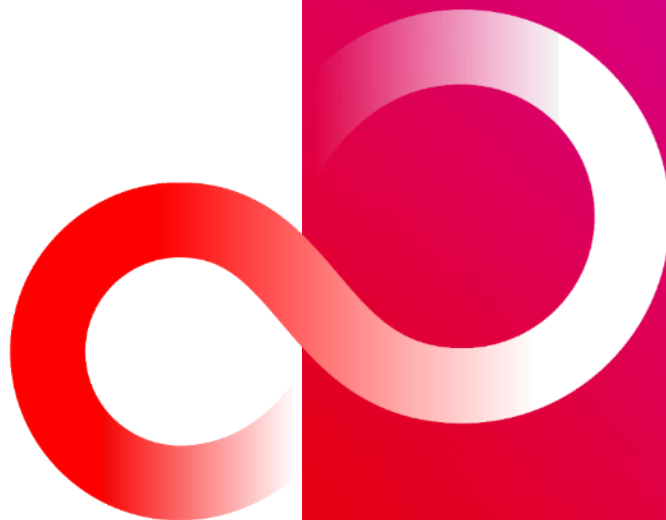


Fujitsu Storage ETERNUS CS8000

PosAm TechDays 2024

Miroslav Hrubý



Challenges to protect huge amount of data



Data growth is unavoidable

Multiplied growth in backup footprint with daily, weekly, and monthly full backups which are kept for months or years



24x7x365 data center reality

Too much data to run full or incremental backups to fulfill required SLAs



Data is the new gold

New requirements to keep more data for longer periods multiply cost for storage, network and management

Data Sprawl

Data fragmentation complicates automation, and increases risk of data leaks, ransomware and threats



Malwares

Protection against Ransomware and Cyber threats are essential for the business



Globalization

Global, data-driven enterprises require 100% data availability



The answer can be ETERNUS CS8000

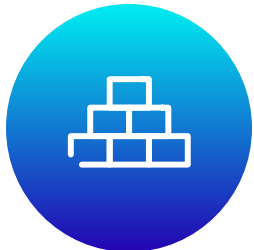


Pooling of resources

- TCO reductions in complex data protection environment by 60%
- Flexibility to allocate resources as required
- Helps driving sustainability transformation

Intelligent automation

- Flexibility regarding capacity performance and costs
- Ensures highest and most reliable service levels
- Reduces administrator workload and ensured processes



Unique scalability

- Long-term investment protection
- On-demand scalability to adapt to unpredictable requirements on capacity and performance
- Faster innovations to leverage latest technology

Split-site solution with cache-mirror

- Maximum protection for mission critical data
- Ensures highest data resiliency with near-zero downtime and near-zero data loss



Key Features (details)

What is your backup challenge?

Too much people tied up in administration tasks?



High infrastructure costs?



What about automation
To ensure data availability?
To reduce risk?



“With ETERNUS CS8000, Fujitsu has reduced the stress on our team by making our back-up process simple, reliable and fast.

Victor Vieira
Storage Systems Manager, TAP



Challenges are solved:



Exponential annual data growth



Budget constraints



SLA management



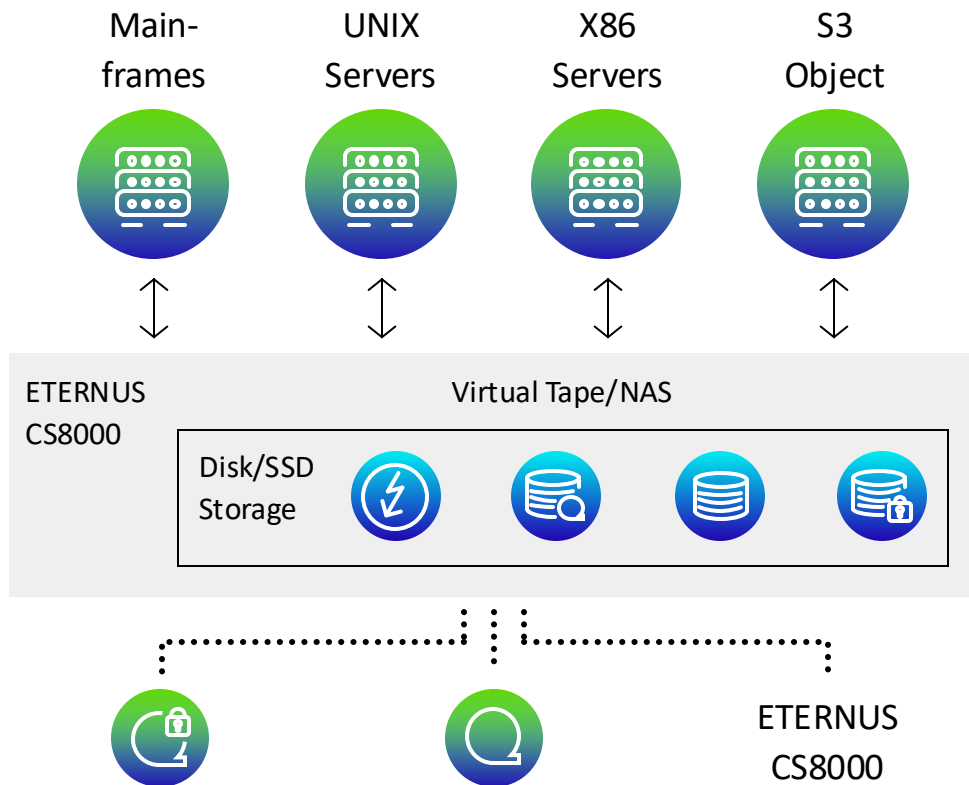
Unified data protection platform:

- Simplify backup and archiving, accelerate processes and provide flexible capacity
- Consolidate, automate and provide flexible service levels regarding speed, capacity and costs
- Comprehensive high availability and disaster recovery capabilities also for trusted long-term storage



ETERNUS CS8000 reshapes data protection environments to radically simplify backup and archiving

How ETERNUS CS8000 works



Virtualization layer and ILM

Decoupling data management from backup software

Combine the strengths of SSD, disk and tape with automation

Manage data for flexible balance of speed, availability and costs

Improve recovery speed

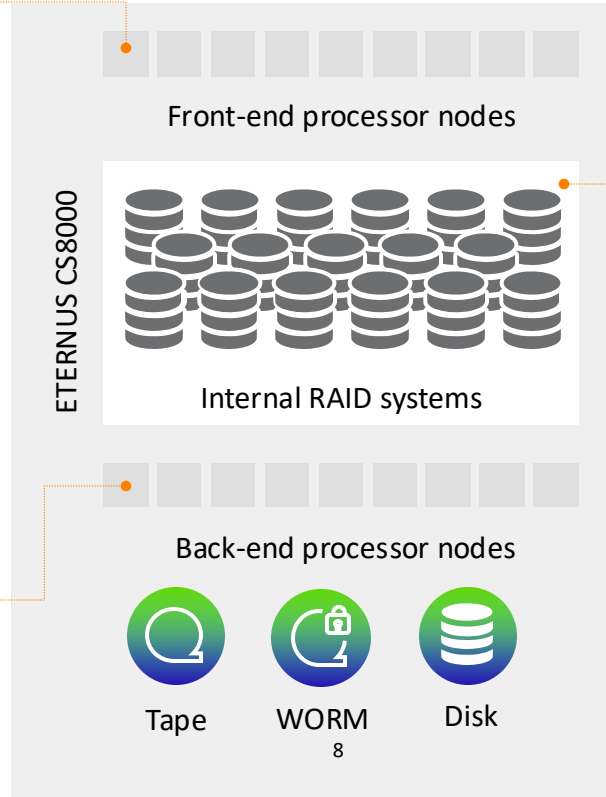
Unique ETERNUS CS8000 grid architecture

Front-end processor nodes

Front-end processor nodes manage the data stream between servers and ETERNUS CS8000

Back-end processor nodes manage the data stream between ETERNUS CS8000 and target systems

Back-end processor nodes



Internal RAID systems

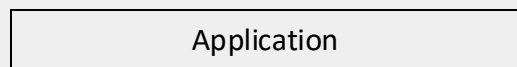
- Internal RAID systems build the disk storage repository
- The disk storage can act as a cache for data which will be further processed (e.g. on tape), or can act as a final target

- Disk or flash capacity: 19 TB up to 350 PB
- Backup AND recovery performance: up to 150 TB/h
- Manage exabytes on tape, tape migration

