MPE/iX 6.5: More Power for E-Services and Business-Critical Computi

HP e3000

Software Roadmap

- **MPE/iX**
- **Internet and Interoperability Tools**
- **Application Development Tools**
- **Databases**
- **Networking**
- **Data Center Management**

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What's New in MPE/iX 6.5?

More Performance ... for business critical computing

- 44% more performance in the high end
- More internet tools bundled and supported
- Ready for much more..

What's New in MPE/iX 6.5?

More Performance ... for business critical computing

- Supports 997/10 -12 way
- Memory configurations up to 16 GB
- 128 GB File support
- Support larger disk capacities
- Support for more users...

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What's New in MPE/iX 6.5?

Additional features... for HP e3000 users

- 3300 terminal I/O sessions, 2600 VT sessions
- 20000 TCP connections (up from 10000)
- 64K Compatibility mode DSTs (up from 16K)
- 10,000 UDP sockets (up from 4096)
- 511 disk spindles (up from 255)

Availability...

- Orderable since Feb 1st 2000
- Shipping now

More Benefits on MPE/iX 6.5?

More Performance ... for the intranet, internet and e-services

- 4 user license
- Longer support life than MPE 5.5 and 6.0

Coming soon..

- MPE/iX Instant Ignition
- High availability and database enhancements
- Foundation of all next generation platforms

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Internet and Interoperability

More Performance ... for the intranet, internet and e-services

Internet and Interoperability

More Performance ... for the intranet, internet and e-services

Internet Features in MPE/iX 6.5
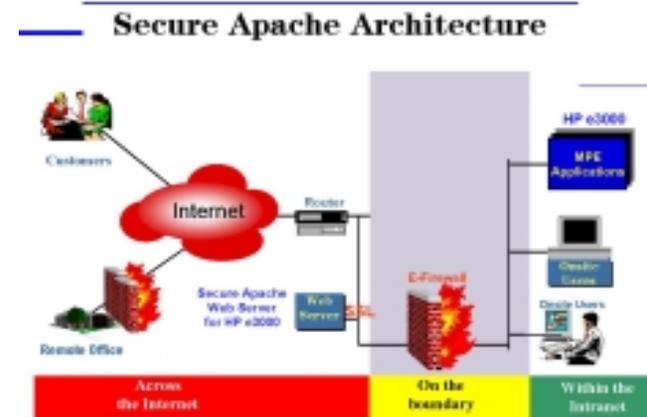
- Webserver software based on Apache

- Java Development kit, based on Java 2

- LDAP - providing directory access to X.500 network directories

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HP WebWise Internet Suite

Providing web sites of HP *e*3000 customers with full-strength security

- Based on
  - Apache 1.3.9, mod_ssl, openssl and
    RSA BSAFE Library
- HP full support
- Easily installed and configured
- Key Features
  - Full-strength RSA Encryption
  - SSLv2.0, SSL v3.0, and TLS v1.0
  - X.509 digital certificates authentication
  - Support session caching
  - Support Dynamic Shared Object (DSO)

