Market Background

The first human genome cost $3B USD and ten years to decode. With recent advances, the same data can be obtained for $1000 USD in three days.

As a result, Pharma companies and research institutions are now performing Next Generation Sequencing (NGS) on a whole new scale. The information obtained is being used in the prediction of outcomes that further drug discovery and therapeutic development. Research tools such as high-throughput genetic sequencing, genotyping, microarray analysis, and bioinformatics are providing the means of creating, gathering, interpreting, and analyzing biological, chemical, and clinical data. This work is driving a massive amount of data creation—recent industry analyst surveys have determined that the healthcare industry worldwide generates approximately 30 percent of the world's data.

The life sciences IT market is relatively mature when it comes to the major biotechs, pharmas and large academic research organizations that would need the capacity and performance of Panasas storage. However, mid-size institutions may still be exploring how to best attain a more strategic view of IT investment.

Life sciences computing and storage applications frequently require extraordinary performance and/or capacity. Seldom, however, do scientific applications require the management and support features of the corporate data center.

Panasas is most directly interested in engaging in opportunities with enabling technologies and tools that drive biomedical research, therapeutic and drug development, with emphasis on predictive biology, drug discovery, informatics, personalized medicine, and clinical trials. Examples: genomic analysis, systems biology, computational biology, computational chemistry, and proteomics.

Customer Pain Points

Life science researchers and the IT professionals who support them share a common challenge: next generation research instruments, especially genetic sequencing devices, are deepening the richness and quality of research conclusions and targets by creating massive amounts of new data.

The need to build, maintain and rapidly scale IT environments that support effective analysis, sharing and preservation of that data continues to create storage challenges.

Researcher Concerns:

- Poor storage performance limits research analysis productivity
- Capacity scaling challenges can limit data production, hindering research
- Poor IO characteristics can inhibit research collaboration

IT Concerns:

- Cost and complexity to build, scale and maintain storage
- Compute and storage burden is dynamic and difficult to predict
- Data retention uncertainty – lifecycle management is inconsistent

Executive Concerns:

- Cost and resource allocation; they do not want highly paid researchers waiting for file access
- Time to discovery – especially for BioTechs and Pharma – can impact competitive position

Panasas Value Proposition

- Panasas scale-out NAS helps life science organizations increase their research productivity while reducing storage operating costs
- Ease-of-use and industry-leading scalability of capacity and performance make Panasas a nearly perfect fit for organizations that are traditionally "data rich" but "IT light"
- Unlike traditional NAS or SAN storage, Panasas products can scale both capacity and performance while remaining simple to manage. Its unique PanFS® operating system allows users to scale without downtime or complex configuration changes
- The "pay-as-you-grow" model enables research organizations to match storage needs with grant funding
- By deploying Panasas scale-out NAS technology, leading life sciences companies and research institutions have reduced on-going operating expenses while providing agility and confidence to meet growing business needs for storage, including Bayer, Boerhinger Ingelheim, Garvan Institute, Merck, National Center for Biotechnology Information (NCBI) at the National Institutes of Health (NIH), Novartis, Partners Healthcare, and Yale University.

Partner Opportunities

Partnership opportunities exist with organizations that are able to translate scientific research requirements into solutions that solve IT, storage, and data management challenges. Examples:

- Infrastructure design for optimal scalability, performance, reliability, and growth
- Objective informatics needs assessment and analysis
- Application optimization and parallelization for high-performance and high-throughput production processing

Target Buyer Profile

TARGET ORGANIZATIONS: Mid-to Large pharmaceutical and biotechs, grant-funded academic research organizations, contract research organizations, government entities

TARGET BUYERS/KEY DECISION MAKERS: Pharma and biotech: VP of Research, Director/VP of Research IT, Computational Biologist, Informatacist, Storage administrator. IT Management is important in that they can block decisions, but will not likely to be as motivated as Researchers to gain productivity advantages.

ACADEMIC: Principal investigator, Department Chair, Department IT Director, Research Associate, Core Facility Director.

