

FAQ document for announcement of SAP HANA availability to run on VMware

February 2012 V1.6

This document is meant to provide a guide on understanding how SAP HANA will support deployment on VMware vSphere virtualization technology. The document will be updated frequently and without notice. For the latest version please contact SAP HANA Product Management, Solution management or SAP HANA COE and review SAP note 1788665.

Q1: WHAT IS ANNOUNCED?

SAP and VMware announce support for deploying SAP HANA virtualization using VMware vSphere. Support is announced for single node Non-Production deployments on certified scale-up single hardware appliances such as test and development systems. Virtualizing SAP HANA with VMware vSphere offers the SAP HANA customer TCO reductions for customers standardizing on VMware and additional options for planning and managing their multiple non-productive systems

Q2: WHEN WILL SAP HANA SUPPORT VMWARE?

SAP will support VMware vSphere 5.1 with the release of SAP HANA SPS 05.

SAP HANA virtualized with VMware vSphere 5.1 is only supported on single-node hardware configurations validated for SAP HANA and provided by certified SAP HANA appliance vendors. The installation of the SAP HANA appliance software into the VMware guest needs to be done by certified SAP HANA appliance vendors or their partners.

Please contact your SAP HANA appliance vendor for more details on when that specific vendor plans to offer SAP HANA virtualized with VMware vSphere 5.1.

Q3: WHAT ARE THE BENEFITS TO VIRTUALIZING SAP HANA SYSTEM?

Virtualizing SAP HANA for test and development environments with VMware vSphere offers the SAP HANA customer;

TCO

- Virtually provision SAP HANA Test and Dev. environments utilizing existing SAP HANA appliance infrastructure;
- Fully virtualized and standardized SAP software appliance that can be rapidly deployed/provisioned
- Ability to have different sized virtualized SAP HANA databases on the same SAP HANA appliance

IT Operations

- Simplify resource delivery on demand by provisioning SAP HANA Test and Dev. environments virtually, securely, fully managed
- Ability to assign and dedicate CPU cores to specific SAP HANA databases within the same appliance
- Standardize virtualization and management across entire SAP and non-SAP datacenters

SAP HANA Application Development:

- Virtual provisioning for developers increases time-to-value for SAP HANA applications

Q4: HOW CAN I PURCHASE SAP HANA ON VMWARE VSPHERE?

VMware vSphere software and support can be purchased from certified SAP HANA appliance vendors by customers. Contact your SAP HANA appliance vendor for specific details and offerings.



There is no specific SAP HANA license for running SAP HANA on VMware vSphere sold by SAP.

Q5: WHEN WILL SAP HANA APPLIANCE VENDORS SHIP SAP HANA VIRTUALIZED WITH VMWARE VSPHERE 5.1?

It is expected that the first appliances will ship in early Q1 2013. Contact your SAP HANA appliance vendor for specific details and virtualized appliance offerings.

Q6: HOW CAN I GET SAP HANA ON VMWARE VSPHERE?

There will be additional offerings made by the SAP HANA appliance vendors, providing VMware vSphere in conjunction with SAP HANA appliance software and hardware configurations, validated for SAP HANA.

Q7: WILL ALL SAP HANA APPLIANCES INCLUDE VMWARE VSPHERE?

No. Specific offerings with VMware vSphere will be made by the SAP HANA appliance vendors. SAP HANA appliances will continue to be offered without virtualization.

Only 'scale-up' single server appliance configurations are supported. 'Scale-out' configurations are not supported.

Q8: ARE APPLICATIONS RUNNING ON SAP HANA SUPPORTED?

Yes. All applications that run on SAP HANA are supported (e.g. SAP BW, RDS solutions, CO-PA Accelerator, SAP HANA data marts, etc.), under the constraints outlined in this document (non-productive use, only single-node configurations, etc.).

Q9: IS SAP HANA FUNCTIONALITY DIFFERENT WHEN DEPLOYED ON "BARE METAL" SERVERS VERSUS SAP HANA USING VMWARE VSPHERE?

No. The SAP HANA functionality is the same as in a non-virtualized deployment (modeling, data provisioning, monitoring, operations, DR Lifecycle management, etc.)

Q10: WHAT IMPLEMENTATION AND DEPLOYMENT SERVICES ARE AVAILABLE?

Implementation and Service offering will be offered through SAP HANA appliance vendors and their partners. Contact your SAP HANA appliance vendor for specific details and offerings.

Q11: HOW DO I GET SUPPORT SAP HANA ON VMWARE VSPHERE?

VMware vSphere support will be offered by certified SAP HANA appliance vendors to customers. Customer Support tickets submitted to SAP will be routed to our appliance partners as required.

Q12: IS THERE ANY PERFORMANCE IMPACT OF RUNNING SAP HANA ON VMWARE VSPHERE?

