

# How Cisco Uses SAP HANA on Cisco UCS to Manage Sales Data

Cisco improves sales forecasting by delivering near-real-time data and insights to its global sales team.

EXECUTIVE SUMMARY	
<b>CHALLENGE</b>	<ul style="list-style-type: none"> <li>Eliminate manual report preparation for weekly sales conference calls</li> <li>Allow on-demand reporting and queries on near-real-time sales data</li> <li>Compile data from multiple enterprise systems and present in single dashboard</li> </ul>
<b>SOLUTION</b>	<ul style="list-style-type: none"> <li>DISE platform and Run the Business dashboard running on SAP HANA and Cisco UCS servers</li> <li>Flexible reporting and drill-down capabilities</li> <li>Mobile access to dashboard data and reports</li> </ul>
<b>RESULTS</b>	<ul style="list-style-type: none"> <li>New dashboard saves 45 to 90 minutes per user per week for report preparation</li> <li>Past-due sales opportunities reduced by 8 percent in first month of reporting</li> <li>Integrated multiple data sets into one for improved efficiency, accuracy, and accessibility of sales data and forecasts</li> <li></li> </ul>
<b>LESSONS LEARNED</b>	<ul style="list-style-type: none"> <li>Plan applications to optimize data access and user interface performance</li> <li>Plan for ongoing dashboard enhancements</li> </ul>
<b>NEXT STEPS</b>	<ul style="list-style-type: none"> <li>Support more users and data growth</li> <li>Extend business intelligence platform to other Cisco business groups</li> </ul>

## Background

Every Monday morning, Cisco sales managers worldwide conduct a conference call with their account executive teams to review sales activity in the past week, forecasted sales for the weeks ahead, and the status of sales opportunities that are still being developed (called the “pipeline”). The teams discuss any corrections that are needed before the data is summarized in higher-level reports for Cisco sales executives, who conduct their own conference calls to review activities and strategies. Altogether, nearly 6000 employees from around the world and multiple groups within the company participate in these calls.

Accurate, complete, and up-to-date order and pipeline information is essential for both the conference calls and the on-demand reports needed by the sales managers and executives. At Cisco, sales forecasts and bookings information is very much a big data challenge, with data drawn from approximately 17,500 sales employees worldwide, as well as numerous employees in the company’s regional and corporate offices.

## Challenge

Prior to 2011, data for the weekly sales calls was compiled in multiple spreadsheets, which was an inefficient, time-consuming, and often frustrating and confusing process. Each spreadsheet involved extensive time to maintain, with a significant amount of manual data entry and calculations. Because the data was drawn from the multiple, disparate systems that track Cisco sales and order activity, the spreadsheets were often out-of-synch with each other. These

issues meant users couldn’t be completely confident about the accuracy and timeliness of the spreadsheet information, or the quality of the calculations.

Additionally, the spreadsheets could provide only a limited degree of insight due to the nature and limitations of their modeling tools. They were also limited in their ability to “drill down” on a particular data point to see the underlying order or customer information. Because the reports were produced only weekly, the information quickly

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became outdated and Cisco sales and business managers could not obtain the real-time information they needed to plan the company's business activities, predict future company financial results, or track top sales opportunities.

The Cisco Sales Operations team wanted a single platform to consolidate sales information and offer more flexibility and power to quickly model data for improved sales management and business intelligence.

## Solution

In 2011, Cisco IT developed an internal platform called Dynamic Insights for Sales Executives (DISE). This platform offers sales executives a single source for automated reports and self-service data queries on order bookings, order forecasts, and the sales pipeline. DISE receives the sales data from SAP HANA, an analytics engine that runs in-memory on Cisco® Unified Computing System™ (Cisco UCS®) servers. Built on top of the DISE platform is a “Run the Business” sales dashboard, which enables automated, self-service access to sales information in a consolidated, customizable view for each user.

The DISE platform and sales dashboard have greatly expanded and accelerated the Cisco sales analysis process with these key features:

- One interface with multiple views into sales data such as:
  - Actual order bookings, pipeline status, and comparisons to target goals
  - Sales representative and team performance, with comparisons and trends using historical data
  - Data views by multiple dimensions including team, region, country, customer, partner, or technology
- Near real-time report data, with order bookings updated every 15 minutes, forecasts updated in real-time, and pipeline opportunities refreshed every hour.
- Fast, easy drill-down for in-depth analysis of a specific data point or pipeline opportunity.
- Easy data access through a web browser, including support for multiple smartphones and tablets.
- Users can view reports or query the data on demand, without waiting for the weekly reports generated for the conference calls.
- Custom data view sets can be defined by users in less than a day to obtain reports for specific needs.

