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Rethinking Backup

Three fundamental technologies are changing the backup world and providing IT managers with a new opportunity to "re-think" backup, along with their data protection strategies:

1. Server Virtualization
2. Virtual Tape Libraries (VTLs)
3. Deduplication

Server virtualization requires that we rethink how we define "server" backup; VTLs (Virtual Tape Libraries) oblige us to rethink the definition of a backup "tape" and the policies used to retain and store tapes; Deduplication compels us to rethink what we are backing up and how elimination of redundant data can radically reduce the size, cost, and overhead of backup.

The Importance of Rethinking Backup.

So why is it important to rethink backup today? Three reasons: First, according to IDC, 39% of new servers deployed over the next five years will be virtual servers¹ and the sprawl of Virtual Machines (VMs) will increase the demands and complexity of backup. Second, VTLs are the ideal tool for dealing with the proliferation of physical and VMs that require individual backup plans. The dynamic allocation and flexibility options provided by VTLs can match the growing demands and complexity of both physical and virtual servers. Finally, according to IDC, data is growing at a 60% CAGR² and deduplication provides the right technology to reduce the size of your backups by up to a 20:1 factor. Reducing the size of your backup improves ROI and scalability of current tape infrastructure, saves money, staff time, and a myriad of other resources.

Virtualization.

The lines between real servers and virtual machines are blurring, creating new challenges and opportunities for protecting data. We know that expanding regulatory demands, shrinking SLAs, and collapsing backup windows are driving new requirements for business continuity and disaster recovery. In the real world, backup plans must be rethought to meet the demands of the virtual data center. The traditional paradigm of running a full or incremental backup to tape each night will not meet the dynamic need of a virtual data center. Virtual Servers demand backup solutions that can protect each virtual machine as a completely recreatable machine. This includes the OS, VM configuration, and supporting data & mapping to SAN storage. This must be achievable in real-time for stringent SLAs, across WANs for business continuity, disaster recovery, and regulatory purposes. This means that the number of backups and types of backups run on each VM must protect the VM as if it were a real standalone system.

Virtual Tape Libraries.

Like virtual servers, Virtual Tape Libraries (VTLs) use virtualization technology to emulate tape libraries, drives, and media. VTLs provide the best of both worlds to the IT manager, offering the speed and accessibility of disk with the advanced policies and manageability of tape libraries. This provides the flexibility to support an infinite combination of real and virtual machine backups. VTLs can now provide support for any physical or virtual server backup needs. VTLs change the way the IT managers can meet or exceed SLAs, business continuity and disaster recovery demands, and regulatory requirements. They provide new tools that require IT Managers to rethink backup policies, onsite/offsite needs, and costs.

¹ Worldwide Enterprise Server 2008 Top 10 Predictions Dec. 2007
² IDC 2007 Storage Systems Report

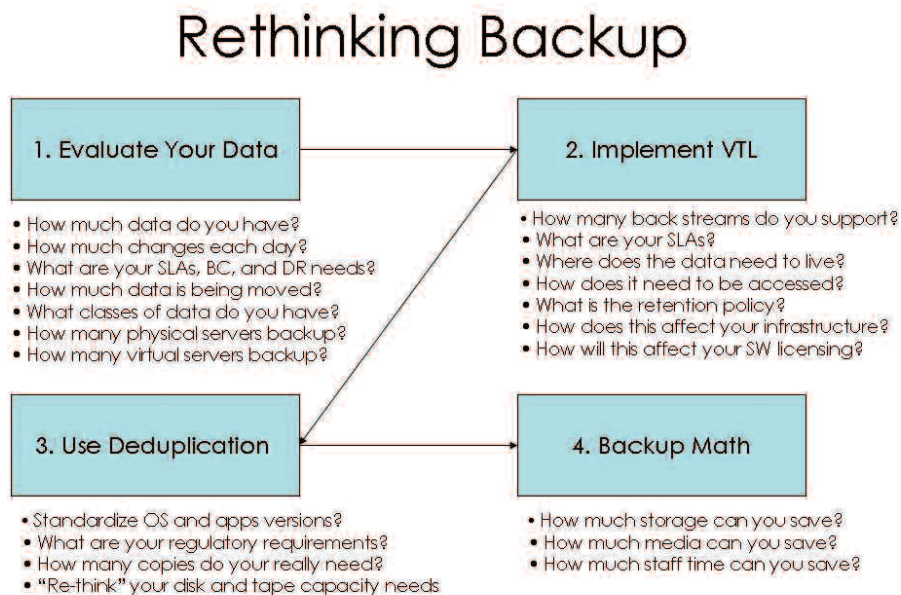
Deduplication.

Deduplication is one of the most revolutionary backup technologies to emerge in the past decade. However, the concept is simple: backup only one copy of each file. If the file is used twice, then put a placeholder for the duplicate file. If you have 50 Windows servers, imagine if you stop backing up 50 copies of Windows OS and instead backed up just one copy of the OS. Imagine if you could do this for all applications, copies of email attachments, and thousands of other redundant files. This is what deduplication does, it dramatically reduces the size of backups and the storage required to protect data. Deduplication reduces costs, improves storage scalability, and creates a new model of backup.

The Four Steps to Rethinking Backup.

Rethinking backup requires four basic steps:

1. Evaluate Your Data - Do you know where your data is? What types of servers/machines are using it and how does it need to be protected to meet SLAs?
2. Implement VTLs - VTLs are the key technology to accelerate the backup/restores process by using disk-based media and leveraging existing backup software and policies. VTL can be seamlessly integrated into the backup process and allow IT managers to gradually introduce new backup thinking.
3. Use Deduplication - Any backup plan should include a strategy for data growth. Using deduplication alleviates the data backup headache by leveraging backup storage 20:1. This new technology changes the entire storage model and creates opportunities to lower storage requirements and costs.
4. Backup Math - Rethinking Backup, with technologies such as VTL with deduplication, can have significant impacts to the cost of storage, the amount of storage used (Disk and Tape), the quantity of media used for local and offsite storage and reduce power, cooling, and rack space requirements.



The IT world never stands still and neither can you or your company. The three technologies provide an opportunity to rethink backup, lower costs and improve support for SLAs, BC, DR, and regulatory requirements. To learn more about deduplication go to www.overlandstorage.com/dedupe.