
Excelero
Lessons learned from the Tech Giants
Designing elastic (storage) architectures

Tech Giants Force Rethinking Scale-out Infrastructures

Web Monsters, Hyperscale & Cloud

Based on the same architectural principles and with the same objectives, Excelero has designed a **Software-Defined Block Storage** solution utilizing client-side services for hyperscale web & cloud applications.

IT for web-scale applications -> Standard Servers -> Shared-Nothing Architectures
Maximum operational efficiency, flexibility & highest reliability.

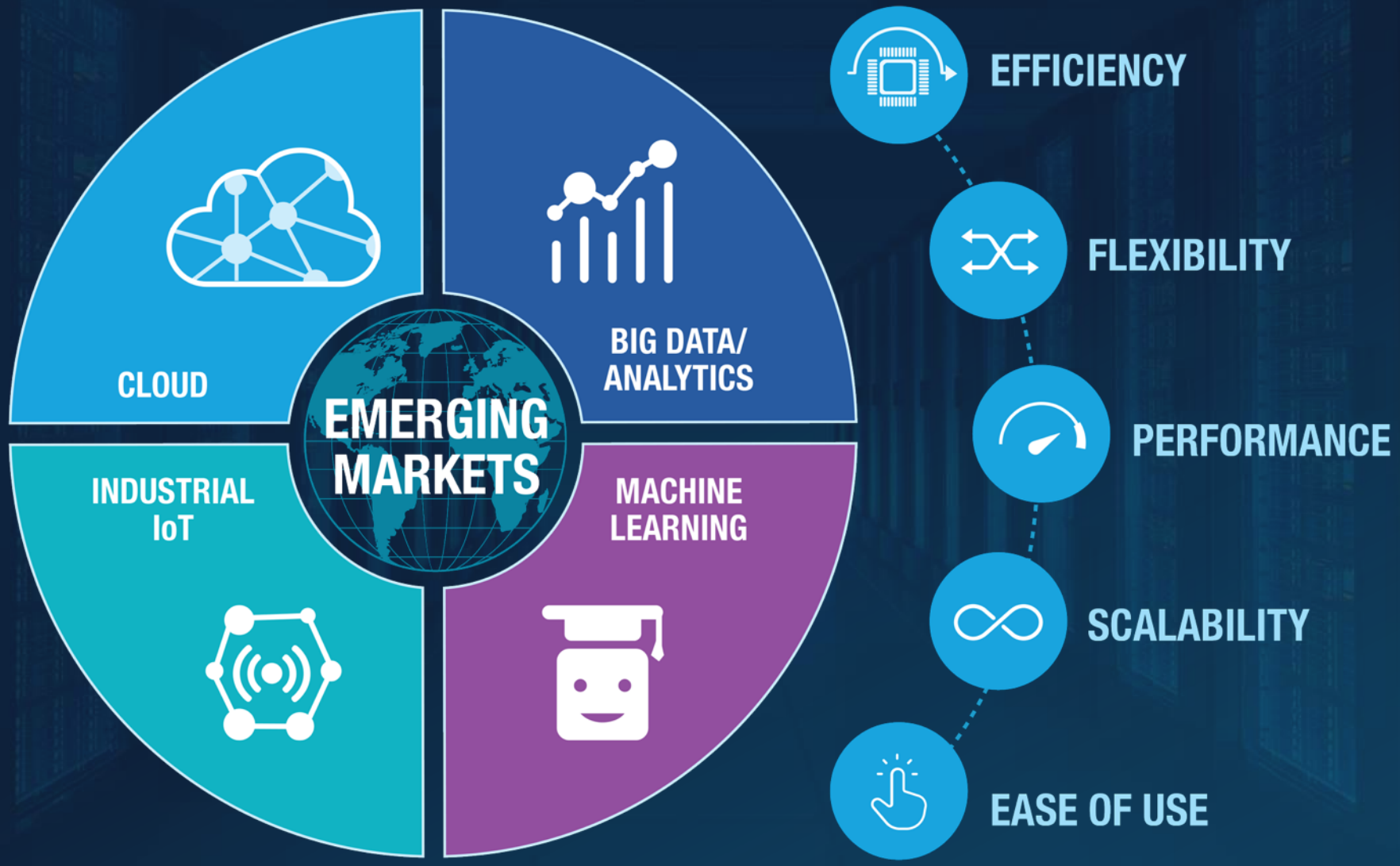
Industry Trends

New-generation SSD performance and density are evolving rapidly but **capabilities are underutilized**

