



Disaster Recovery Solutions

A disaster can range from forces of nature, such as earthquake, flood, fire, to accidents such as system failures, hardware or software error, virus, data corruption, and so on. Any of these disasters can result in loss of critical data and services for an extended period of time.

Data is your most valuable Asset

With every passing day, more organizations are relying upon technology to drive their business. Millions of dollars are being invested in software, hardware, and storage. Data is an asset for any organization, and dependency on systems has increased to a point whereby unavailability of information can be catastrophic to a business's operations and reputation. Loss of revenue and productivity are immediate costs that can affect your business besides the significant damage to your reputation and customer satisfaction. Servers are becoming crucial and as a result the need for a disaster recovery solution becomes more vital than ever. An effective disaster recovery solution can keep your organization's mission-critical services operational by handling situations where data critical to running your business becomes unavailable.

Implementing disaster recovery

A reliable Disaster Recovery solution can help you keep your business running in the midst of a crisis. To be optimally effective, your plan must be in place in periods of non-crises, before a disaster strikes. The sense of protection and peace of mind gained after a successful deployment of a disaster recovery solution is priceless. Study shows that organizations without a disaster recovery plan go out of business soon after a major disaster.

Maximum Protection with DR solutions by TPS

TPS offers disaster recovery solutions suitable for any environment ranging from small to large enterprises. Our disaster recovery solutions cover both data protection and high availability.

Data Protection

A disaster recovery solution starts with data protection. Any critical data that lies on the servers, desktops, and laptops in an organization needs to be protected against accidental loss or deletion. This includes emails, databases, logs, documents, spreadsheets, presentations and so on. In addition to being user-friendly and scalable, an ideal data protection solution would protect the critical data and ensure fast restore when needed.

Key Features:

- Centralized management
- Scheduled backups
- Application aware hot backups
- Granular backups
- Supports major applications and databases
- Supports major operating systems
- Supports backup from a SAN environment
- Device and media management
- Alerts and notifications

High Availability

A high availability solution ensures that the critical systems do not exceed a downtime that is intolerable by an organization. Thus, an HA solution defines a procedure to failover the critical services to an alternate location in case of a disaster.

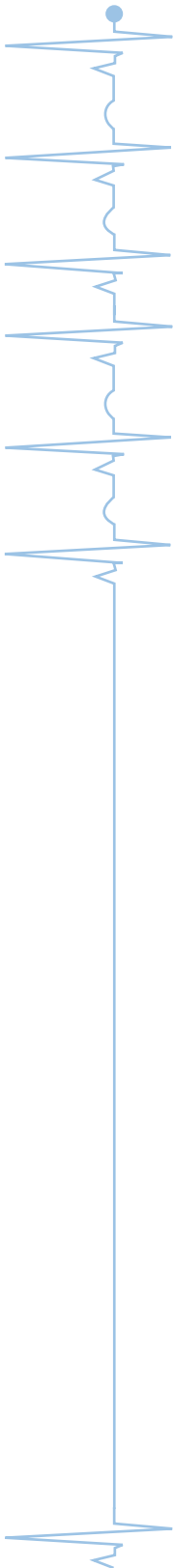
Depending upon the maximum downtime allowed, an HA solution can be divided into two phases, replication and clustering.

