

# HP Integrity servers and business intelligence

Trust HP Integrity servers for your most demanding business intelligence workloads



HP Integrity servers have the performance and agility to help you quickly turn your data into knowledge and your knowledge into a greater competitive advantage.

## Business intelligence is more important today than ever

In a world where competition is steep and customers are more demanding than ever, business intelligence (BI) has become a cornerstone of corporate success. For companies to rise to the top, they must understand their customers, streamline their supply chain, and improve their financial performance.

While business intelligence remains a high priority, the technical requirements of BI solutions have changed. Data continues to grow into double-digit terabytes. Compliance with national and international regulations raises the importance of data integrity and accuracy. In addition, companies are using business intelligence to make minute-by-minute decisions and to run new operational systems.

Infrastructure is more important than ever for today's businesses to keep information flowing, to adapt quickly to changing intelligence needs, and to scale to meet the exponential growth of data. Competitive BI solutions need to take advantage of new innovations in business continuity, scalability, and virtualization.

With their ability to run business solutions on HP-UX 11i, Microsoft® Windows® Server 2003, Linux®, and OpenVMS, HP Integrity servers have the strength and agility to help you turn data into knowledge—and knowledge into a greater competitive advantage. As a result, HP's BI solutions provide you with the right information at the right time, at the right price. When the time comes for you to make new investments, you can trust HP Integrity servers for your most demanding business intelligence workloads.

“CompUSA’s vision is to be able to scale our data warehouse to support our ongoing growth. The [Intel®] Itanium® 2 microarchitecture allows us to get there to scale up to 8-way, 16-way, and, in the future, to 32- and 64-way servers. As a result of the Itanium 2...-based HP Integrity server solution, we have seen tremendous performance improvement on several processes associated with our data warehouse.”

Cathy Witt, Chief Information Officer, CompUSA Inc.



## The right foundation for business intelligence

When it comes to BI solutions, choosing the right foundation is crucial. Over the last 10 years, HP technological innovations have transformed the company’s infrastructure solutions into an extraordinarily powerful, reliable, and flexible platform for business intelligence—a major reason for HP’s #1 industry ranking\* in combined server and storage revenue for strategic BI. HP Integrity servers—the latest innovation in HP’s server portfolio—were built for BI.

With HP Integrity servers and the full power of the HP portfolio, you get:

- Leading performance to handle your most demanding workloads
- Superior choice of operating systems—including HP-UX 11i, Microsoft Windows Server 2003, Linux, and OpenVMS—letting you run the mission-critical applications you require on the platform that best fits your needs
- The ability to do more with less and to redeploy resources to more strategic projects, leveraging an unparalleled range of integrated virtualization solutions

- A perfect match for your diverse workload needs when you choose from the world’s broadest server line
- A wide array of industry-leading, highly scalable storage solutions—giving your infrastructure the ability to grow without limits
- Rapid delivery of business intelligence systems with simplified management across all operating environments—and across the entire solution stack, from the network to the applications
- A collaborative relationship with HP and your choice of the right ISV partners to meet your business requirements

A successful business needs the underlying intelligence to react instinctively to change—to do the right thing at the right time—in order to continue its march toward growth and profit. By offering superior choice, focused innovation, and world-class experience, HP Integrity servers provide the foundation that allows you to raise the bar for business intelligence across your entire enterprise.

\* 2003 IDC Workload Report



### BI workload gains with HP Integrity servers

Enterprises the world over have experienced tremendous gains in their BI workloads since implementing HP business intelligence solutions on HP Integrity servers. Here are a few examples:

- American Healthways: 96% reduction in extract/transform/load (ETL) processing time
- PREMIER Bankcard: Queries that took 22 hours now take 45 minutes.
- The Weather Channel: Doubled the performance of its previous system, at 75% less cost, using HP Integrity and HP ProLiant systems
- CompUSA: Data warehouse processes that previously took 14 hours now take 33 minutes on HP Integrity Superdome.
- Vattenfall: 250% increase in performance and 33% reduction in TCO.
- Banca Popolare di Vicenza: Reduced query times from 20 minutes to two seconds

### HP Integrity servers are built for business intelligence.

When you choose HP Integrity servers for business intelligence, you are investing in the future of your data center and your company. HP Integrity servers easily scale up and scale out, and they can run the world's leading operating systems, including HP-UX 11i, Microsoft Windows Server 2003, Linux, and OpenVMS—even on the same system, through partitioning. They're built to handle different BI workloads quickly, reliably, and cost-effectively, providing outstanding investment protection by adapting as your needs change.

