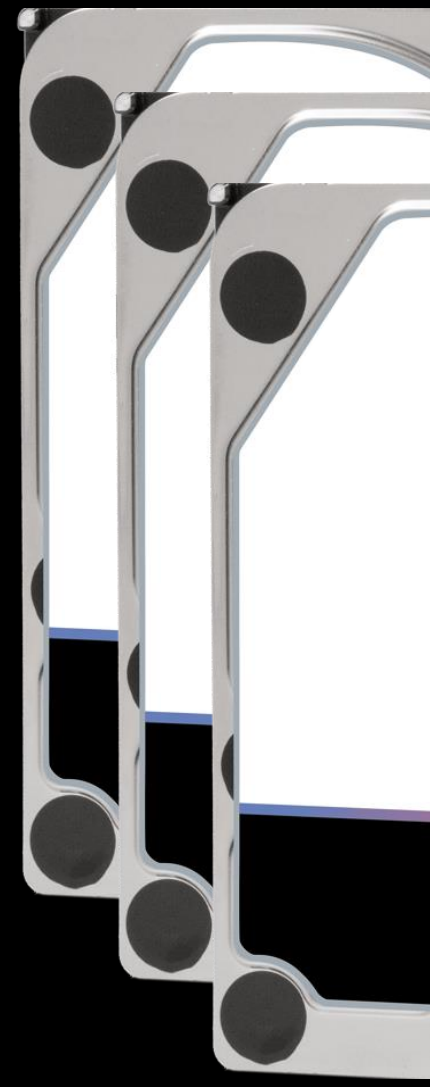
Western Digital.



Решения для хранения данных на платформах Western Digital

Григорий Никонов, Системный инженер

20 мая 2022, Алматы

HGST
a Western Digital brand

WD
a Western Digital brand

SanDisk®
a Western Digital brand

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Платформы Western Digital

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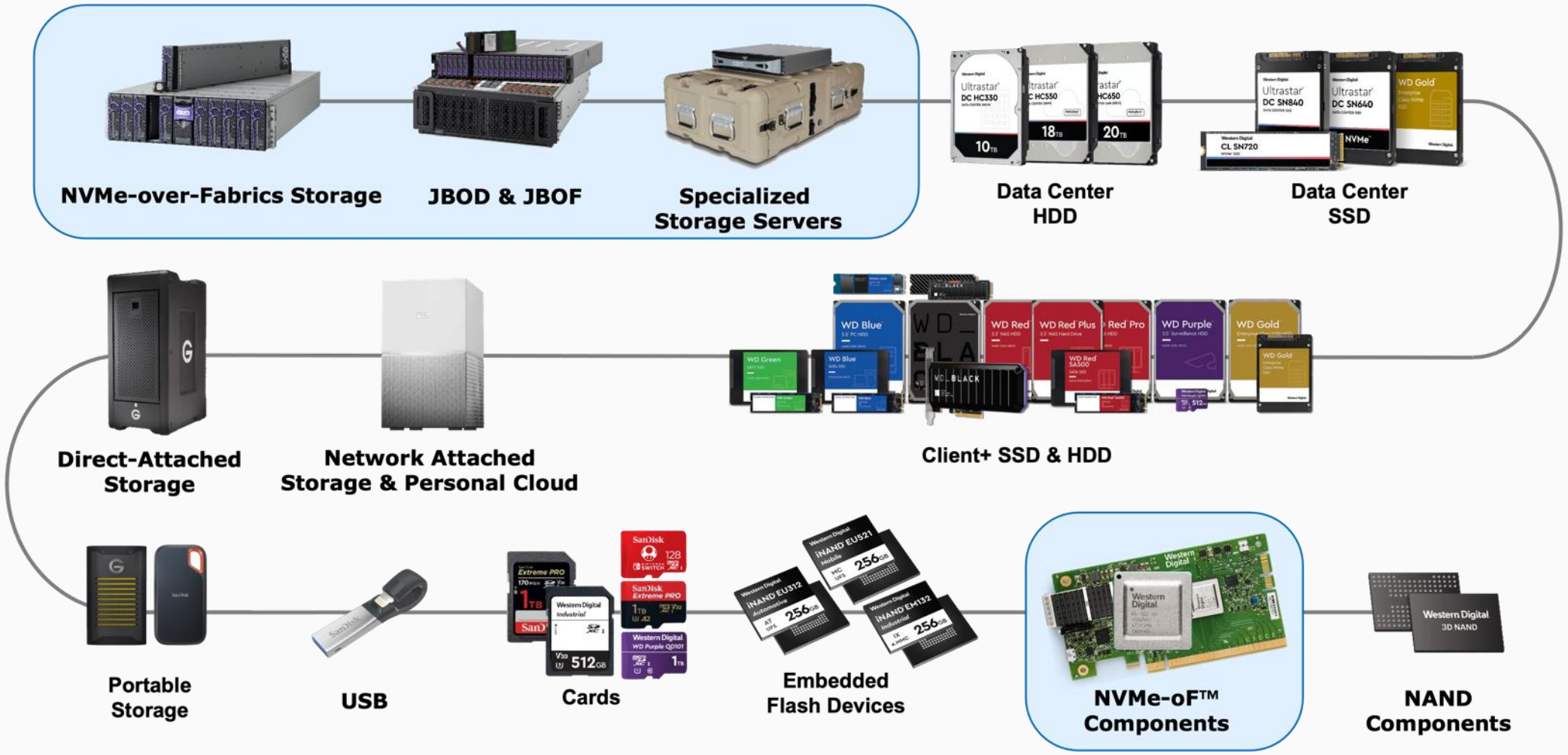
Western Digital Product Portfolio



