
BITMICRO®

BITMICRO®

MAXio®

All Flash Storage Array

Popular Applications

MAXio N1A6

MAXio All Flash Storage Array

Use Cases

- High speed centralized storage for IO intensive applications – email, OLTP, databases…etc
- Easy to use high capacity – high speed storage for data analytics and data capture
- Solid state high speed multi-access content delivery – cloud, on-demand, video libraries, music/audio, HDTV…more.
- Backend SAN attached storage for VDI servers (Virtual desktop infrastructure)

MAXio N1A6 Applications

Virtual Desktop Infrastructure (VDI)

- VDI addresses key problems in terminal based approaches to server based computing by allowing multiple user desktops to run as separate virtual machines while sharing the same physical hardware resources
- To improve shared storage performance, use MAXio ® All Flash Storage N1A6 as a storage repository for virtual machine images
  - Capable of handling boot volume and data volume for virtual machines. MAXio All Flash Storage N1A6 delivers up to 560K IOPS random read and 370K IOPS
  - Accessing the boot image in shared storage:
    - Typical VDI instance uses 100 to 150 IOPS
    - MAXio All Flash Storage N1A6 can support more than 5,000 users
  - Accessing the data volume in shared storage:
    - Typical VDI instance uses 35 to 40 IOPS depending on workload
    - MAXio All Flash Storage N1A6 can support more than 14,000 users if workload is mostly reads

MAXio N1A6 Applications

HPC HIGH PERFORMANCE COMPUTING

High Performance Computing

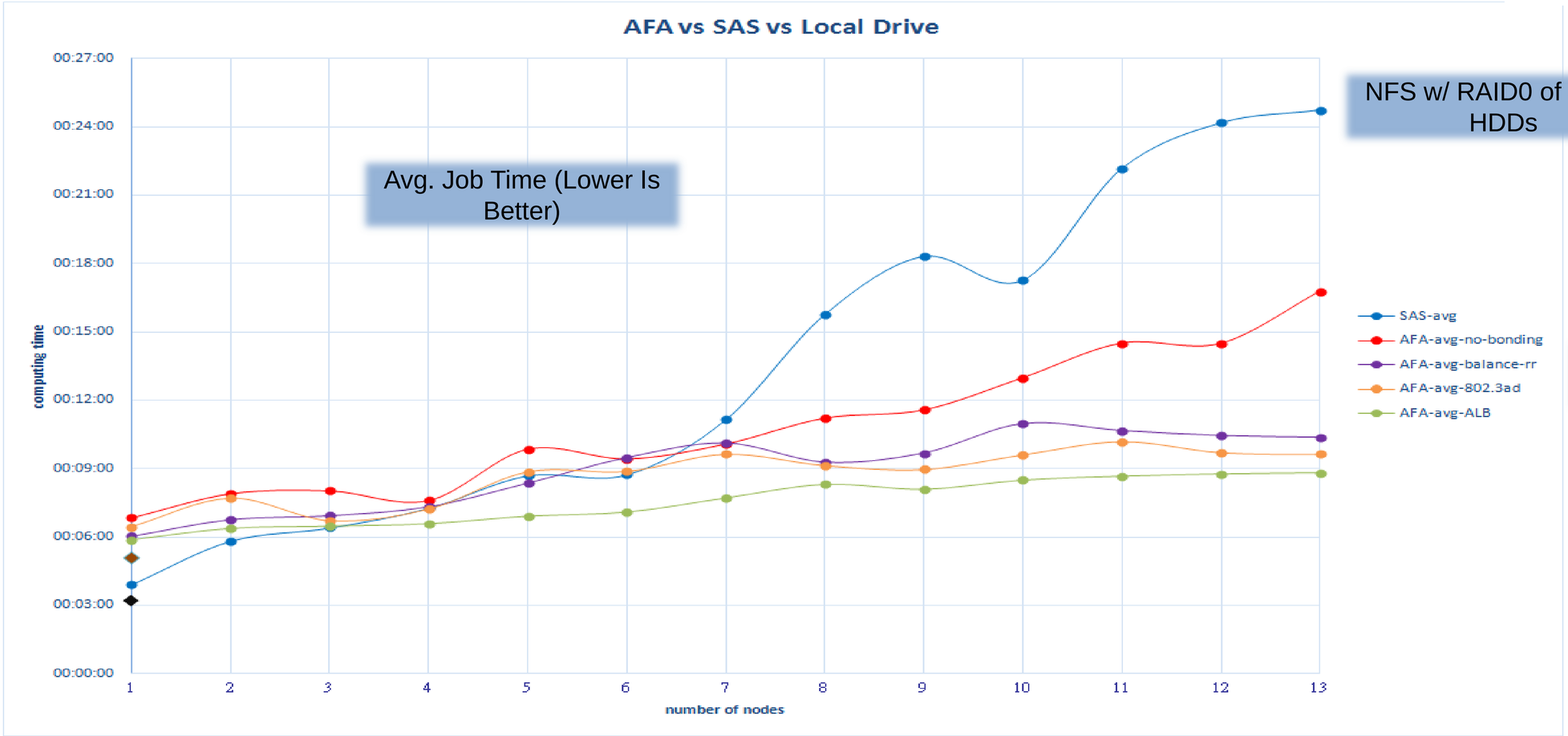
- In a computing farm, computing nodes use NFS or CIFS/ SMB to exchange intermediate data
- To improve shared storage performance, use MAXio® All Flash Storage N1A6 storage array and replace or augment a HDD-based storage array.