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Panasas Product Fit

Panasas ActiveStor is ideal for primary analysis of raw instrument data. It offers leading mixed workload performance by leveraging its large, scalable cache in front of flash storage for small file IOPS and high capacity hard drives for large file throughput processing. In this part of many life science workflows there are a large number of applications, files, and libraries used; ActiveStor accelerates the time to results for processing and analyzing this data.

ActiveStor is also suitable for Tier 2 analysis results and mid-term storage of instrument data because of the high concurrent access it provides, and the scalability of storage capacity without the need to create additional file systems or mount points.

Multi-petabyte archival opportunities are typically not worth pursuing, because other solutions such as object storage or nearline solutions from other vendors will normally offer a much lower dollar per terabyte. However, these may be worth bidding if reliability/availability, ease of use, and low IT management overhead are valued especially highly by the customer.

Objection Handling

Storage is not a problem for me (talk to IT!).

In reality, many researchers don't know if storage is a problem or not. That stack of 1 TB drives on your lab bench would seem to indicate that you might have trouble effectively and efficiently sharing that data with other researchers or assuring its protection. Instead of wondering, let us work with you to understand if there is an opportunity or not.

What we have works, and changing to a radically different system like Panasas ActiveStor would create upheaval and chaos.

Almost all of the 500+ Panasas customers successfully migrated at some point from traditional NAS or SAN to scale-out NAS without workflow disruption. Most customers report that they now have a significantly reduced need for storage management and lower IT overhead because of the simplification in their environment that Panasas scale-out NAS provides.

I'm in the middle of a research project and don't have time to look at or care about storage.

Panasas respects that. Our mission is to improve your research productivity and the last thing we would do is interfere with research actively underway. While this phase of research moves forward, who in your IT team should we talk to in order to understand how we can best demonstrate our capabilities once this phase of your research is complete?

Qualifying Questions

For Researchers:

- Are your analysis applications running as quickly as you'd like?
- Do you have additional sequencing capacity you'd like to use?
- Are you able to enable collaborative analysis of your data?
- Is your research bottlenecked by insufficient storage performance?

For IT:

- Are your researchers complaining about research productivity?
- Do you have the additional staff available to manage your growing storage need?
- How much time do you spend planning your next storage upgrade?
- Are you interested in predictably scaling your storage infrastructure in lock-step with data growth?

Case Studies/References

The Garvan Institute has taken advantage of Panasas's extreme ease-of-use to scale their sequencing environment by 50x without having to add any additional storage management staff. This includes ingest of NGS data from the new, high-performance Illumina High-Seq X Ten sequencers.

National Center for Biotechnology Information (NCBI), a part of the National Insitute for Health (NIH), uses Panasas as the central storage repository for its genome data shared with institutions around the world.

Competition

EMC Isilon

Will contend they are a perfect fit for life sciences and showcase their many wins and close relationship with sequencer manufacturer Illumina. Will contend that Panasas is too small and lacks the tiering support and data replication features that many customers require. However, customers have found that Isilon has performance limitations relative to Panasas and can be very costly.

DDN or Seagate with Lustre

Will argue that Lustre is now mature enough and easy enough to manage to deploy in production environments while offering a much lower cost and higher density than Panasas. However, the reality is that Lustre is poor at the mixed workload performance needed by Life Sciences customers and still suffers from poor manageability and reliability.
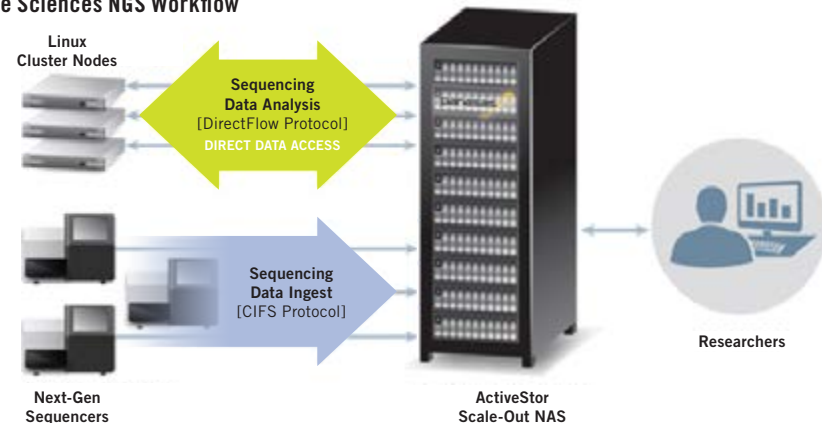
IBM