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Western Digital Platforms Portfolio

High Capacity, Performance and Flexibility

Specialized | **JBOD** | **NVMe-oF & Composable**

Data Transport and
Ruggedized/Mil-Spec Edge Servers

High-density JBODs

Cold Storage

NVMe-oF attached JBOF

Composable Disaggregated

Ultrastar | **OpenFlex** | **RapidFlex**

Solutions to access, transform, transport and preserve data

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Ultrastar® Data60/102 Storage Platform

- 4U 60-bay and 4U 102-bay JBOD family:
  - Compact 4U60 with depth of less than 36” (890mm)
  - Dense 4U102 with over 2.0PB in 4U (20TB SMR HDDs)
- 100% WDC-designed with innovations
  - IsoVibe™ and ArcticFlow™
  - Dramatic reliability improvements – 62% reduction in HDD returns*
  - Backed by a 5-year limited warranty
- Enterprise grade, big data storage use cases
  - Backup, archive, email
  - Disaggregated storage for SDS environments

* Based on observed drive return data, does not change product specifications and does not constitute a warranty

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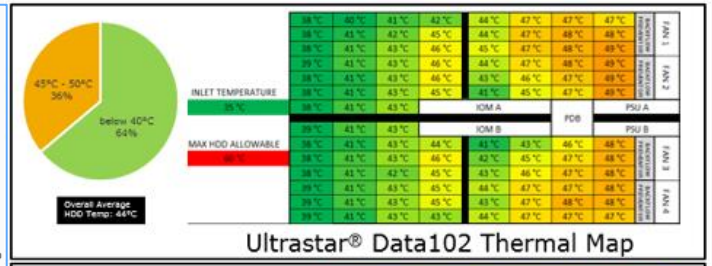
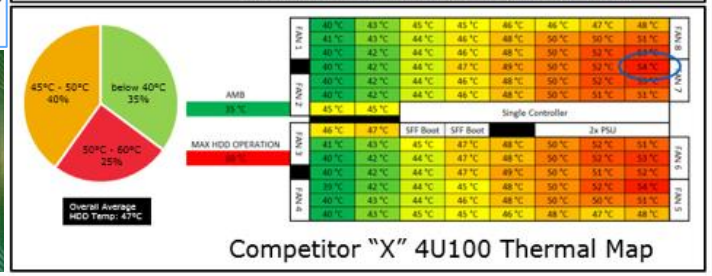
Ultrastar® Data Family Innovations

- Measured reduction of 62% in drive return rate*
  - Same HDDs, vs. similar WDC JBOD without IsoVibe™ & ArcticFlow™
- IsoVibe patented vibration isolation technology
  - Vibration Isolated HDD carrier/slot & fans
  - Over 60% lower vibration
  - Performance is maintained, even when all the drives are working hard
- ArcticFlow thermal zone cooling technology
  - Lower temperatures, improved reliability, energy savings
  - $1,500 in energy savings per enclosure
- Serviceability – maximizing “cold aisle” access
  - Rack mounted top cover
  - Top-load drives, tool-less carrier





* Based on observed drive return data, does not change product specifications and does not constitute a warranty

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Решения с партнерами

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Veeam

Application servers
Physical / Virtual

Primary storage

Hewlett Packard Enterprise
DELL
NUTANIX
vmware
Microsoft
NetApp
openstack.