  - Create and connect to 8 or 16 iSCSI targets
  - Setup RAID 0 on these targets via the storage controller
  - Share the RAID 0 with NFS
- To fully utilize NIC bandwidth
  - Job partitioning: Group clients into different subnets
  - Bonding: Use 802.3ad-capable network switch

MAXio N1A6 Applications

HPC HIGH PERFORMANCE COMPUTING

High Performance Computing



Avg. Job Time (Lower Is Better)

NFS w/ RAID0 of 8 SAS HDDs

NFS w/ N1A6, Different Bonding Modes

MAXio N1A6 Applications

Media Production

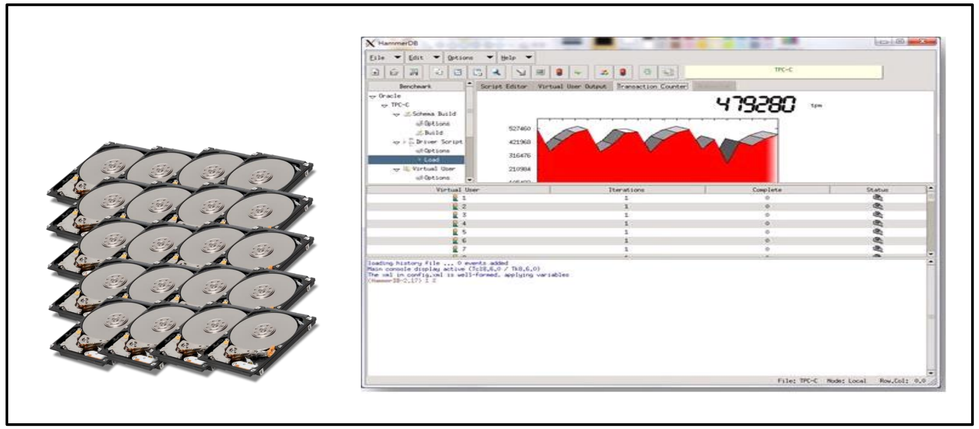
- 4K online editing typically requires media storage with three to four times the size of the source footage of a project
  - Store and playback of 4K content requires fast random-access which HDDs cannot handle

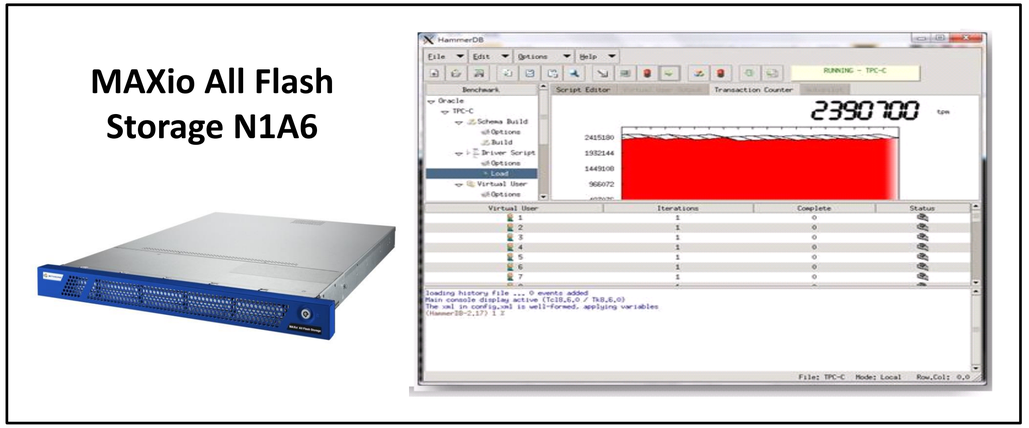
- To improve media storage performance, use MAXio All Flash Storage N1A6 storage array for better sustained transfer rates and less likely to drop frames during playback
  - Estimated to perform 26x faster on storing and rendering production media and 20x faster on playback vs HDD in RAID 0 configuration

MAXio N1A6 Applications

Databases

- Requires high performance and low latency for faster transaction completion
- To improve data access and query performance, use MAXio All Flash Storage N1A6 storage array as primary database storage
  - MySQL users sometimes implement splitting reads from writes and partitioning the data through sharing to improve performance
  - Performs almost 5x faster than internal HDD storage (20 x SAS 12Gb HDD) on Oracle DB based on benchmarks below (using HammerDB)



