

CUSTOMER CASE

Scan Directly into EMR Application with VMware ZeroClient Infrastructure

For scanning medical documents, Maniilaq Association uses RemoteScan® to streamline multi-step procedure down to a single step, increasing staff efficiency and avoiding costly hardware upgrades.



In a region above the Arctic Circle where IT infrastructure is spread out over 300,000 square miles and a gallon of milk costs 13 dollars, every bit of efficiency counts. The subsistence way of life in that part of the world has shaped Maniilaq's approach to IT — all the way down to solving document scanning problems.

"Our IT is all private cloud," says Wayne Hogue, VMware administrator for Maniilaq Association. "We run it here at Kotzebue and everybody across the region connects to our site for infrastructure. We have technicians in each village and we frequently travel to villages by bush plane, snowmobile or even dog sled in the wintertime."



Country: USA



Employees: 550



Industry: Healthcare

Business Need

Maniilaq staff members must scan from different scanner models, but their electronic medical records (EMR) software supports a single TWAIN driver only.

Solution

Taking advantage of the flexibility of RemoteScan, users can now double-hop from physical zero-clients to non-persistent virtual machines, then from VMs to EMR running on Citrix. No matter which scanner is connected, RemoteScan presents a single TWAIN driver name to Cerner EMR software. Maniilaq staff gains efficiency and IT avoids costly hardware upgrades.

Benefits

- Ensured staff could use direct document scanning from their Citrix-hosted EMR software
- Enabled IT to save thousands of dollars in client hardware and scanners by continuing to use low-cost, zero-client workstations
- Relieved pressure on IT to make the task of document scanning efficient once again

Constant scanning of medical documents

Maniilaq's 35 users around the borough log in to a non-persistent, virtual desktop in VMware that has their personalization layered on top. In the clinics, the hospital and the business office, clerks are constantly scanning ID cards, forms and documents into the system Maniilaq relies on for healthcare IT. The infrastructure lets any user quickly log in at any station in any village and start remote desktop scanning directly into the EMR system.

"Many years ago, we used physical clients with attached scanners," says Hogue. "Then, we began switching out the physical clients that cost about \$1,500 with zero clients that cost about \$300. Besides saving money, we can manage hundreds of desktops with just a handful of images. There's no maintenance on a zero client, and we don't have to worry about users trying to log on to a station that may or may not have their profile on it."

Their infrastructure served them well for 12 years. Until they got new EMR software.

Enter Cerner, 1:1 mapping and the double hop

Maniilaq implemented Cerner Millennium as its new healthcare IT solution, running on a Citrix server. While the new system fit the association's needs for medical records management, it broke Maniilaq's ability to scan documents directly.

"The software is capable of scanning a document directly into a patient's record," says Hogue, "but not with our kind of infrastructure. Cerner requires 1:1 mapping of a scanner, the scanner's TWAIN driver name and the workstation name. All three of those have to be aligned in a database, or else the software won't accept direct scanning. But with our desktop infrastructure, we never know the name of the workstation from one session to the next."

Then, Cerner permitted only a single TWAIN driver on the system. The Maniilaq environment included four different models of Fujitsu scanner. Even though the driver was identical across models, each machine presented a different TWAIN driver name to the scanning software.

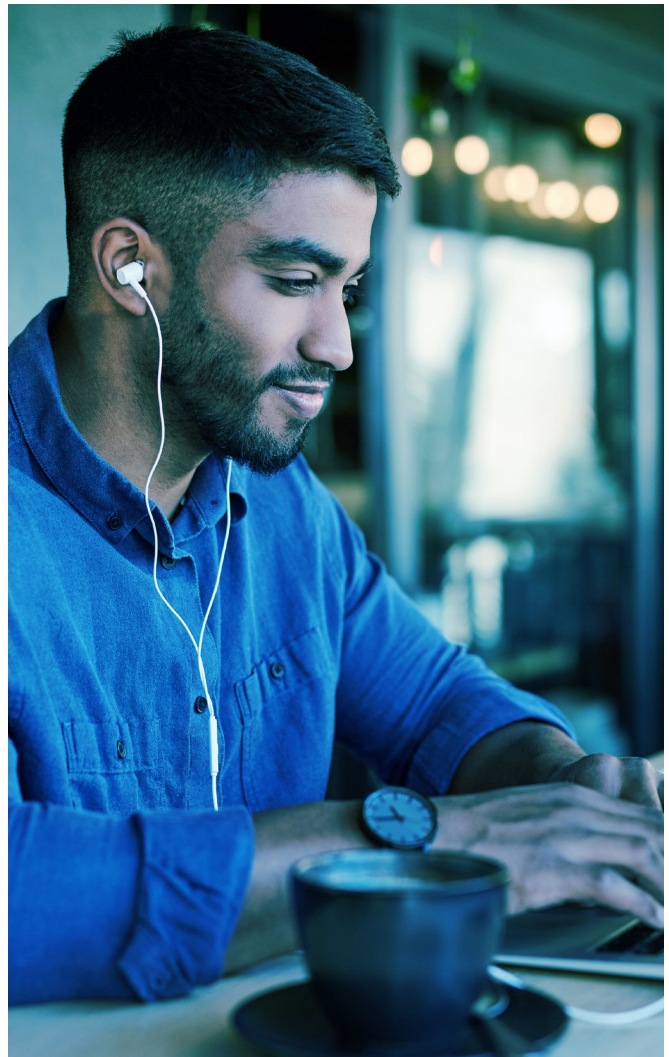
Finally, Maniilaq's infrastructure required a double hop: from the zero client to the virtual desktop in VMware, and from VMware to the Citrix server running Cerner. That meant that there was no direct connection from the user's zero client to the remotely hosted scanning application on Cerner.

