



## Creating a Cloud Storage Service

Deon George

# Pulse2012

Meet the Experts. Optimise your infrastructure.

**May 31 – June 1**

Sheraton on the Park Hotel, Sydney

# Agenda

- TSM “Cloud Service” features
- Cloud Service
  - Customer, providing a internal backup service
    - Internal Backup Cloud Service
  - Service Provider, providing a backup service
    - External Backup Cloud Service
  - Service Provider, providing infrastructure
  - Front Safe Web Portal



# Double the capacity of the TSM Server – AGAIN!!

Data growth of 40%-60% per year?

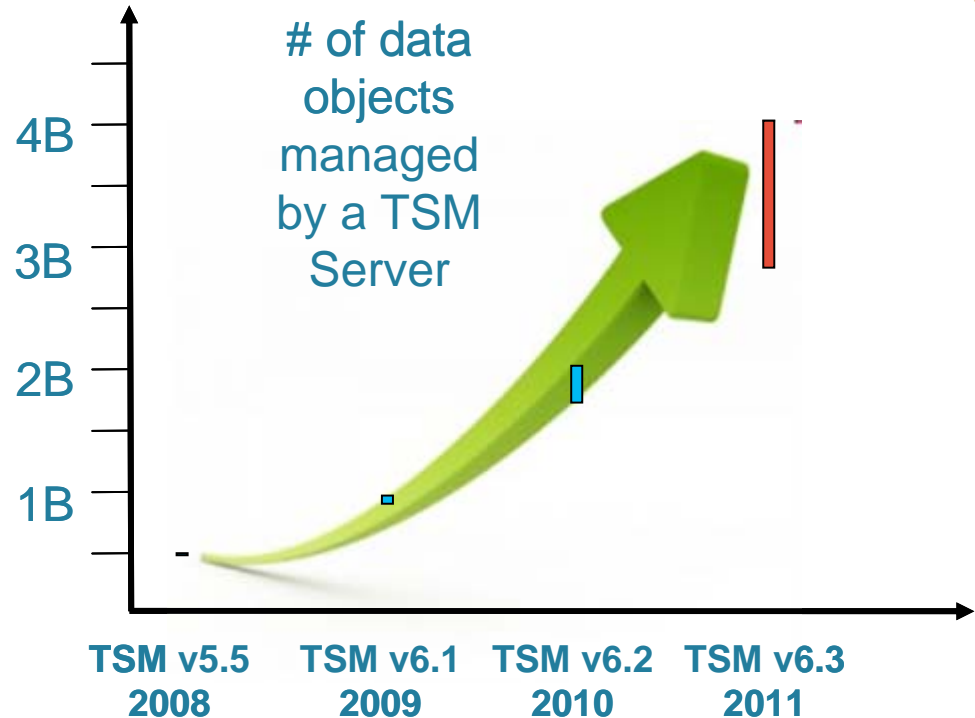
**NO PROBLEM**

The best-in-class in scalability just GREW 100% for the 3rd straight year

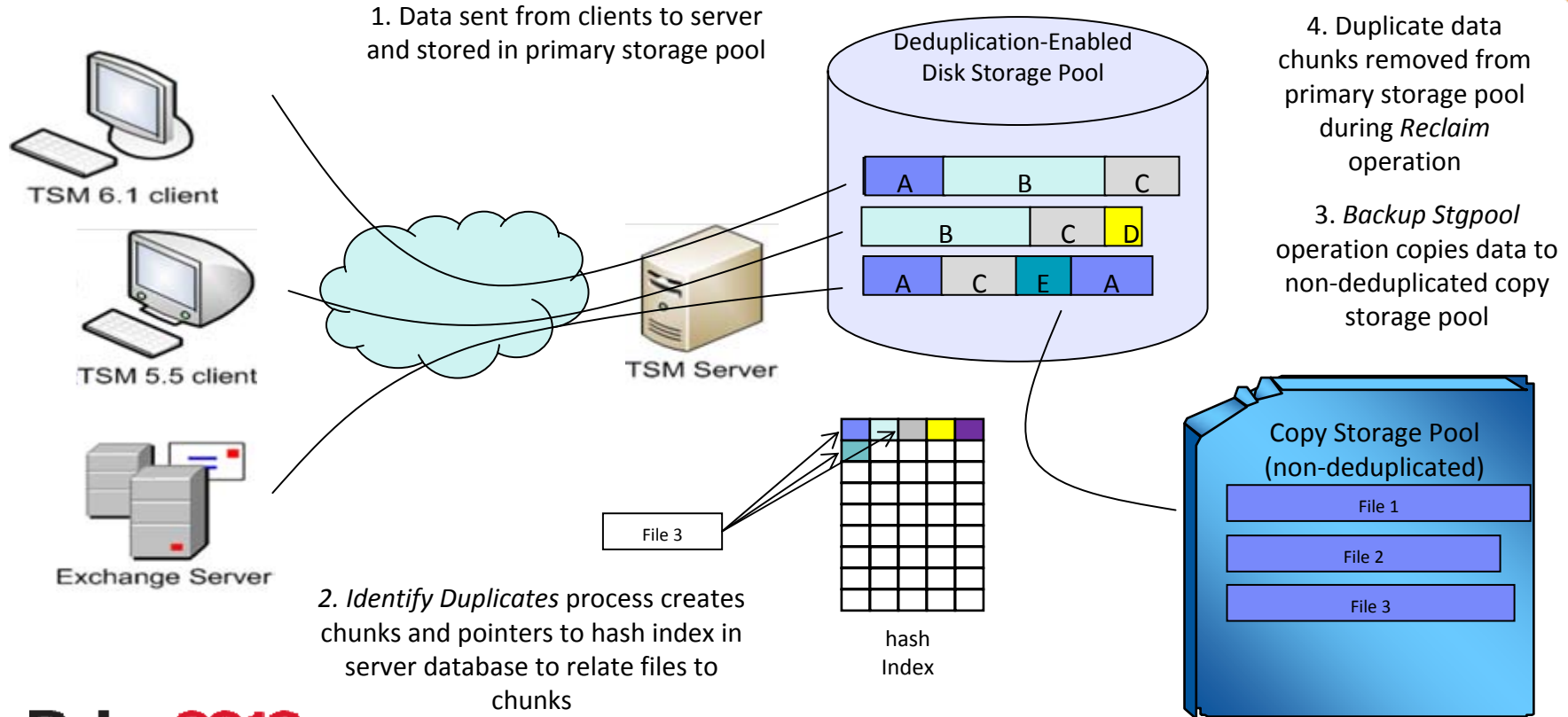
Now managing up to 4 BILLION data objects in a single TSM Server

