

# OCHEP DOSAR STATUS

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## OCHEP Tier 2 Hardware

- 40 Node (80 CPU) 3.2 GHz Xeon-64, with 4 TB storage
- DDN/IBRIX storage – add. 15 TB on order
- ROCKS 3.3 installed on cluster
- OSG 0.4.0 and DDM/DQ2 0.2.1 installed
- Used for PanDA production and OSG integration
- New hardware (20 dual-quad nodes) will be added soon



# OCHEP Tier 2 Status

Ganglia Cluster Toolkit: Cluster Report

https://tier2-01.ochepou.edu/ganglia/?c=Tier2-01&m=&r=hour&s=desc...Ganglia Cluster Toolkit: Cluster Report

https://tier2-01.ochepou.edu/ganglia/?c=Tier2-01&m=&r=hour&s=desc...



Cluster Report for Fri, 5 May 2006 21:30:43 -0500

Get Fresh Data



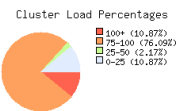
Metric  Last  Sorted  Physical View

OCHEP Grid > Tier2-01 >

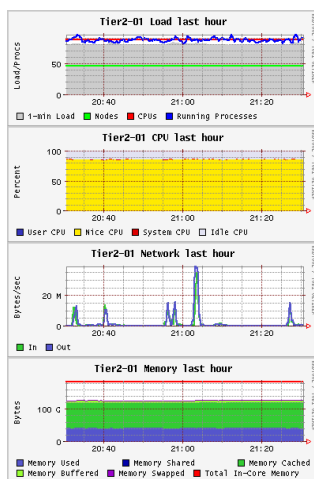
CPUs Total: 88  
Hosts up: 46  
Hosts down: 0

Avg Load (15, 5, 1m): 92%, 92%, 91%  
Localtime: 2006-05-05 21:30

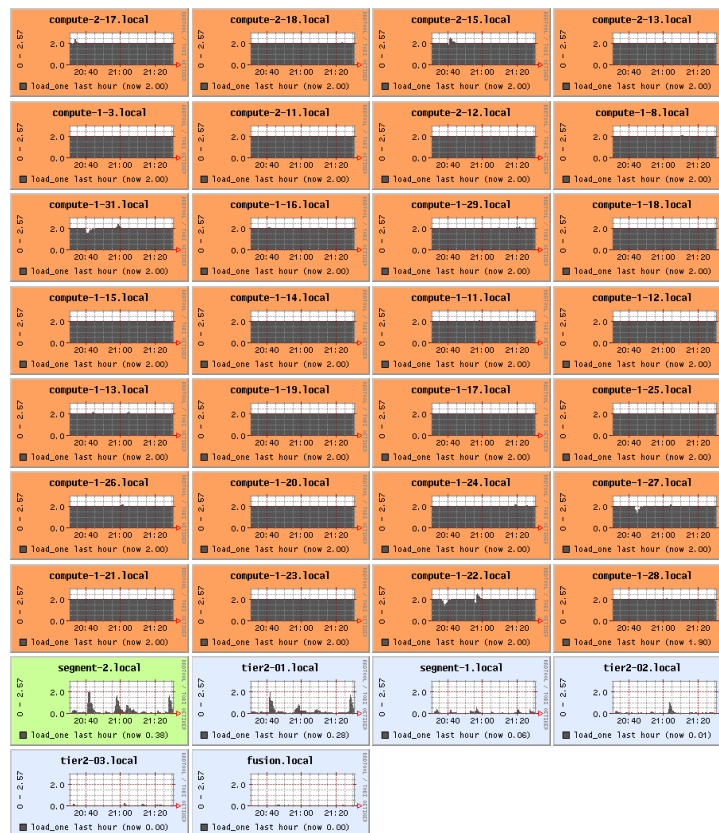
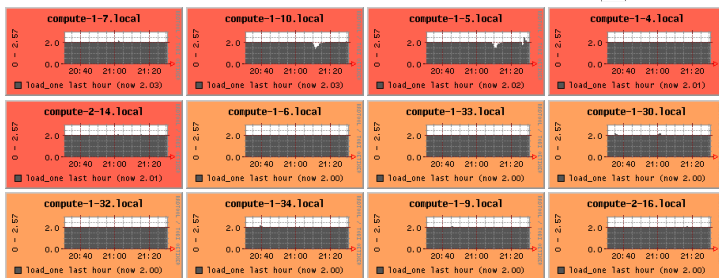
Rocks Tools: [Job Queue](#) | [Cluster Top](#) | [Gmetrics](#)



Overview of Tier2-01



Show Hosts: yes  no  | Tier2-01 load\_one last hour sorted descending | Columns 4



(Nodes colored by 1-minute load) | Legend

Gmetad Web Frontend version 2.5.7 [Check for Updates](#).  
Gmetad Web Backend (gmetad) version 2.5.7 [Check for Updates](#).  
Downloading and parsing ganglia's XML tree took 0.0648s.  
Images created with [RRDTool](#).



