

Critical Notification:

PROPER BACKUPS ARE YOUR SOLE RESPONSIBILITY AND NEITHER DATARON NOR AUTOLOGUE WILL IN ANY WAY BE RESPONSIBLE FOR THEM OR ANY LOSS RESULTING FROM THEM.

If you do not understand everything below clearly or if you even suspect something is not working properly it is your sole responsibility to resolve the problem. To assist in this you may contact us for an explanation and/or possible assistance, but the sole responsibility for backups is yours !

There are two different types of backups and responsibilities according to the type of AIX system you have. The first system type is a single volume group and the second is a multiple volume group system. To verify what type of system you have, at the 'dot' type: **host lsvg** If it displays only one line reading: **rootvg** then you have a single volume group system. If it displays more than one line, typically would be **rootvg** and **datavg** then you have a multiple volume group system.

Notes regarding this document:

- What the IBM displays is shown in ***Bold Italics*** below.
- What you enter or accept is shown in **Bold** below.

For Single Volume Group Backups:

Overview:

For single volume group backups, the backup will run every night starting at 10:30pm. This process WILL backup the entire system including the AIX Operating System and the Datatron data files. No separate backups of the operating system are necessary.

Labeling Your Backup Tapes:

For a proper backup rotation you need at least 10 backup tapes (and 11 if you are open Sunday). Place adhesive tape labels on the flat plastic (not metal) side of the tape and with a black Magic Marker label the 10 (or 11) tapes:

Tuesday#1, Tuesday#2, Tuesday#3, Tuesday#4 and Tuesday#5
Monday, Wednesday, Thursday, Friday, Saturday and Sunday (if open Sunday)

For Multiple Volume Group Backups:

Overview

Multiple volume group backups, will require Two different backups procedures. One for the Datatron data and another for the AIX Operating System.

Labeling Your Backup Tapes:

For a proper backup rotation you need at least 12 backup tapes (and 13 if you are open Sunday). Place adhesive tape labels on the flat plastic (not metal) side of the tape and with a black Magic Marker label the 12 (or 13) tapes:

sysb#1, sysb#2

Tuesday#1, Tuesday#2, Tuesday#3, Tuesday#4 and Tuesday#5

Monday, Wednesday, Thursday, Friday, Saturday and Sunday (if open Sunday)

The nightly Datatron Data Backup:

The Datatron data backup procedure will automatically run every night starting at 10:30pm. This process will backup ONLY the Datatron data, and will NOT backup the AIX Operating System, or make the backup tape bootable.

The required MANUAL AIX Operating System "SYSB" Backup:

It is required that you create AIX Operating System backups (also known as "SYSB"). The process is done MANUALLY by you. It is recommended that you perform the SYSB backup on a monthly basis and also when any System changes are made. An example would be setting up a new printer. These SYSB backups will contain ONLY the AIX Operating System and will NOT include your Datatron data. The SYSB is done on the sysb#1 and sysb#2 labeled tapes.

To perform the SYSB backup:

- Login as root.
- Type: **ctl sysb**

The Backup Report:

After each backup has finished, a report will be printed on your default printer. This report will contain valuable information about the backup. You will see lines that will display the number of files: backed up to tape, read from tape, and on the disk. You must confirm that these numbers are all similar.

On the daily backup, another report will print after the backup report, which is the system error log. Each day you will see an entry for "*LABEL: reboot id*". This is normal.

If you do not get a backup report, or the report does not show the proper number of files being backed up, or there are any error messages in the report, or you see additional messages in the system error log, contact Datatron support immediately.

Nightly Backup Procedures:

To make nightly backups, simply put the proper daily backup tape in the tape drive, i.e. on Wednesday put in the Wednesday tape, on Thursday put in the Thursday tape, etc. On Tuesday put in your oldest Tuesday backup tape (remember that you have 5 of them). The system will AUTOMATICALLY reboot the system at a predefined time (normally 10:30PM) and then run the backup (normally starting at 10:45PM). After this tape finishes the system will print a report of the results on your report printer. *Check carefully the messages that print on this report to be sure the backup completed successfully !* You can either cut this report out and place it in the tape case along with the nightly backup you just made OR just record the date on the tape label (such as 03/02/04) and then save the reports for at least one full week! Doing this is important to verify when the nightly backup tape was made and that it is restorable in case you ever need it to restore any files from it.

