Nimble Storage All Flash Arrays

nimblestorage

Predictive Flash Storage for the Modern Data Center

The industry's only Predictive All Flash array combines the speed of flash with the power of InfoSight™ Predictive Analytics — radically simplifying operations while delivering 33%-66% lower TCO than other all flash arrays. Backed by Nimble's Timeless Storage™, there is no need to pay for optional software and forklift upgrades are a thing of the past.

Sheer Performance with Unmatched Scalability
Built for speed and scalability, Nimble All Flash arrays deliver the performance and low latency needed to power the flash data center.

33-66% Lower TCO
All flash performance at less than the cost of legacy performance disk solutions and one to two thirds lower TCO than other all flash arrays.

Absolute Resiliency
Non-stop availability delivers 99.9997% measured uptime through InfoSight Predictive Analytics and no single point of failure hardware and software design.

Backup at One Third of the Cost
Storing backup copies on all flash arrays can be cost-prohibitive. That's why Nimble cost-optimized Adaptive Flash arrays can be used for backup, DR, test/dev and archival even when primary copies are stored on All Flash.

Scale-Out
An All Flash array scale-out cluster, managed as a single entity, can non-disruptively scale beyond the limits of other all flash arrays to over 8PB with more than 1.2 million IOPS at less than 1ms response time. And with Scale-to-Fit, grow capacity and performance of an array independently and non-disruptively.

Nimble Storage AF-Series Arrays

The **AF1000** and **AF3000** are the perfect entry points for all IT organizations that require speed and economy for performance-sensitive workloads.

The **AF5000** and **AF7000** offer high performance and attractive economics for performance-sensitive workloads that need the best blend of price/performance/scalability.

The **AF9000** is designed for consolidating multiple large-scale performance-sensitive applications with aggressive performance and high scalability demands.

Nimble All Flash arrays support iSCSI and FC storage protocols.

Sheer Performance and Scalability
- Scale-up capacity and performance non-disruptively in an array
- Scale-out with up to four arrays managed as one
- Up to 8PB+ and 1.2 million IOPS at sub-ms latency

33-66% Lower TCO
- Requires 10-30X less memory
- Cost and performance optimized for 3D-NAND
- 5X or more data reduction from deduplication and compression
- Backup, DR, and archival at one third of the cost

Absolute Resiliency
- Non-stop availability measured at 99.9997%
- Triple+ parity RAID
- Integrated data protection
- Application granular encryption and secure data shredding

> "Our customers have very high expectations for accessing data quickly. With the Nimble AF9000 All Flash array we've been able to deliver data 3 times faster to our customers."
>
> Dana Skovsende
> Infrastructure Developer
> Forca

All Flash Array Specifications

Nimble AF-Series Array	AF1000	AF3000	AF5000	AF7000	AF9000	Scale-Out[1] 4x AF9000
Raw Capacity (TB/TiB)[2]	6-46 / 5-42	6-92 / 5-83	11-184 / 10-167	11-323 / 10-293	23-553 / 20-503	2,212 / 2,012
Usable Capacity (TB/TiB)[2]	4-33 / 3-30	4-67 / 3-61	8-136 / 7-123	8-238 / 7-217	17-409 / 15-372	1,636 / 1,488
Effective Capacity (TB/TiB)[2,3]	20-165 / 15-150	20-335 / 15-305	40-680 / 35-615	40-1,190 / 35-1,085	85-2,045 / 75-1,860	8,180 / 7,440
Max # of Expansion Shelves	1	1	1	2	2	8
RAID Level	Triple+ Parity					
Max IOPS (100% Read)	40,000	60,000	140,000	270,000	350,000	1,400,000
Max IOPS (70% Read / 30% Write)	35,000	50,000	120,000	230,000	300,000	1,200,000
Onboard iSCSI/Mgmt 1Gb/10Gb ports per array[4]	4	4	4	4	4	16
Optional iSCSI 1Gb/10Gb ports per array[4]	4	4 or 8	4 or 8	4, 8, or 12	4, 8, or 12	48
Optional FC 8Gb/16Gb ports per array	4 or 8	4 or 8	4, 8, 12, 16, 20, 24	4, 8, 12, 16, 20, 24	4, 8, 12, 16, 20, 24	96
Max Power Requirement	550W / 0.61kVA	600W / 0.67kVA	700W / 0.78kVA	800W / 0.89kVA	900W / 1kVA	3600W / 4kVA
Thermal (BTU)	1,802	1,965	2,293	2,620	2,948	11,792

SSD Expansion Shelves[5]

Raw Capacity (TB/TiB)[2]	6-184 / 5-167
Usable Capacity (TB/TiB)[2]	4-137 / 4-124
Effective Capacity (TB/TiB)[2,3]	20-685 / 19-620
Power Requirement	325W / 0.36kVA

Physical and Environmental Specifications

Dimensions	7"H x 17.5"W x 26.5"D 17.8 cm x 44.5 cm x 67.3 cm 4 Rack Units
Weight	80 lbs / 36 kg
Weight (All Flash Shelf)	70 lbs / 32 kg
Operating Temperature	10 - 35° C (50 - 95° F)
Non-Operating Temperature	0° C - 40° C (32° F - 104° F)
Operating Humidity	8 - 90%
Non-Operating Humidity	5 - 95%

NOTES
1. Scale-out configuration consists of 4x AF9000 arrays, each with two all flash shelves.
2. Raw, usable and effective capacities are shown in TB (10^{12} bytes) and TiB (2^{40} bytes). Usable and effective capacities take into account space used for parity, spares, and system overhead.
3. Effective capacity is the capacity of the base array and maximum number of expansion shelves. Assumes data reduction of five to one from deduplication and compression.
4. Onboard ports are 10GbaseT. Optional ports are: 1GbaseT, 10GbaseT or 10GbE SFP+
5. Each shelf consists of up to 48 SSDs. SSDs can be 240GB, 480GB, 960GB, 1.92TB, or 3.84TB raw capacity.

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