Cisco Expands Real-Time Visibility into Its Business with SAP HANA

What You Will Learn

All organizations want real-time visibility into the right data, increased business opportunities, reduced operating costs, and support for optimal decisions.

Cisco met this challenge by deploying SAP HANA, an in-memory analytics solution, on Cisco Unified Computing System™ (Cisco UCS®) Integrated Infrastructure. The first use case for this solution involved sales forecasting and quickly expanded to include additional sales, services, strategy and planning, supply chain, and engineering scenarios.

Running a US$45 Billion Business

Access to timely, accurate, and consistent data is vital to informed decision making at Cisco, whether by company leaders or individual contributors. Cisco wanted to expand access to real-time data to support transforming raw sales data into actionable insights and to provide access to more consistent reporting for those gathering data from multiple sources. In doing so, however, Cisco did not want to sacrifice security or governance effort—or increase its IT budget.

Deploying SAP HANA

In response to these enterprisewide information needs, Cisco IT deployed SAP HANA on Cisco UCS Integrated Infrastructure. The initial implementation was so successful that it is now used at all levels across Cisco, delivering these business and technology benefits:
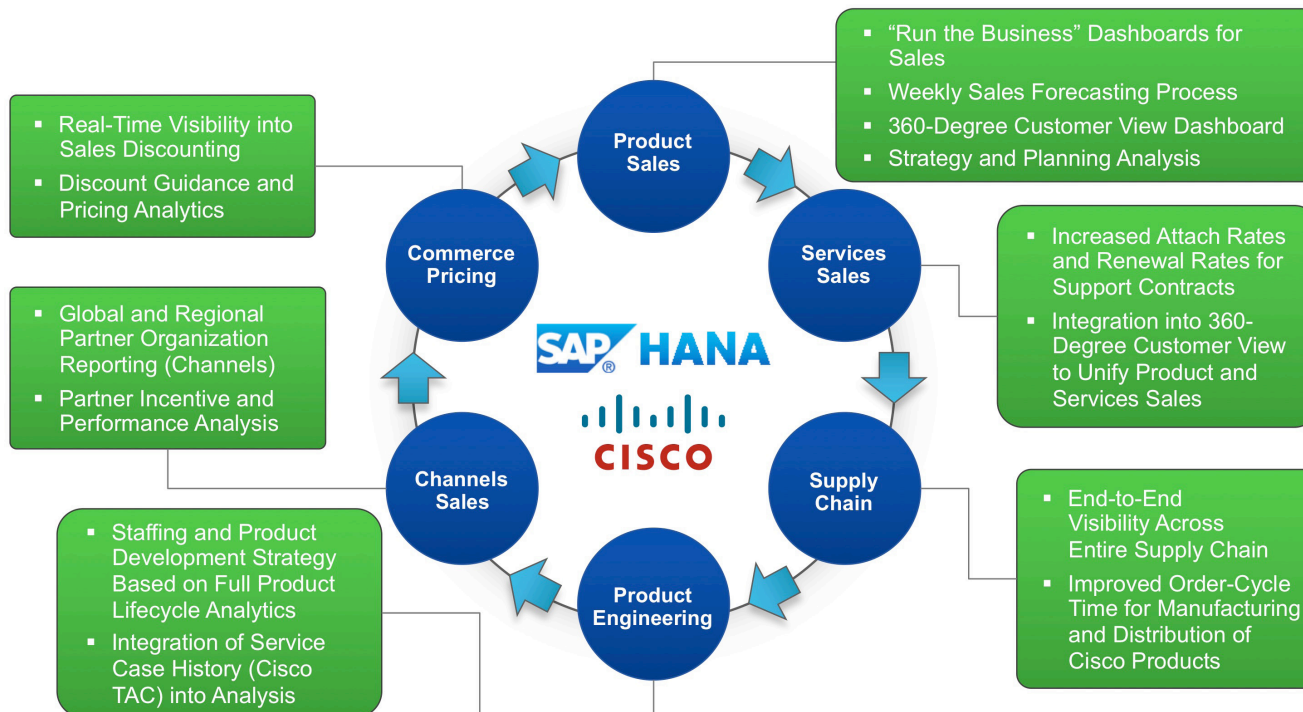
- Enhances decision making with a platform that provides exceptional speed to insight, rock-solid availability, and a footprint that expands easily to meet increased demand
- Delivers faster time to value through the rapid creation of reports based on near-real-time data
- Reduces the cost involved in maintaining disparate data processes, data sources, and spreadsheets
- Provides a single source of data truth, with an enterprisewide view
- Eliminates error-prone manual data processing

