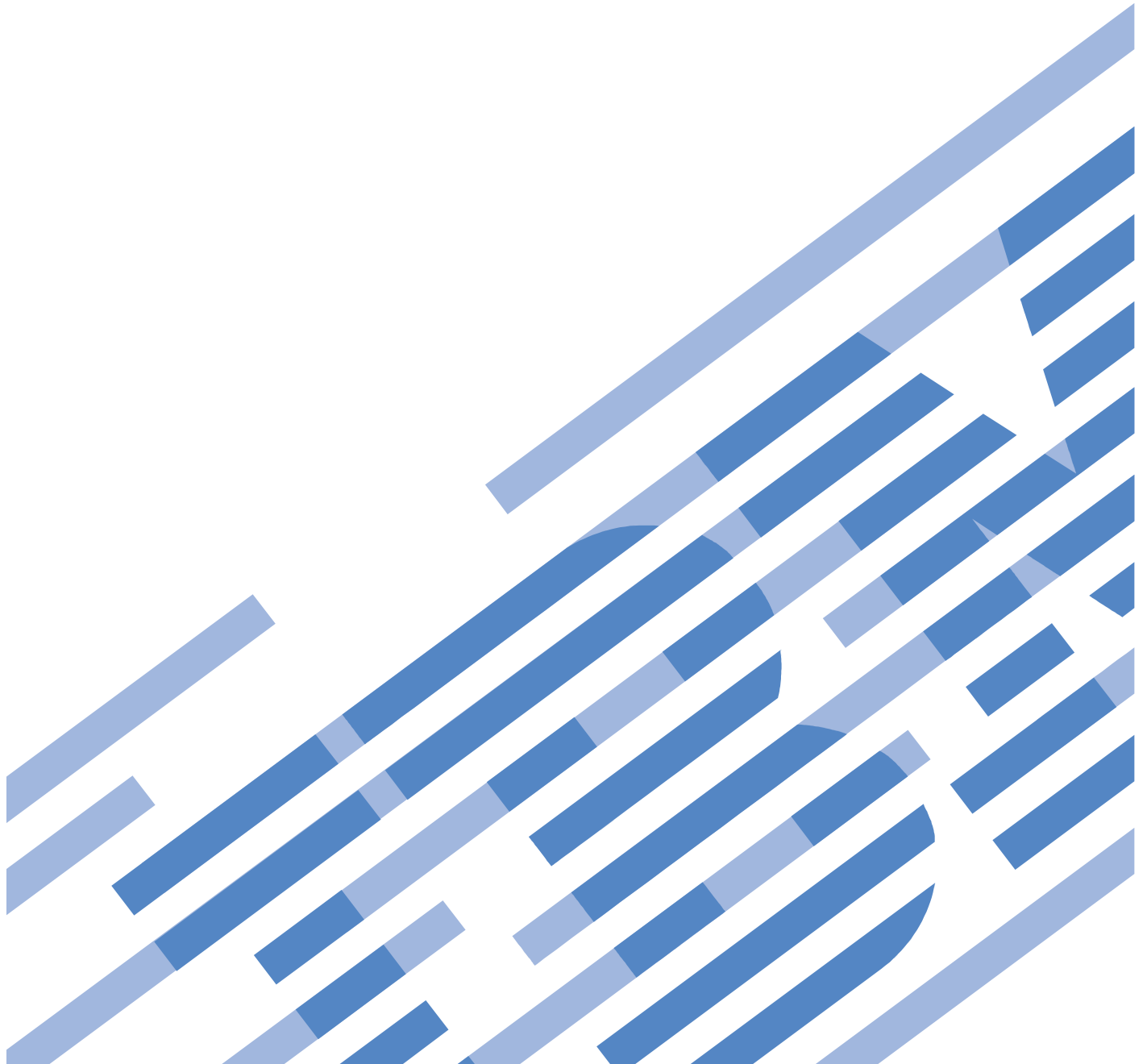Power775
Time of Day (TOD) Battery Service Procedure
Last Modified 9/30/2011

Power775 Time of Day (TOD) Battery Service Procedure
PN: 41U8496, EC N44172

CONTENTS

Figure List

Table List

1 GENERAL

1.1 Release / Revision History

Document Name	Date	PDF name	Description
Power775 Time of Day (TOD) Battery Service Procedure	9/30/2011	"p775_tod_battery.pdf"	Initial Release

Table 1 Release / Revision History

1.2 Where to find this document, and contents of the parent PDF

The current Power775 Time of Day (TOD) Battery Service Procedure document is "p775_tod_battery.pdf" which is to be downloaded from:

InfoCenter Website: http://publib.boulder.ibm.com/infocenter/powersys/v3r1m5/topic/p7ee2/p7ee2kickoff.htm

> Click "PDF files for the IBM Power 775 (9125-F2C) removing and replacing parts"
> Under "CEC Drawer", click "Power775 Time of Day (TOD) Battery Service Procedure" to download PDF "p775_tod_battery.pdf"

This is the only valid source for the latest Power775 Time of Day (TOD) Battery Service Procedure.

1.3 Required Documents

Document	Doc Number	Location
Safety Notices http://publib.boulder.ibm.com/infocenter/powersys/v3r1m5/topic/p7hdx/G229-9054.pdf	Doc# G229-9054	InfoCenter *

Table 2 Required Documents

*InfoCenter Website: http://publib.boulder.ibm.com/infocenter/powersys/v3r1m5/topic/p7ee2/p7ee2kickoff.htm

1.4 Abbreviations

Abbreviation	Definition	Details
CEC	Central Electronic Complex	Also referred to as the node.
DCCA	Distributed Conversion and Control Assembly	The Power Supply for CEC and DE are call the CEC DCCA and DE DCCA respectively
DE	Disk Enclosure	
GPFS	Global Parallel File System	IBM's file system utilizing software RAID
HDD	Hard Disk Drive	This also means hard drive
LED	Light Emitting Diode	
PCB	Printed Circuit Board	
RAID	Redundant Array of Inexpensive Disks	
SAS	Serial Attached SCSI	Protocol used for direct attached storage
SSR	System Service Representative	IBM Service personnel
SSD	Solid State Drive	
UEPO	Unit Emergency Power Off	

Table 3 Abbreviations

2 OVERVIEW

This section is an overview only. Do not start the service procedure until Section 3 which contains the detailed steps.