- Files and chunks of de duplicated files
- Databases
- Images

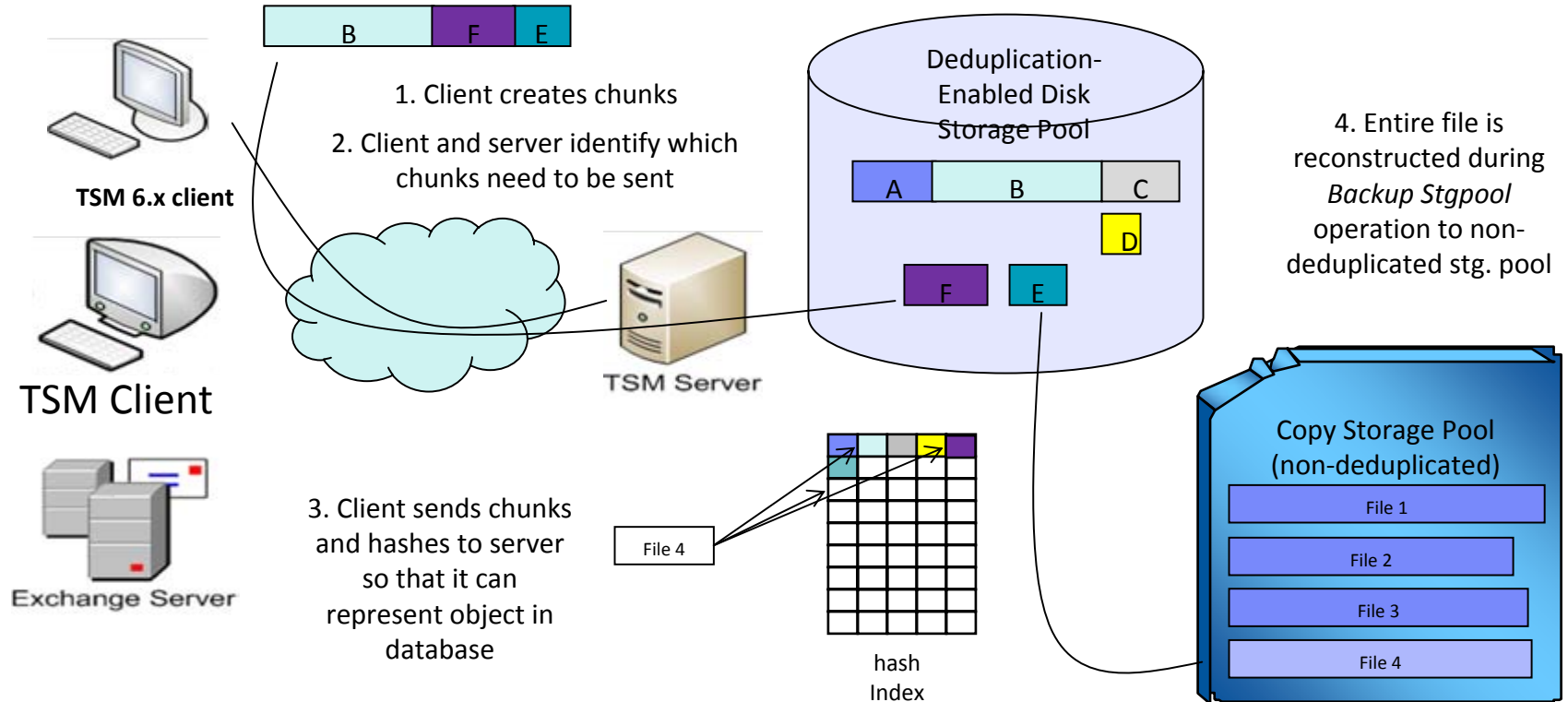
**Pulse2012**



# TSM Server Side Data Deduplication (TSM 6.1)



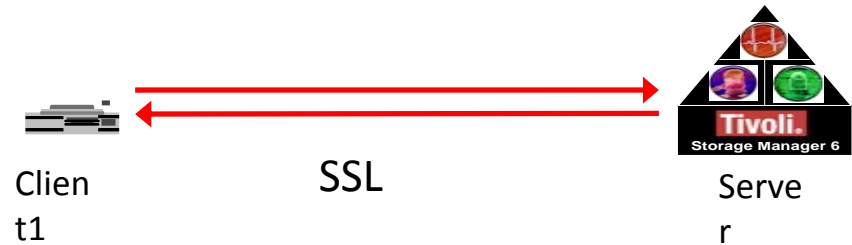
# TSM Client Side Data Deduplication (TSM 6.2)



