InfuzeOS™
Infinidat's Unique and Powerful, Software-defined Storage Architecture

InfuzeOS powers Infinidat's unique software-defined storage (SDS) architecture. It drives the performance, availability, cyber storage resilience, ease of use, and economic benefits of our storage platforms, InfiniBox®, InfiniBox™ SSA, and InfiniGuard®.

InfuzeOS' SDS architecture delivers these powerful capabilities without dependance on proprietary hardware or components. This means greater flexibility and cost savings without sacrifice to performance, availability, or ease of use.
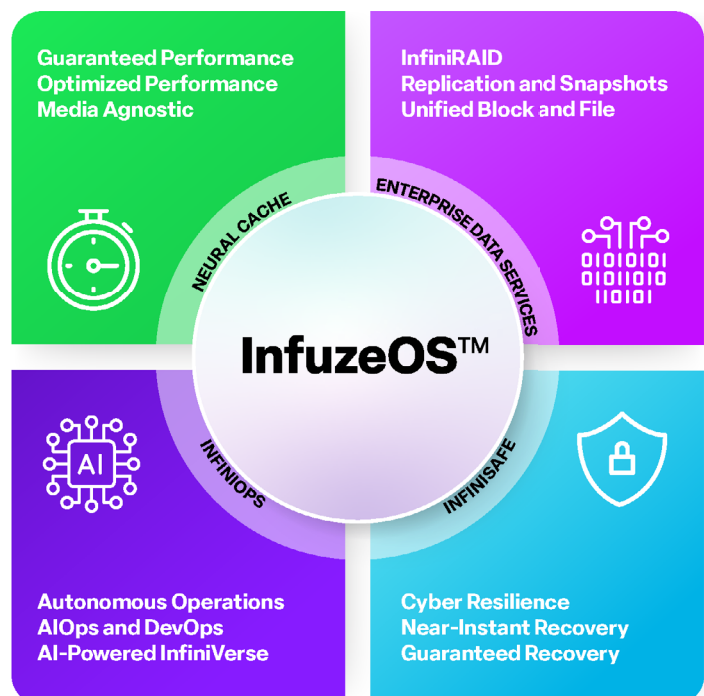
InfiniBox and InfiniBox SSA are delivered on a hardware platform of commodity, off-the-shelf hardware which eliminates the expense and time-consuming process of engineering and developing custom/proprietary hardware components. Performance is paramount with Infinidat's patented Neural Cache technology. Neural Cache enables the lowest latency of any storage platform in the industry, as low as 35 microseconds with our InfiniBox SSA – critical for many workloads, especially those that are highly transactional. As new processors, I/O controllers, and memory evolve to provide greater capacity and performance, Infinidat can deploy this new technology faster to remain on the forefront of these technological advances and accelerate time-to-market, thus bringing big cost savings benefits to our customers. In fact, a recent IDC white paper shows that Infinidat customers reduced their OpEx 48% over five years with InfiniBox.

InfuzeOS is deeply ingrained in every aspect of the Infinidat's storage platforms resulting in enterprise-class capabilities that are second to none in performance, cyber storage resilience, reliability, and availability. All the components within InfuzeOS work together intelligently and autonomously to deliver exceptional data services capabilities.

Let's discover what makes InfuzeOS unique.

Neural Cache

At the performance core of InfuzeOS is our Neural Cache technology which uses deep learning techniques of AI/ML to intelligently place stored data and highly optimize read cache hit rates, resulting in exceptional real-world application performance. Mixed and consolidated workloads greatly benefit from the deep learning aspects of the Neural Cache as well to optimize performance. Neural Cache quickly adapts autonomously based on data usage behaviors and seamlessly responds to new applications and new workloads. It can consistently deliver 90% or better cache hit ratios on many workloads.

Guaranteed Performance
Optimized Performance
Media Agnostic

InfiniRAID
Replication and Snapshots
Unified Block and File

NEURAL CACHE
ENTERPRISE DATA SERVICES

InfuzeOS™

INFINIOPS
INFINISAFE

Autonomous Operations
AIOps and DevOps
AI-Powered InfiniVerse

Cyber Resilience
Near-Instant Recovery
Guaranteed Recovery

InfuzeOS™

Cyber Resilience

Built into InfuzeOS is our InfiniSafe® technology which adds powerful cyber resilience capabilities to our family of products. Four key areas are enabled by InfiniSafe technology:

- Immutable snapshots
- Local logical air-gap for separation
- Fenced forensic environment
- Near-instantaneous recovery from cyberattacks

The recoverability of any of immutable snapshot is guaranteed within 1 minute on our InfiniBox platform and 20 minutes or less on our InfiniGuard, regardless of dataset sizes.