2.1 Safety Notices

Read "Safety_Notices " available from InfoCenter at this link:
http://publib.boulder.ibm.com/infocenter/powersys/v3r1m5/topic/p7hdx/G229-9054.pdf

The following cautions apply to all Power775 service procedures:

CAUTION:
Energy hazard present. Shorting might result in system outage and possible physical injury. Remove all metallic jewelry before servicing. (C001)

CAUTION:
The doors and covers to the product are to be closed at all times except for service by trained service personnel. All covers must be replaced and doors locked at the conclusion of the service operation. (C013)

CAUTION:
Servicing of this product or unit is to be performed by trained service personnel only. (C032)

The following notices specifically pertain to this Power775 service procedure.
CAUTION:
Only trained service personnel may replace this battery. The battery contains lithium. To avoid possible explosion, do not burn or charge the battery. Do not: Throw or immerse into water, heat to more than 100°C (212°F), repair or disassemble. (C002)

2.2 Confirm how you got to this Power 775 Time of Day (TOD) Battery Service Procedure

You should be performing this procedure if

An SRC directed you to replace the battery

You should have downloaded this procedure from:

InfoCenter Website: http://publib.boulder.ibm.com/infocenter/powersys/v3r1m5/topic/p7ee2/p7ee2kickoff.htm

 This is the only valid source for the latest Power775 Time of Day (TOD) Battery Service Procedure

2.3 Time of Day (TOD) Battery Description

Referring to Figure 1 and Figure 2 below, the Battery Cover and Battery are located at the middle right of each DCCA in all CEC drawers at the front of the system.

Power775 Time of Day (TOD) Battery Service Procedure
PN: 41U8496, EC N44172

Figure 1 Blue Battery Cover Location

Figure 2 Battery Location with Blue Battery Cover Removed

2.4   Background

The battery provides Real Time Clock(RTC) function for the DCCA unit when 350VDC is not present on the DCCA power cables. When 350VDC is present at the DCCA power connection, the RTC function will be powered by a regulator within the DCCA circuitry. There is a blue cover placed over the top of the battery.

2.5   Concurrency

The battery replacement is concurrently maintainable. The CEC will be powered on with 350 Volts DC during this procedure.

2.6   Time of Day (TOD) Battery Weight

The battery and battery cover have negligible weight.

2.7   Required SSRs and Roles

This service procedure requires 1 SSR.

2.8   Estimated Service Time

20 minutes

2.9   P7IH Hand Tool Kit Required Tools

None

2.10 Prerequisites for this Procedure

In order to perform this procedure, you will need the following information:
1) The location code of the FRU to be serviced
2) The cage location of the FRU to be serviced
3) The frame number of the FRU to be serviced

2.11 Overview of Procedure

This is an overview of the tasks to be performed. Read this overview but do not perform any of the tasks yet.

3 SERVICE PROCEDURE

NOTE: 350VDC will remain active on the power cables of the CEC drawer when servicing the battery. If the 350VDC is powered off to the CEC Drawer while the battery is removed, you will need to re-set the clock after this service procedure.

3.1 Identify CEC Drawer requiring Battery Service <= SSR TASK

STEP 1   Identify with the customer and locate the HMC that manages the frame you will be performing this procedure on.

STEP 2   In the Navigation menu on the HMC, expand **Systems Management** then select **Servers**

STEP 3   Place a checkmark in the Select column of the CEC Drawer that you want to flash the Battery Identify LED on.

STEP 4   From the **Tasks** menu *select* **Operations -> LED Status -> Identify LED**. See Figure 3.
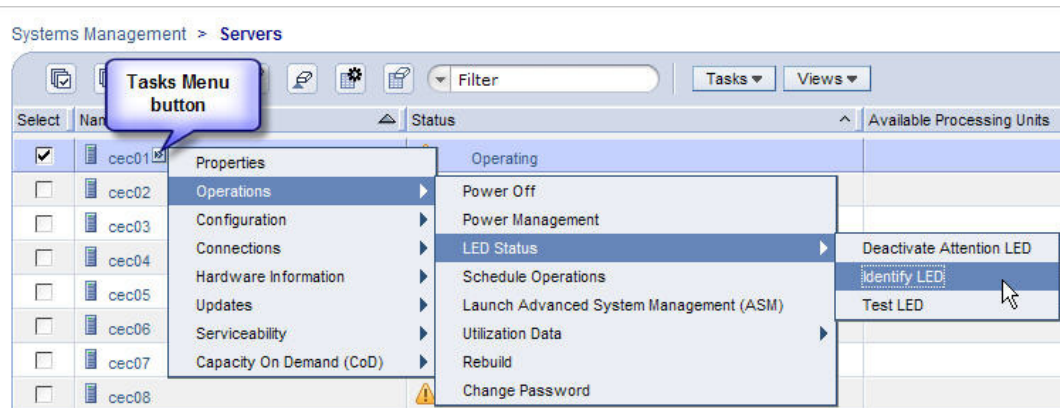
Figure 3 Identify LED Selection

