



# Get Started

Welcome to the SAP HANA Family!

As a new SAP HANA customer, I want to take this opportunity to let you know that the entire SAP team is behind you to ensure your SAP HANA implementation and experience is a grand success. SAP HANA offers endless opportunities for increased speed, flexibility, and efficiency as well as custom applications development. We are eager to hear how SAP HANA's real-time business insights help to transform your business into a "Best Run Business".

Irfan Khan  
Global SVP, CTO, GM Platform Solutions Group

If you're new to SAP Support, please read this brochure:

<http://service.sap.com/~sapidp/011000358700000905192010E.pdf>

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# SAP HANA READINESS GUIDE 2014

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## BACKGROUND

SAP HANA is a high performance, analytical, in-memory appliance that is deployed on highly optimized hardware. Although it is delivered as an appliance, like other SAP systems, SAP HANA installations should be carefully prepared for like any other productive system operation. This guide provides you with a quick overview of the solution and points you to key assets that are often required during the planning and implementation phases of SAP HANA deployments.

## SAP HANA USE CASES

SAP HANA has numerous deployment options to deliver significant and immediate business value. These use typically fall into three categories:

- As a real-time operational datamart: Integrate large volumes of data from disparate, operational data sources into one version of “the truth” in milliseconds
- As a database under SAP NetWeaver Business Warehouse (SAP BW): Turbo charge your SAP BW implementation with a superfast database designed for heavy workloads like SAP BW
- As a side-by-side accelerator for key SAP business processes (e.g. CO-PA, CRM segmentation)
- As a platform for in-memory applications (e.g. Strategic Workforce Planning, Smart Metering)

## Use Cases by Industry

Regardless of your industry, SAP HANA can transform your business to a best-run business by providing high-speed real-time insights into your business while simplifying your landscape. Here are some examples of how customers are using SAP HANA for industry-specific purposes:

### AUTOMOTIVE

- Predict market trends and respond in real-time to changes in supply and demand
- Performance management by enabling real-time Lean KPI analysis (Six Sigma)
- Analyze and monitor warranty claims across all channels
- Perform customer segmentation in real-time to run targeted marketing campaigns
- Vehicle segmentation to explore warranty claims and optimize recall campaigns
- Perform real-time planning and optimization of service parts replenishment

### CONSUMER PRODUCTS

- Maximize go-to-market spend by managing and measuring marketing programs, promotions, and campaigns in real-time
- Create differentiated offerings based on customer/retailer segmentation

- Analyze large amounts of demand data to predict market needs and accurately react to consumer preferences
- Improve store shelf availability and prevent out-of-stock scenarios by real-time insight into inventory, sales, and consumer trends
- Help establish and improve supply network responsiveness to reduce costs and manage risk across the network more efficiently
- Allow for broader up-to-the minute enterprise-wide financial visibility, coupled with tight financial controls

### **ENGINEERING, CONSTRUCTION & OPERATION**

- Predict inbound and outbound cash flows in real-time to effectively drive cash requirements, risk management, and short-term borrowing
- Link operations and financials for real-time performance analytics
- Accelerate spend visibility across the enterprise to identify areas of potential cost savings and get real-time insight into profitability by owner, project, and market
- Perform complex workforce planning simulations in “real” real-time and refine workforce models driven by strategic revenue, FTE, attrition rates, hiring rates, cost, retirement age, and more
- Perform comprehensive pipeline and backlog analysis in mere seconds
- Identify at risk customers or projects in real-time for improved account management

### **HEALTHCARE**

- Improve monitoring and evaluation of clinical trial outcomes
- Analyze and segment patients by participation levels and care plans in real-time
- Monitor patients vitals, provide quick feedback, and recommend remedial measures
- Monitor and report on the outcomes of prevention programs
- Access all relevant patient and clinical information in nano-seconds
- Analyze clinical and administrative data to evaluate operational efficiency using quality indicators
- Help researchers accelerate research programs (e.g. epidemiologic studies) by providing better patient identification and data synthesis during clinical studies

