

hp e3000 business servers



n-class product brief



solve your evolving business needs

Today's business professionals are coping with more demands and fewer resources. Their customers are evolving, their businesses are evolving, their markets are evolving...and everything is faster than yesterday.

If you are living this scenario, we've got good news for you.

Hewlett-Packard's e3000 N-Class server is changing everything. We've leveraged our proven data management and Internet knowledge, our qualified consultants and our business services to introduce a faster, affordable high end system that really fits your needs.

- **run it**—over 35% more performance than previous high-end HP e3000 servers
- **trust it**—modular growth and expansion with years of investment protection
- **evolve it**—embrace new business models with our integrated Internet server and IMAGE/SQL database management software

The HP e3000 N-Class is the ideal platform for today's complex and challenging world, offering you best-in-class technology for data management applications in areas such as manufacturing planning and inventory control, e-commerce, supply chain management, financial services, managed health care, and education.

fit for today and the future

The HP e3000 N-Class server uses a state-of-the-art IA-64 bus structure designed to support several Precision Architecture (PA-RISC) processors today and generations of higher frequency processors into the future (see tables 1 and 2). When you need that future burst of growth, it's easy to add more or faster processors, more I/O and even more memory. Expand when you want to, at your own pace.

The HP e3000 N-Class server includes the open MPE/iX operating system optimized with years of tuning and enhancements to meet your business computing needs. It comes with the IMAGE/SQL database bundled in, to securely manage your business data without the need for expensive third-party databases.

Whether your IT environment needs an upgrade from yesterday's technology, or you are embarking on the reengineering of your business processes for today's e-commerce world, the HP e3000 N-Class server is an excellent platform you can depend on for many years to come.

"always on" infrastructure

The HP e3000 N-Class server contains Internet development tools to securely take you to the e-world. At the same time, it provides you with an "always on" infrastructure to get the most out of the opportunities you don't want to miss in an evolving business world. Inject your business with new levels of performance at an affordable cost (see figure 1).



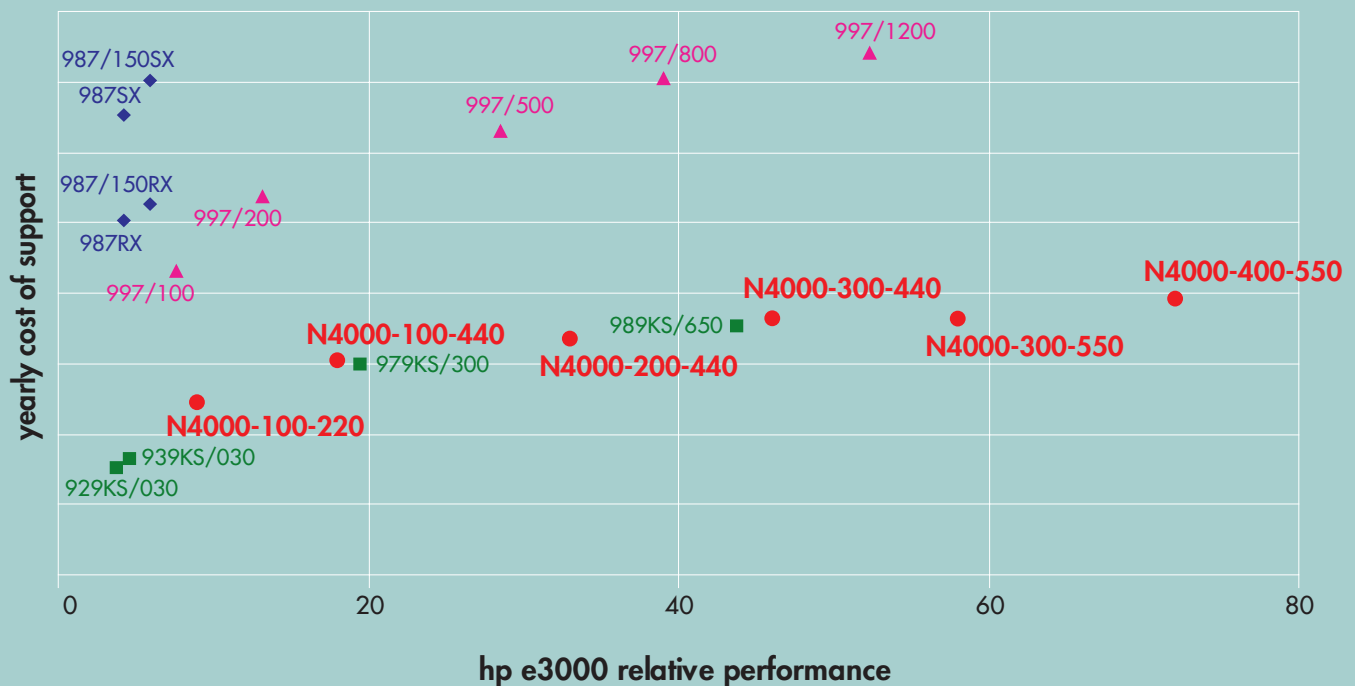
*redefining midrange computing
for the internet age*

