

# The Practical Path to Flash for Data Center Modernization

Capacity flash storage from NetApp, the intelligent data infrastructure company



The data center is the power behind the apps that drive your business. And those apps are putting pressure on the underlying infrastructure. More data. Scaling to more users. Pushing for more speed. If you're looking to digital services to spur revenue, you need the power behind them to ensure availability and fast, reliable transactions that meet expectations.

Flash storage has been on the hot list for data center modernization to support modern, demanding apps. But cost can be high, making the transformation not worth the investment for many workloads. Modernizing data centers need storage that delivers:



Flash-like speed



Energy efficient



Reduced carbon footprint



Non-disruptive scalability



Cloud connected



Cost efficient

## Capacity flash storage: Near the speed of flash at hybrid flash economics

In response to this gap, NetApp has expanded their already robust portfolio of storage solutions with the NetApp AFF C-Series, a new family of capacity flash storage. The AFF C-Series uses the latest quad-level cell technology which enables more storage density, delivering the needed speed, energy efficiency and carbon footprint reductions—at a cost that rivals hybrid storage. Now you can modernize your data center and deliver the near flash speed that meets requirements for most non-critical tier 1 and tier 2 applications.

## What impact could NetApp AFF C-Series have on your data center?

Refresh your hybrid flash or 10K hard drive-based storage systems at a similar price while modernizing with all flash.

### Compared to hybrid flash storage

Reduce up to 95% of rack space

Save up to 85% in energy costs

### Compared to HDD storage

Save up to 98% in rack space

Reduce power and cooling costs up to 97%

Savings can be even greater by easily tiering cold data to the cloud.

## Cost-effective, large capacity flash deployments

The AFF C-Series family is ideal for cost-effectively transitioning from hybrid or HDD storage to all flash and is suitable for non-latency sensitive VMware workloads, database applications and file environments. It can also serve as a secondary storage target for disaster recovery, backup or tiering.



## SAN-optimized flash storage with NetApp ASA

NetApp ASA systems are optimized for SAN workloads and deliver the high performance and continuous availability they need. Available for both A- and C-Series, the ASA systems:

- Deliver exceptional performance to improve customer experience and reduce time to results.
- Offer six 9s guarantee keeping business-critical data available, protected and secure.
- Provide more effective capacity for any workload, backed by the industry's most effective guarantee.
- Are backed by NetApp's Ransomware Recovery Guarantee.

**The NetApp ASA C-Series also delivers exceptional value and cost reductions for your modernizing data center.**

**High capacity per gigabyte slashes costs for intensive workloads**

**Reduced power consumption by up to 70% compared to competing all-flash arrays**



## Unified data management at scale with NetApp ONTAP

NetApp ONTAP is the only solution that delivers single pane-of-glass, unified data management for NVMe, file, block and object storage. ONTAP provides a common storage operating system that spans multiple on-premises storage offerings and every major public cloud, unified by a common API set and single control plane.

- Unified management and continuous operations
- Standardized data security model free from fragmented silos
- Mix storage systems in a single cluster
- Nondisruptive workload mobility to match to the right tier of storage
- Seamless workload and data migration to cloud with NetApp Cloud Volumes ONTAP
- Industry-leading protection and security for your data
- Direct tiering to cold object storage on premises or in the cloud

## Data storage from NetApp to meet every need

**NetApp® BlueXP™**  
Unified control plane

### NetApp ONTAP®

Data management software

Delivering automation, efficiency, data protection and security capabilities across the NetApp portfolio for file, block and object.

**PERFORMANCE FLASH**  
Best performance  
for tier 1 workloads

#### AFF A-Series

Submillisecond  
latencies

#### ASA A-Series

Optimized for SAN

**CAPACITY FLASH**  
Best price for  
performance

#### AFF C-Series

High-capacity with flash  
performance characteristics

#### ASA C-Series

Optimized for SAN

**HYBRID FLASH**  
For lowest cost and  
secondary use cases

#### FAS

Balanced performance  
and budget for smaller-  
capacity workloads

**CONVERGED**  
Fast deployment and cloud-like  
capabilities on premises

#### FlexPod® XCS

Integrated solution with server,  
storage and networking  
components; delivered by NetApp  
and Cisco channel partners

**NetApp Advance**

## Plan for the future with NetApp Advance

NetApp Advance is a best-in-class portfolio of programs and guarantees that go hand-in-hand with AFF, ASA and FAS systems and revolutionize the storage ownership experience. As your business demands evolve, you can rely on greater flexibility, improved ROI and reduced TCO, all while gaining risk-free efficiency and performance. Features include:

### Storage Lifecycle Program

Take the risk out of refresh with predictable hardware upgrades, flexible trade-in options and VIP services that protect your infrastructure investments.

### Cloud Advantage

Swap your on-premises controller refresh for cloud services or hybrid cloud storage as a service.

### Storage Efficiency Guarantee

Get 4:1 efficiency for SAN workloads on ONTAP AFF systems—guaranteed.

## What's next?

Storage is an essential part of your data center and application modernization conversations. Contact Arrow to be put in contact with a NetApp Solution Provider who can help you learn more about NetApp and the ASA and AFF solutions.

## More about Arrow

Arrow works behind the scenes with your trusted solution provider to help expand the effectiveness and ROI of the technology solutions your business relies on. We provide value-add services that bolster what your solution provider can do for you.