Improving Operations Across Cisco

With SAP HANA, Cisco was able to improve operations across the organization (Figure 1).

Figure 1 SAP HANA at Cisco: Use Cases

- Real-Time Visibility into Sales Discounting
- Discount Guidance and Pricing Analytics

- Global and Regional Partner Organization Reporting (Channels)
- Partner Incentive and Performance Analysis

- Staffing and Product Development Strategy Based on Full Product Lifecycle Analytics
- Integration of Service Case History (Cisco TAC) into Analysis

Commerce Pricing

Product Sales

Services Sales

Channels Sales

Supply Chain

Product Engineering

SAP HANA
CISCO

- "Run the Business" Dashboards for Sales
- Weekly Sales Forecasting Process
- 360-Degree Customer View Dashboard
- Strategy and Planning Analysis

- Increased Attach Rates and Renewal Rates for Support Contracts
- Integration into 360-Degree Customer View to Unify Product and Services Sales

- End-to-End Visibility Across Entire Supply Chain
- Improved Order-Cycle Time for Manufacturing and Distribution of Cisco Products

Product Sales: Use Case

Accurate, efficient forecasting is critical to any sales organization.

Prior to the SAP HANA implementation, Cisco sales staff found data in many different Line of Business (LOB) reporting applications and spreadsheets. Reports generated by these applications were not always synchronized with each other, because data was drawn from disparate sales and third-party order activity tracking systems.

In response, Cisco IT deployed SAP HANA with SAP Business Objects on Cisco UCS Integrated Infrastructure. Cisco refers to this solution as Dynamic Insights for Sales Executives (DISE). The SAP HANA implementation delivers consolidated data that is the foundation of near-real-time automated reports and supports self-service queries about order bookings, forecasts, and the sales pipeline. DISE incorporates a "run-the-business" SAP BusinessObjects Dashboard, giving users customizable, self-service access to sales information.

Requiring just five months from whiteboard to production, DISE launched with 200 users, 1 billion records, and 2 terabytes (TB) of memory. The platform quickly grew to handle more than 2000 users, 4 billion records, and 3 TB of memory—and is capable of updating forecast data every 5 minutes. DISE sources detailed order booking information every 15 minutes from Cisco's Enterprise Data Warehouse (EDW) and pipeline data hourly from Cisco's instance of Salesforce.com.

Improved accuracy, timeliness, and access to business information helps sales managers act faster. This SAP HANA implementation has reduced weekly forecast calls by 45 to 90 minutes per user per week. More important, sales managers can focus these calls on current activity and opportunities rather than data correction. In the first month of DISE operations, the number of past-due opportunities declined by 8 percent, with many converting to actual orders. Improved visibility into sales opportunities is an important factor in allowing Cisco sales teams to accelerate orders and forecast sales more accurately.

Services Sales: Use Case

Increased service attach rates and renewal rates are a top priority for technology companies. Adding services and support data took only four months from inception to a pilot deployment of 50 users. The user base is growing rapidly, and the overall user base—including partners—for the SAP HANA implementation is expected to exceed 10,000 unique users per quarter within the next year.

Now, with Cisco merging its product and services sales departments, Cisco salespeople can use not only service contract data but also sales bookings and pipeline information for any Cisco customer. As users enter customer names, the system sorts more than 4 billion product sales records and more than 8 billion service sales records in seconds. The combined solution now handles 10 million new and updated records daily.