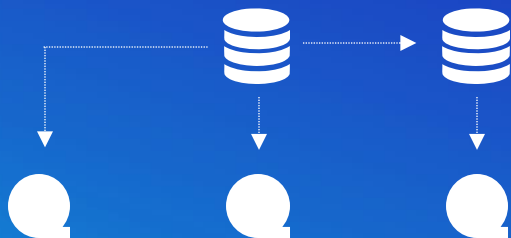
Unique scalability

Automated data copies

Multiple copies managed based on pre-defined service levels

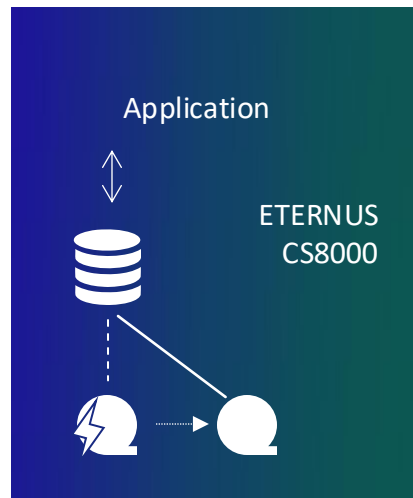


ETERNUS CS8000

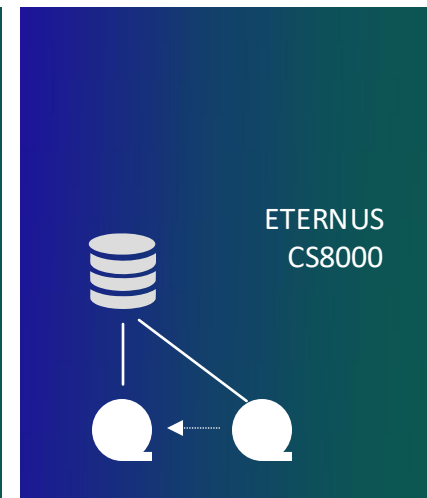


Automated self-healing

Step 1: Redirect



Step 2: Self-healing



Ensures highest service levels

Split-site configuration with Cache Mirror



Automated continuation



One logical system spread over two geographically separated sites



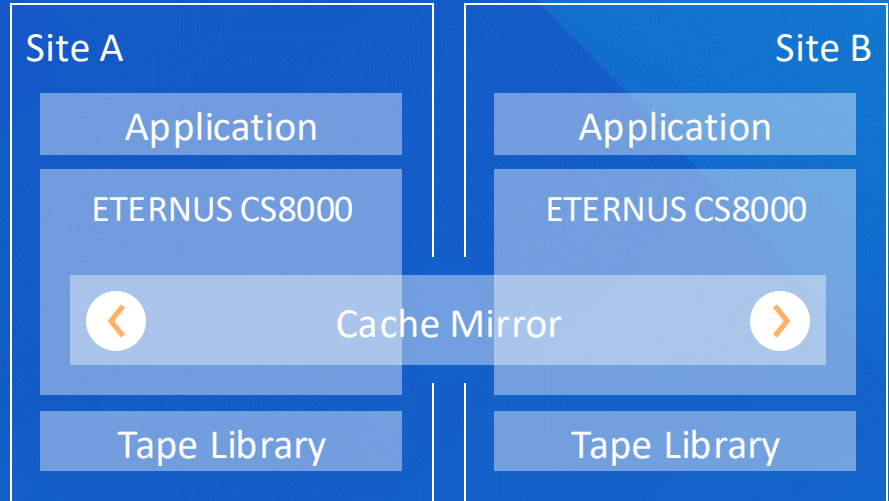
No manual failover necessary



Dramatically reduced administration efforts



Optimum in disaster protection for all mission critical data



> The only one system in the entire world which can do this

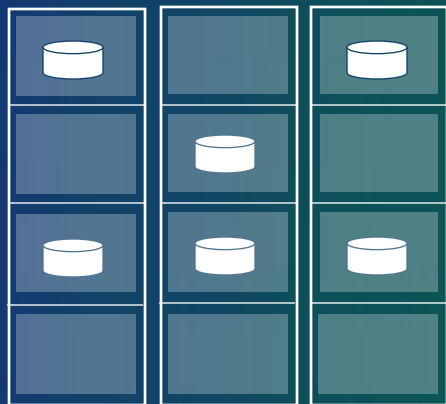
Backups are (mis-)used as archives

The ETERNUS CS8000 NAS subsystem (ViNS)

