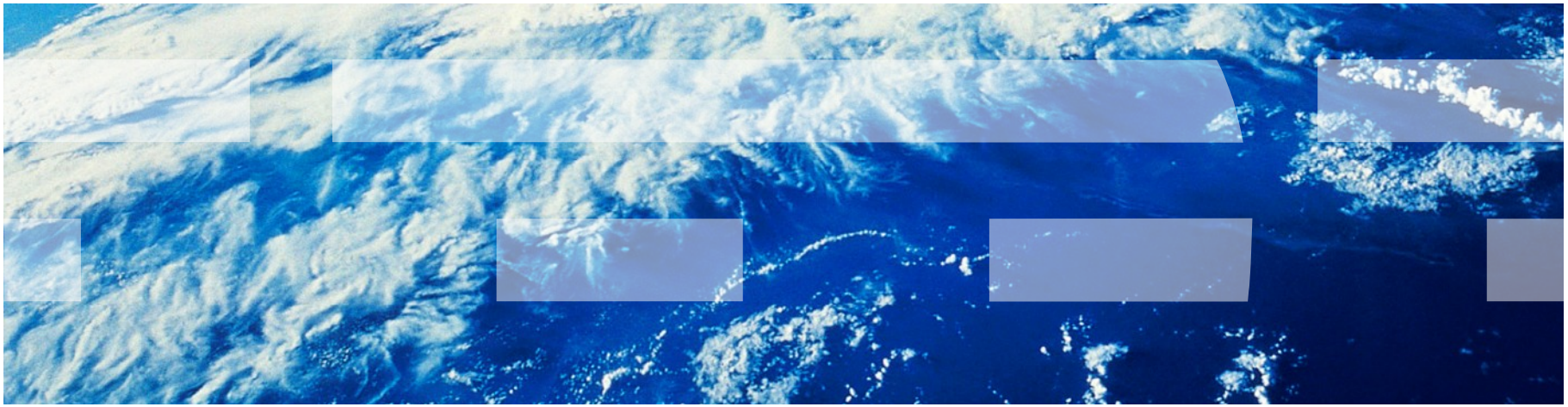
Cem Erdoğan – Hizmetler Ürün Yöneticisi

21/Ekim/2009

IBM yazılım zirvesi '09

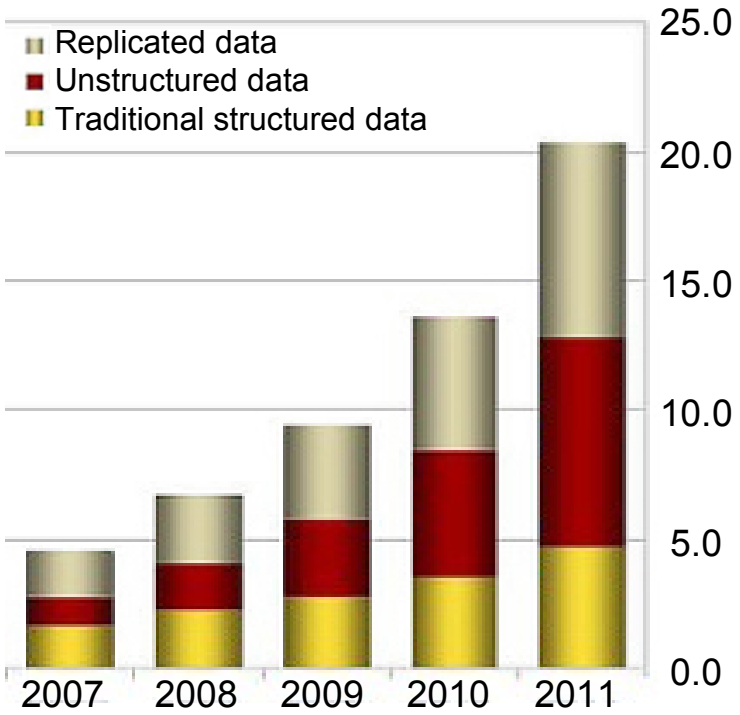
IBM Data Mobility Services
Data Migration Without Limits



© 2009 IBM Corporation

Significant data growth

- *Clients are also experiencing significant data growth, which causes them to expand their focus on migrating and protecting data*
- *Surge in criticality, value, and volume of data (doubling every 18 months!!)*
  - 250 TBs grows to 625 TBs in 24 month period



- Structured data -- databases for transactional workloads -- growing at 32%
- Unstructured data -- user files, medical images, web and rich media content -- growing at 63%
- Replicated data -- backup, archive, business analysis, discovery and business continuance -- growing at 49%

Source: IDC worldwide enterprise disk in Exabytes from "Changing Enterprise Data Profile", December 2007

© 2009 IBM Corporation

Client Business Drivers and Technology Trends are causing clients to plan and execute specific IT Infrastructure Initiatives

Typical Business Drivers

- Mergers and Acquisitions
- Business Transformation
- Budget pressures
- Escalating energy costs
- New Business applications
- 20,000 compliance regulations worldwide

Technology Trends

- Green Data Center
- Intelligent Infrastructure
- New enterprise Data Center
- Infrastructure optimization
- Virtualization
- 24x7 availability.