On-premises backup

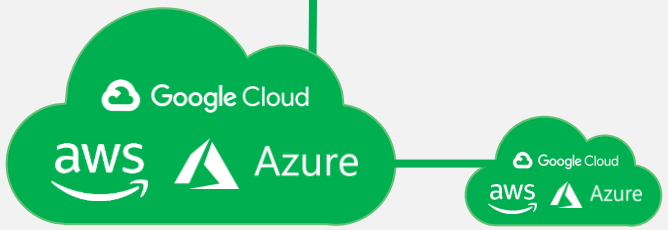
Data60/102 JBOD

Serv60+8

Veeam backup repository or SOBR
30/60/90 day retention enabling
on-premises fast restores

Secondary backup / cloud

SCALITY
OSNEXUS
SUSE
ceph



Veeam Cloud Tier
Delivered by service provider,
or on-premises object storage

Optional Archive Tier

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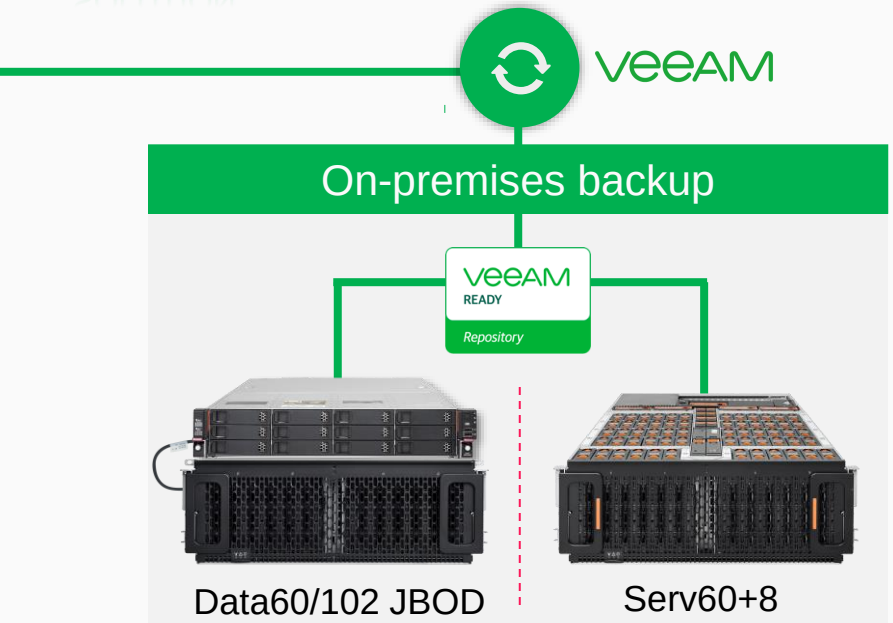
Veeam Backup Repository

…and SOBR (Scale-Out Backup Repository)

VALIDATED SOLUTION



Veeam backup repository or SOBR
30/60/90 day retention enabling on-premises fast restores

POSITIONING

Validated solution
- validated as an official Veeam Ready Repository storage solution. Built by Western Digital, powered by Veeam.

Affordable capacity
- cost-effective capacity expansion for an existing backup server, or high-density server for new installations

Efficient storage
- leverage Veeam's dedupe and compression technology to reduce storage space requirements

BENEFITS

Fast installation
- fast to procure, easy to install and simple to manage

Improved reliability
- improve long-term reliability with IsoVibe™ and ArcticFlow™ technologies

Increase density
- consolidate existing NAS and/or backup appliances & improve efficiency with high-density storage hardware

