

YerPhl cluster current status

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Contents

- GRID at YerPhI
- Configuration of WNs
- Configuration of SE
- Configuration of CE
- Alice, Atlas VO support in YerPhi cluster and expansion of EGI integration.
- Last month monitoring results



During last two years there were implemented several projects in Yerphi for setup computer cluster and for Grid infrastructure development and deployment.

ISTC“A-1606 Development of Armenian-Georgian Grid Infrastructure and Applications in the Fields Energy Physics, Astrophysics and Quantum Physics (01.11.2008 -30.10.2010)”

In the framework of above mentioned project a computer cluster has been deployed in Yerphi with the following specification:

**1x Computing Element: 2 Processor Dell PE1950 III Dual-Core Xeon E5205
1.86GHz**

**1x Storage Element: 2 Processor Dell PE1950 III Dual-Core Xeon E5205 1.86GHz +
1TBHDD**

6 x Worker Node: 2 Processor Dell PE1950 III Quad-Core Xeon E5420.5GHz

Total number of CPUs on worker nodes: 48 CPU

Total storage size: 1 TB

**With the help of our German partners from DESY we are received additional 80 servers with the following specification: AMD Opteron 2,5GH 2x processores,
RAM 4GB HDD 80GB**

Situation in Armenia: ArmNGI

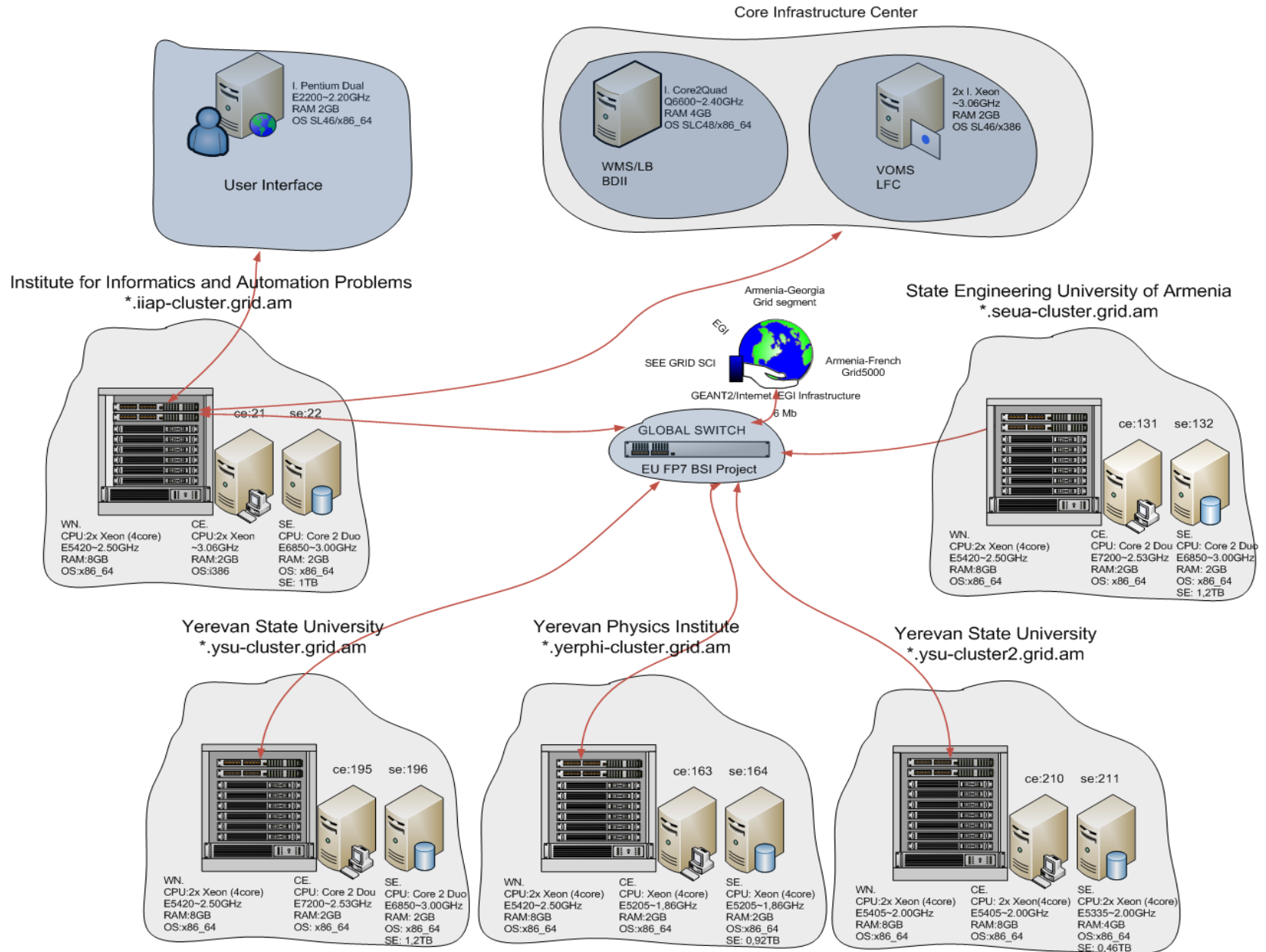
- Creation of Armenian Grid Joint Research Unit. Agreement signed in September 2007
- Armenian National Grid Initiative Foundation, Kick-off meeting 31 October 2008.



