Recovery from an LED C31 in AIX 3.1 or 3.2

Special Notices

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

Causes of an LED C31

An LED C31 during IPL on a RISC System/6000 in AIX 3.1 or 3.2 may be caused by an incorrect console configuration, by a corrupt ODM (Object Data Manager), or by a non-terminal device (such as a modem or printer) plugged into port 1 or 2.

Summary of the Recovery Procedure

To resolve the LED C31, check for a non-terminal device plugged into port 1 or 2. If that is not the problem, you will need to boot up in Service mode and change the console with the `chcons` command as in the following steps.

Steps

1. Check for a non-terminal device plugged into serial port 1 or 2. If there is not such a device, go to step 2. If there is one, unplug it or turn it off. Then reboot the machine with the key in Normal position. You do not need to continue with these steps.
2. Turn the key to the Service position.

3. 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.

4. Choose the maintenance shell (option 5 for AIX 3.1, option 4 for AIX 3.2).

5. Determine the hdisk# to use with the getrootfs or /etc/continue 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 3.1 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.

6. Now access the rootvg volume group by running /etc/continue (for AIX 3.1) or getrootfs (for AIX 3.2). ('#' is the number of the fixed disk, determined in step 5.)

   For AIX 3.1 only, run

   ```
   /etc/continue hdisk#
   ```

   For AIX 3.2 only, run

   ```
   getrootfs hdisk#
   ```

   If you get errors from /etc/continue or 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)

   All of the above avenues for assistance may be billable.

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

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

8. Change the system console with the following command. The change will take effect at the next startup of the system.

   If your console is an hft (6091), run the following:

   ```
   chcons -a login=enable /dev/hft/0
   ```

   If your console is a tty (ibm3151), run the following:

   ```
   chcons -a login=enable /dev/tty0
   ```

9. With the key in Normal position, run

   ```
   shutdown -Fr
   ```

10. If the system does not stop at LED C31 during reboot, you do not need to continue with these instructions.

    If the system still stops on LED C31 during reboot and you are running AIX 3.1, repeat steps 2-6 and then go to step 11.

    If the system still stops on LED C31 during reboot and you are running AIX 3.2, repeat steps 2-5 and then go to step 12.

11. For AIX 3.1 only, run the following commands, which will remove much of the system's configuration, saving it to a backup directory.

```
mkdir /etc/objrepos/bak
cp /etc/objrepos/Cu* /etc/objrepos/bak
cp /etc/objrepos/boot/Cu* /etc/objrepos
```

Determine which disk is the boot disk with the lslv command. The boot disk will be shown in the PV1 column of the lslv output.

```
lslv -m hd5
```

Save the clean ODM database to the boot logical volume. ('#' is the number of the fixed disk, determined with the previous command.)

```
savebase -d /dev/hdisk#
```

Go to step 13.

12. For AIX 3.2 only, run the following commands, which will remove much of the system's configuration, saving it to a backup directory. ('#' is the number of the fixed disk, determined in step 5.)

```
getrootfs hdisk# sh
mount /dev/hd4 /mnt
mount /dev/hd2 /usr
mkdir /mnt/etc/objrepos/bak
cp /mnt/etc/objrepos/Cu* /mnt/etc/objrepos/bak
cp /etc/objrepos/Cu* /mnt/etc/objrepos
/etc/umount all
exit
```

Determine which disk is the boot disk with the lslv command. The boot disk will be shown in the PV1 column of the lslv output.

```
lslv -m hd5
```

Save the clean ODM database to the boot logical volume. ('#' is the number of the fixed disk, determined with the previous command.)

```
savebase -d /dev/hdisk#
```

Continue with step 13.

13. Turn the key to Normal position and run

```
shutdown -Fr
```

14. If LED C31 still occurs when you reboot your system and you need further assistance with this problem, contact one of the following:

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

All of the above avenues for assistance may be billable.

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