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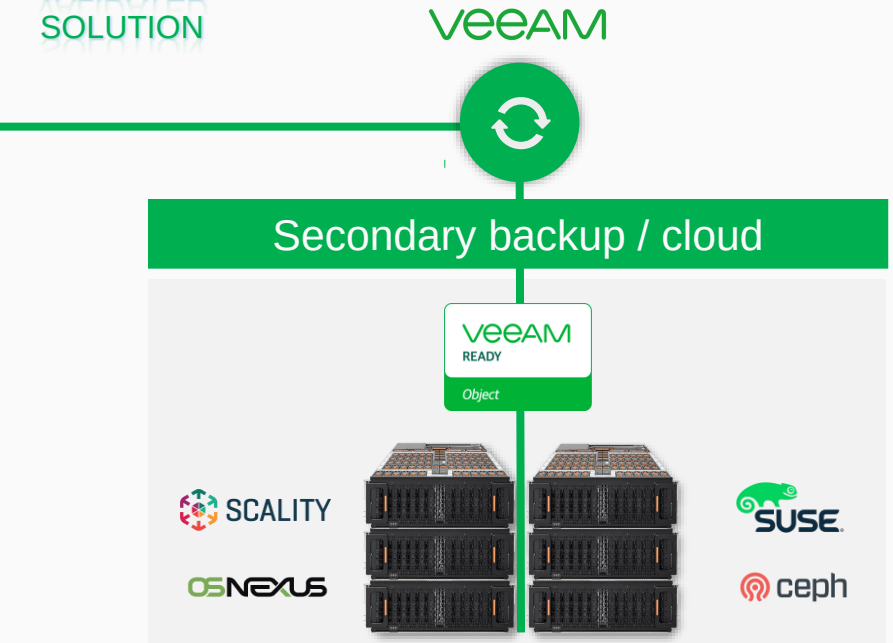
Veeam Cloud Tier

For those building their own cloud

VALIDATED SOLUTION



Veeam Cloud Tier
Delivered by service provider,
or on-premises object storage

POSITIONING

Validated solution
- validated as an official Veeam Ready Object storage solution by Western Digital's Technology Alliance Partners.

Expand capacity
- highly cost-effective capacity tier used as an "extension" of the primary backup repository

Automated backup
- Veeam Cloud Tier automatically offloads older backup files from the primary backup repository to secondary backup

BENEFITS

Lower TCO
- drive down cost per terabyte in large configurations where the focus is achieving maximum capacity for the lowest price

Increase durability
- protect data with advanced methods of data protection to increase durability and availability

Eliminate tape
- utilize object storage to eliminate tape along with all the hassles of managing, transporting and storing tapes at an off-site location

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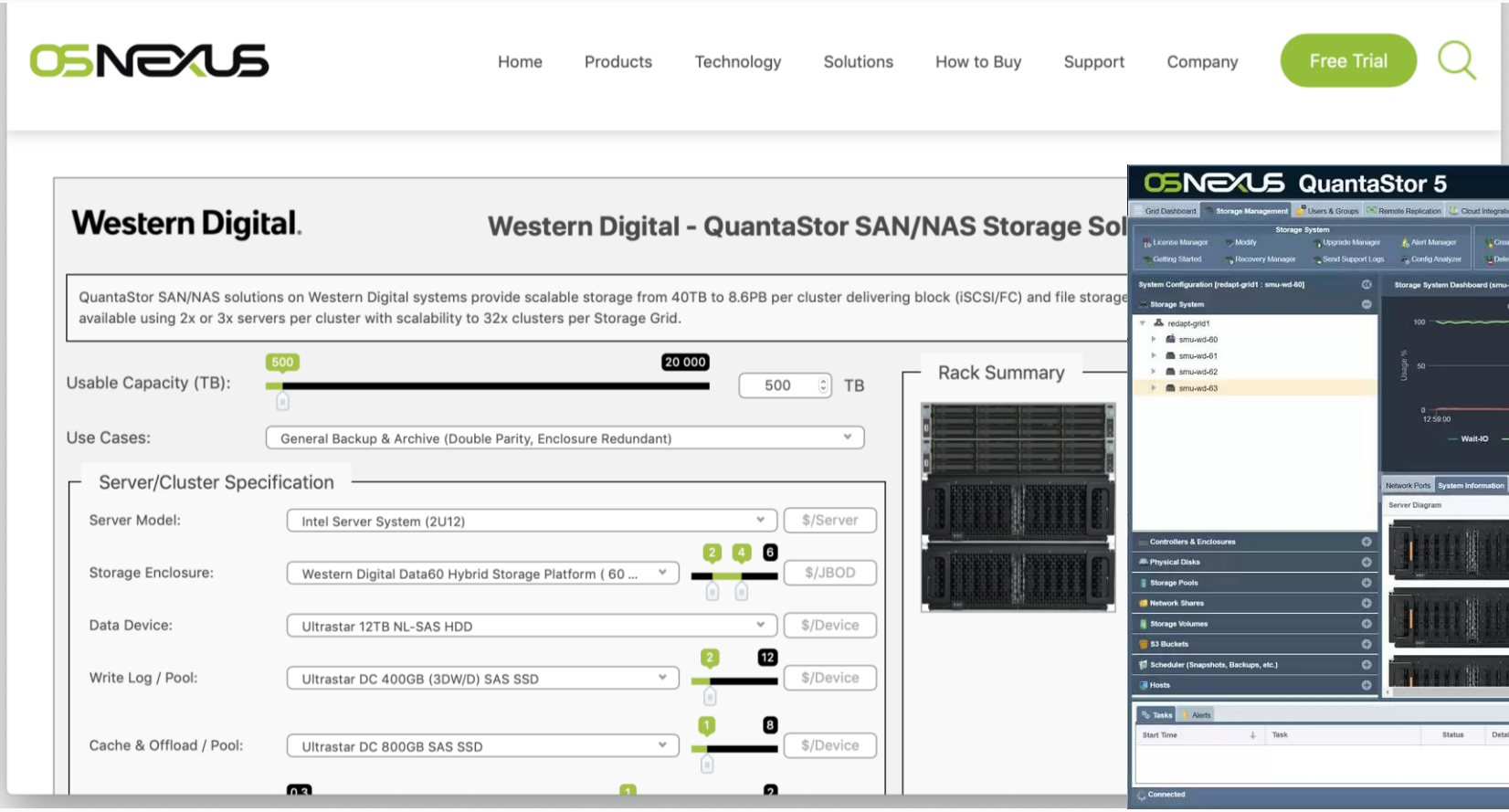
OSNEXUS

