LED 518 or Failed mksysb After Preservation Install

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 LED 518 or Failed mksysb After Preservation Install

When a preservation installation from AIX 3.1 to AIX 3.2 is followed by "BOS Installation Completion Tasks," some stanzas (sections) from the old /etc/filesystems file are copied over corresponding stanzas in the new file. Because of differences between AIX 3.1 and 3.2, some variables are not set correctly, and /dev/hd1 may be mapped to /u instead of /home.

There are two symptoms of this problem:

- After the user rebuilds the boot image ("bosboot -a") and reboots, an LED 518 occurs.

  Notes:

  1. This /etc/filesystems problem occurs whether the system is installed from tape, over a network, or from a /usr server.
  2. This problem does not occur with the "Upgrade Utilities" package.
  3. APAR IX26523 addresses this problem.

- When the user creates a system image with mksysb and then tries to reinstall from that image, the reinstall fails.

Summary of the Recovery Procedure

If the symptom is a failed reinstall, try reformatting and recertifying the disks and then reinstalling.

If the symptom is LED 518, in the file /etc/filesystems, append "type=bootfs" to the /, /usr, and /var stanzas. Make sure /dev/hd1 is mapped to /home in /etc/filesystems. Then recreate the boot device.

Steps

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

1. If the symptom is a failed reinstall, try reformatting and recertifying the disks and then reinstalling. Do not continue with these steps.

   If the symptom is LED 518, start with step 2.

2. Turn the key to the Service position.
3. 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.

4. Choose the maintenance shell (option 4).
5. 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.

6. Now access the rootvg volume group by running the following command. ('#" is the number of the fixed disk, determined in 5).

   ```
   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 to the /etc directory.

   ```
   cd /etc
   ```

9. Set your terminal type in preparation for editing a file. (xxx is a terminal type, such as hft, ibm3151, or vt100.)

   ```
   TERM=xxx
   export TERM
   ```

10. Edit the file /etc/filesystems. In stanzas /, /usr, and /var, append "type = bootfs". Also, make sure /dev/hd1 is mapped to /home and not to /u. (For an example, see "Example of /etc/filesystems for AIX 3.2" on page 5.)
11. 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.

    At this point, it is very important to determine the correct boot disk.

    ```
    lslv -m hd5
    ```

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

12. Now, recreate the boot image. ('#' is the number of the fixed disk determined in step {518LSLV}.)

    ```
    bosboot -a -d /dev/hdisk# -l /dev/hd5 -u
    ```

13. Switch the key to normal and shutdown the system.

    ```
    shutdown -Fr
    ```

14. We recommend that you create a new full-system backup because previous ones may be bad. To display the System Startup Menu, from which you can create a full-system backup, type "smit startup".

Example of /etc/filesystems for AIX 3.2

The following is an example of the /, /usr, /var, and /home stanzas of the /etc/filesystems file.

```
/:
        dev = /dev/hd4
        vfs = jfs
        log = /dev/hd8
        mount automatic
        check false
        type= bootfs
        vol = root
        free= true

/usr:
        dev = /dev/hd2
        vfs = jfs
        log = /dev/hd8
        mount automatic
        check false
        type= bootfs
        vol = /usr
        free= false

/var:
        dev = /dev/hd9var
        vfs = jfs
        log = /dev/hd8
        mount automatic
        check false
        type= bootfs
        vol = /var
        free= false

/home:
        dev = /dev/hd1
        vfs = jfs
        log = /dev/hd8
        mount true
        check true
        vol = /home
        free= false
```

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