IT infrastructure initiatives

- Technology refresh
- Infrastructure Optimization
- HW Consolidation
- DC Relocation / Consolidation

ESG Impact Report™

Compliance: The effect on Information management and the storage industry

© 2009 IBM Corporation

To address the projects, clients typically define three objectives: 1) reduced downtime, 2) better methods and 3) improved quality / efficiency

Reduced downtime	*Better methods – with choices on how and when to migrate data*	*Improved quality, efficiency (speed) with less effort required to execute*
• 48% of firms rate coordinating outage time with users as the #1 pain point involving migration • 61% of migrations exceeded originally planned downtime • 30% of firms require more than 3 hours downtime when migrating critical data	• 29% of firms delay storage purchases due to migration issues • 41% of firms validate migration results through user testing • Over 45% delay data migration due to lack of internal staff • 25% have delays due to lack of data migration expertise	• 82% of firms report they have problems when moving data • 41% of firms move data at least monthly or weekly • 36% of migrations encounter data loss • Over 30% of firms take 4 weeks or longer to plan a data migration event • Manual data mobility is the #3 highest challenge for implementing tiered storage

Softek 2005 Data Migration Study, n=500 (NA and EMEA)

© 2009 IBM Corporation

Agenda

- Business Drivers
- Data Mobility market
- Why IBM Data Mobility Services featuring Softek technology?
- **How IBM Data Mobility Solutions enable cost reduction**
- IBM Data Mobility Services
  - Solutions for X-Series
  - Solutions for data protection
  - Implementation services
- Summary

© 2009 IBM Corporation

Clients must address three major challenges when managing and moving data

- Business change and ongoing requirements magnify challenges in managing IT infrastructures.
  - Business cannot be disrupted.
  - There is pressure to reduce any downtime.
- Migration is difficult, complex, and risky.
  - Lack of predictable results during migration
  - Missed, lost, or corrupted data
  - Disparate tools and processes
  - Proprietary technology
  - Highly specialized skills required
- Mobility and management are obstacles to IT and business flexibility.
  - Data alignment and movement have become the gating operations.
  - Platform and multivendor choices are limited.

Disappearing downtime window:

- 70% reporting shrinking downtime window
- 40% stated downtime window is less than 4 hours per week

Migrations are time consuming:

- 70% spend more than 10 hours per month just planning migrations

Migration challenges:

- Better tools: 53%
- Coordination of groups: 42%
- Minimize downtime: 25%
- Migrations take too long: 25%
- Insufficient skills: 19%
- High volume of data: 19%

Clients are looking for greater flexibility when selecting solutions to reduce risk and complexity associated with managing and moving data.

Source: TheInfoPro, F1000 Sample, N = 63, December 2007.

© 2009 IBM Corporation

Why IBM Data Mobility featuring Softek technology?

- Minimize risks, costs and application outage associated with migrating data
  - Within or across multi-vendor hardware (heterogeneous) environments
  - Multi-platform SW support: z, Windows, Unix, Linux
  - Over distances either local or remote
- Deliver fixed outcome and predictable results
  - **Best practice methods and tools**: IBM's proven methodology includes: assessment, planning, migration and validation
  - **Standard approaches**: Speed with consistent, high-quality results, leveraging best of breed software
- Help to reduce overall migration costs, including lease and/or maintenance fees, outage windows costs, staff expenses, power, and floor space, between 30–60%
- Proof points
  - Since 1996, IBM performed more than 1800 data migration engagements using Softek products (an average of three projects completed weekly somewhere in the world—for 12 years straight)
  - More than 800 organizations around the world rely on Softek technology to underpin their data migration activities
  - IBM's experienced technical professionals used their skills to migrate more than a petabyte of data every year
  - The 2008, Gartner "positions IBM in the leaders quadrant" for storage services*—highest in 'ability to execute'

Magic Quadrant for Storage Professional and Support Services, Adam W. Couture, Robert E. Passmore, published July 30, 2008. *Magic Quadrant Disclaimer*

The Magic Quadrant is copyrighted 2008 by Gartner, Inc. and is reused with permission. The Magic Quadrant is a graphical representation of a marketplace at and for a specific time period. It depicts Gartner's analysis of how certain vendors measure against criteria for that marketplace, as defined by Gartner. Gartner does not endorse any vendor, product or service depicted in the Magic Quadrant, and does not advise technology users to select only those vendors placed in the "Leaders" quadrant. The Magic Quadrant is intended solely as a research tool, and is not meant to be a specific guide to action. Gartner disclaims all warranties, express or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

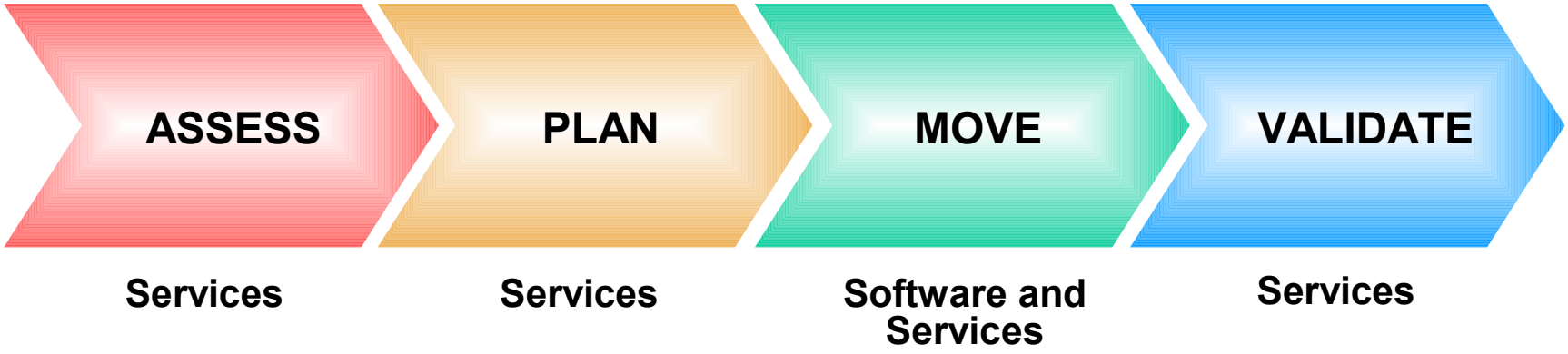
© 2009 IBM Corporation

IBM Data Mobility Solutions enable cost reduction (capital and operational expenses) and infrastructure optimization

- ✓ Migrate data faster from older, costly and higher risk hardware to more efficient hardware
- ✓ Reduce lease and maintenance overlaps and the associated cost of redundant hardware – footprint, energy
- ✓ Lower labor expenses
- ✓ Minimize costs of planned and unplanned outages
- ✓ Consolidation into virtualised environments

