

# EVALUATING SAP HANA ON PUBLIC CLOUD

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## Why Organizations Are Moving to SAP HANA

According to a recent survey from Accenture, 89% of business leaders believe data will revolutionize business operations.<sup>1</sup> These organizations are making or planning to make major investments for the strategic use of analytics to improve business performance and drive digital transformation. For those using SAP software, the deployment of SAP HANA is quickly determining the difference between success and becoming an also-ran. SAP HANA is a large-scale, in-memory database solution that drives a wide range of business analytics activities. As a platform, SAP HANA provides the foundation to not only simplify data and database management, but also transform and enable new and powerful analytics capabilities for big data, Internet of Things and line-of-business applications that deliver vital insight. With the ability to handle larger and more complex data sets, organizations can identify critical trends and make optimal business decisions faster and more efficiently.

Adoption of SAP HANA is rising dramatically amongst the enterprise. In the fourth quarter of 2015, the number of SAP HANA customers more than doubled<sup>2</sup> quarter over quarter. And data from the Americas' SAP Users' Group<sup>3</sup> (ASUG) shows that deployment is on the upswing, with more than 7,200 customers implementing SAP HANA to date. This is delivering quantifiable business results: 88% of SAP HANA implementations have produced positive business and IT value. Also attracting increased investment is the new suite

<sup>1</sup> ["Big Success With Big Data,"](#) Accenture, 2014.

<sup>2</sup> ["S/4 HANA: SAP's New ERP Platform Saw Increased Adoption in 4Q15,"](#) Market Realist, Jan. 14, 2016.

<sup>3</sup> ["ASUG Research: SAP HANA Adoption Survey Results 2015,"](#) ASUG News, Dec. 8, 2015.



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of from SAP, S/4HANA, as 32% of customers plan to spend more on SAP HANA now that the product has shipped, according to ASUG.

## A Platform for Success: SAP HANA on Public Cloud

Public cloud infrastructure delivers many overall benefits, but when focusing specifically on SAP HANA, the benefits become even more compelling. With SUSE Linux Enterprise Server for SAP Applications, the leading Linux OS for SAP HANA, those benefits are amplified. Using certified public cloud infrastructure with the operating system trusted by SAP for their development platform enables enterprise organizations to build modern SAP landscapes powered by SAP HANA that are reliable, secure, and highly scalable.

It is important to understand that the value of the applications supported and run on SAP HANA is quite high, making any improvements in delivering SAP HANA that much more impactful. The primary benefits of using the public cloud for these workloads include:

- **Faster Deployment.** Eliminate the tasks of siting, provisioning, installing and testing hardware infrastructure can reduce the time to solution for SAP HANA to hours, according to the [AWS](#) website. In addition to near-instant deployment, you can also leverage SUSE Linux Enterprise Server for SAP Applications on-demand to access helpful features such as installation wizards for SAP HANA Firewall, High Availability, and SAP HANA TDI environments.
- **Transformative Economics.** Remove the infrastructure build phase to reduce a number of traditionally high up-front costs for IT assets as well as flexibility to including IT staffing and operations. Build your SAP HANA powered landscape with on-demand SUSE offerings also offers flexibility with a number of purchasing options such as Reserved Instances on the AWS Marketplace or leveraging Microsoft Enterprise Agreements and provisioning through the Azure Marketplace.
- **Elasticity for the Landscape.** Reduce up-front costs, as well as the carrying cost of additional expensive high-memory hardware that you would traditionally have to forecast in advance with the elasticity of public cloud. Capacity planning for SAP HANA, given the complexities of its role as a critical data storage and management platform, can demand substantial time and resources. Using public cloud infrastructure can mitigate much of this work.
- **Reliable, Secure, and Flexible Environments.** Public cloud services provide improved scalability, a focus on security and compliance, and wide geographic availability. The availability of SUSE solutions for High Availability and Live Patching, when coupled with the global presence of leading public cloud platforms, enables enhanced availability including features such as automated failover detection for SAP HANA. Enhanced flexibility is an important capability that reduces the challenge of capacity planning for analytics workloads, which are notoriously hard to plan for and previously required high carrying costs for unused but forecasted capacity.



Enterprise adoption of public cloud continues to see strong growth. Numerous studies have indicated that most enterprises already are using either Amazon Web Services (AWS) or Microsoft Azure—and often both.

## Tailor-Made Cloud Infrastructure for SAP HANA

While the fundamental benefits of public cloud infrastructure make it an attractive option, there is a new generation of public cloud infrastructure designed from the outset to provide optimal support for SAP HANA workloads. Working with SAP, SUSE and Intel, both AWS and Azure are providing new public cloud instances that are enterprise-grade and production-ready for mission-critical SAP HANA workloads. By using the latest Intel technology to enable larger memory sizes and more compute power for each instance, the public cloud offerings, utilizing SUSE Linux Enterprise Server, provide the performance, availability, security and agility that was previously unavailable. The public cloud providers also offer increased network throughput for these high-performance instances to support this type of workload.

### AWS X1 instance

The AWS X1 instance is purpose-built for SAP HANA. The goal was to build a fully elastic cloud offering that provides the performance, memory and CPU to meet the demands of SAP HANA's in-memory workloads. These instances are run on four Intel Xeon® E7 8880 processors and provide up to 2 GB of DDR4 memory. These instances also offer high storage throughput with up to 20 Gbps of network bandwidth and up to 10 Gbps of dedicated bandwidth to Amazon Elastic Block Store. X1 instances are certified by SAP for production environments that will run Business Suite S/4HANA, Business Suite on HANA, Business Warehouse (BW) on HANA, and data mart solutions on SAP HANA.