Cisco IT incorporated services contracts and installed-base data into the existing SAP HANA deployment, adding 5 TB of memory to the production SAP HANA deployment. Cisco's SAP HANA deployment now consists of one 8-TB SAP HANA cluster instance for inbound write operations from source systems and dashboard reporting and a second 8-TB SAP HANA cluster instance for data exploration and information discovery.

360-Degree Customer View: Use Case

With improved product sales and service forecasting in place, Cisco began implementing a more efficient 360-degree global view of its customer relationships. Because customer information was maintained in separate systems and data marts, unifying it into a more integrated, accurate, and timely dashboard view was an important move.

Sales professionals needed a single view of sales bookings and pipelines, services renewals, and installed-base history. Additionally, they wanted the flexibility to add marketing-level insights, such as market intelligence (who visited Cisco tradeshow booths, attended webinars, and downloaded content, for example), web analytics, and specific product deployment information.

This 360-degree customer view dashboard went live in early 2015—requiring only four weeks to deploy, because it used the existing SAP HANA deployment and SAP BusinessObjects dashboard tool. Salespeople can now search billions of records and create a 360-degree view of any end customer in seconds. The initial pilot deployment started with 500 users and is expected to add 2500 unique sales users per quarter.

Supply Chain: Use Case

Cisco's supply chain organization has also benefitted from the SAP HANA platform. Cisco loaded one year's worth of historical supply chain management data onto the SAP HANA platform, with new data added every 30 minutes. The pilot deployment included 200 users. The second phase of implementation added 1200 users across the entire value chain. Cisco IT plans to add predictive analytics capabilities and alerts to inform stakeholders of the need to remedy issues affecting performance across the supply chain.

Cisco IT decided to use the existing SAP HANA deployment because of its history of delivering timely solutions to complex real-time analytics problems. The new solution performs extract, transform, and load (ETL) operations on several ERP databases in a common system with a common data model. This processing uses an additional 3-TB SAP HANA cluster instance on Cisco UCS Integrated Infrastructure.

Product Engineering: Use Case

Cisco product engineering also benefits from the SAP HANA deployment. The engineering management solution added 400 million records, primarily customer support ticket and internal bug-tracking data. The solution went live in only five months, beginning with 50 primarily management users. It is expected to add 300 unique users per quarter going forward. Currently, the system is handling approximately 1 million new records and changes daily.

A unique feature of SAP HANA is that it is user-interface neutral. Engineering staffs across Cisco can use familiar interface tools, which helps reduce implementation costs. This feature, as well as ease of use, is a major selling point.

SAP HANA on Cisco UCS Integrated Infrastructure

Figure 2 shows the functional architecture of Cisco's production in-memory analytics deployment. Central to this architecture is SAP HANA running on Cisco UCS Integrated Infrastructure with multiple SAP HANA Tailored Datacenter Integration (TDI)-certified shared storage arrays for persistence. Data originates from multiple sources, including Salesforce.com, the Customer Relationship Management (CRM) system, Enterprise Resource Planning (ERP) databases, and the Cisco EDW. All inbound data from ERP databases is merged into a true customer master hierarchy in SAP HANA.

