

Dell and Red Hat Configurations for SAP HANA™



Dell's solution for SAP HANA

The combination of Dell's enterprise class products and services, HANA from SAP, and Red Hat Enterprise Linux® for SAP HANA allows users to conduct real-time analytics, performance management and operations in a single system from Dell. Dell's optimally configured and SAP certified SAP HANA solutions include a hardware appliance, pre-loaded software and a full range of services.

What is included in Dell's SAP HANA solution?

With Dell's SAP HANA appliance, services and world class support, companies can set themselves apart by delivering complex analytic solutions before their competition. Dell's integrated SAP HANA solution includes:

- **Dell PowerEdge servers** - Dell's PowerEdge R930 incorporates Intel E7 technology, and 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 such as Lifecycle Controller, to provide for seamless and integrated implementation and management. 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.
- **Dell Compellent storage systems** – Used to provide shared storage necessary for larger, "scale-out" configurations, Dell Compellent leverages our Fluid Architecture to deliver high performance and enterprise class management and availability to the SAP HANA environment.
- **Pre-loaded software** – SAP HANA appliance software and Red Hat Enterprise Linux for SAP HANA operating system comes pre-loaded as part of Dell's SAP HANA solution. Red Hat Enterprise Linux for SAP HANA brings the reliability, scalability, and performance of the world's leading enterprise Linux platform to SAP HANA. More than 90% of Fortune Global 500 companies use Red Hat products and solutions. (Source: Red Hat client data and Fortune Global 500 list, 2013)

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Installation and Configuration services

- Planning for SAP HANA deployment;
- Design for SAP HANA landscape; and
- Installation and testing SAP HANA In-Memory databases to support development, quality assurance and production landscape designs.
- **World-Class Support Services** – Dell's world-class ProSupport and Mission Critical Services keep your SAP HANA solution running smoothly. For more thorough support, our HANA Managed Services provide comprehensive management and support for your SAP HANA landscape, including 24 x 7 monitoring, ongoing remote health checks, firmware and software upgrades, including application patching, as well as assistance with problem tracking and resolution.

Below are Dell's HANA single-node and scale-out configurations. For future configurations support information click [here](#) and check the "supported entry level systems" tab.

Scale-up SAP HANA configurations on R930

Config	Processor Intel Xeon (Haswell EX)	Memory	Storage OS+SAP+Log	Storage Data Volume (+1 hot spare configured as RAID 5)	OS	File System
128GB	2* E7-8880 v3 2.3GHz OR	16x8GB RDIMM-DRx2	5* 1.2TB SAS + 1 hot spare configured as RAID 5	3* 800GB OR 3* 1.6TB SAS SSD	Red Hat Enterprise Linux for SAP HANA	XFS for DATA and LOG Volumes
256GB	2* E7-8880L v3 2.3 GHz OR	32x8GB RDIMM-DRx2				
384GB	2* E7-8890 v3 2.5GHz	48x8GB RDIMM-DRx2				
512GB		32x16GB RDIMM-DRx2		4* 800GB OR 3* 1.6TB SAS SSD		
786GB		48x16GB RDIMM-DRx2		5* 800GB OR 3* 1.6TB SAS SSD		
1TB	4* E7-8880 v3 2.3GHz OR	32x32GB LRDIMM-DRx2		6* 800GB OR 4* 1.6TB SAS SSD		
1.5TB SoH only	4* E7-8880L v3 2.3 GHz OR	48x32GB LRDIMM-DRx2		8* 800GB OR 5* 1.6TB SAS SSD		
2TB SoH only	4* E7-8890 v3 2.5GHz	64x32GB LRDIMM-DRx2		10* 800GB OR 6* 1.6TB SAS SSD		
3TB SoH only		96x32GB LRDIMM-DRx2		14* 800GB or 8* 1.6TB SAS SSD		

Scale-out SAP HANA configurations on R930

Configuration	3TB RAM (2+1nodes)	6TB RAM (4+1nodes)	9TB RAM (6+1nodes)	12TB RAM (8+1nodes)	15TB RAM (10+1nodes)	18TB RAM (12+1nodes)	21TB RAM (14+1nodes)	24TB RAM (16+1nodes)
Compute	N * Active + 1 Standby Dell PowerEdge R930 with <ul style="list-style-type: none">• 1.5TB RAM, 4* Intel Xeon E7-8880/8890• Intel Ethernet X540 DP 10Gb BT + I350 1Gb BT DP Network Daughter Card• 2 x Intel 10GbE dual port RJ45 (X540-T2)• 2 x Qlogic 2660 Single Port 16Gb Optical Fiber Channel HBA							
Storage (each Compellent storage array supports up-to 8 active nodes + 1 standby)	Dell Compellent with <ul style="list-style-type: none">• 2* SAS, 6Gb, 4 Wide-Port, PCI-e backend/per controller (dual chain)• 2* FC16, 2-Port QLE2662, PCI-e front end/per controller• 2* 24 bay 2.5" 1.8TB 10K RPM SAS with 7-24 spindles/per array• 1* 24 bay 2.5" 400G SAS SSD with 7-24 disks/per array				Dell Compellent (2 nd Unit) with <ul style="list-style-type: none">• 2* SAS, 6Gb, 4 Wide-Port, PCI-e backend/per controller (dual chain)• 2* FC16, 2-Port QLE2662, PCI-e front end/per controller• 2* 24 bay 2.5" 1.8TB 10K RPM SAS with 7-24 spindles/per array• 1* 24 bay 2.5" 400G SAS SSD with 7-24 disks/per array			
Mgmt & Storage Fabric, Networking (complete for entire infrastructure)	<ul style="list-style-type: none">• 2* Force 10 S4820T ; 1* Force 10 S60• 2* Brocade 6510• 1* PE R630 (management node)• 1* KMM console• 2* PDUs							
OS	RedHat Enterprise Linux for SAP HANA							

