Troubleshooting with the rx2800 Management Processor

Overview

- Identify a VMS workstation running VMS 8.4-2 or newer.
- In a VMS workstation, setup to log your session to a file (`SET H 0/LOG`).
- Connect to the Management Processor (MP).
- Go to the Command Menu (CM) prompt.
- Get a list of available commands (`HELP LIST` or `HE LI`).
- View Power Status (PS).
- Return to the MP Main Menu.
- View the Virtual Front Panel (VFP).
- Cancel VFP and return to the MP Main Menu.
- Dump and save the Event Log.
- Clear the log files.
- Enter the CM and view the rx2800 firmware revisions (`SYSREV`).
- In the CM, view the listing of the hardware installed in the rx2800 (`DF –ALL`).
- Exit the MP session.
- Finish logging the VMS workstation session.
- Review the session log file.

Details

1. Identify a VMS workstation running VMS 8.4-2 or newer – required for SSH to work with the rx2800 MP.

```
PDQVS1$ tcpip show version
  HP TCP/IP Services for OpenVMS Industry Standard 64 Version V5.7 – ECO 5 on an
HP Integrity rx2800 (1.73 GHz / 20.0 MB) running OpenVMS V8.4-2
```

2. In a VMS workstation, setup to log your session to a file (SET H 0/L0G).

```
PDQVS1$ set h 0/log=mp-troubleshoot-pdqvsa-log.txt

 Welcome to HP OpenVMS Industry Standard 64 Operating System, Version V8.4-2

Username: system
Password:
  VMS Software, Inc. OpenVMS (TM) IA64 Operating System, V8.4-2 on node PDQVS1
    Last interactive login on Monday, DECEMBER 3, 2018 04:06 PM
    Last non-interactive login on Sunday, DECEMBER 9, 2018 03:03 AM
        1 failure since last successful login

PDQVS1$
```

3. Connect to the Management Processor (MP).

Per usual convention, the PDQVSA MP Hostname is PDQVCA.

```
PDQVS1$ ssh "Admin@pdqvca"
...
Admin's password:  (Keystrokes will not be echoed, no asterisks or dots, nothing.)
Authentication successful.

   Hewlett Packard Enterprise Integrated Lights-Out 3 for Integrity
  (C) Copyright 1999-2017 Hewlett Packard Enterprise Development, LP
                 MP Host Name: pdqvca
                iLO Firmware Revision 02.00.03


   MP MAIN MENU:

        CO: Console
       VFP: Virtual Front Panel
        CM: Command Menu
        CL: Console Log
        SL: Show Event Logs
        HE: Main Help Menu
         X: Exit Connection
```

4. Go to the Command Menu (CM) prompt.

```
[pdqvca]</> hpiLO-> cm

        (Use Ctrl-B to return to MP main menu.)
```

5. Get a list of available commands (HELP LIST or HE LI).

```
[pdqvca] CM:hpiLO-> he li

HE li

==== MP Help: Command Menu List ==========================================

CA   : Configure asynch/serial ports    PM   : Power Management
DATE: Display Date                       PR   : Power Restore Configuration
DC   : Default Configuration             PS   : Power management module Status
DI   : DIsconnect users                  RS   : Reset System through RST signal
DF   : Display FRU Information            SA   : Set MP Access
DNS : Configure DHCP and DNS             SO   : Security Options
FW   : Upgrade MP firmware               SS   : System processors Status
HE   : Display Help                      SYSREV: Display System firmware Revs.
ID   : System Information                SYSSET: System Settings
IT   : Modify MP inactivity timeouts     TC   : Reset system via INIT
LC   : Configure LAN, SSH and Web ports  TE   : TEll- send a msg. to other users
LDAP: Configure Directory parameters     UC   : User Configuration
LM   : License Management                WHO : Display connected MP users
LOC : Locator UID LEDs display           WOL : Wake-On-LAN
LS   : LAN Status                        WSMAN : WSMAN notification settings
OEMSYSSET: OEM System Settings           XD   : Diagnostics and reset of MP
PC   : Remote Power Control
```

