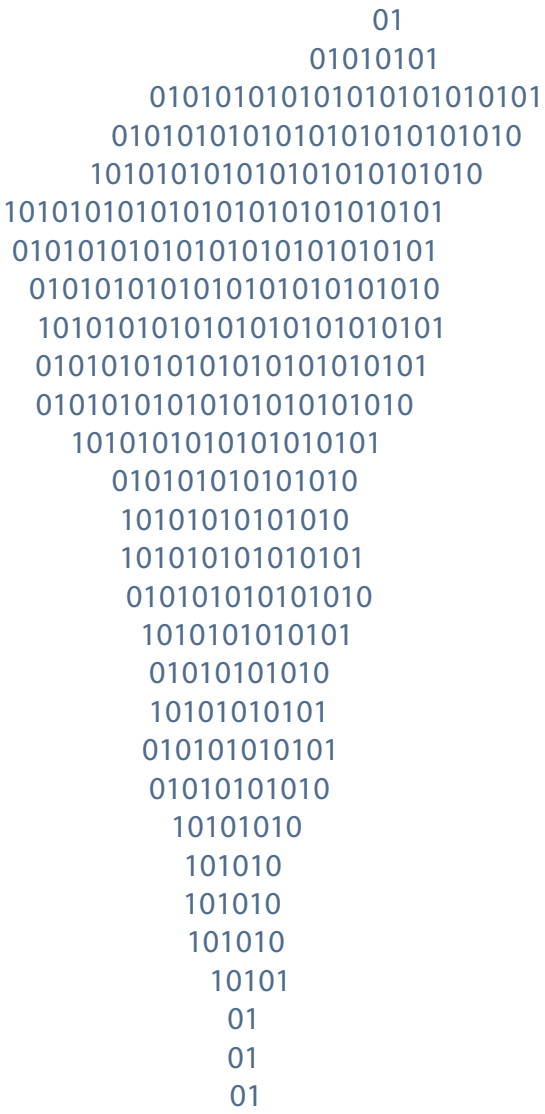

FREEFORM DYNAMICS

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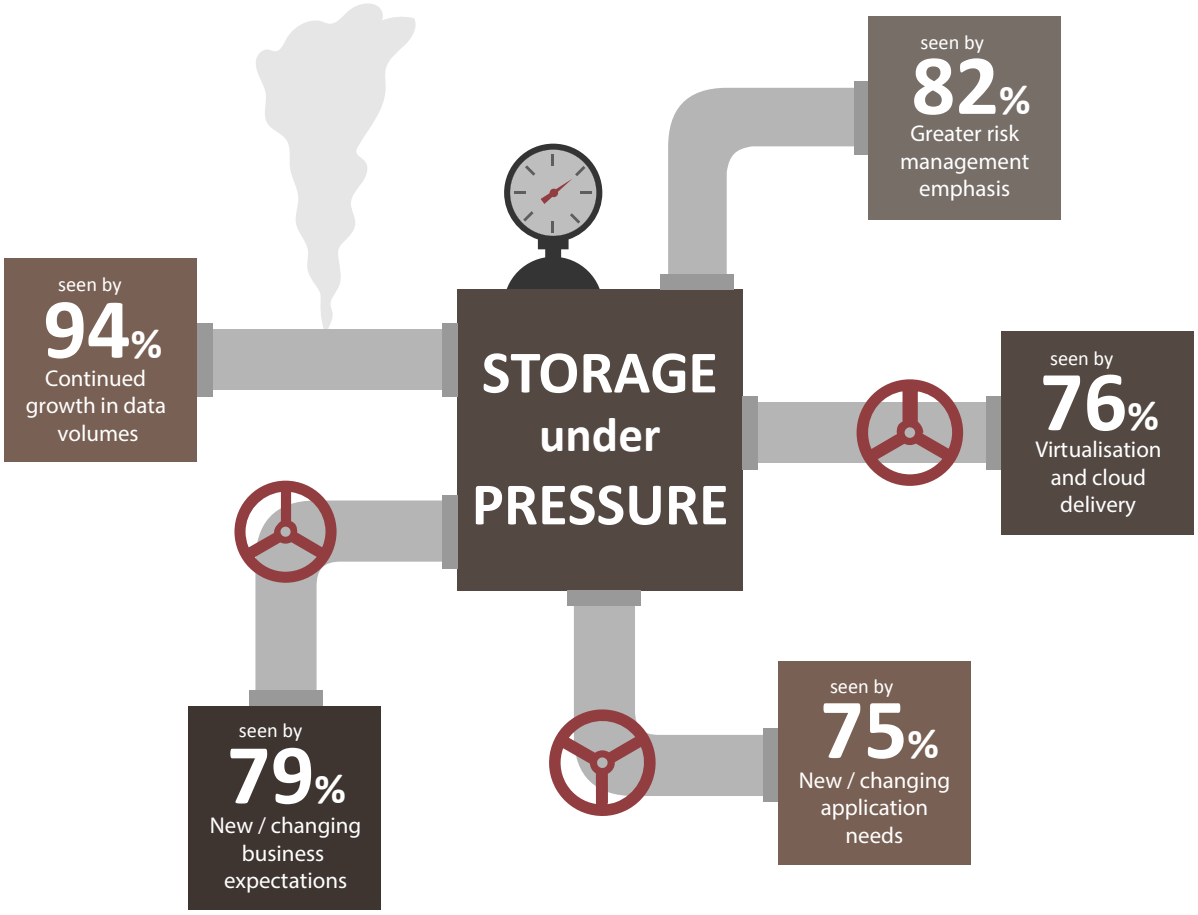
STORAGE under PRESSURE

