EXECUTIVE SUMMARY

Implementing SAP HANA, an End-to-End Perspective

by Jonathan Haun, Consulting Manager, Decision First Technologies; Christopher Hickman, Principal Consultant, Decision First Technologies; and Don Loden, Principal Consultant for BI, Decision First Technologies

In this executive summary, learn tips about SAP HANA in the areas of creating a data model, the modeling process, and connecting SAP BusinessObjects to SAP HANA. This executive summary is an abbreviated version of a full, exclusive SAPexperts special report, "Implementing SAP HANA, an End-to-End Perspective," available to SAPexperts subscribers. For more information about SAPexperts, go to www.sapexperts.com.

SAPexperts

This report is produced by SAPexperts in cooperation with Decision First Technologies.

SAPexperts publishes the most valuable, independent SAP expertise on the web. Validated instruction, tutorials, tools, tips, and case studies are continuously added to help your entire team advance their skills and overcome the toughest SAP challenges.

A 12-month subscription to SAPexperts.com provides access to the most sought-after expertise from the world's top experts in SAP technology. It's like adding experts to your team who have all the answers — without the cost of hiring them. Learn how SAPexperts helps corporations and consultants, or get subscription rates for your team. To speak with an SAPexperts representative, call +1-781-751-8799.

This document is for your personal use only. Reproduction or distribution in any form is strictly prohibited without the permission of the publisher, SAPexperts. For information about SAPexperts visit SAPexperts.com.

After more than a year of working with SAP HANA, Decision First Technologies shares lessons learned and tips in this special briefing for SAPexperts readers. The company believes that HANA, SAP's innovative in-memory technology, will lead to revolutionary changes in business intelligence and beyond.

This executive summary gives an overview of our full special report on the topic. Subscribers to SAPexperts.com can read the full report by logging in. For more information about on how to subscribe to SAPexperts go to: http://sapexperts.wispubs.com/your-sap-investment-is-too-important.

In the report, the authors share their expertise in the three stages of setting up SAP HANA:

- Creating a proper data model
- Understanding the main components of SAP HANA modeling
- Bringing it all together for reporting and analytics by connecting applications to SAP HANA

Note

The main focus of this report is the way organizations move data from multiple sources, in either batch or real time, into the SAP HANA in-memory database. The authors refer to this as a standalone approach, as opposed to two other options (moving a BW environment based on a legacy database to SAP NetWeaver BW powered by SAP HANA or rapid solutions based on a specific industry, business process, or line of business).

Creating a Proper Data Model

To create a good data model, the authors suggest that you profile data with SAP Information Steward's Data Insight and load the data into SAP HANA using SAP Data Services 4.0. After creating staging with surrogate keys, you move the data into SAP HANA and create all tables at runtime in SAP Data Services.

Tip!

SAP HANA stores data either in rows or in a columnar format. Although star schemas are a good starting structure for an SAP HANA data model, with a couple of exceptions, this degree of normalization is not always necessary or even beneficial for certain types of queries. Both in the lab at Decision First Technologies and at clients, the authors have seen better performance in some situations with SAP HANA by denormalizing or "flattening" data in certain fact tables when this flattened data is stored in column store tables.

Copyright © 2012 WIS Publishing | www.SAPexperts.com

Modeling Process

The seven main components to SAP HANA modeling each have a specific purpose. When these components are compiled, the result is a meaningful, multi-dimensional representation of the data. The main components of SAP HANA modeling are:

- SAP HANA Studio.
- Schemas.
- Packages.
- Attribute views, which define all possible facets of your multi-dimensional model.
- Analytic views, which consist of a main fact or transaction table that is joined to one or more attribute views. You can also define measures and additional private attributes within the analytic view to complete the multi-dimensional model.
- Calculation views, which produce data sets that require more complex calculations or processing.
- Analytic privileges, which allow developers to define automatic, row-based filters based on SAP HANA user accounts or database roles. Analytic privileges can be used to either protect data or automatically filter data for each individual SAP HANA logon or database role.

Tip!

You can set up an analytic privilege to restrict the results of the data to only the country of Great Britain, for example. Once the analytic privileges are saved and activated, the database administrator can then assign it to an individual user or a database role.

Copyright © 2012 WIS Publishing | www.SAPexperts.com

Connecting SAP BusinessObjects to SAP HANA

In the last section of the report, you learn about how to connect to SAP HANA with the various reporting and analytics tools in SAP BusinessObjects, as shown in the matrix in **Table 1**.

The semantic layer (UNX) connects to SAP HANA using a standard ODBC or JDBC connection. SAP Crystal Reports 2011 connects directly using ODBC or JDBC without the use of a universe. Meanwhile, SAP Crystal Reports for Enterprise can connect using a universe and ODBC or JDBC connection.