With their SpectrumScale (formerly GPFS) file system solution, will contend that Panasas is too small and cannot address customers' broad range of needs (especially when it comes to data management capabilities). While SpectrumScale can meet performance and data management requirements, it is extremely complex and difficult/costly to manage.

Build Your Own (BYO)

Some research institutes will look closely at the build-your-own approach, where they hope to maximize performance and features, while lowering their cost. This strategy is fraught with management complexity, reliability and QOS challenges, ultimately leading to many hidden costs and a bad user experience. Panasas should represent a much more predictable, reliable, and higher performance solution and should also be lower cost from a TCO perspective. The ideal customer will frequently be someone who just tried and failed at the BYO approach; they will definitely see the wisdom in taking a more strategic view towards their data storage needs.

Typical Workflow

Life Sciences NGS Workflow

Linux Cluster Nodes — Sequencing Data Analysis [DirectFlow Protocol] DIRECT DATA ACCESS — Next-Gen Sequencers — Sequencing Data Ingest [CIFS Protocol] — ActiveStor Scale-Out NAS — Researchers

Market Background

Gone are the days of relying on costly physical tests for product design.

Automotive design used to involve using crash test dummies to test automotive safety and aerospace companies used wind tunnels to test thermals across aircraft wings. But today, Linux clusters and parallel computational environments reign supreme, allowing design engineers to perform complex simulations of products at levels of detail unheard of in the recent past. High Performance Computing (HPC) is even used to model and optimize the absorbency of baby diapers—that's how pervasive the use of HPC is in the manufacturing sector.

Particularly in the Enterprise, it is now all about the use of data to drive product differentiation and ultimately business success. This translates to an enormous growth in the amount of data, most of which needs to be accessed with high performance and protected so that it can be leveraged for future needs.

Unlike other HPC markets, manufacturing workflows tend to involve many different simultaneous projects and potentially hundreds of applications. High performance, mixed workload access at an aggregate level is key for most environments. While these are still largely scientific workflows, a larger number of management and support features are frequently needed than in other HPC sectors.

Panasas is best suited for Computer Aided Engineering (CAE) opportunities in the Aerospace and Automotive industries, although there are also interesting applications in consumer products as well that are a good fit. Higher education and government applications frequently leverage CAE for their needs as well.

Customer Pain Points

Design engineers and the IT professionals who support them share a common challenge: next generation approaches to product design, especially the latest multi-physics simulations, are deepening the richness and quality of product design research. This is creating massive amounts of new data, sometimes measured in petabytes.

The need to build, maintain and rapidly scale IT environments that support effective analysis, sharing and preservation of that data continues to create storage challenges.

Design Engineer Concerns:

- Poor storage performance limits designer productivity
- Capacity scaling challenges can limit data production, hindering research
- Poor IO characteristics can inhibit research collaboration

IT Concerns:

- Cost and complexity to build, scale and maintain storage
- Compute and storage burden is dynamic and difficult to predict
- Data retention uncertainty – lifecycle management is inconsistent

Executive Concerns:

- Cost and resource allocation; they do not want highly paid researchers waiting for file access
- Time to results directly impacts competitive position