thinking about your future



- The highest performing HP e3000 N-Class server is over 35% faster than a 12-way 997 Server. This will increase even more in the future with higher power PA-RISC processors.
- Many older high-end HP e3000 servers have already ended their support life.
- All 9x7 servers (discontinued in 1997) will end their support life in April 2002.
- Older high-end HP 3000 servers and all 9x7 servers are not supported with the new MPE/iX 7.0 operating system.
- The new operating system MPE/iX 7.0 offers you many Internet tools such as Java; it is the platform on top of which most new MPE/iX functionality will be implemented in the future.
- The HP e3000 N-Class server is the most cost effective alternative for consolidating several older servers into one.
- The high cost of support for older servers, combined with the growing scarcity of repair parts, make them excellent candidates for upgrade (See figure below). Replace them this year with faster, more affordable, new HP e3000 servers!

figure 1. hp e3000 n-class core server cost of support



Based on servers with MPE/iX and IMAGE/SQL, for non-N-Class Servers user license levels vary between 64 and unlimited, LTU software updates, and phone-in software assistance. Compares annual server support costs. N-Class first year support costs will be lower since new HP e3000 servers are covered by 1-year HP hardware warranty. Chart based on list pricing.



run it.

The world's fastest microprocessor, based on HP's PA-RISC architecture. Perfect for consolidating older servers.

Superior on-line transaction and website performance versus other midrange priced systems, with plenty of headroom for growth.

Large memory capacity for handling complex data management and e-commerce applications.

Reliable, expandable I/O connections that allow the system to scale without compromise or trade-off.

Advanced I/O technology built in for easy, ready-to-go networking and data accessibility.

I/O intensive data management and e-commerce applications will not become "I/O bound".

Built in floating point processor accelerates compute-intensive application performance.

Authorized control of your servers over the Internet from any location worldwide.

With an unlimited user license, you never have to worry whether you will have too many users for your server.

Expert integration and configuration for a quick, worry-free start.



trust it.

Single-system high availability features to maximize your business uptime.

Increased reliability and network stability even under heavy loads.

Internal high-uptime storage to protect critical data.

The HP e3000 family offers you among its solutions, the HP WebWise MPE/iX Secure Web Server which ensures data protection against eavesdropping, tampering and forgery as you bring your business into the e-services and Internet world.

MPE/iX 7.0 features numerous tools and services to keep your mission-critical applications running, your data safe, and fast recovery assured if any problems arise.

The HP e3000 family is committed to deliver innovative technologies such as Java™ to improve its performance and reliability in running real-world, mission-critical applications for businesses like yours.

Data is the heart of your business. MPE/iX 7.0 is bundled with one of the best database products for information management: HP IMAGE/SQL.

With HP Predictive Support Software (requires MPE/iX 7.0 Express 1), system uptime is increased by proactively identifying possible processor, memory or mass storage hardware problems before they take a system down.

Reduce risk with HP's proactive and reactive worldwide support services.



evolve it.

Flexible growth path projecting over a 300% performance increase for maximum investment protection.

Superior rackability that optimizes use of floor space, expandability and delivers unprecedented performance density.

Shared hardware development across HP assures low cost investments to extend the N-Class feature set.

High degree of interoperability with the Internet, Microsoft® Windows NT®, UNIX® and other operating environments.

An operating system for you to grow and evolve with.

With integrated IMAGE/SQL, costly third party databases are not required. This high performance database handles your evolving business needs.

