

Scale -out Storage Cluster

Use Case

EXOS™
CORVAULT™

Increasing Requirements Call for Innovation

... unless one's resources are unlimited. However, being on standby around the clock has become the standard for the vast majority of companies these days. The competition between investing into equipment or human intelligence needs to be balanced accordingly, to optimize the benefit.

- How long is it affordable then to manage each single disk with a single CPU core?
- Are manufacturer colored "standards" only cost effective in the short term, if at all?
- Is the periodical DC walk to replace failed disks a waste of human capacity?

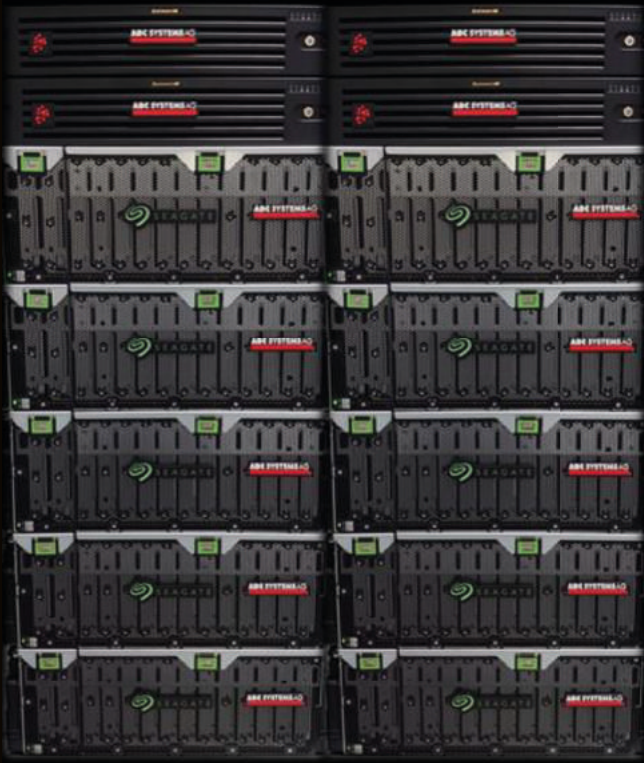
The scalability of the DC is sought in various dimensions.

- Is it enough to only scale storage capacity while throughput and performance don't keep up?
- Can sight of functional scalability be lost despite capacity and performance?
- Doesn't more intelligence create more efficiency and better solutions?

A Better Construct of Storage

Hardware performance continues to improve significantly.

Therefore give RAID/EC back to the hardware. Blindfold. That's CORVAULT.



ADAPT Erasure Coding (EC) through a storage controller offloads complexity from any software defined storage layer or file system. This leads to an enormous saving of valuable resources.

ADR Autonomous Drive Regeneration enables the storage controllers to intervene and immediately repair defects. Nothing is more effective in acting immediately with the disk.

It reads the exclusive logs and analytics of the last 1000 hours of operation – data far beyond the simple S.M.A.R.T. status quo values.

The logs of drives show just the failed part of the disk – e.g. one of 18 surfaces, one of 18 read/write heads. ADR reformats such drives to 17TB and integrates them back into the array without interruption.

Set the storage and forget it for 5 years. In addition to reduced handling with failed drives, a lot of e-waste is prevented.

It's no longer sufficient to only grow the capacity in the DC. Simply adding lots of drives in JBODs will quickly drain the controller's single GBps.

The throughput must keep up with the capacity. Thus, the measure that reflects parallel growth is GBps/PB.

CORVAULT comes with 8 SAS expanders, of which the two redundant controllers take advantage, providing an output of 14Gbps Read and 12GBps Write.

With two RAID controllers per 1.6PB usable, CORVAULT becomes the powerful standard storage system of choice when designing scalable storage clusters.

ABC's storage solutions offer top-of-the-line technology in proven open architecture concepts.

ABC's international storage expertise covers more than 30 years, including over 20 years with IBM Storage Scale (formerly Spectrum Scale, GPFS). Experience and skills assure the success with storage solutions of 100s PB and 100s GBps.

The lean design with industry standard systems and industry components guarantees an excellent price to performance ratio as well as trivial system operation and support. On premise, in the cloud, and remotely.

Functional scalability is achieved with the ABC Scout Data Manager that allows for best meeting the customer's needs.

Seagate EXOS CORVAULT has quickly become the key storage player for the scale-out storage clusters of ABC.

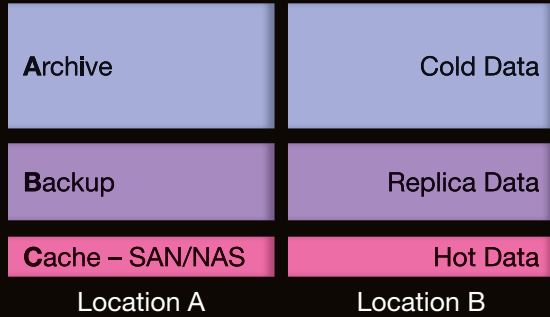
It is deployed together with leading standard systems and powerful SDS solutions.

The experience in research and university institutes has already reached 160PB.

A Better Concept of Data Management

Segmented Data Storing

in several physical Repositories
– Complex & Costly –

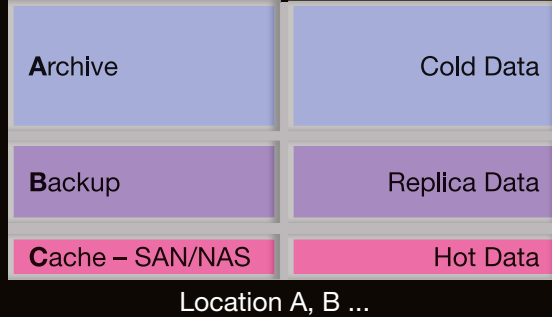


The ABC Scout Data Manager design discerns 2 types of building blocks. Each of them can be multiplied as needed.

