VERITAS™

Veritas InfoScale: Business Continuity for SAP Applications

Technical overview.

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Introduction

Veritas Technologies is a leader in developing data resiliency and availability solutions that focus on the protection and management of digital assets critical for a company's success and business continuity. One of our flagship products, InfoScale, is designed to provide high availability and disaster recovery (HADR) as well as maximum performance and optimization for SAP applications.

Maintaining optimal performance and availability for critical SAP applications is increasingly difficult for many IT organizations. The challenge is to maintain optimal performance and continuous SAP application availability across complex, interconnected, dynamic and heterogeneous infrastructure. With minimal or no ability to tolerate downtime, IT organizations need the ability to upgrade, test, maintain and deploy SAP infrastructure components without disrupting operations.

InfoScale for SAP applications offers several key benefits:

- Confident disaster recovery: test SAP application resiliency plans easily and non-disruptively
- Intelligent monitoring: instantly detect issues that may affect SAP application availability
- Intelligent, automated remediation of outages, according to SAP best practices
- Eliminate planned and unplanned application downtime
- Customized high-availability agents guarantee SAP application compatibility, reduce time to deployment, and cut consulting costs
- Virtual Business Services for simplified availability and recovery orchestration of SAP applications
- Manage complexity by providing a single interface for starting, stopping, monitoring and maintaining SAP application services
- Flexibility with extensive support for a wide range of operating systems, databases, and storage systems
- Manage updates by proactively moving application services to enable dynamic maintenance and testing Optimized resource utilization

InfoScale is a certified solution for managing high availability and disaster recovery for SAP applications. InfoScale enables organizations to deploy SAP with the confidence that it will be highly available and resilient, while providing an enterprise solution that manages high availability for the overall SAP business service supported by SAP HANA and other database management solutions supported by SAP applications.

Solution Value

Veritas InfoScale is a proven industry leading availability and storage management solution that helps organizations manage information resiliency and protection across physical, virtual, and cloud infrastructures. InfoScale helps organizations that rely on SAP applications by providing an integrated, out-of-the-box solution to keep their business services running. InfoScale provides a simple and cost-effective solution to ensure 24x7 availability of your SAP applications.

Application Availability

SAP applications can be critical to an organization's daily operations and downtime is not an option. With an increasingly globalized footprint, outage windows once available to IT staff are now business hours somewhere else around the globe,

making planned downtime increasingly scarce and expensive. IT organizations need the ability to upgrade, test, maintain and deploy infrastructure components without disrupting operations. Unplanned downtime may interrupt critical business processes and cost companies thousands of dollars or more per hour.

InfoScale eliminates planned and unplanned downtime by clustering critical applications and the resources they require. InfoScale can monitor and centrally manage all the critical components of an SAP environment, including the SAP NetWeaver/SAP S4HANA application, the underlying database, and the file server, to ensure maximum application availability. By monitoring the status of applications and automatically moving them to another server in the event of a fault, InfoScale can dramatically increase the availability of an application or database. It can detect faults in an application and all its dependent components, including the associated database, operating system, network, and storage resources.