HP Labs first began working on BI innovations as early as 1992. In 1995, we were one of the industry's first companies to design server technology specifically for BI—at a time when other vendors were merely building systems for online transaction processing (OLTP) workloads. Through the years, solid engineering has built a foundation for a solid BI computing platform—one that you can trust for your most demanding workloads:

- The HP Integrity family of servers was built with multi-OS capabilities to handle consolidation of diverse business intelligence systems.
- Explicitly Parallel Instruction Computing (EPIC) has built-in branch prediction, and addresses massive memory to enable leading performance for analytics and queries.
- HP Integrity Superdome—the record-setting, 128-way server—boasts 1 TB of memory and huge I/O bandwidth, making it the ideal platform for large-scale BI implementations.

HP Integrity servers are based on industry standards. Your hardware resources are easily redeployed without hassle—and you're not locked into proprietary technologies. Plus, from the database to the desktop, the leading BI software vendors have already moved or are moving to HP Integrity servers because of its performance and innovation.



## HP Integrity servers deliver leading virtualization capabilities.

Enterprises requiring a versatile business intelligence environment can benefit greatly from HP's innovative virtualization solutions, which pool and share IT resources so that utilization is optimized and supply automatically meets demand. Leading the charge for virtualization, HP-UX 11i allows you to quickly and cost-effectively allocate or re-allocate resources to address your changing business needs.

Business intelligence workloads include data extraction/transformation/loading (ETL), data-warehouse updates, queries, batch processing, and analytic applications. This diverse set of workload requirements is typically met with separate resources for each process, resulting in under-utilized servers that are stressed during peak windows.

With the HP Virtual Server Environment (VSE), resources from the virtual resource pool are shared between applications and can be quickly assigned as needed to meet fluctuating demands. This eliminates the huge cost of replicating under-utilized systems that have been configured for peak processing windows.

By using the innovative server virtualization capabilities that are part of the HP VSE—including partitioning, workload management, high availability, and utility pricing—you can adapt your system resources dynamically, maintain service levels, and align resources with your business needs and budget.

## HP StorageWorks solutions help unlock the value of your data.

Storage requirements in the business intelligence world are different from those in the typical transaction-processing world. There is a need for high I/O due to large sequential table scans. The update process requires careful monitoring due to the importance of time and data accuracy. Because data grows quickly, the storage arrays must be able to handle rapid growth and provisioning.

As part of the HP Integrity server ecosystem, HP StorageWorks provides a full range of array offerings to meet your business intelligence needs. Enterprises with huge, multi-terabyte data warehouses can experience the industry's most scalable BI storage solution, designed for massive throughput of up to 8 GB per second. Or, data can be separated into independent chunks, scaling over multiple HP StorageWorks Enterprise Virtual Arrays (EVAs) or Modular Smart Arrays (MSAs) at attractive price points. The HP StorageWorks disk array family features three lines, including:

- The high-performance XP series, delivering high, sustained, sequential throughput
- The EVA series, providing increased utilization and cost savings through virtualization
- The entry-level, affordable MSA series, which is ideal for data marts

“HP Integrity servers are meeting our business intelligence needs, including support for Microsoft SQL Server (64-bit) and SAS. We are now reaping the benefits of a 30% to 100+% performance improvement that enables us to make better business decisions faster, and also gives us the headroom to sustain our 8% annual growth rate.”

Dave Geiver, vice president of technology,  
PREMIER Bankcard

The IT processes that surround the management of terabytes of information can be complex and costly. With HP StorageWorks, you can:

- Align compliance issues with the right technology architecture and processes using HP Information Lifecycle Management (ILM)
- Create online copies when it's time to update the database—then, when the update is complete, you can use the same copy for business continuity with HP StorageWorks Business Copy XP and Business Copy EVA
- Save network expense by moving data within the HP storage area network (SAN)
- Experience continuous operations with a fault-tolerant, redundant architecture and no single point of failure
- Manage and monitor complex, growing business intelligence environments with HP Storage Essentials

It is no wonder that HP is the #1 storage provider in business intelligence. Regardless of the size of your data warehouse or your performance requirements, HP StorageWorks products—combined with HP Integrity servers—are built to handle your most demanding BI workloads.

## Intelligent management for the HP Integrity server ecosystem

The award-winning HP OpenView management suite is ideal for managing and monitoring dynamic BI workloads in your HP Integrity server environment. HP OpenView tools offer intelligent management capabilities across the entire BI solution stack.

For example, the HP OpenView Smart Plug-in (SPI) helps administrators efficiently monitor distributed enterprise-wide database environments from a central, best-in-class console. The SPI technology increases data warehouse availability and performance—and it provides administrators with a visual means of tracking capacity shortages and trends—which consequently lowers the overall cost of maintaining large, complex database environments. Plus, HP OpenView SPIs can:

- Proactively identify database problems before they affect end users
- Significantly increase database performance and capacity
- Facilitate fast recoveries
- Diagnose, plan, and track service levels with flexibility

In addition to database management, HP OpenView provides integrated management of servers, operating systems, storage, network, middleware, database, and applications—all through a single window. Now you can respond quickly to changing information needs, prevent unplanned slowdowns and outages, and lower your TCO for business intelligence.