STEP 5   In the window titled **Identify LED, Select Enclosure** *select* **System Unit, Model F2C**
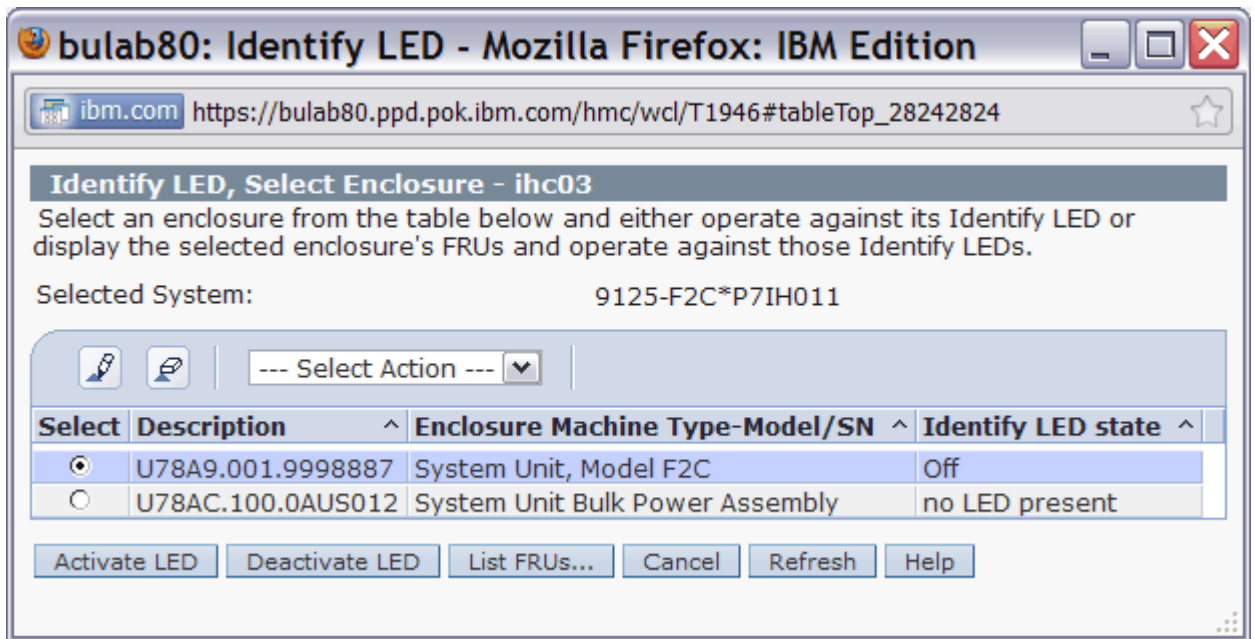then *click* the List FRUs… button. See Figure 4.

Figure 4 System Unit, Model F2C Selection

STEP 6   In the window **Identify LED, Select Location**, place a checkmark in the Select column for the battery location for the appropriate LED. Figure 5 shows the example of replacing the battery in **U78A9.001.[Serial#]-P1-C147-E1** and then *click* the **Activate LED** button. To select for the battery in the lower DCCA of the CEC Drawer it would be **U78A9.001.[Serial#]-P1-C148-E1.**

Figure 5 Battery Identify LED Selection in DCCA

STEP 7   Locate and confirm the Frame selected now has a flashing UEPO Switch LED and is the frame you plan to perform a service action on.

3.2 Remove Battery Cover and Battery <= SSR TASK

STEP 8   Open the front door of the frame.

STEP 9   Locate the battery to be replaced. This battery will have the amber colored battery ID LED illuminated which is included in the lower left of the blue battery cover. Be sure to leave the hoses connected to DCCA as it requires water cooling.

STEP 10   Remove the battery cover by first depressing the tab on the top of blue battery cover as indicated in Figure 6.

Figure 6 Depressing Blue Battery Cover Tab

STEP 11   While depressing the top tab, pull the top of the blue battery cover towards you while leaving the bottom tab engaged in the DCCA. Do this in a rocking fashion as seen in Figure 7. The last step is to pull the bottom of the blue battery cover out of the DCCA.

Figure 7 Removing Blue Battery Cover

STEP 12   Remove the old battery from the DCCA by gripping the top and bottom of the battery and pulling it straight back towards you as seen in Figure 8.

Figure 8 Battery Removal

3.3   Install new Battery and Re-install Battery Cover <= SSR TASK

STEP 13   Install the replacement battery into the battery slot by lining it up and pushing it into the DCCA as seen in Figure 9. Note that the Plus side of the battery faces down. The tabs of the battery holder will expand slightly as the battery slides into place. Be careful to note the orientation of the battery; inserting the battery incorrectly will cause mechanical damage to the battery holder.

Figure 9 Battery Replacement

STEP 14   Verify that the new battery is seated tight to the back of the battery receptacle.

STEP 15   Reinstall the blue battery cover.
   a) Engage the bottom tab of the blue battery cover into the DCCA.
   b) Raise the top right corner of the blue battery cover so it encases the connector housing as seen in Figure 10.
        • Be careful to note the alignment of the left and right sides of the cover such that the cover is not shifted compared to the opening.
   c) Ensure the blue battery cover is lined up correctly by raising the top left corner up, as seen in Figure 11
   d) Engage the top tab of the blue battery cover until it snaps into place as seen in Figure 12.
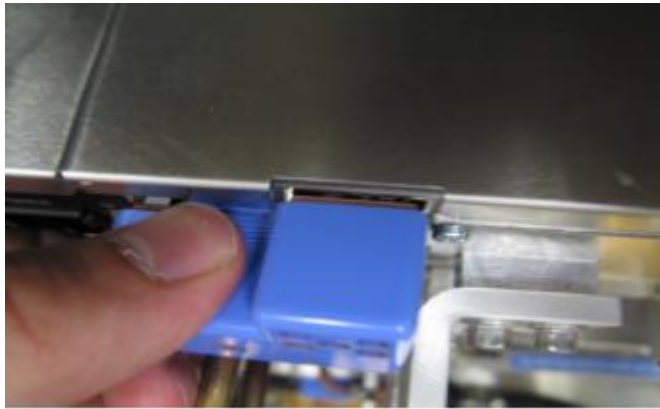