VMware vSphere Virtual machine does have a performance impact on SAP HANA processing from a CPU processing, I/O and memory access perspective. The impact is highly dependent on the specific operation being executed and the data on which is operating on. The specific impact cannot be predicted but across a range of pre-release tests it has been observed to be about 10% or less.

Q13: WILL SAP HANA SUPPORT VMWARE RUNNING ON COMMODITY HARDWARE?

No, SAP HANA virtualized with VMware vSphere 5.1 is only supported on single-node hardware configurations, validated for SAP HANA and provided by certified SAP HANA appliance vendors.

Q14: CAN I MIX VIRTUALIZED AND NON-VIRTUALIZED SAP HANAS ON THE SAME APPLIANCE?

No. The appliance will be delivered either virtualized or non-virtualized.

Q15: WHAT DOES 'SINGLE NODE' NON-PRODUCTION SYSTEM MEAN?

VMware vSphere support is currently supported for single node SAP HANA deployments only (i.e. a single node database configuration). Support for scale-out clusters is not offered at this time.

A non-Production system means any SAP HANA deployment not used in a productive manner. Examples include Development, Test, Sandbox, break-fix and learning systems.

Q16: HOW IS SAP HANA SIZED FOR VIRTUALIZED ENVIRONMENTS?

Virtualized SAP HANA is sized the same as non-virtualized SAP HANA deployments. There will be a small performance impact for virtualization but no impact on database's data size. We recommend that customer's utilize the t-shirt sizing for defining virtual machines to ensure the right balance of CPU and Memory. SAP HANA in scale out configuration is not support

- XSmall: 64GB RAM with CPU 5 cores
- Small: 128GB RAM with CPU 10 cores
- Medium: 256GB RAM with CPU 20 cores
- Large: 384GB RAM with CPU 30 cores

Q17: WHAT IS THE MAXIMUM VIRTUALIZED SAP HANA DATABASE THAT CAN BE DEPLOYED?

Currently the largest SAP HANA virtualized database is limited to the number of cores supported by a single vSphere (64). We recommend that customer's utilize the t-shirt sizing for defining virtual machines to ensure the right balance of CPU and Memory. See question above for recommended sizing information.

Q18: CAN I HAVE A SYSTEM LANDSCAPE WITH A MIX OF VIRTUALIZED AND NON-VIRTUALIZED SAP HANA DEPLOYMENTS?

Yes. For example, Development and Test systems could be virtualized and the Production system non-virtualized

Q19: CAN SAP HANA BE DEPLOYED IN A SCALE OUT CLUSTER WHEN VIRTUALIZED?

No. SAP HANA Scale-out and HA scenarios are not currently available for VMware vSphere either across physical appliance nodes or across logical nodes with the same appliance

Q20: CAN I USE VMWARE VSPHERE FAULT TOLERANCE / HA FUNCTIONALITY WITH SAP HANA?

VMware vSphere Fault Tolerance is only supported on Virtual Machines with 1 vCPU which means that it cannot be used with HANA as all HANA VMs will have more than 1 vCPU. VMware HA functionality allows for a virtual machine to be automatically restarted on another vSphere host in the event that the vSphere host it was running on failed. This requires that all the virtual machine's virtual disks reside on shared storage. If the SAP HANA appliance is not pre-configured with shared storage, this local disk storage requirement means that HA cannot be used with HANA virtual machines because the virtual disks are not on shared storage.

Q21: CAN SAP HANA USING VMWARE VSPHERE BE DEPLOYED IN THE CLOUD?

Yes. On-premise and private cloud offerings are supported via certified providers. There is currently no specific certification for SAP HANA using VMware vSphere from SAP.

Q22: CAN I CONVERT AN APPLIANCE FROM NON-VIRTUALIZED TO VIRTUALIZED?

Please contact your SAP HANA appliance vendor or cloud provider for more information on what conversion services are offered.

Q23: CAN I INSTALL NON-SAP HANA SOFTWARE INTO ADDITIONAL VIRTUAL MACHINES ON A SAP HANA APPLIANCE?

Yes. SAP permits the installation and operation of external software that is required to fulfill the IT compliance and IT policy that are determined in operation, provided that the prerequisites stated in SAP Note 1730928 are met.

Q24: CAN I USE VMWARE VSPHERE SYSTEM CLONING FEATURES WITH SAP HANA?

It is a valid use-case to clone a productive SAP HANA system on bare-metal into a virtual machine to be then used for Non-Productive purposes under the constraints described in this FAQ and the “Guidelines for running SAP HANA virtualized with VMware vSphere”.

Q25: WHERE CAN I FIND THE LATEST INFORMATION ON SAP HANA RUNNING ON VMWARE VSPHERE?

www.saphana.com and SAP note 1788665