Secure Apache Architecture

Enabling

HP WebWise Internet Suite
MPE/iX Secure Web Server based on Apache

- Includes
  - **Web Server binaries, configuration files, etc.**
  - **Utility for key, certificate and CSR generation**
  - **Documentation and Marketing Information**
- Availability
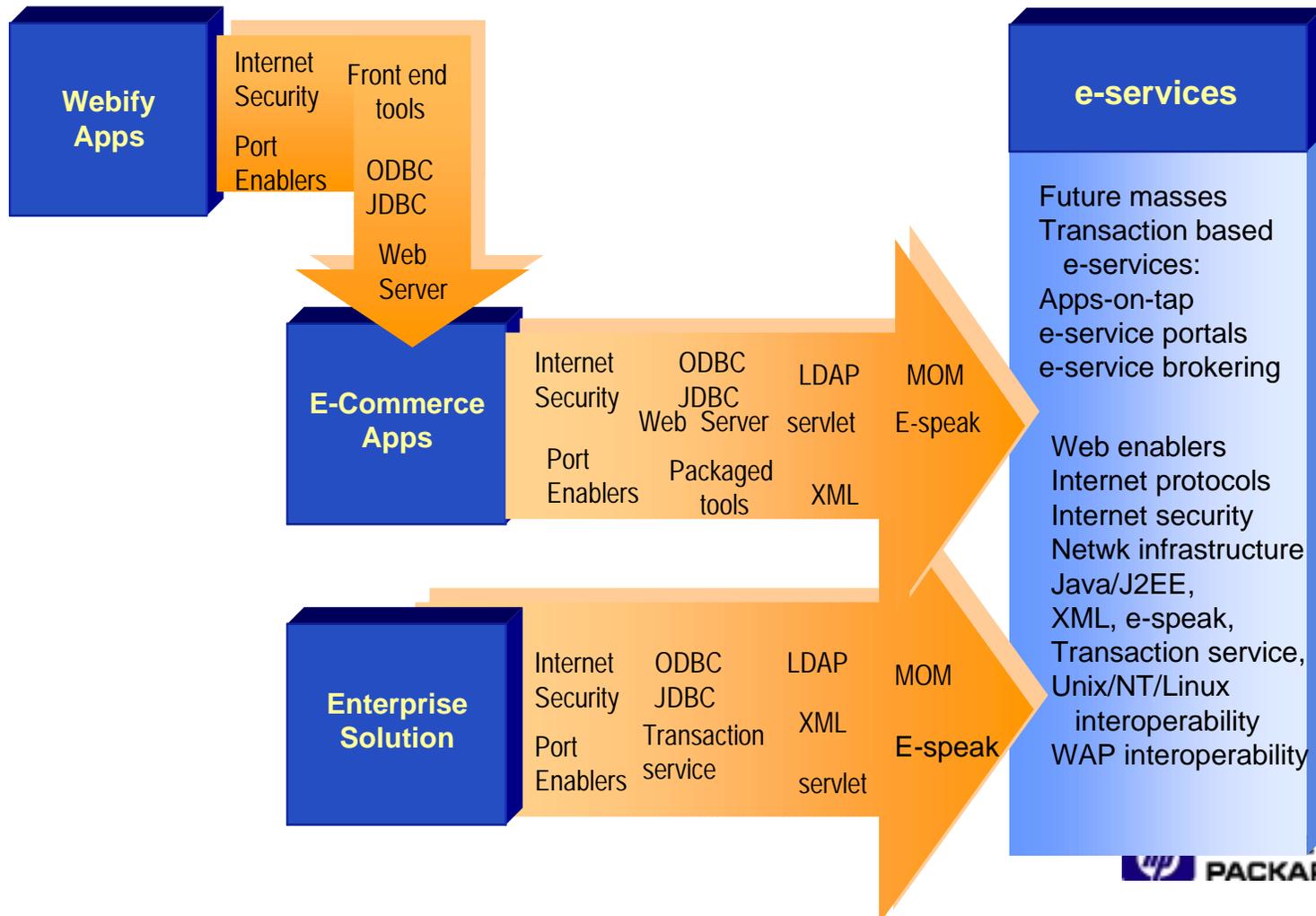 - **Orderable and shipping today**

Enabling

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HP e3000 Internet & Interoperability Roadmap

Business
Value
&
Benefit

Shape the e-services world

Become a key player in the e-services world

Capitalize on and expand Internet business

Anticipate and fulfil emerging needs for ISVs and enterprise customers

New business opportunities

Stimulate the growth of Web, e-commerce and e-services solutions

Investment protection; reduce costs; increase productivity

Modernize legacy applications

vision

HP e3000 customers and their businesses are successfully using and seamlessly integrating the Internet/Intranet and the e-services world

Leads to...

