CLABBY ANALYTICS

Research Report

Why SAP Certification of Power Systems in the SAP Cloud Is Important

Executive Summary

Two years ago Clabby Analytics wrote a report entitled "Why Power Systems Will Overtake x86 Servers in the In-Memory Marketplace" that explained how hybrid Power Systems could run circles around x86-based servers in the in-memory database processing marketplace. In that report we explained how IBM Power System microprocessor architecture is superior to the leading x86 server designs – highlighting how POWER microprocessors offer significant symmetrical multiprocessing advantages as compared to x86 servers. Further, when comparing Power Systems to x86 system designs, we observed that IBM Power Systems provide:

- More addressable memory
- More memory bandwidth
- Faster input/output bus speed
- Faster processors
- GPU accelerators
- Denser cores with higher throughput per core

Finally, we pointed out that Power System designs are more flexible than x86 designs in both scale-up and scale-out designs – offering denser scale-out system designs and greater headroom in scale-up designs with Power 9 enterprise servers able to scale up to 16 sockets, 192 cores with access to 64 TB of memory. (HPE's Superdome Flex for HANA offers only up to 48 TB of shared memory [see here]).

Now SAP has certified IBM's Power Systems for use in the SAP HANA Enterprise Cloud. This month, IBM and SAP announced IBM Power Systems have been certified for the SAP HANA Enterprise Cloud – meaning that SAP customers can now access the industry's fastest in-memory database processing servers within SAP's managed, private cloud environment. By using Power Systems on the back-end, not only will users see results

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faster, but users will also gain additional flexibility by taking advantage of IBM Power Systems firmware-based virtualization that helps enable SAP HANA Enterprise Cloud users more easily accommodate capacity changes.

What Does All of This Mean?

This offering is an infrastructure simplification move. By offering access to Power Systems within the SAP HANA Enterprise Cloud SAP customers need not deploy and manage their own hybrid, virtualized Power Systems cloud environments. SAP, with its implementation and tuning knowledge can build and deploy high-performance virtualized IBM Power Systems as part of its own managed cloud infrastructure.   The responsibility for optimizing, tuning, managing, and securing this environment rests with SAP – freeing-up customers to focus on gathering data results rather than operating infrastructure. It's like having an enterprise private cloud – with all the security, optimization and service levels performed by and guaranteed by a single, trusted provider. This private cloud service is available as bring your own license (BYOL) or as a monthly subscription based on the number of users.

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It is important to note that SAP has certified this service on IBM POWER9-based IBM Power Systems E980 servers, which have the industry's largest virtualized server scalability of 24TB for the SAP HANA database. Power Systems can scale-up to 64TB of memory – but this configuration has not yet been certified by SAP.

A Closer Look at the HANA Enterprise Cloud

The goal of SAP's HANA Enterprise Cloud is to accelerate a user's evolution on the path to cloud readiness. SAP's HANA Enterprise cloud offers "capabilities that span the software and hardware stack, a comprehensive menu of functional and technical services, and the level of control clients should expect on premises, all in one privately managed environment".

Specifically, the SAP HANA Enterprise cloud offers SAP customers:

- Guaranteed service levels with IT stack stability, providing customers with control of their SAP environment, but with better service levels than most private on-premise deployments
- SAP operational expertise, reducing the risk of faulty deployments by exploiting SAP operational resources
- Managed services across the infrastructure and application layers – reducing deployment and operational complexity, while also allowing SAP clients to request additional services when needed
- An allowance for customized innovation – enabling SAP applications to be personalized (or users can exploit over 1,000 prebuilt applications from SAP partners)

- Hyperscaler capabilities – by exploiting the industry's most powerful commercial in-memory system design (Power Systems), SAP is offering access to a hyperscale, integrated hybrid environment that can achieve results faster than other commercial system architecture
- Business process integration – The SAP HANA Enterprise cloud allows customers to mirror their business processes with the SAP cloud. This included the operation of federal business processes (certified by the National Security Services organization)

The combination of all of these services enable SAP customers to leverage the SAP HANA Enterprise Cloud as if it were an extended, managed private cloud (only external instead of on-premises.)

Summary Observations

The way to look at this IBM Power Systems/SAP HANA Enterprise Cloud announcement is as an infrastructure simplification play that offers superior performance to typical private cloud deployments.

The way to look at this IBM Power Systems/SAP HANA Enterprise Cloud announcement is as an infrastructure simplification play that offers superior performance to typical private cloud deployments. What IBM is offering is the fastest, most scalable SAP HANA in-memory database processing servers; what SAP is offering is access to a very well designed, tuned, managed and secure cloud environment that off-loads enterprise IT from having to deploy and manage an on-premises environment. The combination of the two offerings enables enterprises to get results faster while potentially reducing operational costs (deployment, tuning and ongoing management) and risks (security, service level interruptions).