



To make the kind of decisions that keep your business competitive, you must be able to sort through an increasing volume of information quickly while maintaining high performance levels. The SAP NetWeaver® platform can help. It features a “snap-in” accelerator that enhances business intelligence (BI) functionality. Scalable and easy to use, the BI accelerator – developed in collaboration with Intel, an SAP technology partner – dramatically improves performance speed and load time, ensuring maximum return on investment.

## **ENHANCING PERFORMANCE FOR REAL-TIME BUSINESS INTELLIGENCE**

Making timely business decisions has never been easy, but today it is more difficult than ever – in large part because of the increasing volume of available information. Business managers face several challenges:

- They want to base their decisions on the full range of information available, but that range is growing exponentially as computer systems become more powerful.
- They rely on ever-more-sophisticated analytical tools, which increase the challenge of maintaining real-time performance.
- They are moving toward service-oriented architecture with flexible information infrastructure – a major benefit that brings with it a serious side effect: user queries and report requests are harder to predict.

All these challenges drive organizations to improve the performance of their business intelligence (BI) systems.

### **Business Analytics Challenges**

Today’s knowledge workers have it relatively easy when it comes to using BI tools. A decade ago, users had to line up at the door of the IT department waiting for their report requests to be fulfilled. In some cases, they waited days or even weeks to receive reports. Today, users typically generate their own reports, use their dashboards, and control their embedded analytics right from their desktops through a standard Web browser or enterprise portal – or through office applications such as Microsoft Excel.

But for the IT department, which supports today's desktop analytics, coping with new information, new users, and new query techniques is not so easy. The volume of data generated by business is estimated to grow by as much as 50% per year while the number of BI users is estimated to grow by as much as 100% per year. Adding to these volume challenges is the fact that BI technology itself is becoming more sophisticated. Event-driven, real-time analysis is now possible – and even expected – by many users.

In an ideal world, the IT team would be able to deliver these functions while at the same time enabling self-service capabilities and using rapid prototyping to test out newer generations of tools and applications. IT would be a change enabler, not a bottleneck.

But in the real world, IT managers are squeezed by these two conflicting demands; that is, by the need to deliver advanced BI tools to users in order to maximize adoption while at the same time keeping costs within budget. These demands, combined with a growing number of users and a growing volume of data, present a serious challenge.

### **The Solution: The BI Accelerator**

To meet this challenge, the SAP NetWeaver® platform offers a new function, the BI accelerator. This “snap-in” appliance was developed in conjunction with Intel, an SAP technology partner. It enables businesses to supercharge analytic services and applications by combining high-performance software from SAP NetWeaver with an advanced hardware design from Intel that boosts analytics performance. It also cuts IT time by performing on-the-fly data aggregation and eliminating the need for query tuning. And it significantly shortens load times by eliminating adjustments (known as change runs) to data aggregates.

Intel collaborated with SAP in the development of the BI accelerator by using advanced Intel software and hardware technology optimizations to maximize performance and scalability in solutions based on enterprise services architecture on innovative 64-bit Intel platforms. Intel offers a broad range of open and flexible platforms with leading security, manageability, and reliability features. It also hosts the industry's largest ecosystem of platform providers. Currently, more than 74% of new SAP® installations are deployed on Intel platforms.



Packaged as an appliance, the BI accelerator places the accelerator functionality of the SAP® software within standard, 64-bit Intel-processor-equipped “blade” systems. To activate the accelerator, IT management simply cables it into the existing BI infrastructure of SAP NetWeaver (equipped with SAP NetWeaver 2004s or higher) and determines the SAP NetWeaver information cubes to be supercharged.

The BI accelerator indexes the information cubes in order to create a highly compressed index structure that can be loaded into memory whenever a user requests the data. The accelerator processes queries entirely in memory using high-performance aggregation techniques and then delivers the results to the BI analytic engine in SAP NetWeaver for output to the user.

The appliance, available on dedicated hardware platforms (see sidebar), simply plugs into the corporate network, in which BI software is preinstalled. It then accesses SAP NetWeaver and indexes the user-designated information cubes. Because of its advanced architecture, it is able to speed analytics performance in two ways:

- It eliminates the need to preaggregate data for storage in the information cubes, because aggregation now takes place on the fly, at the time of query execution.
- It lets the user browse SAP NetWeaver information cube data in real time, without having to wait for the back-end database.

