

CASE *IN PRINT*



Spadab: AFP and VPS® Get Interest From Savings Banks Across Sweden

When you turn on the faucet, you expect to get water. Plug in a lamp, and you expect the bulb to light up every time. Right or wrong, we take these things for granted.

Today, customers take one more thing for granted: access to information. Few groups know this better than the banking industry, where customers demand real-time answers to their financial questions. Gone are the days when a customer would accept "We'll process your forms, and send you a confirmation letter in a few weeks."



Information technology makes it possible to provide information on demand—and the customers know it.

In 1962, a group of Swedish savings banks joined to solve a growing problem: how to handle the increasing volume of bank transactions. The answer was a central data processing center for Sparbanken Sverige AB called Spadab. Today, Spadab handles the data processing for 77 of the 91 savings banks in Sweden. Branch banks in Sweden send information to Spadab's data center over their SNA

or LAN connections. With three IBM 9021s processing requests, Spadab provides quick service for its member banks.

Customers don't know or care about how fast transactions run on the network. To the customer, the job is not done until the teller or loan officer actually hands over a piece of paper that documents the transaction. Spadab needed a way to send print quickly and reliably to any network printer in any of the remote savings banks.

Printing at Spadab: Thousands of Variables

From its headquarters in Stockholm, Spadab manages more than 5200 printers all across Sweden. Per Norburg, a systems programmer in Spadab's production group, is one of the people that makes sure all those printers stay busy regardless of where they are. "We've got about 4300 printers in the branch offices, and the rest are here at headquarters," Per says. "Lots of those are older line printers, but about 2000 are laser printers – mostly PCL." Most of the printers are connected to Spadab's SNA network that crisscrosses Sweden, but some branch banks are connected via a Novell NetWare LAN.

EXECUTIVE **SUMMARY**

VPS and DRS products provided Spadab, a data processing center for 77 Swedish banks, with centralized control over SNA and LAN network printing along with a cost-effective method for printing AFP documents on 2,000 existing PCL printers.

Managing this heterogeneous network used to be a major challenge. What made it even tougher was that Spadab had separate print management systems for different types of printing. "When somebody at a branch bank called up for support, we did not have a



method to find out where the print job failed," Norburg explains. This slowed down the problem resolution process, which was a big problem for the bank representative standing in front of an impatient customer. Per and his colleagues went looking for a better solution.

"There were several Scandinavian companies that were offering print management software, but they were creating their own spooling mechanisms, not using JES." One reason Per's group wanted a JES-based print management tool was its legendary reliability. Another reason may have been the availability of JES utilities on the market. According to Norburg: "We talked to a lot of companies about what was the best solution, and people said to try VPS."

A Single Point of Control

VTAM Printer Support (VPS®) is an MVS host software solution that retrieves output off the JES spool and routes it to the appropriate printer anywhere in an SNA network. Its reliability and ease of use have made it the choice on over 5200 MVS systems worldwide. The monitoring and control facilities in VPS give authorized users full control over how and where output is routed, and provide an interface for monitoring all VPS-controlled functions. VPS and its extension products provide a single point of control for all network-attached printers, making it easier to manage remote printing. This is especially important when the network spans across an entire country. According to Norburg, "One of the big

reasons we went with VPS was its flexibility: it supports all kinds of printers within a single product."

The VPS Monitoring and Control Facility (VMCF) is an interface that lets administrators and users find, resolve, and prevent printing problems. "Our help desk staff at headquarters use VMCF when they get calls from an internal or external customer," explains Per. "But we are also using a special 'Error Retry' exit in VPS, so most problems are solved automatically. If VPS can't fix it, it must be a very serious problem." When those serious problems occur, the support staff uses VMCF to pinpoint and resolve them.

Really Remote AFP Printing

Like many service industries, banks are judged by the quality of their customer service. Often, the only physical proof of the bank's services is a statement, a receipt, or some other document. By making these documents more attractive and easier to use, a bank can improve its image in the eyes of the customer.

"Our member banks wanted nicer printouts in the branches, and different banks wanted to use their own logos," Norburg said. He knew that by implementing the AFP architecture, Spadab would be able to improve the appearance of these financial documents. But centralized printing was not an option; most of the documents were printed on demand, so they needed to be sent to printers right in the remote branch offices.

"We looked at several options. It would have been very expensive to put IPDS printers in all of our branch offices. Most of our banks already had PCL laser printers, so it made sense to send the AFP data over our SNA network to these existing printers." First, Per's team needed a way to convert from AFP on the host to the PCL data stream that the printers understood.

One option Spadab considered was a hardware solution that stored electronic versions of the forms. When a bank ran a report, Spadab's mainframe would send the variable data for the job, and this hardware box would merge it with the electronic form. "These boxes could store up to 50 forms. Unfortunately, we estimated that we would need at least three times that," Norburg remembers.

This hardware solution was also expensive: "These boxes would have cost about US\$2700 each, and we needed over 2000 of them. That is just the cost of purchasing them. You also have to factor in the cost of sending someone

out to the branch banks to install them.” Luckily, about this time, Levi, Ray & Shoup was readying a new VPS extension product for the market: VPS/PCL.

VPS/PCL converts AFP resources into PCL data streams on the MVS host, then uses the base VPS product to deliver the output to any PCL-capable device. This may be a printer, a fax server, or any other PCL device hooked to an SNA, TCP/IP, or local area network. Because the AFP-to-PCL conversion runs on the MVS host, there is no need to add hardware protocol converters or intermediate servers to the network.

Spadab saved over \$5 million by using VPS/PCL instead of using the data stream conversion boxes. Moreover, Per Norburg’s group was spared thousands of hours of installation time.

