

Unit 3 Corporate Business System Overview

Purpose

**If you think that the data center belongs
just to mainframes,

Think again.**

The purpose of this unit is to familiarize you with the most powerful general-purpose platform Hewlett-Packard has ever introduced: the **HP Corporate Business System**.

Objectives

At the end of this unit, you will be able to:

- ⁿ Identify and describe general features of HP's new high-end platform.
- ⁿ Describe the features and benefits of the hardware itself, including its built-in capability to grow as your customers' needs grow.
- ⁿ Identify and describe the differentiators of the HP 3000 Corporate Business System.
- ⁿ Identify and describe the differentiators of the HP 9000 Series 800 Corporate Business Server.
- ⁿ Describe HP's vision for the future of its high-end business systems.

Unit 3

This unit is divided into three sections:

ⁿ An overview containing key messages, major features and benefits, and general facts about the Corporate Business System hardware.

ⁿ Specific details on the HP 3000 product additions.

ⁿ Specific details on the HP 9000 product additions.

HP's Corporate Business System Solution

To answer customers' large-system needs, HP introduces the HP Corporate Business System, the most powerful general-purpose platform HP has ever produced.

WBKP3-00.HGL;6";4.411";HPGL

Key Messages

The new Corporate Business System extends both the HP 3000 and HP 9000 product lines. It provides big benefits to high-end customers:

NEWBURST.PCX;

1.4";0.986";PCX

ⁿ Although they are not being positioned as mainframes, these systems offer enough performance and capacity to support a data center -- 70 percent more performance and twice the configurability than current 4-way 980 or 870S systems. In fact, these new platforms have the performance equal to the low- to mid-range ES/9000 water cooled; high-end 3090; and high-end ES/9000 air cooled mainframes.

NEWBURST.PCX;

1.4";0.986";PCX

ⁿ Large configuration support--up to 4500 users, up to 690 Gbytes of mass storage, and up to 2 Gbytes of main memory.

ⁿ Immediate response data center support services are a reality with new, comprehensive Premier Account Support. (A fixed-price, fixed-content product receives full quota and commission upon sale.)

ⁿ Robust functionality and support of key data center applications.

ⁿ Large expansion potential to accommodate future growth needs via in-cabinet upgrades (estimated 75-100 percent Compound Annual Growth Rate) and add-on I/O and disk expansion bays.

Corporate Business System Product Configuration

To introduce you to the Corporate Business System hardware, the graphic below depicts the components that might be part of a large Corporate Business System installation.

System Processing Unit

The single-cabinet system processing unit contains system elements such as the system bus, processor boards, memory, bus adapters, and power supply. The base configuration for each system also includes a single HP-PB I/O bus. Unlike the 9X7 and 8X7S platforms, the Corporate Business System does not contain any integrated peripheral devices.

Peripherals are housed in the same peripheral bays as are used for the 9X7 and 8X7S families. The peripheral bays allow for the modular addition of disk drives, backup devices, such as DAT and 1/2 inch tape drives, terminal controllers as well as additional HP-PB I/O card cages. Peripheral devices for the Corporate Business System are pre-integrated and pre-tested in the peripheral bays at the factory. It is also possible to order operating system software pre-installed onto system disk drives.

Features and Benefits

The Corporate Business Systems offer customers a wide range of features and benefits, including those highlighted on the following pages.

New Features

Benefits

PA-RISC:

Superior commercial performance

Performance: up to 70 percent growth over the current high end.

Ability to run larger and more complex applications.

High-speed CPU chips combined with large, high-speed CPU cache memory.

CPU cache enhances performance by reducing CPU requests for instructions or data stored in main memory or disk.

Large **high-speed instruction and data caches** (2 Mbytes each).

Enhanced OLTP performance for large numbers of users.

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PA-RISC:

Designed for growth

1- to 4-way tightly-coupled **symmetric multi-processing**.

Allows economical, modular growth as system performance requirements increase.

Simple growth by adding CPU boards within the same cabinet.

Easy expandability, investment protection.

Fast uniprocessors are superior to same-performance multi-processor systems.

Better batch performance.

64-bit virtual address capability with addressing range of 256 terabytes.

Allows for substantial expandability. Customer investments are protected.

Multi-processing is transparent to the application.
Existing applications can benefit from increased system performance
without modifications.
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New Features

Benefits

Leading-edge technologies increase performance and reliability while decreasing costs

Submicron CMOS VLSI technology enables the entire CPU to be integrated into a **single circuit board**.

This approach reduces complexity and thereby reduces system costs while increasing performance and reliability.

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System organization handles large user loads

Two-tiered, **mainframe class bus structure**.

Provides optimal balance between processor and I/O requirements, thus ensuring high system throughput for large user loads.

Up to **1 Gbyte per second peak bandwidth HP Precision Bus** (4 times the peak speed of the 980 and 870S).

Balanced system for greater performance now and in the future.

