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8 Critical Pains with Remote Scanning

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Scanning for the Love of Time, Space, and Budget

From personal use to enterprise-sized businesses, scanning is the new wave of the future. Not only does it play a huge role in the green movement, but it also cuts costs, saves space, and can free up hours of managing high-maintenance printers and storage rooms. Industries that thought they could never go paperless have discovered new technologies that safely and efficiently reduce the use of paper, storage, ink, and man-hours. According to Record Nations, employees actually spend more time searching for files than they spend reading them. Scanning documents into a centralized database is also a great form of disaster recovery planning. If files and filing cabinets were to encounter a fire, flood, or some other unfortunate disaster, that information would most certainly be lost for good. However, that same information scanned and saved to the cloud or similar database outside of the office would be left unscathed.

In addition to scanning, remote access to the workplace has been a big trend in recent years. Mobility of users and applications has become a key aspect of running an efficient business. If a user can get their job done from anywhere they are located, disaster recovery is built-in and productivity is boosted. However, combining the benefits of scanning with those of remote workplace access can result in new headaches.

The ability to scan remotely can improve your office as well as transform the efficiency of your business. Before jumping right in, it's important to understand the problems you may face and be prepared with plausible solutions. Let's take a look at the top eight critical pains associated with remote scanning.

Pain 1: Limitations of TWAIN and WIA

Technology Without An Interesting Name, or TWAIN, is a committee-created standard that has no official testing body. Scanner manufacturers are left to implement the TWAIN standards to their own satisfaction and quirks among TWAIN data sources (drivers) are inevitable. Add non-native, remote scanning into the mix and problems abound. The user's client machine may have the latest driver loaded and the scanner may work perfectly on the local client machine, but when running in a remote session with a different driver and application on the server, the scanner will not work properly. Since TWAIN drivers can have their own User Interface (UI) components, different drivers can have different UI dialogs and this only adds to the user's confusion.

On the other hand, WIA or Windows Image Acquisition, is limited in how many scanners and applications have support for it since it is a newer technology from Microsoft and it will take time before (or if) it unseats TWAIN as the industry leader. In multi-user environments, WIA is limited by its inability to secure scanners between users, meaning each user will see every other users scanner.

Pain 2: Unsupported Scanners

One of the toughest tasks for any remote scanning software package is the ability to cover a wide variety of scanner makes and models. No matter what application software is used, the source of the data (in this case the scanner) has to know how to communicate via a common protocol such as TWAIN or WIA.

For example, many scanners today are TWAIN-only scanners, meaning they will only transmit data recognized in the TWAIN protocol. If the receiving software only supports WIA, it cannot accept the TWAIN data and the transmission is lost.

When you are connected remotely to a Citrix or Microsoft Remote Desktop Server or a VDI workstation, the pain is worsened because you don't have access to install the manufacturer's scanner driver and software on the remote machine. Therefore you are limited by what support is built into those solutions and/or the driver software that your administrator was kind enough to install. Currently both methods are very limited and chances are your scanner won't be available to use remotely.

Pain 3: Complex Scanner Drivers

Like most printers on the market today, scanners and imaging devices come with an abundance of advanced features. Each scanner in an environment is going to have a very specific driver with options, such as automatic image rotation, infrared pixel type, auto-sized images, automatic color detection, and so on. Like printing, these options need to be available both locally and remotely. However, often times these advanced options are not available in remote environments.

The most logical solution is to make sure the software package being used communicates with the scanner so it recognizes the driver, emulates all the features provided, and brings it into the terminal session without losing the ability to deliver all of the required options. Again, making sure that the scanner is TWAIN and/or WIA compatible seems to be an easy task, but with countless imaging products on the market it can become a daunting one for developers.

Universal driver solutions have been tried in the past but they tend to fall short because their solution is also their downfall. Universal drivers simply don't offer robust features or advanced options for users. While simple and easy to set up, a universal driver will only solve the basic problem of bringing over a scanner to a terminal session. What happens when a user needs automatic feed or flatbed switching, or high-resolution pixel detection capabilities that aren't offered on other scanners? The complexity of these drivers can run deep and the software you use will make all the difference.

Pain 4: Limited Citrix TWAIN Support

While Citrix XenApp supports TWAIN devices over an ICA connection, there is a limited list of scanning devices and applications that XenApp supports. To be precise, according to Citrix only five devices and three applications are supported by XenApp. Any other devices or software not included in the ICA-TWAIN compatibility list will have mixed results and 64-bit applications and 16-bit TWAIN drivers are blatantly left unsupported. Often times the administrator will have to troubleshoot and reconfigure settings to allow TWAIN devices to function in Citrix environments. The complexity of supporting TWAIN devices increases as more variables are added to the equation - scanning device, driver format (WIA or TWAIN), driver architecture (16-, 32-, or 64-bit), client OS, server OS, application, and application architecture.

