Nimble Storage for Splunk Enterprise

Simplify management, improve performance, and protect data with Adaptive Flash storage.

Today's modern enterprises generate massive amounts of machine data from IT infrastructure such as websites, applications, servers, networks, sensors, and mobile devices. When leveraged the right way, this data can be extremely valuable in troubleshooting problems, investigating security incidents, and monitoring end-to-end infrastructure to avoid service degradation or outages.

Splunk Enterprise turns machine data into valuable insights by monitoring and analyzing machine data. This includes data from packaged and custom applications, application servers, web servers, databases, networks, virtual machines, telecom equipment, sensors and other sources. Once collected and indexed, this data can be monitored and analyzed from one place in real time.

Nimble Storage for Splunk Enterprise

Management complexity, performance needs, scalability, availability, and data protection are all important when choosing an effective storage platform for Splunk Enterprise deployments. Nimble's Adaptive Flash platform provides a solution that addresses some of the biggest challenges with Splunk Enterprise deployments.

Management

Nimble Storage arrays simplify storage infrastructure by providing a single point of storage management and monitoring. While Splunk organizes data into stages and transitions data along "hot," "warm," "cold" and "frozen" stages depending on accessibility requirements, Nimble's Adaptive Flash platform can cost-effectively accommodate all of these buckets without the management complexity of planning and allocating different tiers of storage. This is because Nimble's Adaptive Flash platform is tier-less, and automatically leverages both flash and disk for optimal performance, without the need to manually provision and manage different types of media for different stages of Splunk data.

Nimble's InfoSight cloud service ensures the peak health of Splunk storage infrastructure by identifying problems, and offering solutions, in real time. InfoSight alerts customers to upcoming capacity issues, and provides insights on how to increase storage performance at the click of a button from any web browser.

Performance

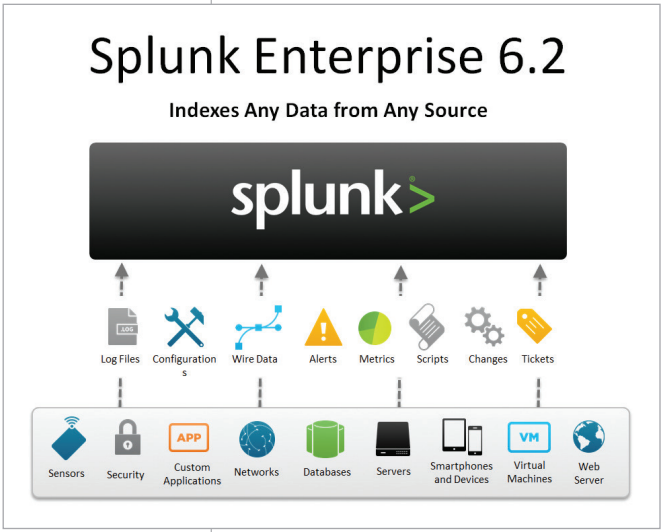
As Splunk software collects and indexes data, it places different demands on read and write storage performance. Writes are normally streamed sequentially, while reads are typically random. Nimble's Adaptive Flash arrays leverage both flash and disk to match the performance characteristics demanded by Splunk Enterprise. Inbound data is coalesced in real-time for high performance sequential writes to disk, and flash is intelligently populated for fast random reads.

Nimble Storage arrays also provide data services such as high availability and integrated data protection, which can increase Splunk performance by offloading Splunk servers to increase compute resources for other tasks.

Overview

Nimble's Adaptive Flash platform provides a solution that addresses some of the biggest data storage challenges with Splunk Enterprise deployments:

- Management
- Performance
- Scalability
- Storage capacity and availability
- Data protection and disaster recovery



Scalability

Splunk deployments often scale as an organization grows and more data is ingested from new data sources. Nimble Storage systems can scale capacity and performance independently to keep up as a Splunk deployment scales. Capacity can be increased by adding disk shelves, and performance can be increased by adding flash drives or upgrading the controller. Nimble Storage arrays can also be clustered to scale-out both capacity and performance. With non-disruptive scaling, Nimble Storage systems ensure that there is no interruption to the critical Splunk services the organization relies on as needs grow.

Storage Capacity and Availability

To maintain storage availability in a Splunk environment, data is often replicated three times so that a peer copy can be used in the event of an issue with one of the other copies. While this increases availability in case of a failure, it also reduces capacity efficiency because there are two extra copies of the data. Nimble Storage arrays deliver 99.999 percent (or "five nines") availability because they have redundancy and resiliency built-in, so that there is no single point of failure at the storage layer. With Nimble Storage arrays, data does not need to be replicated for single-site storage availability, increasing capacity efficiency.

Nimble Storage also offers in-line compression, which can result in an additional compression rate, further increasing capacity efficiency.

Data Protection and Disaster Recovery

Nimble Storage arrays feature very efficient block-level storage snapshots, which store only changed data blocks without impacting storage performance. Nimble Storage snapshots can be used to instantly protect Splunk data at all stages, whether "hot," "warm," or "cold" without any performance impact — and because only changed blocks are stored on capacity disk, they can be retained cost-effectively for months as well. This allows instant recovery to a previous point in time at which a snapshot was taken. For single-node installations where Splunk clustering and replication is not used, this can be especially beneficial to protect the Splunk deployment.

Nimble Storage arrays can also replicate compressed snapshot data to another offsite array, so that users can recover their data in the event of a local disaster. With Nimble Storage, Splunk data can be protected both locally and at a recovery site, without any performance impact or additional load on server and network infrastructure.

Conclusion

Splunk Enterprise offers businesses the critical operational intelligence that they need, but relies on the underlying storage platform to deliver real-time results. Nimble Storage's Adaptive Flash platform provides a solution for some of the biggest storage challenges with Splunk deployments, including management, performance, scalability, availability and data protection. Nimble Storage arrays help reduce the total cost of ownership, and increase the return on investment for Splunk Enterprise environments.

nimblestorage

211 River Oaks Parkway, San Jose, CA 95134
Phone: 408-432-9600; 877-364-6253
Email: info@nimblestorage.com
www.nimblestorage.com