Up to **2 Gbytes main memory**, expandable in 64, 128, or 256 Mbyte increments.

Avoid memory bottlenecks. Expand memory as needed.

Supports up to **4500 users** on a single system (unlimited with NetBase)

Ability to centralize applications and consolidate systems.

Support for up to **690 Gbytes** of disk storage.

Ability to run large applications with substantial on-line storage requirements. Ability to centralize applications and consolidate systems.

Up to **8 HP-PB input/output channels**.

Performance for I/O intensive applications. Large configuration support.

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New Features

Benefits

Support for a large variety of peripheral devices
Support for **SCSI, PBA-IB, PB-IB, PSI, LANIC and LAN/CONSOLE cards.**

Wide choice of peripheral technologies. Flexibility to meet specific customer needs.

Rack mounted peripherals.

Allows for modular growth.

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Additional features provide high availability, cost savings and ease of installation.

Battery backup, powerfail recovery.

High availability.

Air-cooled technology.

Fewer environmental requirements (compared to water-cooled and large CISC-based systems), less expensive to own and operate.

Small number of parts.

Superior MTBF, price/performance and higher reliability.

Compact size of system and peripheral cabinet.

Cost savings due to minimal floor space requirements.

Factory integration/ testing of system and peripherals.

Ease of installation.

Optional **pre-loading of software.**

Ease of installation.

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<p>Note: Please refer to the configuration guides (available May, 1992) for more detailed system diagrams, specifications, and maximums.</p>

HP's Vision for the Future

The HP Corporate Business System platform is designed for future expandability to support high-end processing requirements and protect customer investments well into the next century.

Over time, customers can expect growth possibilities for this platform to be at least twenty times the initial uniprocessor levels. Future directions include the capability for up to 16-way multiprocessing through in-cabinet upgrades, up to 16 Gbytes of main memory, mirrored memory and redundant power.

In addition, due to fundamental technology shifts discussed in Unit 2,

HP solutions offer significant cost savings, not only for today, but also for tomorrow. Simple cost curve projections show that thanks to a powerful PA-RISC architecture, HP's price/performance leadership will continue to increase versus traditional mainframes over time. HP's Corporate Business System is delivering solutions in 1992 and will continue to deliver solutions throughout the decade.

HP 3000 Corporate Business System Overview

Models 990 and 992

The HP 3000 Corporate Business System is a family of highly-expandable, high performance computers offering superior value and ease-of-use for their power class.

FIG3-01.HGL;6";4.411";HPGL

Five Performance Levels

Five new models extend the high-end of the HP 3000 family. The figure below diagrams the names and performance estimates (TPS design goals) for the HP 3000 models. Growth between these performance levels is accomplished via simple CPU and memory board upgrades.

FIG3-02.HGL;6";4.411";HPGL

Improved price/ performance over the S/980

When compared to the Series 980, the 990/100 provides 25 percent more performance than the Series 980/100 at a slightly lower price, while the Series 992/100 provides 60 percent more performance at only slightly higher pricing.

The following chart is an overview of the complete HP 3000 product line, including all new systems.

Two product versions for the HP 3000 Corporate Business Systems

The HP 3000 Corporate Business System is available in a choice of two product versions:

1. **The Corporate Business System DX**, which includes the Corporate Business System hardware along with standard high-functionality software, a windows-based PC

console, performance management tools for system performance analysis and capacity planning, and high availability software to minimize both planned and unplanned downtime. This offering allows you to present a total solution to your customers -- a standard expectation with large system solutions. The DX version also provides greater ease of ordering and installation.

2. A **Basic Corporate Business System**, which includes only the Corporate Business System hardware, without the added functionality standard in the DX.

Both packages can be ordered as preconfigured, or with MPE only, SQL only, or TurboIMAGE only.

Key Features

Performance and functionality to support a data center

- Powerful, robust new systems that feature a windows-based PC console for customizable, exception-based systems management through highlighted icons; PC-based performance management tools for system performance analysis and capacity planning; and factory pre-loaded high availability software to minimize both planned and unplanned system downtime.

Fast RISC platform (400+ TPS) is also highly **balanced** to avoid bottlenecks--as the platform has been designed to accompany these fast CPUs with strong memory, bus structures, and I/O. MPE/iX also has been designed to minimize physical I/O using mapped files, improving HP 3000 performance in large user and database environments.

Data center support

- New, comprehensive Premier Account Support package is tailored to meet the specific needs of high-end applications and large system customers.

Data center applications in place today

- Key mainframe-class applications are available today on HP 3000s... with a list of solutions that continues to grow. See May 1992

Application Guide for detailed information.

Growth path to future

- ⁿ Expect 100 percent growth per year through the late 1990s.

Customers can achieve almost 4X growth initially in this platform. Expectations are that this growth span will eventually exceed 20 times the initial entry-level uniprocessor offering - all in the same compact, air-cooled package.