## Other OUHEP and LUHEP Resources

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- **OUHEP: 32 Node (42 CPU)  $\approx$  2 GHz PIII/P4, 4.5 TB storage**
  - OSG Production site, OSG Integration site, SAMGrid Execution site, OUHEP SAM station, OSG SAM station, and DDM/DQ2 and dCache site service
  - Used for DØ SAMGrid production, ATLAS PanDA, and OSG and SAMGrid integration testing, and local theory calculations
- **LUHEP: 10 Node (14 CPU)  $\approx$  2 GHz PIII/P4, 2.5 TB storage**
  - SAMGrid Execution site and SAMGrid Submission site
  - Used for DØ SAMGrid production



## Other OU Resources

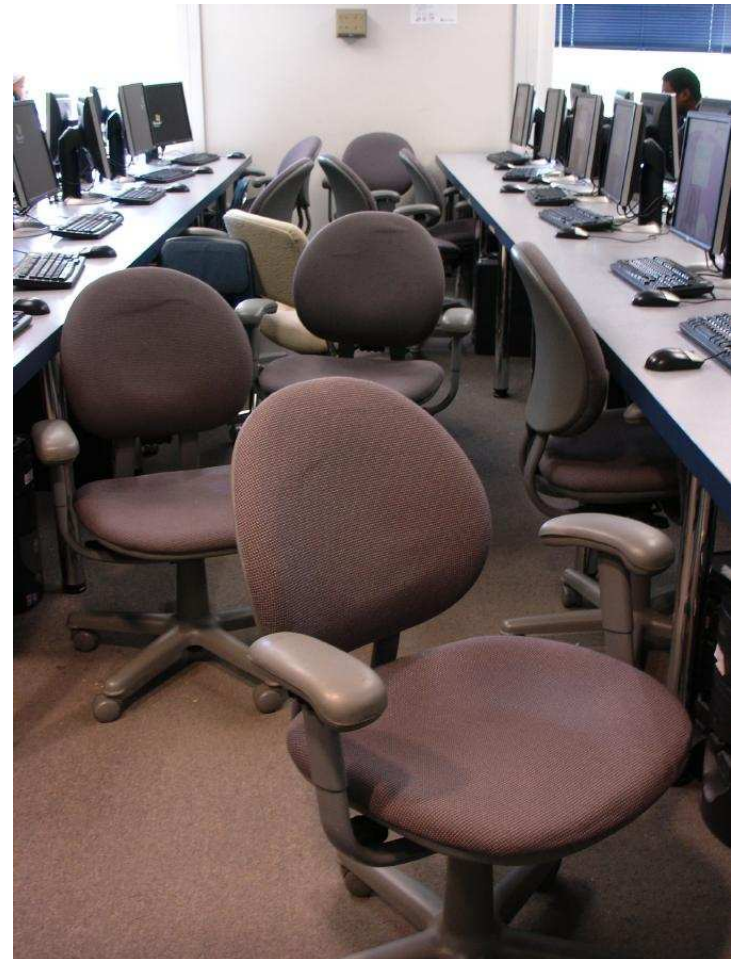
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- Old OSCER cluster, boomer: 135 Node (270 CPU) 2 GHz Xeon, 5 TB storage; currently down for machine room expansion
- Then take over boomer for primary DØ data processing and MC production
- Current OSCER cluster, topdawg: 512 Node (1024 CPU) 3.2 GHz Xeon-64, 10 TB storage; used for ATLAS Tier 2 and DØ computing as available



## OU Condor Pool

- 160 Node Condor Pool
- 3.0 GHz P4, 1 GB RAM, 40 GB HD, 100 Mbps network
- Distributed over Campus PC labs
- Originally Switched from Win2K to RHEL4
- Added VMWare 5.5 + WinXP, and Condor 6.7
- Now switched back to WinXP and CoLinux and Condor



## OU Condor Pool (cont.)

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- Central Manager: 2.8 GHz P4, 2 GB RAM, 250 GB HD, 1000 Mbps network (Henry's desktop)
- Special Condor configuration necessary because PC labs are on private Network
- Special Firewall settings and DNS lookup (forward and reverse)
- Nodes imaged by IT with GHOST-like software
- All 750 Campus lab PCs to be included by Summer
- Central Manager also Globus Gatekeeper
- OSG 0.6.0 with modified NFS-lite Condor jobmanager installed
- Reporting Pool Size and VO Jobs to MonALISA Repository



Open Science Grid Monitoring with MonALISA

http://monalisa.grid.iu.edu:8080/display

MonALISA Repository  
**OSG**



**MonALISA Client**  
Click on the button below to start the Monalisa Client.

MonALISA Repository

- Interactive map
- Jobs
  - VO aggregation
  - Site aggregation
  - Sites per VO
  - VOs per site
  - Statistics
- Accounting
- Site views
- Networking
- Sites status
- Repository info

close all

[OSG Reports](#)

[ABPing Configuration](#)

[Site Administration](#)

[Layout configuration](#)

