

Accessing and using the Collum-Loring-Abruna-Widom (CLAW) cluster

Specific directions on accessing and using the Collum-Loring-Abruna-Widom (CLAW) cluster

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See also

- [1\) CCB High Performance Computers \(HPC\)](#)
 - [Collum-Loring-Abruna-Widom "CLAW" Cluster](#)
- [zClarifying cluster responsibilities and ownership](#)

Nodes on shared cluster are NOT shared between groups, by default

By default, each group can only use their group's compute nodes.

- This is enforced technically.
 - Command-line: Applies to all groups
 - WebMO (GUI access): Currently applies only to the Collum group (as of 11/4/16).
 - Q: Can WebMO be used by any other group to access only their group's nodes?
- Faculty members may create social agreements to permit cross-group access of nodes.
 - This increases group member's responsibility not to abuse any nodes they are guests to.
 - Chemistry IT staff are hopeful that the default restrictions can be modified to enable desired degree of sharing.

Exceptions to isolated nodes

The following groups are sharing nodes:

Widom's nodes are available to the Collum group.

Widom and Loring share each other's nodes. To clarify:

- Collum group may not use Loring's nodes.
- And Loring's group may not use Collum's nodes.

Table of information, by group

Group	Group's nodes And software licensed.	Access to other groups' nodes (assume access to own group's nodes, naturally)	WebMO data (GB)	Current users' data (GB)	Inactive users' data (GB)	Back- up? (EZ- Backup)
Collum	8 compute nodes Maybe 1 more (former head node) Has paid for Gaussian Has paid for WebMO	Widom (Collum group paid to add hard drives to all 7 of Widom's compute nodes. 12TB (= 6TB * 2) hard drive space now available on each of Widom's nodes.)	(To get from Lulu)	(To get from Lulu)	(To get from Lulu)	Yes
Abruna	10 compute nodes • We expect these will be the first to get tested at CAC Maybe 1 more (former head node) Has paid for Gaussian	n/a	n/a	~500 (11/11/16)	(To get from Lulu)	No
Loring	5 compute nodes Oldest nodes on the cluster.	Widom	n/a	(To get from Lulu)	(To get from Lulu)	No

Widom	Widom contributing the current head node. 8 compute nodes <ul style="list-style-type: none"> All 8 nodes have 12 TB hard drives (2*6T) for each node, paid for by Collum. <ul style="list-style-type: none"> Extra hard drive space of value only to the Collum group. 	Loring Special queue*	n/a	(To get from Lulu)	(To get from Lulu)	No
SLin	(SLin currently has no compute nodes) Has paid for Gaussian	Widom	n/a	(To get from Lulu)	(To get from Lulu)	No

***Special queue:** Queue was created and for use by a single member of Widom's group to enable their research without consuming 100% of Widom's nodes.

- To be used only for single-core jobs, which is a social expectation and not technically enforceable.
- Allows for stacking of many, many single-core jobs, and is limited to consuming up to 6 of Widom's 7 compute nodes.

Questions and known issues

Q: Enable WebMO for groups other than Collum? If so, add column with nodes enabled.

Q: Enable Back-in-Time, for versioning? If so, how provision and who pays what?

- Does CAC have better options, if cluster is hosted there?

Q: Where does storage occur? How provision and who pays for what?

- Does CAC have better options, if cluster is hosted there?

Q: Backing up user accounts and other research data? If beyond Collum's group, how provision and who pays what?

- Does CAC have better options, if cluster is hosted there?

Know issues:

Q: How do we prevent individual from bringing shared head node to its needs by running an application directly on the head node, instead of using queues? (Does CAC have suggestions?)