



Printing in a VDI Environment

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A Typical Day in the Office

The Monday morning management meeting is set to start in a few minutes. Coffee has just finished brewing in the break room and all you have to do is refill your mug and print your presentation on the upcoming business quarter. You press 'Print' and move to grab your mug when a sharp beep sounds and a message appears. Printing error.



How can that be possible when you just printed yesterday without incident? Your heart drops as you look at the clock. Quickly you click 'Fax and Printer Preferences' and find that your designated printer is nowhere to be found. You try to add your printer to the list, but it doesn't appear. It's time for the meeting and you don't have the time to run to your IT department to implore one of the techs to drop what they're doing to help you. Your laptop is at home because you figured you'd have a hard copy of your agenda instead, eliminating the only possibility of bringing your presentation to the meeting. Scribbling some notes from off the top of your head, you drag yourself toward the conference room feeling frustrated and unprepared. What if you forget a crucial topic with all the executives looking to you for answers? What if they want a copy of your agenda and you're faced with making the freshman, "my printer broke" excuse? This is not how you wanted to start your day.

Problems like this happen more often than anyone would like to admit. Imagine employee reactions if this error appeared when printing out a batch of paychecks. Or picture patients in the ER backing up because the spooler crashed and printing wristbands came to a halt. Print delays and crashes affect everyone in the office, not to mention those in charge of fixing them.

Know Your Options

1. The Homemade Workaround

Jane has tried to print an invoice five times but keeps getting the same error message. She calls in Joe for IT support. Joe is extremely busy and decides to create a homemade workaround. At first, it seems to be a cheap remedy because there's no need to hire someone and no need to purchase software. However, in the long run it becomes time consuming for Joe and results in lost productivity. Since the workaround is Joe's personal concoction, if another problem pops up Joe is the only one who can fix it. What happens if Joe has a family emergency and has to take a leave of absence? What if he quits for another job opportunity? Now the company is left to figure out Joe's cryptic script alone.

- quick, cheap fix
- single gatekeeper
- time consuming, lost productivity
- temporary solution, not made to last

2. Hire an Outsourcer to Help

Although Joe created a workaround, everyone in the office seems to be having a similar print problem as Jane. This requires Joe to spend a lot of time on print issues and put a halt on his primary responsibilities. There is discussion about hiring someone to help solve problems on a case-by-case basis. The "solution professional" is called in to help with a major spooler crash but he can't get there until that afternoon. In the meantime, Jane and her coworkers worry about how not being able to print will create major delays in projects, effecting deadlines and, in the end, business. The outsourcer rushes in and out, failing to relay any details of how to fix the problem to anyone in the office. Now the company has created a crutch as no one on the inside learned what caused the problem or how to resolve it in the future.

- expensive solution
- inefficient use of time and money
- knowledge gatekeeper is not within the company

3. Invest in a Third Party Software Solution

After untold hours spent by Joe and the cost of an outsourcer, the company decides to look into a third party software solution. The company values productivity and efficiency but somewhere along the way they've lost touch and it's time to get away from the printer madness. Although there is an initial investment, it is less expensive than the cost of the outsourcer and allows Joe to get back to his responsibilities. Software solutions only require a one-time setup and need little to no maintenance. It is a reliable, preventative approach that will increase the productivity of everyone in the office. The results mean never having to deal with printing problems again. The return on investment is quickly met as time and money are saved!

- solid investment
- one-time setup for a permanent solution
- proactive, rather than reactive approach
- high return on investment

The ScrewDrivers and Simplify Printing Solution

ScrewDrivers, triCerat's signature product, is a standalone technology. It is a driverless print solution that emulates a printer's functionality and eliminates the need for any other print drivers on the virtual desktop.

In a VDI environment, a ScrewDrivers server piece resides on each virtual desktop. The client's end point contains the ScrewDrivers client component. Once the user connects to the virtual channel within an RDP or ICA connection, the local printer is virtualized and made available to applications on the respective server. At login, printer capabilities are passed to the virtual desktop and a copy of the local printer is created for the user. When the print job is initiated, it is compressed using a replacement of EMF, called triMeta Format or TMF. Once the print job is compressed, it is sent back across the ICA/RDP channel and spooled on the end user's server or workstation.