QuantaStor (iSCSI/FC/NVMeoF/NFS/CIFS/S3)



Solution brief

https://www.osnexus.com/zfs-designer?conf=wd

https://www.westerndigital.com/partners/technology-alliance/osnexus

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QSAN

https://qsan.su/goods/sistemyi-xraneniya-dannyix/

https://qsan.su/novosti/qsan-sert-western-digital-ultrastar-data60-for-xcubesan.html

https://qsan.com/en/newspage/218

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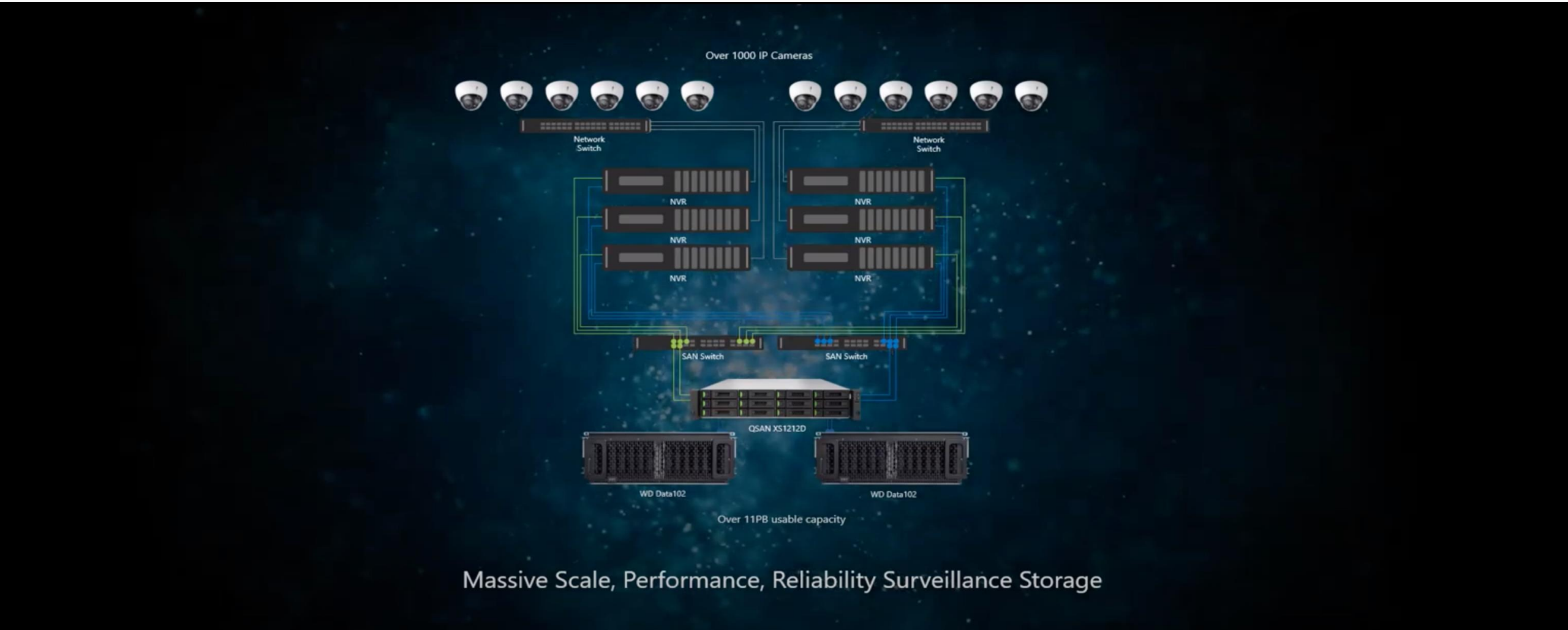
QSAN видеонаблюдение