### **HIGH-TECH**

- Real-time visibility into sales, demand, channel forecasts, and customer orders
- Quickly simulate and optimize go-to-market programs for price, product, and channel
- Enable real-time up-selling and cross-selling
- Conduct timely profit analyses to increase margins for warranty and returns
- Improve service performance through use of real-time installed-base analytics
- Modeling and analysis of workforce capacity and constraints
- Real-time profitability & cost management by customer, market, and product
- Fast and complete end-of-period costing and margin analysis
- Quick identification of lost revenue due to license or warranty leakage and piracy

## **INDUSTRIAL MACHINERY & COMPONENTS**

- Perform real-time what-if analyses during the S&OP meeting
- Improve the management of regulatory requirements
- Rationalize product lines and expand use of postponement strategy
- Improve cost estimation for ETO and new products
- Maximize operational efficiency and effectiveness
- Improve reliability and availability of assets
- Analyze key procurement processes in real-time
- Perform dynamic customer segmentation to provide superior service offerings to our customers
- Monitor the install base in real-time to increase up-time and fulfill best-in-class service level agreements (SLAs)
- Reduce service costs through maintenance budget planning and simulation

## **INSURANCE**

- Simultaneously analyze the contract portfolio , customer data, claim information, payment information, and more in real-time to identify new product areas
- Identify insurance risk exposure based on broad-based analysis for mitigation of unnecessary risk and ex-post analysis
- Analyze detailed claim information to optimize claims handling efficiency and accurate claims financial exposure data
- Develop go-to-market strategies based on fast and thorough analysis
- Align insurance sales with market trends, company, and product strategy
- Develop sustainable and robust strategies for customer retention
- Enable timely and accurate reporting of financial and operational performance
- Identify potential fraud patterns to reduce fraudulent claim payments
- Quickly respond to CAT situations to reduce residual damages or fraud while improving customer retention

## **PROFESSIONAL SERVICES**

- Create more accurate proposals with nearly instantaneous visibility into past bids
- Provide innovative, customer-centric service offerings and pricing models (e.g., accurate and detailed consumption-based billing)
- In-depth analysis of past deliverables to create accurate project financial plans
- Achieve real-time visibility into all aspects of service delivery (client engagement, contract, project, resources, subcontractors)
- Predictive-modeling of workforce capacity and constraints based on real-time insight of business, supply, demand, and market trends
- Optimize resource allocation plans based on up to the minute visibility into global supply of, and demand for, resources

## **RETAIL**

- Gain detailed consumer insights to provide a differentiated, personalized shopping

- experience
- Obtain detailed visibility of sales performance across all channels with alerts
- Enable flexible, high-performance retail planning while using the lowest level granular data
- Predict consumer buying patterns and behaviors via in-depth analysis of POS data
- Improve responsiveness of supply network to reduce costs and manage network risk
- Get real-time insights into inventory and service level issues (e.g. potential out-of-stock)
- Re-plan the flow of merchandize based on real-time insight into customer demand
- Perform customer segmentation to ensure more efficient promotions and marketing events
- Increase consumer engagement by understanding the influence potential retained by each retail channel including store, mobile, computer, and social networks

### **TELECOMMUNICATION**

- Correlate real-time insights on network issues to customer experience
- Optimize scheduling of asset maintenance priorities through use of real-time data
- Manage capital planning for network expansions with real-time insight
- Monitor, define, simulate, and launch new offers and bundles in real-time
- Predict customer usage in real-time and run targeted customer retention campaigns

### **UTILITIES**

- Optimize cash-flows in real-time
- Predict market trends to improve the balance of energy demand & supply
- Get real-time insights for the grid by correlating transformer station information with on-going events
- Enable call-centers and online services to deep-dive into large volumes of data (e.g. Smart meter consumption) and get results in sub seconds
- Reduce TCO by providing users with real-time visibility into their data via self-service BI

## SAP HANA CUSTOMER REFERENCES

Customers across the globe are taking advantage of the huge performance gains and business value being delivered by SAP HANA. To read more about their use cases and overall experience visit the SAP HANA website (<http://www.saphana.com/>).