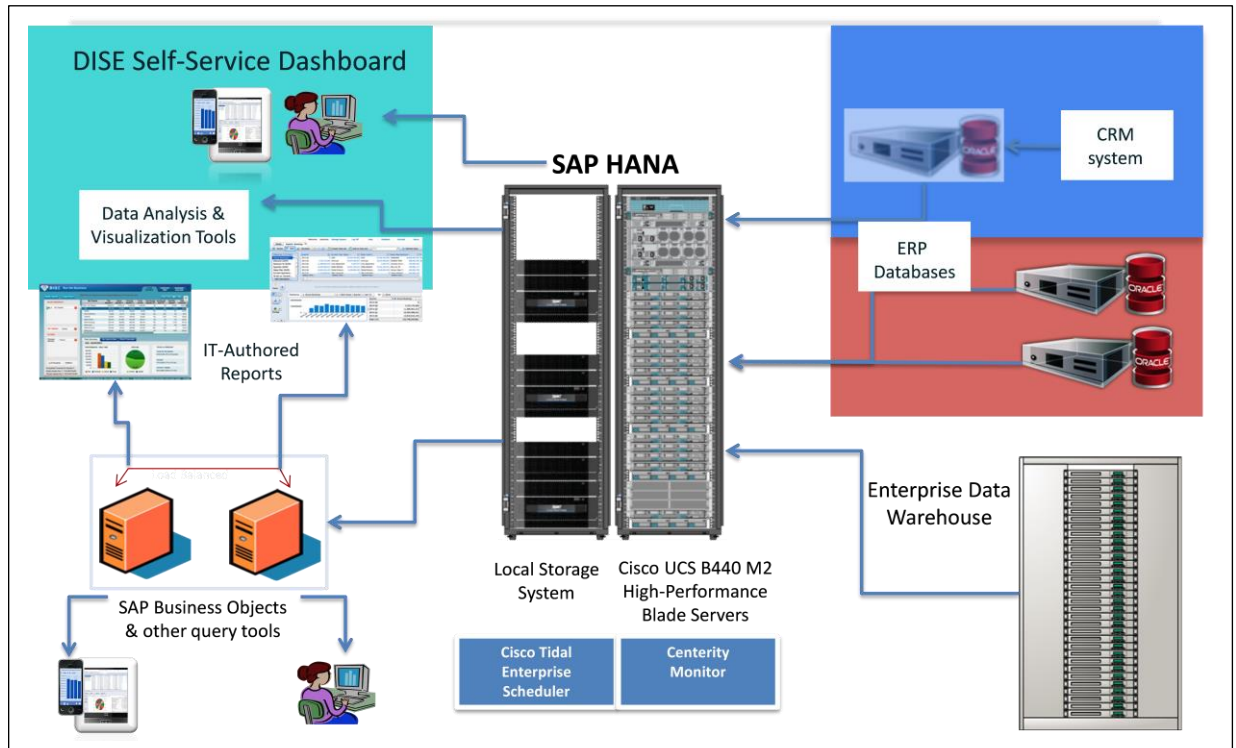
## DISE Solution Deployment

SAP HANA is an analytics engine that is optimized to run in-memory on Cisco UCS servers. It benefits from server features, including processing speed, large memory capacity, high throughput and low latency network interconnect, and massive scalability.

Together, the combination of SAP HANA, a Cisco UCS server, and a data storage system creates a SAP HANA appliance for fast data retrieval and analysis. “DISE performance is blazingly fast,” says Piyush Bhargava, Cisco IT distinguished engineer, who has been involved in IT deployments to support DISE. “DISE is able to process queries for data sets up to a billion rows of data in sub-seconds.”

Figure 1 shows the overall architecture of the DISE solution. Central to this architecture is the SAP HANA engine running on Cisco UCS blade servers, which are integrated with a local system for data storage. Sales data is drawn from multiple sources, including the Cisco customer relationship management (CRM) system, enterprise resource planning (ERP) databases, and enterprise data warehouse. SAP HANA outputs that data for use in many forms, including informal queries, IT-authored reports and applications such as the sales dashboard, and data analytics applications. For monitoring and managing the platform, Cisco IT uses several products for server, cloud, and SAP HANA management.

**Figure 1.** DISE Solution Architecture



## Results

The improved accuracy, timeliness, and accessibility of business information allow sales managers to more easily and quickly make decisions and take action. For example, the DISE platform has eliminated the costly manual processes for developing the spreadsheet reports, saving an estimated 45 to 90 minutes per user per week in preparing for the Monday conference calls. More importantly, sales managers can focus the conference call discussion on current sales activity and opportunities instead of on correcting data.