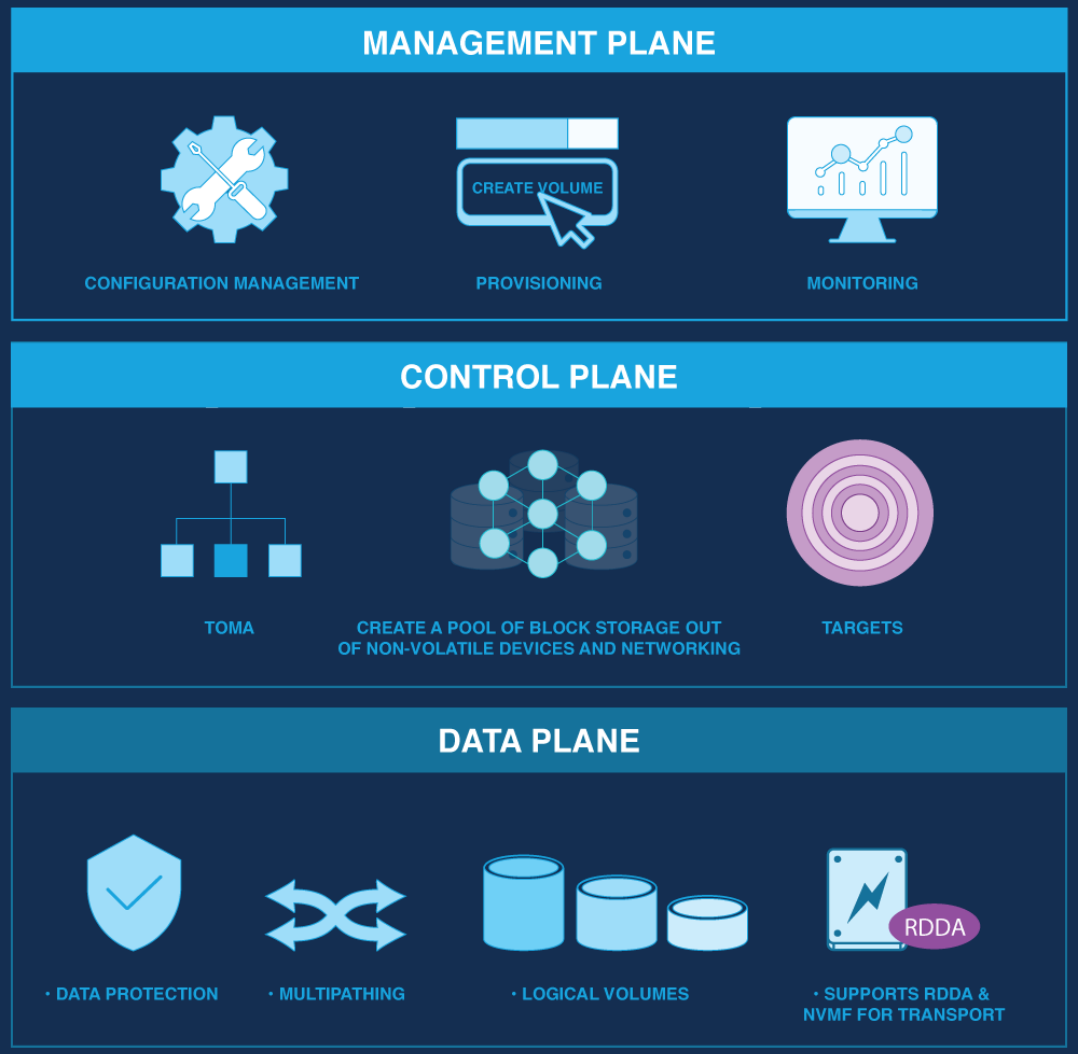
25/50/100G networking & **RDMA** enable new distributed storage architectures

Server SAN enables maximum utilization of high-performance flash over the network

Key SDS requirements



NVMesh's **S**oftware **D**efined **D**ata **C**enter Compliance



NVMesh software-defined storage separates the data-, control- and management-plane.

