

Strategy 7 IBM pSeries installation checklist

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Contents

1 Storage allocation policy (rootvg)

It is our philosophy to use disk mirroring for reliability where possible. Two drives are dedicated to the root volume group. This is where the operating system and paging space reside. There is also room for software packages such as database and other utilities. It is our general thinking that these drives should not contain data storage.

When configured with internal drives and a PCI RAID controller, it is possible to mirror the rootvg drives with the RAID controller. This requires additional configuration using the diagnostic routines. We feel this unnecessarily complicates the installation. Therefore, we tend to use software mirroring. That is using the mirroring capability of AIX for the mirroring of the root volume group.

Data storage is planned to be on a separate volume group. Sometimes named datavg. This volume group may be resident on internal disks, RIO drawers directly attached to the system or on SAN devices.

When the data storage is resident on internal drives and the internal drives are connected to a PCI RAID controller, the RAID control should be configured to mirror the data drives and allocate the 5th drive (if present) to a hot swap spare.

2 Installation Steps for AIX

Inventory against S7 proposal and IBM packing lists

1. Inventory against S7 proposal and IBM packing lists
2. Bolt it all together and apply power
 - a) Watch for sparks or smoke.
3. Verify OS installation and version.
 - a) Boot the machine. Do we have an Operating System?
 - i. Enter oslevel r to determine the version and maintenance level.
 - A. There may be another option to use here -s.
 - ii. Install AIX if required.
 - A. Preferably install on hdisk0
 - B. We will mirror later
 - iii. Verify firmware level. Check against latest level on IBM web site. Upgrade as necessary. Use lsmcode with options.
 - A. <http://techsupport.services.ibm.com/server/mdownload2/download.html>
 - iv. Increase paging space to at least the size of RAM.
 - A. Use SMIT
 - B. Do not add additional paging space on other volume groups. Use smit to expand the existing space.
 - v. Increase size of rootvg filesystems as client and configuration dictate;
 - A. root /
 - B. /var
 - C. /usr
 - D. /tmp

3 System dump device

- i. Configure the system dump device.
 - A. The sysdumpdev command will allow you to review the current configuration of this facility.
 - B. sysdumpdev e (prints out the current requirement for dump space)
 - C. sysdumpdev l (prints out the current dump device configuration.)
 - D. IBM / Avnet generally ships this in either of two configurations.
 - E. Primary dump device is /dev/hd6 or /dev/lgdumpdev
 - F. If the configuration is /dev/hd6, you should add a logical volume named lgdumpdev on rootvg and change the configuration of sysdumpdev to point to the new logical volume. (If you allow the dump device to remain pointing to /dev/hd6, the client will be prompted to mount a tape to record the dump after a system crash. This is most annoying and most clients will not do this, thus no dump for IBM tech support to analyze.)
 - G. This logical volume should start at 150% of memory size. Calculate the number of physical partitions required by dividing memory size by the size of the physical partition size times 1.5. around 12GB
 - H. Determine memory size by:
 - I. Looking at proposal / packing list
 - J. Using topas.
 - K. Using smit, devices, show characteristics of a defined device.
 - L. Determine physical partition size by using lsvg rootvg, look in upper right hand corner of display.
 - M. Use smit to create a new logical volume lgdumpdev. Note: the logical volume type must be sysdump.
 - N. Use smit to reassign the /dev/hd6 to the newly created /dev/lgdumpdev.
 - O. Go to smit
 - P. Go to System Environments
 - Q. Go to Change / Show Characteristics of System Dump
 - R. If the configuration is /dev/lgdumpdev please verify that the size meets the specifications outlined above. If it is too small, increase the size of the logical volume.
 - S. Install additional software packages as required.
 - T. There are four sources useful to configure your system.