# In-flight data encryption using SSL

- Extended platform support

- Linux
- Solaris
- HP-UX
- Available in TSM 5.5: Windows, AIX

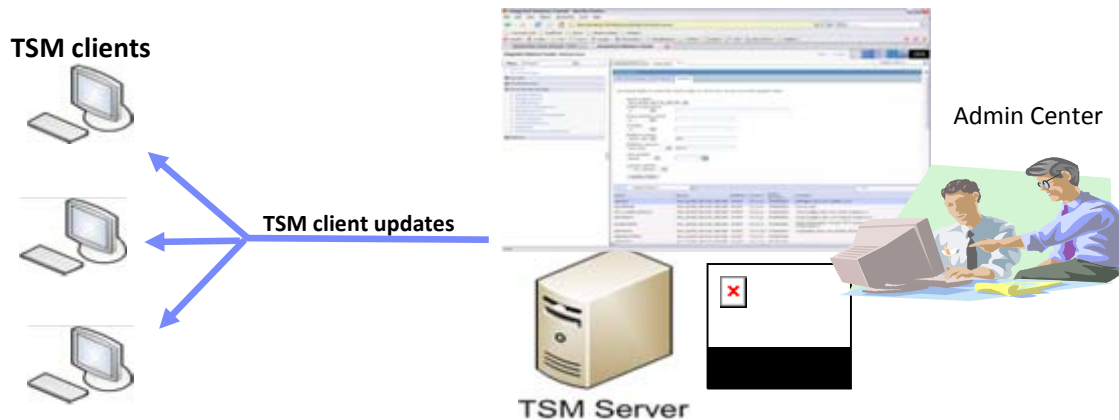


- **Benefits:**

- Secure data transmission between client and server
- 256-bit AES encryption for in-flight data
- Compatible with TSM server- or client-side deduplication
- Simplified deployment and validation of TSM server certificates



# Client Deployment for Windows BA clients (TSM 6.2)



## Benefits:

- Updating Windows BA clients is:
  - Less time consuming
  - More reliable
  - Less labor intensive

- ✓ TSM administrator obtains Windows BA client maintenance release from the FTP site.
- ✓ From the Admin Center, the TSM administrator selects a maintenance level to be distributed to a list of existing clients. Define a policy and schedule.
- ✓ The distribution and code updates will run automatically on the clients, based on the predefined policy/schedule.
- ✓ From the Admin Center, the TSM administrator can review the client distribution status.
- ✓ Windows Backup-Archive client maintenance distribution for upgrade from 5.x or higher to 6.x or higher.

# Deployment of Backup Archive Client Updates (TSM 6.3)

- Deploy client maintenance updates to non-Windows platforms
  - Previously only Windows
  - Now AIX, Solaris, HP-UX, Linux, Macintosh & Windows
- Allow client to upgrade to 5.5, 6.1, 6.2 or higher versions

Previously

Windows

Previously or now allowed to update Backup-Archive clients to version 6.2

– Now clients can be updated to lower (supported) versions

6.2 or higher

AIX

Solaris

HP

Linux

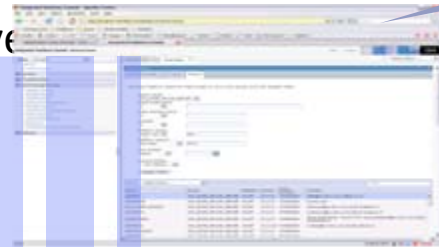
Mac

new

Client updates

Admin Center

or

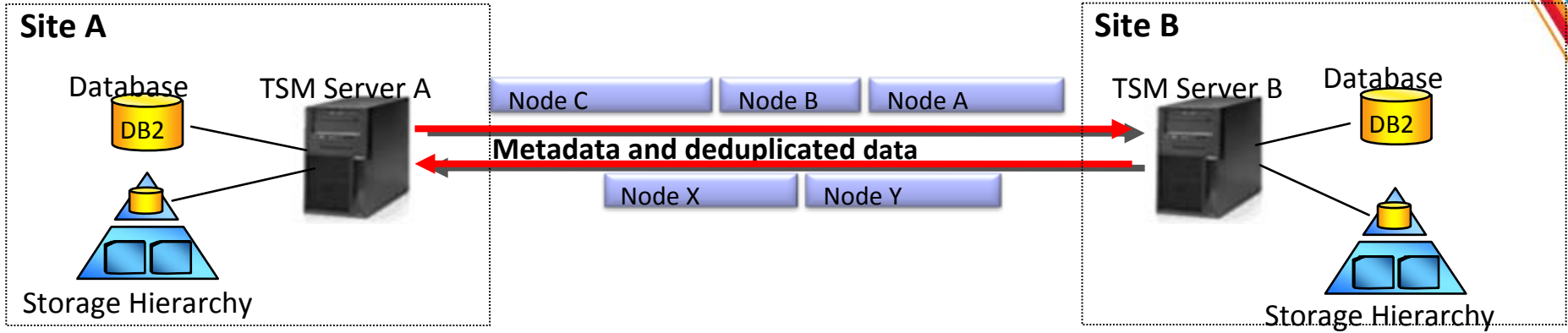


TSM Server





# Node Replication (TSM 6.3)



Provides the ability to incrementally replicate a node's data to a remote target server for disaster recovery purposes

