Workaround for LED 551 Hang After Concurrent Diagnostics

Special Notices

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

About this Document

This document applies to AIX 3.2 on the RISC System/6000. It contains a workaround for an LED 551 hang that occurs after concurrent diagnostics have been run on a hard disk belonging to the rootvg volume group.

The levels of 3.2 diagnostics that contain this bug are 2.0 and 2.1. The bug was corrected in diag 2.1.1. The problem is configuration dependent. To use the following workaround, you must have access to a running 3.2 system.

On the running AIX 3.2 RISC System/6000 machine, follow these steps:

1. Log in as root, and enter the following commands:

```
cd /tmp
mkdir recover
cd recover
cp /etc/chpv .
cp /etc/lchangepv .
cp /usr/bin/sed .
cp /usr/bin/sort .
cp /usr/bin/uniq .
ls * | backup -if/dev/rfd0
```

   When prompted, insert a diskette in the diskette drive.

Now, **on the machine that has the LED 551:**

2. Turn the key to the Service position.

3. 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.

Follow the prompts to the installation/maintenance menu.

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

5. Enter the following command:

```
lsdev -Cc disk
```

Make sure all hard disks in the system are in the available state. If they are not, then the 551 hang is probably caused by the fact that one or more hard disks cannot be made available during IPL.

6. Once you have verified that all hard disks are present and in the available state, insert the diskette that you just copied from the other RISC System/6000 into the diskette drive and type the following commands:

```
cd /etc
restbyname
```

7. 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.

8. Now access the rootvg volume group by running getrootfs ('#' is the number of the fixed disk, determined in step 7).

   ```
   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)

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

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

10. The getrootfs script will display a list of physical volume names and their state (PVACTIVE versus PVREMOVED). Make a note of any physical disk that has a PVREMOVED state. When you see the prompt again, issue the following command for each hard disk that has its PV removed.

    ```
    chpv -v a hdiskx
    ```

    Next, reissue the getroofs command:

    ```
    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)

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

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

12. When the command finishes, all the file systems should be mounted. Verify this by issuing the mount command, and also make sure that all physical volumes are active by issuing the lspv command.

13. You should now be able to reboot from the hard file again.

Reader's Comments

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