Adobe is using SAP HANA to gain business insights into software piracy, develop preventive strategies, and explore significant revenue recovery opportunities by analyzing large volumes of complex data.



Infosys utilizes SAP HANA to understand project profitability and to conduct “what-if” analyses on the fly with granular revenue and cost data. Infosys was able to explore, and interact with, key variables that impacted a project’s profitability at all levels within the company.



T-Mobile plans to use the Strategic Workforce Planning application on the HANA platform to run 66 million calculations in mere seconds allowing business leaders to take real-time, immediate action.



Nomura Research Institute, a research and consulting service provider, uses SAP HANA to analyze traffic information in Tokyo by searching through 360 million data records in 1 second.



SAP HANA helps Medidata improve the way their clients manage clinical trials through the availability of real-time analytics. SAP and Intel are co-innovating to create game-changing technology with In-Memory Computing on Intel processors. SAP HANA reduced database query time from 77 minutes to 13 seconds (a 355x improvement in performance!) when run on the Intel Xeon processor 7500.



P&G, the world’s largest consumer product company, uses SAP HANA to build the next generation of financial planning and reporting applications, with speed that completely transforms what is possible today.



## Hardware Overview

In previous versions of the HANA Appliance, SAP (through partners) marketed HANA as a preconfigured appliance only. Now SAP, in an effort to give customers greater flexibility and allow for reuse of existing storage and networking investments, customers have the flexibility of two approaches when implementing HANA: Appliance Delivery and Tailored Datacenter Integration.

### Appliance Delivery

- SAP-approved hardware partners deliver the SAP HANA appliance on validated hardware to the customer site as a pre-packaged solution. All of the required software including firmware, storage software, and operating system is pre-loaded on the appliance by the hardware vendor.
- Fast Implementation
- Support fully provided by SAP
- Solution validation done by SAP and SAP Partner
- Preconfigured hardware setup
- Preinstalled software

### Tailored Datacenter Integration (TDI)

- TDI allows for certified HW vendors for networking and storage to certify their existing installations at your company with use of your HANA certified servers.
- Save IT budget and reuse existing hardware and software investments.
- Installation and validation of HANA needs to be done by the customer
- Customer aligns with the hardware partner(s) on individual support model

Every SAP HANA server configuration must minimally consist of the following:

- Intel processors i.e. Nehalem, Westmere, Sandy Bridge and Ivy Bridge CPU's
- Memory used to store (primary persistence) and process data
- Log Volume to synchronously write transactional logs
- Data Volume to back up all the data from memory
- 64-bit SuSE Linux Enterprise Server (SLES) 11 SP1
- RHEL????
- High-speed networking components 10G or higher networking
- In Scale-Out configurations, optionally dedicated networking equipment and networks for application traffic, inter-node communication, and replication traffic.
- Optionally redundant components for failover can be added in what SAP calls "Scale Out" and N+M architecture which adds additional nodes for failover which assures HA within a data center.

In single node configurations, the Log Volume is typically realized using PCIe-Flash or SSD drives to ensure 100K I/O per second. Data Volume is realized using high speed SAS or SSD drives to ensure data transfer throughputs of around 800 MB per second.

In some scale-out configurations, the Log and Data Volumes may be realized using shared storage across all nodes. However, SAP has ensured that required I/O transfer & network throughputs are met to ensure maximum performance.

The complete list of validated hardware configurations can be obtained on the Product Availability Matrix on the Service Market Place (<https://service.sap.com/pam> - search for SAP HANA).

Detailed information about each hardware configuration can be obtained from the hardware vendors websites listed at the end of this document.

