

Veritas InfoScale + AWS

Application Performance and Availability
in Hybrid-Cloud Deployments
with Amazon Web Services.

OVERVIEW

Cloud adoption is a given for most enterprises—with many adopting a cloud-first mindset. According to a [worldwide survey](#) conducted by Veritas, 92 percent of organizations plan to move infrastructure and workloads to public clouds such as Amazon Web Services (AWS). Factors driving this move include the desire for increased resiliency, security and decreased CapEx and OpEx spend. Although there is considerable interest in hybrid-cloud deployment models, ensuring seamless data movement, enterprise performance, scalability and resiliency can be challenging.

Veritas InfoScale, part of our information-defined storage portfolio, offers enterprise-grade capabilities for organizations that want to deploy and run their top-tier, mission-critical applications across hybrid clouds. InfoScale combines with AWS to deliver a complete suite of benefits for organizations deploying a robust hybrid-cloud infrastructure, including:

- Business continuity for mission-critical applications.
- Simplified orchestration of complex, multitier services.
- Intelligent, policy-based data movement to the cloud.
- Storage reliability and performance.

BUSINESS CONTINUITY FOR MISSION-CRITICAL APPLICATIONS

Many, if not most applications require high availability in the event of a node outage (compute and/or data) or an availability zone or regional outage. InfoScale allows recovery of critical workloads or even an entire site to AWS with a single click or with controlled recovery options. It can orchestrate seamless recoveries for complex, tiered workloads to AWS while ensuring all application dependencies are honored.

InfoScale uses its Intelligent Monitoring Framework (IMF) to monitor applications and trigger a fast failover when it detects an application failure. InfoScale offers application-aware agents for leading enterprise applications, and organizations can write custom agents for in-house applications. Volume and file-level replication ensure application data is replicated to other AWS availability zones or regions to protect against a large-scale infrastructure outage (see Figure 1).

BENEFITS AT A GLANCE

Business Continuity for Mission-Critical Applications

InfoScale allows an organization to eliminate downtime for its mission-critical applications without having to implement aggressive availability and disaster recovery strategies across the entire infrastructure.

Simplified Orchestration of Complex, Multitier IT Services

InfoScale is aware of complete business services and takes action in the event of a failure to restore the entire service and automatically orchestrates connections to other computing resources—on-site or across sites.

Intelligent, Policy-Based Data Movement to the Cloud

Moving application workloads from one operating system platform to another typically requires an application outage. InfoScale keeps applications available by making the same set of data accessible to UNIX® and Linux®.

Storage Reliability and Performance

Technologies in InfoScale bring performance gains and shared storage capabilities to deliver predictable service-level agreements (SLAs) in the public cloud.

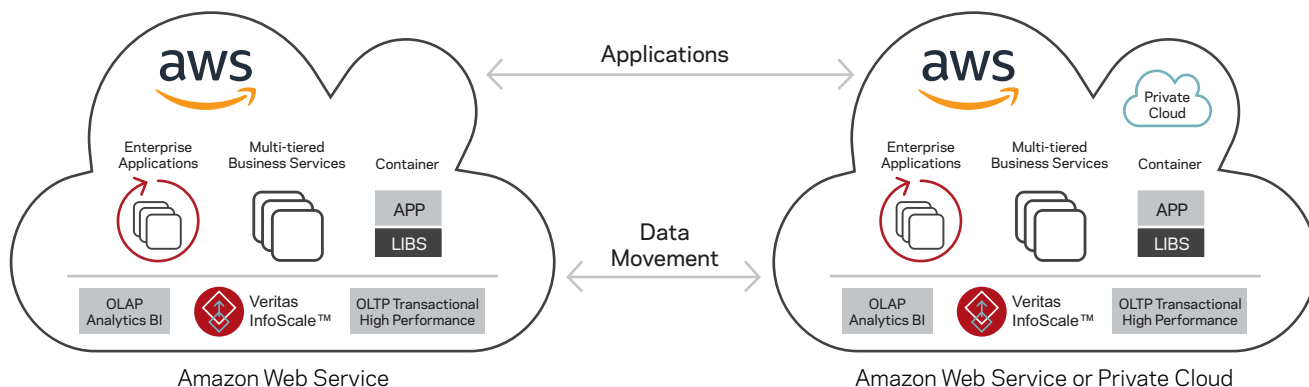


Figure 1. Veritas InfoScale ensures application resiliency across AWS regions and zones.

