

E-Guide

Integrating and Managing SAP HANA

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SAP HANA Best Suited for Solving ERP Performance Issues

Is Having a Mixed SAP Environment Worth the Hassles?

The in-memory data warehouse appliance SAP HANA can help businesses process high volumes of data faster than ever. But finding the best use case for SAP HANA and then successfully deploying the software takes the right team and resources. This E-Guide uncovers the necessary skills and steps involved in leveraging SAP HANA, as well as tips for integrating and managing mixed SAP environments.

SAP HANA Best Suited for Solving ERP Performance Issues

By: Tony de Thomasis, Contributor

SAP HANA gives businesses the ability to perform complex calculations faster than ever. But successfully deploying the technology rests on proper planning, from making sure the business case is right to having the skills on board to do the job.

SAP HANA is able to process large data volumes, which helps address ERP performance issues. The best SAP HANA use cases involve several simple data structures or simple table contents that must be joined, aggregated or searched. One of the more successful SAP HANA use cases so far has been fast ERP profitability reporting on line items without the administration overhead of data aggregation and the re-engineering of business functions.

In the simplest of terms, any large list of data that can be created by downloading multiple tables using transaction SE16 and a join in Microsoft Access makes an achievable HANA use case. The more adventurous might consider using SAP HANA to remove the latency between the creation of data in ERP and the reporting process in SAP NetWeaver BW.

Conversely, poorly selected SAP HANA use cases ultimately compromise results. For example, scenarios with complex business data logic or complex transformation rules such as alphanumeric conversions, currency translations and time-dependent logic are not good fits for SAP HANA.

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What skills are necessary to deploy SAP HANA?

Much of the risk involved in an SAP HANA deployment can be mitigated by entering into a fixed-price, predefined installation of HANA statement of work. Under this agreement, SAP typically commits to a clearly defined fast-track installation of SAP HANA in two weeks. The scope of this agreement normally covers the following items:

- Installing and setting up SAP HANA in conjunction with the hardware partner.
- Installing and setting of one form of replication (SAP BusinessObjects Data Services, Sybase Replication Server or SAP Landscape Transformation).
- Creating a data model within SAP HANA that connects it to one SAP Business Suite application.
- Setting up and maintaining SAP HANA during customer knowledge transfer sessions.
- A front-end reporting tool (Microsoft Excel or SAP BusinessObjects Explorer).
- The successful outcome can only be guaranteed by close collaboration with a trustworthy SAP hardware partner who performs the following tasks:
 - Sizing.
 - Installing the application (only a certified hardware partner can perform the installation).
 - Backing up and restoring processes (only a restricted set of backup and recovery features are available at present).
 - Automatic patching (SAP HANA Service Pack 2 is available to SAP HANA hardware partners).
 - Identifying and resolving any early performance problems.
- The local Basis resource is responsible for the following tasks:
- Architecting the SAP HANA landscape (Figure 1). The current deployment scenario is referred to as the side-by-side scenario with the SAP ERP data as the source system.
- Creating an appropriate SAP HANA landscape to support the nonproduction and disaster recovery systems.

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- Determining the most appropriate SAP HANA replication option(s), which include
 - Sybase Replication Server for non-SAP data sources.
 - SAP Landscape Transformation trigger-based replicator for ERP-based real-time replication.
 - SAP BusinessObjects Data Services for aggregation and transformation of data from multiple sources in near real time.
- Ensuring SAP BusinessObjects Explorer is installed and working.
- Installing the SAP Host Agent and SAP HANA Load Controller binaries on the ERP source system.
- Setting up the client machine to access the in-memory computing engine.
- Managing the SAP HANA application using In-Memory Computing Studio.
- Establishing analytics privileges as well as security and user provisioning.

