Optimization of Remote Office Operations

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Pulse Comes to You

Optimising the World's Infrastructure

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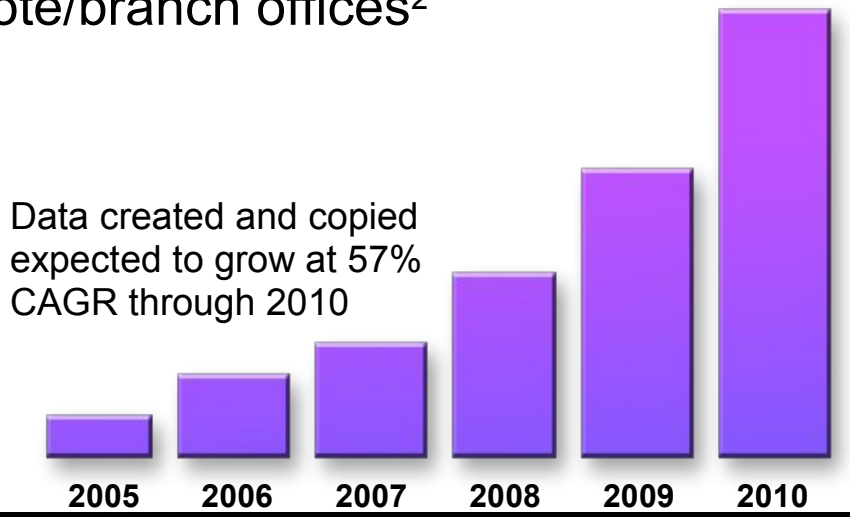
Agenda

- Evolving demands for remote data management
- Best practices for distributed data
- A vision for the future

Remote Data is Big and Growing

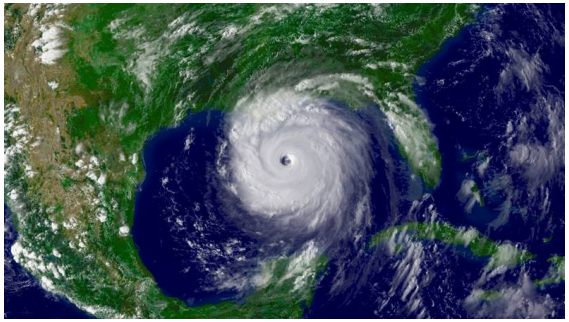
- > 4 million remote/branch offices (ROBOs) in the U.S. alone[1]
- *Data and its value* in remote offices are increasing
- % of corporate data in remote offices is increasing as companies expand operations and attempt to move closer to their customers, suppliers and partners
- Result: large enterprises have between 35% and 65% of their data in remote/branch offices[2]



[1] U.S. Census Bureau
[2] ESG, Forrester, Gartner, IDC, Taneja

Range of Data Loss Scenarios

- Operational error
  - System maintenance, finger check
- Malicious intent
  - Virus, disgruntled employee
- Application corrupted data
  - Software error, unplanned concurrent access
- OS and middleware corrupted data
  - Database, content managers, OS patch error
- Hardware failures
  - Storage subsystem, network, server, hardware failure
- Site loss



20th Century Data Protection Approaches Insufficient for 21st Century

Demands of 21 century on remote data:

- *Remote sites requiring enterprise level protection*
- *Traditional backup operations becoming unacceptable in many remote offices*
- *Remote tape operations are costly and unreliable*
- *But, still need offsite and DR protection*
- *Network bandwidths still insufficient for remote data operations*
- *Very limited IT skills at remote offices*

Are driving need to modernize technologies and operations:

- *Advanced technologies improving RTO and RPO*
- *Advanced replication technology and CDP*
- *Disk to disk protection remotely…*
- *With data flow to enterprise DR operations*
- *Combinations of data reduction techniques*
- *Increased productivity and central administration*

What Technologies are Driving Trends in Data Protection?