Figure 10 Replacing Blue Battery Cover

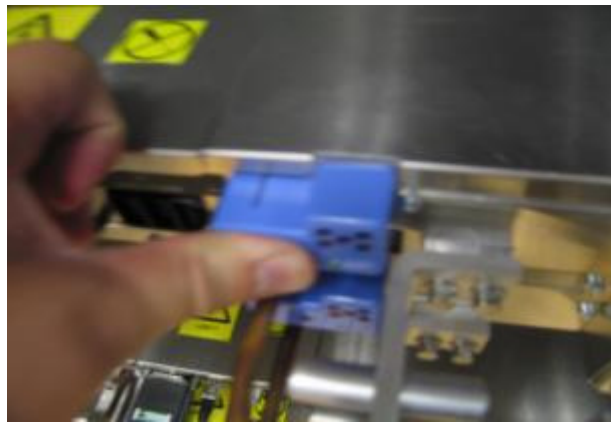Figure 11 Replacing Blue Battery Cover Continued

Figure 12 Securing Blue Battery Cover

STEP 16   Verify that the blue cover is on securely by pulling gently on the cover. Note: do not depress top tab.

STEP 17   When the use of the Battery and UEPO Identify LEDs are complete, turn them off by selecting it in the list in **Identify LED, Select Location** and then *click* the **Deactivate LED** button.

STEP 18   *Click* the **Cancel** buttons to close the **Identify LED** windows.

STEP 19   Close the front door of the frame.

STEP 20 Use the procedure "Appendix: Power775 BPC FSP Command Line Procedure" **(included in Section 5 of this document).** Verify the accuracy of the Real Time Clock (RTC) and if necessary reset the RTC by executing the following commands on the BPC FSP Command line.

I. Determine the current Time Of Day (TOD) settings by executing the following command on the BPC FSP Command line.

```
rtim timeofday
```

II. If the TOD needs to be changed, execute the following command on the BPC FSP Command line.

```
rtim timeofday yyyyMMddhhmmss
```

Where:

yyyy: Year (0001 - 9999)
MM: Month (01 - 12)
dd: Day (01 - 31)
hh: Hour (00 - 23)
mm: Minute (00 - 59)
ss: Second (00 - 59)

- Confirm any changes by repeating the `rtim timeofday` command as necessary
- If time of day settings can not be properly set contact next level of support.

III. Log out of BPC FSP ASM

3.4 Verify Battery Installation <= SSR TASK

STEP 21   In the Navigation menu on the HMC, expand **Systems Management** then select **Servers**

STEP 22   Place a checkmark in the Select column of the CEC Drawer that requires battery service.

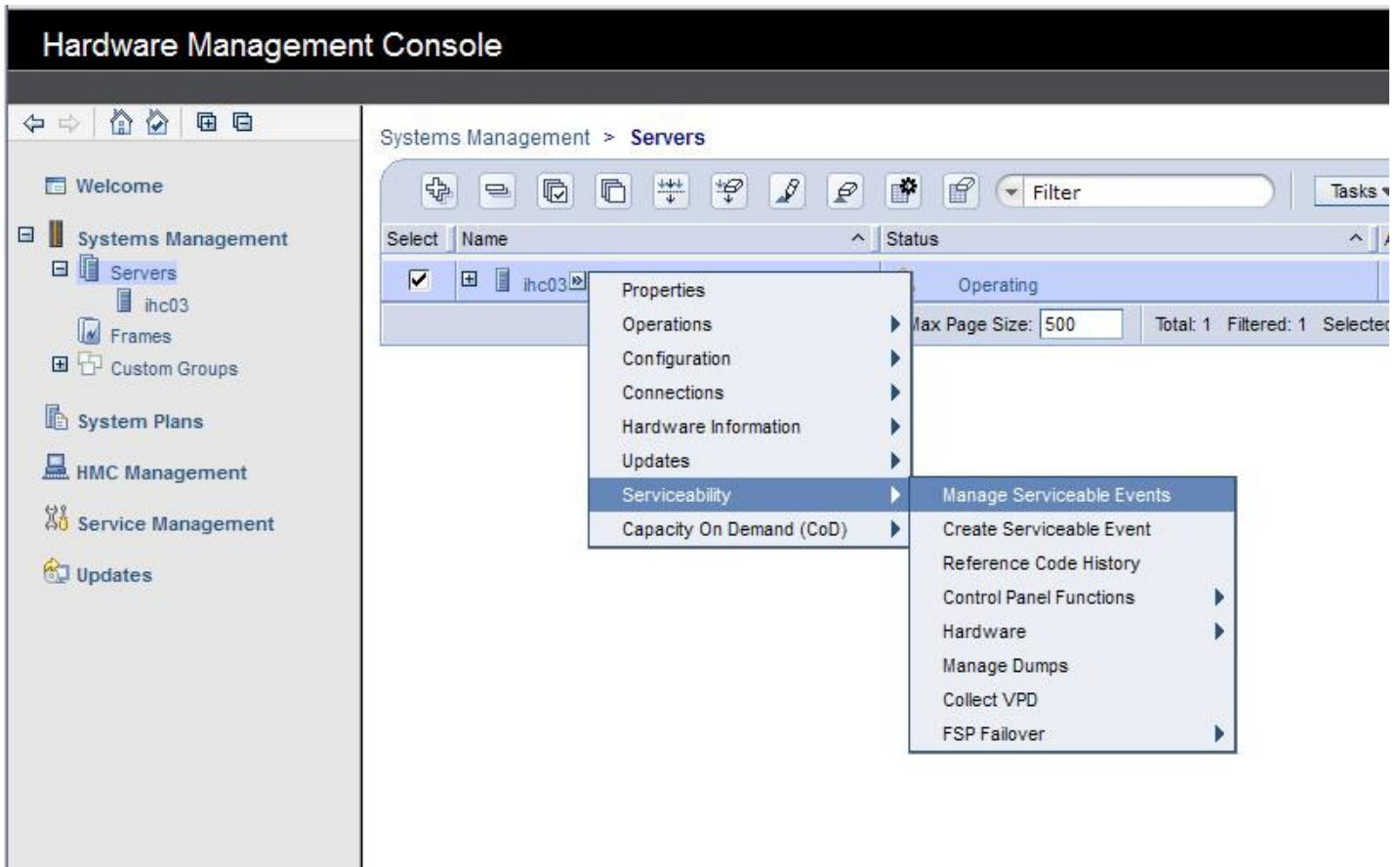STEP 23   From the **Tasks** menu *select* **Serviceability -> Manage Serviceable Events**. See Figure 13.

