PENGUIN SOLUTIONS ClusterWareAI™ CLI Cheat Sheet

The purpose of this guide is to provide an overview of ClusterWareAI™ commands that system administrators may use on a daily basis. For more information, commands, and examples, see the ClusterWareAI documentation.

In general, commands make use of command line interface (CLI) options like **-h**, **-v**, **-q**, **ls**, etc. **list** is a heavily used option for many **cw-*** commands. The first example of **cw-nodectl** below combines **list** with **-l** (or **-L**) for expanded node information.

Node and Attribute Control

cw-nodectl Create, query and modify nodes for the cluster.	**cw-nodectl list [-l | -L]** **list** Show a list of compute nodes. **-l, --long** Show a subset of all optional information for each node, e.g. basic hardware info, MAC, IP address. **-L, --long-long** Show all optional information for each node, e.g. all hardware info, MAC, IP address. **cw-nodectl status [-L]** Shows the current status of a node. **-L** adds all optional information for each node, e.g. uptime, load average, free RAM. **cw-nodectl create mac=00:25:90:0C:D9:3C** Add a new node beyond the end of the current list.
cw-attribctl Create, query and modify attribute groups for the cluster.	**cw-attribctl create name=iScsiGroup** Add a new attribute group. **cw-attribctl -i iScsiGroup set _boot_config=RebelBoot boot_style=iscsi** Configure attributes to boot nodes using **RebelBoot** with iSCSI for root file system access.

Boot Customization

cw-add-boot-config Tool for creating ClusterWareAI boot configurations.	**cw-add-boot-config --iso CentOS-7-x86_64-DVD-1908.iso --image ** **CentOS-7.7-Image --boot-config CentOS-7.7-boot --batch** Use the named ISO file in hands-off batch mode to build a repo and distro, both named **CentOS-7-x86_64-1908**, a boot image named **CentOS-7.7-Image**, and boot config named **CentOS-7.7-boot.** **cw-add-boot-config --make-defaults ...** If there are no attribute groups on this system, then automatically build an attribute group referencing a new boot configuration referencing a new image.
cw-bootctl Create, query and modify boot configurations for the cluster.	**cw-bootctl create name=Fed29Boot kernel=@/boot/vmlinuz-4.20.6-200.fc29.x86_64 ** **initramfs=@cw-ramfs-4.20.6-200.fc29.x86_64** Create a boot configuration with a premade kernel and **initramfs**. **@** sign references a local file.

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Image Customization

cw-imgctl Create, query and modify images for compute nodes.	**cw-imgctl -i DefaultImage clone name=NewImage** Clone the **DefaultImage** to a new **NewImage.**
cw-modimg Tool for manipulating image contents.	**cw-modimg -i NewImage --chroot ...** Downloads **NewImage**, and opens a root environment where changes can be tested on the new image. **cw-modimg --capture n8 --set-name CapturedN8image --upload** Capture the image executing on node **n8**, give it the name "**CapturedN8image**," and upload it.

Backup Cluster Info

cw-cluster-conf Load or save the cluster configuration file.	**cw-cluster-conf save /root/cluster-conf-bak** Save a copy (backup) of the current network configuration and node list. **cw-cluster-conf load /root/cluster-conf-new** Replace the existing node definitions with ones loaded from **/root/cluster-conf-new.**
cw-sysinfo Capture the system state information. Often used for debugging.	**cw-sysinfo** Capture the state of the current node into a gzip'ed tarball, executed as user root.

Utilities

cw-adminctl Create, query and modify administrators for the cluster.	**cw-adminctl -i hsolo clone name=cbaca** Copy the administrator properties for "**hsolo**" to a new administrator "**cbaca**"
cw-clusterctl Tool for manipulating global cluster settings. Many additional tools exist within cw-clusterctl for power users.	**cw-clusterctl pools create name=infiniband_nodes pattern=ib{} first_index=0** **cw-nodectl -i n[64-127] update naming_pool=infiniband_nodes** Create a node name group "**infiniband_nodes**" for nodes named "**ibX**", beginning with "**ib0**", and associate those names with nodes **n64** to **n127.**
cw-reports Manage and generate cluster reports.	**cw-reports unknown** Display the full list of unknown nodes that have attempted to boot. Options exist to restrict query.

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