Additionally, proactive recovery readiness is simple, with fully automated and non-disruptive “fire drills” that can be run at any time without affecting production environments. InfoScale provides testing for recovery and migration to AWS with automated cleanup and detailed reporting, giving an IT department the ability to comply with business continuity mandates.

SIMPLIFIED ORCHESTRATION OF COMPLEX, MULTITIER SERVICES

IT services are no longer stand-alone applications running on single servers. Multitier business services make up most of an IT organization’s critical services, with different components of the business service running on different tiers of infrastructure—including cloud—each with unique availability needs. A failure at any tier can bring down the entire business service; managing the recovery is time-consuming and complex. InfoScale 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, InfoScale automatically orchestrates the connection to other computing resources, on-site or across sites. This process means faster recovery and minimal downtime—with no manual intervention.

INTELLIGENT, POLICY-BASED DATA MOVEMENT TO AWS

Transfers to/from the data center to the cloud need to be optimized to prevent costly, unnecessary data movement. InfoScale includes SmartMove technology that ensures efficient and intelligent data migration to help organizations save on bandwidth and storage costs when migrating application data to the cloud. SmartMove analyzes storage usage by looking up file system metadata and ensuring that only relevant or active data is migrated to the cloud. For example, if 10 TB of storage has been provisioned, and active (non-deleted) data is 3 TB, then a standard data mover typically moves 10 TB of data to the cloud by considering all non-zero bit strings as valid data. In contrast, SmartMove technology will look up the file system metadata and move only non-deleted or active data. (See Figure 2.) Data movement to the cloud using SmartMove can also be optimized in terms of CPU, network bandwidth and schedule.

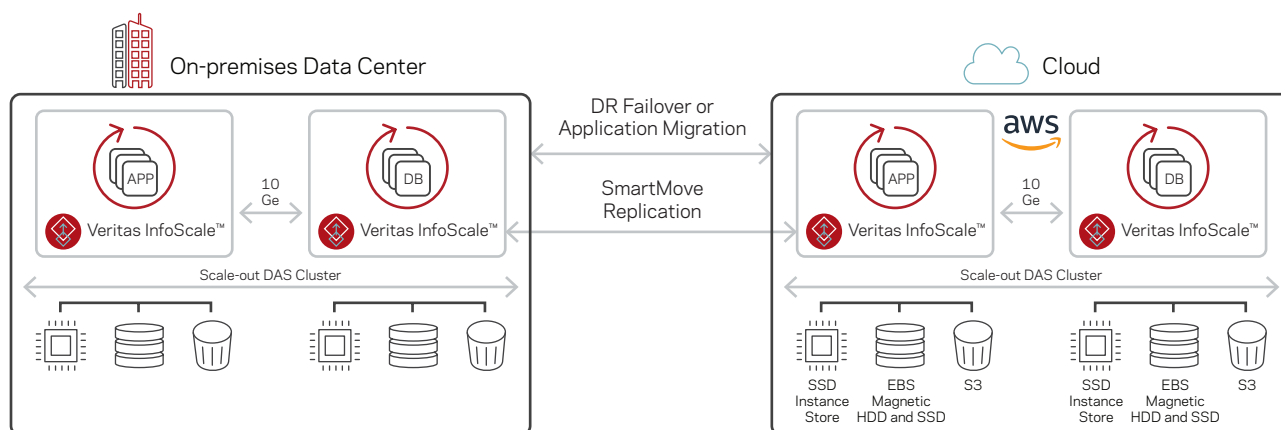


Figure 2. InfoScale uses SmartMove technology to reduce data transfer costs.

