PacificNet Co., Ltd. engages in what is called the 4R Business, namely, "Reuse (reutilization of goods)", "Recycle (resource recovery)", "Reduce (waste control)", and "Rental" of personal computers and office automation equipment. Upholding establishment of a recycling-oriented society and reduction of environmental impact as its corporate philosophy, PacificNet has acquired ISO 14001 certification(*1). Additionally, in order to fulfill the social responsibility as a handler of information and security, PacificNet has acquired ISO 27001(*2) and ISMS(*3) certifications for its sixteen establishments nationwide. It is a common practice with used computer retailers that collection and recovery are outsourced. At PacificNet, however, most of the overall processes of collection, purchase, recovery, are sales are done at its own resources. Moreover, by setting up a high standard of security for each of these steps, PacificNet has established the highest level of total security framework in the industry. Computer units to be purchased are collected by the company’s own trucks, and the own staff wipe the remaining data and destroy the hard disk drives. After operational checks are performed, they are sold at retail shops and branches all over the country. Even in its Rental Business, computer units are recovered after their assigned time, and are sold as used units at the company’s own retail shops. As reflected in the above, PacificNet is committed to effective utilization of resources and establishment of recycle-oriented society backed by the company’s extremely high integrity.


Background and Key Points for Implementing ActiveImage Protector

Here for the interview is Mr. Kazuhide Sugano, Head of Information System for PacificNet Co., Ltd.

Product and its version currently in use: ActiveImage Protector 3.5 Virtual Edition
Time implemented: ActiveImage Protector 2.7 was implemented in December 2010.

Search for backup software which balances ease of operation with cost-effectiveness

At PacificNet, we used to narrow down what needs to be backed up for servers. We were using file-based backup by a batch file as well as standard functions of database or operating systems. As business grew, however, existing methods posed serious limitations in accuracy, speed, and ease of operations. Moreover, as number of servers increased, establishing proper infrastructures including virtualization for which we started receiving lots of demands became our urgent need. Part of that move required us to consider implementing a backup system which balances easy of operation with cost-effectiveness.

Key points: low cost, peace of mind from excellence in support and ease of operation

There are three major points which moved us to implement ActiveImage Protector:

◆ Attractive License Prices
In the Virtual Environment License system, one license for a physical machine covers all the virtual machines that run on the same unit without extra charge. Therefore, the total cost for backup systems has been reduced.

◆ Support that Imparts Peace of Mind
Support is provided by the developers themselves, and they are quick and accurate. That gives us a lot of peace of mind.

◆ Intuitive and Easy Operations
Overall operations are so intuitive that documentations are not really needed. Even non-specialists were able to start operating the system right after its installation leading to reductions of training time and costs.

Before Implementing ActiveImage Protector

NTBACKUP and Robocopy were being used previously, but they consumed much time for restore, and they were not able to restore the system to the most recent state.

- How did the implementation of ActiveImage Protector come about?

Before ActiveImage Protector was introduced, backups had been performed using internal backup functions of database products as well as NTBACKUP and Robocopy. In other words, we were using simple methods of copying file by file and folder by folder using batch files. Since this simple method secured all data required for our business, we thought that restoration was possible even in the event of system crash.

However, in reality, we were only able to perform backup once a day since this method consumed so much time. Though restoration was possible, it just brought back the state of the previous day; what was done on that day would be completely lost. This was not so reassuring. We had to quickly reconsider our method of performing backups in preparation of possible server fault happening on the next day of any backup failure. We were looking for a better backup method when our support provider introduced ActiveImage Protector to us. When we tried out the software, we liked the intuitive operation of it. Restore process was fast and simple because image files simply had to be returned to the hard drive.
Activelmage Protector implemented as it provides satisfactory backup and virtualization functions

We decided to purchase Activelmage Protector 2.7 immediately as we were in the process of virtualizing our entire infrastructure. We made sure that Activelmage Protector had satisfactory backup and virtualization functions. For our full-scale implementation, we upgraded the software to Version 3 and purchased additional licenses. In the Virtual Environment License system, license fees are calculated, not according to the number of virtual machines, but based on the number of physical machines used as hosts. The cost is significantly reduced, adding more appeal to the product. We do not need to think about increasing costs even if the number of virtual machines increases when promoting virtualization of our internal systems.

Backup size reduced to about 50% by In-Line Deduplication Compression

- Specifically, which function of the product moved you to implement it in your systems?