Large configuration support

- ⁿ This new family of systems supports larger configurations than the existing Series 980 platform, including up to 2300 connected users (unlimited if using NetBase). Use Series 980 successes and the over 20 reference sites with greater than 400 concurrent users to help convey the HP 3000's high-end computing capability message.

The Opportunity

Why Customers Will Buy

There are many reasons why customers will be interested in considering an HP 3000 Corporate Business System solution. Key reasons include:

HP 3000 already has credibility in large-system computing

- ⁿ This is HP's SECOND mainframe-class platform entry into large-system markets (the first being the Series 980 systems).
- ⁿ Mainframe-class credibility of HP 3000 systems is proven via PeopleSoft and DOR benchmarks.

ⁿ Credibility is further underscored through a large portfolio of successful Series 980 customers.

This is a key opportunity for the HP 3000. Please refer to the "Mainframe Alternative Opportunities" section in Unit 1 for more detail.

Where to Sell?

Key Vertical Markets

The HP 3000 has leading applications in many specific vertical markets. The chart below outlines promising selling opportunities for these new high-end systems. Corporate applications (discussed below) can be sold horizontally across vertical markets, and present excellent leverage possibilities.

FIG3-04.HGL;6";4.411";HPGL

Corporate Applications

The HP 3000 is especially leveragable across two specific groups of corporate applications, namely Financials (Payroll, General Ledger, Accounts Payable, Accounts Receivable, etc.) and Human Resources (Employee Database, Benefits, Payroll tie-in, etc.). The HP 3000's product fit, credibility, testimonials and references are especially high in these areas.

Excellent Upgrade Opportunities

Successful HP 3000 high-end customers (especially S/960s through 980/400s) are prime candidates to increase their systems' power and expandability by upgrading to the Corporate Business System platform. Consolidation of one or more machines to a single, larger system is also a likely opportunity in installed base accounts.

Return Credits Changing

A reduction in return credits for upgrade systems and selected components on November 1, 1992 means that installed base customers have a definite incentive to place orders for Corporate Business Systems within the 1992 fiscal year.

When to Sell?

Availability

Today! These products are on the worldwide Corporate Price List as of May 1, 1992. Volume shipments of the HP 3000 Corporate Business Systems begin in August, 1992.

Solution Features

Proven Mainframe Performance

Published Fortune 100 benchmarks prove that HP systems can already compete with mainframe systems and excel at data center applications. Although benchmark data is not available yet for the DX, even the 980/100 compares favorably. Here are the key results from those benchmarks.

980 Benchmark Results

Mainframe Batch Sort Benchmark (D.O.R.) Results

Systems: IBM 3090-200J vs. HP 3000 980/100

Benchmark: Syncsort vs. TurboSort @ 640Mbyte

Relative Performance Results

	HP 992/100 IBM 980/100 (est.)
Cost	4.8 1.0 .9
Throughput	1.0 1.1 1.7
CPU Utilization	1.0 3.3 N/A
K\$/Job	5.1 1.0 N/A

PeopleSoft 980 Benchmark

PeopleSoft, a client/server Human Resource Management System, was tested on an Amdahl 5900 Model 700 (with DB2) and an HP 3000 980/100 (with ALLBASE/SQL). With the same version of PeopleSoft and the best efforts to make performance optimal on both systems, HP comes out on top. The results are impressive:

- Series 980/100 performed at 8,000 transactions per hour.
- Amdahl 5900 Model 700 performed at 7,500 transactions per hour.

The bottom line is that the 980/100 had **7 percent greater throughput than Amdahl at one-eighth the cost** -- and the 992/100 has even 60% to 70% more performance than the 980/100.

Data Center Class Support

NEWBURST.PCX;

1.4";0.986";PCX

HP offers a worldwide, complete support solution for data center environments which builds on HP's strengths in service and support. This new high-end support service ensures solution availability, complete coverage and support partnerships and is tailored for the special needs of high-end applications.

A bundle of products specifically designed for the needs of high-end customers is available exclusively to Corporate Business System installations. One product number now provides the following:

- ° 24x7 hardware support with immediate response
- ° Software support with expanded 24X7 software coverage
- ° ResponseLine support
- ° Net Assure Network Support
- ° Account-assigned Response Center Engineer
- ° Training
- ° 26 Days of Consulting

Please refer to Unit 9, "Support Services," for more detail.

NOTE: This support product offering is eligible upon sale for **quota and commission credit.**

MPE/iX--Balanced System Throughput

MPE/iX provides an excellent environment for interactive workloads such as on-line transaction processing and batch workloads such as MRP. Its reduced physical I/O activity allows excellent throughput and scaling with larger CPUs. MPE/iX reduces I/O through mapped files by minimizing the number of physical I/Os without imposing additional CPU overhead or sacrificing data integrity and protection. As a result, the HP 3000 Corporate Business Systems provide the exceptional performance and functionality needed for large multi-user environments.