SAP HANA outputs that data as informal queries and IT-authored reports as well as to the sales dashboard and data analytics applications. Cisco IT uses several server, cloud, and SAP HANA management products to monitor and manage the platform.
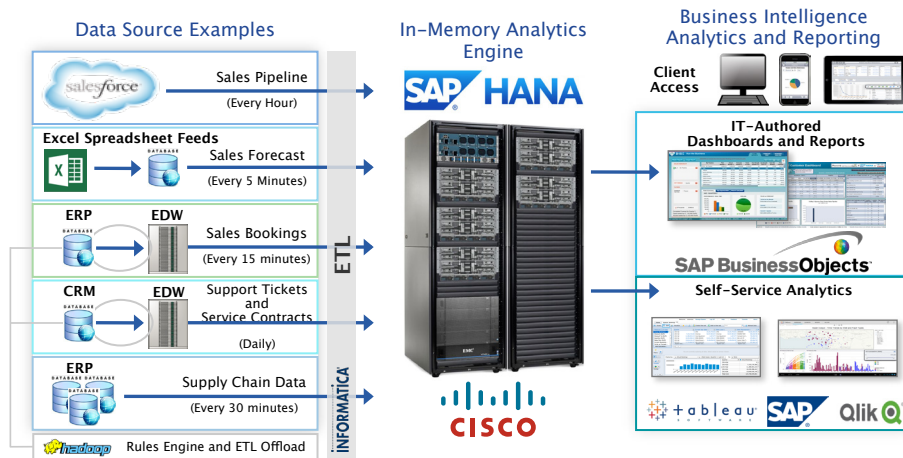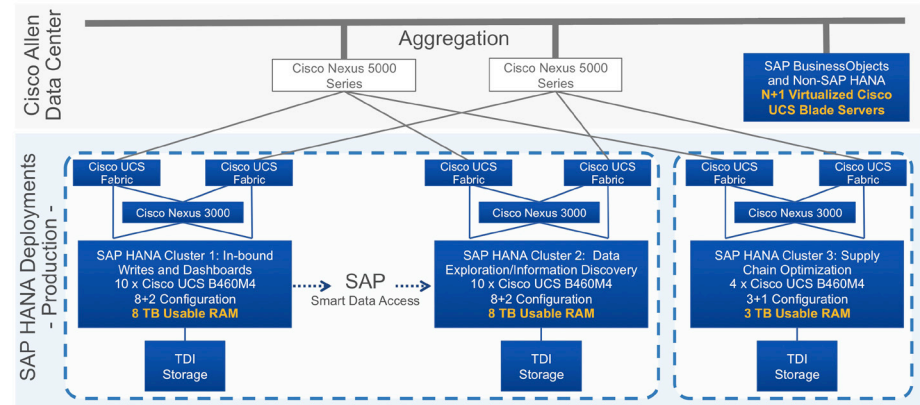
Figure 3 shows the technical architecture and instance strategy for the SAP HANA deployment. Cisco uses three SAP HANA cluster instances. Two of them run on 10 Cisco UCS B460 M4 Blade Servers using 8 TB of RAM. Cluster 1 is responsible for all inbound write operations from various source systems and for IT-authored dashboard reporting. Cluster 2 is responsible primarily for data exploration and self-service information discovery. SAP Smart Data Access (SDA) synchronizes data between cluster 1 and cluster 2 every 30 minutes. Cluster 3 is currently a separate SAP HANA instance dedicated to the supply chain use case. SAP BusinessObjects tools and other related analytics tools run in a virtualized blade cluster with all SAP HANA and non-SAP HANA workloads in a TDI deployment model on a 10 Gbps Fibre Channel over Ethernet (FCoE) unified fabric (using Cisco Nexus® and Cisco UCS platforms).

Figure 2 Functional Architecture: SAP HANA at Cisco

Figure 3 Technical Architecture and Instance Strategy: SAP HANA at Cisco

What Cisco Employees Are Saying

"The SAP HANA platform has rapidly evolved to be a fantastic source of information to streamline our business operations management. The more we use the tool, the more we will see productivity gains operating from a common set of numbers… Without a doubt, this tool will help us focus our efforts on managing the business more efficiently."

– Sylvain Tremblay, director of operations for U.S. commercial markets

"Having been involved in forecast meetings for three decades, the SAP HANA platform, without a doubt, is the very best tool I have ever seen to help us build predictability into our forecast. I'd urge everyone to use the system quickly. The sooner we use it, the sooner we improve our predictability… It's as simple as that."

– Duncan Mitchell, senior vice president for Europe, Middle East, Africa, and Russia (EMEAR) and emerging markets

Why SAP HANA?

What started as a pilot deployment to determine whether SAP HANA could help Cisco sales executives get more accurate and timely sales forecasting information has blossomed into deployments across the company. Many Cisco departments have discovered the benefits of a single source of data truth, accessed through familiar presentation tools and run on a platform that makes the information in data sets with billions of rows available in less than a second.

For More Information

To learn more about how Cisco helps customers deploy SAP applications and SAP HANA, visit www.cisco.com/go/sap and buildprice.cisco.com/saphana, or contact your local Cisco representative.

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