### VMWare Support

As part of the TDI program, SAP HANA is now certified for use with VMware in production environments (non-productive use of HANA on VMware have been supported for some time). For the first time, with the release of SPS07 HANA or newer, customers can create Software Defined Data Center Architecture (SDDCA) using HANA and VMWare vSphere 5.5.

#### Highlights:

- SAP HANA virtualized on VMware vSphere 5.5 is supported for productive use cases
- SAP HANA virtualized on VMware vSphere is supported via the current maximum VMware vSphere VM size of 1TB with 64 vCores (assuming the correct memory to core ratio for SAP HANA)
- SAP HANA virtualized does NOT support multi-node/scale-out
- SAP HANA virtualized supports VMware vSphere advanced functionality including vMotion, DRS, and High Availability
- SAP HANA virtualized is only available on certified HANA Appliances or on SAP HANA Tailored Data Center Integration Application-Verified Hardware
- All SAP HANA sizing and best practices must be followed for Virtualized HANA

Here are the relevant SAP Notes and changes:

#### **SAP Note: 1788665** — SAP HANA support for VMware vSphere Environments

*Updated to include "Taking the next step to also support virtual deployments of SAP HANA on VMware vSphere for production scenarios, SAP has released SAP HANA SPS07 on VMware vSphere 5.5 into controlled availability, allowing selected customers, depending on their scenarios and system sizes to go live with SAP HANA on VMware vSphere immediately. For further questions and details feel free to contact us: [sap\\_hana\\_tailored\\_data\\_center\\_integration@sap.com](mailto:sap_hana_tailored_data_center_integration@sap.com)."*

#### **New SAP Note: 1995460** — SAP HANA on VMware vSphere in production (controlled availability)

*"With the release of SAP HANA SPS 05, SAP announced support for VMware vSphere 5.1 for non-production scenarios of SAP HANA on either certified appliances or through SAP HANA tailored data center integration verified hardware configurations.*

*Meanwhile VMware and SAP have gathered further experience in running SAP HANA in virtualized environments, allowing us to now also announce support for virtual deployments of SAP HANA SPS 07 (or newer) on VMware vSphere 5.5 for production use cases, provided all the following conditions have been met."*

#### Additional Resources:

- [SAP HANA Guidelines for being virtualized with VMware vSphere](#)

- [SAP on VMware](#)
- [HANA GTM VMware Virtualization JAM Site](#)

## SETTING UP THE SERVER

If the installation is an “Appliance Delivery” the hardware partner should load all software required to run SAP HANA on your hardware. If the installation is a “Tailored Data Center” then ensure that you align with the hardware vendor(s) to ensure that your system(s) are properly configured.

Do not install additional software (e.g., monitoring tools, back-up tools, etc.) without prior consent from SAP and your hardware vendor. Setting up and configuring the appliance is fairly straightforward and can easily be done by following the instructions in the “SAP HANA Server Installation Guide” from the SAP Help Portal ([http://help.sap.com/hana/SAP\\_HANA\\_Server\\_Installation\\_Guide\\_en.pdf](http://help.sap.com/hana/SAP_HANA_Server_Installation_Guide_en.pdf)).

## SQUARING OF THE LICENSING

All SAP HANA appliances come with a temporary license key that is valid for 90 days. SAP strongly recommends that the temporary license key should be replaced with a permanent license key as soon as the system is up and running. For more information on creating and installing the SAP HANA license key, refer to “SAP HANA Administration Guide” ([http://help.sap.com/hana/SAP\\_HANA\\_Administration\\_Guide\\_en.pdf](http://help.sap.com/hana/SAP_HANA_Administration_Guide_en.pdf)).

## SIZING YOUR INSTANCE

Just like any other SAP application, SAP HANA also needs to be accurately sized. SAP HANA uses memory to store data and perform operations, such as calculations, in-memory. Therefore, we typically use 50% of each node’s memory for working memory and 50% for in-memory data storage.

