SOLUTION BRIEF

High-performance Storage for Creatives

Pure Storage® FlashBlade® and LucidLink bring speed and simplicity at scale to Adobe Creative Cloud.

Creating and editing rely on access, speed, and responsiveness. Long waits for file downloads and uploads, dropped frames, and endless buffering seriously hamper production workflows. By combining FlashBlade, the high-speed object storage platform, with LucidLink Filespaces, Adobe Creative Cloud content creators gain a high-performance solution no matter where they are working.

Architecting Creative Workflows for Distributed Teams

Creative teams span the world. Remote work is essential to access global talent and deliver the best products.

This presents a challenge for creatives. Internet bandwidth limitations and data latencies are major impediments to remote work. Media and entertainment professionals use a mix of large and small files to create videos, build animated graphics, produce sound mixes, and review or correct images and photos. These tasks are far more time-consuming and difficult when working remotely with traditional file-sharing protocols.

LucidLink Filespaces resolves this dilemma by enabling global teams to stream data directly to and from any object store on demand, with no need to download and synchronize files in advance. This empowers users of industry-leading editing creative software like Adobe Creative Cloud to work effectively and efficiently no matter where they are. So where does flash storage fit into the picture?

Create Anywhere

- Create, edit, review, and produce anywhere, without limits
- Create at home or on the road, just as if you were in the office

High Performance

- Accelerate creative workflows
- High-speed, all-flash object repository
- Equal performance with large or small files

Simple Management

- Easy deployment and expansion of storage
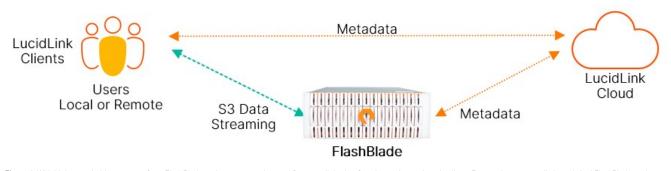- Cloud-based management with proactive tech support

Figure 1. With high-speed object storage from FlashBlade at the core, creative workflows are lightning-fast, improving project timelines. Egress charges are eliminated. And FlashBlade scales non-disruptively up to petabytes of capacity with linear performance.

How FlashBlade Completes the Story

Object storage has long been viewed as a slow data tier, useful only for archive data. Yet the performance and capacity demands of editing and creative workflows are anything but slow. The solution? Pure Storage FlashBlade, the leading unified fast file and object (UFFO) storage platform.

While LucidLink optimizes and parallelizes the requirements of data going over the wire, true performance still requires high-speed, low latency storage built to serve all the creatives in an organization, not just a few. FlashBlade's high throughput, massively parallel architecture is the perfect fit for your creative editing and production workflow challenges:

- **Workload Variation:** Creative workloads vary greatly. Creating and editing high-resolution video with Premiere, marketing and advertising content with InDesign, or detailed graphics work in Photoshop can pull very large files from a variety of sources. Animation and special effects rendering may operate on hundreds of thousands of small files. Operations can be read-intensive or write-heavy. FlashBlade and LucidLink work equally well with files of any size to accelerate all use cases. And FlashBlade never requires tuning. This makes it an exceptional platform for diverse media workflows.

- **Multiple Users:** Creative projects are a long way from the days of one editor working at a single workstation. Projects now require multiple creatives sharing access to the same storage. FlashBlade's intelligent load balancing automatically distributes clients and data across all resources and layers, which means that no resource, no data path, and no metadata server is ever the bottleneck. Tens of thousands of clients can connect to a FlashBlade.

- **Scale:** FlashBlade is capable of massive scale. Up to 8PB of effective capacity can be deployed in a single cluster of 150 blades of 52TB each. And since each blade contains flash capacity, compute, and networking elements, performance scales linearly from a starter system up to the largest, multi-chassis unit.

- **Downtime:** Lack of access can be devastating to creative staff productivity and disrupt project delivery timelines. FlashBlade dynamically self-heals to deliver incredible reliability. With data availability powered by erasure coding, FlashBlade will keep running as the system heals itself in case of failure in any resources. This helps ensure productivity stays high.

FlashBlade's exceptional performance easily surpasses the public cloud. And end-users can often realize significant savings by returning workloads to the data center.