MPE/iX High Availability Functionality

HP 3000 Exclusive: NetBase

NEWBURST.PCX;

1.4";0.986";PCX

In conjunction with Quest Software, the HP 3000 offers **NetBase**, a solution providing selective horizontal performance growth and very high availability. By linking multiple systems together, NetBase provides performance growth while supporting automatic load leveling among the systems. And with the ability to support an expanded data center over a broad geography (via wide-area network), a high degree of disaster tolerance is provided in the event of a local catastrophe. For more information about NetBase, refer to Unit 6, *Systems and Network Management*.

Bullet-proof Software

NEWBURST.PCX;1.5";1.056";PCX

Due to an ongoing commitment to software excellence, MPE/iX's

resiliency against failure continues to increase. Try/Recover routines have been implemented in more places with release 4.0, reducing total system failures caused by isolated application and operating system failures. Also in 4.0 is a new feature called "Aggregate Parallel Recovery" which dramatically reduces recovery time at system bootup.
NEWBURST.PCX;1.5";1.056";PCX

Higher table limits and more intelligence in the tables is another addition to MPE/iX. Through the use of a Table Monitor (available later this year), proactive alarms are in place to disallow limits to be exceeded (which would lead to system failure). The Table Monitor, coupled with higher limits, will contribute to making the HP 3000 even more available. (See Unit 7 for more information.)

OpenView Console

NEWBURST.PCX;1.5";1.056";PCX

The OpenView console, based on OpenView Systems Management, is a special PC high-end console for the new HP 3000 Corporate Business System DX. This new console provides the same benefits as OpenView Systems Management but is dedicated to managing one system. For additional information, please refer to Unit 6.

MPE/iX 4.0 Functionality Summary

MPE/iX release 4.0 also provides added functionality such as increased connectivity, increased disk capacity, increased maximum supported file size, and improved performance scaling.

NEWBURST.PCX;

1.4";0.986";PCX

Listed in the table below are the primary new features and benefits of MPE/iX 4.0. For more detail, please refer to the appropriate Units in the Corporate Business Systems Solutions Overview Part II.

Features

Benefits

Corporate Business System support.
New next-generation high-end platform.
Increased maximum number of terminals from 850 to 2300.
Support for a greater number of users and larger applications.
Increased disk capacity from 85 Gbytes to 690 Gbytes.
Support for larger databases and applications that require extensive

mass storage.

Increased maximum number of concurrent processes from 3119 to 5460.

Increased capacity for application growth and greater throughput.

Maximum file size increased from 2 Gbytes to 4 Gbytes.

Application development flexibility.

Dump size halved.

Faster problem diagnosis and faster recovery.

Bullet-proof software.

Greater system availability and minimized down-time due to software failure.

Performance scalability.

Greater performance for MP systems and greater overall system throughput.

Support for high end printer.

Improved data center productivity, complete high-end solution.

Aggregate Parallel Recovery.

Faster recovery after a system crash. Greater availability, minimized down-time.

Support for Token Ring.

Provides customers with an important link for multi-vendor connectivity and interoperability

OpenView console.

New windows-based data center console.

Corporate Business Systems Positioning:

What to Sell When?

Where to Sell the HP 3000 Corporate Business System DX

In general, the "Where to sell?" answer is, "Everywhere you can." The DX product is the high-value, high-functionality, flagship HP 3000 offering.

Defined by a single product number (A1809A), DX systems come standard with a color, windows-based PC system console. Also included are capabilities for on-line, unattended, parallel backup, automatic recovery management for operatorless system restart, plus performance management and monitoring software. (As with all HP 3000 high-end systems, factory preloading of software can be a no-cost option).

In addition to being simpler to order and install, the DX was designed to:

1. Provide capabilities frequently expected in data center environments.
2. Position the HP 3000 as a strong solution provider.
3. Compare favorably to IBM systems in robustness.
4. Maintain a sizable cost advantage over traditional data center solutions.
5. Provide significant savings to customers (actual price difference versus ordering the additional software separately is 32 percent).
6. Provide additional value to customers by optionally preloading the software.

Note:

DX systems savings are ONLY available upon initial Corporate Business System purchase. There is no upgrade path from a basic system to a DX system (although software can of course be added independently). Typical opportunities for the DX include robust environments requiring full functionality solutions, and where existing software functionality is outdated and/or expensive to maintain. The DX should also be bid as an alternative to a mainframe upgrade, to offload a mainframe and/or to replace older mainframes.

Details of the DX offering are listed in the following figure.

FIG3-05.HGL;6";4.411";HPGL

Where to sell the basic HP 3000 Corporate Business System

When cost--and not robust functionality--is the ultimate issue, the HP 3000 can compete on price as well. Basic systems without the additional DX software are also available (product number A1811A). The HP 3000 Corporate Business System includes a standard 700/96 console, MPE/iX, and database software options.

