

	Vaulting	Server Replication	Virtual Server Replication	Storage Replication
How are SunGard's solutions different?				
1. Solutions Overview	<p><i>Vaulting Services offers:</i></p> <ul style="list-style-type: none"> Online data backup service and alternative to tape Customers the ability to utilize the Internet to transfer data directly to SunGard-protected disk-based vaulting location The ability to selectively restore quickly and reliably 	<p><i>Server Replication offers:</i></p> <ul style="list-style-type: none"> Microsoft® Windows® customers real-time replication/application availability of user data Failover and fallback capabilities 	<p><i>Virtual Server Replication offers:</i></p> <ul style="list-style-type: none"> Real time replication of user, application and operating system data Protection of Windows and VMware ESX virtualized applications A fully-managed service; all aspects of replication, failover and recovery monitored and managed at a provisioned virtualized recovery infrastructure at a secure SunGard site. 	<p><i>Storage Replication offers:</i></p> <ul style="list-style-type: none"> Data replication of information on the SAN (user, application, & operating system data, or user data only, depending on customer configuration) Protection of valuable business info Improved RTO/RPO Minimized operational issues and revenue loss
2. Solution Differentiators	<ul style="list-style-type: none"> SunGard's Recovery Services (hot-site) capabilities can be leveraged with Vaulting (data backup) Backup info reliably stored in a secure SunGard data center on disk storage Customers can set backup period and retention policy to meet their changing needs 	<ul style="list-style-type: none"> End-to-end management and failover of applications, while competitors just offer replication Application transition from one server to the other and back again for something simple like a server outage 	<ul style="list-style-type: none"> Fully managed solution (recovery-as-a-service) minimizing required customer tasks and skills Sub 6-hour Service Level Agreement –only DR solution with contractually guaranteed SLA Cost effective, same day offsite recovery at a SunGard site ~30-50% less expensive than physical server replication solution* 	<ul style="list-style-type: none"> Replicates, regardless of distance between source and target locations Hotsite processors in an always ready state capable of being attached to your replicated data store very quickly, eliminating the need for dedicated processors
How time sensitive is your data?				
3. Recovery Time Objective	12-48 hours, depending on amount of data, ISP, & backup frequency (RPO)	Can be as little as 30 minutes	Six hours or less guaranteed by a SLA	Four hours or less
4. Recovery Point Objective	Hourly, daily, weekly or monthly (set by customer)	Minutes	Minutes	Can be as little as minutes
What combination of services are right for your organization? [Enterprise Size: ■ Large ◆ Mid-Size ● Small]				
5. Organizational Profile	<ul style="list-style-type: none"> Need to reduce their dependence on tape-based media Need to protect backup info and reliably restore it For companies with low BCDR maturity looking to enhance recovery capabilities Single data center companies <p style="text-align: right;"> ■ ◆ ● </p>	<ul style="list-style-type: none"> Small to mid-tier enterprise Needs to protect Wintel apps from server or larger-scale outages with almost immediate failover <p style="text-align: right;"> ◆ ● </p>	<ul style="list-style-type: none"> Small to mid-size enterprises with moderate workloads that desire same day recovery Organizations who are looking for a fully managed replication and recovery solution (lack expertise internally) Windows applications that can be effectively run in a virtualized recovery environment. Single data center, (no viable internal dual site capabilities) 1-50 servers: (approximately 1-15 needing to be virtualized) Application size: < 250 GB including data <p style="text-align: right;"> ◆ ● </p>	<ul style="list-style-type: none"> Mid-size to large enterprise Stringent RTO/RPO objectives Prepare for unplanned processing/operational disaster Customer requires dedicated storage <p style="text-align: right;"> ■ ◆ </p>
6. SunGard vs. In-House Solution	<p><i>Have you had difficulty restoring data from tape?</i></p> <p>Tape-based customers can greatly minimize their capital expenses as well as internal operational expenses and redirect to other business objectives.</p>	<p><i>How easy is it to failover? How easy is it to fallback?</i></p> <p>This solution takes all of the manual processes out of the failover process by automating the entire event.</p>	<p><i>What are the advantages of a fully managed solution?</i></p> <ul style="list-style-type: none"> Customer has no responsibility for purchasing, operating and maintaining a second site, recovery infrastructure Customer can readily expand protection one application at a time SunGard manages critical fail over and fail back activities Up to 30 days of post-event, customer operations included in the service 	<p><i>Is data being replicated within building or campus?</i></p> <p>If outage, data is copied and available at SunGard's facility. Replicating to SunGard gives you a safe, off-site copy. Eliminates drain on existing IT staff. Leverages SunGard's infrastructure.</p>
7. Trigger Events and Organizational Goals	<ul style="list-style-type: none"> Backup tape lost or destroyed Incompatibility of media to tape Off-site media too time-consuming Government compliance or corporate governance mandate data off-site and readily available 	<ul style="list-style-type: none"> Experienced a server outage Looking to reduce recovery point objective Adding new servers Adding new applications 	<ul style="list-style-type: none"> Looking to reduce current RTO and RPO Have considered previous replication offerings but found them too expensive or too demanding from a management perspective Implemented VMware virtualization technology and are comfortable running their workloads in a virtualized state 	<ul style="list-style-type: none"> Experienced data loss Looking to reduce recovery point objective Adding new storage Adding a critical application like SAP, or an ERP application

	Vaulting	Server Replication	Virtual Server Replication	Storage Replication
Operating System				
Windows	●	●	●	●
Unix	●			●
Linux	●			●
Sun Solaris	●			●
pSeries	●			●
Storage Location				
SAN (EMC, IBM, Hitachi)		●	●	●
Local Server		●	●	
Located at selected SunGard Data Centers	●		●	
Applications				
SQL-server database	●	●	◐	●
Oracle server	●	●	◐	●
MS Exchange	●	●	◐	●
Blackberry	●	●	◐	●

*TCO based on five Intel server solution and ½ incremental FTE to support physical server replication.

AdvancedRecoverySM Service Decision Tree Logic

AR Service Offering Key:

- A. Storage Replication
- B. Server Replication
- C. Virtual Server Replication
- D. Managed Continuous Data Replication* (MCDR)
- E. Custom Advanced Recovery Solution
- F. Vaulting Services

*Available for Limited Availability Release (LAR) Q4:08