© 2009 IBM Corporation

The data migration process is composed of four steps



- **Assess** – What and how much data must be moved from source environment to target environment
- **Plan** – How data is moved from source to target environment
- **Move** – Move data from source to target environment
- **Validate** – Verify data was successfully moved as planned from source to target environment

© 2009 IBM Corporation

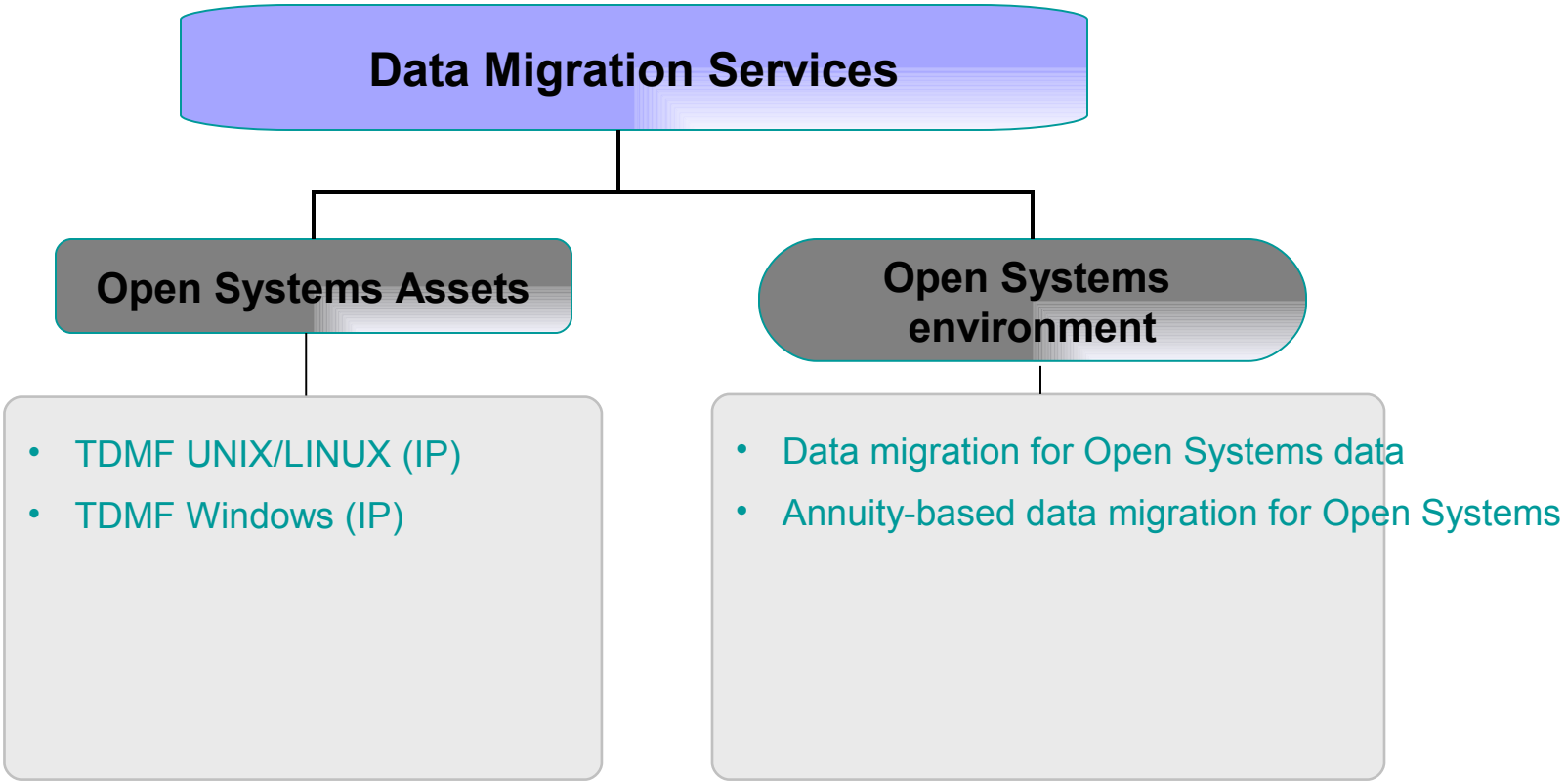
Data Mobility Services

Data Migration

© 2009 IBM Corporation

Comprehensive portfolio for open systems

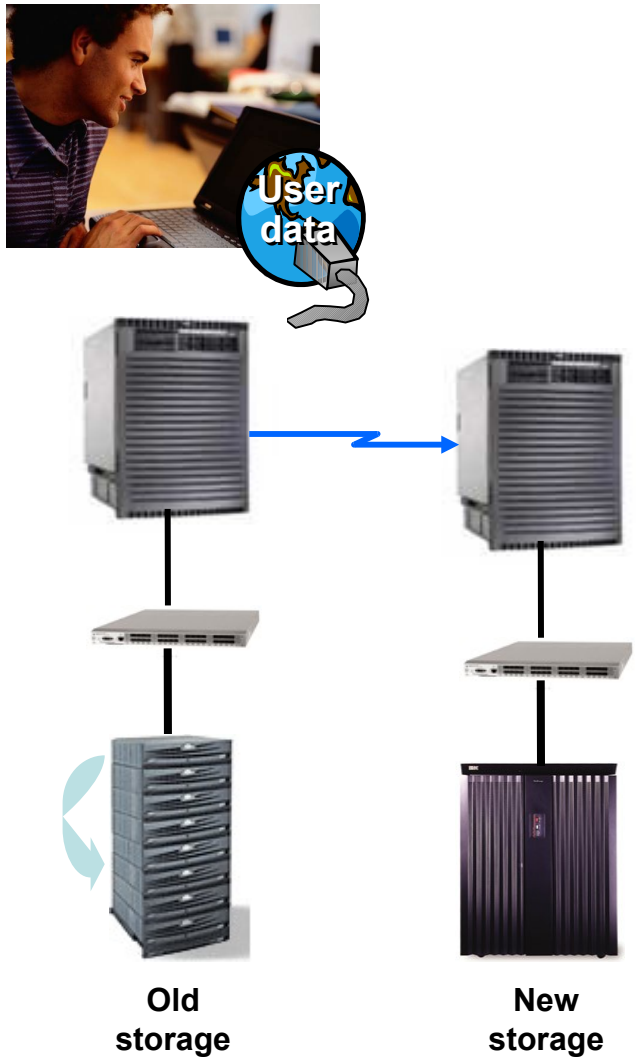
IBM's comprehensive portfolio of data mobility services can cover all your data migration needs for Open Systems.



