

MPE/iX 7.5 and HP e3000 PA-8700 Performance Upgrade Updates

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Overview

- New HP e3000 PA-8700 Systems
- Recommended Upgrade Paths
- Memory “Rules of Thumb”
- New Features of MPE/iX 7.5
- MPE/iX 6.5 and 7.0 Performance Patches

New HP e3000 PA-8700 Systems

- This part of the presentation will discuss the performance of the new PA-8700 HP e3000 N-class and A-class systems. Some of this information was not finalized in time for the proceedings. It will be presented at the HPWorld 2002 conference, and an updated paper will be made available on the Interex web site.

New Highest-Performing HP e3000 System

- The new N4000-400-750 delivers **100** MPE/iX Relative Performance Units.
- Last year's high-end system, the N4000-400-550, measured **72** MPE/iX Relative Performance Units.
- This new system provides a gain of **over 35%** in overall system throughput at the high end, and is almost double the Series 997/1200.

Batch Processing Example

CPU time to sort an 800MB file
(10 million 80-byte records):

- 997 13 minutes
- 989/x50 8 minutes
- N4000-550 4 minutes
- N4000-750 Results to be provided at conference

Recommended Upgrade Paths

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Memory “Rules of Thumb” – PA-8700 System Minimums

- 1.5 - 2 GB per processor
for N4000 750 MHz systems
- 1 GB per processor
for N4000 380 or 500 MHz systems
- 512 MB per processor
for the A500 200 MHz system
- 256 MB for the A400 150 MHz system

Memory “Rules of Thumb” – When to Add More

- For memory-intensive applications (such as those using 4GLs)
- For heavy batch processing
- For a high number of online user sessions
- When adding processors to a system

New Features of MPE/iX 7.5 - FibreChannel

- Native FibreChannel PCI I/O cards are now supported in N-class and A-class systems, allowing FibreChannel disks to be directly connected to these systems.
- Six new system processes were added for FibreChannel, so the XM Checkpoint Processor is now PIN 17 (was PIN 11).

New Features of MPE/iX 7.5 - TurboIMAGE

- Large File Datasets allow replacement of jumbo dataset “chunks” with a single large (>4GB) file.
- Enabling EHW (Enhanced High Water Mark) in DBUTIL may provide improved concurrency on busy OLTP systems, beyond what DSEM and Prefetch give.

New Features of MPE/iX 7.5 - PLFD Expansion

- A process can open more files and/or sockets, up from 1024 to 4096.
- A new hashing algorithm provides better performance when a process has more than 512 files and/or sockets open.

Other New Features of MPE/iX 7.5

- The number of users that can connect to a single user logging process has been increased from 1140 to 2851.
- LDEV 1 can now be greater than 4GB in size. MPE/iX system files must still reside in the first 4GB on this disk.

Review of Some Recent High-End Features

- A system can now have more than 8190 processes, by enabling the “BIGPIN” feature in SYSGEN (introduced in 7.0 Express 1).
- Systems needing additional processes can replace the :RUN command with the :NEWCI command, to eliminate one process per user (introduced in 6.5).

MPE/iX 6.5 and 7.0 Performance Patches

- Two patches were released in 2001, which may improve performance on some larger systems running MPE/iX 6.5 or 7.0:
 - MPELXH8 (Memory Manager)
 - MPELXH3 (TurboSTORE)
- Both patches are included in MPE/iX 7.5.
- No 6.5 or 7.0 Power Patches contain both of these patches; customers must request them.

MPE/iX 6.5 and 7.0 Performance Patches

- MPELXH8 was superseded by MPELXV3 on 6.5, and by MPEMX11 on 7.0. None of these patches are included in any Power Patch release for MPE/iX 6.5 or 7.0.
- MPELXH3 was superseded by MPELXY4 on both 6.5 and 7.0. MPELXY4 is included in MPE/iX 6.5 Power Patch 3, but the changes of MPELXH3 are NOT included in any other Power Patch release for MPE/iX 6.5 or 7.0.

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