It is important to note that in some organizations, this type of high-performance infrastructure may not even exist today. This is not unexpected. As organizations focus on cloud services for data center augmentation, the investment in very-high-performance on-premises infrastructure has lagged.

From a financial perspective, AWS X1 instances are changing the economics of enterprise-scale in-memory applications. The ability to use a certified cloud service for typical SAP HANA applications is a relatively new option. Lowering the up-front investment and shortening the time to solution dramatically improves return on investment.

### Azure Large instance

The Azure Large instance is a purpose-built platform that enables organizations to utilize the cloud to maximize the value of their investments in SAP for both traditional and OLTP/OLAP-focused production environments. SAP HANA certifications for Azure Large instance include SAP HANA Developer Edition, HANA One, SAP S/4HANA, HANA OLTP, HANA Enterprise for BW, and SAP BW/4HANA.

The Azure solution starts with bare metal for superior performance unencumbered by virtualization, providing scalability, high availability and the agility of cloud services. These instances are built on Intel's Broadwell platform, and can support very large memory configurations of up to 4 TB scale-up and 32 TB

scale-out. These offerings provide as much as eight times more memory than traditional M instances. There is also support for up to 10 Gbps network throughput for these instances.

From an operational perspective, Azure Large instances offer compelling capabilities. The first is a service-level agreement (SLA) of 99.99% for a high-availability pair. Getting this SLA level requires an identical pair of Azure instances. There is built-in infrastructure support for both backup and recovery and disaster recovery. This level of operational completeness is essential for mission-critical SAP HANA workloads.

## **Enterprise Success: SAP HANA on Public Cloud**

Perhaps the best way to highlight the value of using public cloud infrastructure for SAP HANA is to showcase how actual customers are using the solution. These examples are currently in production and have delivered real benefits as noted below.

### **IT Transformation Driven by SAP HANA on Azure Large Instances**


Coats Group is a U.K.-based manufacturer of industrial thread and consumer textiles with 19,000 employees and revenues of nearly \$1.5 billion in 2015. As is true for most organizations, Coats needed to improve the speed and agility of its IT systems. Moving to SAP HANA on Azure, the manufacturer cut the time required for planning cycles and can now speed up delivery of finished goods to its customers. Coats also was able to implement real-time reporting and monitoring that improved manufacturing process productivity across the entire global supply chain. The combination of Azure and SAP HANA helped Coats transform its IT operations, enabling the company to run more efficiently, save money and satisfy customers by fully interrogating and exploiting its data.

### **New Levels of Competitiveness Powered by SAP HANA on AWS**

Ferrara Candy is a billion-dollar full-line candy company, known for well-loved brands such as Brach's®, Red Hots® and Black Forest®, among many others. The company was founded in 1908 and has almost 3,000 employees. Ferrara's IT organization faced a number of challenges, including completing the integration of systems from a merger with Farley's & Sathers, as well as meeting the need for timely and actionable business insight and IT infrastructure with costs that scaled in relation to realized value. Working with AWS and partner Protera Technologies, Ferrara deployed SAP BusinessObjects on SAP HANA using the AWS cloud and is able to expand operations leveraging not only X1 instances but also the new r4 instances from AWS. With this solution, not only have delivery times been drastically reduced, but their finance, sales, and operations teams now have access to new insight. With Business Objects powered by SAP HANA on AWS they have become more agile and competitive in their ability to support changing demands for sales promotions.

## **Key Takeaways**

As organizations of all types and sizes start the process of digital transformation to drive organizational success, SAP HANA has proved to be a critical platform for data management and analytics. For this



reason, the benefits of using SAP HANA have had an outsized impact on organizations' success, making the ability to more quickly deploy the platform and optimize its use a critical task for IT. Utilizing public cloud services will shorten the time to solution and provide the ability to scale on demand to support the effective use of SAP HANA in all of its forms. Coupled with the availability of certified instances of the SUSE Linux platform to provide reliability, availability, manageability and security, public cloud may become the default infrastructure option.

To support their customers, both AWS and Microsoft Azure have deployed new large-memory, high-performance cloud instances that are purpose-built for SAP HANA and based on Intel's latest technology. In many ways, these platforms are the optimal solution. Utilizing AWS X1 and Azure Large instances, it is now possible to more quickly and effectively meet the organizational demands for the data and analytics that SAP HANA delivers to support digital business transformation.

Regardless of whether you choose to maintain your own data center or look to transforming your approach to the SAP landscape using Amazon Web Services or Microsoft—you can trust SUSE to provide the open source solutions that are trusted for the most demanding enterprise applications.

Using SUSE Linux Enterprise Server for SAP Applications On-Demand you can use easy-to-deploy, pre-configured images that connect to the SUSE operated update infrastructure. On-demand deployments using the AWS Marketplace or Azure Marketplace automatically include the advantage of a warm hand-off for SAP and SUSE support to provide Priority Support should you need assistance.

## About SUSE

SUSE®, a Micro Focus company, provides and supports enterprise-grade Linux and open source solutions with exceptional service, value and flexibility. With partners and communities, we innovate, adapt and deliver secure Linux, cloud infrastructure and storage software to create solutions for mixed enterprise IT environments.