InfoScale provides immediate detection of application faults with the Intelligent Monitoring Framework (IMF) feature. By removing the constant monitoring cycle needed by most availability solutions, this framework provides instant notification when a resource goes offline, with no additional CPU overhead. As a result, action is taken immediately in the event of a failure which enables very fast remediation and minimizes the potential for data corruption.
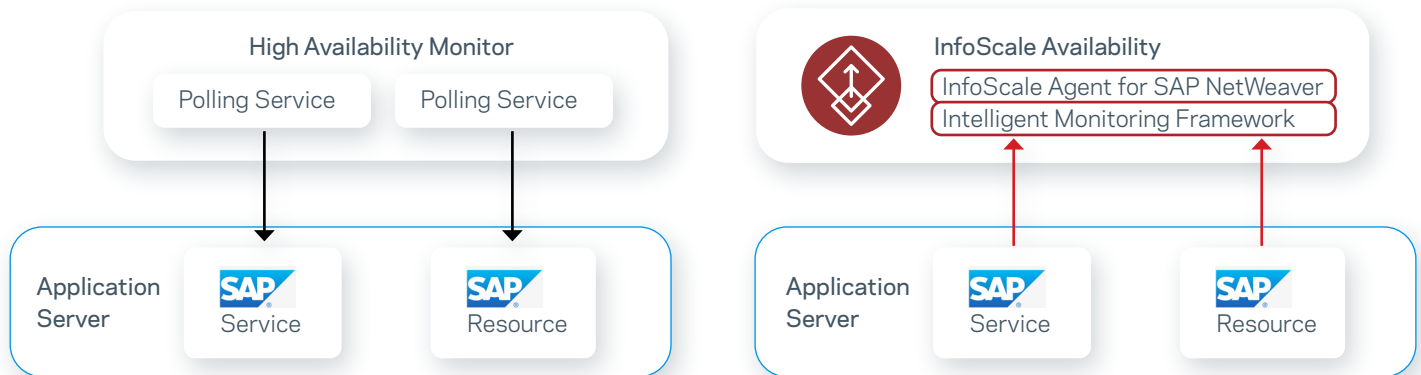

Figure 1. InfoScale SAP NetWeaver Agent with Intelligent Monitoring Framework

InfoScale also supports geographically distributed clusters as well as the underlying data replication. InfoScale enables administrators to migrate applications with a single click, helping businesses operate during serious local disruptions without significant interruptions to critical services.

Application Performance

As an industry leading software-defined storage management solution, InfoScale provides a highly available, robust foundation for SAP data. Several performance benefits are realized when using InfoScale with SAP applications:

- InfoScale SmartIO intelligently caches SAP application data on the fastest available storage for better application performance
- A highly available clustered file system reduces application downtime by providing concurrent access to application data across multiple nodes
- Flexible software-defined architecture that supports multiple highly available and high-performance storage configurations
- Database optimizations for multiple enterprise database management solutions such as Oracle, DB/2, Sybase, Microsoft® SQL Server, and Oracle® RAC

SAP can take advantage of InfoScale Flexible Storage Sharing (FSS) – a unique feature that provides high performance shared storage built using Direct Attached Storage (DAS). FSS enables fast implementation times and can be combined with SmartIO granular intelligent caching to significantly increase SAP application performance while reducing overall storage costs. Other storage management features such as deduplication, compression, thin provisioning, and storage tiering included with InfoScale work in parallel to provide an enterprise data management platform for SAP applications.
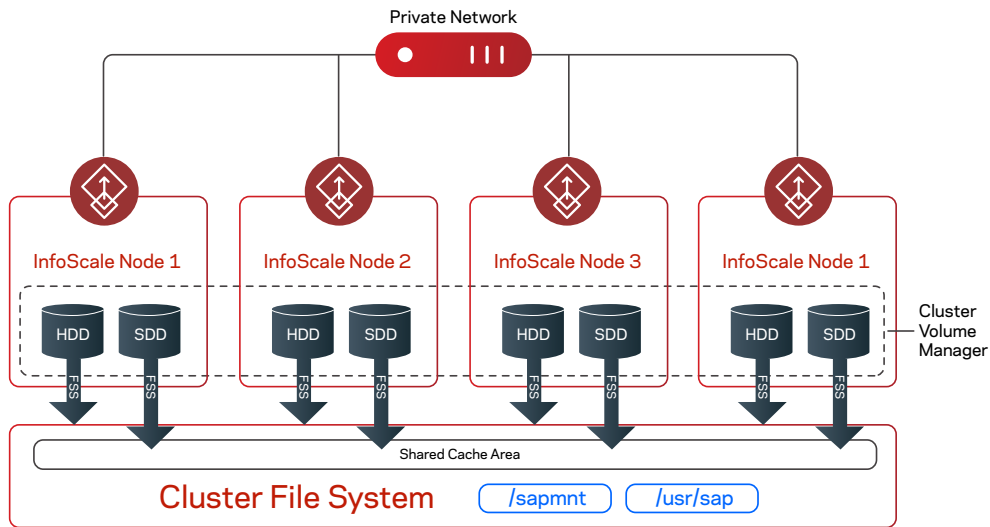
Figure 2. InfoScale FSS for SAP

