



PP&B

Q

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THE NEW HPC CLUSTER

# For the early birds

**New compute cluster `q.fhi-berlin.mpg.de` is ready for testing**

At the end of last year we applied for an upgrade of the yfhix cluster. In mid-January, the last systems (with GPUs) have been delivered. In terms of usage, the system is very similar to the old one.

# The new HPC cluster



**01** **Operating system**  
The Rocks cluster system will continue to be used.

**02** **Batch system**  
The batch system gridengine will continue to be used.

**03** **Installed Software**  
Compiler, Frameworks, scientific software

**04** **Installed Hardware**  
Intel Xeon Gold 6130  
2,1G, 16C/32T

**05** **Usage**  
How to use the system

**06** **Documentation**  
Where to find documentation

# 01

Operating system



# Rocks cluster system



Welcome to the *q* cluster home page

## Cluster Information

- [Local ganglia monitoring instance](#) (if ganglia roll is installed)
- [Cluster kickstart graph](#)
- Cluster contact: [pph@lni-berlin.mpg.de](mailto:pph@lni-berlin.mpg.de)

Visit [Rocks Website](#) for latest news and updates

## Installed Rolls

CentOS	(v.7.4.1708)	hpc	(v.7.0)	<a href="#">roll usersguide</a>
Updates-CentOS-7.4.1708	(v.2017-12-01)	kernel	(v.7.0)	
area51	(v.7.0) <a href="#">roll usersguide</a>	perl	(v.7.0)	<a href="#">roll usersguide</a>
haxe	(v.7.0) <a href="#">roll usersguide</a>	python	(v.7.0)	<a href="#">roll usersguide</a>
core	(v.7.0)	sge	(v.7.0)	<a href="#">roll usersguide</a>
ganglia	(v.7.0) <a href="#">roll usersguide</a>	zfs-linux	(v.0.7.3)	<a href="#">roll usersguide</a>

<http://www.rocksclusters.org>

# gridengine

# 02

Batch system

< 5 >

```
[root@q ~]# qstat -f
queuename                qtype resv/used/tot. load_avg arch      states
-----
all.q@compute-0-0.local  BIP   0/0/64         0.01  lx-amd64
all.q@compute-0-1.local  BIP   0/0/64         0.01  lx-amd64
all.q@compute-0-10.local BIP   0/0/64         0.01  lx-amd64
all.q@compute-0-11.local BIP   0/0/64         0.01  lx-amd64
all.q@compute-0-12.local BIP   0/0/64         0.01  lx-amd64
all.q@compute-0-13.local BIP   0/0/64         0.01  lx-amd64
```

[http://wiki.gridengine.info/wiki/index.php/Main\\_Page](http://wiki.gridengine.info/wiki/index.php/Main_Page)



# 03

## Installed software

```
[root@q apps]# pwd
/share/apps
[root@q apps]# ls -l
total 8
drwxr-xr-x 28 root      root      4096 Feb  9 17:55 intel
drwxr-xr-x 21 turbomole FHI_COMP 4096 Nov  5 10:15 TURBOMOLE
```



# 04

Installed  
hardware

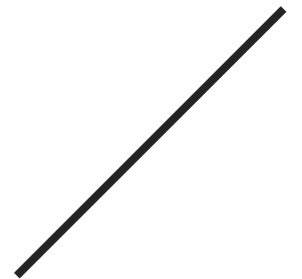


CPU Total: **2608**  
Hosts up: **41**  
Hosts down: **0**

Current Load Avg (15, 5, 1m):  
0%, 0%, 0%

Avg Utilization (last hour):  
0%

Localtime:  
2018-02-12 09:12



# 05

## How to use the system



```
[root@q ~]# rocks list host partition compute-0-0
DEVICE MOUNTPOINT          START  SIZE  ID TYPE          FLAGS  FORMATFLAGS
sda1   /                      1049kB 33.6GB -- ext4          boot  -----
sda2   /var                   33.6GB 16.8GB -- ext4          -----
sda3   swap                   50.3GB 4194MB -- linux-swap(v1) -----
sda4   -----                54.5GB 65.5GB -- -----
sda5   /state/partition1     54.5GB 65.5GB -- ext4          -----
sdb1   /state/partition2     1049kB 33.6GB -- ext4          -----
sdb2   /scratch                33.6GB 927GB  -- ext4          -----
```

/scratch on each node (fast ssd), 192 GB Memory

Apply for account -> mail to [junkes@fhi-berlin.mpg.de](mailto:junkes@fhi-berlin.mpg.de)

Home Dir:

/dev/mapper/rocks\_q-home 10T 669M 9.5T 1% /export/home





# 06

## Documentation



<http://rtfm.fhi-berlin.mpg.de>

All docus, cluster, FEL, etc will be available here.

