

IBM Servers



**Project Monterey:
A Strategic Approach to Business Computing**
December 1999

Changing the rules

Around the world, organizations are using e-business solutions to rewrite the rules of competition. Not only are they buying and selling over the Internet — they're using e-business to reinvent the enterprise, creating innovative new business models that let them deliver higher levels of customer value and gain a competitive edge.

Advancements in server technology have helped enable the e-business transformation. Servers are the engines that drive e-business; they provide the power that permits an organization to respond quickly and precisely in an e-business world. As a result, servers now play a key role in the strategic design and success of the business.

Many organizations are choosing servers running UNIX®-based solutions as being uniquely suited to this strategic transformation. The UNIX operating system offers the qualities of service — such as performance, reliability, manageability and scalability — required for mission-critical business systems. UNIX servers also offer strong Internet “affinity”; in fact, Internet technologies such as TCP/IP have their origins in UNIX systems. This combination of strengths has made UNIX servers a leading choice for developing and operating e-business solutions.

As a result, UNIX operating system usage has been on a solid growth path, a trend that's projected to continue for some time¹. Accompanying this rapid growth has been the introduction of critical emerging solutions, such as Web serving and application hosting, as well as a wider choice of the latest business solutions, such as enterprise resource planning (ERP) and business intelligence.

Some companies have found, however, that realizing the full strategic benefits of UNIX can be difficult. The fragmented nature of the industry — which can limit the choice of applications and tools and availability of skills — complicates the process of creating robust, easy-to-manage e-business solutions.

Project Monterey provides a way to gain the full benefits of UNIX servers today and tomorrow.

Leading the way

Project Monterey is a major UNIX operating system initiative led by IBM®, joined by SCO, with participation from Intel® as well as major hardware and software companies from around the world. Under the Project Monterey banner, IBM is working with SCO and others to deliver a single UNIX product line that will run on systems based on IBM Power and Intel 32- and 64-bit architectures.

The goal is simple: to produce a single UNIX product line with broad industry support in order to provide organizations with the widest choice of critical business solutions, leadership technology and the flexibility to run across servers ranging from the workgroup to the data center.

The starting point for reaching that goal is AIX®, IBM's industry-leading enterprise UNIX operating environment. Project Monterey establishes an enhanced investment strategy for AIX that will accelerate the delivery of new features and capabilities on IBM processors, such as the planned incorporation of Non-Uniform Memory Access (NUMA) technology from IBM NUMA-Q (formerly Sequent).

In addition, Project Monterey will extend AIX enterprise strengths to the Intel architecture. SCO is incorporating AIX technology into UnixWare to provide an enhanced UNIX operating system for Intel's 32-bit architecture, IA-32. And to ensure broader compatibility across the product line, UnixWare will be supported by selected IBM tools, middleware and applications.

Together, the members of the alliance are developing a UNIX operating system for IA-64, Intel's 64-bit architecture that will include upcoming microprocessors such as Itanium and “McKinley.” This product, code-named “Monterey/64,” is expected to incorporate

¹ *The UNIX Systems Market Review and Forecast, 1997-2002*, International Data Corp., 1998

technologies from SCO's UnixWare and NUMA-Q's DYNIX/ptx[®] into an AIX base on IA-64.

The combined technologies approach of IBM, SCO and NUMA-Q won the endorsement of Intel, which has stated that it expects Project Monterey to become the leading UNIX for IA-64. In addition, many computer manufacturers (OEMs) and independent software vendors (ISVs) endorse Project Monterey.

By bringing together technologies from three leading UNIX operating system innovators, Project Monterey establishes a well-defined product roadmap for strategic IT decisions.



IBM and SCO bring complementary strengths and expertise to Project Monterey.

IBM is uniquely qualified to lead this effort. In addition to UNIX expertise — based on 10 years of developing and enhancing AIX, the premier enterprise UNIX operating system — IBM also brings strength in providing Intel-based solutions on its Netfinity[®] line of servers. And as the world's leading technology company, IBM brings the middleware, management tools and applications required to create enterprise solutions and the expertise to implement them.

SCO has over 15 years of expertise in developing and delivering high-volume, hardware vendor independent UNIX operating systems on Intel

platforms. Today, SCO is the clear leader in providing UNIX operating systems on the IA-32 architecture.² In addition to UnixWare, SCO's UNIX product for IA-32, SCO will contribute selected technologies that will enhance compatibility across the product line.

IBM NUMA-Q is contributing technologies from the leading UNIX environment for high-end Intel servers. The Project Monterey product line will be strengthened by the incorporation of NUMA-Q's innovative technologies including NUMA architecture and multipath I/O technology.

Delivering greater value

The value that Project Monterey delivers to businesses is straightforward.