- True incremental replication-
  - Only replicates directories and files that do not exist on target server
- Deletes data on target server that has been deleted on the source server
- Can recover client data directly from hot standby server

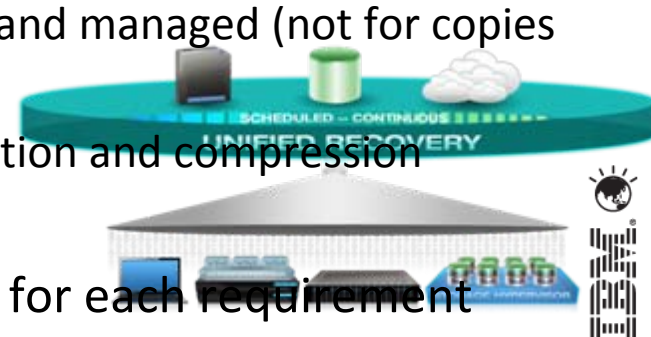
Remote vaulting without manual tape transfer  
Efficient use of bandwidth through deduplicated replication  
Allows hot standby at remote site

Can use with or without deduplication

Can have multiple servers replicate to one server

# Tivoli Storage Manager Suite for Unified Recovery

- TSM Cloud Packaging and Pricing
  - Meets diverse data recovery requirements across the enterprise and scales to meet needs of any size organisation
- Value-based pricing and easy-to-measure licensing
  - Perpetual license for the storage capacity consumed
  - Pay for the amount of primary data being stored and managed (not for copies of backup data)
  - Costs can be reduced with built-in data deduplication and compression
- Uses the right data protection and recovery tool for each requirement
- Manages it all from a single user console



# Putting it together (Customers)

- Node replication
  - Provides a highly available TSM service
    - Maintenance performed on Master, recoveries available from secondary
    - Enables DR testing from secondary without impacting recovery capability
  - More capability planned for future releases
- SSL Encryption
  - Protect data at sites via a public link
- De-duplication
  - Efficient for bandwidth (especially with compression)
  - Efficient for storage requirements (especially with compression)
  - Helps backup windows (especially with compression)
  - Reduces TB licensing (especially with compression)



# Using the cloud as another tier

Remote or Data  
Center Sites



Backup /  
Restore Traffic



Public Capacity Cloud  
Storage Provider



Data Center



Via Cloud Partners  
(Riverbed, Ctera, etc.)



Node  
Replication

TSM Backup / Disaster  
Recovery Cloud



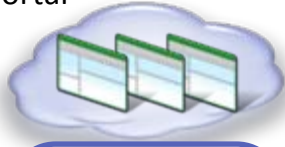
# Putting it together (BaaS Providers)

- Node replication
  - Provides a highly available TSM service, customers can always recover
    - Maintenance performed on Master, recoveries available from secondary
    - Enables DR testing from secondary without impacting recovery capability
  - Provide the target for Node Replication
    - Customers Node Replicate to your infrastructure
  - More capability planned for future releases
- SSL Encryption
  - Provide a secure channel to your TSM infrastructure
    - Protecting customer data from being reviewed in transit
- De-duplication