Production storage



Archive storage

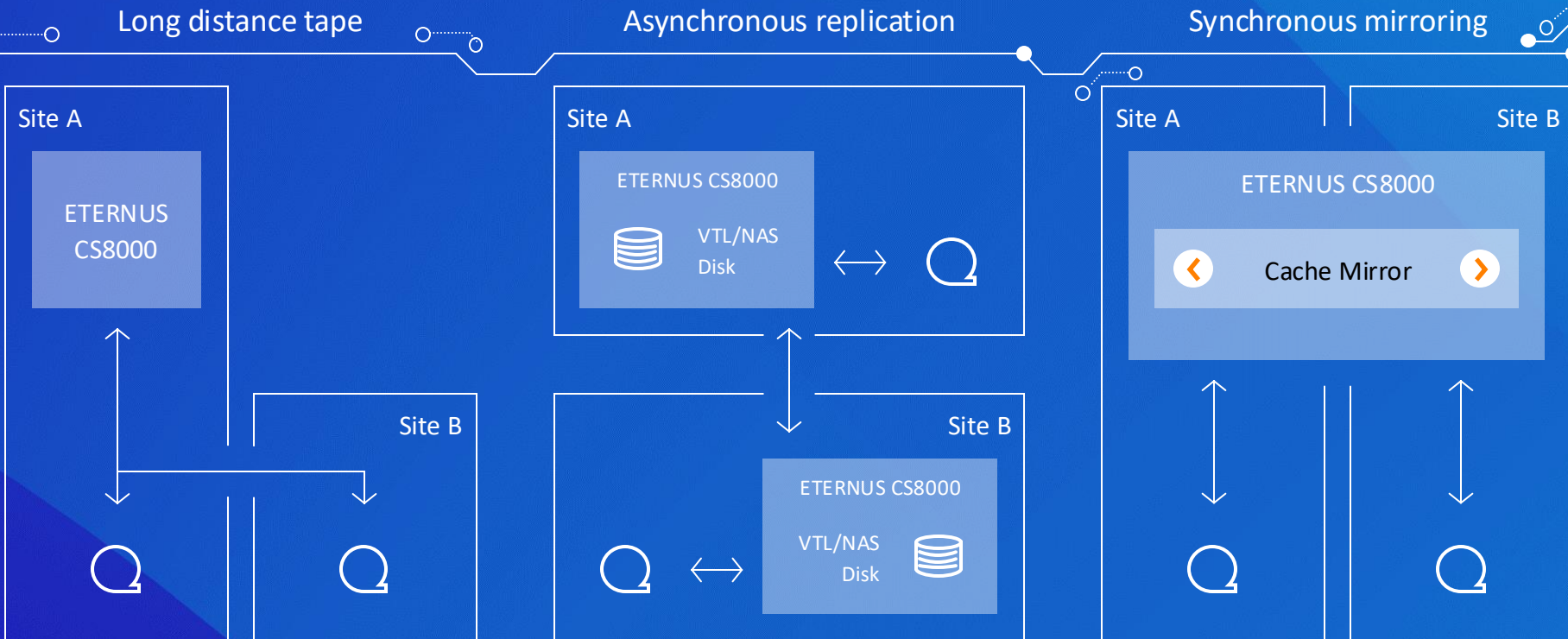


Archiving and second-tier file storage

- > Not only for compliance reasons
- > Reduce costs
- > File management

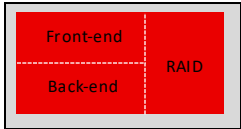
Also archive storage needs to be protected!

Various Data Protection Options



CS8050 VTL

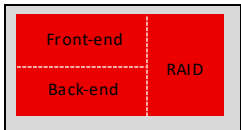
“Branch-office”



- VTL only
- Open systems

CS8050 NAS

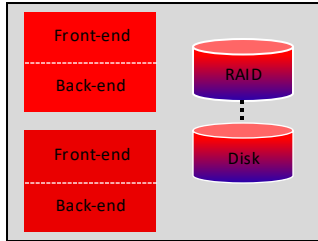
“Archive System”



- NAS only
- COSS
- SoftWORM / VRB

CS8200

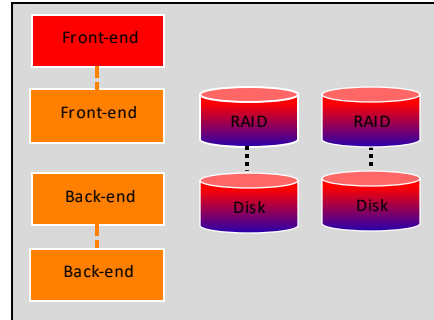
“Scale-up”