Replication

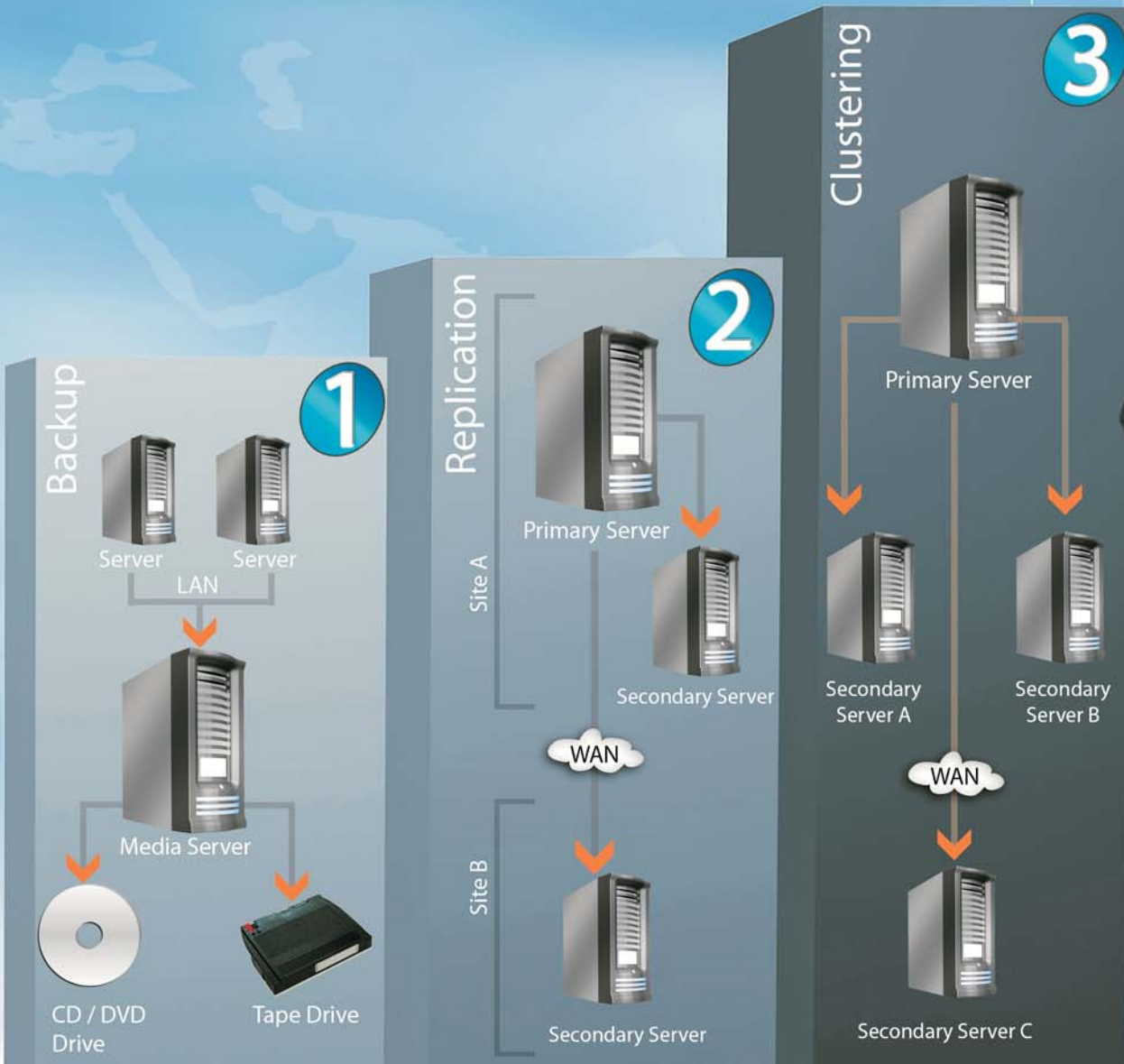
In a replication solution, the data residing on the critical server is replicated to a secondary server, which can be either on the same site as primary server or at a remote disaster recovery site. If the primary server becomes unavailable, the secondary can be manually brought online.

Key Features:

- Real time replication in synchronous and



Disaster Recovery Solutions



Complete disaster recovery can be achieved by deploying backup, replication, and clustering solutions. The backup solution protects the data from accidental loss or deletion. Replication makes the data highly available at a remote disaster recovery site, and finally clustering technology makes your critical services highly available by automating the failover process.

- asynchronous modes
- Uses TCP/IP protocol
- Supports one-to-many and many-to-one topologies
- Supports replication over wide area network
- Supports write order fidelity
- Supports bandwidth throttling
- Volume based block-level replication ensures data consistency and integrity
- Storage independent replication
- Ensures zero data loss
- Protection against network failures
- Manual failover

Clustering

Unlike replication, no data transfer takes place between nodes of a cluster, as the data is stored on a shared storage. Moreover, in case the primary node encounters a disaster, the secondary node takes over automatically. Thus no admin intervention is involved in a cluster.

Key Features:

- Automatic failover ensures zero downtime
- Supports up to 32-nodes in a cluster
- Shared storage eliminates the need of data transfer between nodes

Products

TPS offers following products in order to implement the solutions featured above:

Data Protection

- Symantec Backup Exec: Centralized backup solution for Windows platform
- Symantec NetBackup: Centralized Backup Solution for multiple platforms

High Availability

- Symantec Replication Exec: File-level replication for Windows platform
- Symantec Storage Foundation: Storage management and administration for

multiple platforms

- Symantec Volume Replicator: Block-level replication for multiple platforms
- Symantec Cluster Server: Cluster configuration and administration for multiple platforms

TPS and Symantec

Symantec is world leader in Disaster Recovery solutions, including data protection and high availability. More than 90% of Fortune 500 companies rely on Symantec for their disaster recovery needs as it is remarkably reliable, affordable and easy to use. The solutions offered by Symantec are available on all major platforms, including MS Windows, Solaris, and Linux, and supports major database applications such as MS Exchange, Lotus Domino, MS SQL Server, Oracle, SAP, and so on.

With over a decade of focused product development and solution sales, TPS is a leading provider of switching and payment processing related solution and services to financial institutions worldwide. TPS has unmatched experience and domain expertise in the field of self service banking. Being tightly integrated with the technology needs and requirements of the organizations within the region, TPS has stayed abreast with the local and regional need for Disaster Recovery solutions. TPS, a pioneer in the field of e-Banking and e-Payments in Pakistan, is now associated with Symantec as a Symantec Partner in the region. This enables TPS to offer state-of-the-art disaster recovery solutions including data protection and high availability. We have the capability to design, implement, and support the solutions based on Symantec line of products.