Panasas Value Proposition

- Panasas scale-out NAS helps enterprise companies increase their product differentiation and competitiveness while reducing storage operating costs
- Ease-of-use and industry-leading scalability of capacity and performance make Panasas a nearly perfect fit for organizations that are often "data rich" but "IT light"
- Unlike traditional NAS or SAN storage, Panasas products can scale both capacity and performance while remaining simple to manage. Its unique PanFS® operating system allows users to scale without downtime or complex configuration changes
- The "pay-as-you-grow" model enables customers to match storage needs with their current budgets
- Panasas ActiveStor is the scale-out NAS solution of choice for CAE software developer CD-Adapco's own needs. Panasas has worked closely with both Ansys and CD-Adapco to optimize their products for Panasas storage
- By deploying Panasas scale-out NAS technology, leading Enterprise companies and public sector institutions have reduced on-going operating expenses while providing agility and confidence to meet growing business needs for storage. This includes many household names like Airbus, BMW, Boeing, Bosch, GE, Gulfstream, Honda, Honeywell Aerospace, Lockheed Martin, MAN Diesel, Mercedes Benz, Northrup Grumman, Proctor and Gamble, and 3M

Partner Opportunities

Partnership opportunities exist with organizations that are able to translate product design requirements into solutions that solve IT, storage, and data management challenges. Examples:

- Infrastructure design for optimal scalability, performance, reliability, and growth
- Objective informatics needs assessment and analysis
- Application optimization and parallelization for high-performance and high-throughput production processing

Target Buyer Profile

TARGET ORGANIZATIONS: Mid-to Large aerospace and automotive companies, consumer products companies, grant-funded academic research organizations, government entities

TARGET BUYERS/KEY DECISION MAKERS: Enterprise companies: Director/VP of IT, Director/VP of HPC, Storage administrator. IT is important and is generally responsible for identifying and implementing solutions to gain productivity advantages.

ACADEMIC: Principal investigator, Department Chair, Department IT Director, Research Associate, Core Facility Director.

Panasas Product Fit

Panasas ActiveStor is ideal for high performance scratch space used in product design simulations, for scale-out project data, and for hosting associated application binaries. It offers leading mixed workload performance by leveraging its large, scalable cache in front of flash storage for small file IOPS and high capacity hard drives for large file throughput processing. A large number of applications, files, and libraries are used; ActiveStor accelerates the time to results for processing and analyzing this data.

ActiveStor is also suitable for mid-term storage of product design data because of the high concurrent access it provides, and the scalability of storage capacity without the need to create additional file systems or mount points.

Multi-petabyte archival opportunities are typically not worth pursuing, because other solutions such as object storage or nearline solutions from other vendors will normally offer a much lower dollar per terabyte. However, these may be worth bidding if reliability/availability, ease of use, and low IT management overhead are valued especially highly by the customer.

Objection Handling

What we have works, and changing to a radically different system like Panasas ActiveStor would create upheaval and chaos.

Almost all of the 500+ Panasas customers successfully migrated at some point from traditional NAS or SAN to scale-out NAS without workflow disruption. Most customers report that they now have a significantly reduced need for storage management and lower IT overhead because of the simplification in their environment that Panasas scale-out NAS provides.

I'm in the middle of a research project and don't have time to look at or care about storage.

Panasas respects that. Our mission is to improve your product design productivity and the last thing we would do is interfere with projects actively underway. While this phase of design moves forward, who in your IT team should we talk to in order to understand how we can best demonstrate our capabilities once this phase is complete?

Qualifying Questions

For Product Designers:

- Are your CAE applications running as quickly as you'd like?
- Are you able to enable collaborative analysis of your data?
- Are your design simulations bottlenecked by insufficient storage performance?

For IT:

- Are your engineers complaining about CAE productivity?
- Do you have the additional staff available to manage your growing storage need?
- How much time do you spend planning your next storage upgrade?
- Are you interested in predictably scaling your storage infrastructure in lock-step with data growth?

Competition

NetApp FAS

Will try to leverage their frequently prominent position within Enterprise IT to also win business for HPC requirements. Will contend that Panasas is too small and lacks the Enterprise features that many customers require. However, customers have found that NetApp still does not have a true scale-out offering with cluster mode and that NetApp cannot provide HPC levels of performance for their workflows.