FlashBlade and LucidLink

The true potential of a LucidLink Filespaces is realized when paired with FlashBlade. Any data written to FlashBlade through LucidLink is segmented into manageable blocks, encrypted, indexed, and transferred through multiple parallel and concurrent connections. This ensures maximum throughput over distance and removes the performance limitations of traditional network-attached storage protocols. Each block is tracked by the LucidLink Cloud service and the resulting metadata is synchronized and consistent across all connected clients. This removes up to 85% of the client-server chatter previously needed to open the files. Users reap the rewards of hyper-efficient and massively parallel data retrieval, from anywhere, by referencing only the necessary metadata from local flash or cloud, and then accessing only the file data they need, on-demand, from FlashBlade.

LucidLink's intelligent caching and precaching capabilities allow users to access the data on FlashBlade as quickly as if it were hosted on local flash. Users can immediately focus on creating something amazing, instead of waiting for data to download or synchronize.

Updates to sections of files, such as a range of frames in a Premiere timeline or a single page in an InDesign document, are made by uploading *only* the changed pieces and the Filespace service updating other clients. Uploading entire new files is now a thing of the past. Users experience a native workflow as simple as working from their local machine while reaping the benefits of shared assets and workflows.

Enterprise Features Included at No Added Cost

While the needs of the creative staff take precedence, FlashBlade is IT equipment and needs to be managed as part of the data center. Fortunately, FlashBlade is built with the same Pure Storage mentality that has revolutionized ease of management for enterprise storage:

- FlashBlade is quick and easy to deploy. Management is centralized via Pure1®. Upgrades are non-disruptive.

- FlashBlade is fully programable via REST APIs and can easily be part of any automation workflows. Common automation libraries are supported along with an active developer community.

- Data protection is built-in and included. Snapshots protect data. Asynchronous object replication can be between two FlashBlades or from FlashBlade to Amazon S3. Secure SafeMode™ snapshots help protect data after ransomware attacks.

- Connectivity is simplified by integrated networking. Interconnectivity between chassis removes the need to connect every node to a core switch, greatly reducing cabling. And network properties don't have to be set for each blade, reducing complexity and errors. This simplified, high-performance networking means you can support tens of thousands of clients on a single converged fabric.

- FlashBlade's small form factor and high density help save on costs for rack space, power, and cooling, especially compared to legacy disk or hybrid storage.

LucidLink is also designed with key enterprise features that solve fundamental challenges.

- Provision and deploy on-demand with LucidLink Cloud Portal.

- Zero overhead snapshots allow for easy file and Filespace recovery or roll-back to previous versions.

- Data is encrypted on the user's device and remains encrypted both in transit and at rest.

- Data privacy can be enabled via user access controls. Administrators can leverage Active Directory as well as single sign-on via Okta to invite and control access for a dynamic creative user base.

- LucidLink client software offers application-agnostic connectivity supporting Windows, Linux, and macOS. Distributed creatives can now use their tools as they were meant to be used: immediately, synchronously, and with no additional training.

- Remove the complexity of asset change management and get instant user buy-in.

Meet the Unexpected with as-a-Service Purchasing

Media projects can be unpredictable. It's difficult to plan in terms of storage capacity and performance needs. The result is often underbuying or overbuying. Either way, it's inefficient. This is partly why many projects have moved to the cloud. Purchasing can be done as needed, when needed, and easily reduced or expanded as projects warrant. What if you could buy data center storage the same way?

With Pure as-a-Service™ you can. FlashBlade can be purchased and consumed in the same way as cloud-based storage, only it's delivered to your data center. Pure even provides transparent pricing online.

Instead of purchasing a specific amount of storage with Pure as-a-Service, you purchase an SLA: the amount of capacity and performance together that you require. Pure takes care of the rest, keeping the equipment updated, monitoring it, and expanding it as your needs grow. You can shift your purchase level up and down as needed.

Pure-as-a-Service is the perfect complement to LucidLink which is also sold using a subscription-based model. And by bringing your object storage to LucidLink, you avoid data egress charges.

Additional Resources

- GigaOm rates FlashBlade a Leader in high-performance object storage.

- Take a test drive of FlashBlade to see how easy it is to use.

- Learn more about LucidLink Filespaces.