Evolving

Goals

Seamless Interoperability

1999   **HP-UX, MPE/iX, NT, Linux and beyond**   2001+

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Evolve key customers to e-services

Webify Apps

Internet Security

Port Enablers

Front end tools

ODBC JDBC

Web Server

E-Commerce Apps

Internet Security	ODBC JDBC Web Server	LDAP servlet	MOM E-speak
Port Enablers	Packaged tools	XML	

Enterprise Solution

Internet Security	ODBC JDBC	LDAP	MOM
Port Enablers	Transaction service	XML servlet	E-speak

e-services

Future masses
Transaction based
e-services:
Apps-on-tap
e-service portals
e-service brokering

Web enablers
Internet protocols
Internet security
Netwk infrastructure
Java/J2EE,
XML, e-speak,
Transaction service,
Unix/NT/Linux
  interoperability
WAP interoperability

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HP e3000 Internet and Interoperability Literature

- Web Enabling Your HP e3000 Applications and Data Access White Paper #5968-8121E

- HP e3000 Internet and e-services Solutions Guide (#5980-0126E)

- Enhancing the HP e3000 User Interface White Paper #5968-9502E

- HP e3000 Business Servers MPE/iX Release 6.5 Datasheet #5968-8856E

- Server side Java with Apache/iX: http://jazz.external.hp.com/papers/java/

- CGI programming: http://jazz.external.hp.com/papers/cgi-paper/cgiwhite.htm

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Application Development Strategy

- Maintain the traditional HP e3000 development environment, compilers and development tools.
- Enhance to support e-services & growth requirements (enable porting, POSIX compliance, etc.)
- Expand with ports of industry standard development tools.
- Partner closely with ISVs who provide leading-edge development tools.
- Move the application development environment forward to IA-64.

Application Development Language Roadmap

IA-64

Pascal & linker
(IA-64 OS devel version)

NM (PA) Compilers

CM (MPE/V) Compilers

Third party maintenance and development (C++ (GNU freeware),
SPL (SPLash!, Allegro), PERCobol (Legacy J) & 4GLs (Speedware, Cognos))

Ongoing maintenance & selected enhancement for current PA languages
(Business Basic, C, Cobol, Fortran 77, Java, Pascal, RPG, Transact, Linkeditor, XDB)

| 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |

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Application Development Language Roadmap -- IA-64

✓ COBOL, C, C++, Java, generate native IA-64 code for greatest performance. Recompilation required to achieve the greatest performance gains.

✓ Pascal, Fortran 77, Transact, RPG, Business BASIC and SPLash! dynamically translated PA code.

✓ All "classic" CM, compiled binaries to execute in the dynamically translated CM environment.

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Database Update

- *Image*
  - **Improve scalability for higher number of users and transactions (dataset limits)**
  - **working with third party vendors:**
    - **DB Change replacement products from Adager, Bradmark and OpenSeas**
    - **24x7 online maintenance**
  - **Date Mapping**
  - **Support for >80GB data sets (6.5 PP2)**
  - **Increased limits (6.5 PP2)**
    - **Greater number of data items (1200) per DB**
    - **Greater number of data sets (240) per DB**

Enabling

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Image and Allbase Database Update

- *Allbase*
  - Improve scalability for higher number of users and transactions
  - Date Mapping (map date formats in Image to DATE in Allbase from ODBC apps)
  - JDBC included in next HP-UX Dart release
  - Stored procedure enhancements

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Current HP-PB Networking Connectivity

LAN

- 100 BT, 100 VGAnyLAN, Thin LAN
- FDDI
- TokenRing

WAN

- SNA Link (PSI), SNA/SDLC, NS point-to-point (LAPB), BSC, RJE
- X.25 (through DTC)

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Current HP-PB Networking Connectivity

HP-PB Discontinuance* :

- 100VGAnyLAN (November 2000)
- ThinLAN 3000/iX Link (mid-2001)

* Product will be removed from HP Price list.
End of support life is typically 3 - 5 years after discontinuance.

