Recovery from an LED 201 in AIX 3.1 and 3.2

Special Notices

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

Warning: Please do not use this document if the system is a /usr client, diskless client, or dataless client.

Causes of an LED 201

An LED 201 during IPL is most often caused by a corrupted boot logical volume; however, it can also be caused by a hardware problem. If LED 299 appears before LED 201, a corrupted boot logical volume is probably the cause. If LED 299 does not appear, the cause may be hardware.

The boot logical volume can become corrupted if the / (root) or /tmp file system is full when the bosboot command is run. This may occur during the installation of updates.

Summary of the Recovery Procedure

In the following steps, you will boot in maintenance mode, check the amount of free space in the /dev/hd3 and /dev/hd4 file systems, erase files as necessary, and rebuild the boot image (in case it is corrupted). Then you will check the error log for hardware CHECKSTOP errors. If you find CHECKSTOP errors, contact hardware support (1-800-IBM-SERV). If you do not and if you still get an LED 201, contact your local branch office.

Steps

Warning: Please do not use this document if the system is a /usr client, diskless client, or dataless client.

1. Turn the key to the Service position.
2. With bootable media **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 5 for AIX 3.1, option 4 for AIX 3.2).
4. 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.

5. 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 4).

   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.

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

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

7. Run the following commands and note the numbers in the "free" column in the output:

   ```
   df  /dev/hd3
   df  /dev/hd4
   ```

8. If the "free" column for either the /dev/hd3 or /dev/hd4 file system shows less than 1000, erase some files from that file system. Some files you may want to delete (if they exist) are

   ```
   /smit.log,
   /smit.script
   /core
   /etc/core
   /dev/core
   /tmp/core
   ```

Core files in / or /tmp or in any subdirectory of / or /tmp (unless the subdirectory is a separate moint point) may be deleted. Examples of subdirectories of / that you may want to check are /etc, /dev, and any user-created directories.

Also check for any tremendously large files in the /dev directory. It is common for a very large file to end up in /dev as a result of a mistyped command (such as backup, tar, or dd).

9. 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
   ```

WARNING: Please do not proceed further if the system is a /usr client, diskless client, or dataless client.

10. Recreate the boot image. (hdisk# is the boot disk determined in step 9.)

    ```
    bosboot -a -d /dev/hdisk#
    ```

11. Check the error log for hardware CHECKSTOP errors:

    ```
    errpt -a | grep CHECKSTOP
    ```

    If you get output similar to

    ```
    ERROR LABEL:  CHECKSTOP
    ```

    then contact hardware support (1-800-IBM-SERV) for assistance with this hardware problem.

12. With the key in Normal position, shutdown the system.

    ```
    shutdown -Fr
    ```

13. If LED 201 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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