# TSM as the Backup / Disaster Recovery Cloud

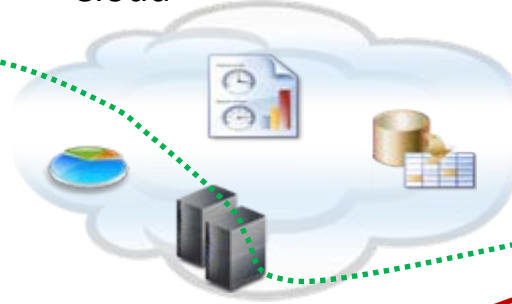
Service Providers Web Portal



Ready for  
**IBM Tivoli.**  
software

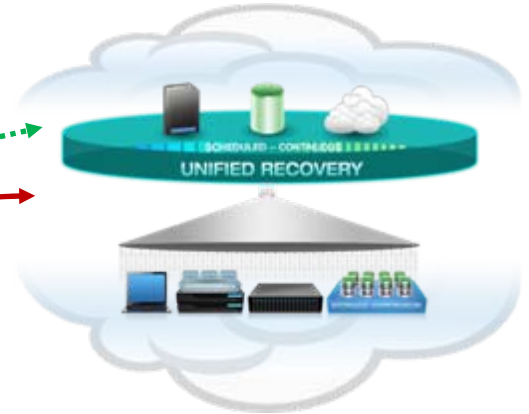
- OEM Branding
- Administration of clients, partners, backup
- Management reporting, billing

Backup Management Cloud



Backup / Restore Cloud

Provider Data Center, Public or Private Cloud



Customer Site



TSM Clients

WAN / LAN

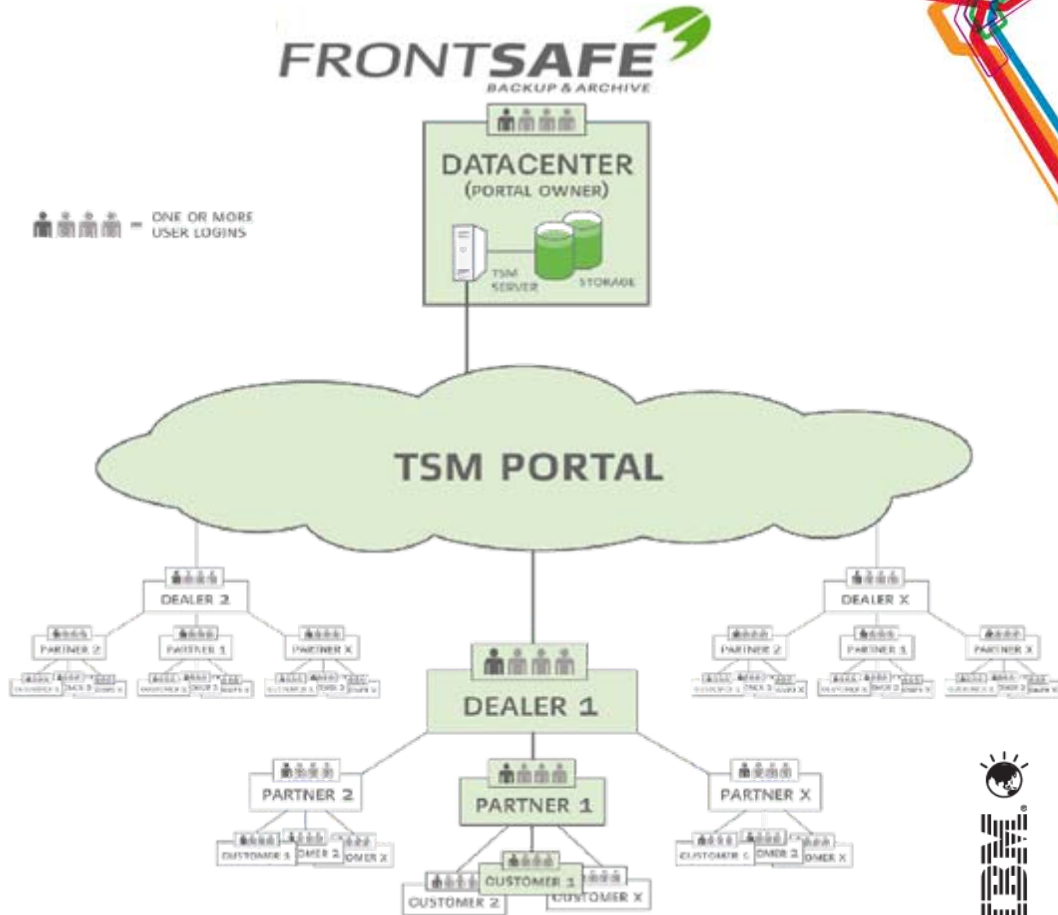
Backup / Restore Traffic

# Introducing the go to market interface..



# TSM Business Cloud Portal

- The Vision
  - Make TSM accessible to smaller customers
  - Deliver TSM as a service to small and medium sized companies
  - Build in business functionality
  - Secure a fast and effective business model for bringing TSM to market