© 2009 IBM Corporation

Softek TDMF (IP) Overview
Simple data migration – locally or globally – for Linux, UNIX and Windows

- Data migration over Transmission Control Protocol/Internet Protocol (TCP/IP)
  - Nondisruptive to production application
  - Block level: logical volumes (mount points)
  - Rate controllable by groups of volumes (applications)
  - Local area networks (LANs) and wide area networks (WANs)
  - Storage vendor independent
  - Supports virtualised environments
  - Supports HA enviroments, e.g. MSCS
- Supported on IBM AIX®, HP-UX, Sun Microsystems Solaris and Red Hat/Suse Linux® and Windows operating systems
- Three-level interface
  - Command line
  - Local graphical user interface (GUI)
  - Common console

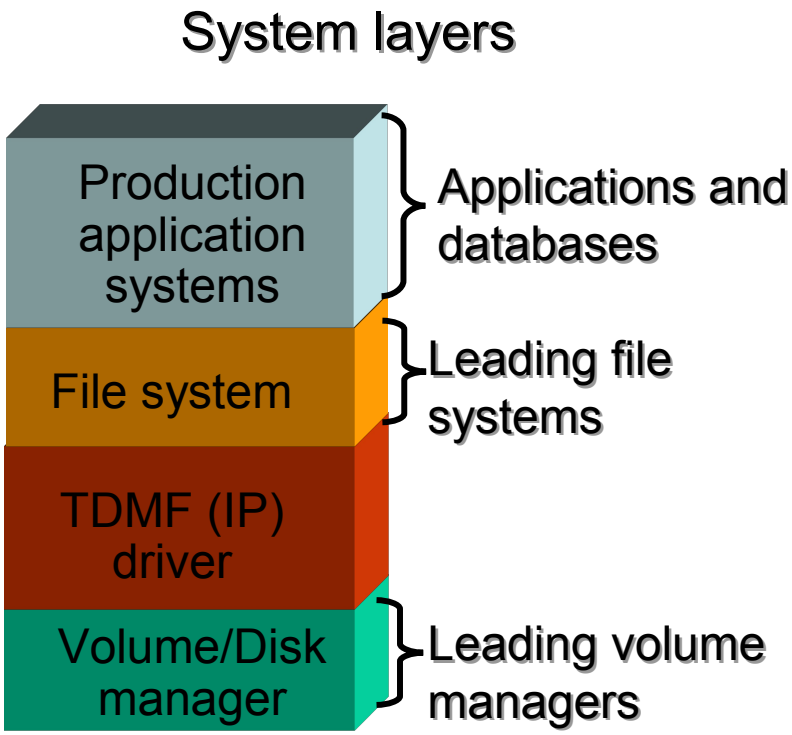


© 2009 IBM Corporation

Softek TDMF (IP) overview (cont.)

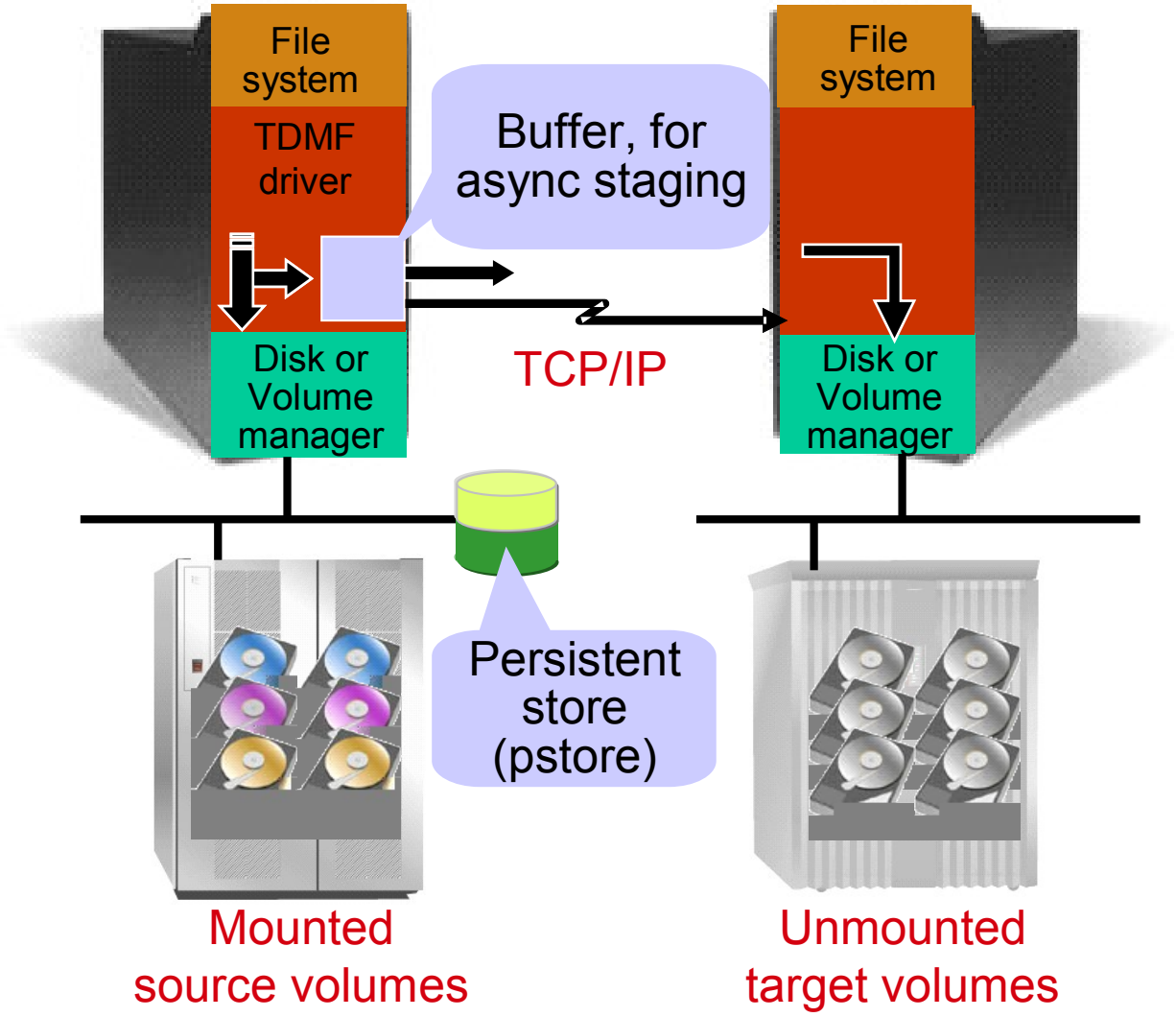
The Softek TDMF (IP) solution offers unmatched flexibility by:

- Migrating across applications or databases
- Working with leading file systems (e.g., IBM Journaled File System 2 [IBM JFS2], Veritas File System [VxFS], UNIX File System [UFS], Raw, etc.)
- Migrating at the drive or mount-point level
- Operating without prerequisite software
- Working with leading volume manager technologies (e.g. logical volume manager [LVM], VxVM, and others)
- Supporting volume size up to 4 TB
- Providing restartable full refresh–migrations can be resumed from the point of interruption



© 2009 IBM Corporation

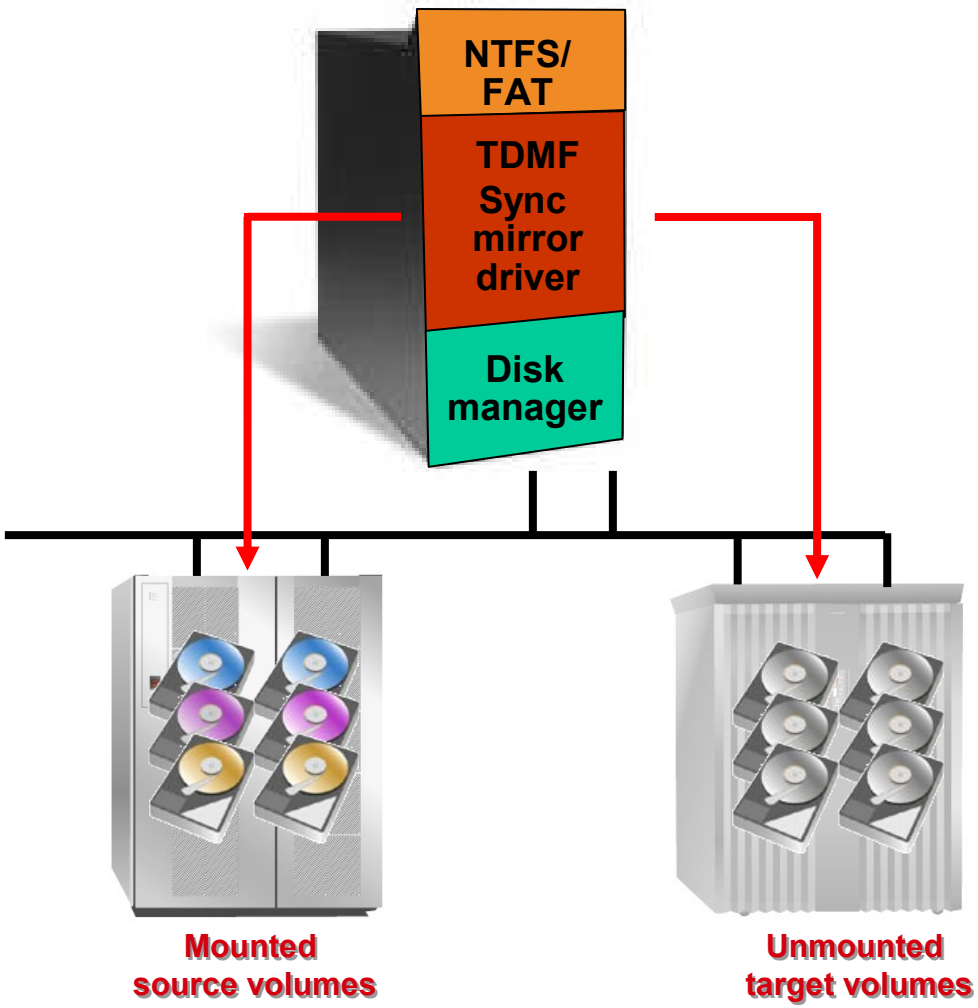
Architecture overview



© 2009 IBM Corporation

Architecture for local migration with synchronous mirror driver

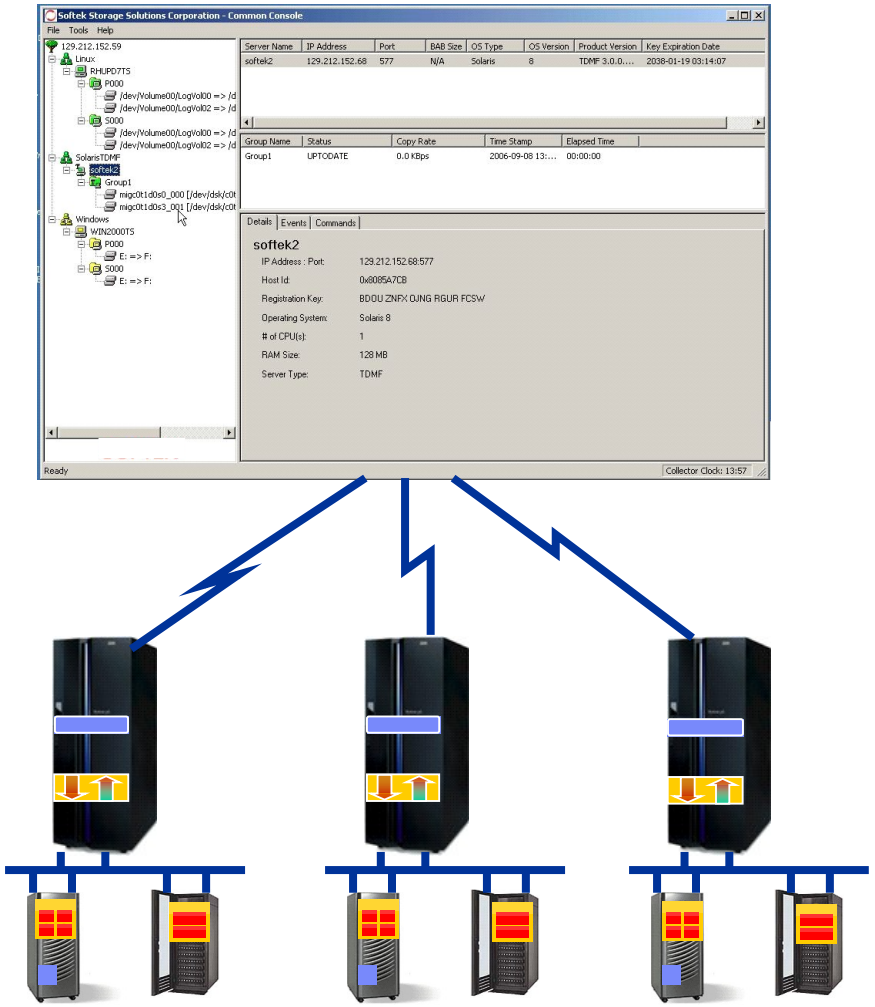
- Updates are written to both source and target volumes synchronously
- No BAB or journal is used
- Driver modes are either tracking or normal
- View target command that enables a read-only copy
- Support local or SAN attached disk
- Supports virtualised environments



