Restoring /usr/ccs/lib/libc.a in AIX 3.2

Special Notices

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

Procedure

This procedure MIGHT help to recover the system if someone has accidentally removed /usr/ccs/lib/libc.a. This document applies to AIX 3.2.

1. Turn the key to the Service position.
2. With bootable media OF THE SAME VERSION AND LEVEL AS THE 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.

3. Choose the maintenance shell (option 4 for AIX 3.2).

4. Determine the hdisk# to use with the importvg 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. Run the following commands, replacing "hdisk#" with the disk which contains hd5 (determined in step 4),

   a. getrootfs hdisk# sh

   b. mount /dev/hd4 /mnt

   c. mount /dev/hd2 /mnt/usr

   d. cd /mnt

6. Insert the mksysb tape in the tape drive and issue the following commands (replacing "X" with the appropriate number for the tape drive device and "Y" with the appropriate number for the desired tape drive action and density):

   Note: For more information on rmtX.Y special files, refer to InfoExplorer or order document number 1896 from 1-800-IBM-4FAX (or 415-855-4FAX outside the U.S. from a fax machine phone).

   First you will need to set the block size of the tape drive. By default the device driver in maintenance mode will be set to a block size 512.

a. tctl -f /dev/rmtX rewind

b. tctl -f /dev/rmtX.Y fsf 1

c. restbyname -xvqf /dev/rmtX.Y ./tapeblksz

d. cat tapeblksz

e. If the value from step 'd' is not equal to 512 do this /etc/methods/chggen -l rmtX -a block_size=<value from d>

f. tctl -f /dev/rmtX rewind

g. tctl -f /dev/rmtX.1 fsf 3

7. Now use the "pax" command to restore the missing file. Replace "X" with the appropriate number for the tape drive device and "Y" with the appropriate number for the desired tape drive action and density.

   a. IF YOU NEED TO RESTORE /usr/ccs/lib/libc.a, follow these steps:

      ```
      pax -rvf/dev/rmtX.Y -pmop ./usr/ccs/lib/libc.a
      skip to step 8
      ```

   b. IF YOU NEED TO RESTORE /usr/ccs/lib DIRECTORY, follow these steps:

      ```
      pax -rvf/dev/rmtX.Y -pmop ./usr/ccs/lib
      skip to step 8
      ```

   c. IF YOU NEED TO RESTORE /usr/ccs/bin DIRECTORY, follow these steps:

      ```
      pax -rvf/dev/rmtX.Y -pmop ./usr/ccs/bin
      skip to step 8
      ```

8. Flush the data to disk.

   ```
   cd /mnt/usr/sbin
   ./sync;./sync;./sync
   ```

9. Unmounting /usr filesystem:

   ```
   cd /
   umount /dev/hd2
   ```

   ```
   If that commands fails then turn key to normal mode and reboot.
   ```

10. Umounting / filesystm:

    ```
    umount /dev/hd4
    ```

    ```
    If that commands fails then turn key to normal mode and reboot.
    ```

11. Continuing with getrootfs

    ```
    exit
    ```

12. Boot the system in normal mode:

    ```
    turn key to normal position
    shutdown -Fr
    ```

Reader's Comments

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