SAP® IN-MEMORY APPLIANCE (SAP HANA™)

THE NEXT WAVE OF SAP® IN-MEMORY COMPUTING TECHNOLOGY

SAP® In-Memory Appliance (SAP HANA™) software is a flexible, multipurpose, data source agnostic in-memory appliance that combines SAP software components optimized on hardware provided and delivered by leading hardware partners of SAP.

Powerful In-Memory Appliance for Real-Time Insight

SAP® In-Memory Appliance (SAP HANA™) software enables organizations to analyze their business operations using huge volumes of detailed information while business is happening. Organizations can instantly explore and analyze all of their transactional and analytical data in real time from virtually any data source. Operational data is captured in-memory as it occurs, and flexible views expose analytic information at the speed of thought. External data can be added to analytic models to incorporate data from across the entire organization.

Business Challenges

Information is the lifeblood of business today. Organizations demand insight into business operations while those operations are running. But the volume of operational data available for business insight often exceeds the amount of data that traditional disk-based systems can process within a reasonable period of time. As a result, organizations are forced to reduce the data from operational applications into analytic models for even the most basic analyses. That means that analytic environments are disconnected from operational applications, resulting in significant lag times between gathering data and gaining insight into that data.

Organizations also want to employ flexible analytic models when working with information in order to uncover trends and patterns or to improve planning, forecasting, and financial close processes.

In traditional analytics, high data volumes require that assumptions be made during modeling in order to reduce the data set to a manageable size. Such simplified models don't accurately reflect the multifaceted nature of operational data, often resulting in suboptimal forecasting, planning, or trend analysis – items all critical to monitoring and enabling a rapid response to business performance.

SAP HANA Functionality

SAP HANA provides direct access to operational data without affecting the performance of the SAP ERP application or any other operational software. Organizations can synchronize key transactional tables in near-real time in-memory, making these tables easily accessible for analysis and lookup. Once data is available in-memory, departments can instantly look up individual line items from massive lists like booking documents, sales leads, or service requests – with no impact on the operational system. This streamlined modeling workflow supports direct-access models for detailed line items, as well as analytic models for more complex analytic processing.

SAP HANA provides a streamlined workflow from idea to analysis. The workflow covers the entire process: identifying relevant operational data (the raw data to be transformed into relevant information), generating semantically grouped information in models, and publishing the completed models. The key difference that sets SAP HANA apart from traditional analytic models is the absence of any materialization – all models are purely virtual and calculate results based

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on the underlying detailed operational data. The absence of materialization means making changes to models is straightforward and fast.

SAP HANA can access any data. In situations where organizations require operational data from non-SAP applications or would like to expand existing analytic models, any source of data can be used as a foundation in SAP HANA. Using the SAP BusinessObjects™ Data Services software, non-SAP operational data can be loaded in-memory in SAP HANA, enabling businesses to generate a complete picture for a specific business situation using a very lean process.

The Web-based modeling environment provided by SAP HANA increases the autonomy of business users. They can readily create new analytic models based on semantically enriched views that turn raw operational data into understandable and relevant information.

SAP BusinessObjects business intelligence (BI) solutions can directly leverage in-memory data gathered by SAP HANA, giving business users a complete range of insight and analysis support for all high-performance applications. However, if users prefer to employ Microsoft Excel – or other tools and applications – for insight and analysis, they can connect to SAP HANA via standard interfaces for multidimensional expression (MDX) or SQL queries.

SAP HANA provides standard interfaces to existing applications, operational software, and other business applications. This means that the software will not disrupt existing software landscapes by connecting to existing data sources and can leverage investments in existing BI clients.

Benefits of SAP HANA

SAP HANA provides organizations with better insight into business operations

SAP HANA provides organizations with better insight into business operations more quickly by analyzing all the data available and enabling you to respond to changing business conditions, no matter how rapid.

more quickly by analyzing all the data available and enabling you to respond to changing business conditions, no matter how rapid. With SAP HANA, organizations can make better decisions more quickly by gaining immediate access to relevant information – requiring far less reliance on IT to gain the insight needed.

