



Education

# **A Promise Kept: Understanding the Monetary and Technical Benefits of STaaS Implementation**

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- In today's world it's necessary for organizations to efficiently utilize resources and expertise to ensure secure, efficient storage and protection of data, as well as make that data actionable. Freeing IT staff from these complicated tasks allows them to focus on core competencies that drive their business forward, enable innovation, create competitive advantage and grow existing revenue streams. This interactive tutorial examines several drivers behind the growth of Storage-as-a-Service and the wealth of benefits it promises to businesses: the need of medium to large enterprises for remote storage as part of a disaster recovery plan; pressures regarding regulatory compliance and litigation risk as businesses view an online service as a faster way to meet requirements; and greater acceptance of software-as-a-service, with storage as a corollary service.

- The *Real* Promise: Reasons to Backup & Archive
- Overview of “Storage as a Service” (STaaS)
- Meeting the Promise: How STaaS Solves Challenges in
  - > Protecting Data
  - > Storing Data
  - > Using Data
- Summary

**You don't buy “backup” or “archiving”...**

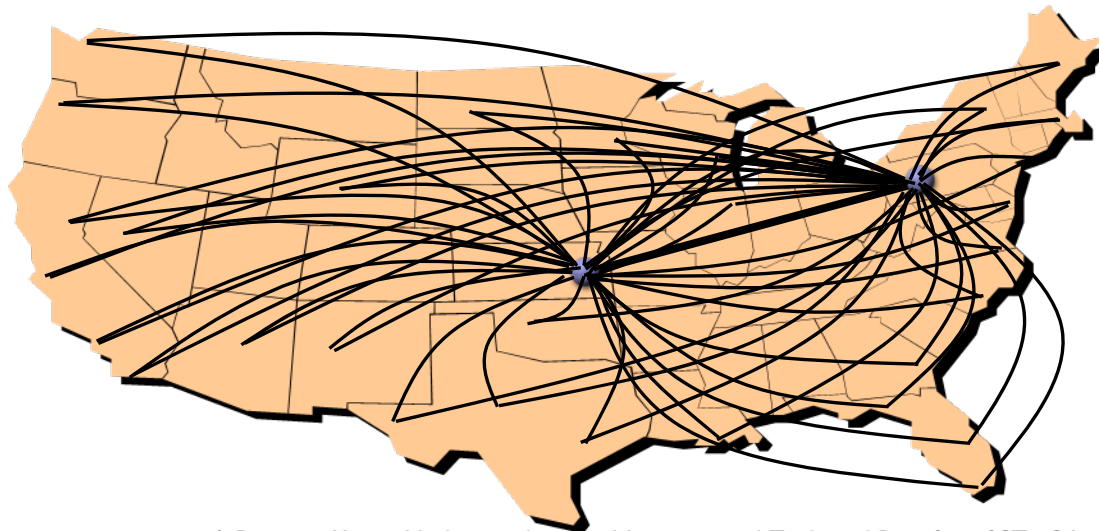
**You don't buy “restore capabilities”...**

**You buy the ability to **USE** your data  
in the future!**

- Backing up or archiving data is a **cost**
  - ◆ It enables you to get future value from your data.
- This is the fundamental premise and promise of all backup and archive products and services
  - ◆ It is often implicit rather than explicit.
- The path is: **Protect, Store, Use**
  - ◆ Storage as a Service addresses each stage differently than an internal solution does.

