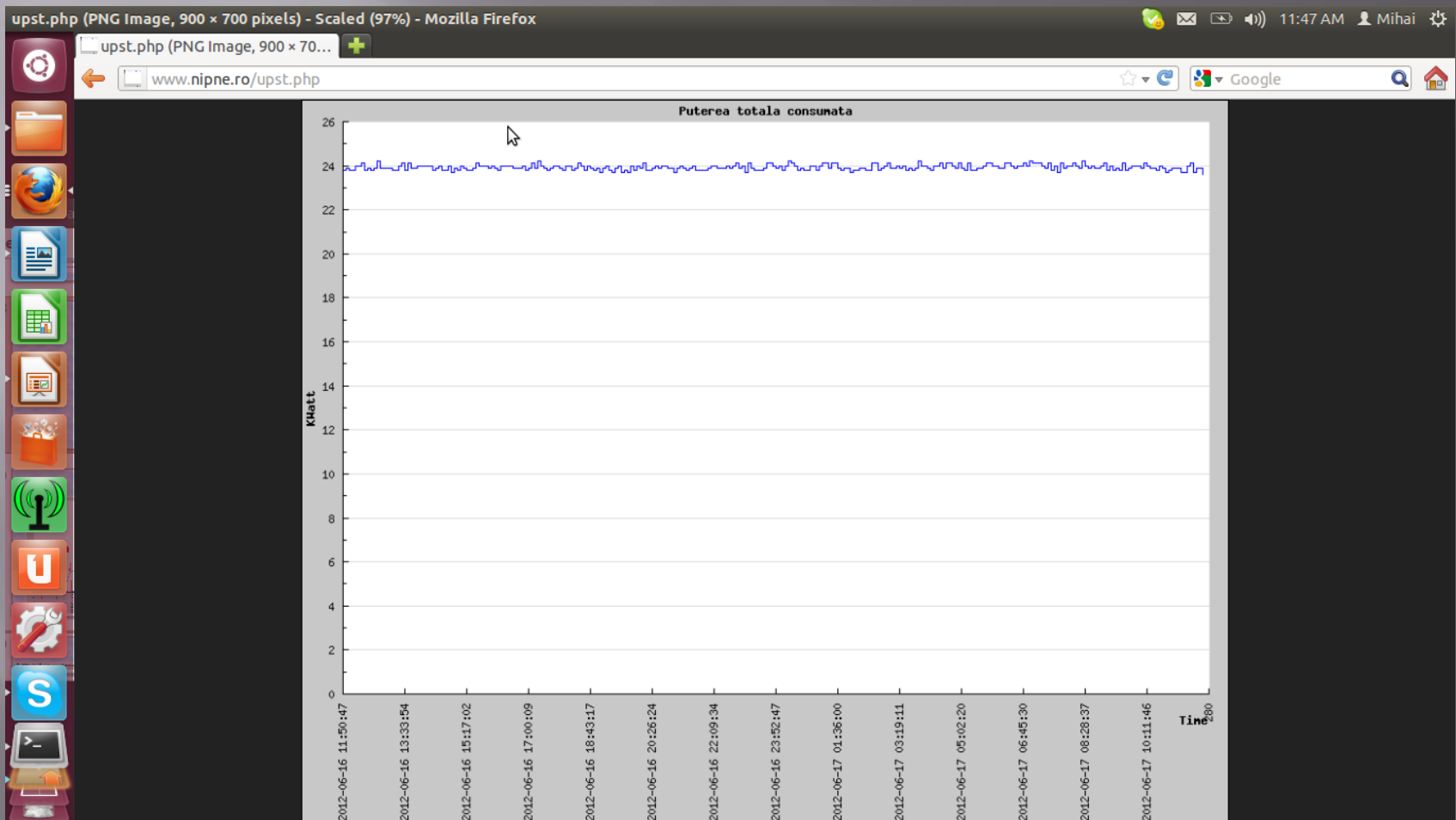
RO-07-NIPNE: MONITORING



RO-07-NIPNE: MONITORING



RO-07-NIPNE: MONITORING



RO-07-NIPNE: MONITORING

Conclusions:

- February, March and April lots of network problem – independently of our Instiut
- End of April, beginning of May – power network problem in the data center
- Facing a new type of problem – if a DPM-disk dies, dies also the dpm deamon on the DPM-MySQL server
- More stable from beginning of May
- Never ran more than 150 analy jobs simultaneously , why?
- Power consumption in our data centers(there is also a Parallel Computing cluster) with 1100 jobs running: 120KWh

RO-07-NIPNE

THANK YOU!

On behalf of
Serban Constantinescu
Teodor Ivanoaica
Mihai Ciubancan