The **Capacity Building Block** consists of up to 10 CORVAULTs. Two redundant IBM NSD nodes manage them. See example.

Holistic Data Management

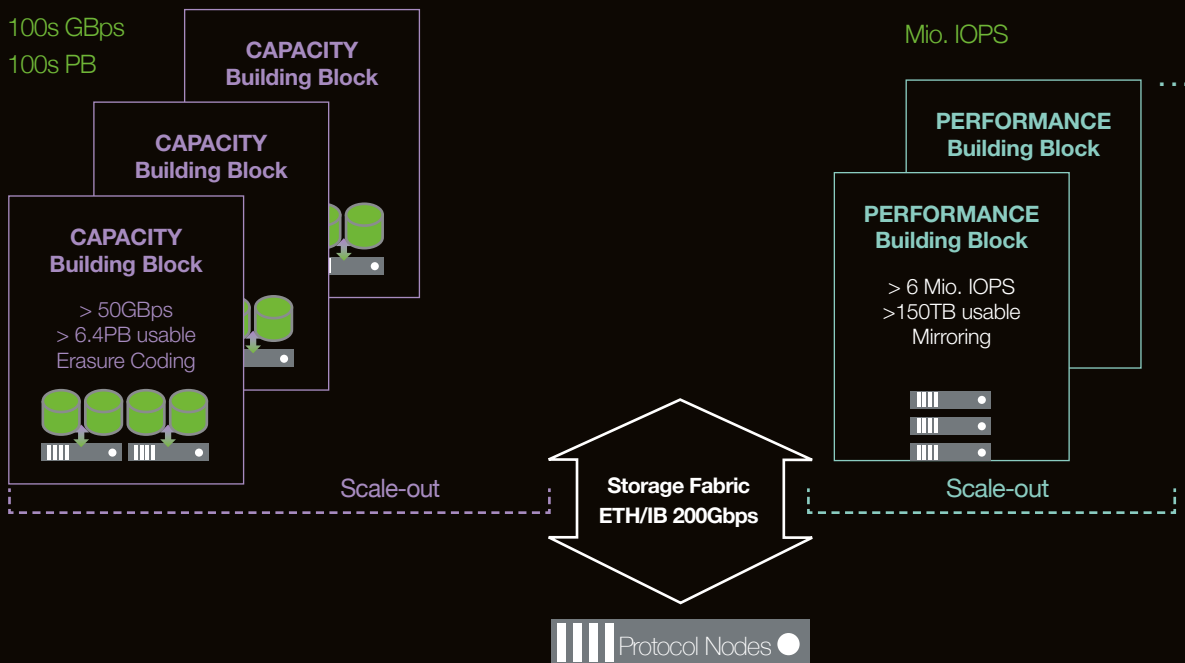
in one logical Layer
– Easy & Efficient –



Performance Building Blocks can be added at any time, exactly when needed.

Whether as a super-fast data tier or a meta data brick, the building blocks follow ABC's proven Speedway Design deploying suitable standard SMC All-NVMe servers.

Global Namespace



ABC Scout Data Manager

A Better Counsel of Partner Choice



The SEAGATE Storage Systems division accumulates the knowledge of:

- XYRATEX – chassis, enclosures
- LSI Storage – SAS management
- DotHill – RAID technology.

The result is a leading portfolio of powerful and well-proven storage systems sold under many big names in the IT industry.



Since 2019, the storage range is directly available to the partner channel. ABC is the first in EMEA to achieve the DIAMOND partner status.

The success is mainly based on the new and innovative EXOS CORVAULT storage, exclusively offered by the direct partners.



Exclusive ADAPT Erasure Coding and unique ADR Autonomous Drive Regeneration make it the compelling storage brick in any storage project to cover growing storage needs economically.

- 2 redundant RAID controllers
- 14GB/s Read, 12GB/s Write
- 106 HDD in 4U
- 8 SAS 12Gbps Host-Ports
- 5 years warranty



ABC was founded in 1981 as an independent system integrator. ABC designs, implements, operates and supports individually optimized DC infrastructures.

The solution design uses open architecture - based on conceptual approaches, standard industry IT systems and components of innovators.

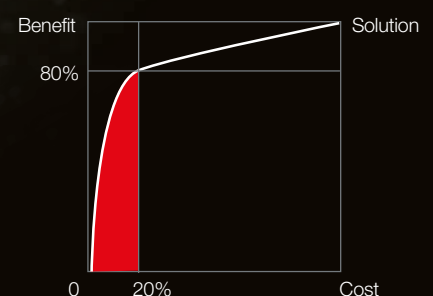
First-class solutions require continuous verification and falsification of industry offerings in order to meet customer's needs.

ABC Approach

The underlying ABC Approach

- achieve 80% of benefit at 20% of the costs -

forces systematic action, thus assuring high efficiency.



Conceptual initiatives such as ABC Data Pooling, ABC Datadrom, and ABC Speedway Design of storage and server have led to successful standing in the IT industry since 1981 – appearing in numerous publications, e.g.

Basic Technology Reports

<p>Scalable SAN Architectures</p>	<p>Serial Attached SCSI</p> <p>vereinfacht, leistet mehr, kostet weniger</p> <p>Internationaler Standard Storage Architecture Standard</p>	<p>Des ABC greifender Datenhaltung</p>
5.2000	5.2006	4.2008

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