The use of modern technologies to alleviate the strain

Freeform Dynamics Ltd, January 2015

STRESSES AND STRAINS

TRADITIONAL STORAGE IS BEING CHALLENGED



RESULTING ISSUES

Hardware costs	issue for	**53%**
Software costs	issue for	**47%**
Maintenance costs	issue for	**51%**
High management overhead	issue for	**38%**
Service level shortfalls	issue for	**27%**

Pretty much all businesses today are dependent on electronic data, and meeting basic storage needs has been a necessity for some time now. But with rapid changes taking place in both the business and technology worlds, how is the storage environment keeping up? This question was explored during a recent research study in which feedback was gathered from over 400 business and IT professionals.

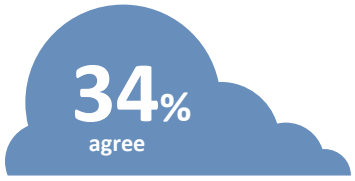
What we heard back was that storage systems are under increasing pressure, and not just because of an accelerating growth in data volumes. Over three quarters said that changing business expectations, new application requirements and a greater emphasis on risk were conspiring to create additional stresses and strains. Put this together with the impact of IT related trends such as virtualisation and the adoption of cloud architecture, and the implications are very real.

Resulting issues include increased hardware, software and maintenance costs, additional management overhead, and a struggle to meet service levels.

CONSIDERING THE OPTIONS

CLOUD HELPS, BUT IS NOT THE ANSWER

"More of our data will move to the cloud"

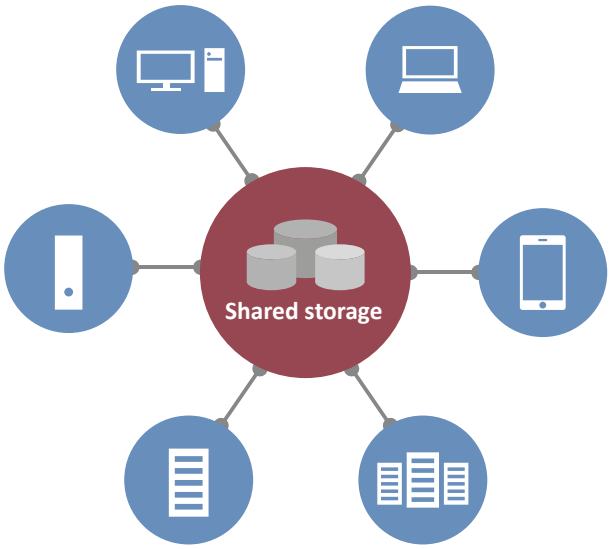


"All of our data will move to the cloud"

One option to deal with the pressure is to move your data into the public cloud and let a service provider take care of the practical challenges. While around a third see a trend in this direction, few regard the public cloud as the ultimate destination for all of their data. Notably, almost two thirds don't currently see a big role for cloud in their core storage plans at all.

These findings underline some of the confidence issues that continue to suppress mainstream enthusiasm for cloud. They also confirm that the centre of gravity for IT will remain firmly in the data centre for some time to come. The upshot is that in house storage systems must be able to deal with evolving demands directly.

MODERN, SHARED ARCHITECTURE IS THE KEY



Make significant use now

say **69%**

Will use more in the future

say **74%**

As IT teams look to optimise the way in which data is stored, managed and accessed, one of the big shifts we see is a move from storage silos, centred on the needs of specific applications, to a shared storage approach. Around three quarters acknowledge a trend in this direction, with 7 out of 10 saying they have already implemented storage sharing to a significant degree.

This development makes absolute sense in the bigger picture context. Whether it's virtualised systems, private cloud or open web architectures, one of the common themes is to boost agility and efficiency by decoupling and reusing components. Storage pooling and sharing is just part of this.

