Рішення для прискорення роботи даних і надійного зберігання інформації.

Гжегож Ліг'єр
Лідер продажі IBM Spectrum Storage в CEE
How typical storage infrastructure look like?

- Disk from multiple vendors,
- SDD, HDD
- plus data in Cloud
- functions not compatible
- Multiple copy of data
- Accessed from various OS
There are 3 major challenges caused by this kind of infrastructure:

- Security of data
- Manageability difficulty
- Performance issue

### Unification

### Software-defined
What is Software-defined storage?

**Software-defined storage (SDS)** is a marketing term for computer data storage software for **policy-based provisioning and management** of data storage independent of the underlying hardware. Software-defined storage typically includes a form of **storage virtualization** to separate the storage hardware from the software that manages it. The software enabling a software-defined storage environment may also provide policy management for features such as data deduplication, replication, thin provisioning, snapshots and backup.

From Wikipedia

https://en.wikipedia.org/wiki/Software-defined_storage#cite_note-3
What is Software-defined storage?

Based on commodity hardware
IBM Spectrum Virtualize
value for all stakeholders

Offers storage virtualization of over 300 different flash and disk systems

Allows you to
• Pack more data onto the physical disks you own
• choose lower cost disk arrays
• adopt new storage technology more quickly
• implement ultra high availability using any type of physical storage
• save money on software licensing costs
What is Software-defined storage?
IBM Spectrum Control
Intelligent Analytics for Managing Storage

Single console for managing all types of data on disk, flash, file and object storage systems, equipped with visual admin tools, reporting and analytics.

• Take the guess-work out of managing workloads across multiple tiers of storage

• Policy based data placement provides objective analysis of workload placement

• Analytics make recommendations based on historical performance with automated, transparent migration to appropriate storage tier

PLACE DATA IN THE RIGHT PLACE AT THE RIGHT TIME
What is Software-defined storage?
80%

More then 80% of data stored will never be accessed.
IBM Spectrum Scale & Archive
Policy-based Cost Optimization

**Powerful policy engine**
- Example: File Heat measures how often the file is accessed.
- As the file gets “cold” move it automatically to a lower cost storage pool
- Information Lifecycle Management
- Fast metadata ‘scanning’ and data movement
- Automated data migration based on threshold

**Users not affected by data migration**
- Single namespace
- Persistent view of the data

**Tape as the external pool of Spectrum Scale**

Small files last accessed > 30 days

- Gold pool (SSD)
- Silver pool (NL SAS)

Send it back to Silver pool when accessed

System pool (Flash)

- last accessed > 60 days
- Silver pool is >60% full Drain it to 20%

IBM Spectrum Scale

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What is Software-defined storage?
Data protection modernization means improving data security for 41% of survey respondents

Today’s Key Data Protection Trends

Central backup stores are every company's biggest information repository

01. Application / Data Recovery
   Data availability

02. Disaster Recovery
   Recovering from data access loss in the primary data center

03. Business Continuity
   Reducing the risk to the business, employees, market perception

04. Application / Data Reuse
   Utilize data for new routes to market

05. Cyber Resiliency
   Recover the business from a compromised attack

Source: Research conducted by ESG on behalf of IBM, 2019
IBM Spectrum Protect Portfolio – Intelligent Data Protection / Reuse

- **Workloads**
  - Files
  - Email
  - Databases
  - Applications
  - Hypervisors

- **SLA Managed**
  - IBM Spectrum Protect Suite

- **Optimized**
  - Incremental
  - Forever
  - Deduplication
  - Compression
  - Encryption

- **Protected**
  - Cloud
  - Tape
  - VTL
  - Disk
  - S3

- **Agent (client) based backup** optimized for file / object
- **Agentless backup** optimized for snapshots

**Features**
- Enterprise Availability
- High Performance
- Lower CapEx
- Business Agility
- Lower OpEx
- Cyber Resiliency
- Competitive Advantage
What is Software-defined storage?
IBM Spectrum Storage Suite

Complete Value to Drive Cost Efficiency and Total Management

A new licensing model for IBM Spectrum Storage

Provides unlimited access to IBM’s comprehensive set of software-defined storage offerings with convenient per-TB pricing
The IBM Spectrum Storage difference

- Built using technologies proven in over fifty thousand client deployments
- Flexible deployment on cloud, integrated solution, converged infrastructure and as software on client choice of hardware
- Complements and transforms existing infrastructure to support next generation applications
- Comprehensive family of offerings addresses full range of software defined storage requirements
- From the #1 provider of SDS platforms

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Software-defined storage from IBM offer to your organization:

- Enhanced Security
- Ease of Manageability
- Performance and utilization improvement
- Cost reduction

What you will implement first?

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