

IBM Spectrum Storage



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IBM Connect 2015

Trends

Data Solutions

Yesterday



Today



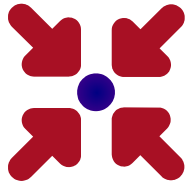
Tomorrow



New infrastructure expectations

Changing Nature of Business and Data

Business
Pressures



New
Applications



Data
Growth



Hybrid
Cloud



*Free data from constraints of hardware and realign with
new business processes and applications*



Cost

Complexity

Inflexibility

Hardware is not the answer

- Blindly adding capacity
- Data trapped in storage silos
- Data duplication and more silos
- Extending refresh cycles
- Ad hoc cloud usage

Solutions to Trends

- Data Dimensions
- CAMSS

Think Big - Solutions

- Flash
- Control
- Protect
- Virtualize
- Accelerate
- Scale
- Archive



\$1 Billion

investment in "software-defined storage".

February 2015

\$1 Billion

investment in FlashSystem.

February 2015

IBM Spectrum Storage portfolio

700 patents, hybrid cloud transformation

IBM Spectrum Storage Business Value

**Scalability with
data anywhere**



**Simplified storage
management**



**Improved data
economics**



Openness

Software Offering **Choice**

Industry standard hardware, integrated appliances or as SaaS (SoftLayer)

Announcing IBM Spectrum Storage Solutions



Agility

Speed

Spectrum Accelerate™

Elasticity

Spectrum Scale™



Control

Insight

Spectrum Control™

Governance

Spectrum Protect™



Efficiency

Utilization

Spectrum Virtualize™

Placement

Spectrum Archive™

Get It Your Way: Software, Service or Appliance

Proven Technology, Open Standards, Modular Adoption

Think Big

Flash

IBM FlashSystem, it's about *time*.

Time to insight. Time to value. Time to market.

Up to



50x

better performance than enterprise disk systems using IBM FlashCore™ technology to enable real-time business decisions using IBM FlashSystem™

Up to



6x

faster I/O performance using Flash enclosure with IBM Spectrum Scale for near real-time analytics

IBM FlashSystem Tier 1 Guarantee

Performance

IBM **MicroLatency™**
performance.

3:1

Data Reduction

Storage efficiency savings
rate¹

Endurance

read/write endurance²

Support

up to

7 year

24 x 7³

Peace of Mind

Complimentary IBM
services⁴

Grab the microsecond advantage

1. The eligible machine, using compression, will achieve a system level storage efficiency savings rate of at least 3:1, based on Comprestimator performance modeling results, within the guarantee period.
2. Flash memory will be covered for read/write endurance as long as you are under warranty or maintenance.
3. Up to 7 years support available with optional price protection and flash media retention offerings.
4. No Charge, Complimentary IBM services for all Tier 1 opportunities: 40 hours for 228+ TB solutions up to 556 TB, or 80 hours for 556+ TB solutions, Lab Services delivery in 2015.

Think Big

SpectrumControl

IBM Spectrum Control

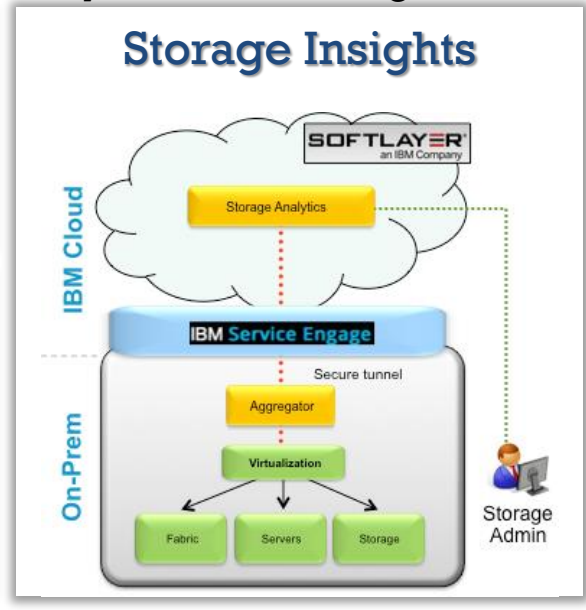
Unleash the power of analytics to reduce users' per terabyte cost of storage



Up to
100%
improvement in
capacity utilization¹

Up to
90%
storage capacity
utilization²

Up to
66%
reduction in staff
time, software &
support costs³



1. Source: Cost/Benefit Analysis of IBM Virtual Storage Center Compared to VMware Tools for Storage Virtualization and Management May 2014, International Technology Group, Santa Cruz, California
2. Average maintained at IBM data centers
3. Source: Cost/Benefit Analysis of IBM Virtual Storage Center: Compared to EMC Storage Virtualization Solutions May 2014, International Technology Group, Santa Cruz, California

Cloud based



\$90M in 5 years

or

Appliance based



Video [link](#)



ITG Brief [PDF](#)

Large Enterprise can cut cost by 72%. IBM saved \$90M over 5 years
Single Plane of Glass



ITG Brief [PDF](#)

Mid Market Customers can cut cost 34%.
CAS cut their cost by 50%
Full Featured @ Mid Market Price

Think Big

Spectrum Virtualize

“stop double spending & double effort”

IBM Spectrum Virtualize

Choice of infrastructure solutions



SVC

Performance and utilization as it scales



V9000

Encryption & data governance for data



V7000/V5000

Share data locally or globally

Up to

100%

improvement in capacity utilization¹

3x

performance with as little as 5% data on flash²

Up to

80%

savings & outstanding performance with Real-time Compression **Guaranteed³**



Manage the storage pool from a central point

Make changes to the storage without disrupting host applications

Apply common services across the storage pool

Combine capacity from multiple arrays into a single pool



SAN

Spectrum Virtualize



Unlock Assets

260+

Storage systems supported

Virtualization



[Axtel](#)



[Ricoh](#)

IBM Systems and Technology
Cloud Today

Dar Al-Handasah engineers smart solution to data growth challenge
Cutting costs and maximizing cloud utilization during June 2014

IBM

Challenges
Dar Al-Handasah, a leading engineering and construction firm, faced a significant data growth challenge. The company's data volume had increased by 50% in the last 12 months, and the cost of storage was rising. The company needed a solution that could handle the growing data volume while also reducing costs.