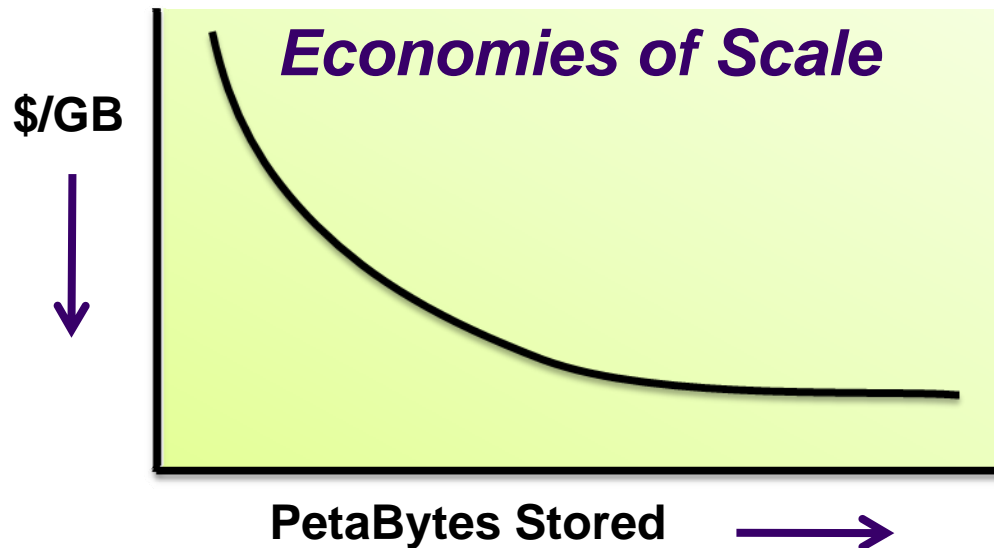
# What is STaaS?

- Storage-as-a-Service (STaaS or SaaS)
  - ◆ Backup, Archive, and other related services
  - ◆ Not primary cloud storage
- High-end datacenters receiving, storing, managing and returning information to and from many geographically dispersed customers via the Web