There are also other SAP BusinessObjects tools that can connect natively to SAP HANA.

	Universe via ODBC or JDBC	SQL ODBC or JDBC direct connection	Native direct connection to analytic view or calculation view
Web Intelligence	X		
Crystal Reports 2011		X	
Crystal Reports for Enterprise	X	X	
Dashboard Design	X		
Analysis for OLAP			X
Analysis for Office			X
SAP BusinessObjects Explorer	X		X

Table 1 SAP BusinessObjects tool connectivity matrix

Tip!

Here are pointers specific to universes based on SAP HANA:

- If your Web Intelligence reports are using a universe based on the SAP HANA analytic view, you need to include a measure in every query.
- If your Web Intelligence reports are based on a universe that incorporates the base SAP HANA tables, you can use any type of basic query.
- If your report needs multiple queries to facilitate requirements, it is better to ask the universe designer to add context or derived tables to the universe to fully use SAP HANA. There are several development techniques and parameters in the universe that can force SAP HANA, and not the Web Intelligence report engine, to process multiple queries.

Copyright © 2012 WIS Publishing | www.SAPexperts.com

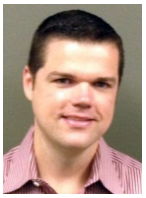
Decision First Technologies

Decision First Technologies is a professional services company specializing in delivering end-to-end business intelligence solutions to its customers. An SAP gold channel partner and six-time SAP BusinessObjects Partner of the Year, DFT resells and offers certified consulting, training and technical support for all analytics as well as database and technology products in the SAP BusinessObjects portfolio. DFT's comprehensive BI solutions allow users to access, analyze, and share information stored in multiple data sources, including SAP and non-SAP environments. The company's data warehousing practice designs and implements enterprise solutions utilizing SAP Business Warehouse, appliances such as SAP HANA or traditional relational database technologies. With more than 10 years of experience, DFT has helped hundreds of companies make better business decisions, dramatically reducing costs, increasing revenues, and boosting profits. For more information on Decision First, visit http://www.decisionfirst.com/ or follow on Twitter @DecisionFirst.

Jonathan Haun

Jonathan Haun has more than 12 years of information technology experience and has served as a developer and administrator within a diverse set of technologies. Over the past six years, he has served as a full time SAP BusinessObjects and SAP Data Services principal consultant for Decision First Technologies. He has gained valuable experience with SAP HANA based on his project experience and management of the Decision First Technologies SAP HANA lab in Atlanta, Georgia. He also writes the All Things BOBJ BI blog at http://bobj.sapbiblog.com. You can follow Jonathan on Twitter @jdh2n. You can contact Jonathan by email at jonathan.haun@decisionfirst.com.

Christopher Hickman



Christopher Hickman is a principal consultant at Decision First Technologies. He has experience in the SAP BusinessObjects suite of applications as well as ESRI's range of GIS applications (ArcGIS Desktop, Server, Business Analyst Desktop, BA Server, etc) and systems used to tie the two together (APOS, Centigon, Antivia), resulting in fully featured business and location intelligence systems. He is also heavily engaged in social media and the opportunities presented with the synergy generated from various social media utilities. You can follow Chris on Twitter @chickman72. You can contact Christopher by email at chris.hickman@decisionfirst.com.

Don Loden

Don Loden is a principal consultant for BI at Decision First Technologies with full life cycle data warehouse development experience in multiple verticals. He is an SAP-certified application associate on SAP BusinessObjects Data Integrator and he speaks globally at numerous SAP and ASUG conferences. He has more than 12 years of information technology experience in the following areas: ETL architecture, development, and tuning, logical and physical data modeling, and mentoring on data warehouse and ETL concepts. You can follow Don on Twitter at @donloden. You can contact Don by email at don.loden@decisionfirst.com.

You can contact the editors at SAPexperts by email at editor@BI-expertOnline.com and follow them on Twitter @SAPexperts.

Copyright © 2012 WIS Publishing | www.SAPexperts.com

YOUR SAP® INVESTMENT IS TOO IMPORTANT

Studies show that insufficient training is a major reason why ERP implementations under-deliver on ROI. Don't risk losing the benefits of your SAP investment by not educating your team.

Imagine having year-round web access to the most highly sought-after expertise from the world's top SAP gurus; where proven instruction and guidance help your team avoid costly mistakes as it gets more out of your SAP investment than you thought possible.

It's no dream. It's SAPexperts.com.

SAPexperts

SAPexperts.com

WIS pubs