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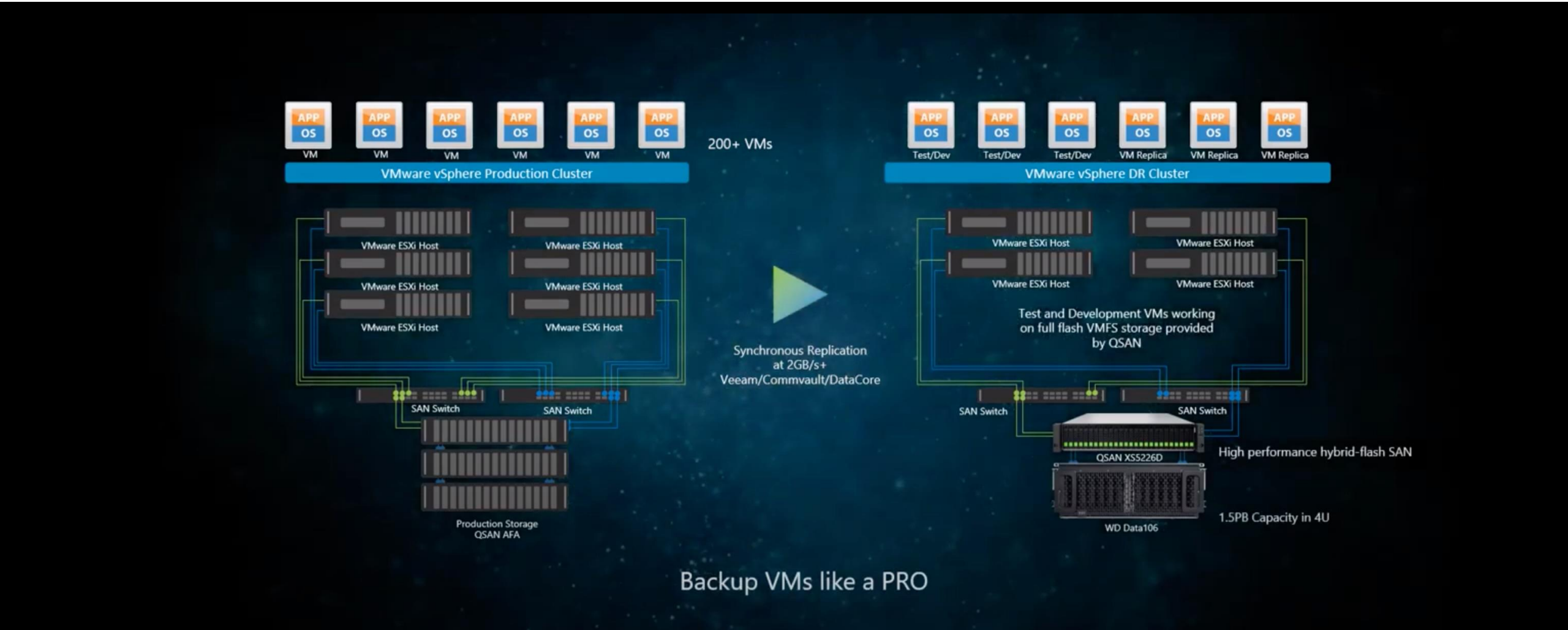
QSAN бэкап виртуальных машин



