

Nimble Storage Secondary Flash Arrays

No more backup windows

- Near-instant snapshot-based backup—No more backup windows and zero impact to host
- Near-instant restore—Access files VMs, applications, or entire systems directly on the SFA or rapidly copy them back to primary storage
- Near-instant disaster recovery—Failover to the SFA and run production workloads at full speed

Flash-based performance

- Run real workloads with flash performance, such as dev/test, QA, patch testing, and analytics
- Zero-copy clones let you reuse backup data and instantly create hundreds of application copies
- Easily and quickly test and verify backups for peace of mind

Radical simplicity

- Converges backup, DR, and secondary storage within a single, cloud-connected solution
- InfoSight Predictive Analytics anticipates and prevents issues for trouble-free operations
- Third-party software integration simplifies data management and enables cloud archiving

Nimble Secondary Flash array (SFA) represents a new type of data storage optimized for both capacity and performance. It adds high-performance flash storage to a capacity-optimized storage architecture for a unique backup platform that lets you put your backup data to work.

Nimble Secondary Flash Array is cloud-ready and optimized for backup, disaster recovery, and secondary data storage. By using flash, it lets you put your backup data to work for dev/test, QA, and analytics. With Nimble Secondary Flash Array, you can instantly back up and recover data from any primary storage system. Our integration with leading backup software simplifies data lifecycle management and provides a path to cloud archiving.

The flash-enabled architecture delivers fast backup and restores, and does not compromise on storage efficiency. Flash also provides the speed to let you quickly test and verify backups as you go, providing peace of mind. With Nimble Secondary Flash, you can quickly access files, VMs, applications, or entire systems, or rapidly copy them back to primary storage. You also don't need to wait to restore: just run production workloads at full speed on the Nimble Secondary Flash Array and restore in parallel.

The array is capacity-optimized to reduce your cost per gigabyte—delivered in part through flash-enabled inline data reduction for typical 3X to 18X savings, based on backup data retention policy, with no performance impact.¹

Put your backup data to work

Run real workloads with flash performance, such as dev/test, QA, patch testing, reporting, and analytics. Zero-copy clones let you reuse backup data and instantly create hundreds of application copies. Nimble Secondary Flash array lets you get to your data easily and quickly—reads are over 100X faster than with traditional hard drive-based backup appliances. Restores can be near-instantaneous, or you can just run your application directly from the array for performance similar to primary storage.

¹ A typical retention plan includes 12 weekly backups that are expected to mostly dedupe, multiplied by 1.5X compression savings, resulting in an expected total 18:1 data reduction.

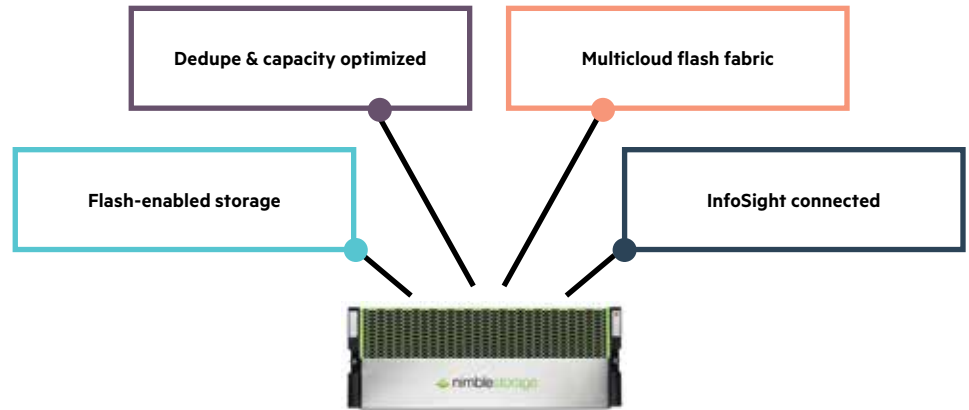


Figure 1. Key features of Nimble Secondary Flash array

Manage within a multicloud flash fabric

For **Nimble** environments, execute thousands of instant, zero-impact snapshots on primary storage and natively replicate to the Nimble Secondary Flash Array. Nimble flash arrays are cloud-ready providing an easy on-ramp to the cloud through Nimble Cloud Volumes.

