

Use a resource request as follows:

```
# qsub -I -l select=1:ncpus=8:chip_type=e5-2665:mem=24gb
```

You can change the chip_type to e5-2665, e5-2670v2, e5-2680v3, e5-2680v4. The memory must be 2GB or more less than the total ram.

You can get the available hardware types as follows:

```
# cat /etc/hardware-table
```

PALMETTO HARDWARE TABLE Last updated: July 23 2018

PHASE

COUNT	MAKE	MODEL	CHIP(0)	CORES	RAM(1)	/local_scratch	In
terconnect	GPUs	PHIs	SSD				
0 6	HP	DL580	Intel Xeon 7542	24	505 GB(2)	99 GB	1g, 10g,
mx	0	0	0				
0 1	HP	DL980	Intel Xeon 7560	64	2 TB(2)	99 GB	1g, 10g,
mx	0	0	0				
0 1	HP	DL560	Intel Xeon E5-4627v4	40	1.5 TB(2)	881 GB	1g,
56g, fdr, 10ge	0	0	0				
0 1	Dell	R830	Intel Xeon E5-4627v4	40	1.0 TB(2)	880 GB	1g, 56g,
fdr, 10ge	0	0	0				
0 1	HP	DL560	Intel Xeon 6138G	80	1.5 TB(2)	3.6 TB	1g,
10ge	0	0	0				
1 108	Dell	PE1950	Intel Xeon E5345	8	12 GB	37 GB	1g, 10g,
mx	0	0	0				
2a 206	Dell	PE1950	Intel Xeon E5410	8	12 GB	37 GB	1g, 10g,
mx	0	0	0				
2b 37	Dell	PE1950	Intel Xeon E5410	8	16 GB	37 GB	1g, 10g,
mx	0	0	0				
3 227	Sun	X2200	AMD Opteron 2356	8	16 GB	193 GB	1g,
10g, mx	0	0	0				
4 326	IBM	DX340	Intel Xeon E5410	8	16 GB	111 GB	1g, 10g,
mx	0	0	0				
5a 329	Sun	X6250	Intel Xeon L5420	8	32 GB	31 GB	1g, 10g,
mx	0	0	0				
5b 9	Sun	X4150	Intel Xeon E5410	8	32 GB	99 GB	1g, 10g,
mx	0	0	0				
6 68	HP	DL165	AMD Opteron 6176	24	48 GB	193 GB	1g,
10g, mx	0	0	0				
7a 42	HP	SL230	Intel Xeon E5-2665	16	64 GB	240 GB	1g, 56g,
fdr	0	0	0				

7b	12	HP	SL250s	Intel Xeon	E5-2665	16	64 GB	240 GB	1g,
56g, fdr			2(3) 0 0						
8a	71	HP	SL250s	Intel Xeon	E5-2665	16	64 GB	900 GB	1g,
56g, fdr			2(4) 0 300 GB(7)						
8b	57	HP	SL250s	Intel Xeon	E5-2665	16	64 GB	420 GB	1g,
56g, fdr			2(4) 0 0						
8c	84	Dell	PEC6220	Intel Xeon	E5-2665	16	64 GB	350 GB	1g,
10ge			0 0 0						
9	72	HP	SL250s	Intel Xeon	E5-2665	16	128 GB	420 GB	1g,
56g, fdr, 10ge			2(4) 0 0						
10	80	HP	SL250s	Intel Xeon	E5-2670v2	20	128 GB	800 GB	1g,
56g, fdr, 10ge			2(4) 0 0						
11a	40	HP	SL250s	Intel Xeon	E5-2670v2	20	128 GB	800 GB	1g,
56g, fdr, 10ge			2(6) 0 0						
11b	4	HP	SL250s	Intel Xeon	E5-2670v2	20	128 GB	800 GB	1g,
56g, fdr, 10ge			0 2(8) 0						
12	30	Lenovo	NX360M5	Intel Xeon	E5-2680v3	24	128 GB	800 GB	
1g, 56g, fdr, 10ge			2(6) 0 0						
13	24	Dell	C4130	Intel Xeon	E5-2680v3	24	128 GB	1.8 TB	1g,
56g, fdr, 10ge			2(6) 0 0						
14	12	HP	XL1X0R	Intel Xeon	E5-2680v3	24	128 GB	880 GB	1g,
56g, fdr, 10ge			2(6) 0 0						
15	32	Dell	C4130	Intel Xeon	E5-2680v3	24	128 GB	880 GB	1g,
56g, fdr, 10ge			2(6) 0 0						
16	40	Dell	C4130	Intel Xeon	E5-2680v4	28	128 GB	1.8 TB	1g,
56g, fdr, 10ge			2(9) 0 0						
17	20	Dell	C4130	Intel Xeon	E5-2680v4	28	128 GB	1.8 TB	1g,
56g, fdr, 10ge			2(9) 0 0						
18a	2	Dell	C4140	Intel Xeon	6148G	40	372 GB	1.9 TB	1g, 56g,
fdr, 40ge			4(10) 0 0						
18b	65	Dell	R740	Intel Xeon	6148G	40	372 GB	1.8 TB	1g, 56g,
fdr, 25ge			2(11) 0 0						
18c	10	Dell	R740	Intel Xeon	6148G	40	748 GB	1.8 TB	1g, 56g,
fdr, 25ge			2(11) 0 0						

*** PBS resource requests are always lowercase ***

(0) CHIP has 3 resources: chip_manufacturer, chip_model, chip_type

(1) Leave 2 or 3GB for the operating system when requesting memory in PBS jobs

(2) Specify queue "bigmem" to access the large memory machines, only ncpus and mem are valid PBS resource requests

(3) 2 NVIDIA Tesla M2075 cards per node, use resource request "ngpus=[1 | 2]" and "gpu_model=m2075"

- (4) 2 NVIDIA Tesla K20m cards per node, use resource request "ngpus=[1 | 2]" and "gpu_model=k20"
- (5) 2 NVIDIA Tesla M2070-Q cards per node, use resource request "ngpus=[1 | 2]" and "gpu_model=m2070q"
- (6) 2 NVIDIA Tesla K40m cards per node, use resource request "ngpus=[1 | 2]" and "gpu_model=k40"
- (7) Use resource request "ssd=true" to request a chunk with SSD in location /ssd1, /ssd2, and /ssd3 (100GB max each)
- (8) Use resource request "nphis=[1 | 2]" to request phi nodes, the model is Xeon 7120p
- (9) 2 NVIDIA Tesla P100 cards per node, use resource request "ngpus=[1 | 2]" and "gpu_model=p100"
- (10) 4 NVIDIA Tesla V100 cards per node with NVLINK2, use resource request "ngpus=[1 | 2 | 3 | 4]" and "gpu_model=v100nv"
- (11) 2 NVIDIA Tesla V100 cards per node, use resource request "ngpus=[1 | 2]" and "gpu_model=v100"