- The Solution





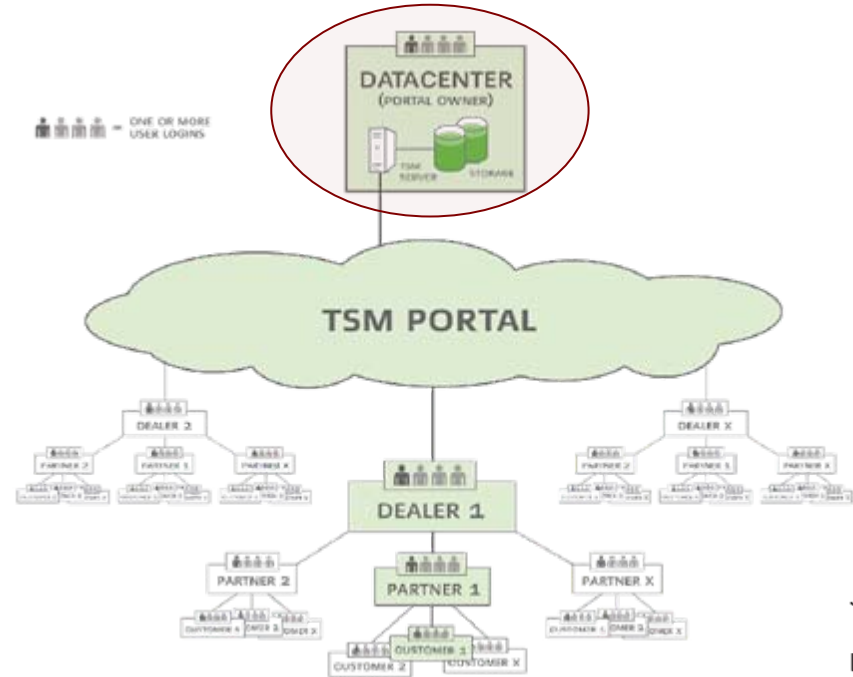
# Who is Front-safe

- Business established in 2006
  - TSM Cloud Service Provider in Denmark
    - including own datacenter, TSM infrastructure, TSM Cloud Portal, service and support, etc.
- Provider of the TSM Cloud Portal
  - enabling Datacenters/Enterprises to setup TSM as a public or private Cloud



# The datacenter (Portal Owner)

- IT Hosting and Service providers looking for new services for the market + Large Enterprises with needs for setting up TSM as a Private Cloud
  - Deliver the infrastructure (buildings, Hardware, Software, TSM Portal)
  - Deliver TSM skills and know-how
  - Deliver 1st level support to Dealers, to direct Partners and to direct customers
  - Invoices Dealers, direct Partners and direct customers