Many Platforms, One Printing Strategy

One of the reasons Spadab chose VPS as its corporate printing strategy was the fact that VPS is JES-based. Any mainframe output written to the JES spool can be routed to any printer on Spadab’s SNA and local area networks. This is a strong solution, but it only works if there is a way to get the output to JES.

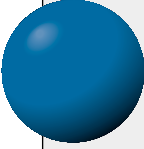
For one of its IMS applications, Spadab was using an IBM 4700. “The spool on this machine could only hold nine LU1 printouts at a time, after that, jobs would get backed up. In our environment, the limit of only nine printouts was too restrictive,” according to Norburg. To eliminate this problem, Spadab implemented the Dynamic Report System (DRS) from Levi, Ray & Shoup. Per’s group sends IMS output through DRS, which routes the output to the JES spool. From here, VPS routes the output to the appropriate printer. Spadab is also using this DRS-VPS combination to print from its mainframe-based E-mail package.

One of Spadab’s important banking applications runs on a Tandem platform. Users want

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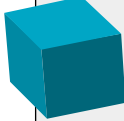
LRS PRODUCTS

Spadab met the challenges of nationwide remote printing by implementing a range of Enterprise Output Management solutions. LRS products supporting Spadab’s output management strategy include:

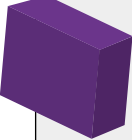


VPS – VTAM Printer Support efficiently routes output from the JES2/JES3 spool to the most appropriate printer or output device. Printers can be quickly and easily added to the VPS system without the need for IPLs, JES definitions, or re-starting the VPS system.

VMCF – VPS Monitor and Control Facility (VMCF) is a single point of control for network printing, giving you the ability to monitor all VPS-controlled output devices and fix any problems that occur.



VPS/PCL – VPS/PCL is a VPS AFP extension product that enables you to send AFP output to your PCL5 compatible printers without the need for expensive IPDS data stream conversion cards or other cumbersome solutions. All you need are the PCL printers that you’ve already purchased and already connected to the network.



DRS – Dynamic Report System lets you dynamically route output created by your online applications to the JES spool. From the JES spool, VPS can direct print jobs to any printer in your enterprise-wide network.

DRS/PC – DRS/PC sends large print jobs created by LAN applications to the JES spool.

the ability to print this output on any laser printer in the enterprise network. Since Spadab is using VPS to manage its enterprise printing, the first step is getting the output on the JES spool. “This is quite difficult from the Tandem system,” says Per Norburg. “We are using the virtual printer interface of DRS to put the output on JES.”

Printing to a DRS virtual printer is similar to using a physical printer, however, it allows a greater degree of flexibility. For example, one physical printer can be associated with many virtual printers: the first for portrait printing, the second for landscape, the third for two-up, the fourth for overlaying graphics, etc. Virtual printers give companies increased printing options and flexibility.

With all the focus on remote printing, it is easy to forget that high-speed centralized printers are sometimes the best output option. For example, when Spadab’s remote banks want to print large manuals or other high volume

jobs, the most appropriate printer may be the IBM 3900 at the central office. This is one of the reasons Spadab uses DRS/PC, a LAN-to-host extension product to DRS. Users at a bank can print to DRS/PC just like any other printer on the Novell network, and DRS/PC routes the job through DRS to the JES spool. From here, VPS sends the job to the high-speed 3900 printer, where the data center staff barcode the package and ship it to its destination.

The Benefits of Enterprise Print Management

Increasing IS productivity and customer service are two of the main goals at Spadab, as in most large organizations. One often-overlooked way to achieve these goals is to evaluate the current print strategy and develop an overall enterprise print management solution.

Levi, Ray & Shoup is committed to raising the awareness and profile of print management throughout organizations worldwide. Enterprise print management should be a deliberate, strategic effort on the part of companies who want to maximize the use of their resources while standardizing and efficiently managing their computing environments.

The result of developing an enterprise print management strategy varies with the needs of the organization. For Spadab, re-examining their print strategy led to a more stable printing environment. It also enabled Spadab's banks to provide more attractive customer documents without spending unnecessary amounts of money on printing hardware or pre-printed forms.

To discuss your organization's current print strategy and ensure that it can meet the expanding needs of your enterprise, contact the enterprise print management specialists at Levi, Ray & Shoup. Whether your interests are cost savings, flexibility, or increased performance, LRS can provide the products and the expertise to fit your needs.

LRS OFFICES

Levi, Ray & Shoup, Inc.
2401 West Monroe Street
Springfield, Illinois 62704
USA
Phone: 217.793.3800
Fax: 217.787.0979
Internet: <http://www.lrs.com>

Levi, Ray & Shoup, Inc.
Türkenstr. 11
80333 München
Deutschland
Phone: +49 (0)89/28 66 95-0
Fax: +49 (0)89/28 66 95 11

Levi, Ray & Shoup, Inc.
Beethovenstr. 18
63263 Neu-Isenburg
Deutschland
Phone: +49 (0)6102/7958-0
Fax: +49 (0)6102/7958-50

Levi, Ray & Shoup, Sucursal en España
Consell de Cent, 106-108, 1^o-3^a
08015-Barcelona
España
Phone: 34-9-3-426-5143
Fax: 34-9-3-423-9006

Levi, Ray & Shoup, Inc. U.K.
Regent House
Rodney Road
Cheltenham, Gloucestershire GL50 1HX
United Kingdom
Phone: 44-1-2425-37500
Fax: 44-1-2425-37501



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ENTERPRISE OUTPUT MANAGEMENT

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