Tuesday backup tapes:

The multiple Tuesday tapes are for *off-site* storage of the last 5 Tuesday night backups. The night chosen for this off-site storage should be any night when whoever takes these tapes to their home goes directly home after work. You should not choose this person's bowling night as the backup tapes would then be left in their car for hours and the tapes could easily be damaged by the cold or heat or humidity (or worse yet taken into a smoky environment). Substitute whatever night is most appropriate in your situation for the Tuesday tapes above.

Manual Backup:

The system will create the backups automatically at night. If you need to create a backup manually, follow these instructions:

From the 'dot', type: **su**

At the *password* prompt, type in the root password

At the *root@name#* prompt, type: **ctl**

The backup will begin, displaying a status of it's progress. When the backup has completed, your cursor will return to the *root@name#* prompt. Also, you will receive a backup report onto your printer, similar to the reports you receive at night.

Type: **exit** to return to the datatron 'dot'.

SYSB Backup Facts:

The SYSB backup creates a *bootable* backup of your AIX Operating System on the tapes. Should for any reason AIX crash (which is an Operating System software issue and is *far more likely* than a hardware crash) a SYSB tape is the **ONLY** way to get your system back up and running quickly. If you have not made these SYSB tapes or if you have but they are old, it is going to be extremely painful, time-consuming *and expensive* (as we *will* charge by the hour !) to get you back up, configured and running. *Depending on the time of day and if we have to send you fresh AIX CDs, it could easily be 24-48 hours until you are back up and running.*

You should make a SYSB on the SYSB#1 tape once a month (make the first tape now!), then one month later make another SYSB on the SYSB#2 tape. Then each succeeding month make another SYSB over the top of the oldest SYSB tape. Make this tape on the same day every month so you do not forget – adding this to your month-end procedures is an excellent idea. In addition, if you make configuration changes to your IBM system during the month (such as adding a new terminal or printer or PC, disk or tape drive, changing anything related to your network such as adding new stores or remote hosts or terminal servers or print servers, etc, etc) you should make another SYSB over the top of the oldest SYSB tape within a day or two of making the changes.

To make the SYSB simply put the oldest SYSB tape in the tape drive and log in as “root” (the **ctl sysb** command *will refuse* to run unless you are root). If you are not already logged in as root you can back out of the programs to the (dot) prompt and type: **su** At the password prompt, type root’s password. At the *root@name#* prompt type: **ctl sysb** and hit the **RETURN** key. Depending on the speed of your system and tape drive making the SYSB tape should take 5-90 minutes. When complete, you will again be prompted with the *root@name#* , type: **exit** to return to the (dot) prompt. A "SYSB" backup report will print a small report of the results on your report printer. Cut this report out and place it in the tape case along with the SYSB tape you just made. Doing this is important to verify when the SYSB tape was made and that it is restorable in case you ever need it to boot your system with it. Remember to remove the SYSB tape from the tape drive when you are finished and put in the tape for tonight's scheduled daily backup.

Note that you must make the SYSB tape with nothing else running on the system, so come either come in a little early or leave a little late or possibly teach someone else to do it *and then check to be sure that they do!* You should keep your most recent SYSB tape in-house so it is quickly accessible if you need it. You **MUST** keep your oldest SYSB off-site in case a fire destroys both your computer and your in-house tapes (if it is never going to happen to you then why do you continue to pay for fire insurance? Trust us, it has happened !).

There is also absolutely no substitute for off-site backups ! A fireproof safe simply means that the interior of the safe will not get so hot that paper spontaneously combusts (that is at something like 700 degrees) ! Your tapes will be destroyed at under 200 degrees. Plus what about a tornado, flood (we have had that happen too!), theft, famine, pestilence, etc? You simply **MUST** be no more than one-week behind with off-site backups, so keep **ALL** of your Tuesday tapes, plus the oldest SYSB tape, at home. While it is probably overkill, many users keep all of their backup tapes off-site.

REMEMBER, IT IS YOUR RESPONSIBILITY TO:

- **Change the backup tapes daily!**
- **Check the backup results!**
- **Store the Tuesday backup tapes off-site!**
- **Run the manual SYSB backup regularly if on a multi-volume system!**
- **Contact Datatron Support if ANY questions or problems!**

IF YOU HAVE NOT DONE THIS AND YOU NEED TO RESTORE FILES FROM THE NIGHTLY BACKUP, YOU WILL EITHER HAVE TO MANUALLY REENTER ALL TRANSACTION SINCE YOUR LAST NIGHTLY BACKUP OR POSSIBLY LOSE ALL OF YOUR DATA !!

If you have made and stored your DVDs properly, the process is usually relatively painless!!