

TECHNICAL WHITE PAPER

FlashArray//C™: A Data Protection Admin's Best Friend

Performance or value? Pick any two.

Contents

- Organizations Are Under Pressure and Struggling to Stay Ahead of Data Protection. Here's Why3**
- Let's Explore a Few of These3**
 - Data Growth..... 3
 - Regulations 3
 - Costs and Maintenance 3
- FlashArray//C: Simple. Performant. Lower TCO.....4**
 - Simple..... 5
 - Performant 5
 - Lower TCO 5
- Additional Resources5**
- A Deeper Look at Ransomware, Backup and Restore, and Replication.....6**
 - Ransomware: Security Only a Hacker Could Hate. 6
- Backup and Restore. Restore Your Data in "Near-0" Downtime.7**
- Replication. Never Skip a Beat8**
- Conclusion8**
 - Pure Storage FlashArray//C Delivers Performance and Value When it Comes to Data Protection. 8



Organizations Are Under Pressure and Struggling to Stay Ahead of Data Protection. Here's Why.

How an organization protects its data can directly contribute to its success or failure. Done smartly, the organization has the confidence to move ahead without the constant worry of hackers or mistakes that may inadvertently delete vital information. Done incorrectly, the organization is exposed to data loss and ransom demands, creating worry and pressure that may put the jobs of the employees in charge of data security at risk.

Data protection can be perceived as being hard because data protection strategies and solutions are often overcomplicated. There are also many variables that can impact the ultimate safety of your data, and these variables evolve just as your workloads evolve.

In a recent study, 76% of organizations reported at least one ransomware attack within the last 12 months. The organizations attacked were unable to recover 36% of their lost data.

[VEEAM: 2022 DATA PROTECTION TRENDS](#)

Let's Explore a Few of These

Data Growth

Data is everywhere and it's extremely valuable. The more organizations transform into digital-first companies—where more apps exist, every interaction generates new data, and all new data becomes new intelligence—the harder it is to protect. On top of this, data comes in many forms—transactional, historical, structured, unstructured, etc.—and is stored in many places. All of this makes data protection hard.

Regulations

Organizations such as those in the financial services industry (FSI), insurance, healthcare, and government sectors have added pressure when it comes to data protection. For example, many banks and other FSI organizations face huge financial penalties by regulators for privacy breaches and are forced to maintain comprehensive data governance across the entire organization. And cyber insurance companies are implementing stricter standards on higher risk policyholders to show proof of data protection.

Costs and Maintenance

All the above of course ties back to costs, but there are other costs to consider as well. As organizations evolve, they incur sunk costs of older, outdated systems that are too expensive to migrate away from entirely and may have steep vendor lock in costs. There is cost explosion (unexpected and steep costs such as system downtime or having to spend more due to unexpected growth), regular, ongoing support and maintenance costs, plus board-level pressures to do more with less.



89% of IT leaders report a gap between how much data they can afford to lose after an outage versus how frequently data is backed up.

BUSINESS WIRE: ORGANIZATIONS FALLING SHORT ON DATA PROTECTION

So, it's no surprise that organizations may perceive data protection as a complicated and scary thing. But data protection does not have to be complicated or scary. Pure Storage FlashArray//C addresses the three central tenets of any smart data protection plan: *data loss and ransomware protection, backup and restore, and replication*. In the process, FlashArray//C uncomplacates data storage forever, delivers blazing fast speeds, and lowers the total cost of ownership (TCO).

FlashArray//C: Simple. Performant. Lower TCO.

FlashArray//C is the part of the Pure Storage family of all-flash solutions that economically stores your operational data and data from backup and replication activities in an efficient repository.

It also makes flash mainstream for virtually any use case. The first all-quad-level cell (QLC) flash array, FlashArray//C is optimized for capacity and holds up to 9PB in a 9-rack unit that is more compact than comparable disk and hybrid systems.

FlashArray//C maintains the same architecture as FlashArray//X and FlashArray//XL and is supported by the Purity//FA software layer and Pure1 management console, which makes adding FlashArray//C into your "Defense in Depth" mix virtually seamless.



Simple

Always-on data protection with FlashArray//C means your workloads are always protected in a space-efficient, easy to manage platform, taking one more worry off your plate. FlashArray//C delivers integration into most cloud platforms for easy data mobility between on-premises and the cloud, and seamlessly integrates with the leading backup vendors, where snapshots and image level backups complement each other. Supported integrations include those for Veeam, Commvault, Veritas, and Rubrik.

