Managing Router Hardware

This chapter describes about clearing the memory and partitions of an RP or a line card before an RMA (Return Merchandise Authorization).

Clear the Memory and the Partitions of a Card

Users can clear the memory and the partitions of an RP or a line card before an RMA (Return Merchandise Authorization). Clearing the memory and partitions of the card is performed when the card is defective and has to be returned.

When a line card or an RP is identified for an RMA, the user might want to remove the card from the chassis. However, the service personnel may not be available onsite to remove the card immediately. By clearing the memory and partitions of the card, the users can clear the RP or the line card and power-off the card and also let it remain in the slot.

After clearing the memory, do not reload the card or the chassis until the card is removed from the slot. This is because reloading will reboot the card or the chassis resulting in restoring the data that was erased.

In a dual RP system, the reset of the standby RP must be executed from the active RP. Once the standby RP has been cleaned, the standby RP will be shut down to prevent resync with the active RP.

Prerequisites

XR VM and the System Admin VM must be operational.

Note Do not perform an admin process restart, card reload, or an FPD upgrade while clearing the memory and partitions of the card.

Commands

Run the following commands from the XR VM to clear the memory and the partitions of the card:

- **show zapdisk locations**- displays the locations where the memory and the partition can be cleared.
- **zapdisk start location** <*location-id*> - clears the memory and the partition from the specified location.

The following steps explain how to clear the memory or the partition of the card:

1. Display the Locations to Clear the Memory - Use the **show zapdisk locations** command to display the locations to be cleared.

   The following example shows how to display the location:

```
<! Display the Locations to Clear the Memory !>

Router# show zapdisk locations
0/RP1      Fully qualified location specification
0/2        Fully qualified location specification
0/6        Fully qualified location specification
all        all locations

Router#conf t
Router(config)#logging console disable
Router(config)#commit
Router(config)#end
```

2. Clear the Memory or Partition - Use the **zapdisk start location** command to clear the memory or partition.

   The following example shows how to clear the memory or partition:

```
<! Clear the Memory or Partition !>

Router#zapdisk start location 0/2
Action on designated location is in progress, please monitor admin syslog.
Action on designated location is in progress, please monitor admin syslog.

Router#zapdisk start location 0/6
Action on designated location is in progress, please monitor admin syslog.
Action on designated location is in progress, please monitor admin syslog.

Router#zapdisk start location 0/RP1
Action on designated location is in progress, please monitor admin syslog.
Action on designated location is in progress, please monitor admin syslog.
```

3. Verify that the memory and the partition is cleared - Use **show logging**, **show platform**, **show controller card**, and **show reboot-history card location** commands to verify if the memory and partitions are cleared.