- State Scientific Committee of the Ministry of Education and Science
- National Academy of Sciences
- State Engineering University of Armenia
- Yerevan State University
- Yerevan Physics Institute after A. Alikhanian
- Institute for Informatics and Automation Problems of the National Academy of Sciences
- Armenian e-Science Foundation

Armenian National Grid Initiative

GRID-AM / 93.187.165/255(Registered in the RIPE Database)



User Interface

- 1. Pentium Dual
- E2200~2.20GHz
- RAM:2GB
- OS:SL46/x86_64

Core Infrastructure Center

- WMS/LB BDII**
 - 1. Core2Quad
 - Q6600~2.40GHz
 - RAM:4GB
 - OS:SLC48/x86_64
- VOMS LFC**
 - 2x 1. Xeon
 - ~3.06GHz
 - RAM:2GB
 - OS:SL46/x386

Institute for Informatics and Automation Problems
*.iiap-cluster.grid.am

ce:21 se:22

WN.	CE.	SE.
CPU:2x Xeon (4core)	CPU:2x Xeon	CPU: Core 2 Duo
E5420~2.50GHz	~3.06GHz	E6850~3.00GHz
RAM:8GB	RAM:2GB	RAM: 2GB
OS:x86_64	OS:i386	OS: x86_64
		SE: 1TB

State Engineering University of Armenia
*.seua-cluster.grid.am

ce:131 se:132

WN.	CE.	SE.
CPU:2x Xeon (4core)	CPU: Core 2 Dou	CPU: Core 2 Duo
E5420~2.50GHz	E7200~2.53GHz	E6850~3.00GHz
RAM:8GB	RAM:2GB	RAM: 2GB
OS:x86_64	OS: x86_64	OS: x86_64
		SE: 1,2TB

Yerevan State University
*.ysu-cluster.grid.am

ce:195 se:196

WN.	CE.	SE.
CPU:2x Xeon (4core)	CPU: Core 2 Dou	CPU: Core 2 Duo
E5420~2.50GHz	E7200~2.53GHz	E6850~3.00GHz
RAM:8GB	RAM:2GB	RAM: 2GB
OS:x86_64	OS: x86_64	OS: x86_64
		SE: 1,2TB

Yerevan Physics Institute
*.yerphi-cluster.grid.am

ce:163 se:164

WN.	CE.	SE.
CPU:2x Xeon (4core)	CPU: Xeon (4core)	CPU: Xeon (4core)
E5420~2.50GHz	E5205~1.86GHz	E5205~1.86GHz
RAM:8GB	RAM:2GB	RAM:2GB
OS:x86_64	OS:x86_64	OS:x86_64
		SE: 0,92TB

Yerevan State University
*.ysu-cluster2.grid.am

ce:210 se:211

WN.	CE.	SE.
CPU:2x Xeon (4core)	CPU: 2x Xeon(4core)	CPU:2x Xeon (4core)
E5405~2.00GHz	E5405~2.00GHz	E5335~2.00GHz
RAM:8GB	RAM:8GB	RAM:4GB
OS:x86_64	OS:x86_64	OS:x86_64
		SE: 0,46TB

Current configuration

- 8 physical nodes

- 6 worker nodes (8 core each)

2 Processor Dell PE1950 III Quad-Core Xeon E5420.5GHz

- 1 CE (Computing Element) node (4 cores)

2 Processor Dell PE1950 III Dual-Core Xeon E5205

- 1 SE (Storage Element) node (4 core)