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Future PCI Networking Connectivity for Next Generation Servers

- LAN
  - **PCI 10/100 BaseTX (core I/O and add-on Link)**
  - **FDDI (via switch 2000)**

- WAN
  - **ACC Link with LapB (NS Point-to-Point)**
  - **ACC Link with SDLC (SNA)**
  - **X.25 (via DTC 72MX)**

- Console (core I/O)

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Network Transport and Services

Bundled with MPE/iX now and future

- **Increased TCP performance**
- **Increased connectivity**
- **Telnet**
- **ARPA**
- **FTP**
- **Samba/iX**
- **DCE**

DCM Objective

Continual expansion of reliability, availability, security and manageability

- Provide larger capacity and higher performance components and solutions

- Ensure basic system reliability and improve on Disaster Tolerant Solutions

- Provide more flexible enterprise management solutions

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HP e3000 Data Center: Software & Solutions Portfolio

Solving key customer issues

Mass Storage

- 9 GB 10K disks
- 18 GB 10K disks
- 36 GB 10K disks
- DLT and DLT Libraries / 8000
- HVD10
- DDS-3

High Availability

- AutoRAID and XP256, XP512
- XP Business Copy and Continuous Access
- TurboSTORE Backup
- SharePlex
- Legato Store Node

Enterprise Management

- Secure Web Console
- IT/Operations
- Distancing Solution

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HP e3000 Data Center: What's coming

Continuing to solve key customer issues in the future

Mass Storage

- Next Generation DLT
- New LTO technology
- New library 6/140
- 72GB disk and more
- DVD

High Availability

- HA Failover
- HP Manual Switchover
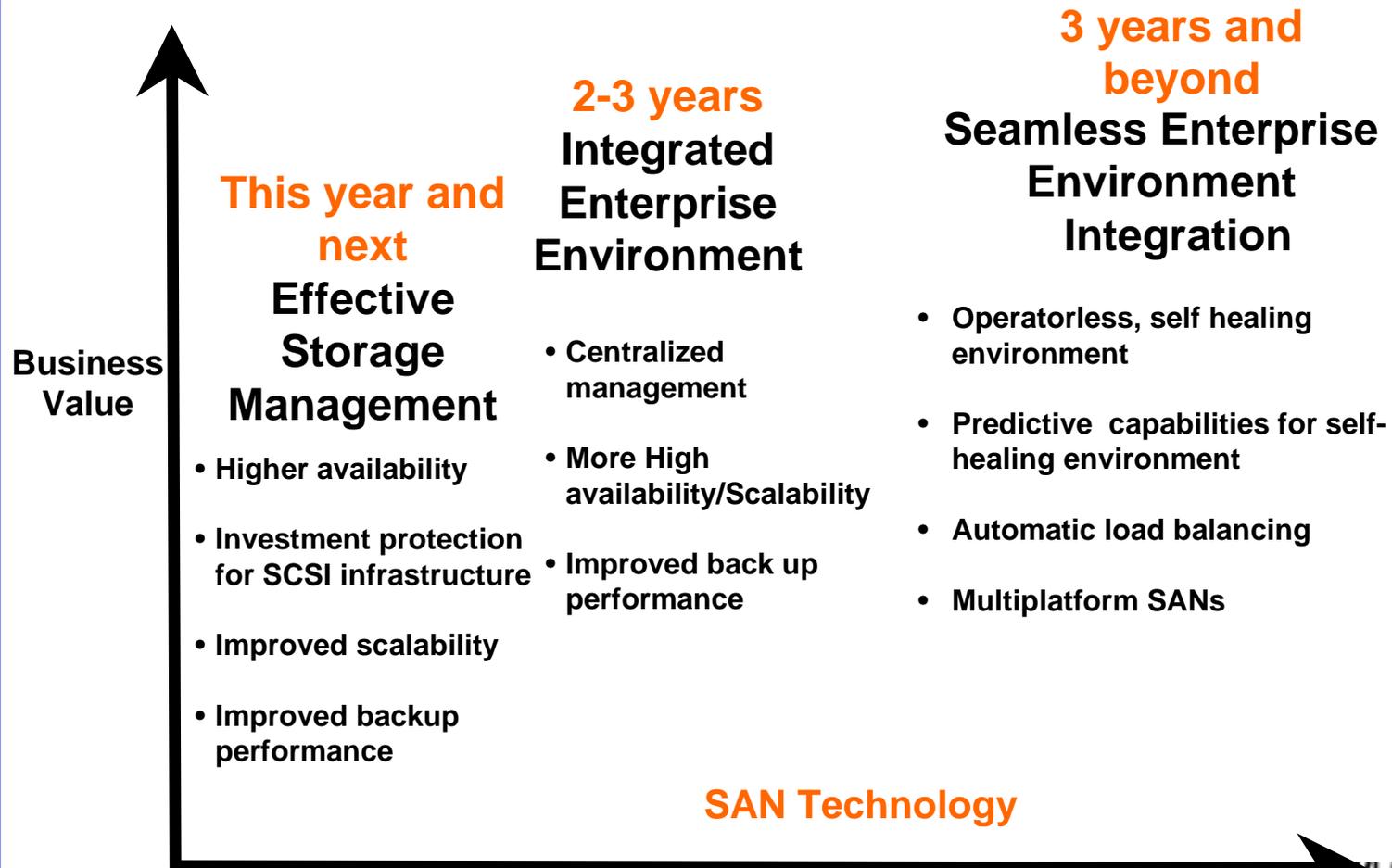- New disk Arrays