   The following example shows how to verify if the memory and partitions are successfully cleared:

```
<!Verification!>

sysadmin-vm:0_RP0# show controller card-mgr event-history brief location 0/2

Card Event History for: 0/2

Card Event History as seen by Master (0/RP0)
  Current State: ZAPDISK_POWERED_ON

  DATE   TIME (UTC)    STATE                    EVENT
  -----  ------------  -----------------------  ------------------------------
  03/04  22:26:13.400  ZAPDISK_RESET            ev_dm1_power_up_ok
  03/04  22:26:02.630  SYSADMIN_VM_GOING_DOWN   ev_zapdisk_req
  03/04  22:25:46.660  CARD_READY              ev_sysadmin_vm_shutdown
  03/04  21:58:14.842  OIR_INSERT_NOTIF        if_card_local_init_done
  03/04  21:58:14.841  WAIT_CARD_INFO          ev_card_info_synced
  03/04  21:57:57.219  WAIT_SYSADMIN_VM_READY  ev_sysadmin_vm_booted
  03/04  21:57:45.305  HOST_OS_RUNNING         ev_sysadmin_vm_started
  03/04  21:57:24.371  BOOTLDR_STARTED         ev_host_os_started
```

```
  03/04  21:56:04.619  CARD_POWERED_ON         ev_bootldr_started
  03/04  21:55:58.212  CARD_IN_RESET           ev_dm1_power_up_ok
  03/04  21:55:45.397  IMAGE_INSTALLED         ev_ios_install_reset
  03/04  21:55:44.896  INSTALLING_IMAGE        ev_ios_install_done
  03/04  21:54:53.045  WAIT_FIRST_EVENT        ev_ios_install_started
  03/04  21:54:53.043  IDLE                    ev_present

sysadmin-vm:0_RP0# show controller card-mgr event-history brief location 0/6
Card Event History for: 0/6

Card Event History as seen by Master (0/RP0)
  Current State: ZAPDISK_POWERED_ON

  DATE   TIME (UTC)    STATE                    EVENT
  -----  ------------  -----------------------  ------------------------------
  03/04  22:26:14.309  ZAPDISK_RESET            ev_dm1_power_up_ok
  03/04  22:26:03.722  SYSADMIN_VM_GOING_DOWN   ev_zapdisk_req
  03/04  22:25:49.563  CARD_READY               ev_sysadmin_vm_shutdown
  03/04  22:00:32.071  OIR_INSERT_NOTIF         if_card_local_init_done
  03/04  22:00:32.070  WAIT_CARD_INFO           ev_card_info_synced
  03/04  22:00:10.314  WAIT_SYSADMIN_VM_READY   ev_sysadmin_vm_booted
  03/04  21:59:57.999  HOST_OS_RUNNING          ev_sysadmin_vm_started
  03/04  21:59:35.271  BOOTLDR_STARTED          ev_host_os_started
  03/04  21:58:18.244  CARD_POWERED_ON          ev_bootldr_started
  03/04  21:58:11.836  CARD_IN_RESET            ev_dm1_power_up_ok
  03/04  21:57:59.122  IMAGE_INSTALLED          ev_ios_install_reset
  03/04  21:57:58.521  INSTALLING_IMAGE         ev_ios_install_done
  03/04  21:54:53.045  WAIT_FIRST_EVENT         ev_ios_install_started
  03/04  21:54:53.043  IDLE                     ev_present

Aborted: by user
sysadmin-vm:0_RP0# show controller card-mgr event-history brief location 0/RP1
Card Event History for: 0/RP1

Card Event History as seen by Master (0/RP0)
  Current State: ZAPDISK_POWERED_ON

  DATE   TIME (UTC)    STATE                    EVENT
  -----  ------------  -----------------------  ------------------------------
  03/04  22:26:24.730  ZAPDISK_RESET            ev_dm1_power_up_ok
  03/04  22:26:04.503  HOST_GOING_DOWN          ev_zapdisk_req
  03/04  22:26:00.677  SYSADMIN_VM_GOING_DOWN   ev_host_shutdown_started
  03/04  22:25:54.770  CARD_READY               ev_sysadmin_vm_shutdown
  03/04  21:57:28.878  OIR_INSERT_NOTIF         if_card_local_init_done
  03/04  21:57:28.878  WAIT_CARD_INFO           ev_card_info_synced
  03/04  21:57:11.443  WAIT_SYSADMIN_VM_READY   ev_sysadmin_vm_booted
  03/04  21:56:59.228  HOST_OS_RUNNING          ev_sysadmin_vm_started
  03/04  21:56:31.882  BOOTING_IOS_IMAGE        ev_host_os_started
  03/04  21:56:26.466  BOOTING_IOS_IMAGE        ev_boot_kernel
  03/04  21:56:12.834  CARD_POWERED_ON          ev_bootldr_ssd_boot
  03/04  21:56:09.730  CARD_IN_RESET            ev_dm1_power_up_ok
  03/04  21:55:48.701  IMAGE_INSTALLED          ev_ios_install_reset
  03/04  21:55:47.700  INSTALLING_IMAGE         ev_ios_install_done
  03/04  21:54:53.046  WAIT_FIRST_EVENT         ev_ios_install_started
Aborted: by user
sysadmin-vm:0_RP0# show logging | i card_mgr
0/RP0/ADMIN0:Mar  4 22:26:03.240 : card_mgr[3211]: %DRIVER-CARD_MGR-5-ZAPDISK_STARTED :
 Card cleanup started for location 0/2
0/RP0/ADMIN0:Mar  4 22:26:04.332 : card_mgr[3211]: %DRIVER-CARD_MGR-5-ZAPDISK_STARTED :
 Card cleanup started for location 0/6
0/RP0/ADMIN0:Mar  4 22:26:04.503 : card_mgr[3211]: %DRIVER-CARD_MGR-5-ZAPDISK_STARTED :
 Card cleanup started for location 0/RP1
sysadmin-vm:0_RP0# show reboot-history card location 0/2
Card Reboot History for 0/2
```

```
 0
  Reason Code  22
  Reason       "ZAPDISK by user request"
  Src Location 0/RP0
  Src Name     card_mgr
sysadmin-vm:0_RP0# show reboot-history card location 0/6

Card Reboot History for 0/6
 0
    Reason Code  22
  Reason       "ZAPDISK by user request"
  Src Location 0/RP0
  Src Name     card_mgr
sysadmin-vm:0_RP0# show reboot-history card location 0/RPCard Reboot History for 0/RP1
 0
    Reason Code  22
  Reason       "ZAPDISK by user request"
  Src Location 0/RP0
  Src Name     card_mgr

sysadmin-vm:0_RP0# show reboot-history card location 0/RP1
Card Reboot History for 0/RP1
 0
    Reason Code  22
  Reason       "ZAPDISK by user request"
  Src Location 0/RP0
  Src Name     card_mgr
```

4. Power-Down the Card - Shut down the card.

System Logs during RSP Switchover

In the event of an RSP switchover, the router logs the following syslog messages:

```
RP/0/1/CPU0:Feb 19 09:08:00.655 UTC: rmf_svr[436]: %HA-REDCON-6-GO_ACTIVE : this card going
 active
RP/1/1/CPU0:Mar 8 11:43:29.041 UTC: rmf_svr[147]: %HA-REDCON-6-GO_STANDBY : this card going
 standby, location RP/1/1/CPU0
```