MKSYSB Procedure

Robert F. Woods
Strategy 7 Corp.

03/20/08

Contents

1 Introduction

1.1 Things you will need

1. Tape drive.

2. Tape cartridge compatible with drive.

3. Root access to the server username=root password=?

4. Terminal emulator or access to the console. Emulation works best with:

   a) vt100
   b) vt220

5. About 1 hour.

2 Background

The IBM AIX term mksysb refers to the process used to create a bootable tape of your computer system. It is also possible to create a bootable DVD of the system.

2.1 SMIT

There is a menu system for system administration. This document will walk you through the steps to create a mksysb tape from the menus.

2.2 Preparation

1. Open a window to your server. This window may be from your desktop with a terminal emulator, from the console or from an ASCII terminal.

2. Login as root. You will see a # prompt.

3. Place the tape in the tape drive.

4. It is best if the machine is quiet with all users logged off.

3 The smit windows

At the # prompt, enter "smitty" hit enter. You will see the following menu.

3.1 System Management

```
                            System Management

Move cursor to desired item and press Enter.

  Software Installation and Maintenance
  Software License Management
  Devices
  System Storage Management (Physical & Logical Storage)
  Security & Users
  Communications Applications and Services
  Print Spooling
  Problem Determination
  Performance & Resource Scheduling
  System Environments
  Processes & Subsystems
  Applications
  Cluster Systems Management
  Using SMIT (information only)




F1=Help              F2=Refresh           F3=Cancel            F8=Image
F9=Shell             F10=Exit             Enter=Do
```

Select the 4th line by moving the highlighted bar down to "System Storage Management (Physical and Logical Storage)". Use the up and down arrow keys to move the highlighted line. Hit enter to see the following menu.

3.2 System Storage Management (Physical and Logical Storage)

```
              System Storage Management (Physical & Logical Storage)

Move cursor to desired item and press Enter.

  Logical Volume Manager
  File Systems
  Files & Directories
  Removable Disk Management
  System Backup Manager
```

```
F1=Help              F2=Refresh           F3=Cancel            F8=Image
F9=Shell             F10=Exit             Enter=Do
```

You screen may appear slightly different based on the version of your operating system. These screens were captured on release 5.1.0. Use the arrow keys again to move down to the line System Backup Manager. Hit enter to see the following menu.

3.3 System Backup Manager

```
                        System Backup Manager

Move cursor to desired item and press Enter.

  Back Up the System
  List Files in a System Image
  Restore Files in a System Image
```

```
F1=Help              F2=Refresh          F3=Cancel           F8=Image
F9=Shell             F10=Exit            Enter=Do
```

The highlight bar should be on the words "Back Up This System to Tape/File".
Hit enter to see the following menu.

3.4 Back Up the System

```
                              Back Up the System

Type or select values in entry fields.
Press Enter AFTER making all desired changes.

[TOP]                                               [Entry Fields]
    WARNING:  Execution of the mksysb command will
              result in the loss of all material
              previously stored on the selected
              output medium. This command backs
              up only rootvg volume group.

* Backup DEVICE or FILE                      []                    +/
  Create MAP files?                          no                    +
  EXCLUDE files?                             no                    +
  List files as they are backed up?          no                    +
  Generate new /image.data file?             yes                   +
  EXPAND /tmp if needed?                      no                    +
  Disable software packing of backup?         no                    +
[MORE...2]

F1=Help            F2=Refresh         F3=Cancel          F4=List
F5=Reset           F6=Command         F7=Edit            F8=Image
F9=Shell           F10=Exit           Enter=Do
```

Now your cursor will be highlighting the [] displayed next to the words "Backup DEVICE or FILE". The + sign on the right side of the page indicates there is a help list available for this item. Notice at the bottom of your screen, the labeling of the Function keys. F1=Help F2=Refresh etc. The F4=List key is the one we will be using here to select the proper tape device to use. So hit F4 at the top of your keyboard now.

If nothing happens, your emulator is not configured properly to use the Function keys. If this is the case, your alternate instructions from this point forward will be to use the Esc (Escape) key in the upper left of the keyboard and then to strike the number associated with the Fn key.

Your screen will change to display the list of devices.

3.5 Select the tape device

```
                          Back Up the System

Type or select values in entry fields.
Press Enter AFTER making all desired changes.

[TOP]                                            [Entry Fields]
    WARNING:  Execution of the mksysb command will
              result in the loss of all material
              previously stored on the selected
              output medium. This command backs
              up only rootvg volume group.

* ??????????????????????????????????????????????????????????????????????????
  ?                        Backup DEVICE or FILE                    ?
  ?                                                                 ?
  ? Move cursor to desired item and press Enter.                    ?
  ?                                                                 ?
  ?   /dev/rmt1          5.0 GB 8mm Tape Drive                      ?
  ?   /dev/rmt2          Other SCSI Tape Drive                      ?
[M?                                                                 ?
  ? F1=Help            F2=Refresh            F3=Cancel              ?
F1? F8=Image           F10=Exit             Enter=Do               ?
F5? /=Find             n=Find Next                                 ?
F9??????????????????????????????????????????????????????????????????????
```

Move the highlight bar up or down to the proper device using the arrow keys and hit enter. The display will return to the previous page display and the device will be displayed inside the [] brackets.

Use the arrow down key to move to the line labeled "EXPAND /tmp if needed? " change from no to yes. This allows the operating system to recover from a specific error where tmp directory is full.

Use the arrow down key to move to the next line and change "Disable software packing of backup?". Change the no to yes. (Note: this is a personal thing. I do not like the backups compressed). In your particular case, if the capacity of the tape is low and the storage space used on the rootvg is high, you might want to leave this set to no. In order to change use the F4 key again to bring up your selections.

Your screen should look like the following.

3.6 Ready to execute

```
                        Back Up the System

Type or select values in entry fields.
Press Enter AFTER making all desired changes.

[MORE...2]                                    [Entry Fields]
            previously stored on the selected
            output medium. This command backs
            up only rootvg volume group.

* Backup DEVICE or FILE                       [/dev/rmt1]        +/
  Create MAP files?                           no                 +
  EXCLUDE files?                              no                 +
  List files as they are backed up?          no                 +
  Generate new /image.data file?             yes                 +
  EXPAND /tmp if needed?                      yes                +
  Disable software packing of backup?         yes                +
  Number of BLOCKS to write in a single output []                #
      (Leave blank to use a system default)
[BOTTOM]


F1=Help            F2=Refresh         F3=Cancel          F4=List
F5=Reset           F6=Command         F7=Edit            F8=Image
F9=Shell           F10=Exit           Enter=Do
```

Hit enter. The system will run for quite a period of time. Then it will display "OK" at the top of the screen. If there is some glitch, The error will be displayed by using the Ctrl key and the "v" key together to scroll down to see the error. It is also logged so that someone can later look at the error.

After the process completes (either OK or Failed) you can use the F3 key to go back one menu level. Then use F10 or successive F3's to exit the menu.