

Tivoli Storage Reference

Tivoli Storage Manager enables
tapeless and secure backup at Indra
Prastha Gas Limited (IGL)

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1.1 Background: Indra Prastha Gas Limited (IGL)

Incorporated in 1998, IGL took over Delhi City Gas Distribution Project in 1999 from GAIL (India) Limited (Formerly Gas Authority of India Limited). The organization provides safe, convenient and reliable natural gas supply to domestic and commercial sectors in Delhi. IGL started with 9 CNG stations and in less than 5 years crossed 100 CNG stations mark in 2003.

IGL is now focusing on encouraging private vehicles to adopt to CNG model. IGL is also working towards expanding its gas retail network to the other cities of National Capital Region (NCR) viz. Noida including Greater Noida, Gurgaon and Faridabad..

1.2 Storage Challenges

Ever-increasing data growth

With unabated data growth due to the digitization of infrastructures; IGL had the need to keep more copies of data for longer periods, and thereby leading to an increase in distributed data sources. This data growth translated into a wide range of increasing management challenges. At the same time, IGL also had to adhere to higher service-level agreements, including higher availability and zero data loss requirements. Adding to this was the challenge of integrating disparate systems and processes used by the former GAIL.

Need for 24X7 availability of mission-critical applications

In today's always-on environment, losing critical data or losing access to critical applications can be disastrous for any business; and IGL wanted to ensure they don't encounter a situation like this. Protecting data and ensuring application availability was a critical need, and there were limited resources available to provide data center class protection and recovery.

Manual and adhoc data-back-up process

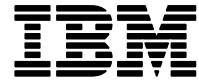
At IGL backups were typically performed by junior IT personnel who have other jobs to do and who, as a result, may be more likely to forget to run the backup. Or they were performed using tape-based systems that may rely on manual processes. The tapes themselves were vulnerable to loss or theft, especially since they were routinely transported off-site for disaster recovery purposes. The problem posed by all of these scenarios was that if the data isn't backed up, isn't backed up properly, or is lost or stolen, it can't be restored when something goes wrong

1.3 Tivoli Storage Manager

IGL selected Tivoli Storage Manager (TSM) to provide centralized, automated data protection that can help reduce the risks associated with data loss while also helping to reduce complexity, manage costs and address compliance with corporate and regulatory data retention and availability requirements.

IBM Tivoli Storage Manager helps increase the efficiency of IGL's IT operations and helps cut costs related to storage management by providing a wide range of data protection, recovery management, and monitoring capabilities using policy-based automation, including:

- Backup and recovery.
- Archiving and retrieval.
- Disaster recovery.



- Space management.
- Online database and application protection.
- Bare-machine recovery.

Tivoli Storage Manager delivers centralized, web-based administration and intelligent data move-and-store techniques to help ease storage management. The product facilitates IGL a multitude of connections, including Internet, wide area networks (WANs), local area networks (LANs) and storage area networks (SANs).

1.4 Business Benefits of IBM Solution

Tivoli Storage management software from Tivoli protects IGL from the risks of data loss and helps reduce complexity, manage costs and address compliance with data retention and availability requirements. The TSM implementation further offers IGL the following benefits:

- Improves business continuity by shortening backup and recovery times and maximizing application availability with advanced data recovery management technologies
- Employs data de-duplication and a hierarchy of storage to increase efficiencies and conserve resources
- Enhances data security with innovative access and encryption features
- Helps adapt to changes within the IT infrastructure to minimize service disruptions and speed restorations and backups
- Helps control storage management costs with ease-of-use features and integration with IBM network attached storage (NAS) products
- Increases visibility into the data protection environment by providing advanced features for operational monitoring and historical reporting
- Creates customizable reports in multiple formats such as HTML, Adobe® Portable Document Formatting (PDF) and comma-separated values (CSV)