STORAGE RELIABILITY AND PERFORMANCE

Mission-critical applications with cloud-based components demand the same performance and resiliency characteristics as they do on-premises. InfoScale helps accelerate cloud-based applications. SmartIO and Flexible Storage Sharing (FSS) technologies in InfoScale bring performance gains and shared storage capabilities to deliver predictable service-level agreements (SLAs) in the public cloud. InfoScale's SmartIO uses instance store—SSD storage closest to compute—as a data caching device to improve performance. (See Figure 3.)

SCALE-OUT APPLICATIONS

InfoScale uses elastic block storage volumes in AWS to create a shared-nothing cluster that delivers horizontal scalability for enterprise applications. As shown in Figure 4, InfoScale allows organizations to scale I/O operations nearly linearly—going from two to four nodes, the cluster delivered 1.9X performance.

Organizations can run multiple applications in a single cluster and set up SLAs to ensure isolation among applications. This type of deployment unlocks valuable use cases such as running real-time analytics on incoming transactional data or fraud detection on credit card transactions.

SUMMARY: INFOSCALE HELPS ENSURE ROBUST, HYBRID-CLOUD DEPLOYMENTS WITH AWS

Organizations today require enterprise and cloud data management solutions that will reliably protect the right data, simplify management and orchestration, ensure resiliency and reduce risk. The unique software-defined infrastructure of InfoScale helps achieve a cloud-enhanced IT strategy cost-effectively without compromising on what's critical to business success. InfoScale and AWS help maximize uptime via proactive and predictable hybrid-cloud business resiliency.

InfoScale's integration with AWS delivers simple workload migration, orchestrated disaster recovery and optimized application performance. It enables simplified, cost-effective enterprise and cloud management solutions that reduce costs and risks while leveraging existing infrastructure investments.

[Learn more](#)

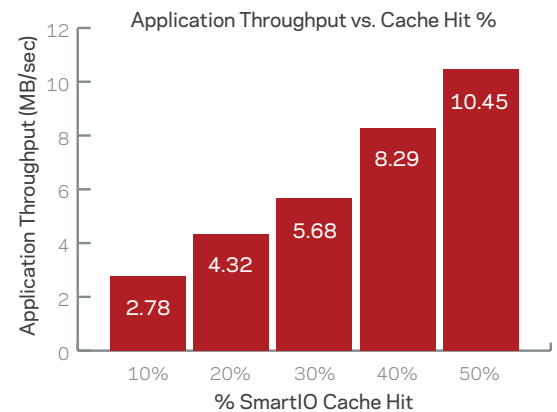


Figure 3. Application performance increases using InfoScale's SmartIO caching.

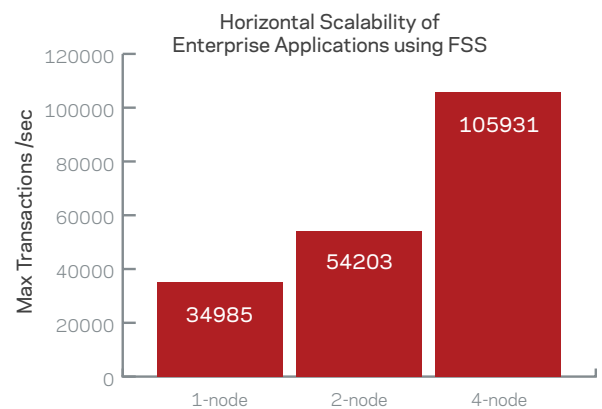


Figure 4: InfoScale uses EBS volumes in AWS to create a cluster that delivers near-linear scalability.

ABOUT VERITAS TECHNOLOGIES LLC

Veritas Technologies is a global leader in enterprise data management. Over fifty thousand enterprises—including 90% of the Fortune 500—rely on us to abstract IT complexity and simplify data management. Our 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 supports more than 500 data sources and over 150 storage targets, including 50 clouds. Learn more at www.veritas.com or follow us on Twitter at @veritastechllc.

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