As with the DX package, 160-user license options (versus unlimited) are also available on the entry-level 990 and 992/100 models. The 160-user licenses are designed especially for CPU intensive applications with large relational databases or systems running large batch jobs. In general, try to lead with the DX models. Several HP-commissioned market research studies show that high-end customers generally exhibit lower price sensitivity than other market segments. Two reasons for this are the high level of functionality frequently demanded in the data center and the historical precedents set by previous acceptance of expensive mainframe solutions. Extremely cost-sensitive environments are generally not typical or representative of this market. However, where high cost-sensitivity *does* arise, bid the basic ("unbundled") Corporate Business Systems 990 or 992 models.

See the Ordering Information Guide (May, 1992)

for more details on when to bid DX and basic models for upgrade and new business sales.

Corporate Business System Positioning for Installed Base Customers Installed Base Upgrades

For upgrade business, consult the chart below. Your Series 960 customers may want to upgrade to the 990 which will give them a 70 - 80 percent performance boost. The 980 customers should upgrade to the same 992 processor level as in their existing system (for example, 980/100 to 992/100), which will give an estimated 60-70 per cent performance increase in every case. No upgrades are allowed from the 980 to the 990.

Series 980 Upgrade Paths

For ease of growth, Series 980 customers can continue to upgrade within the Series 980 family. However, with initial upgrade credits, the 992 systems may offer a lower cost upgrade path and much greater functionality. The following incentive programs are available to help your customers move to the Corporate Business Systems today.

Series 980 customers ordering a 992 by 10/31/92 will receive greater than 50 percent in upgrade credits. The upgrade credits will be reduced on November 1, 1992. If the customer takes delivery of their new CS992 by October 31, 1992, they will receive 75 percent in return credits. For recent Series 980 customers (installations after December 1, 1991), a 90 percent return credit is offered along with special return credits on memory boards. For more information on promotions, other order/shipment incentives, and multiple trade-in policies, refer to the Ordering Information Guide.

Series 960 Upgrade Paths

Your series 960 customers should upgrade to the 990/100 and above. Again, board upgrading within their existing system is an option but customers may actually save money by going directly to the 99X platform due to the attractiveness of the return credits.

A special Series 960 and 95X upgrade credits promotion *doubles* their value. Promotion ends November 1, 1992, so your customers should act immediately. For more information on promotions, other order/shipment incentives, and multiple trade-in policies, refer to the Ordering Information Guide.

FIG3-07.HGL;6";4.411";HPGL

Positioning versus the Series 9x7 Systems

When your customers need a high-end platform designed for maximum performance, growth, configurability and functionality, bid the Corporate Business System. The Corporate Business System 992/400 has almost four times the performance of the 977. You should also bid the Corporate Business System when your customer requires large

memory, disk, or user configurations. It supports 112 slots when fully expanded, while 9x7 has only 12. Although the 990 has performance similar to the top of the 9x7 line, the 990 is the entry point to a brand new platform and should be bid when customer performance needs are expected to increase over time. There will be performance upgrades through new chip technology and support for higher degrees of multiprocessing, allowing the Corporate Business System customer to invest now in a package that will allow him to grow into the late 1990s without swapping the cabinet.

Consult the chart below for other details to help you position the new platform versus the 9x7 line.

FIG3-08.HGL;6";4.411";HPGL

Leadership versus the Competition

Corporate Business Systems offer mainframe performance at the far lower mid-range cost of ownership.

Competitive Cost of Ownership

- ⁿ New 99X systems are a fraction of the cost of IBM mainframes. Often, buying a 99X will result in a significant cost savings versus purchasing a processor upgrade to an existing mainframe. Customers for the first time can receive true mainframe performance--at minicomputer prices.

- ⁿ As mentioned earlier, the HP 3000 99X systems have higher performance than both the VAX 6000-600 and AS/400 systems. For customers who are cost sensitive, continue to bid the 9x7 systems since they offer a significant price advantage over the VAX 6000-600 and the AS/400. Customers requiring more performance can start out with the 99X at a comparable to slightly higher price versus the DEC VAX but get much higher uniprocessor performance and a superior growth path. As compared to the AS/400, the 99X systems offer a 20-30 percent price advantage while providing substantially more uniprocessor performance and a much better growth path.

FIG3-09.HGL;6";4.411";HPGL

Growth Path to Meet Future Computing Requirements

Where the DEC VAX and AS/400 are struggling to increase high-end performance, the Corporate Business System will continue to provide processor upgrades to meet the fastest growing customer needs (estimated for HP at 100 percent CAGR).

Continue to Sell Traditional HP 3000 Strengths

The Corporate Business System also further enhances the traditional HP 3000 strengths in the marketplace. Win with the HP 3000 by continuing to emphasize:

Commitment to Customer Satisfaction

- ⁿ Most satisfied customers in the industry according to ComputerWorld and DataPro.
- ⁿ Investment protection through four annual return credits and moving customers forward to the latest technology while protecting their investments. No other vendor has done this over the past 20 years.