### **Benefits to IT Management**

The BI accelerator reduces operational overhead, preserves capital investment, and minimizes implementation costs. To reduce overhead, it eliminates the need for performance tuning, permits faster prototyping of new BI tools and analytic applications, and minimizes the number of user calls to the IT department concerning slow or nonperforming queries and reports.

The accelerator preserves capital investment by fully complementing existing hardware and software. In addition, it reduces load times by eliminating change runs. And its simple, appliance-like installation keeps implementation costs low. The accelerator also permits “linear scaling” to accommodate more users, more data, and more BI tools – which means that IT can now bring in new groups of users at relatively low costs.

### **Benefits to Line-of-Business Managers**

For line-of-business (LOB) managers, the BI accelerator delivers advantages on a number of levels. First, it speeds user queries by factors (often factor 10 to factor 100) while still giving users access to full historical data. Second, it gives users greater flexibility in the types and depths of their queries, and so encourages user creativity in analyzing business problems. And third, it hastens user adoption of BI functions, easing the path to a more pervasive BI enterprise – and to an enterprise services architecture blueprint.

The BI accelerator can help users and their managers in all industry segments, from retail and telecommunications to utilities, manufacturing, and public services. Here are some sample scenarios:

#### **■ Retail Chain**

A retail chain needs to improve its performance management by offering key managers and executives dashboards that monitor real-time key performance indicators (KPIs). The accelerator lets these users drill deeply into all areas of management – even down to the individual point-of-sales transaction – while maintaining real-time updates of KPIs.

#### **■ Utility**

A utility is losing substantial revenue to meter theft, so it wants to compare individual meter readings with actual user-consumption data. This is a challenge because of the extremely high volumes of data involved and the need for up-to-the-minute results. The accelerator lets the utility find the anomalies quickly – in time to take corrective action.

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[www.intelalliance.com/sap](http://www.intelalliance.com/sap)

### BI Accelerator: Benefits Overview

In addition to the specific advantages the accelerator offers to IT and LOB managers, it offers companies these overall benefits:

- Lower total cost of ownership as a result of off-the-shelf hardware, easy installation, and reduced administration
- Flexibility, thanks to on-the-fly aggregation for any query at any time
- Scalability, a result of data partitioning and other techniques that optimize the use of scalable hardware
- Performance benefits that include a 10-times to 100-times average-speed increase and up to 80% faster load times
- Maximum return on investment, thanks to increased user adoption of BI and analytics as well as to productivity advantages gained through better, more timely insights and decisions

### Make the Most of Your Organization

With the BI accelerator in SAP NetWeaver, you will empower your users to make the best decisions and take the best actions possible on behalf of your business. At the same time, you will free IT management to look for innovative ways to employ BI. And you'll keep capital costs within budget – even while bringing on more users and finding more information sources.

To find out how you can incorporate these SAP NetWeaver advantages in your company, go to [www.sdn.sap.com](http://www.sdn.sap.com).

### Running on Blade Technology from IBM and HP

The BI accelerator runs on a choice of IBM BladeCenter and IBM TotalStorage system configurations or HP BladeSystem technology and HP StorageWorks systems. These Linux-based systems employ high-performance, 64-bit Intel processors and feature modular “blade” technology. Blades, with their self-configuration and self-management functionality, are designed for easy upgrade. Because of this, the BI accelerator offers linear scalability – that is, it can be expanded in economical increments as processing needs increase.

### Powered by SAP NetWeaver

SAP solutions are powered by the SAP NetWeaver platform, the open integration and application platform that enables change. SAP NetWeaver helps companies align IT with their business. It allows companies to obtain more business value from existing IT investments and to deploy a service-oriented architecture. SAP NetWeaver reduces total cost of ownership and complexity across the entire IT landscape.

SAP NetWeaver powers mySAP™ Business Suite solutions, SAP xApps™ composite applications, and partner solutions. It provides the best way to integrate all systems running SAP or non-SAP software. SAP NetWeaver unifies integration technologies into a single platform and is preintegrated with business applications, reducing the need for custom integration.