Unable to offer the direct scanning to which users had long been accustomed, Hogue faced an unpleasant choice. He decided not to return to the long-gone era of full, physical PCs, with all the associated capital expenses, maintenance and inconsistent desktop experience for his users. And, because of the expense involved in replacing hardware, he opted not to standardize on a single scanner model that would present the same TWAIN driver to Cerner.

Instead, he asked all Maniilaq users to follow a multi-step procedure: They would use NAPS, an open-source scanning program, to scan each document to a file, then go to Cerner and import the file.

"When we initially deployed Cerner," says Hogue, "I presented our scan-and-import procedure to the powers-that-be and they were okay with it. But after a couple of years, our users and department heads got tired of the inefficiency. They wanted to be able to scan documents directly into Cerner. They told me to either figure out something better or spend a load of money and undo the successful, zeroclient infrastructure we had spent years putting in place."

Hogue decided he'd figure something out.



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Wayne Hogue, VMware Administrator | Maniilaq Association

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Finding and implementing RemoteScan Universal User Edition

He evaluated several products for document management and scanning, only to find that he still could not scan documents directly into the EMR system.

Finally, Hogue evaluated RemoteScan Universal User Edition and talked to Quest® technical staff. He asked in passing whether RemoteScan had a way

of presenting any TWAIN driver in the system under a single name. That led to a discussion of Maniilaq's infrastructure and the double hop.

"I hadn't even thought about the double hop," says Hogue, "but when the support representative explained why it was an issue, the light bulb went on over my head. I knew how I could get around that and present a single scanner driver name to Cerner."

Hogue's solution was to run both the RemoteScan server and client on a virtual desktop. Next, he installed the WIA driver, which RemoteScan picked up and presented as a TWAIN driver, simply called "RemoteScan," no matter which scanner model was connected. The single driver name satisfied Cerner, which then allowed direct scanning of documents into the EMR.

Maniilaq saves money and recoups efficiency with RemoteScan

"That got us over the problem," says Hogue. "Any user can now scan directly into Cerner from any station with any of our four scanner models. Our main use case for RemoteScan is to give a consistent TWAIN name no matter which scanner model is behind it. RemoteScan handles it on the server side and all you see on the client is a single RemoteScan icon. There were several ways I could have done this but none of them was as clean and userfriendly as RemoteScan. This solution was surely the best one available for our floating, non-persistent desktops, and I haven't found any disadvantages to it."

Users, of course, are happy that they no longer need to take multiple steps to scan a document into a patient record. Plus, they can still log in to their usual virtual desktop from any office or village. Maniilaq IT gets to run on the same, low-maintenance, low-cost infrastructure as before.

"Without RemoteScan, we'd have had to replace a lot of equipment," says Hogue. "We have 25 stations with attached scanners, so we'd have had to replace those zero clients with PCs, plus scanners in most cases. It would have cost about \$4,000 each for most of our 25 workstations. I know I implemented RemoteScan in a brand-new way, but the software was flexible enough to allow it. That was the big bonus."

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Wayne Hogue, VMware Administrator | Maniilaq Association



About Maniilaq Association

The Maniilaq Association manages social and health services for about 8,000 people in a dozen villages around the Northwest Arctic Borough, near Kotzebue, Alaska. Although the borough is not connected to the rest of Alaska by road, each village has a clinic connected to Kotzebue via satellite and/or microwave.

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Products and Services

- [RemoteScan Universal User Edition](#)

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