Industry-leading Reliability and Data Integrity

MPE/iX provides built-in reliability, high availability, and, due to an integrated transaction manager, completely protects data from being lost in unexpected failures. AS/400 and UNIX require complete reloads of data following many disk and system failures.

Open System Standards

The HP 3000 offers a tremendous advantage over the AS/400 in open functionality. (The AS/400 does not support third party DBMS and POSIX is a distant future.) POSIX on the HP 3000 is also a better implementation than on VAX VMS (POSIX is not integrated with VMS commands and files, but is an "add-on" environment contracted outside the U.S.).

Unattended system management

The HP 3000 also provides remote unattended systems management with OpenView System Manager. No other system has this!

HP 3000 Summary

The HP 3000 provides a winning solution with an industry unique combination of:

- ⁿ Performance
- ⁿ Data center functionality
- ⁿ Reliability
- ⁿ Data integrity
- ⁿ Mid-range ease-of-use
- ⁿ Cost of ownership.

Additional Information

For more information on the existing HP 3000 product line, refer to Unit 2, "Meeting Customer System Hardware Needs," in the HP 3000 Fundamentals SR189 Student Workbook (HP Publication 5960-1623).

Discount Schedules Notice

All HP 3000 Corporate Business Systems are on the same discount schedules. These discount levels are slightly lower due to factors specific to the high-end marketplace. Training and distribution of discount schedule reference documents will take place in May and June of 1992. New schedules are effective June 1.

Terms and Conditions

Software tier

VEU discount
schedule

350

A2000* Col. 1

VAB discount
schedule

A2003* Col. 1

Educational discount

yes

Demo/development
discount

no

GSA (as of mid-
1993)

yes

* *New schedules--see your contract administrator.*

HP 9000 Corporate Business Server 890

The HP Corporate Business Server 890 further expands and strengthens the HP 9000 Series 800 Business Server Solutions family. The Model 890 is a state-of-the-art, high-end server that extends the performance of the current Series 800 products.

Model 890 Overview

The Model 890 has the processor, memory, and I/O infrastructure to support mainframe-level performance and configurability.

The Model 890 has superior performance, memory, I/O, and mass storage capabilities compared to the current high-end Model 870S products. It uses a new air-cooled packaging design with new processor, memory array, and system bus designs. This new design takes only half the floorspace of the Model 870S/100. The Model 890 uses the same HP-PB I/O bus architecture and peripheral expansion bay as the Model 8X7S family. The initial release of the Model 890 will incorporate support for 4-way symmetric multiprocessing with HP-UX 9.0.

Model 890 Product Family At a Glance

Minimum HP-PB slots	14
Maximum HP-PB slots	112
Standard HP-PB I/O channels	1
Maximum HP-PB I/O channels	8
Standard memory (Mbyte)	128
Maximum memory (Mbyte)	2048
Maximum disk (Gbytes)	600
Standard ports	16
Maximum users:	

- Mux	1024
- DTC	4500
- Total	4500
IC Technology	PA-RISC 1.0
Clock speed (MHz)	60
Cache size (Mbyte)	
- Instruction	
- Data	2 Mbytes
	2 Mbytes

WBKP3GSY.HGL;6";4.411";HPGL

Strongest High-End UNIX Product Offering

With the introduction of the Model 890 family, HP has the strongest product offering in the high-end UNIX marketplace. These products provide mainframe-level performance and configurability substantially superior to that of high-end UNIX competitors. The new Model 890 family is designed to support both large multiuser configurations (over 4500 users) as well as large server configurations where it offers superior performance capacity and system management functionality.

Performance Scalability

The uniprocessor Model 890 has 50 percent more performance than the Model 870S/100. However, the 4-way Model 890 has approximately twice the performance of the 870S/400. As with the 870S family, the performance span of the Model 890 is achieved through the use of in-cabinet processor upgrades.

The more efficient multiprocessing scaling of the Model 890 is due to a faster system bus as well as enhanced hardware capability. Just as with

the Model 870S family, multiprocessing system performance scaling is dependent on the exact nature of the application environment. In general, multiprocessing software provides maximum performance benefit for computation-intensive environments and small performance benefit for single threaded batch environments.

In a database environment, OLTP performance scaling is highly dependent on the actual database being used. The designs of the individual databases (in terms of how they are optimized to function in a multiprocessing environment) and applications can significantly affect the scaling that OLTP applications will experience.

Modular I/O Expandability

The Model 890 uses the same HP-PB I/O bus as the Model 8X7S family. Each Model 890 comes standard with one HP-PB expansion module located within the CPU cabinet. Up to 7 additional HP-PB expansion modules can be installed in external peripheral racks. Use of a common I/O bus allows for leverage of the same I/O interface cards as well as consistent interconnect within the Series 800 product family.

Software and Peripheral Compatibility

The Model 890 product family utilizes the HP-UX 9.0 release of the operating system software. This product family is fully object code compatible with the rest of the Series 800 product family. In addition, peripherals supported on high-end HP 9000 Series 800 products are also supported on the Model 890.

