nimblestorage
a Hewlett Packard Enterprise company

Nimble Storage Secondary Flash Arrays

The Nimble Secondary Flash Array 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.

The 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. Instantly backup and recover data from any primary storage system. With our integration with leading backup software, it simplifies data lifecycle management and provides a path to cloud archiving.

Next-gen Flash storage solution

The Flash-enabled architecture delivers fast backup and restores, and doesn't 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 secondary flash, you can quickly access files, VMs, applications or entire systems, or rapidly copy them back to primary. Or, don't wait to restore: run production workloads at full speed on the Secondary Flash array and restore in parallel.

The Secondary Flash array is Capacity-optimized to reduce your cost per gigabyte – delivered in part through Flash-enabled inline data reduction up to 18:1 or more, with no performance impact.

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 re-use backup data and instantly spin up hundreds of application copies. The Secondary Flash array lets you easily and quickly get to your data: 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.

Manage within a Multicloud Flash Fabric

For Nimble environments, execute thousands of instant, zero-impact snapshots on primary storage and natively replicate to the Secondary Flash Array. All Nimble flash arrays are Cloud Ready — providing an easy on-ramp to the cloud through Nimble Cloud Volumes.
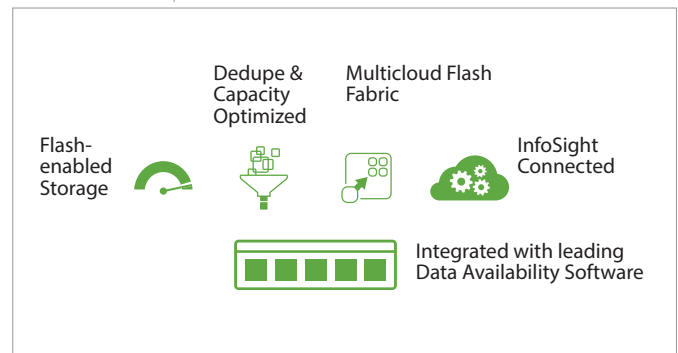
No more Backup windows

- Near-instant snapshot-based back-up – no more back-up 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
- 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 re-use backup data and instantly spin up 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

Flash-enabled Storage

Dedupe & Capacity Optimized

Multicloud Flash Fabric

InfoSight Connected

Integrated with leading Data Availability Software

The SF Series is a line of storage arrays optimized for Secondary storage tasks, optimized for data deduplication to maximize effective capacity.

Initial models available are the SF100 and the SF300. Both are comparable in terms of array-based Snapshots, Replication and Cloning capabilities, always-on inline data reduction, and cost-effective data capacity. The SF100 is the initial entry-level model, targeted at midsize IT organizations or Disaster Recovery sites of larger organizations. The SF300 was designed for larger organizations and provides twice the capacity, IOPS and throughput of the SF100.

Secondary Flash Array Specifications

Nimble SF-Series Array [1,2]	SF100	SF300
Raw Capacity (TB/TiB)[3]	21-126 / 19-115	42-252 / 38-229
Usable Capacity (TB/TiB)[3]	16-100 / 15-91	33-200 / 30-182
Effective Capacity (TB/TiB)[3,4]	288-1800 / 270-1638	594-3600 / 540-3276
Max # of Expansion Shelves	2	2
Flash Capacity (TB/TiB) [3]	1.4-36 / 1.27-33	2.8-76 / 2.55-69
RAID Level	Triple+ Parity	Triple+ Parity
Onboard iSCSI/Mgmt 1Gb/10Gb ports per array[5]	4	4
Optional iSCSI 1Gb/10Gb ports per array[5]	4 or 8	4, 8, or 12
Optional FC 8Gb/16Gb 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)	2,293	2,620

ES2 Expansion Shelves

	SF-ES2-Hybrid
Raw Capacity (TB/TiB)[3]	21-210 / 19-191
Usable Capacity (TB/TiB)[3]	16-160 / 15-146
Effective Capacity (TB/TiB)[3]	128-1280 / 116-1164
Flash Capacity (TB/TiB)[3]	0.7-108 / 0.7-98
Max Power Requirement (Watts/kVA)	500 / 0.56
Thermal (BTU)	1638

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	105 lbs / 48 kg
Weight (ES2)	90 lbs / 41 kg
Weight (ES2-All Flash)	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. SF100 and SF300 support scale up to any model within the SF family
2. All SF Series models consists of up to 21 HDD drives and 3 DFCs (holding up to 6 SSDs)
3. 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, SSD cache, and system overhead
4. Effective capacity is a range from minimum in the base array to maximum in the array plus expansion shelves. Assumes data reduction of 18:1 (18X) from compression and dedupe
5. Each array controller has 2x 10 GbE ports built in. Optional ports are 1GbaseT, 10GbaseT or 10GbE SFP+iSCSI, along with 8Gb or 16Gb Fibre Channel