Performant

Speed and uptime are critical when you are trying to prevent or recover from a ransomware attack, data corruption, or accidental deletions. FlashArray//C delivers 99.9999% availability at sub-millisecond response times with restore speeds at up to 9TB/hour for backups and 10TB/hour for restores.

Lower TCO

When under budget constraints, it's easy to gravitate towards solutions that appear to cost less upfront. But overlooking TCO means you may end up being locked into a solution that not only doesn't completely cover ransomware, backup and restore, and replication, but it also costs more in the long run. FlashArray//C virtually eliminates the need for disk drives and hybrid arrays. When combined with features like thin provisioning, deduplication, compression and space-efficient snapshots, latency sensitive workloads, and more, FlashArray//C drives the lowest TCO of any all-flash solution for capacity-optimized workloads. On top of this, FlashArray//C drives 75% direct energy savings compared to competing hybrid solutions, requiring less power, space, cooling, and waste.¹

Additional Resources

Did you know that FlashArray//C saves you money by reducing energy usage by up to 75%?

- [Learn more](#)

1. Pure Storage: 2021 ESG Report .



A Deeper Look at Ransomware, Backup and Restore, and Replication.

We've established that FlashArray//C holds many benefits for organizations looking to protect any workload. Now let's consider the importance of mitigating against ransomware, backing up and restoring your data, and minimizing downtime during a recovery scenario to see how FlashArray//C protects against all three.

Ransomware. Security Only a Hacker Could Hate.

Ransomware is never a good thing and can be very costly. With Pure Storage's always-on protection, such as immutable and indestructible backups and snapshots, your data is never held hostage because it just works that way, out of the box. You don't ever need to change your setup, environment, or process. Period.

Key attributes for optimal ransomware protection with FlashArray//C and Purity//FA:

Always-on Encryption

- Data at rest is encrypted with AES-256 and validated with FIPS 140-2 to help customers maintain regulatory compliance and help achieve GDPR compliance
- Third-party live authentication eliminates the risk associated with user intervention and key management

Always-on Ransomware Remediation

- SafeMode snapshots ensure no one can access or destroy your backup data without your explicit approval
- Secures backup data and metadata automatically so that it cannot be modified, encrypted, or fully destroyed even if admin credentials are compromised
- Prevents deletion for up to 30 days using time-locked immutable snapshots



Ransomware
Recovery



Backup
& Restore



Disaster
Recovery



Business
Continuity



Backup and Restore. Restore Your Data in “Near-0” Downtime.

Backup and restore of data, for any reason, must work flawlessly. Mitigating risk and minimizing disruption to your business should be your utmost priority. FlashArray//C backs up and restores your data no matter the distance between locations or the recovery point objectives (RPO) and recovery time objectives (RTO) required.