Figure 13 Manage Serviceable Events

STEP 24 In the window titled **Manage Serviceable Events,** make changes to the filtering as appropriate then *click* the **OK** button. See Figure 14.

Figure 14 Filter Serviceable Events

STEP 25   In the window titled **Manage Serviceable Events – Serviceable Event Overview,** *select* the Problem associated with the required battery replacement. Then *click* the **Selected** pulldown and choose **Close Event**. See Figure 15.
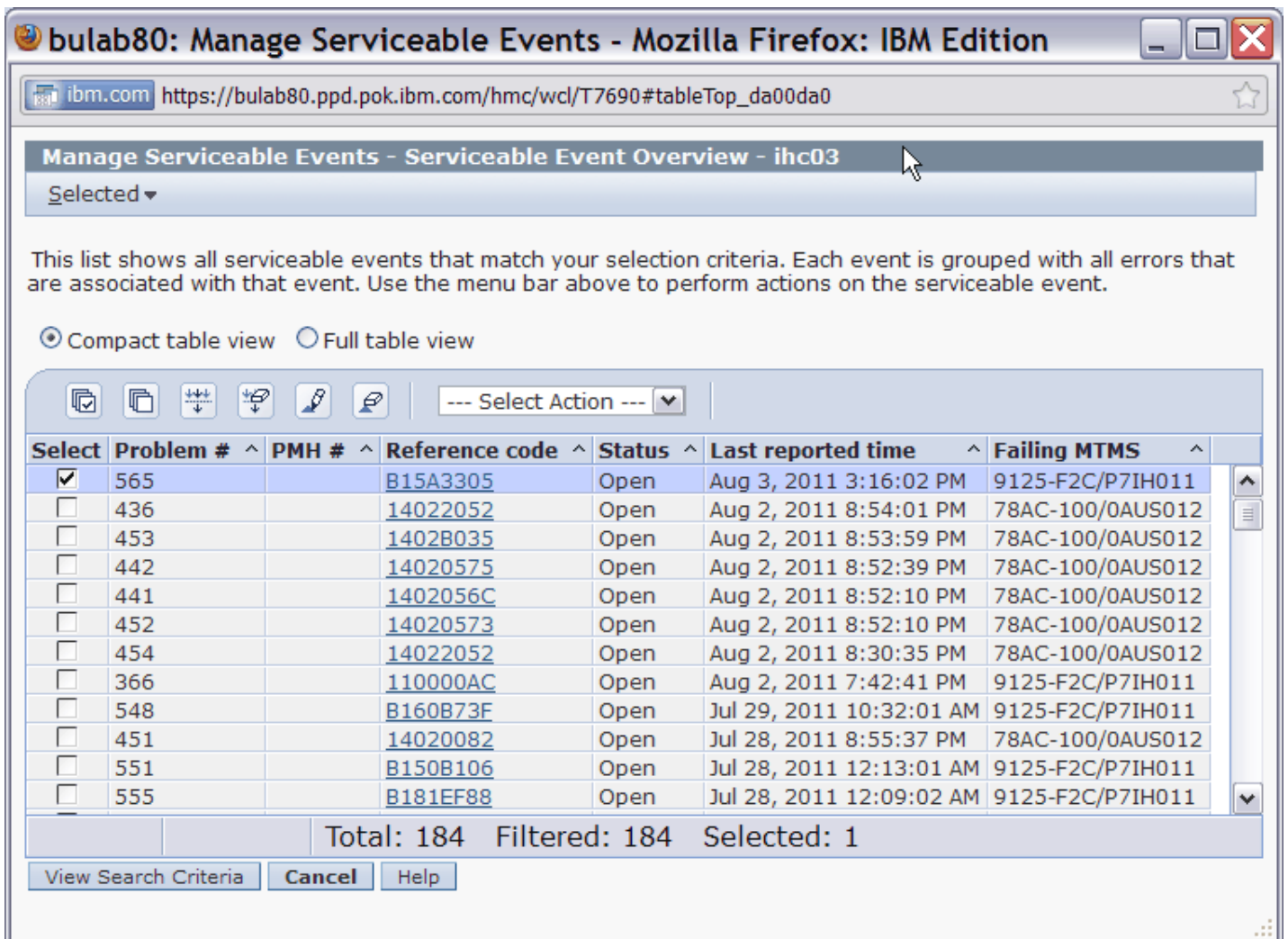