EMC Isilon

Will contend they are a great fit for manufacturing and showcase their many wins in the space. Will contend that Panasas is too small and lacks the tiering support and data replication features that many customers require. However, customers have found that Isilon has performance limitations relative to Panasas and can be very costly.

IBM

With their SpectrumScale (formerly GPFS) file system solution, will contend that Panasas is too small and cannot address customers' broad range of needs (especially when it comes to data management capabilities). While SpectrumScale can meet performance and data management requirements, it is extremely complex and difficult/costly to manage.

HP or DDN or Seagate with Lustre

Will argue that Lustre is now mature enough and easy enough to manage to deploy in production environments while offering a much lower cost and higher density than Panasas. However, the reality is that Lustre is poor at the mixed workload performance needed for CAE workflows and still suffers from poor manageability and reliability.

Case Studies/References

ATK Aerospace uses a wide range of CAE applications including ANSYS Fluent, CD-Adapco STAR- CCM+, and Simulia Abaqus with Panasas storage to speed time-to-market, improve reliability, and reduce manufacturing costs.

CD-Adapco takes advantage of Panasas storage to "dramatically improve the performance of their CAE software," said Steve Feldman, VP Software Development at CD-Adapco. "ActiveStor is robust, simple to maintain, Panasas support is good, and—it just works."

3M turns to Panasas for their HPC storage needs, enabling their design engineers to refine their designs more quickly, improving product quality and engineering productivity. This allows 3M to respond more quickly to its customers, delivering greater value and innovation.

Workflow Example

CD-Adapco

ORECA Technology designed the REBELLION R-One racing car from start to finish using CAE tools which included STAR-CCM+®

365 DAYS, FROM SCRATCH TO TRACK

Market Background

Over-the-top (OTT) distribution has emerged as a key disruptor for all traditional suppliers of M&E content.

New infrastructure required presents Panasas Performance Scale-out NAS with a golden opportunity.

The media industry encompasses a wide array of organizations and workflows - includes ingest, editing, playout, transcoding, format conversion, animation, visual effects and streaming distribution.

Broadcasters and Studios engage in generating and distributing programming for TV, theatrical release and new platforms for OTT distribution. Large organizations manage dozens to hundreds of traditional channels using complex automation systems to streamline production, programming and distribution. Major studios oversee entire facilities for creation of original content. New distribution partners take ownership of rights usage management and security to ensure that entertainment content goes to authorized agents via optimized networks and caching platforms.

Post Production and Effects continues to be essential to the manufacturing of entertainment for film, advertising and game development by using advanced technology to enhance viewer experience through use of storytelling techniques, special effects, new 4K formats, animation and 3D. Specialized visual effect studios with 10s to 100s of artists work together on different shots within a larger movie or TV project, requiring tightly orchestrated workflows supporting collaboration / content sharing alongside large amounts of compute infrastructure for rendering effects.

OTT allows customers to cord-cut their relationship with traditional cable and satellite providers and acquire content a-la-carte and on demand. Infrastructure required is often a combination of private and public cloud. Multiple vendors mixed in a loose alliance drive to the delivery of an ideal next-generation experience on any home device — whether a TV or a handheld tablet.

Customer Pain Points

Media organizations face unprecedented cost pressure to upgrade infrastructure to support new 4K formats, while distributing content to more partners and regions

Media IT Concerns:

- Cost & complexity to build, deploy, scale, maintain shared-access storage
- Traditional dependency on inflexible SAN storage that lacks scale
- Small IT teams must manage complex systems in support of diverse apps. for media ingest, editorial and transcoding

Production Manager Concerns:

- Service interruption of production & delivery as artists run out of storage
- Unable to build optimal workflows for varied apps. with unique storage needs
- Cannot forecast storage needs due to constantly-changing media format specs

Executive Concerns:

- Control of infrastructure capital and operational costs
- Pressure to adopt new technologies to improve content quality and creativity
- Large media repositories to extend media lifecycle value & revenue generation
- Maximize productivity of high-cost artists & applications
- Reduce risk to business continuity - media data is most important assett