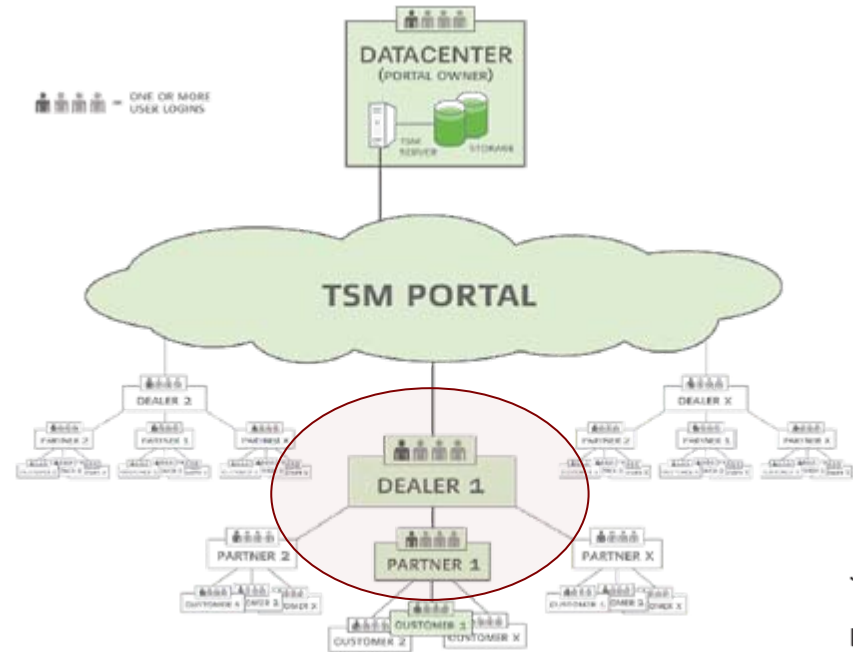


# The dealers

- Find and sell the solution to Partners who resell the solution to end customers
- Deliver 1st level support to Partners
- Invoice the Partners

## IDEAL DEALERS

- Telecommunication Providers
- Internet Service Providers
- Hosting Providers

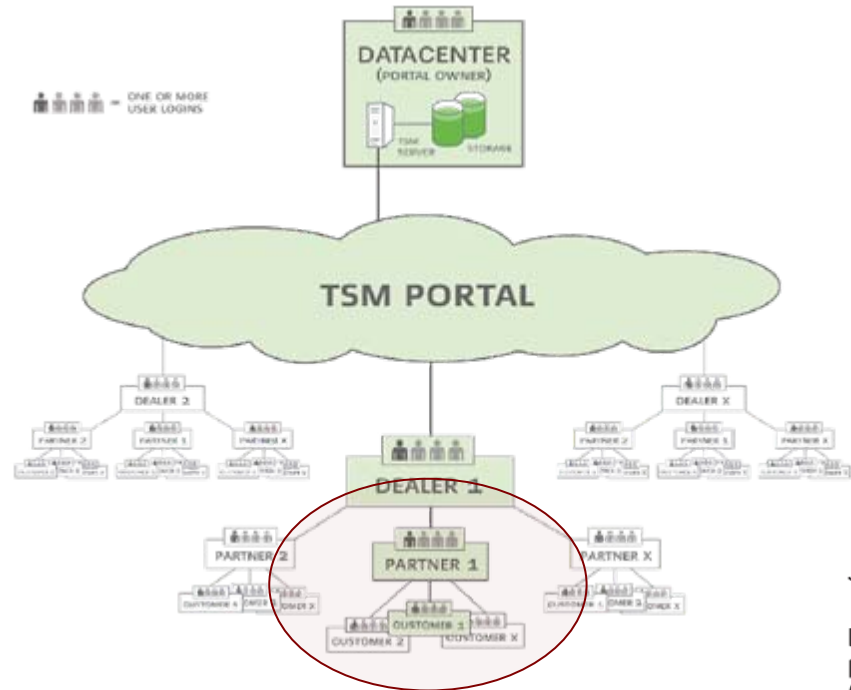


# The partners

- Find and sell the solution to end customers
- Deliver 1st level support to end customers
- Install end customer solutions
- Invoice end customers

## IDEAL PARTNERS

- IT infrastructure providers
- Branch specific application providers



# Why Front-safe is successful



- The infrastructure owner, enables dealer networks
- The dealers enable their channel partners
- The channel partners sell the capability to their customers
  
- All levels can sell to customers
- All levels can be branded as their own
  
- The portal enables
  - Non-technical sellers to provision access to a TSM environment
  - Provides the software for the customers
  - Provides billing data to the partner and dealers

## Front-safe's success



- More than 10 datacenters in 7 different countries run the TSM Portal as Portal Owners
- More than 170 Dealers and Partners
- More than 3.000 end customers
- Close to 10.000 servers
- More than 1 PB of data (all disk)
  
- 2 TSM FTE's manage the TSM Infrastructure
- ~25 TSM Instances (5.5)
- Migrating to 4 TSM Instances (6.3)





# Questions?

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