



# Maximum Uptime for SAP® HANA with Veritas InfoScale™ Availability

## OVERVIEW

SAP® HANA is a database that massively improves performance of existing SAP applications by leveraging in-memory technology, and enables business transformation via real-time analytics and transaction execution. SAP HANA is deployable in the cloud or as an on-premises appliance that is pre-installed and configured by certified partners, including HP, IBM®, Fujitsu, Hitachi, Cisco®, Dell®, Huawei, NEC, and VCE. The SAP HANA Tailored Data Center model allows organizations to run SAP HANA on existing certified enterprise class storage.

SAP HANA has been making impressive inroads as a real-time enterprise platform, moving from non-critical analytic use cases to the heart of critical business applications. As the primary database platform for SAP Business Suite applications, for S/4HANA, or as a platform for new generation applications, the requirements for IT resiliency increase. SAP HANA comes with its own set of resiliency features: SAP HANA System Replication enables high availability for single-host SAP HANA systems, and disaster recovery across data centers for both single-host and scale-out systems.

However, there are challenges with using SAP HANA System Replication to minimize downtime. Business continuity architectures based on SAP HANA System Replication rely on the system administrator to determine that a failure has occurred and initiate the failover to the secondary system. The administrator must monitor SAP HANA for a failure, assess the failure and then perform an appropriate action to recover the situation.<sup>1</sup> This can significantly delay recovery. Also, manual processes are prone to errors that can worsen the situation and lead to data loss.

## KEY BENEFITS

- Automatic, fast detection of SAP HANA failures
- Intelligent, automated remediation of an outage, according to SAP best practices
- Broad use case support
- Virtual Business Services for simplified orchestration of SAP applications across multi-tier implementations
- Support for SAP HANA Multi-tenant Database Containers (MDC) in Scale-up environments
- SAP HANA Appliance Vendor independent solution

## MINIMIZING DOWNTIME WITH AUTOMATION

Veritas InfoScale™ Availability helps minimize downtime by enabling customers to automate the monitoring of SAP HANA, remediation of the failure, and restoring redundancy as soon as possible.

The InfoScale Availability agent for SAP HANA continuously monitors the processes of the SAP HANA instances to verify that they function properly. InfoScale Availability's Intelligent Monitoring Framework feature keeps the monitoring overhead low and reduces failure detection time. In addition, the agent leverages SAP tools in order to regularly perform a thorough health check of the SAP HANA instances.

In the event of a failure, the InfoScale Availability agent for SAP HANA will evaluate the best way to restore availability as fast as possible, without putting your data at risk. To do this the agent performs a check to determine the best way to remediate the situation, according to SAP best practices.<sup>2</sup> It will only fail over to the secondary system if there will be no data loss (i.e. if the replication is in a healthy state) and if a failover can reduce the downtime duration. If the agent determines that a restart attempt of the primary system is possible and provides the least downtime, it will restart the primary system instead of performing a failover. In case of a failover, InfoScale Availability also fails over the IP addresses used to access the SAP HANA database to the secondary system and the clients can now continue to access the database by just reconnecting. In order to restore redundancy after a failover, the InfoScale Availability agent for SAP HANA will redo setup of replication between the SAP HANA systems, as soon as the former primary system is available again.

