The Pure//E Family for Telecom

Replace spinning disk systems with ultra-dense and low-power all-flash storage

While global telecom providers have made the move to all-flash storage for their latency-sensitive, high-performance workloads, most data remains on spinning disk. These large disk repositories are used for multiple use cases (see below), but they come at a cost. Disk systems are unreliable, use lots of power and take up a lot of rack space, stressing data center infrastructure. Replacing failed disks is a never-ending task.

All-flash storage is dramatically superior to disk across multiple metrics, including power consumption, cooling, reliability, and rack space consumption. But it's long been considered "too expensive" for lower performance workloads. Not anymore!

Break New Ground with Pure//E

The Pure//E™ family from Pure Storage® provides all-flash block, file, and object storage at an acquisition cost comparable (or lower than) disk-based solutions. Pure//E is made up of FlashArray//E™ arrays for 1 to 4PB of data (block or file) and FlashBlade//E™ arrays for 4 to 10+PB (file and object).

Acquisition costs at parity with nearline disk-based systems aren't the only advantage of switching to Pure//E, either:

- Fewer components and no moving parts for twenty times the reliability
- About 80% less data center space and power consumption per terabyte and 85% less e-waste
- System device lifetimes of 6–10 years (vs. 3–5 years typical for disks)
- Non-disruptive capacity upgrades
- Up to 40% lower TCO compared to disk over a six-year period

How can Pure//E arrays immediately help telecom service providers? Let's look at the use cases.

Replace Disk

- All-flash less than the price of disk
- 60% lower operational costs
- 20x more reliable
- Multiple purchasing options

The Greener Choice

- 80% less power consumption compared to disk systems
- 80% less data center space
- 85% less e-waste

Smarter Storage

- File, object, and block storage options
- Supports multiple use cases
- All software features included
- Unified management

Analytics: Cold Tier Data

While Pure Storage FlashBlade//S™ is an ideal platform for analytics workflows with high performance needs, a great deal of analytics data isn't accessed often, but still needs to be readily accessible. This so-called "cold tier" of data is ideally supported by FlashBlade//E. Examples include Splunk Classic cold tier, Splunk SmartStore cold tier, and Elastic cold or frozen tier.

In Splunk cold tiers, for example, cold data is still searchable. Because FlashBlade® has no seek time (unlike disk), searches can be lightning fast. By moving all data to flash tiers, analytics pipelines become faster and more reliable.

CDRs and Billing Images

Call detail records (CDRs) and billing data are crucial for telecommunications companies. Without them, revenue cannot be generated. There are also varying state and federal requirements for maintaining records of calls, text messages (SMS data), tower location data, per-call measurement data, and more. Retention requirements can range from days to years. Most of this data is stored on spinning disks and can now be easily and cost-effectively migrated to Pure//E systems.

Backup Data

Telecom carriers often have hundreds of disk-based backup appliances that consume vast amounts of space and power. Pure offers a range of options to replace these systems. FlashArray//E and FlashBlade//E systems are ideal for longer-term backup data or backups of less-critical data that doesn't require top tier performance. These systems are complemented by the ultra-high performance FlashBlade//S, which can provide a rapid restore tier for short-term or highly-critical data. For those that need it, FlashArray//C™ is a mid-tier option for backup and restore needs.

All these arrays provide secure snapshots for ransomware protection. Together, the Pure//E family can both dramatically reduce recovery windows while replacing racks of disk-centric backup appliances. And it's been tested to work with our many backup software partners, including Cohesity, Commvault, Veeam, Veritas and more. Not sure which solution is right for you? Pure has a team of data protection experts who can consult with you to determine which products best fit your needs.

Customer Care Call Recordings

Telecom organizations often need to save call center recordings, whether using home-grown systems or third-party providers such as NICE and Verint. Recordings may be for internal use or to support telecom customers purchasing call center services. Pure//E arrays provide a fast, scalable, and reliable platform for call recordings.

Video Surveillance

There is certainly a need among telco providers to deliver video surveillance to their own facilities for security purposes. But there is also a large opportunity for selling AI-powered video services in the B2B market. Businesses are looking for AI capabilities that deliver innovative services like facial recognition and threat detection, smart notifications, people/visitor counting, smoke and fire detection, and more.

Telcos are ideally suited for these offerings because they understand how to build networks at scale, network security, and combine multiple technologies into marketable solutions. Telcos also have billing systems in place, plus the ability to bundle video surveillance into existing telecom service packages.

Behind every surveillance platform is a storage solution. The FlashBlade//E solution is ideal for high-density storage; it also provides the performance needed to run real-time analytics on video streams. For video analytics pipelines that are container-based, FlashBlade integrates with Portworx®, the Kubernetes-native storage management platform from Pure Storage.

User File Storage

Telecom providers have tens of thousands of employees, most of whom will be storing file data. Today, the bulk of that file data is stored on spinning disks. Pure//E arrays are a cost-effective replacement for disk solutions. While it's impractical to replace an entire disk estate at one time, Pure//E arrays are an ideal platform for replacing disk systems as they come off lease or maintenance.

Object Storage with Databases

Business-critical workloads have traditionally been run on relational databases, but as data object sizes are increasing, object storage is being added to the mix. Cutting-edge applications are now focused on optimizing SQL query speed while moving the bulk of data into object-based data lakes and lake houses. These object stores can have different performance needs based on their roles.

A benefit of object storage is that it can support access from different query engines. Low-latency ad-hoc analytics queries can be supported by FlashBlade//S arrays, while the bulk of data used for tasks such as machine learning models can be housed on FlashBlade//E systems. The result is better performance, higher reliability, and much less power and space consumption for object-based databases.

Conclusion

With the release of Pure//E arrays, there is no longer any reason to store less performance-sensitive data on spinning disk. Moving to a cost-effective, all-flash platform offers dramatically better service reliability and data center saving reductions in power, space, and cooling. And Pure//E arrays share a common management platform with the other Pure array families.

In addition, like other Pure products, Pure//E arrays offer varied purchasing options, ranging from traditional capital expenditure to a complete subscription-based model where you pay for a service SLA and Pure Storage owns and manages the gear.

Additional Resources

- Read the Pure Storage telecom white paper.
- Learn more about FlashArray//E and FlashBlade//E.
- Catch up on the Pure telecom blogs.