For sizing a general SAP HANA instance refer to SAP Note 1514966 (<https://service.sap.com/sap/support/notes/1514966>). For sizing an SAP HANA instance for SAP BW refer to SAP Note 1637145 (<https://service.sap.com/sap/support/notes/1637145>).

## SUPPORT MECHANISM

SAP HANA is an appliance and SAP will serve as your primary support provider. Whether you are experiencing software, hardware, or operating system issue, SAP will troubleshoot and resolve the issue with the help of resources from the responsible partners. If the customer has defined special support agreements with the selected hardware partner (such as a special Service Level Agreement (ESA)), when hardware or operating system issues arise, the customer can contact the hardware partner directly.

Always remember that the installation of SAP HANA and its operating system must be performed by your hardware partner. All other software, including monitoring tools, backup tools etc. is not supported by SAP. Nor will SAP support any custom modified SLES Linux or RHEL Linux versions other than the ones provided by SAP or the hardware vendor.

There are several ways of securing high quality support when an issue arises.

1. Create a Customer Support System (CSS) Message via SAP Service Market Place under the BC-HANA-DB component (<https://service.sap.com/message>).

2. Leverage the 24 x 7 Customer Interaction Center (CIC) to help resolve issues (<https://service.sap.com/supportcenters>). Both the CSS and CIC require a valid S-user number. Follow the steps in this guide to create an S-user ID (<https://service.sap.com/~sapidp/011000358700000905192010E.pdf>).

To investigate SAP HANA-related problems remotely, SAP support requires a support connection to all servers in the SAP HANA landscape. Refer to SAP Note 1635304 on the Service Market Place for more information on how to setup a secure connection (<https://service.sap.com/sap/support/notes/1635304>).

## **SUPPORT OFFERINGS**

SAP Standard support is a basic offering that provides reliable response to technical disruptions and for maintaining system health and integrity (<https://service.sap.com/standardsupport>).

SAP Enterprise support provides proactive support in addition to all the features of the SAP Standard Support option (<https://service.sap.com/enterprisesupport>).

SAP Max Attention support is a tailored support offering with a full range of services customized for your individual needs and driven by an on-site technical quality manager (<https://service.sap.com/maxattention>).

SAP Active Embedded support is an enhanced support partnership that provides an embedded support team, engineering services, and a rapid prototyping service that provides the opportunity to test drive and experience the new SAP innovations based on customer-specific scenarios in an easy and accelerated way (<https://service.sap.com/activeembedded>).

## **UPDATING AND PATCHING THE SYSTEM**

### **Operating System Security Patches**

OS security patches may be imported immediately after they are available. The customer is generally responsible for implementing operating system security patches. If the customer has a special agreement with the hardware partner, support for operating system security patching may be the responsibility of the hardware partner.

### **Operating System Support Packs**

On rare occasions, SAP HANA might require a certain operating system patch. OS Service Packs (SPs) must be installed by your SAP HANA hardware partner after they have been validated and approved by SAP. This same process applies to kernel and runtime library (glibc) patches.

Also when patching the system, please ensure that the original configuration settings of the operating system are in place. Do not change configuration settings when you patch the operating system unless the SAP release note explicitly states that you must do so. SAP will clearly state any dependencies in the relevant SAP Note published when a revision is released which requires such modifications.

In some cases, customers may have outsourced the administration of their landscapes. In such cases, the outsourced service provider should consult with the hardware support provider before changing

any settings. The customer is responsible for upgrading the operating system using the patches delivered via the standard distribution mechanisms

### **File System Operating System**

The customer is responsible for implementing operating patches for the shared file system. If the customer has a special agreement with the hardware partner, the hardware partner is responsible for providing support for file system patching. Firmware, Storage Software, and more The hardware partner is responsible for providing patch support, firmware software, storage software, and more.