With InfoScale, you can adopt Solid State Drive (SSD) technology and implement any changes to your storage infrastructure – including operating system or array migrations – without no impact on application availability. InfoScale delivers reliable, storage-independent replication over any IP network – a critical component of a rapid disaster recovery configuration. Data is replicated at the logical volume level, as well as at the file system level (with Linux systems), while ensuring data integrity and reliability during replication.

Automation and Orchestration

Business Services provided by the multi-tier applications within the SAP Business Suite can involve complex deployments and multiple systems, with different components of the applications running on different tiers of infrastructure each with their own unique availability requirements. A failure in any tier can bring down the entire business service and managing the recovery is time consuming and complex. InfoScale's Virtual Business Services feature is aware of the complete business service, across cluster and platform boundaries, and takes action in the event of a failure to restore the entire service. When an individual component fails, Virtual Business Services automatically orchestrates the connection to other computing resources, on-site or even across sites. This means faster recovery and minimal downtime – with no manual intervention.
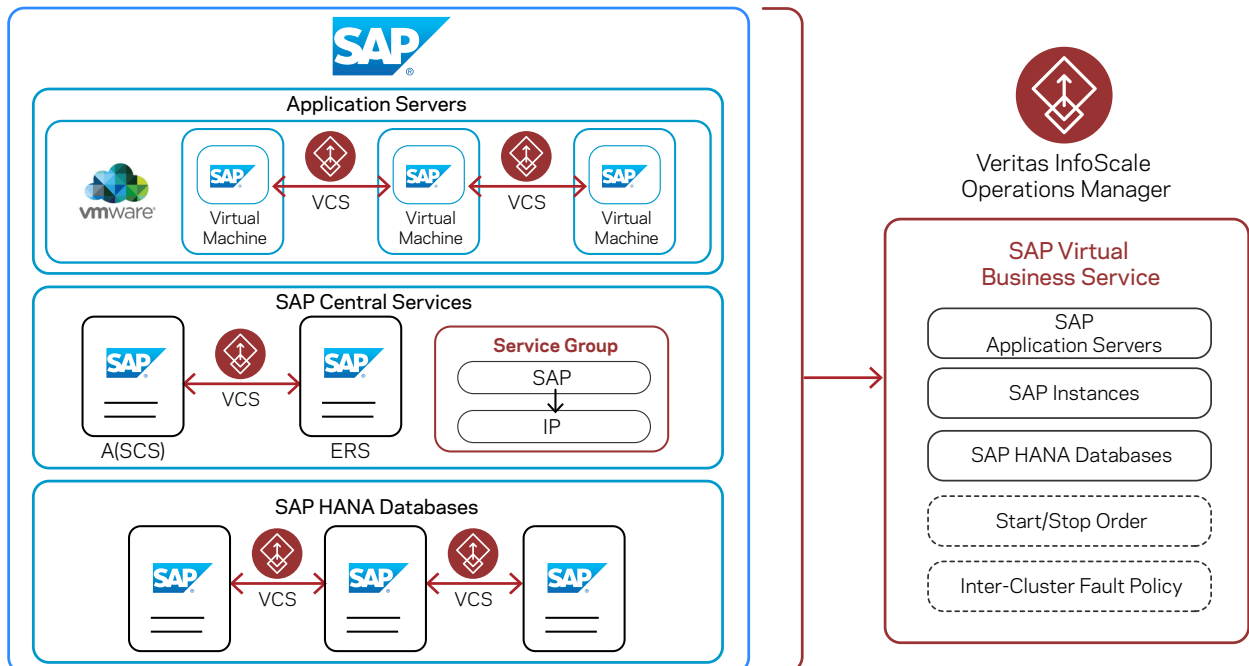