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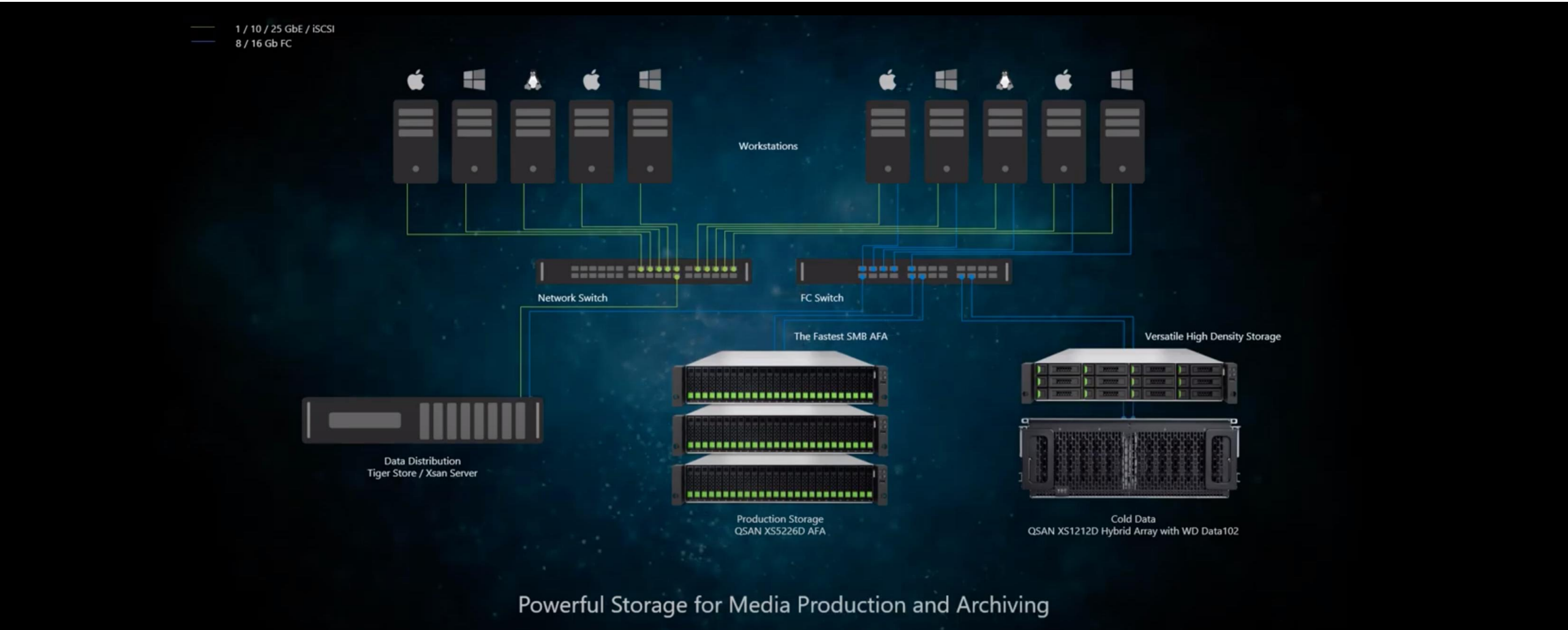
QSAN производство и архив медиаконтента



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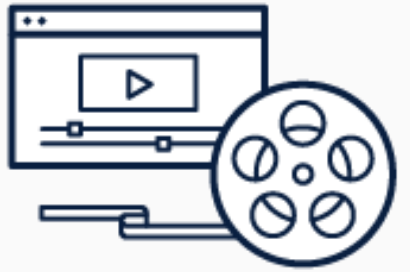
Raidix

https://www.raidix.ru/solutions/western-digital/

- Файловый (NFS, SMB, ATP, FTP) и блочный (FC, IB, iSCSI, SAS) доступ
- Минимальное влияние отказов накопителей и оборудования
- Высокая пропускная способность для интенсивных нагрузок
- Дополнительная защита данных за счет удаленной репликации
- Легкое масштабирование и гибкие конфигурации