Panasas Value Proposition

- Our Performance Scale-out NAS helps media organizations increase their production productivity by providing ease of scale while holding the line on storage operating costs
- Ease-of-use and industry-leading scalability of capacity and performance make Panasas a nearly perfect fit for organizations that are traditionally "data rich" but "IT light"
- Unlike traditional NAS or SAN storage, Panasas can scale both capacity and performance while remaining simple to manage.
- Panasas DirectFlow parallel high-performance protocol for Linux and Mac functions with PanFS® scale-out operating system to provide users with 2X the performance of NFS and SMB protocols found on other scale-out NAS products
- The "pay-as-you-grow" model enables M&E organizations to match storage needs with available budgets
- By deploying Panasas leading media companies and studio production facilities have reduced on-going operating expenses while providing agility and confidence to customers including Asylum Entertainment division of Legendary Pictures, CNN, Deluxe, DirecTV, Turner Studios and many more.

Partner Opportunities

Workflow expertise & ecosystem orchestration of M&E software solutions is prized:

- Non-SAN infrastructure design for optimal scalability, performance, reliability
- MAM integration support to track & direct assets to right stage of production
- Application optimization for high-performance production processing
- Panasas now supports Avid Video Edit direct on PanFS via SanFusion 1.5 driver; Flavoursys Strawberry Linux-based server assist for larger Avid workgroups w/ Strawberry project management interface; Adobe Premiere Pro, After Effects & Adobe Anywhere edit platform; DirectFlow parallel performance on Apple Mac

Target Buyer Profile

TARGET ORGANIZATIONS: Mid-to Large visual effects and game development facilities with large render farms, local, regional and national broadcasters; news, sports and episodic media, production houses full feature motion animation and effects facilities, content processing operations, and media delivery platforms for OTT

TARGET BUYERS/KEY DECISION MAKERS: Facility executives (Directors, VP) seeking to upgrade or evolve storage as part of all strategic infrastructure upgrades. IT Management, often called System Administrators important influencers as they can block decisions, but are motivated to adopt and 'show off' new technologies to gain productivity advantages

NEW DECIDERS: Storage Architects, Delivery Architects, and New Media professionals that serve multiple roles including creative and technical responsibility.

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Panasas Product Fit

Panasas ActiveStor with PanFS is ideal for high performance workloads that benefit from distributed compute resources and parallelism. It offers leading mixed workload performance by leveraging its large, scalable cache in front of flash storage for small file IOPS and high capacity hard drives for large file throughput processing. In this part of many M&E workflows there are a large number of applications, projects and assets used; DirectFlow accelerates the time to results for processing and analyzing this data in parallel.

ActiveStor is also suitable for Tier 2 analysis results and mid-term storage of nearline data because of the high concurrent access it provides, and the scalability of storage capacity without the need to create additional file systems or mount points.

Multi-petabyte archival opportunities are typically not worth pursuing, because other solutions such as object storage or nearline solutions from other vendors will normally offer a much lower dollar per terabyte. However, these may be worth bidding if reliability/availability, ease of use, and low IT management overhead are valued especially highly by the customer.

Competition

M&E-specific storage

Avid ISIS, Apple Xsan / Quantum StorNext, DDN, Harmonic Omneon MediaGrid, EditShare etc. contend they are optimized for M&E. Lack high performance with flexibility to support diverse workflows and ease of scale & management Panasas delivers. They fail to offer enterprise data services like Snapshots and lack the reliability of PanFS RAID 6+ software-based erasure coding for industry-leading reliability and availability.

EMC Isilon

Contend they are great fit for M&E. Showcase many wins and close relationship with app. vendors. Contend Panasas too small, lacking tiering support & data replication. Customers actually find Panasas offers 2X to 5X performance of Isilon via Panasas DirectFlow. EMC Isilon very costly esp. after 3rd year when support costs escalate. M&E customers offended they cannot write down investment in Isilon over 5 years, being forced into early-upgrade scenarios.