HP-UX Commercial Functionality

HP-UX release 9.0 will provide enhanced commercial functionality needed by Model 890 customers, including features such as XPG3+ compliance, increased memory and disk capacity, improved disk management, increased number of shared libraries and a faster FORTRAN compiler. The following table provides a more comprehensive list of the new HP-UX release 9.0 features and benefits.

Features

Benefits

NEWBURST.PCX;1
.5";1.056";PCX

X/OPEN Portability Guide Issue 3+ (XPG3+) compliance.
Continues HP's leading commitment to standards and open systems for increased portability.
Increased memory support to 2 Gbytes.
Improved performance due to more data and programs being kept in fast main memory.
Increased disk support for HP-FL disk arrays (600 Gbytes) and SCSI disks (100 Gbytes).
Support for large databases and other applications that need increased storage.
Flexible disk management with OSF/LVM (Logical Volume Manager).
Provides for more efficient and dynamic use of disk storage.
Improved FORTRAN compiler.
Increases the performance of FORTRAN applications.
System V streams support.
Provides compatibility for applications and environments that require streams interfaces.
NFS automount.
Allows for enhanced management of NFS environments.
Motif 1.2 and X11 Release 5.
Improved performance and increased usability.
Increased number of shared libraries (>1000) per application.
Provides for more flexibility and increased performance for applications, especially ones written in COBOL.
SCSI Powerfail.
Protects HP 890 customers from losing data due to unplanned power outages on system configurations that include SCSI devices.
FDDI and Token Ring Networking.
Continues to provide customers with the links needed for multi-vendor connectivity and interoperability.
Nailed DTC ports.
Increases system security as system administrators and applications can identify a user on any particular DTC port.
SCSI Repeater.

SCSI devices can now be located up to 100 meters from an HP 890, easing computer room space requirements.

Series 800 Mid-Range Versus Corporate Business Server Positioning
In many sales situations, customer requirements will call for a choice to be made between recommending a mid-range 8X7S system or a high-

end Model 890 system. There are several key areas of differentiation between the mid-range and high-end which are important considerations in choosing the appropriate system to bid. These areas are **performance capacity**, **configurability**, and **price**.

Performance Capacity

The high-end Model 890 should be bid in situations where there is a need for high transaction processing capacity. Transaction processing requirements can be determined by either capacity modeling or benchmarking. The high-end Model 890 has OLTP performance over three times greater than the 8X7S family. Consequently, high-end systems should be bid when customer needs call for transaction rates greater than the 8X7S can deliver as well as where customer performance needs are expected to grow over time.

Configurability

High-end systems should also be bid in situations when there is a customer need for large configurations (in terms of main memory, disk capacity, or number of supported users). For example, the high-end Model 890 supports six times the main memory, six times the maximum disk capacity, and five times the maximum user count relative to the 8X7S family.

Price

The third determinant of system selection is price. A mid-range system should be bid in cases when the customer is price-sensitive, and where the application needs for performance can be met with a Model 8X7S system. In many cases, however, customers are price-sensitive despite having the need for high processing capacity and configurability. In such situations, it may be appropriate to bid a Model 890 to provide the lower entry price point into the high-end product line. With this alternative, customers can preserve their ability to upgrade to more powerful Model 890 systems through simple board upgrades.

FIG39.HGL;6";4.411";HPGL

Upgrades

With the introduction of the Corporate Business Server 890, installed base 870S customers will be provided with upgrade paths to these new systems. The principal objective of providing these upgrade paths is to provide performance upgrade paths to 870S customers who are currently performance constrained.

The largest return credits will be for the 870S/300 and 870S/400 products. In addition to upgrades for the base systems, there will also be return credits for memory and some I/O interface cards. Return credits for the 870S/100 and 870S/200 will be less generous because these systems can be upgraded without requiring a platform change.

For these customers, the most financially attractive upgrade paths will be to the 870S/300 and 870S/400.

Bridging Program

In addition to the installed base upgrades, there is a bridging program for customers who require delivery of a Model 890 prior to its shipment in November. Customers requiring an immediate delivery of a Model 890 should order and take immediate delivery of a Model 877S for software development and installation. These customers will receive an extremely generous return credit provided that they order the Model 890 prior to November 1, 1992 and take immediate delivery of that system. In addition, there will also be a return credit for customers who wish to upgrade from the Model 897S to the Model 890.

You should encourage customers wishing to take advantage of these upgrades to do so prior to November 1, 1992. All of these return credits will be reduced by a minimum of 25 percent at that time. Please consult the local country price lists for additional details on the upgrade credits.