But sharing any aspect of IT means handling a mix of performance and other quality of service requirements across multiple applications, managing contention for resources along the way. This will often mean looking beyond traditional storage solutions to modern alternatives.

FOCUS ON SOLUTIONS

ENABLING TECHNOLOGIES GAINING MOMENTUM

Advanced technology	Making use now	Will use more
Flash / solid state	58%	74%
Storage virtualisation	50%	53%
Self managing appliances	40%	52%
Automated tiering	38%	36%
Scale out configuration	38%	38%

In line with evolving requirements, the research indicates that many are already turning to more advanced storage technologies, with growth in the use of solutions that deliver greater performance, automation and resilience set to continue.

Recent falls in the cost of flash makes this an obvious option if performance is a priority. Spinning disks still have economy on their side, however, which leads to hybrid systems and more automated tiering to keep management overhead and service levels under control. Self-managing appliances take simplicity to the next level, with storage virtualisation enabling optimised use of physical storage assets, including legacy systems.

Finally, scale-out configurations address the need for flexible growth and performance scalability.

EMERGING ROLE OF SOFTWARE DEFINED STORAGE

Already using	Currently exploring	Can see the potential	Sceptical or uncertain
			
16%	12%	21%	51%

Building on the above, many are now talking about ‘Software Defined Storage’ (SDS). This is about abstracting functionality such as thin-provisioning, compression, deduplication, replication, snapshotting and backup/recovery out of storage arrays and into generic software. This promotes management simplicity and potentially enhances both efficiency and flexibility. The problem is that many vendors have created confusion by being too quick to reposition any software based storage solution as SDS. This is why over half of our respondents are currently sceptical or uncertain. That said, the emerging role of genuine SDS is becoming apparent from early adoption activity, with over a quarter already using or exploring SDS based solutions at this moment in time.

MAKING IT HAPPEN

HURDLES TO OVERCOME

current issue for

50%

Senior execs not appreciating the need to invest

current issue for

52%

Budgets not keeping up with growth in demand

current issue for

41%

Siloed budgets constraining consolidation / sharing

It's all very well identifying the solutions that can help, but if your storage infrastructure needs modernising, enhancing or extending, funding can be a challenge. The first hurdle is getting the senior execs who control the spend to appreciate the need for investment. You can then tackle the second hurdle of realigning budgets to keep up with the growth in demand. Along the way, you may have to deal with budget fragmentation, which is another reason for seeking exec level air cover.

A range of implementation challenges also exists. Dealing with these may require storage professionals to overcome their natural conservatism.

IMPLEMENTATION CHALLENGES

(Ranked in order of frequency of mention)

1. **Risk of service interruption / downtime**
2. **Data migration effort / difficulty**
3. **Risk of data corruption during migration**
4. **Need to change operational skills**
5. **Reliance on external professional services**
6. **Requirement to change operational processes**
7. **Parallel running of platforms during migration**
8. **Migration of data protection capabilities**

REAPING THE BENEFIT

Aggressive adopters of modern technology are over twice as likely to strongly agree that their storage infrastructure:

- ✓ is easy / cost effective to operate
- ✓ meets business needs very well
- ✓ sets things up well for the future

Working through the funding and practical issues can feel quite daunting, but the research suggests that it is worth the effort. Those who have succeeded in putting a good level of advanced technology in place are 2.5 times more likely to be confident that their storage infrastructure is efficient, effective and future proof - the keys to both happy users, and sleeping soundly at night.

ABOUT THE RESEARCH

The research upon which this report is based was independently designed and analysed by Freeform Dynamics Ltd. Data was gathered via an online survey executed in collaboration with a mainstream IT news site. 403 responses were gathered from business and IT professionals across a range of industry sectors, geographies and organisation sizes. The study was sponsored by X-IO. If you would like to take a more detailed look at the research presented in this report see:

'**Creating the Storage Advantage - Time for proactive modernisation?**'

Download for free from: www.freeformdynamics.com

ABOUT FREEFORM DYNAMICS

Freeform Dynamics is an IT industry analyst firm. Through our research and insights, we aim to help busy IT and business professionals get up to speed on the latest technology developments, and make better informed investment decisions.

For more information, and access to our library of free research, visit www.freeformdynamics.com

ABOUT X-IO

X-IO Technologies, with its Intelligent Storage Element (ISE) architecture, has solved some of the fundamental challenges of enterprise storage for virtualized environments. ISE addresses the demand of customers for consistent performance, simplified, hypervisor integrated management and true zero-touch reliability in VDI, OLTP and BI-DW environments.

Based in Colorado, the organization has offices throughout North America, Europe, Asia, the Middle East, and Africa and has a proven installation of more than 7,000 units across 1,200+ customers worldwide.

See more at: www.xiostorage.com