Qumulo

Qumulo New player. Isilon veterans with Isilon-like clustered scale-out NAS focused on what they call "Data Awareness". Realtime-based combo of Data Analytics & Telemetry - customer gains instant awareness of how much data they have on Qumulo and hotspots within filesystem. Qumulo is very young v1.0 company, and has lost customer data as recently as Q4 2015. Performance customers that try Qumulo indicate that throughput is below EMC Isilon. These two factors make Qumulo a business risk for customers seeking a robust, mature NAS filesystem that easily scales out.

NetApp:

Veteran scale-out NAS provider. HA dual-head FAS architecture + OnTap filesystem = 50% overhead model. Newly offers scale-out NAS v.8 of OnTap filesystem but requires customers to reformat their volume from OnTap 7. Complex reformatting of filesystem for upgrade to v.8 (more than 80 steps!) and higher price of NetApp provides strong opp. for Panasas to offer similar ease-of-use scale-out story for lower cost and no need to reformat data being upgraded to PanFS. NetApp much slower per rack unit than DirectFlow-based Panasas. NetApp typically must deploy twice as much infrastructure as Panasas in order to perform the same workload. Hence expensive.

Objection Handling

Storage is not a problem for me (talk to the Sys Admin!). Many creative users know storage can be a problem but don't know how to address it. That stack of 1 TB drives coming into the production facility indicate likely trouble managing that data with other creatives or assuring its protection. Instead of wondering, let us work with you to understand if there is an opportunity or not.

What we have works, and changing to a radically different system like Panasas ActiveStor would create upheaval and chaos. Almost all 500+ Panasas customers successfully migrated from traditional NAS or SAN to Scale-out NAS without workflow disruption. These customers report they have a significantly reduced need for storage management and lower IT overhead due to simplification in their environment that Panasas scale-out NAS provides, compared to traditional SAN found in M&E production facilities.

Ethernet cannot provide the performance I need. The unique Panasas Scale-out architecture overcomes Ethernet limitations via DirectFlow Parallel protocol. It leverages multiple Ethernet connections to broadly leverage more throughput than possible on other Ethernet-based storage.

My application vendor includes integrated storage. Many M&E app. vendors sell expensive proprietary storage rather than work with open storage solution options. They trap their customers into an ecosystem that lacks scale and flexibility to support many different applications required in M&E workflows. Panasas has extensive experience with diverse media applications, eliminating the application-specific requirement for single-vendor storage and improving workflows by consolidating them onto a single Scale-out NAS from Panasas.

Qualifying Questions

For Decision-makers:

- Are your analysis applications running as quickly as you'd like?
- Can your team work collaboratively across applications and storage silos?
- Do you have performance bottlenecks in your environment?
- Are you lacking support from other NAS vendors for Mac-specific support?

For IT:

- Are your creatives complaining about productivity and delays to workflow?
- Do you have data sprawl across multiple storage platforms and volumes?
- How much time do you spend planning your next storage upgrade?
- Are you interested in predictably scaling your storage infrastructure in lock-step with data growth?

Case Studies/References

Deluxe is a multi-national visual effects and production company that deployed Panasas against Isilon in Australia on a major Hollywood movie requiring a re-render of the entire project using their Linux renderfarm. Panasas was able to take the multi-day job on Isilon and produce the same results in less than one day, delivering significant savings in wall clock time.

Asylum Entertainment is a large post production facility with more than 100 Avid editors performing editorial tasks on long-form television and movie content. Allen Dial is cited in this case study as a powerful reference user of PanFS on ActiveStor for the ease of use and scale capabilities, as well as the forthcoming launch of DirectFlow for Mac.

Typical Workflow

Deluxe Entertainment Visual Effects

- Renders completed 50% faster than industry-leading storage solution, enabling the highest quality visual effects delivered on time when producers authorized last-minute changes
- 50-70 million files per 3D project processed on Panasas storage
- Eliminated storage bottlenecks and "off-hours" renders
- Mad Max Fury Road won 6 Oscars in 2016

Top Use Cases

- Visual Effects
- Rendering
- Post Production
- Broadcast
- Content Delivery
- Active Archive