High Performance to Reduce RPO and RTO

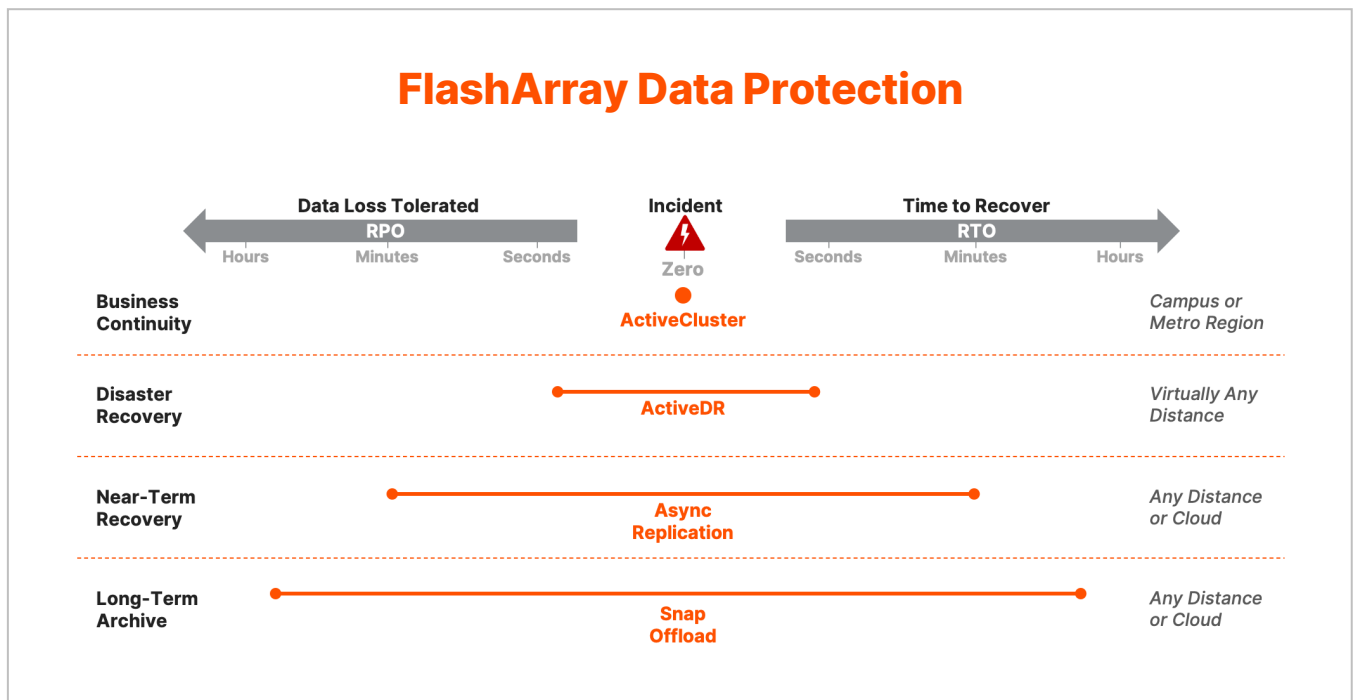
- Backup with consistent speeds up to 9TB/hour
- Restore with consistent speeds up to 10TB/hour

Both Snapshots and Image-Level Backups

- Instantaneously snapshot any FlashArray volume
- Snapshots maximize space efficiency by only writing changed blocks

Highly Available and Efficient

- Always on, up to 5:1 data reduction to reduce capacity
- 99.9999% of availability helps prevent data loss
- Ransomware protection for fast, complete recovery



Replication. Never Skip a Beat

When every second counts, you want the peace of mind that comes with the fastest recovery time in the business. FlashArray//C, combined with Purity//FA, works relentlessly to get you back up and running with minimal disruption in the event of data loss.

Key Attributes to Help Ensure Business Continuity in the Face of Data Loss:

ActiveCluster

- Synchronous replication and symmetric drive active-active design
- Zero automatic failovers requiring no user intervention

ActiveDR

- Recover from disasters with near-zero recovery points across any distance
- Respond to outages and compliance testing with a single click

Asynchronous Replication

- Faster and lower bandwidth sync with leading compression, pattern removal, and deduplication

Conclusion

Pure Storage FlashArray//C Delivers Performance and Value When it Comes to Data Protection.

The smart approach to data protection requires a comprehensive solution. One that protects against ransomware with on-by-default protection to ensure no one can access your data, having a backup and recovery plan that emphasizes speed and simplicity, and ensuring your data is efficiently replicated so it can be recovered at a moment's notice.

Pure Storage FlashArray//C is the comprehensive solution for organizations that want a smarter approach to protecting their data. FlashArray//C, along with Purity//FA and Pure1, eliminates complexity and simplifies what otherwise would be a burdensome endeavor, delivers blazing backup and recovery speeds, and provides IT leaders with a lower total cost of ownership over all-disk or hybrid solutions.

The Pure Storage products and programs described in this documentation are distributed under a license agreement restricting the use, copying, distribution, and decompilation/reverse engineering of the products. No part of this documentation may be reproduced in any form by any means without prior written authorization from Pure Storage, Inc. and its licensors, if any. Pure Storage may make improvements and/or changes in the Pure Storage products and/or the programs described in this documentation at any time without notice.

THIS DOCUMENTATION IS PROVIDED "AS IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID. PURE STORAGE SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE FURNISHING, PERFORMANCE, OR USE OF THIS DOCUMENTATION. THE INFORMATION CONTAINED IN THIS DOCUMENTATION IS SUBJECT TO CHANGE WITHOUT NOTICE.

Pure Storage, Inc.
650 Castro Street, #400
Mountain View, CA 94041

[purestorage.com](https://www.purestorage.com)

800.379.PURE