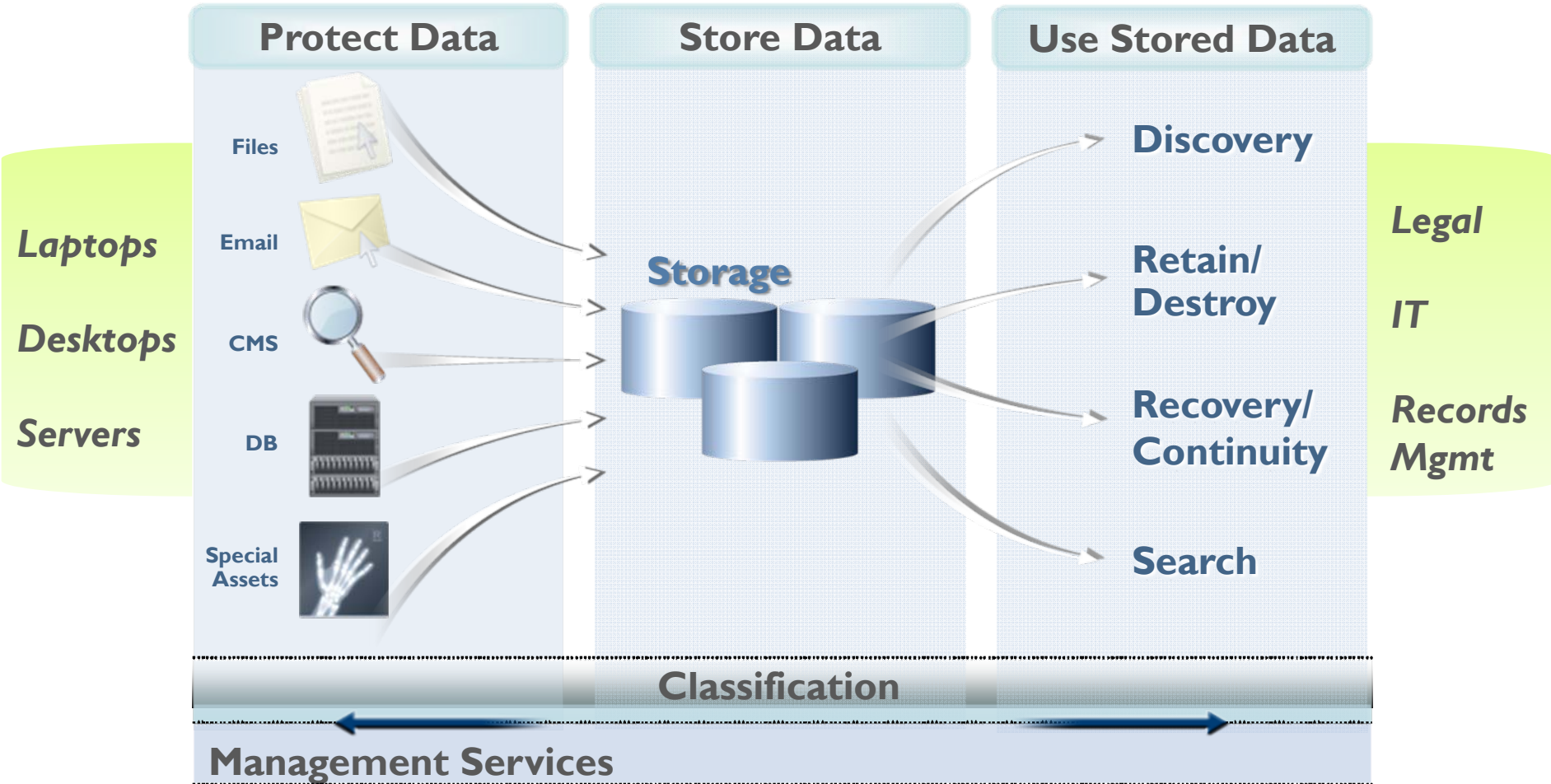


# What is STaaS?

- High security standard for enterprise-level offerings
- Large amounts of data from many customers, along with multi-tenancy allows for economies of scale
- Hybrid offerings may combine on-premise equipment with offsite longer-term storage



# Storage-as-a-Service



# Protecting Your Data

- *Reliability*
- *Data Movement*
- *Configurability*

# Reliability

## Challenges

- **Complex procedures**
  - ◆ Prone to failure
- **Mobile workforce**
  - ◆ Connectivity issues
  - ◆ Usage patterns
- **Difficult recovery**
  - ◆ Limits archiving

## STaaS Advantages

- **Simple agents**
  - ◆ Policy based rules
- **Designed for distributed systems**
  - ◆ Ideal for mobile users
- **Multi-type restores**
  - ◆ End-user or admin

# Data Movement

## Challenges

- Data growth
  - ◆ Stresses backup window
- Mobile workforce
  - ◆ No fixed infrastructure
  - ◆ No fixed backup times
- Restoration logistics
  - ◆ Users are everywhere

## STaaS Advantages

- High volume efficiency
  - ◆ Improved connectivity
  - ◆ Improved data reduction
- Flexible Models
  - ◆ On-site appliances
- “Data shuttles” Mobile-enabled
  - ◆ Move data whenever connected

# Configurability

## Challenges

- Different users/data
  - ◆ Spur different needs
- Different system types
  - ◆ Full backup? Data only?
- Timing & conflicts
  - ◆ Accommodating systems, networks, users
- User involvement
  - ◆ Setting visibility and control levels

## STaaS Advantages

- Flexibility
  - ◆ Easy data selection
  - ◆ Freed from tape timelines
- “Community” model
  - ◆ Target user group needs
- Tunable execution
  - ◆ Speed vs. network use
- Transparency settings
  - ◆ Set balance of control

# Storing Your Data Long-term

- ***Retention***
- ***Compliance & Security***
- ***Availability***

# Retention

## Challenges

- How long?
  - ◆ Different data/users
  - ◆ Short/long term
  - ◆ Exceptions: Legal hold...
- Managing growth
  - ◆ Pay for head room
  - ◆ Hard to shrink
- Old, unnecessary data
  - ◆ Maintenance costs
  - ◆ Potential liability

## STaaS Advantages

- Pay for what you use
  - ◆ Highly scalable (up or down)
- Supports varied retention policies
  - ◆ User & system level
  - ◆ Archive vs. backup
  - ◆ Exception management
- Verifiable destruction
  - ◆ Less worries

# Compliance & Security

## Challenges

- Retention practices
  - ◆ Consistent, defensible?
- Threat Management
  - ◆ Encrypted? Unhackable?
  - ◆ Physical security?
- Assurance
  - ◆ Cost of staying current
  - ◆ Cost of certification: PCI, FISAP, GLB, SOX, rule 26, etc.