The SF-Series is a line of storage arrays optimized for secondary storage tasks, with data deduplication to increase effective capacity.

Initial models available are the Nimble SF100 Secondary Flash array and Nimble SF300 Secondary Flash array. Both are comparable in terms of array-based snapshots, replication, and cloning capabilities, always-on inline data reduction, and cost-effective data capacity. Nimble SF100 is the initial entry-level model, targeted at midsize IT organizations or disaster recovery sites of larger organizations. Nimble SF300 is designed for larger organizations and provides twice the capacity, IOPS, and throughput of Nimble SF100.



Nimble Secondary Flash array specifications

Nimble SF-Series array ^{2,3}	SF100	SF300
Raw capacity (TB/TiB) ⁴	21-126/19-115	42-252/38-229
Usable capacity (TB/TiB) ⁴	16-100/15-91	33-200/30-182
Effective capacity (TB/TiB) ^{4,5}	288-1800/270-1638	594-3600/540-3276
Max. # of expansion shelves	2	2
Flash capacity (TB/TiB) ⁴	1.4-36/1.27-33	2.8-76/2.55-69
RAID level	Triple+ Parity	Triple+ Parity
Onboard iSCSI/Mgmt. 1 Gb/10 Gb ports per array ⁶	4	4
Optional iSCSI 1 Gb/10 Gb ports per array ⁶	4 or 8	4, 8, or 12
Optional FC 8 Gb/16 Gb ports per array	4, 8, 12, 16, 20, 24	4, 8, 12, 16, 20, 24
Max. power requirement (watts/kVA)	700/0.78	800/0.89
Thermal (BTU)	2293	2620

² Nimble SF100 and Nimble Storage SF300 support scale up to any model within the SF family.

³ All SF-Series models consist of up to 21 HDD drives and 3 Dual Flash Carriers (DFCs) (holding up to 6 SSDs).

⁴ Raw, usable, and effective capacities are shown in TB (10¹² bytes) and TiB (2⁴⁰ bytes). Usable and effective capacities take into account space used for parity, spares, SSD cache, and system overhead.

⁵ Effective capacity is a range from minimum in the base array to maximum in the array plus expansion shelves. It assumes data reduction of 18:1 (18X) from compression and dedupe.

⁶ Each array controller has 2 x 10GbE ports built in. Optional ports are 1GbaseT, 10GbaseT, or 10GbE SFP+ iSCSI, along with 8 Gb or 16 Gb Fibre Channel.



ES2 expansion shelves


ES2 expansion shelves	SF-ES2-Hybrid
Raw capacity (TB/TiB) ⁷	21–210/19–191
Usable capacity (TB/TiB) ⁷	16–160/15–146
Effective capacity (TB/TiB) ⁷	128–1280/116–1164
Flash capacity (TB/TiB) ⁷	0.7–108/0.7–98
Max. power requirement (Watts/kVA)	500/0.56
Thermal (BTU)	1638

Physical and environmental specifications

Dimensions	7" x 17.5" x 26.5" (h x w x d) 17.8 cm x 44.5 cm x 67.3 cm 4 rack units
Weight	48 kg (105 lb)
Weight (ES2)	41 kg (90 lb)
Weight (ES2-All Flash)	32 kg (70 lb)
Operating temperature	10°C–35°C (50°F–95°F)
Nonoperating temperature	0°C–40°C (32°F–104°F)
Operating humidity	8%–90%
Nonoperating humidity	5%–95%

⁷ Raw, usable, and effective capacities are shown in TB (10¹² bytes) and TiB (2⁴⁰ bytes). Usable and effective capacities take into account space used for parity, spares, SSD cache, and system overhead.

Learn more at
nimblestorage.com/technology-products/secondary-flash-arrays



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