The goal
The goal was to reduce storage costs and improve data management efficiency. The company needed a solution that could handle the growing data volume while also reducing costs.

The solution
The solution was to implement IBM Cloud Storage and IBM Spectrum Protect. This allowed the company to store data in the cloud and manage it more efficiently. The company also implemented IBM Spectrum Protect to backup and restore data.

IBM

[Dar Al-Handasah](#)

Easy Tier



[Agence France-Press](#)



[Centerline Digital](#)

TOTVS

TOTVS strengthens its storage infrastructure to support rapid growth
IBM Storwize V7000, IBM Easy Tier, IBM Red Hat OpenStack Platform

IBM

Challenges
TOTVS, a leading software development and integration company, faced a significant storage challenge. The company's data volume had increased by 50% in the last 12 months, and the cost of storage was rising. The company needed a solution that could handle the growing data volume while also reducing costs.

The goal
The goal was to reduce storage costs and improve data management efficiency. The company needed a solution that could handle the growing data volume while also reducing costs.

The solution
The solution was to implement IBM Storwize V7000 and IBM Easy Tier. This allowed the company to store data in the cloud and manage it more efficiently. The company also implemented IBM Red Hat OpenStack Platform to manage the infrastructure.

IBM

[TOTVS](#)

Real-time Compression



[Telephone](#)



[Snowball Studios](#)

GAD

GAD provides ultra-reliable cloud banking services
Cutting costs with efficient capacity utilization and improving service by eliminating downtime

IBM

Challenges
GAD, a leading provider of cloud banking services, faced a significant storage challenge. The company's data volume had increased by 50% in the last 12 months, and the cost of storage was rising. The company needed a solution that could handle the growing data volume while also reducing costs.

The goal
The goal was to reduce storage costs and improve data management efficiency. The company needed a solution that could handle the growing data volume while also reducing costs.

The solution
The solution was to implement IBM Cloud Storage and IBM Spectrum Protect. This allowed the company to store data in the cloud and manage it more efficiently. The company also implemented IBM Spectrum Protect to backup and restore data.

IBM

[GAD](#)

Think Big

SpectrumScale

“data with out borders”

IBM Spectrum Scale

Deliver agility and massive scale for today's data intensive enterprise



Large scale

Performance and utilization as it scales globally



Security

Encryption & data governance for data compliance



Collaboration

Share data locally or globally

Up to

90%

reduction in storage cost with policy driven **Automation**¹

Up to

35%

performance improvement over Hadoop File System²

Up to

10x

better **Performance** on the same hardware³

IBM Spectrum Scale™ for Big Data & Analytics



Analyze social data in near real-time and dynamically manage data to keep storage costs low

1. IBM analysis based on a list price comparison of a 1 PB IBM System Storage® TS3500 Tape Library, 1 GPFS license and 1 LTFS EE license, compared to the cost of IBM System Storage DS5100, including annual maintenance.
2. <http://www.sachinbuzz.com/2014/09/integrating-gpfs-with-apache-hadoop-on.html>
3. Cypress Semiconductor case study - <http://public.dhe.ibm.com/common/ssi/ecm/dc/en/dcc03034usen/DCC03034USEN.PDF>

IBM Spectrum Scale



Think Big

SpectrumAccelerate

“grid speed at your cost”

IBM Spectrum Accelerate

Ultra-flexible software defined storage deployed fast, anywhere



Speed

Add storage in minutes;
meet SLAs hotspot free



Agility

Easily use & reuse any x86
server



Simplicity

Standardize operations;
flexible, online licensing

Less than

30 mins

to download, install, enjoy
enterprise storage

More than

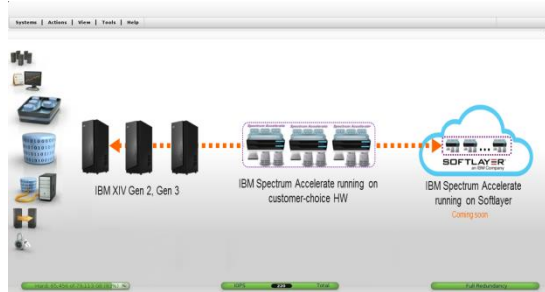
50%

reduction in Total Cost of
Ownership

#1

management experience

Storage your way: appliance, software, service



Single Management Experience
Single Software Stack/Feature Set



One of the world's largest
financial institutions

Prudential Joe Balsamo, Vice President Platform Engineering, discusses innovation in storage, and aligning IT with the business to process huge volumes of data quickly and deliver what customers need. [[link](#)]

Joe's Cloud

Mr. Balsamo

50%

Reduction in \$/MB

75%

Reduction in \$/IOP

?

Storage
Admins
for routine
ops

85%

High Thin
provisioning
conversion

15 seconds

72Hr RPO reduced

Spectrum Accelerate & Virtualize

Thank

You