The dashboard gives Cisco executives and sales managers timely insights to:

- Track overall sales activity and obtain a high-confidence forecast, which helps to proactively manage Cisco business and respond to changes in sales levels
- Track the top sales opportunities with enhanced visibility into the pipeline
- Monitor forecast attainment based on reliable and current data that is maintained automatically and in near real-time
- Accelerate activity with customers and channel partners for specific sales opportunities
- Manage sales activity for consistency and effectiveness across all territories

A much more accurate view of the sales pipeline is one DISE benefit that helps to improve Cisco sales activities and results. One DISE report shows past-due opportunities—the sales that were expected to close by a certain date, but that have not been marked as a booking. In just the first month of report availability, the number of past-due opportunities declined by 8 percent, with many converting to actual orders. The visibility of sales opportunities that need follow-up is one factor that helps the Cisco sales teams accelerate orders and produce better forecasts.

“DISE allows me to make accurate, data-driven decisions on where to focus resources faster than ever, so that we can respond to technology shifts and market fluctuations.”

— Jeff Alexander, sales engineering manager, Cisco U. S. Commercial Sales

For Cisco IT, the integration of multiple data sets and sources by the DISE platform means easier support of new users and the ability to quickly develop new solution features. The sales dashboard will eventually serve nearly 3000 users who represent multiple company functions that need easy, real-time access to current sales data. “You don’t need to mandate use of a tool like the sales dashboard if input and feedback from the salespeople is incorporated into the design,” says Damon Smith, program manager for the DISE platform in the Cisco Worldwide Sales Enablement group. “And if you communicate clearly about new features and planned improvements as you enhance the tool, then user adoption will spread organically.”

Feedback about DISE capabilities from sales managers has been positive, as indicated by the following comments:

“Having been involved in forecast meetings for three decades, DISE is, without doubt, the very best tool I have ever seen to help us build predictability into our forecast.” — Duncan Mitchell, senior vice president, Cisco EMEA Region Emerging Market Sales

“Now I have access to all of the sales data for my region in easy-to-access view sets that show me exactly what I’m after and allow me to explore different facets with minimal effort and no concerns about corrupting my data set. DISE allows me to make accurate, data-driven decisions on where to focus resources faster than ever, so that we can respond to technology shifts and market fluctuations.” — Jeff Alexander, sales engineering manager, Cisco U.S. Commercial Sales

“The DISE Run the Business dashboard has enabled me to find the trends and details of my business within a couple of minutes, instead of hours with the previous tools. This insight enables me to focus my efforts in the right areas to drive additional business.” — Kevin Greene, operations director, Cisco U.S. Commercial Sales

“We needed a simple way to track changes in specific deals from week to week. I especially like the DISE alerts that flag whether a date or dollar value has changed on the deals.” —Britt Norwood, operations director, Cisco U.S. Commercial Sales

## Lessons Learned

For implementing a platform like DISE, Cisco IT offers these lessons:

- **Application development.** Consider querying base detail data directly or using analytic and calculated views in applications. This approach avoids the performance impact of using intermediary structures such as indices and temporary or pre-aggregated tables.
- **Evaluate user interface performance.** With SAP HANA, data for a user query can be retrieved in milliseconds. This capability means that the source of performance delays can likely be found in the application’s user interface design.

- **Create a representative test environment.** To run realistic performance tests for the data platform, the testing environment should reflect the production environment. For example, a single-node rack server used in testing will not produce performance and load results that are applicable to a multi-node blade cluster that is used in production.

For the dashboard development, Smith notes that an important lesson is to plan for ongoing enhancements, because users will want new capabilities once they see the tool's value.

## Next Steps

Cisco IT will support a fourfold expansion of the DISE platform capacity by early 2015. Over time, Cisco IT will enhance the sales dashboard with predictive and prescriptive capabilities to help users better assess and act upon the pipeline opportunity data.

PRODUCT LIST
<b>Servers – Unified Computing</b> <ul style="list-style-type: none"> <li>• Cisco UCS 6248 Fabric Interconnect</li> <li>• Cisco UCS 5108 Blade Server Chassis</li> <li>• Cisco UCS B440 M2 High-Performance Blade Server plus virtual interface card (VIC)</li> </ul>
<b>Data Center Switches</b> <ul style="list-style-type: none"> <li>• Cisco Nexus® 5548 switch with fabric services</li> <li>• Cisco Nexus 2224 Fabric Extender</li> </ul>
<b>Data Center Management and Automation</b> <ul style="list-style-type: none"> <li>• Cisco UCS C200 Management Server</li> <li>• Cisco 2911 ISR Console Server</li> <li>• Cisco Tidal Enterprise Scheduler</li> <li>• Centerity Monitor</li> </ul>

Based on the success demonstrated by using SAP HANA on Cisco UCS to manage high-volume sales data, Cisco IT will use the solution to support other company groups that also need real-time reporting for large data volumes.

## For More Information

[SAP HANA on Cisco UCS servers](#)

[Cisco UCS and SAP solutions](#)

[Cisco UCS servers](#)

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## Note

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