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# REASONS

## To Deploy WekaIO Matrix™, the World's Fastest, Most Scalable Parallel File System, in Your EDA Environment

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### Improving Profitability and Reducing Time-to-Market in Semiconductor Design

Historically, Electronic Design Automation (EDA) systems have been architected using enterprise NAS. While easy to deploy, these systems were not designed for the performance and scale required by modern IC designs. The result is longer simulation times that increase the risk of a chip re-spin, which can have a major impact on profitability.

A better approach is needed that delivers dynamic and independent scaling of performance and capacity to handle peak design workloads. WekaIO's software storage solution provides unprecedented metadata, small, and large file performance at microsecond latencies without the footprint, cost, and complexity of traditional storage solutions.

1

## REDUCE TAPE-OUT TIME WITH STORAGE OPTIMIZED FOR THE ENTIRE DESIGN FLOW

WekaIO's radically simple storage platform is ideal for demanding EDA workloads, such as complex directory queries, meta-data heavy I/O, large and small file reads and writes, or random and sequential access. Collocated storage and compute resources significantly reduces network traffic and latency, shaving months off the design cycle. Automatic load balancing prevents hot spots and performance bottlenecks, meaning that design teams are more productive and spend less time waiting for simulations to complete.

2

## BENEFIT FROM FLASH PERFORMANCE AT A FRACTION OF THE COST OF TRADITIONAL STORAGE

The WekaIO Matrix platform was designed for flash technology and can deliver a 10x or more improvement in performance at less than half the cost of traditional network attached storage. Our software-based architecture features native NVMe support that delivers consistent high performance and low latency at scale. True hardware independence provides the complete freedom to choose any x86 based server, any off-the-shelf solid-state device (SSD), and standard Ethernet or Infiniband components. This eliminates costly vendor lock-in and inflated vendor margins.

3

## INCREASE DESIGNER PRODUCTIVITY WITH INSTANT FILE ACCESS AND ON-DEMAND SCALING

MatrixFS is a POSIX compliant file system designed from scratch to leverage the power of flash technology. The parallel and distributed file system presents a global namespace so designers can easily access and share design files, libraries, project directories, and scratch space—all from a unified application and storage platform. Independently and dynamically scale up or scale down performance to meet design schedules and SLAs using our intuitive GUI, without costly and disruptive forklift upgrades. Our patented data placement and N+4 protection schemes ensure both data and metadata are fully protected and accessible.

4

## LOWER DESIGN COSTS AND INCREASE UTILIZATION OF EXISTING INFRASTRUCTURE

With Matrix, dramatically reduce job run-times, get more use out of EDA software licenses, and reduce the need for peak-use tool licenses to meet design schedules. Leverage the cost benefits and scale of your cloud to further reduce design costs by migrating cold data in the background to any S3 or Swift compatible object store—all without sacrificing performance or security. Inactive design files remain instantly accessible, saving valuable time, and eliminating the cost of recalling data from tape. When deployed in hyperconverged mode, Matrix software requires zero additional footprint or specialized hardware, reducing power, cooling, and floor space requirements by as much as 80 percent. Run the software on dedicated server infrastructure to decouple storage and compute for improved fault tolerance and scalability.

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## INCREASE BUSINESS AGILITY WITH REDUCED COMPLEXITY AND SIMPLIFIED MANAGEMENT

Integrated and granular policy based tiering dramatically reduces infrastructure complexity by consolidating multiple tiers of storage to a hot tier for active data and a cold tier for inactive data. Automatically and seamlessly migrate directories, files, or portions of a file to cost-optimized object storage without special software or disruptive reconfigurations. Never lose access to your data as migrated files appear local to users and applications with near instantaneous retrieval. An intuitive graphical interface provides point and click ease of management and time-series charting for detailed analysis of performance and capacity utilization. Managing petabytes of storage is radically simple with the WekaIO Trinity console.