Figure 3. InfoScale Virtual Business Service for SAP

Optimize Resource Utilization

High availability solutions typically recommend using active/passive two-node availability configurations. This leaves the passive servers idle, wasting computing resources and decreasing server utilization. InfoScale supports true N+1 "roaming spare" or N+M "active/active" configurations for maximum availability without the cost of a dedicated spare per application. With InfoScale's advanced AdaptiveHA feature, it dynamically monitors available unused system capacity in terms of CPU, memory and swap space to understand which systems have the most available resources. It then can make dynamic decisions and select the node with most available resources to fail over an application. AdaptiveHA ensures that SAP application uptime is maximized, and server resources are utilized most efficiently for Linux and UNIX environments.
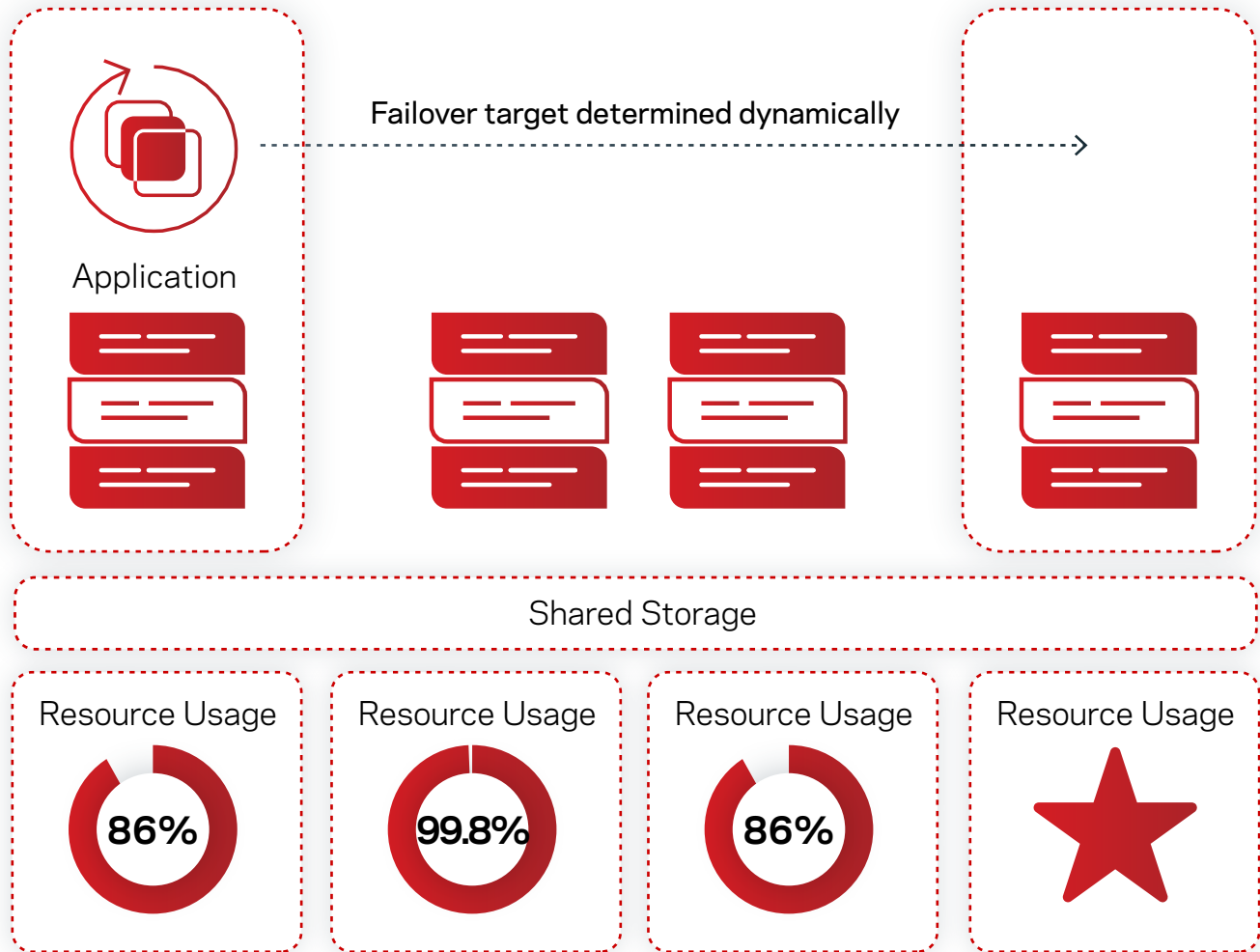