To begin with, AIX delivers the capabilities required to run businesses today. AIX provides real advantages over UNIX variants. For example:

- AIX provides software flexibility to match the broad scalability of the RS/6000[®] family of servers. This helps to get full benefit from an investment in larger servers by providing consistent performance as workloads increase.
- AIX has been tuned for optimum Internet/intranet performance and capabilities. RS/6000 servers running a pre-release version of AIX 4.3.3 — the first AIX release to be influenced by Project Monterey — recently set new records in Web, Java and SMP NFS performance.³
- AIX is the first 64-bit UNIX operating environment to receive both C2 and B1 security certifications and the first server

² Research by International Data Corporation (IDC) shows SCO as the leading provider in 1998 of UNIX server operating systems with 40.6% share of all shipments, regardless of hardware platform. SCO's UnixWare operating system was the fastest-growing UNIX server operating system in 1998, with 58.5% growth over 1997. For details, see IDC Bulletin #W17876 (12/98): Server Operating Environments: 1998 Year in Review

³ See IBM press releases dated July 1, 1999 for more details.

operating system to be certified for Virtual Private Networks.

- AIX is widely recognized for state-of-the-art in systems and network management, including introducing the first complete Web-based system manager tool.⁴

These strengths have led D. H. Brown to rank AIX as the number one commercial UNIX operating system, noting in particular the Internet and system management capabilities. And the capabilities of AIX have led to its selection by key enterprise-class solution providers along with top-score recognition by *VARBusiness*⁵.



With the commitment of IBM and the industry, Project Monterey is poised to deliver the industry-leading UNIX operating environment. This will, in turn, create volume leadership for business-critical applications, providing the widest choice of emerging solutions to address evolving business needs.

Comprehensive industry support sets Project Monterey apart from other UNIX alternatives. Intel is assisting IBM and SCO in making Monterey/64 the primary UNIX operating system for computer manufacturers and software developers. Furthermore, Intel is providing top-level engineering and technical support to ensure Monterey/64 is fully optimized for the IA-64 architecture. And Intel and IBM have announced the availability of millions of dollars to assist software companies in delivering middleware and application programs.

In addition to Intel, major OEMs — including Compaq, ACER, Bull, ICL, Sequent and Unisys — have endorsed Project Monterey. This opens the potential for companies to recognize the cost benefit of being able to select from a wide range of systems from a broad set of suppliers.

As a result of the investments by IBM, Intel, and SCO, as well as the broader opportunities opened by a high-volume UNIX product line, developer support for Project Monterey is growing quickly.

With developers in mind, a great deal of thought and attention has gone into providing compatibility across the Project Monterey product line. This will make it easier for developers to support the leading microprocessor architectures, IA-32, IA-64 and IBM Power. The end result will be greater application availability across Monterey/64, UnixWare and AIX.

Investments in Project Monterey will also help accelerate the delivery of new enterprise-class capabilities into the product plan. Planned technology contributions from the three companies — such as systems management tools from IBM, an IA-32 execution environment from SCO and NUMA technology from NUMA-Q — will help ensure that AIX continues to be the industry's most capable UNIX operating system.

Finally, Project Monterey will deliver unprecedented flexibility to continue to take advantage of the high-performance, scalable RS/6000 product line and to deploy AIX-based solutions on IA-64.

For mission-critical solutions, businesses can continue to rely on the high-performance, scalable IBM RS/6000 product line. The RS/6000 family features a broad product line, from powerful desktop workstations ideal for sophisticated mechanical design up to RS/6000 SP™ systems that can handle the most demanding ERP and Business Intelligence applications, online transaction processing and Web-serving tasks.

The end result is that organizations will be able to select hardware ranging from workgroup servers to

⁴ 1998-99 Operating System Function Review, page 40, January 1, 1999, D.H. Brown Associates, Inc.

⁵ *VARBusiness*, "IBM Tops At Desktop," p67, June 22, 1998 and "Generation Unix," p 59, August 17, 1998

very-high-end data center systems running a single UNIX product line. The Project Monterey product line provides enterprise-class capabilities, common systems management, compatibility across hardware platforms and a wide choice of strategic business applications.

Summary

The goal of Project Monterey is to provide businesses with the best that UNIX operating systems have to offer.

Organizations can realize the full advantages of UNIX today with AIX on RS/6000, which delivers the enterprise-class capabilities and qualities of service required to run strategic business solutions.

And businesses can help protect investments as the business environment continues to evolve. By promoting compatibility across different architectures, the single Project Monterey product line will help to protect hardware investments while also permitting the integration of new technologies as needed. And by providing common systems management, it helps companies leverage existing skills and control costs.

In today's e-business world, the choice of server and operating system has become an essential part of establishing a strategic plan. Project Monterey provides a way for companies to make sound strategic decisions that incorporate both existing and emerging mission-critical solutions.

For more information, and to watch our progress, visit us on the Web at www.ibm.com/servers/monterey



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Route 100
Somers, NY 10589

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