Figure 15 Serviceable Event Selection

STEP 26   In the window titled **Manage Serviceable Events – Enter Serviceable Event Comments,** fill in details as appropriate, then *click* the **Close Events** button. See Figure 16.
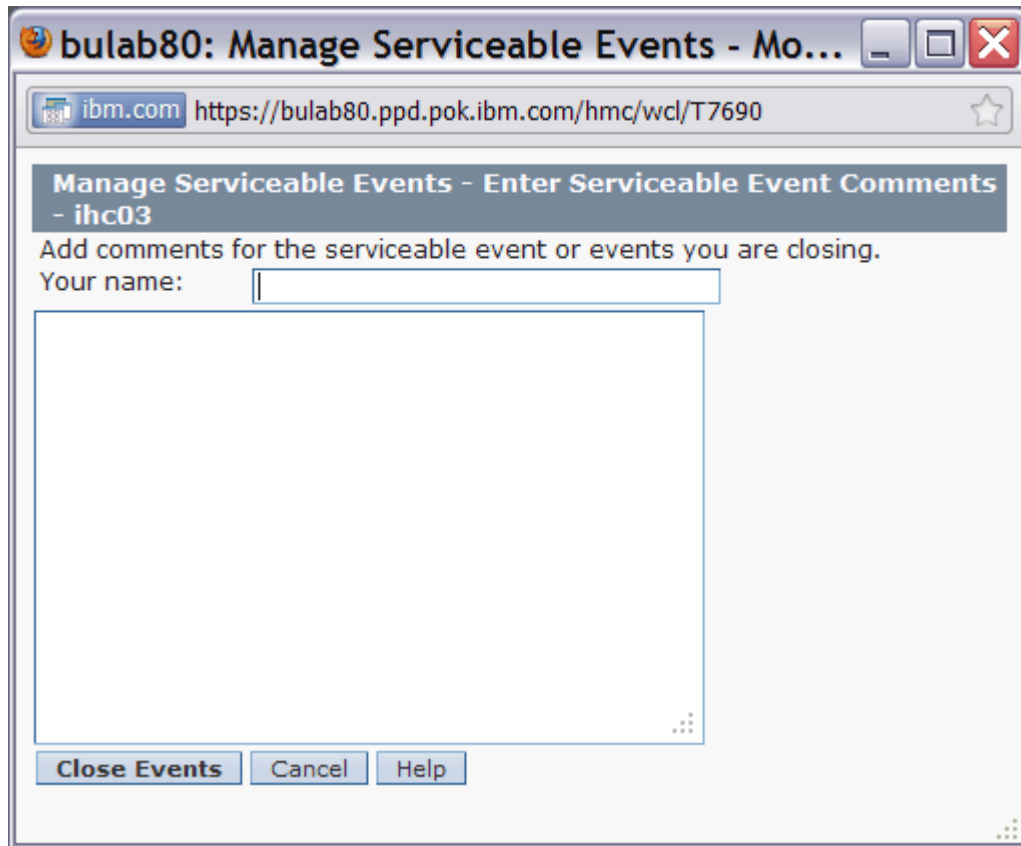
Figure 16 Add comments panel

STEP 27   In the window titled **Manage Serviceable Events – Close Serviceable Events,** *click* the **Yes** button. See Figure 17.
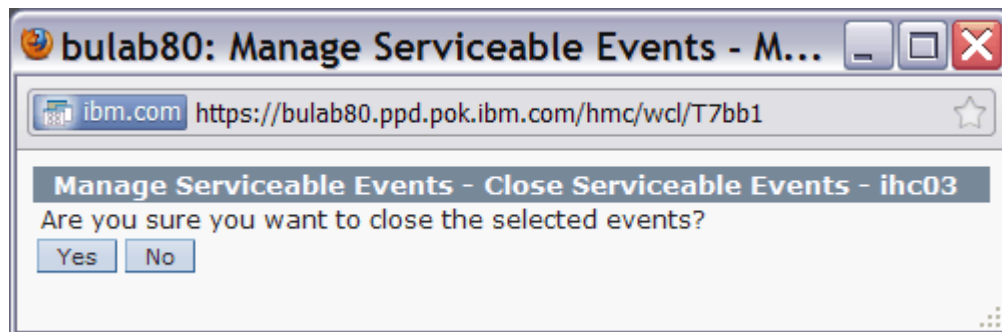
Figure 17 Close Serviceable Event

STEP 28   Click Cancel on the remaining screens until you are back to the main HMC screen,

STEP 29   Execute the battery verification test on the CEC FSP Command line:

registry –Hw rtim/BatteryAlertTime 0x00000000

STEP 30   Check the HMC for any new battery Serviceable Events.
- If no new battery Serviceable Events show up on this DCCA within 3 minutes of executing STEP 29, then the procedure is complete.
- If a new battery Serviceable Events is created within 3 minutes of executing STEP 29, then the procedure failed and you must have not successfully completed the procedure. Complete the service procedure again until this step shows no new battery Serviceable Events in this DCCA.
- If you continue to have a serviceable event on this DCCA, contact next level of support.