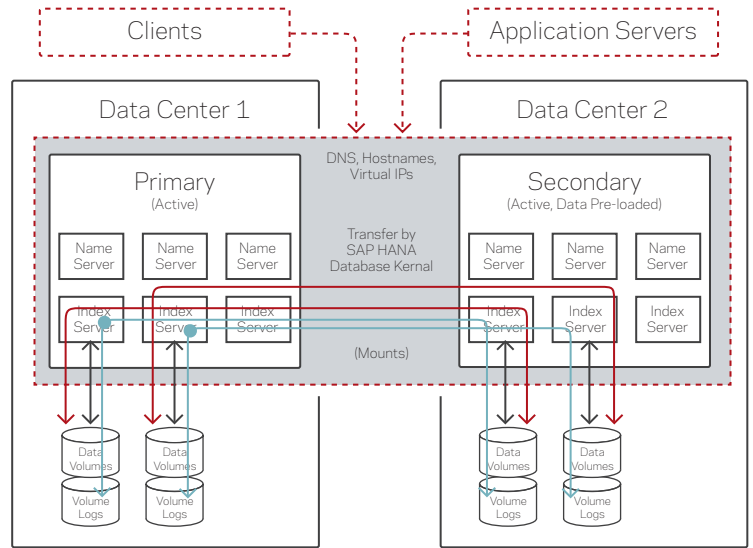


Figure 1. InfoScale Availability for SAP HANA System Replication Automation

## FLEXIBLE USE CASES

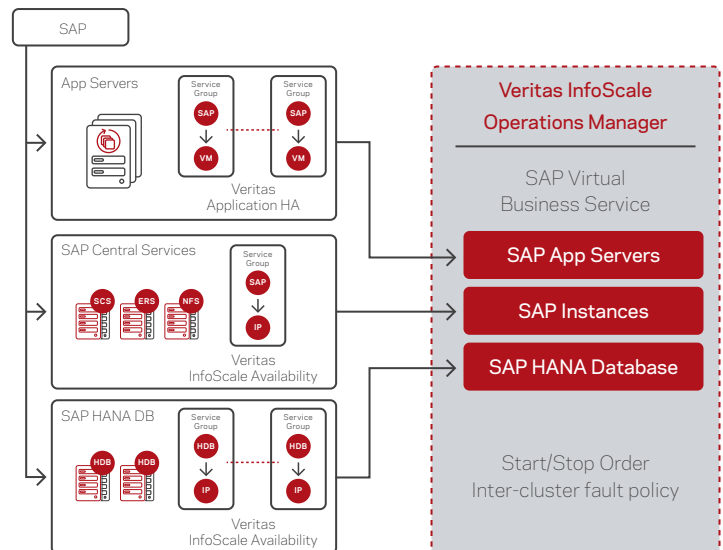
The InfoScale Availability agent supports synchronous and asynchronous replication modes provided by SAP HANA System Replication, to allow for replication across any distance. Multi-tier replication setups with 3 replicated SAP HANA systems in a replication chain are supported as well. In addition, it also supports HANA for shared nothing approach, where the underlying data is partitioned across nodes, also referred as the distributed SAP HANA system layout.

InfoScale Availability for SAP HANA also supports a cost-optimized replication setup. In this kind of setup, the secondary system can be used to run a non-production SAP HANA system when it is not used to run the production system. In the event of a failover of the production system, it can be failed over to secondary system after provisioning the required resources or after shutting down the non-production system.

As a vendor independent solution, the InfoScale Availability solution for SAP HANA can help protect SAP HANA systems running on any SAP HANA appliance vendor's infrastructure.

## SIMPLIFIED ORCHESTRATION FOR COMPLEX, TIERED SYSTEMS

IT services are no longer standalone applications running on single servers. Business services or multi-tier applications like SAP Business Suite applications make up most of an IT organization's critical services, with different components of the application running on different tiers of infrastructure with their own unique availability needs. A failure at any tier can bring down the entire business service and managing the recovery is time consuming and complex. Virtual Business Services in InfoScale Availability is aware of the complete business service and takes action in the event of a failure to restore the entire service. When an individual component fails, Virtual Business Service provides automated orchestration of the connections to other computing resources, on-site or even across sites. This means faster recovery and minimal downtime—with no manual intervention.



## SUPPORTED PLATFORMS

### For SAP HANA

- SAP HANA 1.0 , SAP HANA 2.0 and available SPS
- SUSE® Linux Enterprise Server (for SAP Applications) 11, 12 (64-bit)
- Red Hat® Enterprise Linux for SAP HANA (64-bit)
- VMware vSphere® 5.5 or higher

### For other SAP application components

Linux®, Windows®, IBM® AIX®, Microsoft® Hyper-V, Oracle® Solaris SPARC Unix, Oracle Solaris x86, VMware®

### For Virtual Business Services

InfoScale Availability (formerly Symantec Cluster Server), Veritas™ ApplicationHA, and Microsoft® Windows Failover Cluster

For a complete list of supported systems please check the Services and Operations Readiness Tool at [sort.veritas.com](http://sort.veritas.com).

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<sup>1</sup> Refer to SAP HANA Administration Guide [https://help.sap.com/hana/SAP\\_HANA\\_Administration\\_Guide\\_en.pdf](https://help.sap.com/hana/SAP_HANA_Administration_Guide_en.pdf)

<sup>2</sup> Refer to SAP Note 2063657: HANA System Replication takeover decision guideline

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## ABOUT VERITAS TECHNOLOGIES LLC

Veritas Technologies empowers businesses of all sizes to discover the truth in information—their most important digital asset. Using the Veritas platform, customers can accelerate their digital transformation and solve pressing IT and business challenges including multi-cloud data management, data protection, storage optimization, compliance readiness and workload portability—with no cloud vendor lock-in. Eighty-six percent of Fortune 500 companies rely on Veritas today to reveal data insights that drive competitive advantage. Learn more at [www.veritas.com](http://www.veritas.com) or follow us on Twitter at [@veritastechllc](https://twitter.com/veritastechllc).

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Veritas Technologies LLC  
500 East Middlefield Road  
Mountain View, CA 94043 USA  
+1 (866) 837 4827  
[veritas.com](http://veritas.com)

For specific country offices and contact numbers,  
please visit our website.  
[veritas.com/company/contact](http://veritas.com/company/contact)

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V0617 10/18