SAP HANA Software Guides for System Administration and Maintenance

### **SAP HANA Technical Operations Manual (TOM)**

[http://help.sap.com/hana/SAP\\_HANA\\_Technical\\_Operations\\_Manual\\_en.pdf](http://help.sap.com/hana/SAP_HANA_Technical_Operations_Manual_en.pdf)

### **SAP HANA Administration Guide**

[http://help.sap.com/hana/SAP\\_HANA\\_Administration\\_Guide\\_en.pdf](http://help.sap.com/hana/SAP_HANA_Administration_Guide_en.pdf)

### **SAP HANA Lifecycle Management (LCM) Guides**

[http://help.sap.com/hana/SAP\\_HANA\\_Update\\_and\\_Configuration\\_Guide\\_en.pdf](http://help.sap.com/hana/SAP_HANA_Update_and_Configuration_Guide_en.pdf)

[http://help.sap.com/hana/SAP\\_HANA\\_LCM\\_Tools\\_Reference\\_Guide\\_en.pdf](http://help.sap.com/hana/SAP_HANA_LCM_Tools_Reference_Guide_en.pdf)

### **SAP HANA Performance Analysis Guide**

[http://help.sap.com/hana/SAP\\_HANA\\_Performance\\_Analysis\\_Guide\\_en.pdf](http://help.sap.com/hana/SAP_HANA_Performance_Analysis_Guide_en.pdf)

### **Application Operations Guide – Trigger-Based DATA Replication using SAP LT Replication Server FOR sap hana**

[http://help.sap.com/hana/SAP\\_Landscape\\_Transformation\\_for\\_SAP\\_HANA\\_Operations\\_Guide\\_en.pdf](http://help.sap.com/hana/SAP_Landscape_Transformation_for_SAP_HANA_Operations_Guide_en.pdf)

### **SECURITY**

For SAP HANA Security Guides please see:

#### **SAP HANA SECURITY GUIDE**

[http://help.sap.com/hana/SAP\\_HANA\\_Security\\_Guide\\_en.pdf](http://help.sap.com/hana/SAP_HANA_Security_Guide_en.pdf)

#### **SAP SECURITY COMMUNITY PAGE**

[https://community.wdf.sap.corp/community/hana\\_security](https://community.wdf.sap.corp/community/hana_security)

#### **SAP ROLES AND SETUP GUIDES**

<https://community.wdf.sap.corp/docs/DOC-214906>

Enhancements to SAP System Security have expanded HANA security capabilities to further support enterprise ready deployment, simplified operations and lowered the Total Cost of Ownership.

### **Authorization and User/Role Management**

- Enhanced user copy in SAP HANA studio
- New user validity configuration in SAP HANA studio
- Additional privileges for new SAP HANA capabilities such as repository change management.

### **Encryption**

- Support for SAP's new cryptographic library: "CommonCryptoLib"
- New SAP HANA studio UI supporting configuring of encryption data persistency for data volumes
- Enforce SSL for client connections
- SSL support for system replication scenarios

### **Audit Logging**

- Database tables as audit trail target
- Firefighter logging
- Mandatory audit events
- Usability improvements

### **XS Security Enhancements**

- Authentication via Kerberos and enhanced SAML2 support
- Context related authorizations
- Virus scanner interface for file upload
- Support for Anonymous user sessions

### **Documentation and Help**

- Updated security guide for SPS07 features
- Context sensitive help in SAP HANA studio for security administration

### **DEPLOYING MULTIPLE APPLICATIONS IN A SINGLE INSTANCE**

The following section helps you understand the deployment options for the SAP HANA appliance.

Support for multiple applications on SAP HANA (<https://service.sap.com/sap/support/notes/1661202>).

Support for multiple SAP HANA databases on a single SAP HANA appliance (<https://service.sap.com/sap/support/notes/1681092>).

Support for multiple BW instances on a single SAP HANA Appliance (<https://service.sap.com/sap/support/notes/1666670>).

## **BACKUP & RECOVERY**

SAP HANA supports the creation of storage snapshots, which later be used for SAP HANA recovery and additionally supports many 3<sup>rd</sup> party backup tools.