6. View Power Status (PS).

```
[pdqvca] CM:hpiLO-> ps

PS
For System Processor Status see the SS command.

System Power state  : On
System Power usage  : 159 Watts
Ambient temperature : 14 C
Temperature status  : Normal

Power supplies                State
----------------------------------------------------------------
Power Supply 1                Normal
Power Supply 2                Normal

Fans                          State
----------------------------------------------------------------
Fan Unit 1                    Normal
Fan Unit 2                    Normal
Fan Unit 3                    Normal
Fan Unit 4                    Normal
Fan Unit 5                    Normal
Fan Unit 6                    Normal

[pdqvca] CM:hpiLO->
```

7. Return to the MP Main Menu.

```
[pdqvca] CM:hpiLO-> <Ctrl-B>

   MP MAIN MENU:

         CO: Console
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         SL: Show Event Logs
         HE: Main Help Menu
          X: Exit Connection
```

8. View the Virtual Front Panel (VFP).

```
[pdqvca]</> hpiLO-> vfp

        Welcome to the Virtual Front Panel (VFP).
        Use Ctrl-B to exit.
     System state               Activity                 # of logs since boot
     --------------             --------                 --------------------
     Boot complete              OS_BOOT_COMPLETE         673

E indicates error since last boot

      LEDs   | LOCATOR      | SYSTEM       | HEALTH       | POWER
      -----------------------------------------------------------------
             | OFF          | ON GREEN     | ON GREEN     | ON GREEN
      -----------------------------------------------------------------
      Status | SYS:OS Booting or Running
             | HLT:System health is okay
             | POW:System Power on
      -----------------------------------------------------------------

(Use '?' to display VFP terminal info or Ctrl-B to Quit)
```

9. Cancel VFP and return to the MP Main Menu.

```
[pdqvca] VFP:hpiLO-> <Ctrl-B>

   MP MAIN MENU:

         CO: Console
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         CL: Console Log
         SL: Show Event Logs
         HE: Main Help Menu
          X: Exit Connection
```

10. Dump and save the Event Log.

```
[pdqvca]</> hpiLO-> sl

Event Log Viewer Menu:

      Log Name             Entries    % Full      Latest Timestamped Entry
--------------------------------------------------------------------------
   E - System Event           270      10 %         09 Dec 2018 18:15:17
   F - Forward Progress      12918     65 %         09 Dec 2018 18:15:17
   I - iLO Event              169      33 %         09 Dec 2018 18:11:53
   C - Clear SEL and FPL
   L - Live Events

Enter menu item or [Ctrl-B] to Quit: e


      Log Name             Entries    % Full      Latest Timestamped Entry
--------------------------------------------------------------------------
   E - System Event           270      10 %         09 Dec 2018 18:15:17


Event Log Navigation Help:

   +        View next block     (forward in time,  e.g. from 3 to 4)
   -        View previous block (backward in time, e.g. from 3 to 2)
   <CR>     Continue to the next or previous block
   D        Dump the entire log
   F        First entry
   L        Last entry
   J        Jump to entry number
   H        View mode configuration - Hex
   K        View mode configuration - Keyword
   T        View mode configuration - Text
   S        View mode configuration - Cause/Action
   A        Alert Level Filter options
   U        Alert Level Unfiltered
   ?        Display this Help menu
   Q        Quit and return to the Event Log Viewer Menu
   Ctrl-B   Exit command, and return to the MP Main Menu
```

