

ATEMPO TIME NAVIGATOR FOR VMWARE PROTECTS ESX SERVER FARMS OF THE CRÉDIT MUTUEL DE BRETAGNE

► Problem

- The IT Department of the Crédit Mutuel (GICM – Groupement Informatique du Crédit Mutuel) has deployed VMware ESX servers in their infrastructure. Each ESX server deployed hosts 25 virtual machines. While the server virtualization helps the IT group optimize IT processing resources and increase server availability, the critical need for data protection remains in order to avoid data loss due to unexpected issues or failures.

► Goals

- To protect all the ESX servers and the virtual machines that have been deployed while running VMotion at three separate locations.

► Results

- All ESX servers and virtual machines are backed up no matter where they are located
- Data is backed up to disk then moved to tape which allows the administrator to restore the information quickly in case of data loss and it also allows them to keep a second copy offsite as a disaster recovery backup

« Time Navigator for VMware's ease of installation, management and use has convinced us that it was clearly the right choice. This module enables us to perform not only a full backup of all ESX servers but also to restore all our servers to the state they were originally. Moreover, this latter operation is very easy to perform thanks to the intuitive graphical user interface and the Time Navigation. » States Pierre Le Guével, Storage Administrator of the GICM.



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Organization

The entities of Credit Mutuel de Bretagne, Ocean and Anjou play an important role in the economy of Western France. They offer a complete range of products and services for the banking and insurance industries. They decided in 2001 to pool their resources under the joint IT department of Crédit Mutuel (GICM – Groupement Informatique du Crédit Mutuel). The goal of the GICM is to provide a complete high performance and independent banking IT platform that can be used to implement any strategy that the GICM requires while offering joint IT services that can enhance the creation and innovation of the services offered to customers.

The Challenge

Launching new innovative product offerings and services requires an increasing amount of calculation power. This IT resource growth must take place while considering space constraints, electrical consumption, and heat dissipation in the data center. In order to meet this triple challenge, GICM has decided to virtualize part of its servers. Therefore they bought 12 ESX servers from VMware, with each server hosting 25 virtual servers, for a total of three hundred virtual machines. "Because we are very satisfied with this approach, we have decided to carry on" explains Pierre Le Guével, Storage Administrator at the GICM. The equipment is being implemented in three distinct server farms. "In addition, we use VMotion. It enables us to move data in real time across virtual machines installed on physical servers without any downtime. They can also use the virtual machines attached to a SAN to move data from one server farm to another" explains Pierre Le Guével. However, this new distributed computing architecture had to fit into the existing data protection architecture. Pierre Le Guével had previously developed a script to ensure the backup of ESX servers. Even though the script was fulfilling its task, the increasing number of virtual machines and the use of VMotion were making the backup more and more difficult to perform. "We had reached the limits granted by the script" acknowledges Pierre Le Guével. "We had to switch to enterprise scale to ensure the successful backup of our virtualized architecture."

The Solution

After a thorough review of available solutions, GICM chose Atempo Time Navigator for VMware as their backup solution. This module meets all the required criteria, specifically

because it can backup all of the servers spread over the three farms, even when VMotion is activated. The backup agents of Time Navigator for VMware are deployed on twelve ESX servers and protect all three hundred of the virtual machines. Time Navigator for VMware performs a full backup of all the servers one by one. "This represents of total volume of 5 TB" states Pierre Le Guével. "Currently, servers are backed up every two weeks. This frequency will be changed to weekly starting during the summer of 2007."

The Time Navigator for VMware VCB module has also enabled GICM to transparently integrate all of the virtual machines in the data protection architecture that were already in place. Information is backed up from disk to disk arrays before being transferred to tapes (D2D2T). These operations are performed using the Time Navigator Virtual Library System (VLS). With a VLS, the disk to disk to tape process is automated in order to create a seamless unified architecture. This Atempo software component enables storage based on disk while it is emulating a tape library improving restore reliability and speed.

This architecture is spread over two data centers, each one of them having a SL500 library, a backup server, and ESX servers. This topology guarantees business continuity even in case of major failure in one of the two IT rooms.

Configuration

- 2 bi processors dual core servers with 8 Gb RAM using Red Hat Enterprise 3
- 2 Fiber network cards
- 2 Sun-StorageTek libraries SL 500 with 6 LTO3 drives
- 12 VMware ESX servers
- 300 virtual machines

Results

This solution fits very well in the data protection architecture and business continuity plan already in place. In case of one server failure, GICM has the ability to rebuild a new one quickly using the backup stored on disk in the VLS. Copies of the data stored on tapes are only used in case of major unexpected event. "Thanks to Atempo's data protection solution, we can pursue deploying a virtual environment with high confidence," states Pierre Le Guével. "and thus take advantage of the benefits offered by server virtualization technologies."

