Recovery from an LED 727 in AIX 3.2

Special Notices

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> **Note:** The information in this document has **not** been verified for AIX 4.1.

Cause of an LED 727

In AIX 3.2 on the RISC System/6000, the system may hang on LED 727 during a boot in Normal mode if devices are defined on a concentrator but are not attached. This is a known problem — refer to APAR ix23405 for more information.

Summary of the Recovery Procedure

To recover from LED 727, list all the ttys and printers with lsdev. Then, for each device listed as "defined", remove the definition or attach the device.

Steps

1. Turn the key to the Service position.
2. With BOSboot diskettes or tape **of the same version and level as the operating system**, boot the system.

Warning: If you boot a 3.2 system with 3.1 media, or boot a 3.1 system with 3.2 media, then you will not be able to use the standard scripts (getrootfs or /etc/continue) to bring your workstation into full maintenance mode.

Moreover, performing the scripts on a 3.1 system with 3.2 boot media may actually remove some files and prevent your system from booting successfully in normal mode until missing files (/etc/mount and /etc/umount) are replaced on the disk.

Notes:

a. For information on BOSboot diskettes, refer to InfoExplorer or order fax #2462 from 1-800-IBM-4FAX (or 415-855-4FAX outside the U.S. from a fax machine phone).

b. If booting from diskettes, when you see LED c07, insert the next diskette. This may be the optional display extensions diskette (required for AIX 3.2.5) or the display diskette.

c. If you have AIX 3.2.5, used a fddi network install, and selected that option for the install device, you will need the communications extensions diskette. If this diskette is not available, you can build it from another system with fddi installed or call your branch office for assistance.

Follow the prompts to the installation/maintenance menu.

3. Choose the maintenance shell (option 4).

4. Determine the hdisk# to use with the getrootfs command. If you have only one disk, then `hdisk0` is the proper hdisk# to use. If you have more than one disk, do the following:

   - **For AIX 3.2.4 or later:**

     Run

     ```
     getrootfs
     ```

     The output indicates the disk that should be used with getrootfs in the next step.

   - **For AIX 3.2 to 3.2.3e:**

     Run

     ```
     lqueryvg -Atp hdisk# | grep hd5
     ```

     for each hdisk# (hdisk0, hdisk1, etc.) until you get output that looks like:

     ```
     00005264feb3631c.2  hd5 1
     ```

     The exact output you get will be different but will follow the form

     ```
     large_number.x  hd5 1
     ```

You may find more than one disk has this output. These will all be disks which belong to the rootvg volume group. You may use any of the disks identified to be in rootvg in the following step.

5. Now access the rootvg volume group by running getrootfs. ('#' is the number of the fixed disk, determined in step 4.)

   ```
   getrootfs hdisk#
   ```

   If you get errors from getrootfs, do not continue with the rest of this procedure. Correct the problem causing the error. If you need assistance correcting the problem causing the error, contact one of the following:

   - local branch office
   - your point of sale
   - 1-800-CALL-AIX (to register for fee-based services)

6. For AIX 3.2.4 or greater, enter the following command:

   ```
   ODMDIR=/dev/objrepos
   ```

7. Next, set the TERM environment variable in preparation for using smit in later steps (xxx is a terminal type, such as hft, ibm3151, or vt100).

   ```
   TERM=xxx
   export TERM
   ```

8. To list all ttys and printers, run the following commands:

   ```
   lsdev -C | grep tty
   lsdev -C | grep lp
   ```

9. For each 16-port concentrator device that is shown as "defined", either remove its definition or attach it so that it becomes "available".

   Example 1: Suppose `lsdev -C | grep tty` shows:

   ```
   tty0 available 00-00-S1-00
   tty3 available 00-07-01-13
   tty4 defined   00-07-04-15
   ```

   You do not have to worry about tty0, because it is on serial port 1, or tty3, because it is "available". For tty4, you need to either remove the definition or attach a terminal device to concentrator port 00-07-04-15.

   Example 2: Suppose `lsdev -C | grep lp` shows:

   ```
   lp0 available 00-00-0p-00
   lp3 available 00-07-01-13
   lp4 defined   00-07-04-15
   lp1 defined   00-07-02-11
   ```

   You do not have to worry about lp0, because it is on the parallel port, or lp3, because it is "available". For lp1 and lp4, you need to either remove the definitions or attach printers to concentrator ports 00-07-04-15 and 00-07-02-11.

10. If you decide to attach the devices, you can do so through the smit interface with "smit device". When you are finished, reboot in Normal mode.

If you successfully attached the devices and rebooted, you are finished with these instructions.

If the system still hangs on LED 727, or if you do not have the devices to attach to the "defined" ports, then you must remove these device definitions from the system.

11. You can remove the devices through the smit interface with "smit device" or from the command line with one of the following commands. (Replace "#" with the appropriate number.)

    ```
    rmdev -l lp# -d
    ```

    or

    ```
    rmdev -l tty# -d
    ```

    If you successfully removed the devices, skip to step 15.

    You may receive the following error when you try to remove the devices.

    ```
    0514-039 error unloading kernel extension
    Method error: /etc/methods/ucftty
    ```

12. **If you receive the above errors, create a file called "del_dev" consisting of the following lines:**

    ```
    odmdelete -q "name=${1}" -o CuAt
    odmdelete -q "name=${1}" -o CuDv
    odmdelete -q "value3=${1}" -o CuDvDr
    ```

    Save the file and exit the editor.

13. **Then run the following command to change the file type to executable.**

    ```
    chmod +x del_dev
    ```

14. **Then enter**

    ```
    del_dev xxx
    ```

    where "xxx" is the definition you want to remove ("lp1", for example).

15. **After you have removed all the necessary devices, be sure to enter the following command:**

    ```
    savebase
    ```

16. **Now, switch the key to Normal, remove the diskette or tape from which you booted, and run the following to reboot in Normal mode.**

    ```
    shutdown -Fr
    ```

Note: If all else fails, and you need to get your system running, you can turn the system off and remove the 64-port adapter card. Then reboot.

For assistance with removing the card, contact your branch office or call Hardware Support at 1-800-IBM-SERV.

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