With built in Web Server software, you decide when you want to reengineer your business models. You can make authorized use of the worldwide Internet for customer or employee access to information, fast and easy.

table 1. features/specifications

	N4000-100-220	N4000-100-330	N4000-100-440 N4000-200-440¹	N4000-300-440¹ N4000-400-440¹	N4000-300-550¹ N4000-400-550¹
Product numbers	A6449B	A6450B	A6451B	A6452B	A6453B
Microprocessor supported	PA-8500 @ 220 MHz	PA-8500 @ 330 MHz	PA-8500 @ 440 MHz	PA-8500 @ 440 MHz	PA-8600 @ 550 MHz
Number of processors	1 CPU	1 CPU	1 to 2 ¹ CPUs	3 ¹ to 4 ¹ CPUs	3 ¹ to 4 ¹ CPUs
Operating system supported	MPE/iX Release 7.0	MPE/iX Release 7.0	MPE/iX Release 7.0 ¹	MPE/iX Release 7.0 Exp. 1 ¹	MPE/iX Release 7.0 Exp. 1 ¹
Relative performance	9	13	18 (1 processor) 33 ³ (2 processors)	46 ³ (3 processors) 57 ³ (4 processors)	58 ³ (3 processors) 72 ³ (4 processors)
Memory					
Minimum/Maximum	512MB/16GB ²	512MB/16GB ²	2GB/16GB ²	4GB/16GB ²	4GB/16GB ²
On-chip cache (data/instr)/CPU	1 MB/512 KB	1 MB/512 KB	1 MB/512 KB	1 MB/512 KB	1 MB/512 KB
I/O slots	12	12	12	12	12
I/O devices					
Internal disk drives	2	2	2	2	2
Internal disk capacity maximum	72 GB	72 GB	72 GB	72 GB	72 GB
External storage capacity maximum using disk arrays	37 TB ⁴	37 TB ⁴	37 TB ⁴	37 TB ⁴	37 TB ⁴
Tape drives max.	32	32	32	32	32
System printers max.	8	8	8	8	8
Serial printers max.	250	250	250	250	250
Connected workstations max.	3300	3300	3300	3300	3300
Standard I/O features	Ultra2 LVD SCSI port, 10/100Base-TX LAN, 3x RS-232 ports for console and UPS connections, integrated Web Console				
Supported I/O connectivity	Ultra2 SE/LVD SCSI (single and dual port); ULTRA HVD SCSI (single and dual port); 10/100Base-TX LAN; 802.5 FDDI via a switch; X.25 via a DTC; SNA and NS pt.-to-pt. via 8 channel ACC card				

¹Multiprocessor support requires MPE/iX Release 7.0 Express 1.

²Maximum memory size is limited to 2 GB with Release 7.0. Release 7.0 Express 1 will support maximum memory sizes of 16 GB.

³Estimated performance as of February 1, 2001.

⁴Maximum external disk capacity is limited to 12 TB with Release 7.0. Release 7.0 Express 1 will support maximum disk capacities of 37 TB.

table 2. environmental specifications

Electromagnetic interference	Complies with FCC Rules and Regulations, part 15, as a Class A digital device. Manufacturer's Declaration to EN55022 Level A, VCCI Registered, Class I, Korea RLL
Safety	UL listed, CSA Certified, TUV GS Mark, compliant with EN 60950 and EN 41003
AC input power	200-240V, 50/60Hz
Maximum current requirements	13.8 Amps at 220V (6.9 Amps per input)
Maximum power dissipation	3000 Watts
Physical dimensions	Height: 445 mm (17.5 in)/10 EIA units; Width: 482 mm (19 in); Depth: 812 mm (35 in); Weight: 90 kg (200 lbs)
Operating temperature	+5° to 35° C (41° to 95° F)
Non-operating temperature	-40° to 65° C (-40° to 149° F)
Maximum rate of temperature change	20° C/hour
Operating relative humidity	15% to 80% at 5° to 40° C, noncondensing, maximum wet bulb = 26° C
Non-operating relative humidity	5% to 90% at 65° C, noncondensing
Operating altitude	To 3.0 km (10,000 ft) above sea level
Non-operating altitude	To 4.5 km (15,000 ft) above sea level

Microsoft, Windows, and Windows NT are U.S. registered trademarks of Microsoft Corporation. UNIX is a registered trademark of The Open Group. Java is trademark of Sun Microsystems, Inc. in the U.S. Other brand names are trademarks of their respective owners.

Technical information in this document is subject to change without notice.

© Copyright Hewlett-Packard Company 2001. All rights reserved. Reproduction, adaptation, or translation without prior written permission is prohibited except as allowed under the copyright laws.

Printed in USA 2/01
59804420EN



**for more information on
 HP e3000 business servers,
 contact any of our
 worldwide sales offices
 or HP Channel Partners
 (in the U.S. 1-800-637-7740)
 or visit our
 HP e3000 business servers website at
www.hp.com/go/e3000**