- VTL only version
- NAS / COSS only version

CS8400

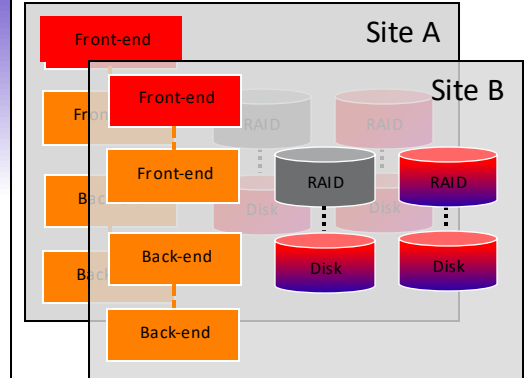
“Scale-out-single-site”



- VTL / NAS and COSS (mix possible)

CS8800

“Scale-out-split-site”



- VTL / NAS and COSS (mix possible)
- Split-site

Provides ransomware protection on all levels for backup, archive, second-tier file storage

ETERNUS CS8000 >

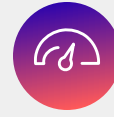
Highlights

- HSM with tape integration
- Synchronous replication
- Asynchronous replication
- Integrated backup
- WORM protection

External Tape library >

(e.g., ETERNUS LT, Scalar)

Performance



- Allows many backups
- Small RPO

Cross-media mix



- Having multi-tier backup reduces downtime
- LTO drives provides hardware encryption
- Media-break or Air-gap makes data backup invisible for hackers
- Cost-effective and secure method

File Storage



- Immutable with WORM (Write Once, Read many) functionality
- Data can neither be modified nor deleted

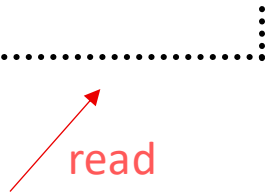
S3 Object



- Immutable
- Change of the protocol for backup allows identifying corrupted data during backup process