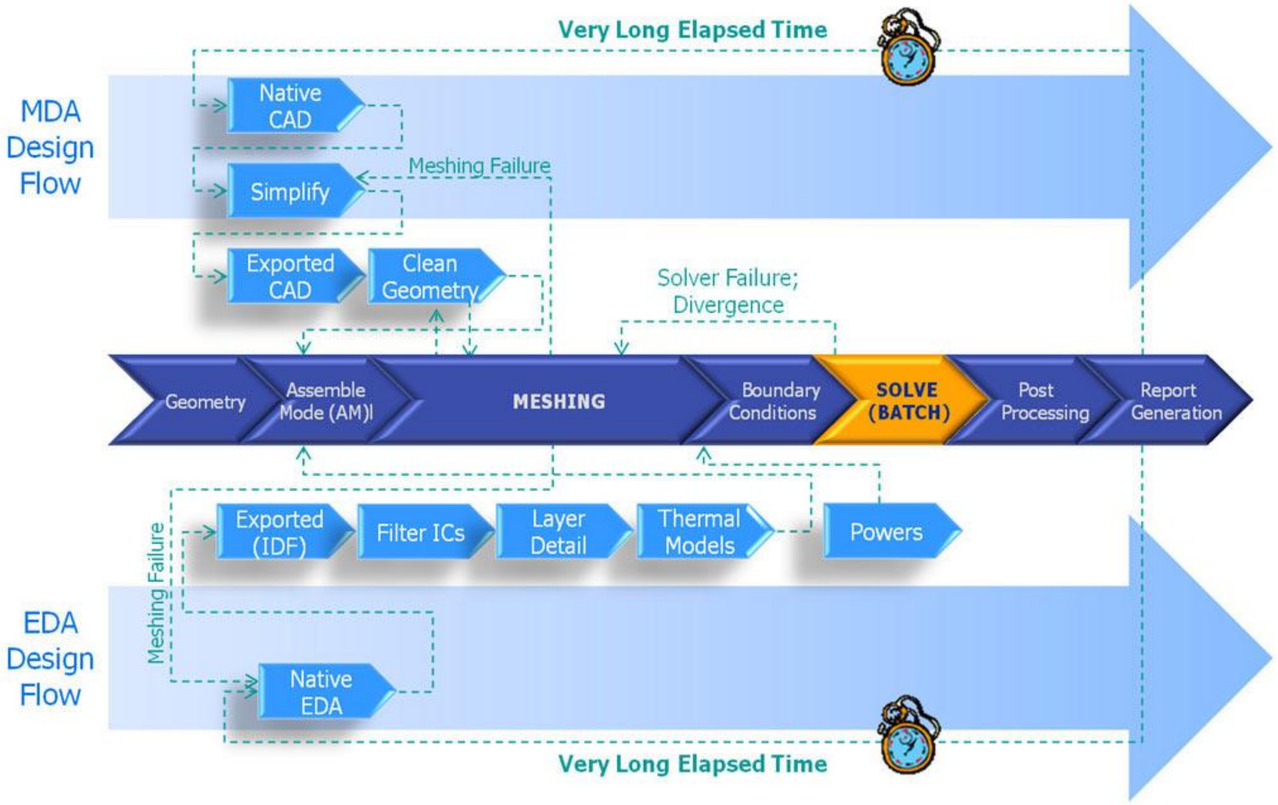


BITMICRO®

www.bitmicro.com

MAXio N1A6 Applications

EDA – Electronic Design Automation



- Engineering resources are expensive. EDA demands high-speed processing so engineers are not sitting idle, waiting for their compiling tasks to complete.
- Raw EDA file sizes can be very large and there are usually multiple projects being compiled at the same time. High storage capacity is needed to ensure multiple EDA compilation operations occur simultaneously.
- To improve electronic engineering and design efficiency, use MAXio All Flash Storage N1A6 storage array. The N1A6 provides extremely quick compilation turn-around for multiple projects, optimizing engineering resources.
- Up to 30 times faster than traditional hard-disk arrays.

MAXio N1A6 Applications

IO Caching

- Clients and applications are demanding and require real-time response
- Hard drive based systems can’t provide the write and read responses needed
- Use an in-band solid-state 12TB storage system to act as a highly responsive caching device.
- SSD storage is much faster than HDD – by a magnitude of 20x to100x depending on the workload
- Cache writes and reads to the SSD system for near instantaneous results
- Clients will immediately enjoy the difference
- The N1A6 can cache up to 1.2 million 10MB files

MAXio All Flash Storage N1A6

- 12TBs of iSCSI connected, usable All Flash Array - Solid State Storage
- Qty 20 1TB SSD's using FlexiRemap software to insure data is protected and easy to rebuild during a drive rebuild
- Hot swappable front loaded drives, redundant power supplies and active/active iSCSI network ports.
- **Applications include: VDI, High Performance Computing, Media Production, Databases and Analytics, Electronic Design Automation, IO Caching and more…**

vmware PARTNER TECHNOLOGY ALLIANCE

HPC HPC

BITMICRO®

MAXio®

All Flash Storage Array