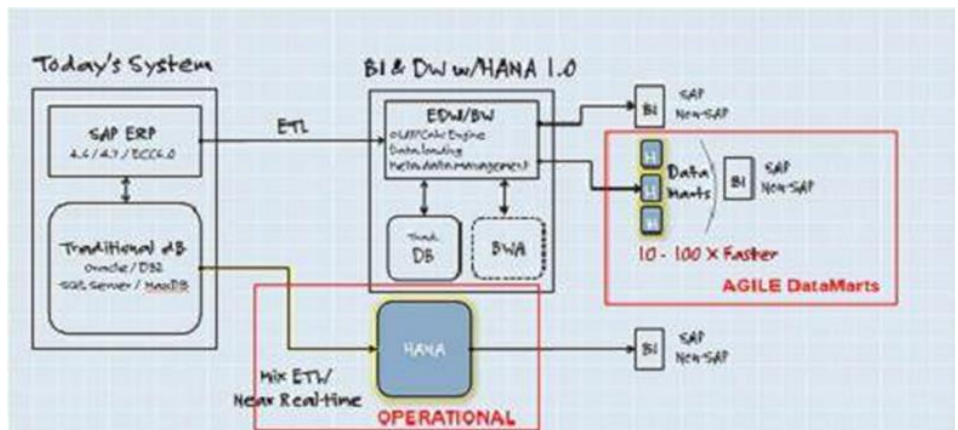


Figure 1. The HANA landscape

The local BW resource is responsible for the following tasks:

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- Creating models and table relationships in SAP HANA by selecting and loading ERP tables using the SAP in-Memory Computing Studio.
- Building reports on top of the data models in SAP HANA using Microsoft Excel, SAP BusinessObjects Explorer, SAP BusinessObjects Web Intelligence or Crystal Reports.
- Verifying that the data in SAP HANA is complete and correct.

It's also a good idea to learn from those who have already been there. For example, SAP Consulting Services has local and global experience gained from running proof-of-concept deployments with several other early adopters. In addition, several SAP partners have attended early consultant training through the Partner Enablement program. These partners might even have a small in-house HANA appliance for reviewing purposes.

SAP HANA Planning Resources

Apart from reading the latest release notes and installation guides (listed below), those interested in SAP HANA should familiarize themselves with the differentiators and exclusive offerings from certified SAP HANA hardware providers. The smallest SAP HANA appliance is the 128 MB offering (40 users), whereas the largest is the 1 TB offering (750 users).

Select the SAP HANA appliance that supports the recently released Westmere CPU. This provides over 30% better HANA results than the outdated Nehalem EX CPU. Furthermore, steer clear of SAP HANA appliances that require additional external storage arrays. SAP HANA storage is best handled internally.

Select SAP HANA disk offerings with internal SSD or internal 600 GB SAS drives. In addition, make sure the SAP HANA appliance can grow from two CPU sockets to four and eight CPU sockets without an appliance replacement required for this growth.

The following SAP Notes can also help with the planning of an SAP HANA implementation:

- SAP Note 1600147: SAP HANA 1.0 SPS2 Release note
- SAP Note 1514966: SAP HANA Sizing SAP In-Memory Appliance

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- [SAP Note 1514967: SAP HANA 1.0 Central Note](#)
- [SAP Note 1603671: SAP HANA 1.0 Software Download](#)
- [SAP Note 1513496: SAP HANA 1.0 Release Restrictions](#)

ABOUT THE AUTHOR

Tony de Thomasis has been working with SAP software since 1986. He installed the first SAP R/2 system in Australia for Mobil Oil in 1989. De Thomasis has presented at events like SAP TechEd and SAUG, authored over 30 SAP Community Network weblogs and written articles for SAP Professional Journal.

Is Having a Mixed SAP Environment Worth the Hassles?

By: Beth Stackpole

Given the complexities of today's globally dispersed businesses, an all-SAP software environment may be nearly impossible to have. Even so, large SAP shops are often willing to forgo the specialized functionality of "best of breed" products because of the cost and complexity of software integration.

At Harman, a Stamford, Conn., manufacturer of consumer-grade and professional electronics, the decision to use SAP or not boils down to which approach best meets the business need.

The company has SAP as its ERP, manufacturing and logistics backbone but employs products from Oracle, Ariba and others to handle everything from CRM to e-commerce, according to Arun Kumar, Harman's director of enterprise architecture and compliance. While integration used to be a major obstacle, Kumar said current SAP offerings, including the NetWeaver Process Orchestration middleware, have simplified things. In fact, integration complexity no longer counts as a factor in evaluating tradeoffs between products.

