

Jet User Meeting

21 July 2010

Overview

- Updates
- Current Schedule
- Moving wJet/hJet models to new OS
- Jetty decommission

Updates

- New service nodes arrived July 16th
- Three (of 13) racks of tJet arrived July 19th
- OS Upgrade to nJet to be executed July 22nd at 8am
 - Testing has shown that existing codes will run without issue
 - If you are not using the default packages on the system, you may run into issues
 - Please try the default packages before using alternates.
- /lfs1 capacity upgrade completed July 15th
 - We may need one additional downtime to resolve a performance issue

Current Schedule

Date	Event	Duration
22 July	Upgrade nJet OS	2 hours
26 July	Reboot njet,ncron1 (new host names fe1 and cron1)	2 hours
One day of 10-12 Aug	Final Test of facilities work to support upgrade	4 hours (tJet 8 hours)
27-29 Aug	Benchmarking and System Testing	3 days
1 Sept	**Decommission wJet Front Ends	
13 Sept	Decommission wJet	

System Resources

Allocations by projects after upgrade

System	RDHPCS	HFIP	FAA	Total
hJet	2016			2016
nJet	1372	472	1736	3584
tJet		10128		10128

Number of cores available to each project per system.

Total system performance: 170 Tflops

Migrating to new OS image

- For nJet users
 - No changes nor recompilation required
 - It is recommended that you recompile your codes as soon as possible
- For wJet users
 - It is necessary to rebuild your codes
 - Steps to build codes do not change on the new OS
 - You will need to move your crontabs to the new cron servers when they are available
 - We will be publishing documentation very soon
 - More to follow

Migrating from wJet

- New PE exists on hJet for running on the new OS image
- Temporarily, use the new cron (cron1) and front end (fe1) nodes
 - Ssh to the nodes by name after logging into Jet
 - These nodes have 3-10x the performance of the existing front end nodes
 - Over the next few weeks we will be replacing all of the cron and front end servers
- The new cron1/fe1 servers will be available July 26th for use.

Migration for w/hJet

- System size of hJet will be dynamically increased as more users use the new OS image
 - wJet may be converted as necessary to provide needed computational resources prior to decommissioning
- For real-time users
 - Test your binaries on the new image
 - Email help system and coordinate with Jet team to move reservations from wJet to hJet under the new OS image

Front-End/Cron Server Migration

- The front-end nodes (wfe0-wfe2,wfe5-wfe7) and the cron servers (wcron0,wcron1,ncron) will be replaced
 - New front-end servers (fe1-fe6)
 - New cron servers (cron1-cron2)
- The migration will be staged due to commercial licensing and networking issues
- There may be issues for users who access databases or special servers outside of Jet
 - Firewall rules need to be changed, we will try and coordinate with you
 - You should contact us if you connect to any special services or databases to ensure all changes are made

Front-End/Cron Server Upgrade Schedule

Date	Action	downtime
26 July	Upgrade wfe7 (njet front-end) to fe1	2 hours
26 July	Upgrade ncron to cron1	2 hours
3 Aug	Enable cron2, reboot fe1 and cron1	Reboot
10 Aug	Logins now directed at new OS, new systems	---
1 Sept	Disable wcron0/1 and last wJet fe	---

- For ncron upgrade, we will move the user crontabs
- For wcron upgrade, nodes will be run in parallel users will have to move their crontabs
- Dates are tentative, final schedule depends on external network changes outside of our control

Upcoming changes for hJet/ nJet

- Performance of hJet and nJet is very different
 - Per core performance is roughly 1-to-2
 - Can no longer support transparent usage between the two systems
- Real-time experiments will be configured on hJet
- Projects will be assigned to either hJet or nJet
 - Project leads will be notified in the next few weeks as to which system their projects will be assigned.

For projects assigned to nJet, your core counts will be reduced by 50%. Overall performance will be the same. We can make additional adjustments as needed.

Parallel Environments

Parallel Env (PE)	Purpose	Date Available	Date Removed
hcompnew	hJet parallel jobs	Today	Oct 13th
hserial	hJet serial jobs	Today	Oct 13th
ncomp	RDHPCS parallel jobs	Aug 20 th	...
nserial	RDHPCS serial Jobs	Aug 20 th	...
nhfip	nJet HFIP parallel Jobs	Today	...
thfip	tJet HFIP parallel jobs	Aug 16th	...
hfip	tJet or nJet HFIP parallel jobs	Today	...
thfipserial	tJet or nJet HFIP serial Jobs	today	...

When wJet is decommissioned, there will be a 30 day transition to move from using hcompnew to hcomp.

Jetty decommissioning

- Jetty is going away
 - This is a good thing!
- Users can copy to /rt and /exchange directly from the Jet front ends, cron servers
 - These filesystems will not be mounted across the compute partitions
- Mounts available: 15 Aug 2010
- Jetty will be shutoff: 30 Sept 2010