For more information, see the “SAP HANA Administration Guide”.

## **SAP HANA ADMINISTRATION GUIDE**

[http://help.sap.com/hana/SAP\\_HANA\\_Administration\\_Guide\\_en.pdf](http://help.sap.com/hana/SAP_HANA_Administration_Guide_en.pdf)

DBA Cockpit for SAP HANA in SAP NetWeaver 7.4

[http://help.sap.com/saphelp\\_nw74/helpdata/de/47/87bfe9cb044ef3a1811a7ff235d0d3/frameset.htm](http://help.sap.com/saphelp_nw74/helpdata/de/47/87bfe9cb044ef3a1811a7ff235d0d3/frameset.htm)

## **HIGH AVAILABILITY IN SCALE-OUT CONFIGURATIONS**

Please refer to the SAP HANA Administration Guide section 4.3 “Scaling SAP HANA” for information on Scale Out configurations.

Please refer to the SAP HANA Administration Guide section 4.1 “High Availability for SAP HANA” for information on configuring: 1. Storage Replication, 2. Backups and 3. System Replication

## **LINKS TO DOCUMENTS & GUIDES**

### **SAP HANA Platform**

([http://help.sap.com/hana\\_platform/](http://help.sap.com/hana_platform/))

### **Download Software**

(<https://service.sap.com/swdc>)

### **Central Note for SAP HANA**

(<http://service.sap.com/sap/support/notes/1514966>)

## **GETTING TRAINED ON SAP HANA**

SAP Education Course for SAP HANA

([https://training.sap.com/us/en/curriculum/hana\\_us-sap-hana-appliance-g-encourses](https://training.sap.com/us/en/curriculum/hana_us-sap-hana-appliance-g-encourses))

SAP Developer Network for SAP HANA – Blogs, Forums, & Guides

(<http://www.sdn.sap.com/irj/sdn/in-memory>)

SAP HANA – Test, Try, & Learn SAP HANA

(<http://www.saphana.com>)

## **LINKS TO HARDWARE VENDOR SITES**

- Hewlett Packard (<http://www.hp.com/go/sap/hana>)
- IBM (<http://www.ibm.com/solutions/sap/hana>)
- Fujitsu Computers (<http://ts.fujitsu.com/hana>)
- CISCO Systems (<http://www.cisco.com/>)
- DELL (<http://www.dell.com>)

- Hitachi Data Systems (<http://www.hds.com/solutions/applications/sap-application/saphana.html>)
- Lenovo (was IBM)
- Huawei (<http://enterprise.huawei.com/en/solutions/IT-solutions/server-application/hw-266849.htm>)
- VCE (<http://vce.com/sap>)
- EMC (<https://community.emc.com/docs/DOC-17151>)
- NetApp (<http://www.netapp.com/us/solutions/applications/sap/sap-hana.aspx>)
- NEC (<http://www.nec.com/en/global/prod/express/scalable/index.html>)

For an updated list please refer to our “SAP HANA Openness page” (<http://www.saphana.com/community/about-hana/sap-hana-openness#/openness/hana-platform-openness>).

#### ADDITIONAL CONTACTS AT SAP

- Customer Solution Adoption – Margaret Anderson (<mailto:margaret.anderson@sap.com>)
- Active Global Support – Ido Adler (<mailto:ido.adler@sap.com>)
- SAP Consulting – Chris Curtis (<mailto:christopher.curtis@sap.com>)
- Global SAP HANA Sales Lead – Christian Rodatus (<mailto:christian.rodatus@sap.com>)



# KEY CONTACTS FOR YOUR ACCOUNT

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SAP

SAP

Hardware Vendor

Hardware Vendor

Account Executive

Client Partner

Account Executive

Support Engineer

## KEY INFORMATION RELATED TO YOUR SAP HANA INSTANCE

SAP

SAP HANA

SAP HANA

SAP HANA

Customer Number

Instance Number

Hardware Key

License key

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