Return Credits

From: _____

To: _____

Model 870S/100 or
Model 877S

Model 890 -1, 2, 3, 4 CPU

Model 870S/200

Model 890 -2, 3, 4 CPU

Model 870S/300

Model 890 -3, 4 CPU

Model 870S/400

Model 890 -4 CPU

Target Opportunities

Target industries for the Model 890 are:

- ⁿ Manufacturing
- ⁿ Telecommunications
- ⁿ Financial services

ⁿ Health Care

Refer to the following figure for more details.

TAROPP.HGL;6";4.411";HPGL

Competitive Issues

Bidding Summary

The table below is a competitive summary that provides bidding recommendations for competitive situations. You should use this table to select the appropriate Model 890 system to bid in response to several competitive offerings.

HP Bid	Competitor's Bid			
Model 890	Sequent	Pyramid	DEC VAX	
1 CPU	8 CPU	6 CPU	6620	
2 CPU	12 CPU	8 CPU	6630/6640	
3 CPU	16 CPU	10 CPU	6640/6660	
	4 CPU	> 16 CPU	> 10 CPU	6640/6660

Competitive Comparisons

With the introduction of the Model 890, HP has the strongest product offering in the high-end UNIX marketplace. This section will detail the advantages that HP can offer over its competitors.

Selling Against the DEC VAX

DEC is in an extremely vulnerable market position in its transition from the CISC (Complex Instruction Set) VAX architecture to the RISC Alpha architecture. By openly pre-announcing Alpha, DEC has acknowledged that the VAX architecture is at the end of its useful life. In this transition to Alpha, DEC customers will have to deal with mixed architecture VAX and Alpha installations. Such installations will be complex and difficult to manage because of the incompatible VAX and Alpha architectures and the corresponding incompatible versions of system and application software.

Use this VAX-Alpha transition complexity to create fear, uncertainty, and doubt in the minds of DEC customers. You should raise the issue of the uncertain value of current investments in the VAX architecture because of the substantial cost in migrating applications and system software to the new hardware environment. Point out that HP has already made this difficult transition and now delivers a single consistent PA-RISC hardware architecture and operating system base. DEC has announced their intent to make VMS open. The HP-UX environment is the most open in the industry today. You can demonstrate our reality of conformance to industry standards today against their anticipated deliverable.

Selling Against Sequent

The Sequent product line is based on the CISC (Complex Instruction Set

Computer) Intel 80486 processor. All other major computer vendors have moved or are moving to a RISC architecture. Sequent's lack of commitment to RISC implies that they are not a technology leader. Even if Sequent eventually moves to a RISC architecture, their customers will be forced to make a costly hardware and software transition from their current environment.

With the introduction of the Corporate Business Server 890 family, HP provides substantially superior high-end performance and scalability to the high-end Sequent S2000/750 product platform. Additionally, the faster Model 890 uniprocessor provides substantially higher batch performance when compared to Sequent. Batch performance is critical for applications such as payroll and MRP and for tasks such as backup, nightly job streams, and network data transfer.

HP also provides a much more robust systems and network management environment with such tools as Switchover/UX, OmniBack/Turbo, and Openview. Specifically, the Customer Associates Unicenter products provide HP-UX with a further enhancement to our systems management software capabilities. In addition, HP has a much stronger commercial CASE and mainframe class application offerings.

Selling against Pyramid

In comparison to HP, Pyramid has a much weaker solution offering for data center environments. Specifically, Pyramid lacks leading mainframe-class applications and has an inferior CASE offering. In addition, HP is able to offer a superior service and support capability needed to support high-end system environments. Finally, Pyramid is known for questionable quality and system reliability.

From a hardware perspective, Pyramid has a much weaker product line than the Series 800 products. Pyramid's product focus is concentrated on the high end--they do not have competitive low-end or mid-range products. The Pyramid high-end server has memory and I/O bus bandwidth that is roughly one-tenth that of the Corporate Business Server 890. In addition, Pyramid uses the MIPS architecture CPU chips that are much lower in performance than contemporary PA-RISC CPUs. Pyramid has also lost considerable momentum in the high-end UNIX marketplace. The recent acquisition of MIPS by SGI has clouded the future of systems vendors, such as Pyramid, who use the MIPS CPUs. Furthermore, the acquisition of NCR by AT&T has damaged the OEM relationship between Pyramid and AT&T. These factors have contributed to Pyramid's recent financial weakness.

Additional Information

For more information on the existing HP 9000 Series 800 product line, refer to Unit 2, "Meeting Customer System Hardware Needs," in the HP 9000 Business Server Solutions SR188 Student Workbook (HP Publication 5960-1621).

Discount Schedule Notice

All HP 9000 Corporate Business Servers are on the same discount schedules. These discount levels are slightly lower due to factors specific to the high-end marketplace. Training and distribution of discount schedule reference documents will take place in May and June of 1992. New schedules are effective June 1.

Terms and Conditions

Software tier	350
VEU discount schedule	A2000* Col. 1
VAB discount schedule	A2003* Col. 1
Educational discount	yes
Demo/development discount	no
GSA (as of mid-1993)	yes

* *New schedules--See your contract administrator.*

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