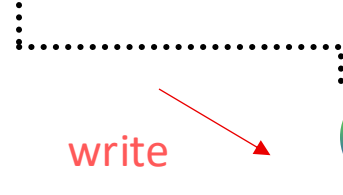
Handling tape live cycles

Production server



read

Old tape generation



write

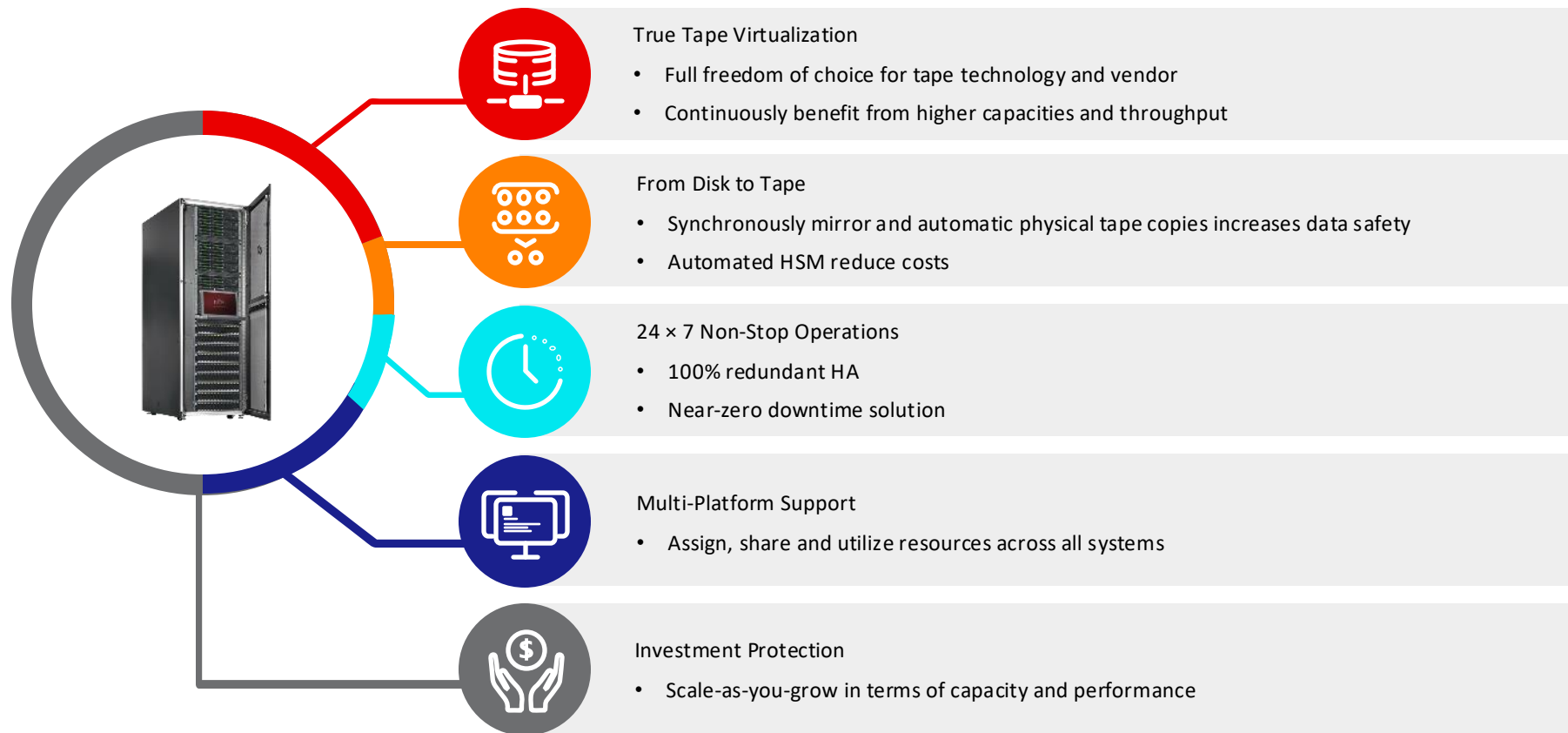


new tape generation



Independently, tapes are migrated by ETERNUS CS8000 to a newer generation - without any effect on the productive environment

The benefits of ETERNUS CS8000



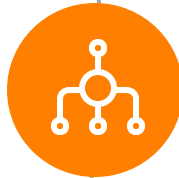
Use cases for ETERNUS CS8000



For upper medium, large enterprises
(Branches e.g.: Financial, Public, Service Provider)



- High and highest requirements
- Availability, performance, capacity



- Consolidation of complex environments
- Automation, cross-media, mainframe and open systems



- Flexible long-term solution
- Investment protection, reduce migration costs

The proof is in the numbers: some examples

ETERNUS CS8000 radically reduces costs in complex environments

Consolidate six high-end dedup appliances

- Only one ETERNUS CS8000
- Management: Reduce 13 h admins effort down to 1 h

Optimize TSM storage

- 120 tape drives reduced to 24
- Savings on drives: € 1.44m
- 60% less disk capacity, 3x faster backup, 2x faster restore

High data availability

- 16 TB disk cache – doubled the backup speed and fulfills 95% of restore cases
- Automates tape copies, local and remote
- Multiple backend processes run concurrently for automated cross-media mix

Fast ROI

- Higher initial investment – but high operational efficiency and flexibility
- Cost savings of € 570k p.a.
- ROI in 18 months

Mainframe and open systems

- Freedom of choice in deploying server platforms (mainframe and open systems)
- Vary workloads and capacities as needed
- Savings on energy costs by € 250k p.a.



ETERNUS CS8000
most reliable, central
backup, archive and
second-tier storage
platform



Unique scalability

- Disk capacity: 19 TB up to 350 PB
- Backup AND recovery: up to 150 TB/h
- Manage exabytes on tape, tape migration
- VTL, NAS and Object interfaces



Pooling of resources

- Mainframe and open systems
- Backup, archive, second-tier and object data



Flexible and highest SLAs

- SSD, disk, tape
- Local and remote copies
- Cache Mirror for near-zero downtime
- User-driven development

Up to 60% TCO savings in complex environments



Most reliable, central backup and archive platform

- > For 25 years the market leading system for true tape virtualization
- > Largest platform for archive with unique functionality
- > ETERNUS CS8000 is part of a customer-centric solution, everything can be provided by us (Planning, Project Management, HW/SW Installation, Cabling, Setup, Backup and Recovery Software and Tape Management customizing, providing Tape Migration Software, Migration, ...)



25 years of success



Customer-centric



Make an appointment for a technical workshop

Ďakujem