Enterprise Management

- Omniback Media Agent
- New ITO enhancements
- Connectivity to FC Peripherals
- Native FC

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DCM Future Directions

Business Value

This year and next
Effective Storage Management

- Higher availability
- Investment protection for SCSI infrastructure
- Improved scalability
- Improved backup performance

2-3 years
Integrated Enterprise Environment

- Centralized management
- More High availability/Scalability
- Improved back up performance

3 years and beyond
Seamless Enterprise Environment Integration

- Operatorless, self healing environment
- Predictive capabilities for self-healing environment
- Automatic load balancing
- Multiplatform SANs

SAN Technology

Expanding

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HP e3000 and Industry Analysts

"...as early as 1996, Hewlett-Packard began development on a Java compiler and runtime system for its HP 3000 line. The MPE/ix-based systems have been marketed as ideal Web server platforms to the consumer marketplace."

Sally Cusack, IDC, *Java Leads the Way*, November 1, 1999

HP e3000 and Industry Analysts

- Smith-Gardner best in business to consumer order management
- Ironside Technologies best in business to business order management

Ken Vollmer, Giga Information Group, *Leaders of the E-Commerce Pack?*, 1/12/2000

HP e3000 and the Industry

- MessageQ.Com an interview with Alvina Nishimoto with HP CSY, Charles Sterling, Microsoft Product Manager, and Ivan Casanova Level 8 Product manager talking about the benefits of the Geneva MQ product

- "We think Level 8 is a tremendous asset. We don't work in a vacuum. We know that we need to be able to leverage all those great HP machines."

Charles Sterling, product manager for MSMQ Products at Microsoft

HP e3000 and the Industry

- Level 8 and HP e3000 in *Business Week*

- "In February, Level 8 signed an alliance with Hewlett-Packard to co-market GMQ to customers of HP e3000"

Business Week, April 24, 2000

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HP e3000 and Customers

"Smith-Gardner promises us that we'll be able to handle 300,000 orders a day. Microsoft is getting into back-end computing, but it doesn't have a proven model. Smith-Gardner with HP and the 3000 have a history with moving order catalog businesses to the Internet."

David Kim, eCandy co-founder, Information Week, February 14, 2000

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HP e3000 and Customers

"The HP e3000 is the primary platform for us. We've stayed with the HP e3000 because HP has continued to make it an open system, and has continued to enhance it and move it forward."

Michael Killoren

Chief Information Officer

School Specialty, Inc.

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Training

- HP e3000 Systems Grant Program
  - **Columbia College**   **Takoma Park, Maryland**
  - **Conestoga College**   **Kitchener, Ontario Canada**
  - **Jackson State University**   **Jackson, Mississippi**
  - **Long Island University**   **Brookville, New York**
  - **Oklahoma Baptist University** **Shawnee, Oklahoma**
  - **Talledega College**   **Talledega, Alabama**

Certification

- Americas:

  www.hp.com/education/certification

- WW (others):

  www.education.hp.com

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