PROACT

Taking our own medicine

Consolidation success with Riverbed

Consolidation has been a general trend in the IT market for a long time now. IT infrastructure is being consolidated to an ever greater extent in order to achieve savings on hardware, software, expertise and operation. Continuous development of web-based tools and applications has made it easier and more natural to centralise business applications and data at large data centres. Communications solutions which are becoming ever cheaper and more secure have also led to it becoming more profitable to centralise multiple applications and data.

However, there is one thing you can never get away from if you have distributed business operations either nationally or internationally. If the distance increases between two points of communication, there is an increase in the time it takes from sending a query to receiving a response (latency). Many applications and underlying protocols have been designed to communicate over fast local networks. These struggle when the latency time increases, because they are designed to constantly send small quantities of control information over the network. Such applications and protocols cannot be streamlined by increasing the thickness of the "pipe". The distance is what causes the limitation. This has led to many companies not bothering to consolidate file services, e-mail services, CRM applications and data, and so forth.

In some cases, companies are entirely dependent on storing data and applications locally at their branch offices. This may be due to regulatory and legal requirements, special applications, local specialist skills and other aspects. In such instances, companies are happy to have invested in local backup systems which create data backups and store these on a local tape station. We are constantly seeing that such companies are interested in securing data centrally. There are several reasons for this:

- **It is expensive to set up and maintain small and medium-sized backup/restore solutions**
- **There is insufficient expertise locally to check these systems**
- **Tape is a difficult backup medium for such small solutions, as it is typically difficult to ensure that tapes are switched and looked after**
- **There is typically a lack of administrative systems so that errors and flaws with local backup solutions may exist for a long time without anyone realising**
- **It is time-consuming to restore systems and data in the event of a catastrophic failure, and central staff have to be involved in any case**

When centralising the backup function, a lot of data will have to be transported over the national or international network. A full backup of a location will typically copy huge quantities of data which have already been copied many times before. At the same time, the transport protocols used have not been optimised to make the job faster. This is why centralising backups is extremely time-consuming and expensive.

"The TCP transport protocol is not always efficient," explains Sven-Ole Skrivervik, IT strategist at Proact Group. "It sends a lot of control information between terminals and has to be packed optimally for optimal use of the available bandwidth. This is even more apparent with application protocols such as MAPI and CIFS (Exchange and MS file services) which are designed for LAN communication."

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Åke Holmberg, IT Manager at Proact Group, Stockholm.

The solution: Riverbed

"We surveyed the market in order to find a system which could streamline communications between e-mail clients and servers, file server applications and other data," continues Skrivervik. "And with Riverbed, we found it."

Riverbed functions can essentially be divided into three areas. First of all, it executes more intelligent data packing and transmission. It compresses the data and recognises data that has already been sent. In this instance, only a reference is sent to the other side; and the central Riverbed solution sends the data itself to the application. Secondly, it streamlines the TCP transport protocol by packing data optimally and reducing the sending of control information. And finally Riverbed also streamlines the most important application protocols such as Microsoft Exchange (MAPI), Microsoft file sharing (CIFS – Common Internet File Sharing), Lotus Notes, Network File System (NFS) and HTTPS.

"In general, we can say that Riverbed streamlines client-server communication and makes it possible to centralise data and applications which it was impossible to centralise before. These solutions also streamline the backup and restore processes where companies are dependent upon local data and applications, but have centralised backup solutions. Furthermore, Riverbed is constantly extending the number of applications in which communication is streamlined," concludes Skrivervik.

Took our own medicine

"We wanted to centralise our entire IT information so that all demanding applications and data would be stored at a single data centre," explains Åke Holmberg, IT Manager at Proact Group. "Previously, we wanted to increase bandwidth to achieve this, but this would have resulted in higher communications costs, more expensive routers and inefficient backup procedures and systems.