## STaaS Advantages

- Retention models
  - ◆ Robust and verified
- High-level physical security
- Massive compliance & security investments
  - ◆ All major standards
  - ◆ Regular verification
  - ◆ Costs spread across all customers

## Challenges

- Ensuring accessibility
  - ◆ Critical to “the promise”
- Expensive infrastructure
  - ◆ Mirrored datacenters
  - ◆ Automatic failovers
- Failure remediation
  - ◆ Requires fast and automatic corrections

## STaaS Advantages

- Continuous accessibility
  - ◆ Redundant high-level datacenters
- Automated redundancy
  - ◆ Replication, failover, and failure correction
- Economy of scale
  - ◆ Costs spread across millions of protected systems

# Using Your Protected Data

- ***Business Continuance***
- ***E-Discovery***

# Business Continuance

## Challenges

- Individual's file restores
  - ◆ Done without help?
  - ◆ Available on the road?
- System-level restores
  - ◆ Can whole systems be quickly restored?

## STaaS Advantages

- Distributed support
  - ◆ Local & remote restores
  - ◆ Web-accessible
  - ◆ Cost-effective SLA
  - ◆ Minimal admin burden
- Optimized high-volume restores
  - ◆ High-bandwidth pipes
  - ◆ Appliances, data shuttles

# E-Discovery

## Challenges

- Ensuring readiness
  - ◆ Are you discovery enabled?
- Chain-of-custody
  - ◆ Certifiable?
- SLA limits
  - ◆ Time pressure to find/restore
- Setup and ongoing work is expensive

## STaaS Advantages

- Discovery-enabled archives
  - ◆ Pre-indexed backups and archives for speed
  - ◆ Data needn't move
- Chain-of-custody
  - ◆ Certified services
- Costs spread across many users

# Summary

# Where Storage-as-a-Service Fits

Situation	Backup	Archive	Comments
<b>Mobile Laptops</b>	✓		<ul style="list-style-type: none"> <li>• Designed for distributed/moving sources &amp; restores</li> <li>• Handles intermittent connectivity</li> <li>• Hands-free backup</li> <li>• Consolidated management</li> </ul>
<b>Desktops / Laptops</b>	✓		<ul style="list-style-type: none"> <li>• Good for handful to hundreds of thousands</li> <li>• Highly scalable: manage by groups and/or geography</li> <li>• Hands-free backup</li> <li>• Consolidated management</li> </ul>
<b>Distributed Servers</b>	✓	✓	<ul style="list-style-type: none"> <li>• Archive reduces data size</li> <li>• Hands-free backup and archive</li> <li>• Consolidated management</li> </ul>
<b>Small Central Servers</b>	✓	✓	<ul style="list-style-type: none"> <li>• Archive reduces data size</li> <li>• Hands-free backup and archive</li> <li>• Consolidated management</li> </ul>
<b>Large Central Servers</b>		✓	<ul style="list-style-type: none"> <li>• Archive reduces data size</li> <li>• Can consolidate archive with distributed servers, etc.</li> </ul>

- For very large amounts of data, onsite might still be needed to meet SLAs
  - › Scale continues to improve, but there are limits on amount of data movable across the Internet in a reasonable amount of time
  - › More of a Backup than archive issue
  - › Bulk data shipments (data “shuttles”) and/or Hybrid (on & offsite) can help on this
  - › Need to understand SLA’s for the particular data and STaaS usage
- Need to ensure health / longevity of STaaS provider meets retention period needs
  - › For 30 day retention, this is less of an issue
  - › For multi-year archive, it could be critical

- **Different expense model**
  - ◆ No initial setup costs
    - › Large scale infrastructure already in place
    - › Fully available from day-one
  - ◆ Pay for what you use
  - ◆ Economy of scale
  - ◆ Lower management costs
- **Handles customers' distributed and mobile data**
  - ◆ Enterprise STaaS offerings built for these profiles

- **Security and compliance (including data destruction)**
  - ◆ Typically intense security focus: physical and electronic
  - ◆ Up to date on key Certifications
  - ◆ Retention policies: full range of options
  
- **Efficient data use**
  - ◆ Built-in enabling features: e-Discovery, business continuity, compliance, etc.
  - ◆ Fast restoration: individual files or large collections of systems
  - ◆ Data availability: to any of your offices or via web

***Protecting Your Data*** ✓

***Storing Your Data*** ✓

***Using Your Data*** ✓

- Please send any questions or comments on this presentation to SNIA: [trackstoragemgmt@snia.org](mailto:trackstoragemgmt@snia.org)

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