© 2009 IBM Corporation

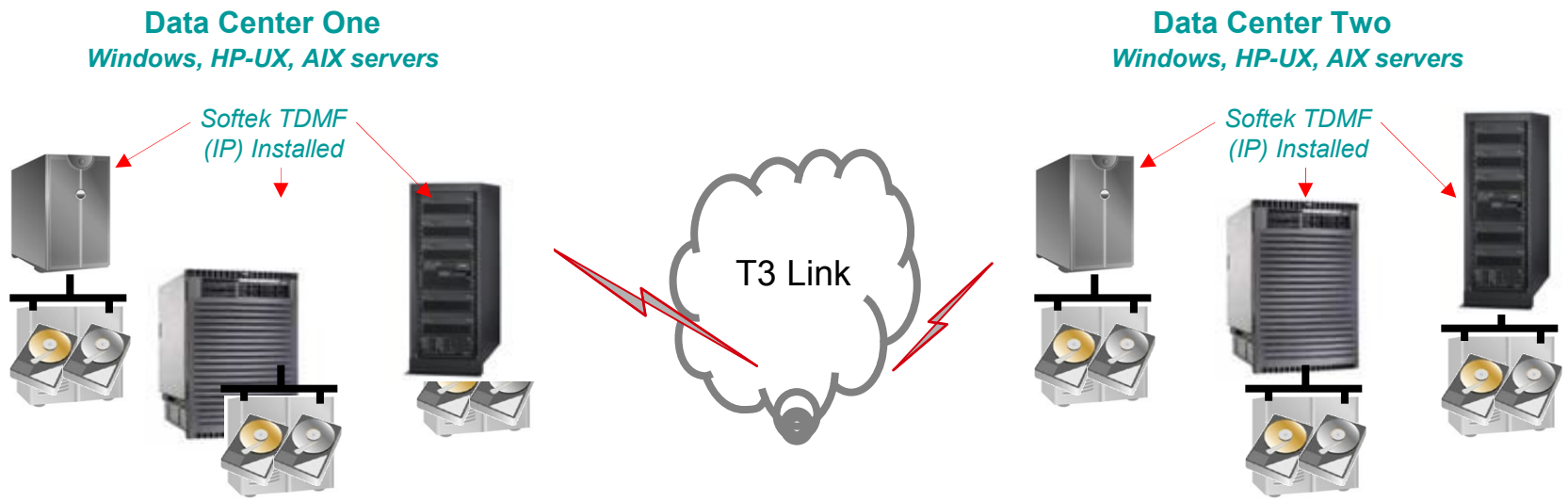
Softek Common Console features

- The intuitive Softek data mobility Common Console provides centralized monitoring, control and management of all migrations across the enterprise
- The Common Console manages data movement by the Windows, UNIX, and Linux versions of Softek TDMF and Softek Replicator



© 2009 IBM Corporation

Case study TDMF UNIX/Linux (IP)



Objectives

- Relocate multiple Windows, HP-UX, and AIX servers from Data Center 1 to Data Center 2
- Have internal SCSI on source and target
- Have 10 TB data in total
- Implement central management and control
- Include ability to test prior to cutover

Benefits and ROI

- It minimized system downtime.
- Central management and control allowed status to be observed and controlled centrally.
- Full system test prior to cutover ensured success.
- Block level (full disk) simplified migration and reduced risk.
- Continuous migration reduced the requirement for very high bandwidth.