As applications are migrated to RDS computing environments, the administrator must consider and address the complexities to deliver an effective remote scanning solution. Furthermore, as the Citrix environment is upgraded from legacy versions such as Metaframe and Presentation Server to new releases of XenApp and XenDesktop, devices that were supported may no longer be usable.

Ultimately, the limited TWAIN support in Citrix may cause user frustration and lead to a failure in scanning support.

Pain 5: Bandwidth and Speed

Bandwidth was not a concern when scanning and TWAIN technology were originally designed because scanners were connected locally to machines. However, when a scanner is connected to multiple machines via a network, bandwidth suddenly becomes a critical concern. The contents of a scanned document are saved, transmitted, and displayed in an image format. The images are large in size and must be transmitted across the network from the client device to the remote application. This transmission process is taxing on the network and degrades productivity not only for the user doing the scanning but for other users on the network as well. Compression is the only solution to increase scanning speed and reduce bandwidth utilization.

While compression is available for ICA TWAIN redirection, the administrator must choose between image quality and bandwidth utilization. The available selections for compression are "High compression; lower image quality," "Medium compression; good image quality," and "Low compression; best image quality." Reducing the image quality will reduce bandwidth and speed up scanning, but it may have an adverse effect on the document quality or an application's ability to use Optical Character Recognition (OCR). An ideal scanning solution would support lossless compression, optimizing the network traffic and speed without affecting the quality of the scanned content.

Pain 6: Unsupported Applications

In today's society, most application vendors are trying to make their products universal to meet all of the needs of their customers. Whether you have Windows, Mac, Linux, Unix, x86 architecture, x64 architecture, etc., there are certain components in some applications that can cause a problem for remote scanning. For instance, if your scanner does not have a TWAIN or WIA driver, remote scanning can prove difficult at best. If the application you are scanning from does not support the appropriate protocol, it won't be able to see and communicate with your scanner. Other applications may not have the ability to run remote scanning. Some applications are made to work only on a workstation operating system and the coding of these applications may not support remote drivers.

Pain 7: Scanner Security

Support for remote scanning on Microsoft Remote Desktop Services or Citrix XenApp poses an interesting security problem. Many remote scanning solutions allow a user to see scanners in their session as well as scanners connected to other client devices. To make matters even more confusing, if different clients have the same model scanner connected, the names will be identical. How will the user know which scanner is the correct one? What if they choose the wrong scanner and end up scanning and viewing a confidential document?

Pain 8: Enterprise-Class Network Security

There are many hassles to scanning in an enterprise network. One of the first to arise is the limited scanning capabilities if all computers and servers are not connected to the scanner. When a computer is not connected to the scanner, either directly or over the network, the only option available is the email feature, which allows the scan job to be emailed and subsequently saved to the computer.

There are plenty of people who have the scanner connected to their terminal server and are able to complete the scan job there. However, from there the difficulty is getting the scan job back to the local host. There are plenty of time-intensive workarounds such as emailing the scan job, saving the document to a network share, or even carrying it physically with a flash drive. All of these inconveniences can be eliminated with the use of remote scanning.

What You Can Do

The eight pains of remote scanning usually result in confused users, frustrated administrators, and can impede on the success of your business. Most users try to circumvent the pain with costly, time consuming workarounds. Scanning is supposed to make life easier with a simple touch of a button or click of a mouse. But the fact is that there can be just as many problems with scanning as there are problems solved. However, even between homemade workarounds and third party vendors, there aren't many remote scanning solutions that can address all of your scanning problems. That's why triCerat is excited to introduce a simple yet all encompassing solution – triCerat's Scanning technology.

triCerat's Scanning technology eliminates the problems association with TWAIN and WIA compatibility, and also supports all-in-one machines, mixed environments, and allows users to access advanced features. Bandwidth and speed are no longer an issue because triCerat's Scanning technology compresses the file, uploads it directly to document management applications, and enables full fidelity scanning. This not only alleviates user frustration, but also saves system administrators time because it eliminates the need to manage scanner drivers.

Find out how triCerat can simplify your business environment with a one-on-one consultation. Call (800) 582-5167 or visit **www.tricerat.com** to download a FREE 30-day trial or to schedule a demo.

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Collaboratively Written by Ian Anderson, CJ Neuman, Brian Rinebarger, and James Szivos

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By developing simple yet intelligent software, triCerat's solutions prevent known system limitations while maintaining and improving the end users experience.