Enterprise Data Services

Enterprise-class data services are key in providing and extending data protection to all organizations. Starting with InfiniRAID®, data is intelligently optimized and protected. InfiniSnap® provides non-locking, efficient, redirect-on-write snapshots that support data protection and increase the utilization of information resources. Immutable snapshots are key for both immutable data stores and for cyber resilience as they are leveraged by InfiniSafe, our world-class storage cyber resilience. Local, metro and long-distance data replication is built in, providing active/active, synchronous, and asynchronous topologies with async updates in as little as every four seconds. Finally, flawless and non-disruptive, in-family data migration is delivered with Infinidat's Active/Active Data Mobility (AADM) capabilities, enabling migrations that are unmatched in simplicity and speed.

> **"We were able to do other projects as a result of doing less management. It shortened our implementation time, for example, on data protection modernization initiatives."**
>
> – Senior SAN Engineer, Medical Center

Block and File

InfuzeOS supports block-level FC and Ethernet-based protocols (NVMe-TCP, iSCSI) and SMB and NFS File protocols. Infinidat's implementation of these storage protocols is tightly integrated and highly optimized to ensure performance, availability, and ease of use, especially when leveraging our Host PowerTools, making your storage implementation much more automated and seamless. Infinidat's Host PowerTools enable simple and fast integration for physical hosts as well as native VMware environments. Additionally, OpenStack ecosystems are well supported with our Cinder and Manila drivers, and our powerful CSI Driver provides best-in-class capabilities in container environments.

100% Availability

The InfiniBox's media layout is managed by innovative patented software – InfiniRAID. InfiniRAID is software-defined Redundant Array of Independent Disks (RAID) controlling all data placement, data protection, and the recovery from failure scenarios. InfiniRAID is a de-clustered RAID, which separates the data layout from the physical layer and uses thousands of virtual RAID groups, spreading data across all the drives and preventing any hotspots, and enabling fast recovery of any failed drive. Infinidat stands behind our availability with a 100% availability guarantee.

INFINIDAT

Automation

Infinidat's InfiniOps™ is a collection of tools and capabilities that simplify the integration and utilization of powerful features of InfiniBox and InfiniGuard solutions. InfiniOps enables the exploitation of AIOps, the acceleration of DevOps, and the reduction of integration risks. AIOps include the in-the-box features of Infinidat's Neural Cache providing continuous AI/ML automation and InfiniVerse, leveraging our powerful InfiniMetrics capabilities providing detailed, global awareness of end-to-end storage telemetry as well as sophisticated analytics. Our out-of-the-box AIOps integration with ecosystem partners and Host PowerTools dramatically simplifies deployment and integration while leveraging our APIs with our command and control environments, to surround the InfiniBox with extensive AIOps capabilities.

SLA-based Outcomes, Guaranteed

We are so confident in the capabilities of InfuzeOS,that we provide added assurances in the form of SLA-based guarantees for our customers' critical storage infrastructure. Infinidat offers performance and availability guarantees for InfiniBox and InfiniBox SSA. Our performance guarantee ensures specific application workload(s) performance that delivers the best primary storage performance in the industry. While our 100% availability guarantee goes beyond the typical "9's" promised by other vendors. Finally, Infinidat provides InfiniSafe cyber storage resilience guarantees for all our platforms. These guarantees provide immutable snapshot recoverability at a speed of under a minute on InfiniBox and under twenty minutes with InfiniGuard.

Powerful Triple Redundant Architecture

InfuzeOS enables the InfiniBox active-active-active architecture with N+2 design which provides constant monitoring, self-healing, and graceful recoveries from hardware failures on all levels. This design produces a high degree of resilience enabling Infinidat to offer 100% system availability scaling to 17PB or more effective capacity in a single 42U rack. By leveraging industry-leading commodity components in the InfiniBox platform, we bring more stability, product maturity, and lower costs to our customers' TCO models, providing greater certainty in uncertain times.

Benefits

The principal benefits of InfuzeOS are threefold. First, InfuzeOS delivers powerful, self-managed, self-healing, continuously-optimized storage across Infinidat's platforms. Our ease of use and management, driven by InfiniOps, brings a level of intelligence that means your IT staff can be focused on business instead of managing the storage infrastructure. Second, InfuzeOS provides data services to expedite the integration of Infinidat capabilities across your IT processes, reducing CapEx and time-to-market. Finally, InfuzeOS delivers added assurance with guaranteed performance, availability, and cyber storage resilience. All InfuzeOS features are built in and provided at no additional cost.