Both the technological solution and the experiences of existing customers made the advantages of Riverbed quite clear. As we are advisors on and suppliers of consolidated storage and archiving systems, it was a natural step for us to have a taste of our own medicine and test Riverbed within our own organisation."

PROACT

> We have a 2.4 Mbps line to Gothenburg, and we see a 41.5 Mbps effect with Riverbed.
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> Marcel Gjaltema, IT Consultant for Proact Group, the Netherlands.

Proact has installed a central Riverbed solution in Gothenburg, with distributed nodes in Oslo, Trondheim, Bergen, Stockholm and Amsterdam. “We are still at the pilot stages,” says Holmberg, “but we gradually want to link up other offices as well. First the other head offices, followed by the branch offices. We are currently seeing a huge reduction in data traffic. For instance, Outlook users are seeing much faster response times from the Exchange servers in Gothenburg. Here, the use of a duplicated cache and streamlining of communications protocols have massively reduced both response times and the amount of traffic.” Nowadays, users in several countries do not even notice that their file server is actually in Gothenburg.

Simple installation

The Riverbed boxes are installed between the firewall and the server. “It was really easy, and took just a couple of hours. The configuration itself just involved telling the box what addresses to work with. And the rest all just happened on its own. If there is a problem with a Riverbed box, it is automatically disabled and its traffic is routed away from it. Client-server response times then fall to what they were before we implemented Riverbed technology. But we have not experienced this yet,” says Holmberg with satisfaction.

> Our data traffic has been reduced with 88% with Riverbed.
>
> Rickard Ström, IT Consultant for Proact Group, Stockholm.

Another advantage of Riverbed is that a version can be supplied as a software package. This means people can use the full efficiency of the system locally from a laptop while they are on the road, or from a small local office which does not have its own Riverbed appliance.

Satisfied clients

Proact Group opened a new office in the Netherlands on 1 January 2008. There were no plans to install local file servers, CRM applications and e-mail. Initially, the office operated an Internet line with a VPN (Virtual Private Network) to Gothenburg and accessed all data and application servers there. But then they started using Riverbed.

“We had problems with our communications solution. We had eight online users, who were experiencing long response times and lots of problems,” explains Marcel Gjaltema, a consultant at the office in the Netherlands. “But once we started using Riverbed, we have had no more problems. You do actually feel as though you are working with a local server. With eight online users and central storage, e-mail and SuperOffice, we are seeing brilliant response times on a 2.4 MB line.”

riverbed®

Proact is an independent integrator within the area of storage, backup/restore, archiving and disaster recovery.

We deliver systems, consulting, support- and operation services within our focus areas, complemented by our broad competence in the field of IT infrastructure. Our solutions typically include hardware and software from market leaders and niche players with the latest technology, intended for use in complex and demanding IT environments. We always tailor the solution based on customer needs.

We are able to support our customers throughout the process phases; design, deployment, support and selective outsourcing thanks to our specialist competence and focus. The total solution gives our customer simplified administration and a more cost efficient operation.

The Proact Group has more than 300 employees and conducts business in Denmark, Estonia, Finland, Latvia, Lithuania, The Netherlands, Norway and Sweden. Since the start in 1994, we have made more than 1.,700 installations within our focus areas.

Proact was founded in 1994 and the parent company, Proact IT Group AB (publ) is listed on the OMX Nordic Exchange in Stockholm under the symbol PACT since 1999.

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we secure mission-critical information

info@proact.eu | www.proact.eu

Denmark	Estonia	Finland	Latvia	Lithuania	Netherlands	Norway	Sweden
+ 45 70 10 11 32	+372 663 0900	+358 9 452 0141	+371 67 819 444	+370 5 2526 140	+31 35 70 70 525	+47 22 89 23 89	+46 8 410 666 00
www.proact.dk	www.proact.ee	www.proact.fi	www.proact.lv	www.proact.lt	www.proact.nl	www.proact.no	www.proact.se