

## **Antony Steel**

#### Thanks to:

Grover Davidson AIX Development Beta programme

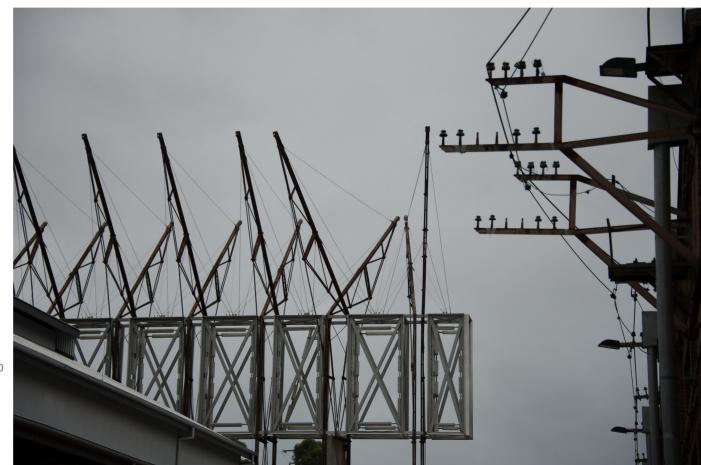


#include <std disclaimer.h>

These notes have been prepared by an Australian, so beware of unusual spelling and pronunciation.

All comments regarding futures are probably nothing more than the imagination of the speaker and are IBM Confidential till after GA.

## Session: ASEAN Power Meetup (Nov '21)



- Some further AIX updates (both 7.3 and recent 7.2)
  - JFS2 Changes
  - ksh updated
  - Multiple Queue support for NPIV
  - Hybrid Network Virtualization
  - Dynamic device attributes
  - Global save / restore of tuning parameters
  - AME support for 64K pages with p10
  - M:N thread model no longer supported
  - Option for child process not to inherit shared memory
  - Special use memory subsystem device driver
  - Java5 depricated
  - Updated support / info for NIM NFS versions
  - Updates to SMB
  - Updates to Chinese (Hant) unicode / locales
  - dist tw width and disk err percent for hdisk can now be modified
- PowerSC 2.0 and PowerSC MFA 2.0 with AIX 7.3



### JFS2 Changes

- Filesystem space reclaim in AIX for JFS2 and there have been performance improvements when shrinking a JFS2 file system.
- AIX 7.2 TL 4: A new JFS2 tunable was added j2\_nPagesPerRBNACluster, to help prevent file fragmentation. (Reserved but not allocated)
- Fileset changes for AIX 7.3
  - Updated ksh93 to ksh93u+.
    - Modified most ksh scripts modified to work with ksh93
  - no longer installs telnet, rcp, rsh and ftp by default (still available on the media)
- Multiple Queue support for NPIV
  - Multiple Queue support is introduced in VIOS 3.1.2 and AIX 7.2 TL5 (both are required for this to work). Power9 and above, significantly less locking needed when using multiple queues on VIO Client

- Hybrid Network Virtualization
  - Allows the use of SR-IOV as fully virtualized adapter.
  - This is done by creating a network adapter with a fully virtualized component (SEA/VLAN) and a SRIOV adapter assigned to the LPAR.
  - The main traffic uses the SRIOV adapter except during the LPM.
  - When the actual LPM occurs, the traffic is redirected to the fully virtualized adapter.
- Dynamic device attributes
  - Dynamic device attributes were introduced a number of years ago for just a few devices/attributes.
     Many more aix attributes can now be changed dynamically, They are identified by a '+' sign at the end if the Isattr output:

So check the attribute before rebooting the system

Introduction to GPFS

- Global save / restore of tuning parameters
  - You can now save and restore all AIX tunable parameter values after the next boot and next Live
     Update operations. SMIT updated for the Global manipulation of tuning parameters.

#### Save/Restore All Kernel Tuning Parameters

View Last Boot Parameters View Last Boot Log File

Save All Current Parameters for Next Boot Save All Current Parameters Restore All Current Parameters from Last Boot Values Restore All Current Parameters from Saved Values Reset All Current Parameters To Default Value

Save All Next Boot Parameters
Restore All Next Boot Parameters from Last Boot Values
Restore All Next Boot Parameters from Saved Values
Reset All Next Boot Parameters To Default Value

- AME support for 64K pages with p10
  - AME supports enablement of 64k pages by default starting with Power10 systems.
  - do you see many customers using AME? I have talked with a few customers in AP, but not seeing much real interest...
- M:N thread model no longer supported
  - The M:N model was implemented in AIX 4.3.1 and became the default model. In this model, several user threads can share the same virtual processor or the same pool of VPs. In 6.1 1:1 became the default as gave better performance in most instances. it was very rarely used, so has been dropped.
- Option for child process not to inherit shared memory
  - a new fork capability that creates a child process that does not inherit shared memory from the parent.
- Special use memory subsystem device driver
  - Special use system memory subsystem provides device driver support for memory technologies that can be used as disk storage

Introduction to GPFS

- Java5 depricated
  - Java5 software has been removed from the base OS installation menus and from the bosinst\_data resources for network installations.
- Updated support / info for NIM NFS versions
  - Two new flags for bos\_inst operations:
    - -a nfs\_version
    - -a sec version
- Updates to SMB
  - case insensitive file/dir names, support for Unicode, limited support for live update (with shares unmounted).
- Updates to Chinese (Hant) unicode / locales
- Two parameters: dist\_tw\_width and disk\_err\_percent for hdisk can now be modified
  - the time window and error percentage before path is marked as failed

- Some issues with installing MFA 2.0 on AIX 7.3 (fix coming soon), no problems with AIX 7.2
- PowerSC 2.0 issues with RHEL 8.4, okay 8.1, 8.2, 8.3

### References

Belisama

- NPIV multiple queue support
  - https://community.ibm.com/community/user/power/blogs/ninad-palsule1/2021/07/26/powervm-npiv -multi-queue-support
- Hybrid network virtualisation
  - https://community.ibm.com/community/user/power/blogs/charles-graham1/2020/06/19/hybrid-netw ork-virtualization-using-sr-iov-for-opt
- TechU presentations ....
- IBM Community
  - https://community.ibm.com/community/user/communities/globalgrouphome?CommunityKey=63dd 8216-5e59-4ab1-a119-cff1df1f6191

## Session: ASEAN Power Meetup (Nov '21)

¿ Questions?

# Thanks!

Your feedback about this session is very important to us.

Please remember to submit a survey

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