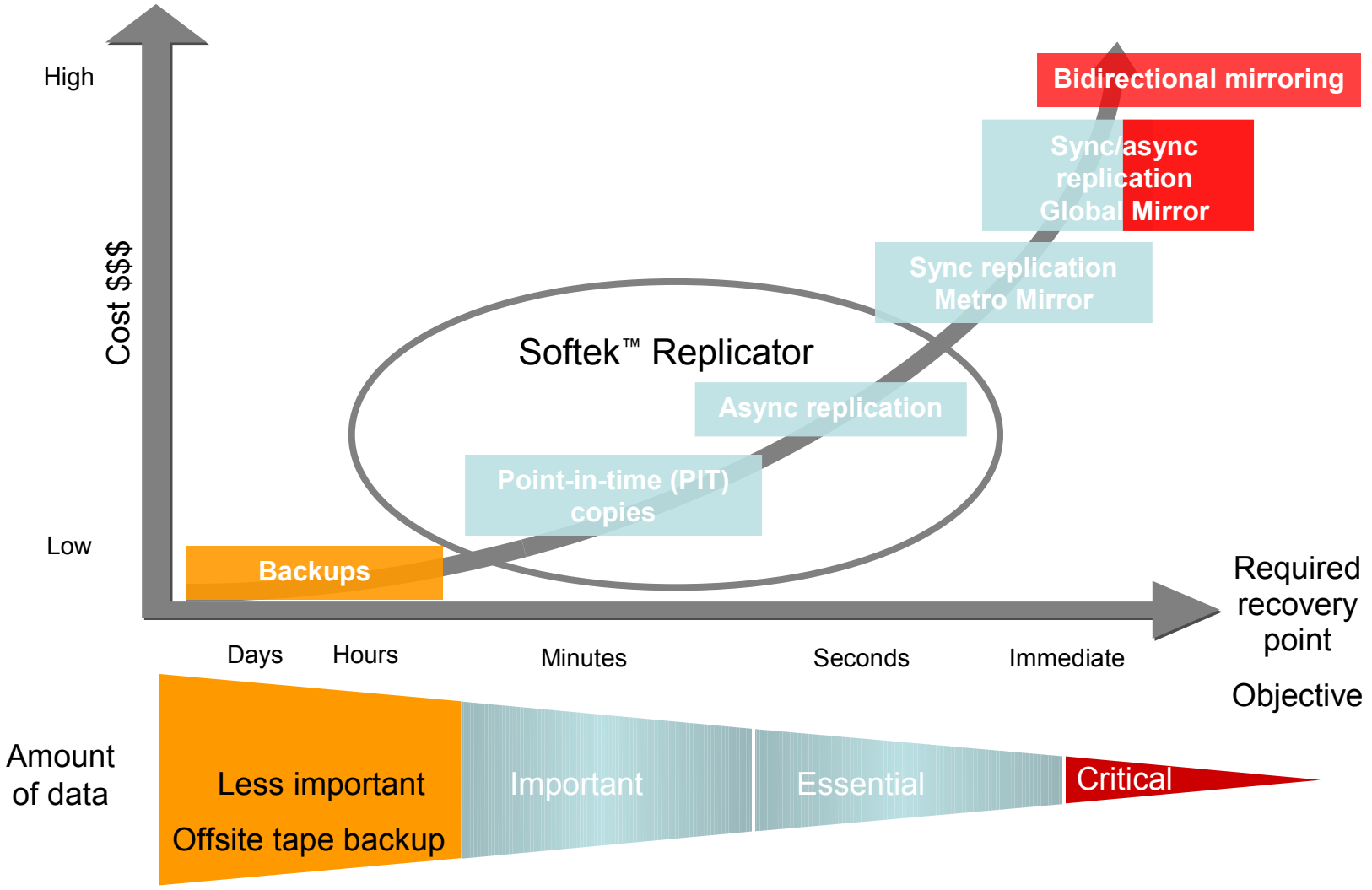
© 2009 IBM Corporation

Data Mobility Services

Data Protection

© 2009 IBM Corporation

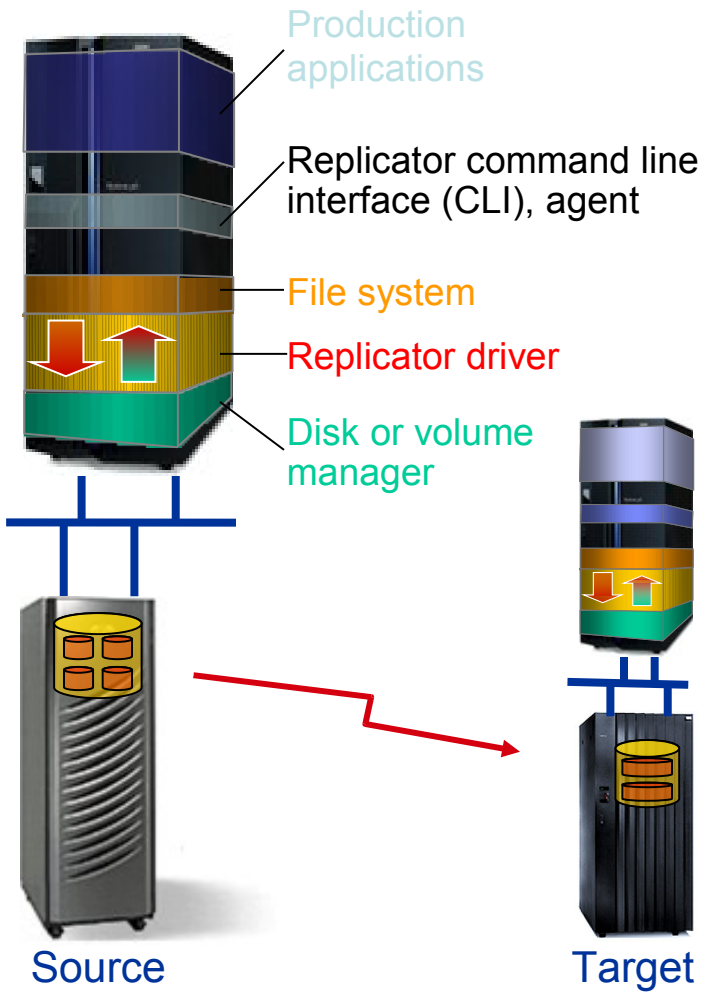
Clients can align cost effective data protection solutions with data that has different business value