- Storage Media & Network Capacities
  - Capacity, cost, performance of disk, tape, and networks
- Social Networking and Web 2.0 applications
- Virtualization
  - Server, file, and storage
- Data protection techniques
  - Evolving backup solutions
  - Replication
  - CDP = Continuous Data Protection
- Data & storage reduction techniques
  - Compression
  - Data De-Duplication
  - Thin provisioning
  - Space efficient flash copy
  - Archiving solutions that relieve local filesystems and applications

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Best Practices for IT Management of Remote Offices

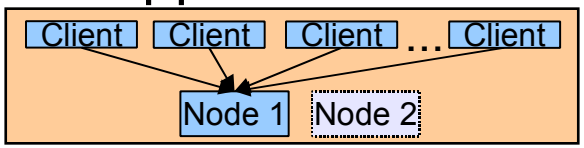
- Upgrade devices and operating systems (OSs) in remote offices as possible
- Standardize Operating System and application images on core release levels with consistent patching
- Establish and socialize data management practices
  - Separation of system and user data
  - Special directories, file types, etc
- Establish and deploy efficient data protection operations
- Exploit internet for remote office solutions – consider private or public cloud for storage and server resources
- Consider Storage Resource Management (SRM) tools like TPC to discover and monitor your distributed environment

Be Forward Thinking, but Practical

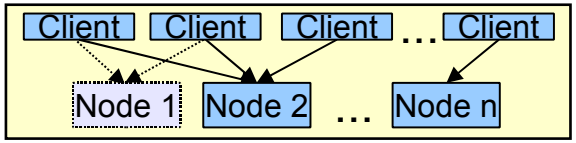
Best Practices for IT Management of Remote Offices