2 Processor Dell PE1950 III Dual-Core Xeon E5205

Connected via armgrid network to geant2 with
dedicated 6Mb/s link

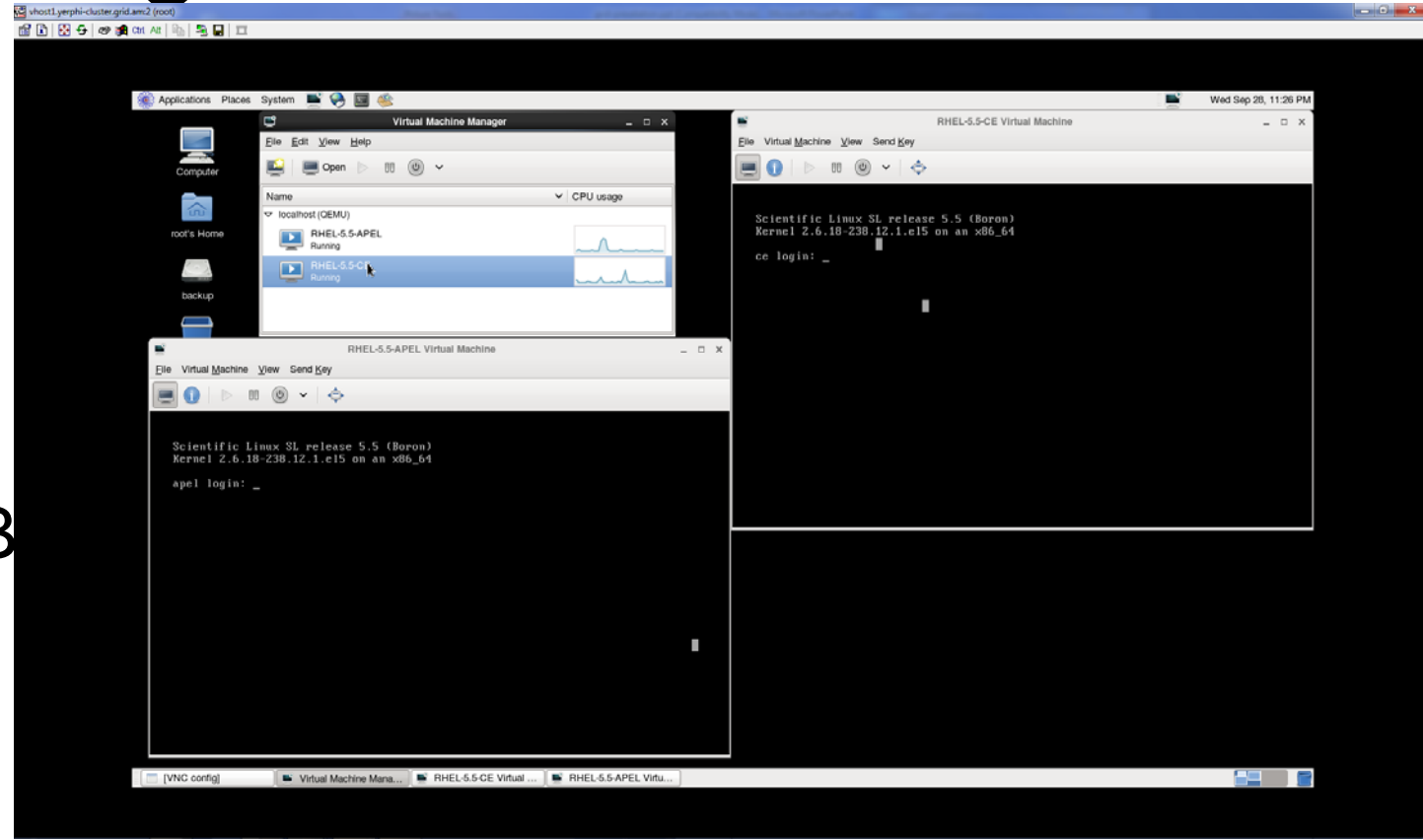
Configuration of WNs

- Description
- Hardware
 - Memory - 8GB
 - Disk – 160GB
 - Cpu – 8 cores
- Os & software (middleware)
 - SLC 5
 - gLite 3.2: glite-WN

Configuration of SE

- Description
- Hardware
 - Memory – 2GB
 - Disk – 2TB
 - Cpu – 4 core
- Os & software (middleware)
 - SLC 4
 - Glite-3.1: glite-SE_dpm_mysql

Configuration of CE



- Description
- Hardware
 - Memory – 2GB
 - Disk – 160GB
 - Cpu – 4 cores
- Os & software (middleware)
 - KVM-QEMU Virtualization
 - base system SL6
 - virtual system-1 (SL5) CE-CREAM
 - virtual system-2 (SL5) APEL,BDII

- Alice, Atlas VO support in YerPhi cluster and expansion of EGI integration.
- Last month monitoring results

Thank You