SAP HANA provides a flexible, cost-effective, real-time approach for managing large data volumes, allowing organizations to reduce dramatically the hardware and maintenance costs associated with running multiple data warehouses and operational and analytical systems. SAP HANA will form the technology foundation for new, innovative applications based on in-memory technology, thus enabling business applications – such as planning, forecasting, operational performance, and simulation solutions – to perform better.
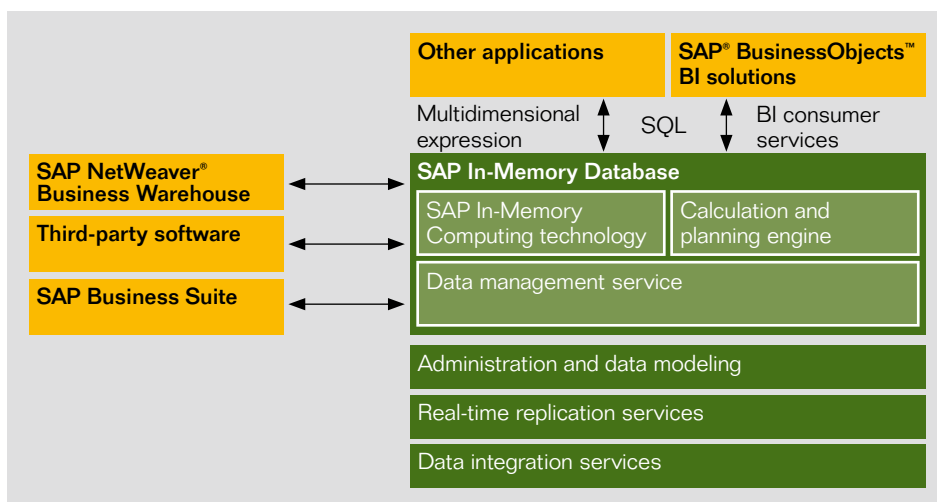

Figure: SAP® In-Memory Appliance (SAP HANA™) Software

Find Out More

As a flexible, multipurpose, data source agnostic in-memory appliance, SAP HANA will change the way your company does business by enabling real-time insight into business operations as they happen. Visit us at SAP to discover how SAP HANA will have your organization running smarter, running simpler, and running truer. Call your SAP representative, or visit us at www.sap.com /platform/in-memory-computing.

About SAP

As market leader in enterprise application software, SAP (NYSE: SAP) helps companies of all sizes and industries run better. From back office to boardroom,

> SAP HANA provides direct access to operational data without affecting the performance of the SAP ERP application or any other operational software.

warehouse to storefront, desktop to mobile device – SAP empowers people and organizations to work together more efficiently and use business insight more effectively to stay ahead of the competition. SAP applications and services enable more than 109,000 customers to operate profitably, adapt continuously, and grow sustainably. For more information, visit www.sap.com.

Optimizing Business Performance Through Innovative Solutions

Our mission is to make every customer a best-run business. Our software and services help customers optimize their business processes. SAP customers can use business analytics to attain insight, efficiency, and flexibility to respond to changes in the business environment with more agility and effectiveness and capture the full benefits of business networks. By leveraging innovative technologies to help companies become best-run businesses, we help customers around the globe perform at a significantly higher level of effectiveness and efficiency. In reaching for this goal, we are also contributing to global economic development on a grand scale.

The SAP product portfolio comprises enterprise resource planning and related applications such as supply chain management, customer relationship management, product lifecycle management, and supplier relationship management, along with business intelligence and analytic applications. And our software is available on demand, on premise, and on device. Essential to the SAP product portfolio is the enablement of complete data and process consistency for our customers, no matter which environment they are operating in.

Helping Companies Run Better

Today, customers in more than 120 countries run SAP applications – from distinct solutions addressing the needs of small businesses and midsize companies to suite offerings for global organizations. Our solutions, which cover

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standard business applications and technologies, as well as specific industry applications, are designed to help companies run better. They can make an organization's business processes more efficient and agile, enable real-time decision making, and create sustainable new value, no matter the operating environment. Incorporating in-memory computing technology across our data management offerings allows customers to instantaneously access any data, anywhere, any place, in real time.

Summary

SAP® In-Memory Appliance (SAP HANA™) software is a flexible, multipurpose, data source agnostic in-memory appliance that combines SAP software components optimized on hardware provided and delivered by SAP's leading hardware partners.

Business Challenges

- Process huge volumes of operational data to gain business insight while those operations are running
- Perform analyses based on all data from operational applications
- Employ flexible analytic models when working with information to uncover trends and patterns
- Keep analytic environments connected to operational applications
- Eliminate lag times between gathering data and gaining insight into that data

Key Features

- **Real-time analytics** – Analyze business operations using huge volumes of detailed information while business is happening
- **Multipurpose, in-memory technology** – Instantly explore and analyze all transactional and analytical data in real time from virtually any data source
- **Adaptable, powerful analytic models** – Create flexible views that expose analytic information at the speed of thought
- **Extensive, source-agnostic data access** – Add external data to analytic models to incorporate data from across the entire organization

Business Benefits

- **Real-time business insight** by analyzing business operations as they happen
- **Better decisions more quickly** by gaining immediate access to all relevant information
- **Greater analytic flexibility** through less reliance on IT
- **Dramatically reduced hardware and maintenance costs** through a flexible, cost-effective, real-time approach for managing large data volumes
- **Improved planning, forecasting, and financial close processes** by employing analytic models that uncover trends and patterns

For More Information

For more information, call your SAP representative or visit us at
www.sap.com/platform/in-memory-computing.