Recovery from LED 551, 555, or 557 in AIX 4.1

Special Notices

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

Warning: Do not use this procedure on an AFS fileserver. Doing so may remove all AFS fileserver data because fsck would be run on the AFS volumes.

About This Document

This document describes the causes for LED 551, 555 or 557 during IPL on a RISC System/6000. Also outlined is a recovery procedure. This document is applicable to AIX 4.1.

Causes of an LED 551, 555, or 557

The known causes of an LED 551, 555, or 557 during IPL on an RISC System/6000 are:

- A corrupted file system.
- A corrupted journaled-file-system (JFS) log device.
- A failing fsck (file-system check) caused by a bad file system helper.
- A bad disk in the machine that is a member of the rootvg.

Recovery Procedure

To diagnose and fix the problem, you will need to boot from bootable media, run logform on /dev/hd8, and run fsck to fix any file systems that may be corrupted.

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 system**, boot the system.

   The bootable media can be **any one** of the following

   - Bootable cdrom
   - NON_AUTOINSTALL Mksysb
   - Bootable Install Tape

   Follow the screen prompts to the following menu:

   ```
   Welcome to Base Operating System
   Installation and Maintenance
   ```

3. Choose "Start Maintenance Mode for System Recovery" (Option 3).

   The Next Screen has the "maintenance" Menu.

   - Choose "Access a Root Volume Group" (Option 1).

     The next screen displays a warning that indicates you will not be able to return to Base OS menu without rebooting.

   - Choose "0 continue"

     The next screen displays information about all volume groups on the system.

   - Select the root volume group by number.
   - Choose "Access this volume group and start a shell before mounting the filesystems" (Option 2).

   If you get errors indicating that a physical volume is missing from the rootvg, run diagnostics on the physical volumes to find out if you have a bad disk. Do not continue with the rest of the steps in this document.

   If you get other errors from the above option, do not continue with the rest of the steps in this document. Correct the problem causing the error. If you need assistance correcting the problem contact one of the following:

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

   All of the above avenues for assistance may be billable.

4. Format the default jfslog for the rootvg jfs file systems.

   ```
   /usr/sbin/logform /dev/hd8
   ```

   Answer "yes" when asked if you want to destroy the log.

5. Next, run the following commands to check and repair file systems. (The "-y" option gives fsck permission to repair file systems when necessary.)

```
fsck -y /dev/hd1
fsck -y /dev/hd2
fsck -y /dev/hd3
fsck -y /dev/hd4
fsck -y /dev/hd9var
```

6. Type "exit". The file systems will automatically mount after you type "exit".
7. If you are running the Andrew File System (AFS), use the following commands to find out whether you have more than one version of the v3fshelper file. (otherwise skip to step 8.)

   ```
   cd /sbin/helpers

   ls -l v3fshelper*
   ```

   If you have only one version of the v3fshelper file (for example, "v3fshelper"), proceed to step 8.

   If there is a version of v3fshelper marked as original (for example, "v3fshelper.orig"), run the following commands:

   ```
   copy v3fshelper v3fshelper.afs
   copy v3fshelper.orig v3fshelper
   ```

8. 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.

9. Recreate the boot image and alter the boot list. (hdisk# is the boot disk determined in step 8.)

   ```
   bosboot -a -d /dev/hdisk#
   bootlist -m normal hdisk#
   ```

10. If you copied the v3fshelper file in step 7, AFS file-system helper back to v3fshelper:

    ```
    copy v3fshelper.afs v3fshelper
    ```

11. With the key in Normal position, run

    ```
    shutdown -Fr
    ```

    If you followed all of the above steps and the system still stops at an LED 551, 555, or 557 during a reboot in normal mode, you may want to pursue further system recovery assistance from 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.

For reasons of time and the integrity of your AIX operating system, the best alternative at this point may be to reinstall AIX.

Reader's Comments

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Use this form to tell us what you think about this document. If you have found errors in it, or if you want to express your opinion about it (such as organization, subject matter, appearance) or make suggestions for improvement, this is the form to use.

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