Hewlett Packard Enterprise

HPE Cray EX Series System Administration with HPE Performance Cluster Manager

Lab guide hardware management

Show the operating system slots

1. Log in as the root user to the admin node.
2. Show information about the slots available to be booted:

   cadmin --show-root-labels

3. Show information about the slots available to be booted with the shortened form of the command:

   cadmin --show-root

Place a node offline

When you suspect a node failure, you can set the node's admin status to offline in the cluster manager. System commands and group commands will no longer include the node.

When you set the node administrative status to offline, cluster manager tools change the node's status in the database, and update configuration files that are dependent on the node status within the database. Commands that use the modified configuration files will then ignore the offline node. You can work directly with the node.

1. On the admin node, list the cluster nodes:

   cm node show

2. On the admin node, review the current administrative state of nodes:

   cm node show --online

   cm node show --offline

3. Coordinate with your LabGroup members to complete this exercise together with the node assigned to your cluster.
4. Power off the node that you will place offline.

   cm power off -t node <node>

5. On the admin node, change a node's status to offline:

   cm node set --administrative-state offline -n <node>

6. On the admin node, review the current administrative state of nodes:

   cm node show --online

   cm node show --offline

   cm node show (<node> no longer appears)

7. Set a node note with information on why you are taking the node out of service:

   cm node set --node-notes "down for maintenance my-initials" -n <node>

8. Review the notes that you set:

   cm node show --node-notes -n <node>

   You can specify multiple nodes by using wildcard characters.

9. Review system power status.

   cm power status -t system

10. Review specific node power status.

    cm power status -t node *<node>*

11. Place the node online with (replace <node> with the name of the node you previously placed offline):

    cm node set --administrative-state online -n <node>

12. Power on the node.

    cm power on -t node <node>

13. Remove the node note (replace <node> with the name of node you placed offline):

    cm node unset --node-notes -n <node>

14. Review the notes that you set (replace <node> with the name of node you placed offline):

    cm node show --node-notes -n <node>

15. Review the list of online nodes:

    cm node show --online

Review node bios settings:

cm node bios show -n x3019c0s31b0n0

cm node bios show -n x3019c0s17b4n0

cm node bios show -n x3019c0s21b0n0,x3019c0s20b0n0 --cmdiff

Create host aliases and group aliases

1. List existing host aliases and group aliases:

   cm node show --alias-groups --alias-name

2. Create a host alias and group alias; replace entries in < and > pairs as follows:

   - <node> replace with the name of the node assigned to your labgroup.
   - <my-group-alias> replace with a group name that is unique to you—your initials or a code word.
   - <my-host-alias> replace with a hostname that is unique to you—your initials or a code word.

cm node set -n <node> --alias-group <my-group-alias> --alias-name <my-host-alias>

3. List your new host and group aliases:

   cm node show --alias-groups --alias-name

   Work with your hostname alias and group alias throughout the lab exercises.

4. Review cm node unset online help

   cm node unset -h

Review cluster manager release

cat /etc/sgi-admin-node-release

Use pdsh commands

5. List custom groups:

   cm group custom show

6. Whenever a new custom group is added, create an equivalent pdsh group

   cm group custom set --pdsh-groups

7. Create your custom group:

   cm group custom add -c <name> -n <nodes>

8. Look for your custom group (the name will be prepended with custom-):

   ls -**l** /etc/dsh/group

9. Review system information – substitute your custom group:

   cd /root

   pdsh -g compute uptime

   pdsh -g compute date

   pdsh -g compute grep –i memt /proc/meminfo | dshbak -c

   pdsh -g compute lscpu | grep name | dshbak -c

   pdsh -g compute lsscsi | dshbak -c (n14-17 diskless)

   pdsh -g compute ip a show dev bond0 | grep inet | grep bond0 | sort

   pdsh -g compute lspci | grep -iv intel | grep -iv amd | dshbak -c

   pdsh -w ^host-list ethtool hsn0 | grep Speed

   pdsh -w ^host-list ethtool bond0 | grep Speed

   cat /root/host-cx6

   pdsh -w ^/root/host-cx6 ip a show hsn0 | grep global

10. Display current fru information:

    cm fru show -t node x3019c0s17b0n1

    cm fru show -t node <node>

    cm fru show -t serial <serial>

11. Review cm-info-gather help:

    cm-info-gather -h

12. Gather operating system service and cluster service detail—the command takes approximately 5-6 minutes to run.

    cm-info-gather

13. Review the archive that you created (replace <date/time> with the date and time associated with the bundle you gathered.

    less /var/tmp/cm-info-gather-<date/time>.tar.bz2

    q

14. Log into a node to gather node specific detail (this file is written into your current directory unless you specify elsewhere with -o):

    ssh root@<node>

    system_info_gather -A -vv -n

15. Browse the file.

16. Exit the node login session.

This completes lab exercise hardware management.