4 END OF POWER775 TIME OF DAY (TOD) BATTERY SERVICE PROCEDURE

# 5 APPENDIX A: POWER775 BPC FSP COMMAND LINE PROCEDURE

5.1 Procedure to Access the BPC FSP Command Line

1. The HMC can be accessed via the keyboard/display that resides in the network management rack.

2. Login to the HMC if not done already.

3. In the HMC navigation pane, expand 'Systems Management' **+** sign and then click 'Frames':
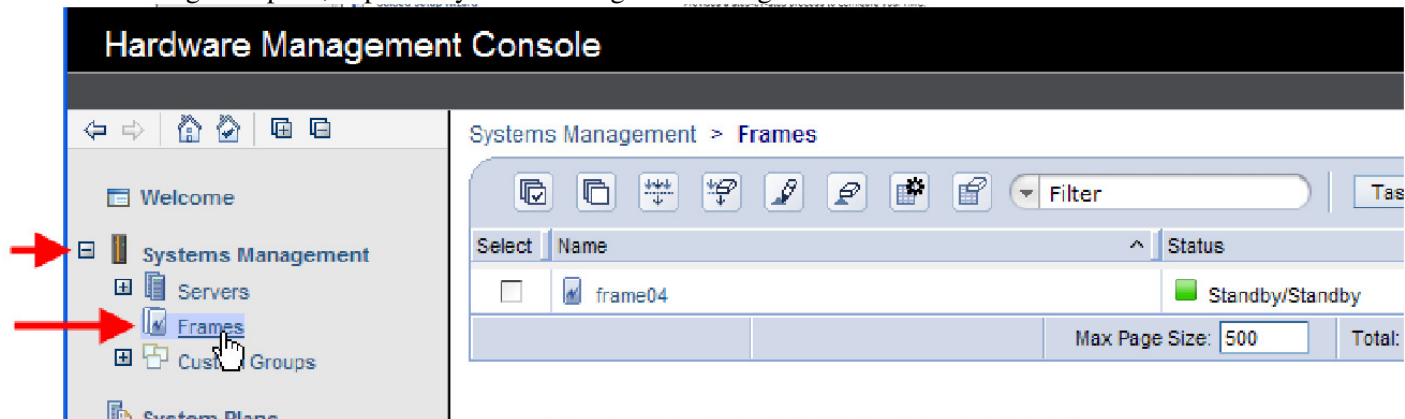
4. From the Tasks Menu right-arrow pull-down menu, click **Operations ➔ Launch Frame Advanced Systems Management (ASM)**
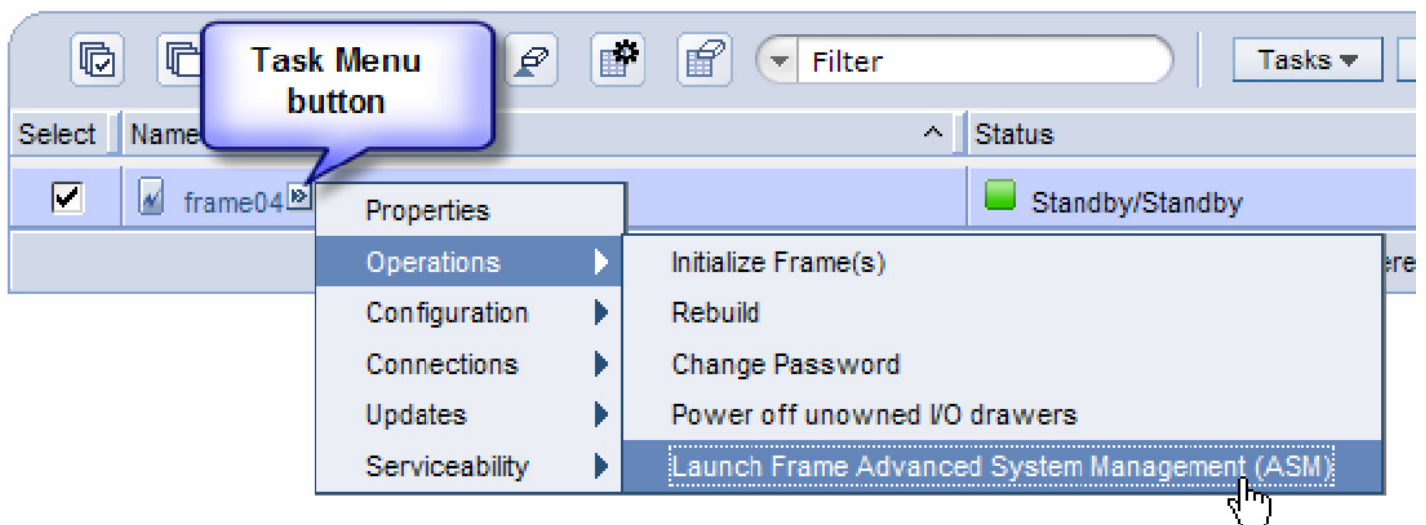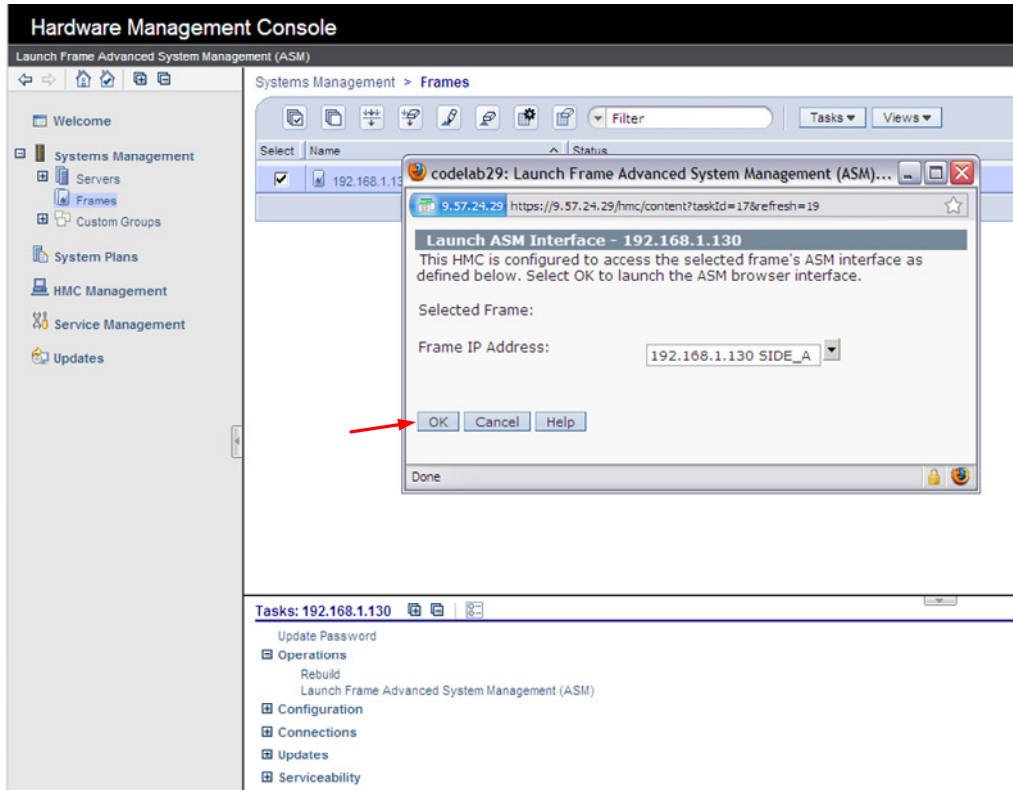
5. From the Launch ASM Interface window, select **SIDE_A** for the 'Frame IP Address' then click the **OK** button.
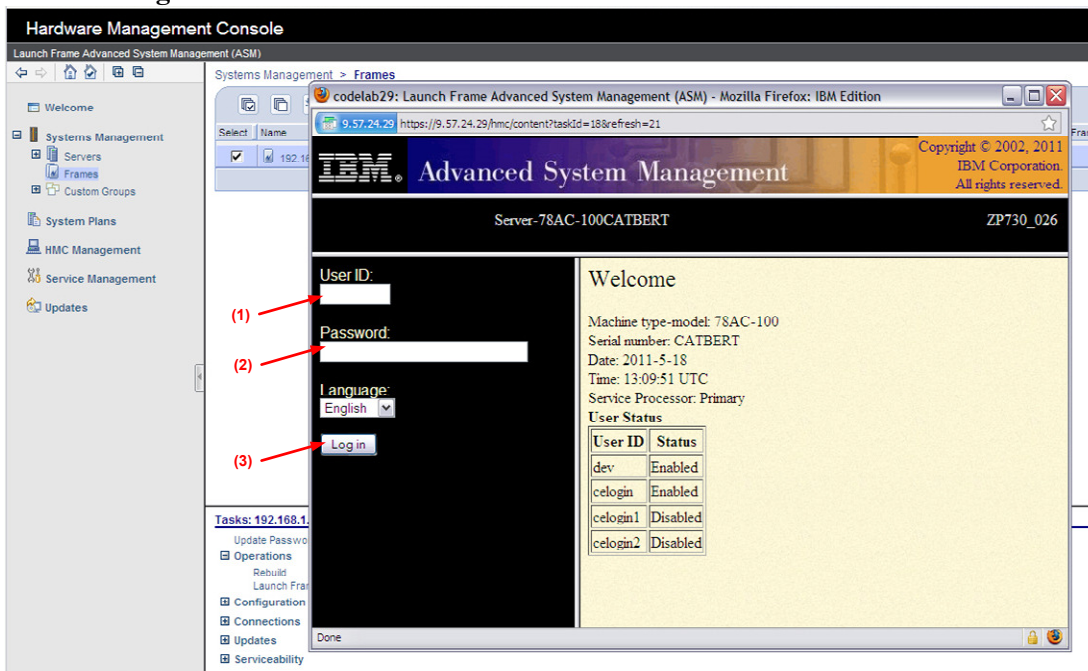