“Not only did HP offer an exceptional hardware, storage, and support solution with the business intelligence applications we needed, but also HP’s responsive, knowledgeable staff helped get us up and running quickly. It is clear that HP really cares about our success.”

Dave Geiver, vice president of technology,  
PREMIER Bankcard



### Software on HP Integrity servers equals a better customer experience.

Partnering with industry-leading ISVs is a key part of HP’s business intelligence strategy. Together, we bring the best of our expertise to you. HP focuses on what we do best, creating the kind of agile infrastructure that makes business intelligence flow. At the same time, our partners focus on their expertise in data management and analytics.

Our joint effort means that you get complete business intelligence and data warehouse solutions that are powerful, proven, and, in many cases, pre-tested. We go the extra mile to set configuration guidelines based on real-world workloads, and we tune the solution stack to optimize performance.

HP has longstanding relationships with such business intelligence partners as Ascential, Business Objects, Hyperion, Informatica, Microsoft, Oracle®, SAP, and SAS. Over the last year, HP and these partners have delivered record-breaking performance. Among the highlights:

- In 2004, HP set two leading APB1 benchmarks designed to test the speed, performance, and scalability of analytic software.\* With midrange HP Integrity and HP ProLiant servers containing Intel processors testing Hyperion Essbase software on Microsoft Windows Server 2003 in a “real world” environment, we achieved a rate of 119K average-queries-per-minute (AQM) while serving 10,000 concurrent users for an average of 5.04 seconds per user query. Later in the year, we doubled these results: a 247K AQM benchmark running HP-UX 11i on an HP Integrity server.
- With Informatica, we achieved a 211% throughput increase using PowerCenter 7 running HP-UX 11i on HP Integrity servers.
- We demonstrated that E-piphany Service 6.5 on HP Integrity servers and BEA WebLogic 8.1 can support the performance requirements of a 10,000-seat call center while handling more than one million transactions per hour.

Our partnerships extend to a shared vision and joint R&D, to cross-training our technical staff, and to developing reference architectures and centers of excellence.

\*For more information, visit  
[http://www.hyperion.com/downloads/partners/hp\\_titanium\\_benchmark.pdf#search='hyperion%20olap%20benchmark'](http://www.hyperion.com/downloads/partners/hp_titanium_benchmark.pdf#search='hyperion%20olap%20benchmark')

“The HP Integrity server running Informatica’s PowerCenter 7.1 gave us performance improvements far beyond what we had expected, and that’s before the system was even optimized for our needs.”

Scott Kozicki, Vice President and Chief Technology Officer, American Healthways

## HP Services for business intelligence

HP Services professionals take a collaborative approach in order to provide you with a complete set of infrastructure services for your data warehousing and business intelligence environment. Building an agile infrastructure for BI will reduce IT complexity and enable you to capitalize on the opportunities that change presents. HP has the expertise to design, build, integrate, manage, and evolve IT environments to more closely align business and IT.

HP also offers a complete set of business intelligence and data warehousing services, from discovery to deployment. We come alongside your business and technical team to:

- Assess your business requirements, organization, and infrastructure
- Discover the right business focus and requirements
- Analyze the elements of a functional specification and high-level design
- Design the necessary details to deliver on time, on budget, and on target
- Implement the entire business intelligence project
- Manage the maintenance and evolution of your business intelligence solution

HP Services will uncover additional value in your BI project by providing industry-leading expertise in BI application services and advanced analytics. HP Labs and HP Consulting & Integration work together to deliver valuable insight into supply-chain analytics, customer analytics, and enterprise performance enhancement.

For more information on these services, please contact your HP sales representative or visit:

[www.hp.com/hps](http://www.hp.com/hps)

## Why implement business intelligence solutions on HP Integrity servers?

HP Integrity servers are the right choice to create the foundation for your business intelligence ecosystem. HP has industry-leading experience in the field, having delivered leading infrastructure and business intelligence solutions to more than 3,000 customers. We continue to top the charts in performance, volume, and market share because our infrastructure technology is built for BI.

Business intelligence solutions on HP Integrity servers provide you with the functionality and reliability your enterprise needs to improve its competitive advantage:

- Superior choice to match your most demanding workloads in diverse business intelligence environments
- Focused innovation to add simplicity, agility, and value to your information assets
- World-class experience to deliver more value with HP services, alliances, storage, and management

The real question isn’t “Why implement BI solutions on HP Integrity servers?” It’s “Why build your BI foundation on anything **but** HP Integrity servers?”

## To learn more

For more information on how HP can help you integrate the right business intelligence solutions on HP Integrity servers, please visit:

[www.hp.com/go/integrity](http://www.hp.com/go/integrity)

[www.hp.com/go/bi](http://www.hp.com/go/bi)

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