[Bookmark this page \(url\)](#)

**Sites :** (check all | uncheck all)

ATLAS  
  CDF  
  CMS  
  DES  
  DOSAR  
  DZERO  
  FERMI LAB  
  FMFI  
  GADU  
  GEANT4  
  GLOW  
  GRASE  
  GRIDEX  
  GROW  
  I2U2  
  MDGL  
  LIGO  
  MARIACHI  
  MIS  
  NANO HUB  
  OSG  
  OSGEDU  
  SDSS  
  STAR

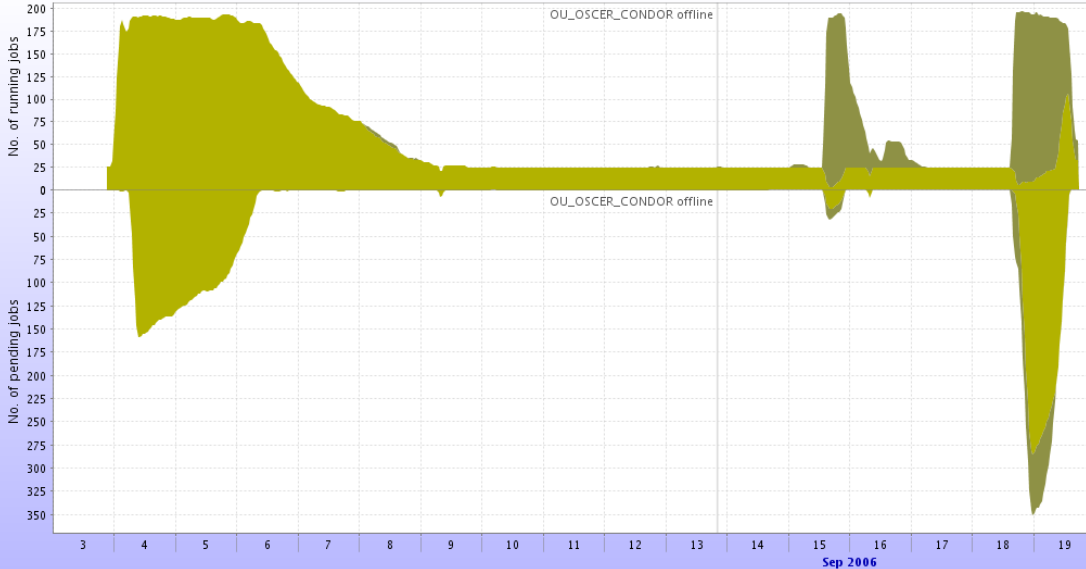
Interval selection: - choose - or «  21:00 -  18:00 »

Select Farm:       Annotations:  visible            Image size:

Graphs:  Running Jobs    Pending Jobs (check all | uncheck all)

[Annotations](#) [Chart description](#)

### Jobs for OU\_OSCER\_CONDOR



Farm	Last value	Min	Avg	Max
DOSAR	33	2	59.27	195
DZERO	21	0	16.83	194
<b>Total</b>	<b>54</b>		<b>76.09</b>	

Farm	Last value	Min	Avg	Max
DOSAR	0	0	25.57	287
DZERO	0	0	2.868	79
<b>Total</b>	<b>0</b>		<b>28.43</b>	





## OU Network

- OU connected to NLR via OneNet
- OU Campus backbone at 10 Gbps
- OU to OneNet and OneNet to NLR fiber capable of 10 Gbps
- Network hardware supposedly setup for 10 Gbps – need to test



- Network Traffic to and from most important end points routed through NLR

## Current Activities

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- DOSAR/Condor
  - Pool has been used for local DOSAR jobs since last year
  - Reported to MonALISA Repository as DOSAR VO Jobs
  - Jobs submitted locally because users not yet familiar with Grid procedures
  - Pool certified for DØ SAMGrid production
  - Started official production this past fall

## Future Plans

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- **DOSAR/Condor**
  - Expand Condor Pool Usage
  - Continue using it for DØ SAMGrid production
  - Educate local users about OSG interface
  - Then teach them to submit to other OSG resources
- **ATLAS**
  - Continue to use Tier 2 cluster for OSG and PanDA ops
  - Upgrade to ROCKS 4 and OSG 0.6.0
  - Add more hardware, especially storage
  - Install/configure GUMS and implement role based auth.



## Future Plans (cont.)

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- Continue utilizing new OSCER cluster, topdawg
- DØ SAMGrid production since last fall, ATLAS still awaiting remote DQ2 operations – very close
- Continue SAMGrid/OSG integration activities (OUHEP/OCHEP/OSCER)
- Take over boomer to do primary DØ data processing, but continue to use for ATLAS computing as available
- SMU and UTD planning to add Tier 3 Clusters to Effort



## Summary/Outlook

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- OU is in very good position for Grid Computing
- Lots of Hardware, Networking coming along nicely
- Both DOSAR and ATLAS (and DØ) efforts well under way
- Making very good progress
- Much more work to do

