Dell's SAP HANA™ Appliance

SAP HANA is the next generation of SAP in-memory computing technology. Dell and SAP have partnered to deliver an SAP HANA appliance that provides multipurpose, data source-agnostic, in-memory appliance software optimally configured on Dell hardware and delivered by Dell Global Services.

Achieve more, deliver quick results and maximize efficiency with Dell's SAP HANA solutions.

Overview of Dell's SAP HANA solution

For more than a decade, Dell has collaborated with SAP to deliver hundreds of SAP solutions across many industries. Dell helps organizations achieve rapid and sustainable business results. Dell's standards based solutions are high-performing and end-to-end.

In addition to innovative, leading edge hardware platforms, Dell offers access to thousands of enterprise computing solutions consultants. Dell incorporates lessons learned and experiences into an enterprise solution delivery model that spans hardware, consulting, implementation, hosting and application management services designed to enhance value for customer investments in SAP solutions.

Dell offers customers a portfolio of end-to-end solutions in support of SAP HANA applications including hardware, software and services that help reduce IT costs while helping organizations transform their business. Dell's innovative platforms can dramatically increase the availability and speed of business information, leading to insightful decision-making using SAP HANA.

Dell's Unique SAP HANA value proposition

Dell and SAP have teamed up to offer an optimally configured SAP HANA solution that includes a hardware appliance, pre-loaded software and a full range of services. This solution is reliable, scalable and offered in multiple configurations to address your specific business needs. Dell's end-to-end solutions give your organization full access to the power of SAP HANA.

Dell's SAP HANA appliance solution includes:

A high performance in memory computing database and a powerful data calculation engine

Real-time replication service to access and replicate data from SAP ERP

Data integration services to access and index information from virtually any data source

A data repository to persist views of business information

Highly-tuned integration with SAP BusinessObjects BI solutions for insight and analytics

SQL and MDX interfaces for third- party application access

A unified information modeling and design environment

This solution is reliable and scalable and offered in multiple configurations to address your specific business needs. Dell's end-to-end and all-in-one solutions give your organization full access to the power of SAP HANA.

The combination of Dell's PowerEdge R910 platform and SAP HANA allows users to conduct analytics, performance management and operations in a single system. Together, the solutions help enable a business to react faster to events impacting operations today.

By implementing Dell's SAP HANA solution, an organization can be positioned to identify and analyze trends and patterns to improve planning, forecasting and price optimization. Enterprise customers taking advantage of Dell's SAP HANA platform get a cost-effective, optimized in-memory computing solution that can increase availability and reduce risk.

Dell's SAP HANA solution
The Dell PowerEdge Server R910 platform has been certified by SAP to run SAP HANA, offering customers a powerful and flexible way to query and analyze large volumes of data with great speed. Dell customers running SAP HANA on PowerEdge R910 servers can gain real-time access to information and analytics to best address rapidly evolving market environments.

Dell's SAP HANA appliance provides:

- **Performance and reliability** in a scalable 4U, four-socket server allowing large workload consolidation and scale for the SAP HANA in-memory database.
- **Integrated diagnostics** with Intel® Advanced RAS (Reliability, Availability, Serviceability) Technology.

- **Robust infrastructure**, including performance resources, power efficiency, I/O, and memory scalability.
- **Processing power** using high performing Intel E7 Series processors, up to 512GB of DDR3 memory, and 2 x 10Gb Optional LOM with 10 PCIe slots.
- **Energy-efficient system design** built with **Energy Smart** technologies that enable power capping, power inventory, and power budgeting within your specific environment. Logical component layout of the internal components aids with airflow direction, helping to keep the server cooler.

The SAP HANA appliance from Dell is fully contained in the PowerEdge R910 server, making use of fast internal disks for storage and solid state cards. Solid state technology from Dell offers high IOPs and low latency performance for the in-memory SAP HANA database. While solid state drives are used to maintain the system's logs, a RAID group made up of internally held 15K RPM disks is used to maintain a copy of the data image.

T-Shirt sizes offered

Dell offers several different sizes of SAP HANA appliances based on the Dell PowerEdge R910 platform.

	X-Small	Small+	Medium
Server	Dell PowerEdge R910	Dell PowerEdge R910	Dell PowerEdge R910
Processor	2 X 10 core Intel E7-4870	2 X 10 core Intel E7-4870	4 X 10 core Intel E7-4870
System Memory	128 GB	256 GB	512 GB
Storage	• 320 GB PCIe-Flash / SSD for Log volume • 1 TB SAS for Data volume • 3 x 1 GB NICs (trunk) or 1 x 10GB NIC	• 320 GB PCIe-Flash / SSD (expandable up to 640 GB) for Log volume • 1 TB SAS for Data volume (expandable up to 2 TB) • 3 x 1 GB NICs (trunk) or 1 x 10GB NIC	• 640 GB PCIe-Flash / SSD for Log volume • 2 TB SAS for Data volume • 3 x 1 GB NICs (trunk) or 1 x 10GB NIC
Software	• SLES for SAP Applications 11 • SAP HANA appliance software		

