PDSF User Meeting

- PDSF performance
- Announcements
- Interactive shifter (demo)
- AOB
aggregated load on PDSF interactive nodes

https://portal-auth.nersc.gov/pdsf-mon/
SLURM CPU*h aggregated over last month

SLURM: completed jobs in last month
http://portal.nersc.gov/project/mpccc/ebasheer/jobbygroup.php

3800 jobs * 24 h = 91k cpu*h/day
→ 640k cpu*h /week
→ 2.7 M cpu*h per month
### Existing Slurm Shifter queues

<table>
<thead>
<tr>
<th>partition</th>
<th>OS provider</th>
<th>TotalCPUs</th>
<th>Time limit</th>
<th>MaxJobPA (per account)</th>
<th>MaxJobPU (per user)</th>
<th>Relative priority</th>
<th>remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>shared-chos</td>
<td>chos</td>
<td>3352</td>
<td>2 days</td>
<td>250</td>
<td></td>
<td>0</td>
<td>Share 94% of hardware</td>
</tr>
<tr>
<td>alice</td>
<td>chos</td>
<td>3224</td>
<td>2 days</td>
<td>1500</td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>realtime-chos</td>
<td>chos</td>
<td>128</td>
<td>4 hours</td>
<td>50</td>
<td></td>
<td>0</td>
<td></td>
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<tr>
<td>debug-chos</td>
<td>chos</td>
<td>128</td>
<td>30 min</td>
<td>2</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>long</td>
<td>shifter</td>
<td>384</td>
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<td></td>
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<tr>
<td>short</td>
<td>shifter</td>
<td>288</td>
<td>5 hours</td>
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<td></td>
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<td>nucori</td>
<td>shifter</td>
<td>16</td>
<td>1 day</td>
<td></td>
<td>0</td>
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<td>Cori-like OS</td>
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<tr>
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<td>shifter</td>
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<td>4 hours</td>
<td>50</td>
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<td>share common hardware</td>
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<td>shifter</td>
<td>128</td>
<td>30 min</td>
<td>2</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The following changes were enforced on Slurm all queues:

- Use true RAM per node
- *compute high mem use tax:* \( nCPU = \frac{mem}{4 \text{ GB}} \)
- *Num job slots per node:* 2x phys cores, but …
- Each job locks 1 physical core by default but is available by using --oversubscribe
- *Default mem per task:* 2.5 GB (was 4, changed on June 13)
- *Used cpu*h half decay time:* 4 days (was 14 days)
- Cap of 250 jobs/user is enforced, pseudo-user alicesgm is an exception
- *--mem → cpus conversion* is 2.5 GB for all partitions, except -p long, -p short use 5 GB

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Jan Balewski, NERSC
PDSF User Meeting
# /project(a) utilization - snapshot

http://portal.nersc.gov/project/star/ithaeder/diskUsage/overview/indexExt.html
https://my.nersc.gov/data-mgt.php
./quota_pdsf.py

<table>
<thead>
<tr>
<th>Project</th>
<th>Space Usage</th>
<th>Space Quota</th>
<th>Space Percent</th>
<th>Inode Usage</th>
<th>Inode Quota</th>
<th>Inode Percent</th>
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<tbody>
<tr>
<td>alice project</td>
<td>61842</td>
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</tbody>
</table>

**FillStatus (Quota): PROJECT (2018-11-15 08:11)**

- star - size
  - 14870600000.7B (99.87%)
- star - inodes
  - 225685562500000.00000 (0.33%)

- starprod - size
  - 24492100000.7B (99.70%)
- starprod - inodes
  - 10190061250000.00 (90.90%)

- alice - size
  - 10550331000.7B (99.29%)
- alice - inodes
  - 215885562500000.00 (0.26%)

**FillStatus (Quota): PROJECTA (2018-11-15 08:11)**

- starprod - size
  - 13563130000.7B (92.18%)
- starprod - inodes
  - 61934162500000.00 (30.83%)
Announcements

Bi-weekly office hours  Dec 20, Jan 3, 59-4016A

PDSF user meeting: Tuesday, Jan 8 (in 2019)

Obligatory MFA in January of 2019
Dear NERSC Users:

Just wanted to remind you that today is the first in a series of virtual office hours we are holding for assisting users transitioning over to multi-factor authentication (MFA). Experts from NERSC will be available until 4 pm (Pacific) to help you set up or troubleshoot your MFA.

This is part of a series of office hours, which will be held from 7 am to 4 pm on the following dates:
* Today, December 11
* Next Tuesday, December 18
* Friday, January 4, 2019
* Monday, January 7, 2019
* Tuesday, January 8, 2019
* Wednesday, January 9, 2019

Please feel free to stop by via Zoom at https://lbnl.zoom.us/j/752299719.

Regards,
-Rebecca
Interactive Shifter - Demo

https://docs.nersc.gov/pdsf/shifter/interactive_shifter_atlas

1) Ssh pdsf
   a) Salloc -p debug
   b) Salloc -p nucori
   Shifter --image …

   Ssh cori
   Shifter --image …

2) source /cvmfs/xyz/someSetup
3) python myJob.py