Consider Applicability of Other Remote Data Management Approaches

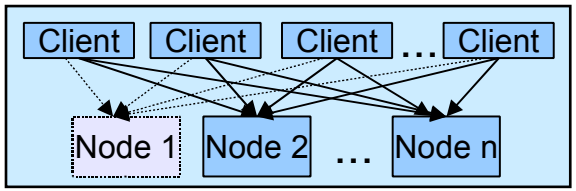
- NAS



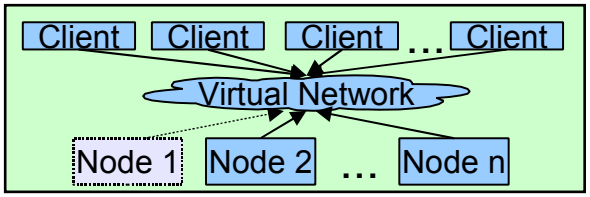
- Clustered filesystems



- Parallel clustered filesystems



- Scale out NAS



- Cloud Storage and Data Protection Services

Focus on Data Access and Recovery

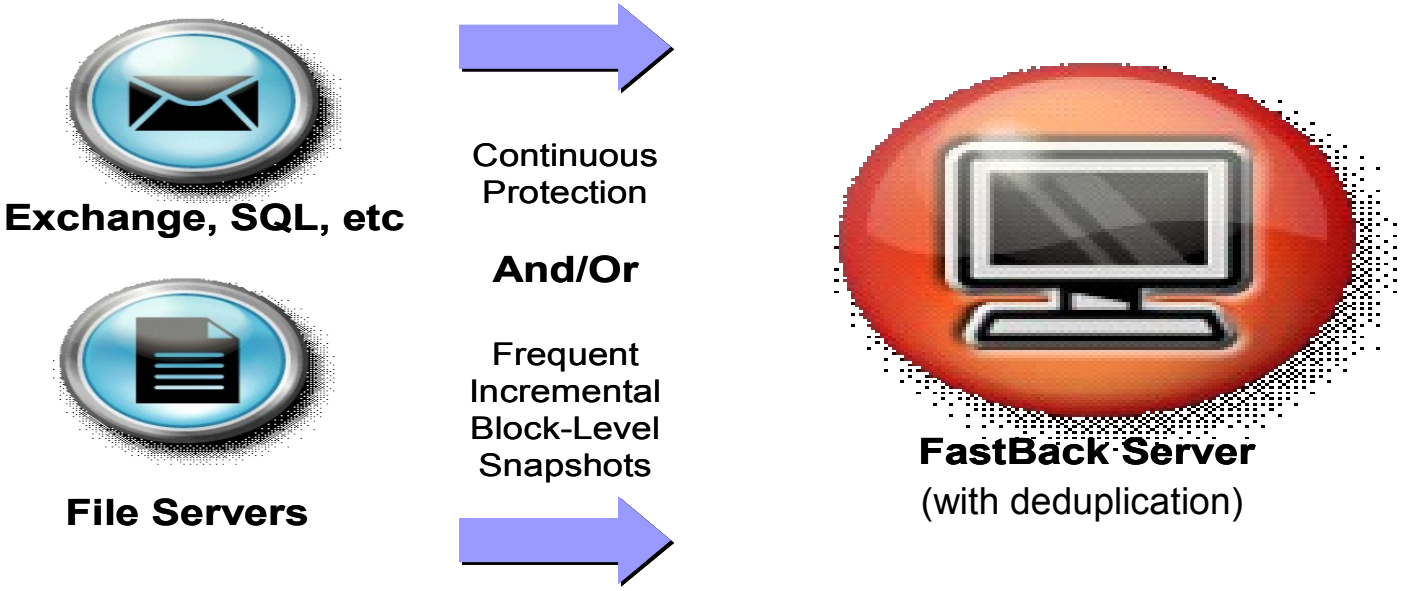
Best Practices for Data Protection in Remote Offices

- Reduce need for onsite skills with solutions that:
  - Are easy to use for end users and admins
  - Can be fully controlled from a central location
  - Minimize or eliminate remote tape operations
- Consider RTO with ROBO solutions that enable fast local restore even when WAN is not available
- Centralize decentralized operations – discovery, backups, recoveries, 2nd site replication, monitoring, config, reporting
- Reduce data created and transferred by exploiting compression, deduplication, and block level incremental forever technologies
- Secure transfer of data from ROBO to Data Center
  - Encrypt during electronic replication to Data Center (preferred)
  - Encrypt tapes
- Companies with world wide operations should look for solutions that are globalized

Technology Transitions Should Focus on Improved Operations

TSM FastBack – Industry Leading *Recovery* for Remote Data

- Near instant recovery of Windows and Linux operating systems, applications and data – Industry leading RTO!
- Blends scheduled, frequent and continuous data protection to minimize data loss – Industry leading RPO!
- Simplifies data protection and recovery, reducing skill requirements while improving data recoverability