Dell Services for SAP HANA	Dell ProSupport Mission Critical Services (3 years)
	SAP HANA Implementation Services
	    • Onsite deployment of Dell SAP HANA Appliance
	    • Configuration of Data Services
	    • Support for SAP HANA Go Live Tests
	Optional Services: Consulting Services, Roadmap Consulting, Rapid Deployment Solutions, SAP Business Warehouse on SAP HANA		

High availability

The Dell™ PowerEdge™ R910 is a high-performance 4-socket 4U rack server designed for reliability and scalability for mission-critical applications. High availability features include:

- Built-in reliability features at the CPU, memory, hardware and hypervisor levels
- Intel advanced reliability, availability and serviceability (RAS) capabilities
- Redundant power supplies
- Remote iDRAC6 connectivity
- Integrated systems management, Lifecycle Controller and embedded diagnostics to help maximize uptime
- Internal Dual SD Module providing hypervisor redundancy

Dell's focus on reliability starts with product design and ends only when it has delivered a solution that meets strict testing and quality control standards.

Additional software included

Dell's SAP HANA appliance is an end-to-end and all-in-one solution that comes pre-loaded with all of the software and management tools necessary.

Support infrastructure

Dell's SAP HANA appliance is designed to be an all-inclusive solution that comes as a pre-integrated unit with all necessary hardware, storage, and networking capabilities.

Support services

Dell is an expert in SAP HANA system support. Dell has a strong systems management and support practice and an in depth understanding of SAP hardware and software solutions.

Dell's SAP HANA appliance comes with 3 years of Dell's award winning ProSupport Mission Critical services and a 3-year extended hardware warranty. Customers receive 24x7x365 phone support, escalation management and collaborative support leveraging Dell's global ProSupport infrastructure of more than 30,000 technicians supporting more than 100 countries in 55 languages.

Dell's end-to-end SAP HANA Solution

Powerful technology	Dell's PowerEdge R910 incorporates Intel E7 technology, is certified for SAP HANA and includes everything needed to support your SAP HANA solution. This all-in-one solution includes powerful system management features that provide for seamless implementation and management.
Energy-efficient system design	Built with **Energy Smart** technologies, Dell PowerEdge servers include power management features that enable power capping, power inventory, and power budgeting within your SAP HANA environment. Carefully engineered layout of the internal components aids with airflow direction, helping to keep the server cool and offering potential savings in data center cooling costs.
Large-scale enterprise consulting expertise	Dell leverages its experience delivering enterprise IT and solving "big data" issues for global companies to provide actionable and real world technology, strategies and solutions. Dell's Center of Excellence (CoE) is well established for SAP HANA, BWA, and Mobility.
Established methodology	Dell's In-Memory Computing and Analytic Methodology (DIMCAM) incorporates best practices and guides customers through a streamlined and successful implementation process.
Comprehensive services	Dell's portfolio of SAP full lifecycle services leverage industry best practices to offer better business outcomes for SAP clients.
World-class support	Dell's ProSupport™ and Mission Critical Services help keep your SAP HANA solution running smoothly.

Dell's ProSupport Mission Critical services are designed to accelerate rapid resolution by offering quick delivery of onsite parts and or labor and providing access to Dell's Critical Situation Process.

Key support features:

- **Onsite Response** –4 hour onsite service with 6 hour hardware repair available 24x7, including holidays.
- **CritSit Procedures** – Severity level 1 issues will be reviewed by Dell and may be nominated for CritSit incident coverage through Dell Global Command Centers. During a CritSit incident, expert resource teams are mobilized to get you back up and running fast.
- **Emergency dispatch** – Onsite service technician dispatched in parallel with phone-based troubleshooting when you declare a Severity level 1 incident.

Optional SAP HANA services

Dell offers optional SAP HANA services to assist with your implementation.

- **SAP HANA Executive Workshop** – This workshop helps to develop the Use Case and Business justification for a SAP HANA solution and helps organizations determine whether SAP HANA is a fit for their situation. .
- **SAP HANA Proof of Concept** – Using Dell DIMCAM methodology and IMPROVE jump start process, customers can see quickly the value that SAP HANA can bring to the decision making process.
- **SAP Modernization Services** – Dell has developed a portfolio of Modernization Service for SAP applications that features cloud computing, real-time analytics and mobile applications.
- **Implementation** – SAP HANA Implementation workshops facilitate planning and creation of the Business Justification for the rest of the deployment.
- **Analytics Factory** - Dell offers global business intelligence consulting and support.

Dell offers customers a complete portfolio of end-to-end solutions in support of SAP HANA applications that help reduce IT costs while helping organizations transform their business.

Learn more at http://www.dell.com/sap