

# CU Research Computing Cheatsheet

## Summit partitions

Partition name	Description	# of nodes	cores/node	RAM/core (GB)	Max Walltime	Billing weight
<b>shas</b>	General Compute with Haswell CPUs (default)	380	24	5.25	24H	1
<b>sgpu</b>	GPU-enabled	10	24	5.25	24H	2.5
<b>smem</b>	High-memory	5	48	42	7D	6
<b>sknl</b>	Phi (Knights Landing) CPU	20	64	TBD	24H	0.1

## Summit QOS-types

QOS name	Description	Max walltime	Max jobs/user	Node limits	Priority boost
<b>normal</b>	default	Derived from partition	n/a	256/user	0
<b>debug</b>	For quicker turnaround when testing	1H	1	32/job	Equiv. of 3-day queue wait time
<b>long</b>	For jobs needing longer wall times	7 D	n/a	22/user; 40 nodes total	0
<b>condo</b>	For groups who have purchased Summit nodes	7D	n/a	n/a	Equiv. of 1 day queue wait time

## Blanca node specifications

Node name	High-prio QoS	cores/node	freq	RAM/core	disk	Features
<b>bnode010[1-5]</b>	blanca-ics	32	2.6 GHz	256	1 TB	sandybridge, avx, rhel6
<b>bnode010[6-7]</b>	blanca-igg	24	2.5 GHz	128	1 TB	haswell, avx2, rhel6
<b>bnode01[08-11]</b>	blanca-ibgc1	48	2.5 GHz	256	1 TB	haswell, avx2, rhel6
<b>bnode01[12-14]</b>	blanca-mrg	24	2.5 GHz	128	1 TB	haswell, avx2, rhel6
<b>bnode01[15-16]</b>	blanca-el	56	2.4 GHz	128	1 TB	broadwell, avx2, rhel7
<b>bnode02[01-36]</b>	blanca-ccn	16	3.3 GHz	64	1 TB	ivybridge, Quadro, k2000, avx, fdr, rhel7
<b>bnode0301</b>	blanca-ics	32	2.4 GHz	256	1 TB	broadwell, avx2, rhel6
<b>bnode030[2-9]</b>	blanca-sha	28	2.4 GHz	128	1 TB	broadwell, avx2, rhel7
<b>bnode0310</b>	blanca-ics	32	2.4 GHz	256	1 TB	broadwell, avx2, rhel6
<b>bnode0311</b>	blanca-ceae	28	2.4 GHz	128	1 TB	broadwell, avx2, rhel7
<b>bgpu-dhl1</b>	blanca-dhl	56	2.4 GHz	128	1 TB	broadwell, avx2, rhel7, Tesla, P100
<b>bnode03[12-15]</b>	blanca-pccs	28	2.4 GHz	128	1 TB	broadwell, avx2, rhel7
<b>bnode0316, bnode0401</b>	blanca-csdms	56	2.4 GHz	128	1 TB	broadwell, avx2, rhel7
<b>bnode04[02-03]</b>	blanca-sol	56	2.4 GHz	128	1 TB	broadwell, avx2, rhel7
<b>himem04</b>	blanca-ibg	80	2.1 GHz	1024	10 TB	westmere-ex, localraid, rhel6

## Useful links

- Batch scheduling and Summit specifications
- Blanca resources