

# SAP HANA on VMware vSphere 5.5 for Production Environments

## Q. What has been announced?

- A. SAP now provides production support for SAP HANA® on VMware vSphere® 5.5, part of vCloud Suite.

## Q. What is supported?

- A. VMware can support SAP HANA databases in scale up mode, up to the maximum size of a virtual machine on vSphere 5.5, which is 64 vCPUs and 1TB of memory. A 1TB SAP HANA database is comprised of approximately 512GB of compressed data; the remainder of the RAM is utilized for temporary tables, intermediate calculations, and other SAP HANA database structures. This is no different from the physical requirements when sizing SAP HANA on vSphere.

A single SAP HANA virtual machine on a dedicated SAP HANA certified server is supported. SAP HANA multi-node/ scale-out deployment configurations are not supported. 2 or 4-socket SAP HANA certified Intel E7 Westmere EX or Intel E7 v2 Ivy Bridge EX processor based configurations in single-node, scale up configurations are supported only. 8-socket SAP HANA certified hardware configurations are not supported.

VMware vSphere® vMotion®, VMware vSphere® Distributed Resource Scheduler™ (DRS), as well as VMware vSphere® High Availability (HA) capabilities can be used to achieve operational performance and availability.

## Q. Are there any exceptions to what is supported?

- A. For SAP HANA on VMware in non-production scenarios, the following exceptions to the conditions above apply:
- With the exception of 2 and 4-socket, also 8 socket single-node SAP HANA appliances or SAP HANA Tailored Data Center Integration (TDI), verified hardware configurations may be used. The Time Stamp Counter (TSC) must be synchronized between all sockets/cores.
  - Multiple virtual machines may be deployed on a single SAP HANA server. Each SAP HANA instance is to be sized the same as SAP HANA deployed on bare metal.

## Q. Are multiple SAP HANA virtual machines on a single physical server supported in production environments?

- A. No. Multiple SAP HANA virtual machines on a single server are only supported today in non-production environments. SAP and VMware continue to work together to expand support.

## Q. What is SAP HANA?

- A. • SAP HANA is an in-memory database that massively improves performance of existing SAP applications, and enables business transformation via real-time analytics and transaction execution.
- SAP HANA is deployable in the cloud or as an on-premise appliance that is pre-installed and configured by certified partners, including HP, IBM, Fujitsu, Hitachi, Cisco, Dell, Huawei, NEC, and VCE.
  - Organizations can run SAP HANA on existing certified enterprise class storage using the SAP HANA Tailored Data Center model.

## Q. What are the benefits of SAP HANA on vCloud Suite?

### A. Lower TCO

- Reduce CapEx by 70% and OpEx by 56%.\*
- Unify and manage SAP HANA with the rest of the virtualized data center (no specialized staff required).
- Better utilization of existing infrastructure.

### Faster time-to-value

- Rapid and automated provisioning.
- Reduce deployment time to hours vs. days.\*\*
- Ensure consistency across environments with template provisioning.

### Higher service levels

- Live migrate SAP HANA across hosts in minutes with zero downtime with vSphere vMotion.
- Ensure out-of-the-box High Availability of 99.9%.\*\*\*
  - Automatically restarts SAP HANA VMs to maximize uptime.
  - Automatic failover to virtual HANA backup appliance with zero data loss.
- Easily manage peak analytic workloads.

\* Taneja Group Research 2014

\*\* EMC IT internal analysis

\*\*\* EMC IT, 02/14 EMC Perspective, H12853

**Q. How can I get SAP HANA on vCloud Suite?**

- A. Organizations can purchase virtual SAP HANA from their existing SAP HANA OEM appliance vendors or via installation of virtual SAP HANA on existing IT infrastructure via the SAP HANA Tailored Data Center model.

**Q. When is SAP HANA going to be available for production use on vCloud Suite?**

- A. SAP support for productive use of virtual SAP HANA on vSphere 5.5 is available today. SAP HANA hardware vendors will not need to re-certify their existing SAP HANA appliances. Support will also include Tailored Data Center deployment options. Further details can be found in [OSS Support Note 1995460](#).

**Q. Where can I find pricing information?**

- A. See vCloud Suite Pricing, Packaging and Licensing: <http://www.vmware.com/products/vcloud-suite/pricing.html>

**Q. How will SAP HANA on vCloud Suite be supported?**

- A. SAP and VMware will jointly support virtual SAP HANA in production, adhering to the SLAs defined in the customer support contract. If a reported problem is a known SAP HANA issue with a validated fix, SAP Support will recommend the appropriate fix directly to the customer. For all other performance related issues, the customer will be referred within SAP's OSS system to VMware staff for support. VMware will take ownership and work with SAP HANA HW/OS Partner, SAP and customer to identify root cause and resolve the issue.

**Q. How is SAP HANA sized for virtualized environments and what is the maximum size SAP HANA databases that can be virtualized?**

- A. SAP HANA databases are sized in an identical manner for physical and virtual environments; please follow the SAP HANA sizing guidelines for SoH or BWoH workloads or the specific T-Shirt sizings. VMware can virtualize and support a 1TB SAP HANA Appliance.

**Q. Will all SAP HANA Appliances include vCloud Suite?**

- A. You can choose to deploy vCloud Suite on any SAP HANA Appliance, which comes either pre-installed from the appliance vendor for SAP HANA or can be installed and verified as documented in the SAP HANA TDI integration approach.

**Q. Is there a performance impact of running SAP HANA on vCloud Suite?**

- A. During recent performance analysis conducted jointly by SAP and VMware, the majority of the test cases stayed within the defined KPI of 12% performance degradation compared to bare metal.

**Q. What migration, implementation and deployment services are provided?**

- A. VMware PSO together with SAP Consulting provide assessment, budgeting, planning and design, implementation and optimization services.

**Q. Can I run SAP HANA on commodity hardware in production?**

- A. SAP HANA is only supported on certified SAP HANA hardware.

**Q. Is there a hardware compatibility list specially required to run SAP HANA?**

- A. Yes, only certified SAP HANA appliance systems that a hardware vendor offers for SAP HANA and TDI Certified configurations are supported for SAP HANA.

**Q. What is the maximum database size for the virtual SAP HANA appliance?**

- A. 1TB is the maximum if all data must reside in RAM; using the SAP ABAP Based Sizing Tool (recommended by SAP), cold data can reside on disk for virtualized SAP HANA databases greater than 1TB.

**Q. What do I do if I outgrow the maximum database size?**

- A. Use the SAP ABAP Based Sizing Tool to grow beyond 1TB (recommended by SAP).

**Q. Where can I find more information?**

- A. Additional information is also available on the VMware and SAP Virtualization web page:

[www.vmware.com/go/sap-hana](http://www.vmware.com/go/sap-hana)

[OSS Support Note 1995460](#)