"Five or six years ago, integration was a major headache, but these days, there are various types of out-of-the-box integration, and, as the products mature, integration becomes much easier," he said.

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Defining the challenge

There's no doubting the heterogeneous nature of the modern IT landscape. Mergers and acquisitions have left companies saddled with an array of enterprise systems. And, increasingly, line-of-business or regional divisions are actively directing their own IT decisions, choosing nonstandard human resources or customer relationship management (CRM) platforms better suited to their needs.

Despite the influx of non-SAP software into SAP-dominated shops, the added functionality of a third-party product does not always outweigh the hassles it brings with it, according to Joshua Greenbaum, president of Enterprise Applications Consulting, based in Berkeley, Calif.

"Integrating SAP and non-SAP systems is [no small challenge] given the configurations and customizations, and, depending on the industry, the additional, nonstandard components to the data model," Greenbaum said.

As a result, companies often opt for their primary vendor when extending enterprise functionality to areas like CRM, supply chain management, talent management and even business intelligence. That's because they don't want to bear the burden of a different user experience, a different data model and a complex integration challenge when the SAP option meets the bulk of their requirements.

"Every IT decision for or against an IT vendor has a cost equation, and the big question is how much will SAP meet the needs of my company and industry out of the box," Greenbaum said.

The aches of integration

One of the biggest advantages of sticking with an all-SAP approach is having the right set of skills and IT resources in-house or at the ready as a result of an existing system integration, according to Sascha Wenninger, an SAP integration architect who is setting up a new SAP consultancy.

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While SAP CRM is a different animal from SAP ERP, the underlying application server is the same, the user interface building blocks are consistent and many architectural components -- from NetWeaver to the IDoc (Intermediate Document) format -- span the portfolio of core SAP applications, Wenninger added.

"I don't want to give the impression that an SAP guy knows how to do everything with SAP, but there can be 80% overlap [between an SAP ERP and CRM specialist], whereas if you go with Salesforce.com or [Microsoft] Dynamics, there is zero overlap," he said.

Wenninger cited a recent client project to integrate SAP ERP with Salesforce.com to illustrate his point. The client, which had integrated SAP CRM and ERP using the standard CRM middleware, wanted to extend the environment, keeping CRM as the system of record but doing things like creating invoices via Salesforce in the cloud.

"This literally turned into a multimillion-dollar project that took well over a year just to get some basic integration that didn't even approach the standard SAP integration with CRM," Wenninger said. "There were also two totally different ecosystems -- you have the SAP guys and the [Salesforce] guys, and neither has experience in the other's environment, which makes things difficult."

The beauty of one

Having a single point of contact for support and integration assistance is another benefit of sticking with a primary vendor, as is the possibility of negotiating better licensing terms. Simplicity of the IT environment itself should be factored in when deciding between SAP and a third-party vendor, according to Luke Marson, talent management architect at Denmark-based Gavdi Group, a consulting company specializing in human capital management. "When you are running fewer systems, you're not duplicating data across multiple systems, which is good for data integrity, security and authorizations," Marson said.

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Theoretically, with an all-SAP platform, SAP owns the integration burden, having committed to delivering a certain amount of integration between systems using a mix of direct connections, application programming interfaces and integration technologies. But industry observers caution that just because a product comes from SAP doesn't mean integration is seamless, especially if it has come into the family through an acquisition.

"Even if it says SAP on the tin, it doesn't mean it nicely integrates with existing stuff," Wenninger said. "Under the covers, it's a totally different product."

An SAP-only club? Probably not

With so many advantages in a soup-to-nuts SAP deployment, why should companies risk going with a niche, third-party product and bear the pain of more complex integration? There's a range of compelling reasons, from having prior on-staff knowledge of a particular application to enlisting multiple suppliers to prevent vendor lock-in -- which can mean less negotiating power on price and being at the vendor's mercy when it comes to upgrade cycles and functionality.

Perhaps the most compelling reason is the need for a specific set of features -- possibly industry-related capabilities -- or because the SAP offering just doesn't stack up.



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