6. The ASM login window is presented. Acquire the necessary User ID and Password.

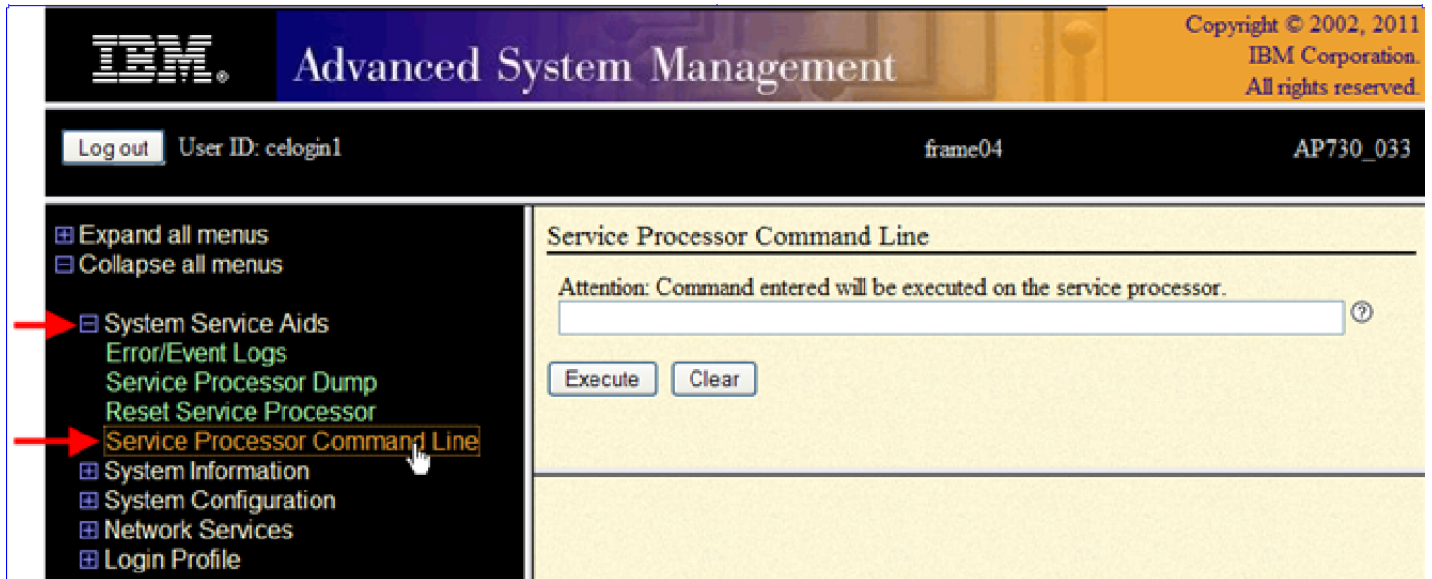   "celogin" requires Daily PW from the IBM Support Center.

    "celogin1" might be has enabled by the customer. If so, obtain the password from the customer.

1. Enter User ID

2. Enter Password

3. Click **Log in** button

7. Expand 'System Service Aids' **+** sign and Select 'Service Processor Command Line'.

8. The ASM BPC FSP Command line will be presented. Enter the commands defined in the paper service procedures at this command line and press the Enter key (or click the **Execute** button).

9. Return to the step of the paper service procedure that directed you to this Appendix.

5.2   End of Appendix A: Power775 BPC FSP Command Line Procedure