11. Clear the log files.

```
SL:hpiLO (+,-,<CR>,D,F,L,J,H,K,T,S,A,U,?,Q or Ctrl-B to Quit)->t
SL:hpiLO (+,-,<CR>,D,F,L,J,H,K,T,S,A,U,?,Q or Ctrl-B to Quit)->d
   Confirm? (Y/[N]): y

Log Entry 1: 21 Feb 2018 10:53:53
Alert Level 2: Informational
Keyword: ILO_SOFT_RESET
integrated Lights Out firmware soft reset occurred.
Logged by: integrated Lights Out
Data: Data field unused
4080256900E10001 0000000000000000


Log Entry 2: 21 Feb 2018 10:54:25
Alert Level 2: Informational
Keyword: ILO_IS_BOOTING
iLO is part way through booting up after a reset or power on event.
Logged by: integrated Lights Out
Data: Data field unused
408022AE00E10003 0000000000000000


...

Log Entry 270: 09 Dec 2018 18:15:17
Alert Level 2: Informational
Keyword: OS_BOOT_COMPLETE
OS Boot Complete
Logged by: O/S Kernel (Generic)
Data: Major change in system state - Boot Complete
548016E100E101E3 0000000000000001

   -> This is the last entry in the selected log.
SL:hpiLO (+,-,<CR>,D,F,L,J,H,K,T,S,A,U,?,Q or Ctrl-B to Quit)->q


Event Log Viewer Menu:

      Log Name              Entries    % Full      Latest Timestamped Entry
--------------------------------------------------------------------------
   E - System Event            270      10 %        09 Dec 2018 18:15:17
   F - Forward Progress      12918      65 %        09 Dec 2018 18:15:17
   I - iLO Event               169      33 %        09 Dec 2018 18:11:53
   C - Clear SEL and FPL
   L - Live Events

Enter menu item or [Ctrl-B] to Quit: c
Are you sure you want to clear the System Event Log and Forward Progress Log?
(Y/[N]): y

   -> Logs have been cleared.
```

12. View the rx2800 firmware revisions (SYSREV).

```
[pdqvca] CM:hpiLO-> sysrev

SYSREV

 Revisions          Active     Pending
 -------------------------------------
 iLO FW          : 02.00.03
 System FW       : 02.68
 MHW FPGA        : 02.02
 Power Mon FW    : 02.09
 PRS HW          : 02.08
 IOH HW          : 02.02
 Power Supply 1  : 02.01
 Power Supply 2  : 02.01
```

13. View the listing of the hardware installed in the rx2800 (DF -ALL).

```
[pdqvca] CM:hpiLO-> df -all

DF -all

FRU NAME: System Board ID: 00

CHASSIS INFO:
 Type:              Rack Mount Chassis
 Part Number      : AT101-2000A
 Serial Number    : SGH808V6BK
 Custom Info      : 0

BOARD INFO:
 Mfg Date/Time    : 22-Nov-2017 06:48 (11514648)
 Manufacturer     : INVENTEC
 Product Name     : rx2800 System Board
 S/N              : MS7BNK0235
 Part Number      : AT101-60001
 Fru File ID      : 11
 Custom Info      : C01
 Custom Info      : 5407
 Custom Info      : E1
 Custom Info      : 0

PRODUCT INFO:
 Manufacturer     : hp
 Product Name     : Integrity rx2800
 Part/Model       : AT102A
 S/N              : SGH808V6BK
 FRU File ID      : 11
 Custom Info      : 891

Type <CR> for next entry, or Q to quit:
FRU NAME: SAS Backplane ID: 01
...
```

```
(Note: the SN of this rx2800 is SGH8080V6BK.)

...
-> Command successful.
```

14. Exit the MP session.

```
[pdqvca] CM:hpiLO-> <Ctrl-B>

   MP MAIN MENU:

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[pdqvca]</> hpiLO-> x
Disconnected; by application ( Client Disconnect).

Connection to 192.0.200.227 closed.

PDQVS1$
```

15. Finish logging the VMS workstation session.

```
PDQVS1$ logout
   SYSTEM        logged out at DECEMBER 9, 2018 10:57 AM
%REM-S-END, control returned to node PDQVS1::
PDQVS1$
```

16. Review the session log file.

```
PDQVSA$ TYPE/PAGE MP-TROUBLESHOOT-PDQVSA-LOG.TXT

 Welcome to HP OpenVMS Industry Standard 64 Operating System, Version V8.4-2

Username: system
Password:
  VMS Software, Inc. OpenVMS (TM) IA64 Operating System, V8.4-2 on node CPCVSB
    Last interactive login on Monday, DECEMBER 3, 2018 04:06 PM
    Last non-interactive login on Sunday, DECEMBER 9, 2018 03:03 AM
        1 failure since last successful login
            You have 2 new Mail messages.
CPCVSB$
CPCVSB$ ssh "Admin@192.0.200.227
   MP MAIN MENU:


        CO: Console
       VFP: Virtual Front Panel
        CM: Command Menu
        CL: Console Log
        SL: Show Event Logs
        HE: Main Help Menu
         X: Exit Connection


[pd
qvca]</> hpiLO->
c
m
...

PDQVS1$
```