



The A, B, C's or F's of backup and compliance

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Data Loss, Downtime, and Non-compliance are Unacceptable



“ Oops! Tech Error Wipes Out Alaska Info ”
March 07



“ Intel Loses Emails in AMD Case: Chip maker claims backup procedure backfired during legal discovery process ”
March 07



“ RIM offers explanation for massive outage ”
April 07



“ IBM loses retirees' personal info ”
May 07

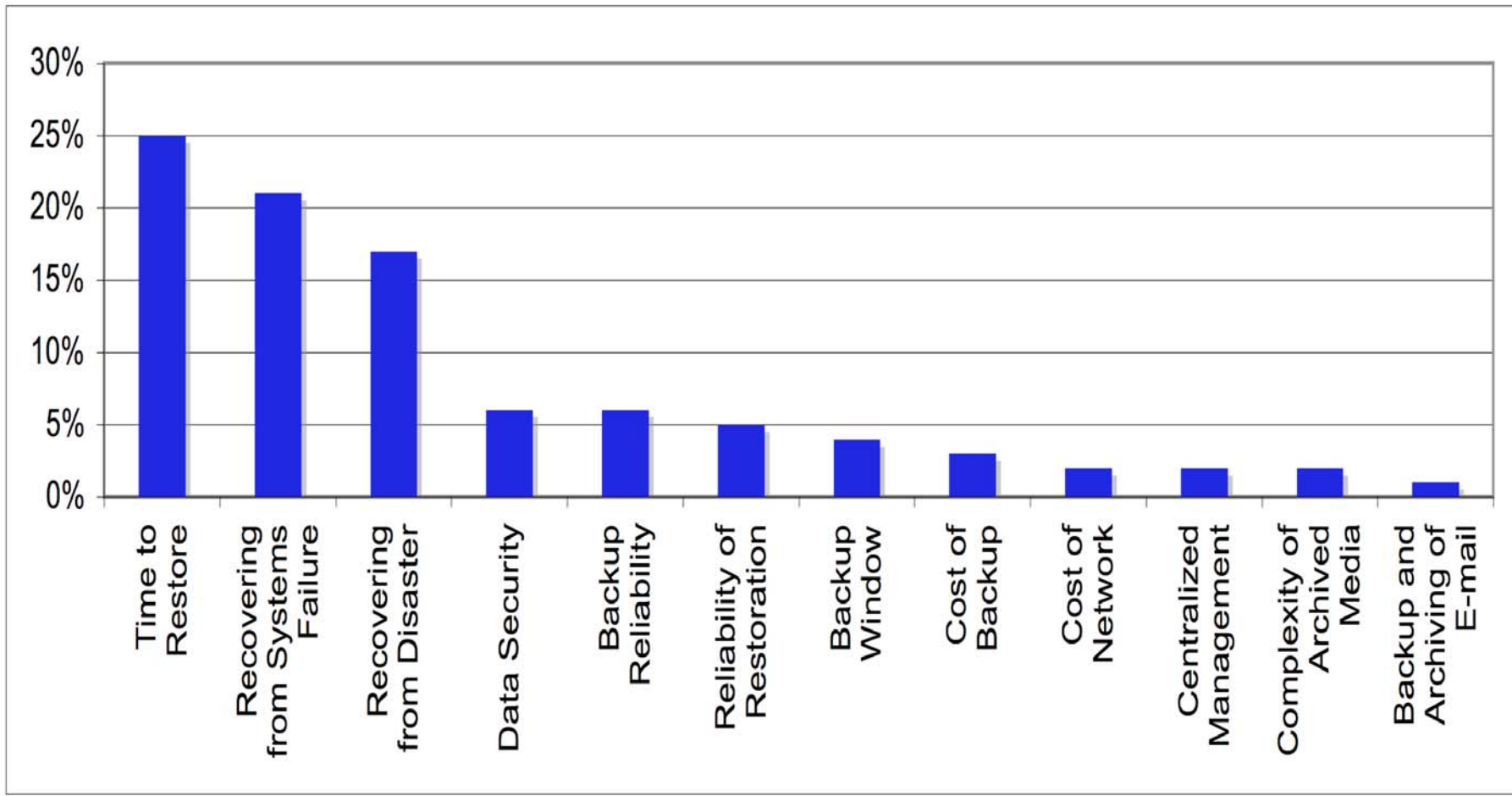
New Demands of Backup and Compliance

- **24x7 business demands**
 - SLA's require real-time continuous data and application availability
- **Data loss is intolerable**
- **Downtime costs are prohibitive**
- **Disaster recovery a must**
- **Compliance is mandatory**
 - Sarbanes Oxley
 - SEC 17a-4
 - FRCP
 - HIPPA
- **Current data protection paradigms do not meet these needs**

Hourly Cost of Downtime	
E-commerce & Financial	\$6.4M
Point of Sale	\$2.6M
Mail Order	\$90,000
Packaging Shipping	\$28,000
SMB LAN	\$18,000

Source: Peripheral Concepts, Dec. 2006

Most Significant Backup and Data-Protection Problems



Source: Peripheral Concepts, Dec. 2006

Tape Protection



Pros

- Portable media for offsite archival and disaster recovery

Cons

- Loss of data between backups
- Protection only as good as the frequency of the backup
- Data recovery in hours to days
- Tape media and drive failure rate is high
- Significant data duplication
- Backup window of hours
- Cost and complexity of backup

VTL/Deduplication Protection



Pros

- Faster backup than tape
- Faster recovery than tape

Cons

- Loss of data between backups
- Data loss is high
- Extremely expensive
- Off-site protection requires another data movement to tape
- Long term archival and compliance has the same issues as tape protection
- Off-site protection still the least reliable media - tape
- Protection only as good as the frequency of the backup

Hard Disk Protection



Pros

- Faster backup than tape
- Faster recovery than tape

Cons

- Loss of data between backups
- Recovery still in hours
- Costly
- Off-site protection requires another data movement to tape
- Long term archival and compliance has the same issues as tape protection
- Off-site protection still the least reliable media - tape
- Protection only as good as the frequency of the backup

Snap Shot Protection



Pros

- Faster backup and recovery than tape
- Data loss is reduced compared to tape, VTL, or hard disk

Cons

- Loss of data between snapshots
- Limited history
- Extremely expensive
- Snapshot not a backup unless copied to another storage device or tape
- Off-site protection requires another data movement to tape
- Long term archival and compliance has the same issues as tape protection
- Off-site protection still the least reliable media - tape

Remote Replication Protection



Pros

- Data loss is reduced but ONLY for the most recent copy of the data
- Fastest recovery
- Disaster recovery
- Protection is continuous

Cons

- No history available
- Does not support compliance requirements due to lack of historical information
- Most expensive way to protect data
- Complexity
- No protection from deletion, user error, data corruption, or virus attacks

Key Criteria for a Full Solution



- Continuous Availability of Data and Applications
- Near-zero Data Loss
- Recover in Seconds
- Instantaneous Application Availability
- Protection of Complete Historical Data for Regulatory Compliance
- Guaranteed Usable Data on the First Recovery
- Global-to-granular Recovery Capability
- Automate Backup and Compliance Processes
- For SME, Mid-market, and SMB organizations: Single solution that meets the business needs of business continuity, disaster recovery, recovery management, e-discovery, compliance and governance support

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