© 2009 IBM Corporation

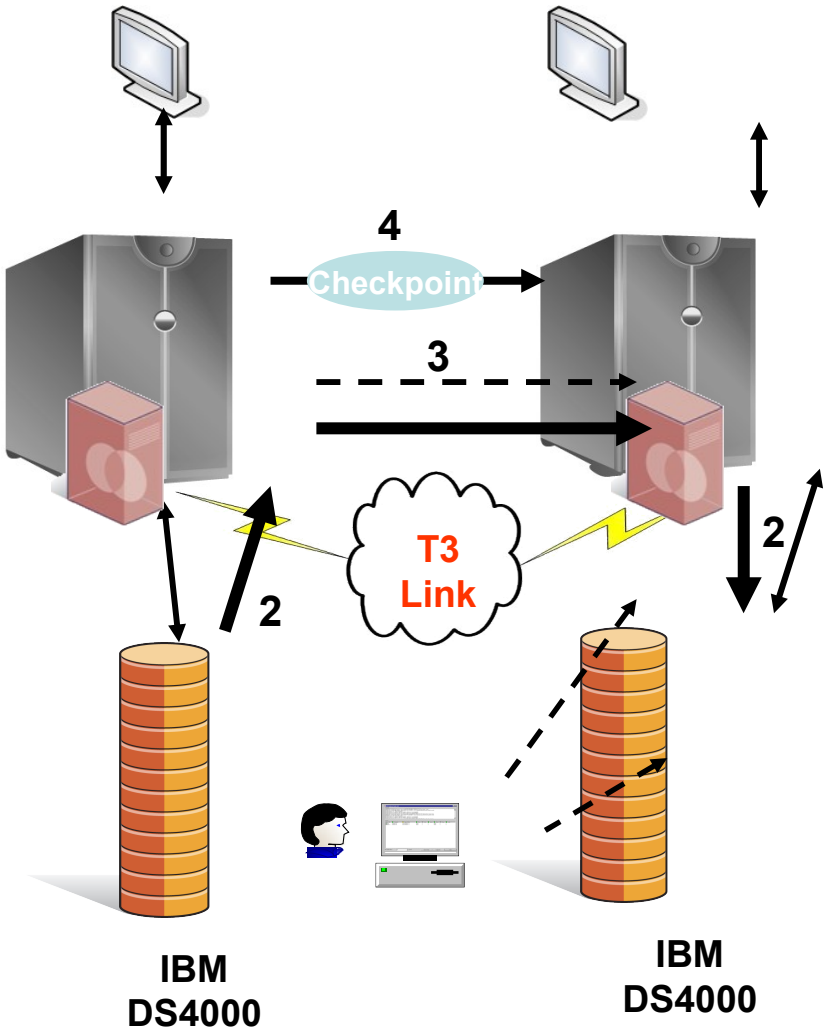
Softek Replicator ensures that data is available to be replicated

- Helps ensure successful recovery by:
  - Being flexible, heterogeneous and cost-effective
  - Replicating data over TCP/IP to remote disaster recovery (DR) site
  - Creating PIT copies at primary or at remote data center for backups or compliance
  - Managing AIX, Solaris, HPUX, Linux or Microsoft Windows Replicator servers centrally through the Softek Common Console
- Assists disaster or outage protection by:
  - Replicating data both locally and over distance
  - Making multiple copies
- Supports faster recovery by:
  - Not having to rely on Tapes during recovery
  - Allowing failover and failback
- Helps ensure valid data by:
  - Constantly validating and helping ensure data integrity, even if the network or remote server fails



© 2009 IBM Corporation

Case Study Softek Replicator



WW Telecommunications Company

Objectives

- Protect against unplanned outages
  - Asynchronous mirror to remote Disaster Recovery Site
- Protect Remedy helpdesk application
  - Fifteen minute window to determine if primary able to recover before initiating failover

Data Mobility Services Solution

- Softek Replicator

Benefits/ROI

- Minimized system down time when fail-over needed
  - Planned fail-over with only 6 minutes of downtime
- Achieved a cost effective DR system
- Easy integration into existing environment
- Added benefit of using the Checkpoint feature during the development cycle to test new application changes.

- Softek Replicator installed on Production Site and Recovery Site servers.
- Full Refresh performed from Production Site arrays to Recovery Site arrays.
- On completion of Full Refresh, Replicator's operating mode changes to Normal. Block-level changes are replicated using "copy-on-write" mechanism.
- When PIT copy is needed, place Replicator in Checkpoint mode.
- Use DR Site copy to test application changes.

© 2009 IBM Corporation

Summary of anticipated advantages

- Meet business continuity mandates
  - Eliminate application downtime
  - Improve performance with load balancing
  - Free up the maintenance window for other tasks
- Improve the total cost of ownership of your IT environment
  - Reduce lease/maintenance costs
- Use a simple, unified solution
  - One simple console to manage data mobility operations
  - Storage vendor independence
  - Support for multiple operating systems*
    - Red Hat Enterprise Linux
    - AIX
    - HP-UX
    - Solaris
    - Windows NT, 2000, 2003
    - z/OS
- Migrate data locally or globally

** Will have different features for various operating systems*

© 2009 IBM Corporation

Contacts

Cem Erdoğan

cem@tr.ibm.com

212-3171344

530-3171344

IBM Data Mobility Services on www.ibm.com

http://www.ibm.com/services/datamobility

© 2009 IBM Corporation

Bu sunum 22 Ekim 2009 tarihinde İstanbul Swissotel the Bosphorus'da yapılan Yazılım Zirvesi 2009 için hazırlanmıştır.

http://www.ibm.com/software/tr

© Copyright IBM Corporation 2009. All Rights Reserved. IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. If these and other IBM trademarked terms are marked on their first occurrence in this information with a trademark symbol (® or ™), these symbols indicate U.S. registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries. A current list of IBM trademarks is available on the Web at "Copyright and trademark information at www.ibm.com/legal/copytrade.shtml. Other company, product, or service names may be trademarks or service marks of others.