



7-Eleven (PHILIPPINES) case study

Challenge

- Disaster Recovery solution
- Warehouse management system supporting 1,000 stores
- 24x7 operation required
- 900GB database
- 3GB database growth per week
- Oracle 10g Standard Edition
- Linux database environment

"A key factor in selecting Dbvisit Standby was the level of support they offered, both before and after the sale"

7-Eleven Philippines



There are over 1,000 7-Eleven stores across the Philippines, serving a population of 99 million people. Supporting that number of stores, and servicing a population base spread across a large number of islands, requires 7-Eleven to operate a significant and complex series of warehouses.

The local operator has held the license to operate the country's 7-Eleven stores since 1982, and today they employ over 300 permanent staff in their central warehouse and operations center.

The Philippines is the most hurricane susceptible large country in the world (hurricanes are also known as tropical cyclones, and locally, typhoons). With an average of 6 to 9 hurricanes reaching landfall every year, each with a rainfall of up to 40" (1 meter), they are arguably the single largest natural threat to the people and businesses in the island group.

The Challenge

Like all businesses in the Philippines, 7-Eleven needs to take steps to mitigate the risks posed to its systems and operations by these large storms. The main warehouse in particular, located in the capital Manila, plays a critical role in ensuring the country's 1,000 stores are kept fully stocked. 7-Eleven's warehouse management system is a critical component of their overall IT platform, and one which needs to operate on a 24/7 basis. It therefore requires a robust and reliable disaster recovery (DR) solution which can be invoked almost instantly when necessary.

The warehouse management system includes physical Windows-based application servers and Linux-based database servers. The database servers are running Oracle 10g Standard Edition and store around 900GB of data, with a weekly growth rate of approximately 3GB. The system maintains a daily volume of around 14GB of transactional data, and archive logs of approximately 100GB, all of which need to be replicated to the standby database. This is a large volume of data to be kept replicated across multiple servers without impacting performance.

The Solution

7-Eleven selected Dbvisit Standby as a solution for their DR needs. Dbvisit Standby is a proven, reliable and cost-effective physical data replication solution for Oracle Standard Edition databases that can be used to deliver disaster recovery.

Solution

- Implemented in 2011 using in-house IT team
- Oracle Enterprise Edition not required
- Cost savings of more than 80% over traditional solutions
- Used to successfully recover from data corruption
- Supports data migration

7-Eleven Philippines estimates they have saved over 80% by implementing Dbvisit Standby DR rather than Oracle Data Guard.



A more extensive version of this case study can be found on our website www.dbvisit.com, or simply scan the QR code above.



Although 7-Eleven initially looked at using Oracle Data Guard, they ruled this out due to the total cost of ownership. While their warehouse management system was able to operate on Oracle Standard Edition, Data Guard required Oracle Enterprise Edition, increasing the overall cost of the Oracle licenses almost six-fold. Dbvisit Standby offered a cost saving of over 80% when compared with the Oracle solution.

7-Eleven found that Dbvisit Standby provided the same or improved features and support levels when compared with other products in the market. Additionally, the deployment and management of the software, from initial trial to full production implementation, proved very straightforward.

Another factor in 7-Eleven's selection of Dbvisit Standby was the level of support provided by Dbvisit. From the evaluation trial and implementation project, to ongoing support once the solution was in production, 7-Eleven has been thrilled with the support they receive.

The Result

7-Eleven has been using Dbvisit Standby in a production environment since 2011. Standby replicates production data from the primary database to the secondary (backup) database at a frequency of between five and fifteen minutes, 24 hours a day, seven days a week.

7-Eleven has found Dbvisit Standby easy to use and operate, both in replication mode and also in the event of a disaster. Over the course of the 3 years Standby has been in operation, 7-Eleven has only needed to revert to the DR database instance on one occasion.

When one of the database tables within the warehouse management system became corrupt, 7-Eleven was able to switch (failover) to the standby database instance almost immediately, with a minimal period of application outage. Once in failover mode the activated standby database supported the production system while 7-Eleven's IT team prepared the replacement primary database server. Once this was ready, they used Dbvisit Standby to recreate the database on the replacement server by replicating from the standby database. Once this process was complete, the application was reconfigured to use the replacement database server.

Dbvisit Standby therefore helped with the failover, but also the recovery process. Not only had it kept the backup copy of the database up-to-date for use during failover, but it also supported the recovery process by recreating the new primary database without the need for an application outage.

Added Benefit: Data Migration

As well as using Dbvisit Standby as a DR platform, 7-Eleven has also used it on several occasions to perform data migrations.

The traditional approach to data migration involves stopping the application to freeze the data while it is copied to the target database. Dbvisit Standby offers a superior solution by incrementally replicating the database while the application continues to run, removing the need for a protracted application outage.

Using Standby's data replication, 7-Eleven has been able to seamlessly migrate to new database infrastructure with virtually zero application downtime. For each data migration 7-Eleven built a new database server, and used Dbvisit Standby to perform a replication process to create a standby copy of the production database on the new hardware. The replication was left in operation until a quiet time in application usage when the production system was shut down, the configuration changed to attach to the new database, and the system restarted.

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