We like the intuitiveness and ease of operation the best after all. User interface can be understood the moment you see it. For instance, if you are thinking what software should be implemented and comparing Activelmage Protector with another software product, Activelmage Protector would be the one with which you can start making backups without looking at the manual. We also take full advantage of In-Line Deduplication Compression added in Version 3.5. We had not have any complaints about the product as a backup tool till then. We nonetheless gave it a try since it was a new function. We found out that significant capacity could be saved in backing up our 30-40GB servers in time differences of about 10 minutes. Once we realized that the size was reduced to about 60%, we started using In-Line Deduplication Compression to all our backups.

Benefits from Implementing Activelmage Protector

- What benefits were brought about by implementing Activelmage Protector?

First of all, the support is great compared to competitors. It’s great to see our first call to the support immediately conveys our issues to the team. Our experiences with other providers required us to follow numerous steps before conveying our issues to them depending on our emergency level and so on. The support team of Activelmage Protector identifies the primary failure from our first conversation and offers precise instructions on extracting necessary log files, cutting a lot of unnecessary interactions. Ease of mind regarding the support is extremely valuable to us.

Restore process required a short time when the real system failed

- Please tell us about your actual operations.

We now perform Scheduled Backups on virtualized servers. Since backups are stored in the storage within the same segment, there is no disconnection or delay. We also conduct verification at backups. While it does require some additional time, we find it extremely useful if that small time ensures integrity of the contents of backups. In fact, we actually had to restore our real system once. We constantly run about 10 servers for our business on virtual machines, but one of them failed for some reason, and a restoration became necessary. We attached the iso file of the recovery media of Activelmage Protector, and booted the system from the virtual machine. Restoration was done from Restore Wizard, and the system was safely up and running. Although we conducted restore trials in the past and made sure the process works, we had some worries when done on the real system. Will the system start up after the restoration? Will the database keep its integrity then? We had those questions. The results: restore process was done with no issues, start up went smoothly, and database’s validity checked out. The whole restore process took only 1.5 to 2 hours. It so happened that it was a holiday. So there was no harm done.

If the problem had occurred when we were using the old method on physical machines, not virtual ones, it could have taken 2 to 3 days for OS re-installation, reconfiguration of environments, copying and restoration of data backed up, and so forth. Activelmage Protector was extremely helpful in that aspect as well.

If previous backup software is used...

Complications of OS and Apps re-installations and reconfigurations could make restore process take several days.

If Activelmage Protector is used...

Restore process from image file only takes a short time

Figure 3: Restore process using Activelmage Protector takes only 1.5 to 2 hours

Virtualization of internal infrastructure was assisted by Physical-to-Virtual (P2V) Conversion

We were helped, not only by the backup features, but also by the virtualization part. When we followed the traditional procedures of virtualizing our internal infrastructure, the virtual machines did not boot up for some reason no matter how many times we tried. We then used the P2V function on Activelmage Protector. Till then, we did not take notice of this function, but when we did, virtualization went smoothly then onward.

Needs in Activelmage Protector and Future Developments

- Could you suggest any room for improvement in Activelmage Protector?

I would like to see a feature that allows users to manage multiple machines from one console. Even now, Activelmage Protector on other machines can be managed from one, and that may be sufficient for normal operations. However, if the number of machines to be managed grows, we would like to have them in a list view. For large number of machines, backups schedules need to be distributed so as to avoid extreme burden on the network and storages. With that being the case, it would be nice if all schedules can be viewed at a glance. Backup size of each client also constantly needs to be grasped. I hear that future versions will include Management Console that enables all these in a bundle. We look forward to it as the number of machines to be managed will grow in the future. In addition, different people tend to get involved in monitoring, management and operation. So the system will be easier to work with if workload can be distributed according to user privileges.

We would like to have a nationwide BCP (Business Continuity Plan) realized

- How about your future developments?

We will implement the product to other servers as we are fully satisfied with its backup features. As for our new trials, by using “Replication Feature” that enables backup images to be transferred off-site, we would like to have a nationwide BCP (Business Continuity Plan) realized although it will require upgrading of our infrastructure.

Figure 4: System Configuration at PacificNet. 10 virtual machines are run on a virtual environment host. Backups are stored in a storage on the same LAN. Virtualization was done using P2V feature of Activelmage Protector.