- ✓ *Flexibility, Efficiency & Reliability*
- ✓ *Standard Hardware & Intelligent Software*
- ✓ *Distributed, shared-nothing architectures*

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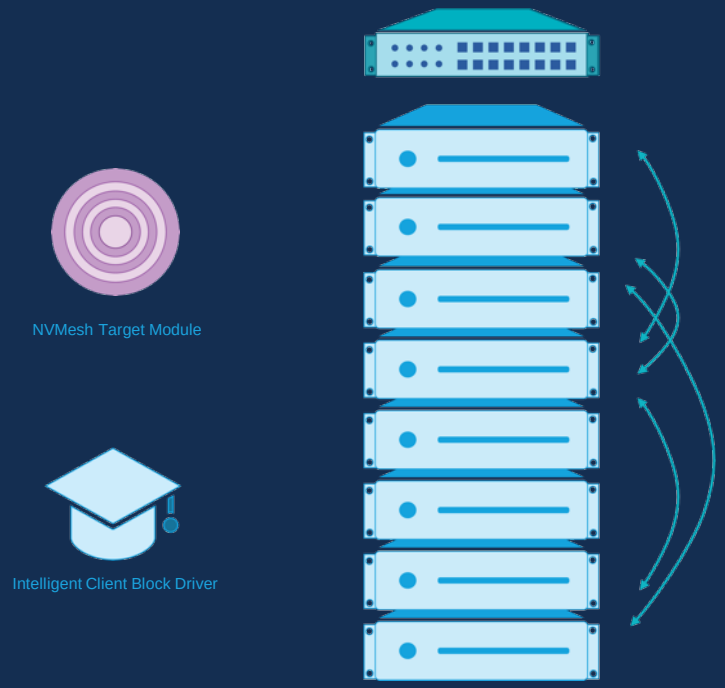
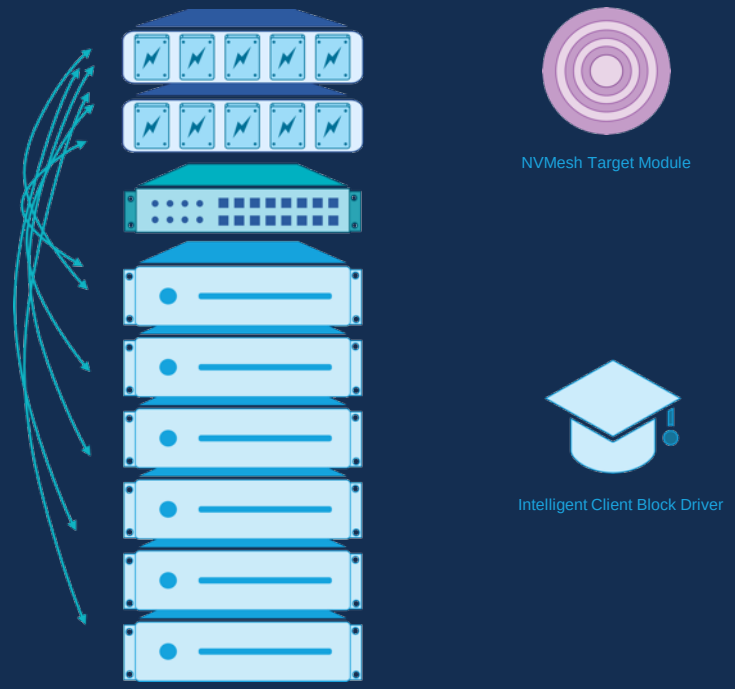
NVMe Deployment Challenges

Local Storage in Application Server



- Storage is unified into one pool
- NVMesh Target Module & Intelligent Client Block Driver run on all nodes
- NVMesh bypasses server CPU
- Linearly scalable

Storage is Centralized



- Storage is unified into one pool
- NVMesh Target Module runs on storage nodes
- Intelligent Client Block Driver runs on server nodes
- Applications get performance of local storage

Hyperscale (Storage) Challenges

Maximize operational efficiency and architectural flexibility

Achieve rigorous business objectives:

100% uptime

Low TCO

Meet complex application requirements

Scalability

Performance & Latency for RT Analytics, DL & AI

Database Storage Challenges

Data and application growth

The need for speed and productivity

Fast applications need fast databases

Resources consumed as a service

Stretched budgets and staffing

Database software license costs

Time spent on query and DB optimization

Container Storage Challenges

Container mobility at data center scale

Persistent volumes

Local flash performance

Flexibility and data protection

of centralized storage

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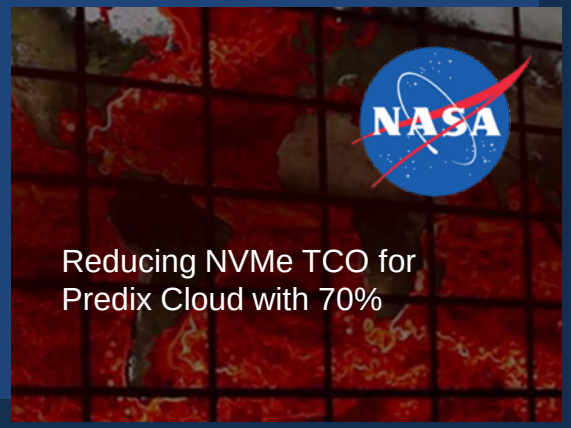
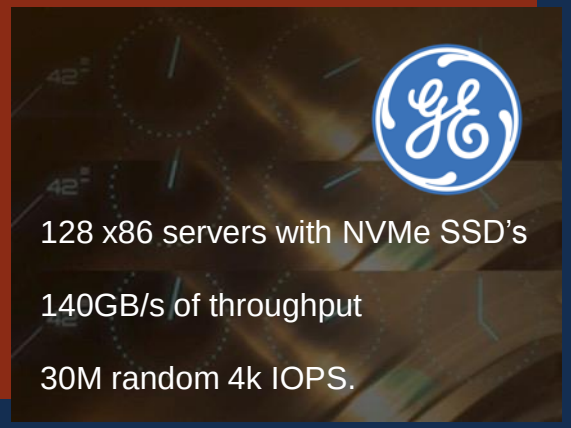
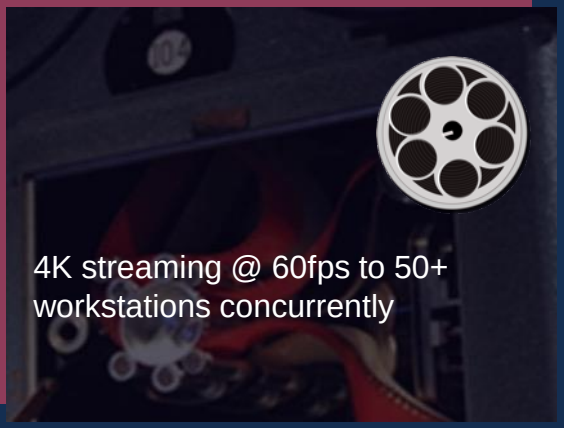
What Makes NVMesh Unique?

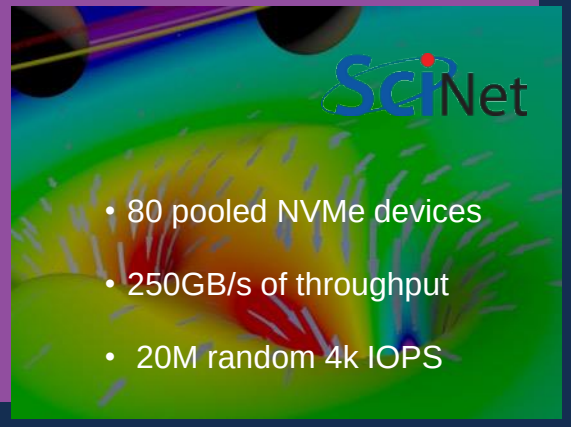
Server SAN	100% SDS, leveraging standard servers and next generation storage & networking components
Elastic NVMe	Pools NVMe storage across a network at local speeds and latencies
Zero-CPU	Enables 100% converged infrastructure
Virtual Array	Deployed as a virtual, distributed non-volatile array and supports both converged and disaggregated architectures
Client-side, distributed Architecture	Enables NVMe sharing that scales performance linearly at near 100% efficiency

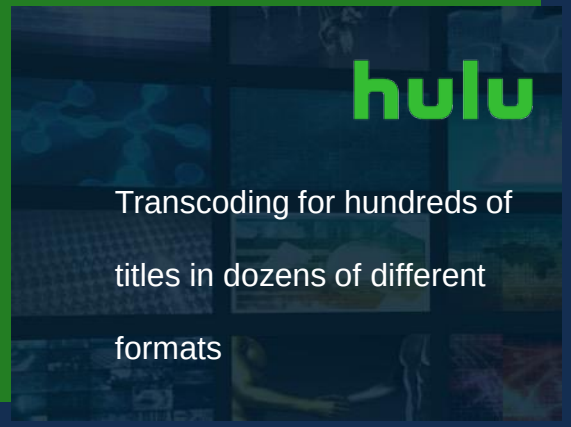
Excelero customer success











FINALISTS

DataCore SOFTWARE
elastifile
Cross-Cloud Data Fabric
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HEDVIG
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Pivot
Qumulo
SCALITY
openSUSE
WEKA.IO
RED HAT CEPH STORAGE

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Excelero's NVMesh® Named **2017 Product of the Year** in Software-Defined Storage

by Storage Magazine and SearchStorage


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Thank you!