

Choice Case Study

Backup Solution for Infotech Enterprises Ltd.

Inside This Case Study

About the Company	1
The Challenge	2
The Solution	3
The Benefits	4
About Choice Solutions	1

About the Company

Infotech Enterprises is a Global IT Services company specialized in Engineering Services, Geographic Information Systems (GIS), and IT services.

The company provides services to a wide range of industries including Aerospace, Automotive, Energy, Government, HiTech Consumer & Medical Devices, Marine, Rail, Retail, Telecom and Utilities.

Infotech planned to implement a backup solution for their servers as per their European client requirement.

The Challenge

I. (First)

The environment at Infotech was a heterogeneous environment where Windows and UNIX operating systems were involved with databases like Oracle. All these databases are hosted in SAN Storage Box to support a work environment of 24/7 where users access the data 16/7 in shift wise and also Infotech's client will access the database at their own working hours. This resulted in the servers being in working situation with full performance at all the time.

A simple delay in the data access often leads to data file corruption. The size of these servers is more than 100 GB for each database and as well few other files. The existing hardware that Infotech has is a SUN Storagetek FC Tape Library.

The challenge out of this was that the backup window should be very less and the performance of the servers should not be degraded while performing backup.

II. (Second)

Infotech planned to implement a backup solution for their servers as per their client requirement. The environment is a Windows based environment where all the servers are working with Windows operating systems. The servers are connected with a SAN Storage Box and NAS Storage Box.

They have a huge data of different applications and current projects files as well previous projects data in the same storage. The data size of these storage volumes crossed more than 10 TB and the backup window with the existing LAN backup increased to 20hrs -24hrs.

Users who are accessing the servers are facing accessibility problems where the data file is taking time to load. The key challenge in this scenario is to reduce the latency of data file access and backup windows.

The Solution

I. (First)

1. VERITAS Netbackup

Choice Solutions Ltd. worked closely for this project in conjunction with the technical team of Infotech. This made it possible that the solutions provided would overcome the limitations and support for the environment. Finally the suggestion was put forward that VERITAS Netbackup software be deployed on their environment. There would also be a dedicated server along with it to take care of the backup for the other servers. Further it was suggested that Tape Library should also be connected to the SAN Switch.

This solution was suggested because SAN based backup will reduce the backup window with its high data access rate as well as reduce the burden. Through this solution, bandwidth chocking of local LAN can also be avoided. Data will be directly transferring only from the SAN Storage box to SUN Storagetek Tape library.

2. Key Solution Components

- (a) *Backup Software* → Backup software for heterogeneous environments and robustness in backup to reduce the backup window
- (b) *SSO Option* → The best agent that was used along with Netbackup which helped to transfer the data between the storage box and the tape library without any interference of the original hosted servers
- (c) *LEO* → This option from the backup software helped a lot in accessing the tape drives connected in SAN Switch through the FC channels and writing the data at a high speed in the drives parallel
- (d) *Tape Library* → Utilizing the existing tape library to leverage the existing hardware. This hardware component is highly performed and data has to be written simultaneously in two drives

II. (Second)

1. VERITAS Backup Exec

Choice Solutions Ltd. suggested them to change the backup architecture to improve the backup window and backup success rate with existing hardware and with new options. We tried to leverage the existing hardware for optimized performance. The existing tape library is partitioned into 2 logical partitions with a physical drive in each and the tape slots are equally allotted to each partition. Then the Choice Solutions team connected one partition directly to NAS box for NDMP level backup and another one was connected to SAN Switch. The backup jobs were fired simultaneously from both the devices and the logical partition of the tape library was writing the data from the both devices. The data from the SAN and the NAS box were directly transferred between the tape library and storage boxes without any server intervention.

2. Key Solution Components

- (a) *Backup Software*: Backup software for Windows environments and robustness in backup to reduce the backup window. Software is deployed for backup of two different storages and to access the single tape library as two logically
- (b) *NDMP*: This option helped a lot in developing the NAS storage backup solution as the data stored in the box is directly accessed by the tape drive without any intervention of other servers. The data is backed up at volume level and restored at granular level
- (c) *LEO*: This option from the backup software helped a lot in accessing the tape drives connected in SAN Switch through the FC channels and other drive connected to NAS device for writing the data at a high speed in the drives parallel

The Benefits

I. (First)

This architecture will put fewer amounts of burdens on the servers where users don't find any difference while backup. SAN based backup reduces the backup window drastically when compared to standard backup method of LAN based. The recovery of the data is also in the same speed, as customer will get the recovered data in less time window.

Leveraging the existing hardware will reduce the investment of customer. Dedicated server for backup will help the other servers to reduce their hardware and software resources utilization for backup and letting them to concentrate on their own server responsibilities.

II. (Second)

The backup window is reduced to 4hrs to 6 hrs and the LAN bandwidth is totally free for users to access the data. Application access is improved and performed well.

Both the storage boxes are simultaneously working with single hardware resource. The partition of the tape library is eliminated with the purchase of new hardware.

About Choice Solutions

Established in 1991 Choice Solutions Ltd. is a leading IT and Facilities solutions provider. Choice Solutions Ltd. business comprises of Six different practices, namely

IMS

- Desktop, Server, Network, Storage, Support, OS, Assets, Apps, Non IT
- Hardware - A-Add, M-Modify, I-Install, C-Change, R-Repair
- Assets, Security, Software Distribution, Upgrades

Networking

- Packaged Services Monitoring & Management
- Products, Security, Design, Deploy, Maintain
- Auditing & Compliance, SOC

Datacenter

- DC Audit, Monitor & Manage, Training
- Assess, Design, Built, Deploy, Disaster Recovery

Consulting

- Business Consulting, CIO & Technology Services, Physical Security, Power Devices, IT Consulting
- DC Consulting, ERP, CRM & Custom Apps

Cloud Computing

- Cold Site – Backup, Disaster Recovery
- Hot Site – HaaS, Software, Manage
- Public Cloud, Private Cloud, Hybrid Cloud
- CaaS, License Software, IaaS
- Disaster Recovery

Power

- Power Audit, Equipment Management
- Physical Security, Power Devices
- Power Saving Devices
- Design & Audit
- Renewable Energy Products