If you have Windows or Linux servers, you should be considering TSM FastBack

TSM 6.2 and 6.2.1 – Added Value for Remote Data

TSM 6.2	TSM 6.2.1
GA 3/19/10	GA 5/21/10

Multiple language support

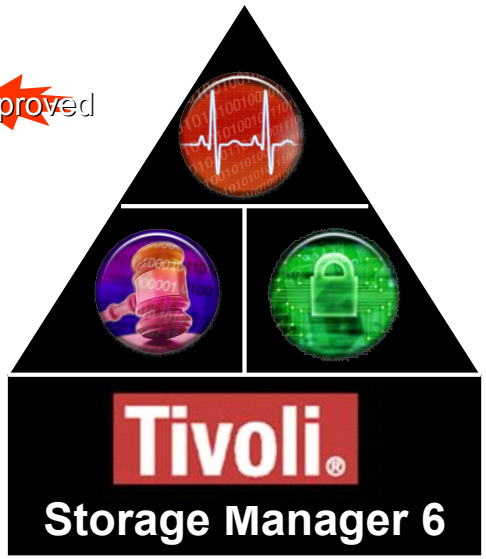
Support for LTO5 devices New

Extended dedupe offering (source or target side) Enhanced

Automated client updates New

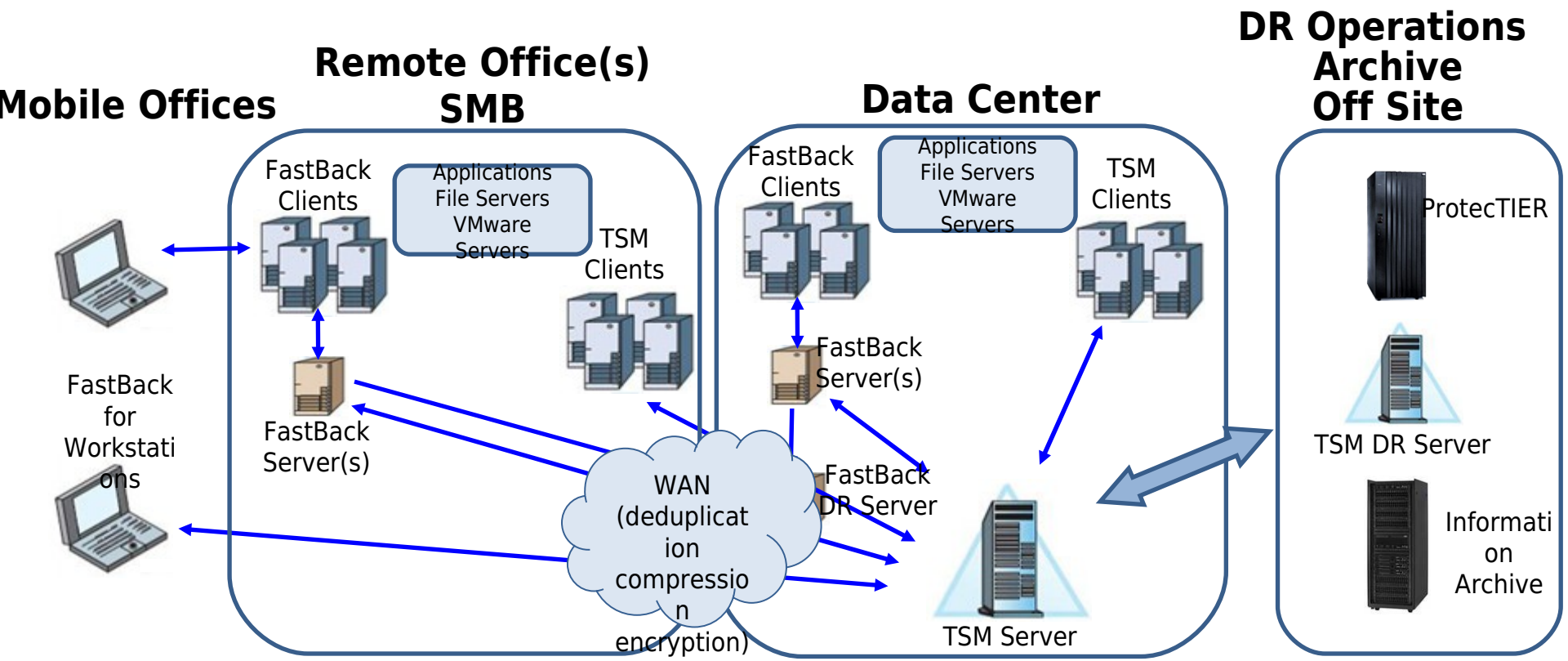
Improved support for virtual environments

Even better performance and scalability Improved



Net Result = Unified Recovery Management
Improved Quality of Service

Seamless Integration of Remote Data into Enterprise



- Integrated FastBack and TSM data protection
- Unified backup and recovery management
- Integrated policy management
- Unified reporting and monitoring