Figure 4. InfoScale AdaptiveHA Dynamic Failover

Most critical applications have a deployment architecture based on geographic separation for the primary and secondary environments. While this helps ensure application uptime, alternate data centers are costly. For many businesses, disaster recovery planning involves managing a "cold" recovery site that requires an initial investment and ongoing maintenance. In the case of a disaster, recovery may be time consuming and will often require manual intervention. By multi-purposing resources, InfoScale enables businesses to build "hot" recovery sites that can provide nearly instant recovery without manual intervention.

Summary

As one of the most popular solutions for enterprise business management, SAP applications rely on Veritas InfoScale as a certified solution to ensure maximum uptime and resiliency for SAP applications. InfoScale combines industry-leading data management and resiliency functionality to create a highly available, robust foundation for SAP data.

InfoScale's high-availability agents for SAP are directly integrated with application resources to provide maximum uptime. InfoScale helps reduce the overall complexity of SAP environments with simplified service level HADR orchestration and optimized resource utilization. Some key benefits of using InfoScale to manage HADR for SAP applications:

- Near-instant fault detection that provides minimal RTO and RPO for SAP applications and databases
- Automation of the entire failover process that includes non-disruptive DR testing
- Operational flexibility with support for multiple operating systems and hardware platforms Support for database and hardware solutions commonly used to run SAP applications

With the ability to provide best-in-class architectural flexibility, availability and resiliency for SAP applications, InfoScale enables businesses to improve on application SLA's while reducing costs and operational complexity. Whether running on-premises, in a hybrid cloud configuration or entirely within a cloud environment, InfoScale is an enterprise software-defined availability and resiliency solution that provides the tools needed to run SAP applications with maximum uptime.

Supported Platforms

For SAP application components

Supported platforms: Linux, Windows, IBM® AIX®, Microsoft Hyper-V, Oracle® Solaris SPARC Unix, Oracle Solaris x86, VMware® (not all high availability agents available on all platforms).

For Virtual Business Services

InfoScale Availability / InfoScale Enterprise (formerly Symantec Cluster Server), and Microsoft® Windows Failover Cluster.

For a complete list of supported systems please check the Services and Operations Readiness Tool at sort.veritas.com.

About Veritas

Veritas Technologies is a global leader in data protection and availability. Over 80,000 customers—including 87 percent of the Fortune Global 500—rely on us to abstract IT complexity and simplify data management. The Veritas Enterprise Data Services Platform automates the protection and orchestrates the recovery of data everywhere it lives, ensures 24/7 availability of business-critical applications, and provides enterprises with the insights they need to comply with evolving data regulations. With a reputation for reliability at scale and a deployment model to fit any need, Veritas Enterprise Data Services Platform supports more than 800 different data sources, over 100 different operating systems, more than 1,400 storage targets, and more than 60 different cloud platforms. Learn more at www.veritas.com. Follow us on Twitter at @veritastechllc.

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