HITACHI
Inspire the Next

"As our IT business grows, and more data need to be processed, new Hitachi platforms and Hitachi IT solutions continue to be our number one interest."

M.Sc. Vladimir Šac
IT Operations Department
T-Hrvatski Telekom

Hrvatski Telekom

T-Hrvatski Telekom (Croatian Telekom)

INDUSTRY	Telecommunications
SOLUTIONS	Enterprise Platform, File and Content Services **Hardware** — Hitachi Universal Storage Platform® V (3) **Software** — Hitachi Universal Replicator; additional software provided by Hitachi Data Systems Technology Alliance Program (TAP) Partner Solix **Services** — Provided by Hitachi TrueNorth Channel Partner Computech

T-Hrvatski Telekom Chooses Hitachi Storage and Solix Technology to Build Innovative Oracle Database Archival Solution

Since deregulation of Eastern European markets, telecommunications has experienced dramatic growth. It was no surprise that T-Hrvatski Telekom, the leading provider of telecommunication services in Croatia, found its infrastructure near its processing limits. The company required an archive to reduce the amount of data being processed, while keeping the data online to the application. After talking to various vendors, the IT Operations Department found their solution in the portfolio of heterogeneous archival applications offered by Hitachi Data Systems.

The Battle for Growth

T-Hrvatski Telekom (T-HT) is the leading provider of telecommunications services in Croatia and the sole company to offer the full range of fixed and mobile telephony, data transmission, Internet and international communications services. T-Hrvatski Telekom is a joint stock company in the majority ownership of Deutsche Telekom. In recent years, the company had grown to have nearly 1.5 million fixed lines, nearly 2.86 million mobile subscribers, nearly 555,000 broadband connections and nearly 236,000 IPTV subscribers (results for the year ending on 31 December 2009). With this intensive growth, T-HT quickly exceeded the capabilities of its existing SAN infrastructure.

The Search for Cost-effective Infrastructure

T-HT began the search for a more scalable and flexible storage architecture to meet growing demands and so contacted Computech, the largest Hitachi TrueNorth Channel Partner in Croatia. After being briefed on the capabilities of the Hitachi Universal Storage Platform® V (USP V), T-HT immediately recognized the benefits that its advanced technology would offer to their business. Its unsurpassed performance and scalability has been independently benchmarked by the Storage Performance Council. This convinced T-HT staff that they could continue to grow their business while maintaining application quality of service in even the most demanding periods of high activity, without having to expand their storage infrastructure. This is a significant factor for improving customer satisfaction while keeping costs in control. They were also impressed by the nondisruptive architecture of the Universal Storage Platform V, which is designed to provide the round the-clock service required to meet the growing demand for higher levels of application availability. The USP V architecture has the flexibility to accommodate data and files from various sources, not only SAN, and logical partitioning to guarantee application quality of service. The USP V offers further potential while delivering all of the technical and financial benefits of a single storage platform with a single point of management.

As a result, T-HT had no difficulty justifying the purchase of two Universal Storage Platform V systems with a large amount of data capacity in a high availability configuration to guarantee 24/7 service. T-HT uses the platforms to mirror data synchronously between their primary and disaster recovery sites to ensure site consistent failover and recovery independent of the server. They were so impressed with the performance and reliability of the Universal Storage Platform V systems that they subsequently purchased a Universal Storage Platform V with Hitachi Universal Replicator software for long distance, three data center, disaster recovery purposes to solve their immediate storage needs. M.Sc. Vladimir Šac, in T-HT's IT Operations Department, explained, "By using the Hitachi Universal Storage Platform V solution we can easily optimize disk space usage, increase IT service reliability and make IT systems scalable."

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The Challenge of Completing Processing and Maintenance

As the number of subscribers continued to increase, and the number of call records with them, T-HT began to have problems completing batch processing and database maintenance within the available maintenance windows. Although the billing system running on Oracle had been tuned as best as possible, an investigation had shown that any further application tuning or database redesign would only postpone the inevitable: they would reach a point where they would either have to reduce the service levels for the application and risk losing customers, or come up with a new solution. Reducing the number of records to process by using an archiving solution seemed the best choice. The challenge was to keep the data online to the application for regular customer service enquiries, something that a normal archiving solution could not deliver.

Universal Storage Platform V and Solix to the Rescue

The solution was to be found in the use of the Solix Enterprise Data Management Suite, one of the few database archiving products on the market today, which would use the Universal Storage Platform V as its storage platform. Solix is part of the Hitachi Data Systems Technology Alliance Program, providing customers with the flexibility to select best-of-breed applications from their favorite independent software vendor (ISV) as well as the security of knowing that their solution is fully supported by Hitachi Data Systems.

According to Solix Vice President of Product Management and Strategy, Raghu Kodali, "The Hitachi Data Systems Technology Alliance Program has given us the relationship that was required to deliver a high quality joint solution where customers can use Solix Enterprise Data Management Suite along with Hitachi storage."

By using Solix, T-HT is able to exploit the flexibility of the Universal Storage Platform V to archive one month's worth of Oracle data while remaining online to the application. As customer service queries are performed, they are directed automatically to either the production or archive databases based on their date. As a result, T-HT has halved the time to perform their database maintenance and can now meet their application service levels.

The installation was also impressive. The nondisruptive architecture of the Universal Storage Platform allowed new archive capacity to be added online without an outage. The Solix software was installed remotely in a single day and a proof of concept performed to ensure that the necessary functionality and performance could be delivered. During a standard maintenance window, the servers were rebooted to pick up the new online archive and since then the application has been running trouble-free.

Since going into production, the combination of the Universal Storage Platform V and Solix archival software has reduced not only batch processing time, but also the time to perform online customer queries by more than 20 percent. This eliminates queuing for a customer service representative and so improves customer satisfaction. As B.Sc. Mislav Radica commented, "The Solix database archival solution improved service quality by optimizing processing time in our production environment, exceeding our levels of expectation."

Investment Protection into the Future

In summary, T-Hrvatski Telekom has been very pleased with the implementation of the new Solix database online archive on their Hitachi Universal Storage Platform V. Its proven performance, reliability and scalability make it the perfect choice for adding more solutions in the future, not only to protect their call records, but also to exploit the flexibility of the storage architecture to accommodate other applications and make even better use of their investment in Universal Storage Platform V.

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