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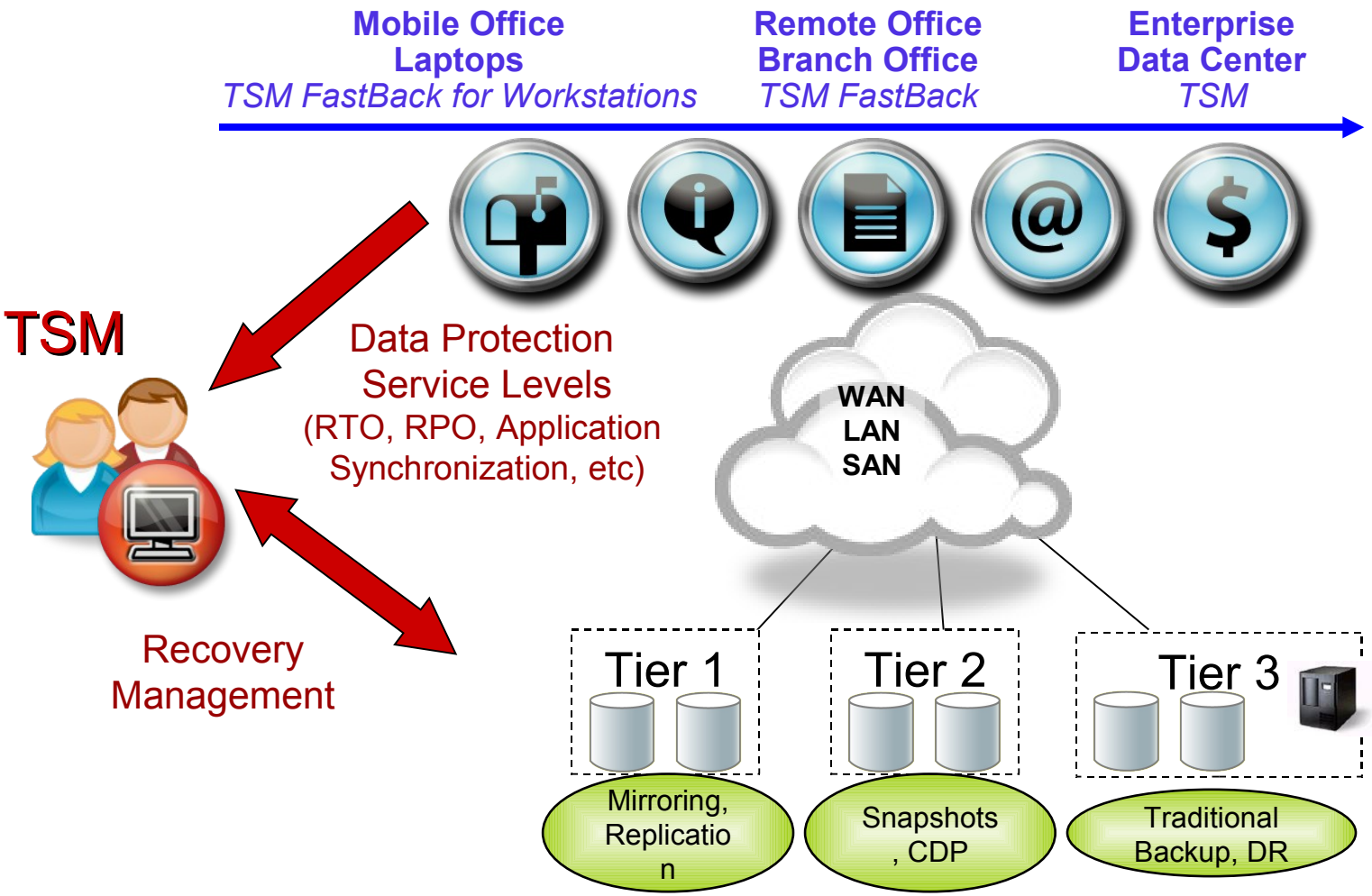
Vision: Unified Management with Tiered Recovery

Recovery technologies aligned with business priorities



A Vision for Remote Office Data Protection

1. Evolve from Data Protection to ***Unified Recovery Management*** – Service levels manage multiple technologies for protecting and recovering business-critical data, with single point of control

2. ***Securely protect data movement*** through the storage hierarchy and simplify administration of security policies

3. Improve visibility into remote operations with real-time ***monitoring and reporting***, analytics, predictive analysis

4. Reduce impact of data growth with continual improvements in ***performance, and data reduction techniques***, including data deduplication