Для видеонаблюдения



Для видеоконтента

Для корпоративных инфраструктур

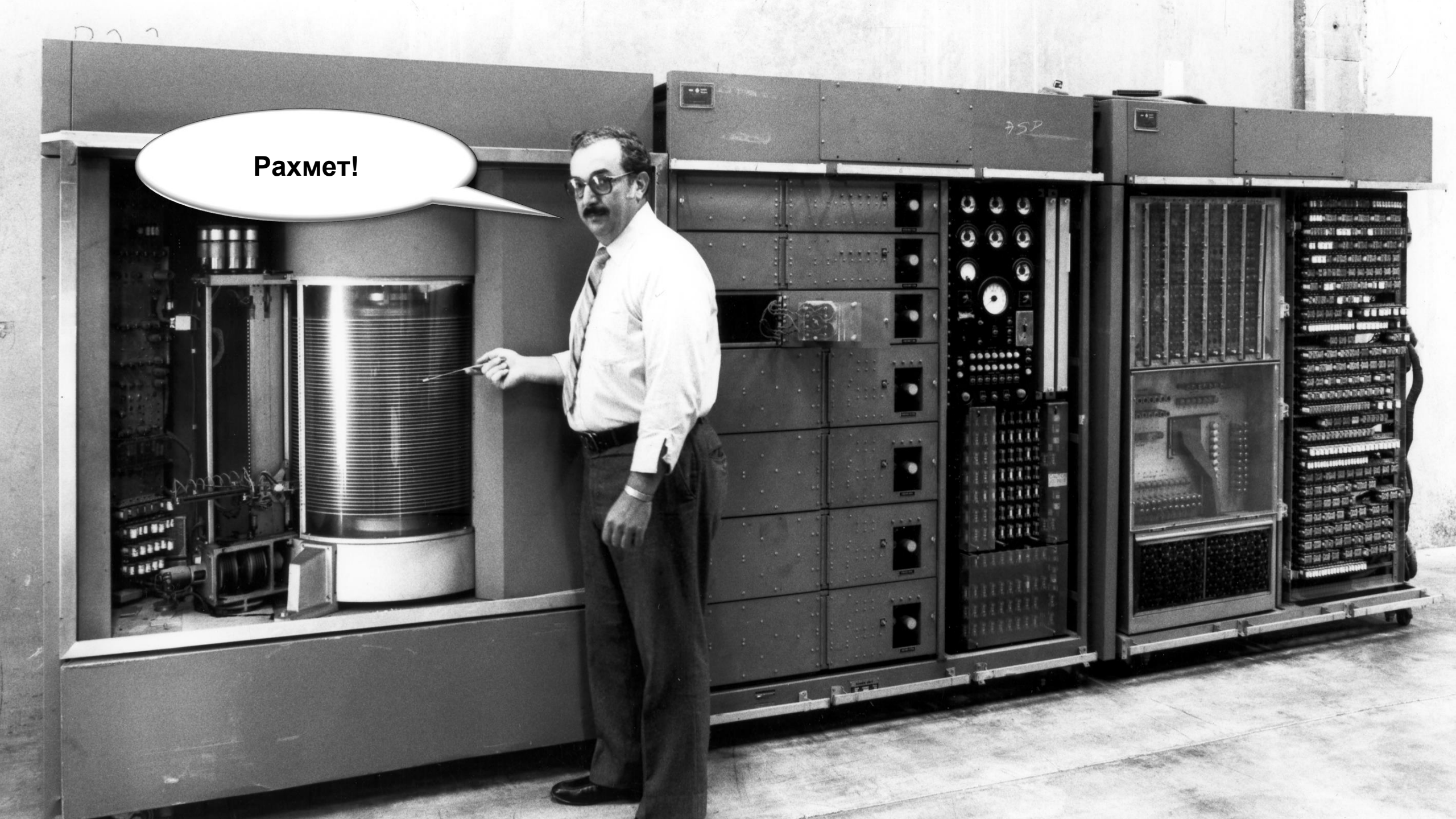
Для HPC-инфраструктур

Референсные архитектуры:

https://www.raidix.com/uploads/2018/10/reference-high-performance-fault-tolerant-data-storage-system.pdf

https://www.raidix.com/uploads/2018/10/reference-architecture-scale-out-data-storage-system.pdf

https://habr.com/ru/company/raidix/blog/354340/


Рахмет!

Western Digital®

Create What's Next