Other main components of ScrewDrivers is its ability to automatically embed fonts not available to the client via MICR technology, reducing font management. TMF, the custom print job, can also stabilize remote printing for limited bandwidth networks, including VPN, ISDN, and dial-up. With the custom naming scheme, you aren't stuck with the default printer names. Some legacy applications have printer name requirements and ScrewDrivers can be customized to support these applications. It supports thin client printing and offers printing for VDI networks.

It's important to remember that no remote print solution is 100% compatible. However, if you encounter output issues with ScrewDrivers there are built-in functions to address these output issues for quick yet effective fixes. These include "Print as Image" as well as "Pre-render Text" options if someone runs into a print job that isn't printing correctly. These functions let Windows do more of the rendering so that the print job is either sent as an image, or the text components of the print job are sent as an image in place of embedding fonts.

In Need of More Control?

Simplify Printing includes all of the features of ScrewDrivers plus the ability to add print server or print cluster printers. It also includes ScrewDrivers v4 Print Server, which can compress data across wide area networks (WANs) for geographic-dispersed networks. The v4 features a PDF print driver with pre-defined customizations which allows the PDF printer to have specific settings for different users. Via a central management console, you can drag and drop printer assignments to any user or group in the organization. The native drivers feature brings the same drag and drop assignment to printers with manufacturer drivers, eliminating the hassle of writing scripts. It supports DOS-based application printing remotely by sending encapsulated print data through the print server communication gateway.

Benefits of ScrewDrivers and Simplify Printing:

- low CPU usage
- reduces bandwidth
- increases print speed
- high quality print jobs
- eliminates print driver and font management
- centralizes all print management to a single console
- no need for "company approved printers"
- great ROI

Simplify Printing accompanied with ScrewDrivers is equipped to combat against any printing fiasco. In addition, triCare Support is always available for you to contact to help troubleshoot any other issues.

Tech Specs

Simplify Printing is compatible with Citrix and Terminal Server, VDI, and workstation environments and runs on Windows 2000, 2003, 2008, 2008R2 servers. It runs on Windows 2000, XP, Vista, Windows 7 clients and in 32-bit and 64-bit environments, as well as mixed environments.

Simplify Printing supports any Windows print drivers that use a print spooler and easily supports x86 and x64 clients. With the ability to compress all print data between nodes, it reduces bandwidth and increases the speed of printing. Simplify Printing communicates directly to Windows print servers and can handle proximity printing (IP-based assignments).

Simplify Printing handles:

- Citrix, TS, VDI, workstations
- Windows 2000, 2003, 2008, 2008R2 servers
- Windows 2000, XP, 2003, 2008, Windows 7 clients
- 32-bit and 64-bit; mixed environments
- Windows print drivers that use a print spooler
- Automates compatibility of x86 and x64 drivers
- Proximity printing (IP-based assignments)

Different Solutions for Different Needs

First and foremost, it is important to understand your environment and be able to recognize any problems you may have. Doing so will give you the power to make an informed decision about a suitable print solution.

triCerat's technology stands out in many ways. One of the main benefits of triCerat's print solution is its adaptability to *all* environments - Terminal Services, workstations, VDI, or Citrix- as well as mixed environments. Competitors use EMF and PDF for printing. However, printing in EMF can cause font and image incompatibilities. It can also hang up the print spooler and delay printing for all users. PDF was not originally designed as a print standard, or built for for streaming. It also doesn't include necessary features to transfer print data with high fidelity and accurate page formatting for specific printers.

ScrewDrivers and Simplify Printing offer a custom file format to pass data called triMeta Format. TMF is triCerat's proprietary vector-based format for printing, which allows our developers to modify the print job in a lightweight universal format. TMF natively supports compression and streaming, which optimizes remote printing speed.

Questions to Ask Yourself:

1. What is your environment?
2. What is the problem?
3. Who is it affecting?
4. How can I fix this quickly - saving time and money?

What If You Need Help?

triCerat's triCare Support provides access to our support staff via email, Internet, and phone. There is no limit to the number of incidents or inquiries that can be opened. Their services include the ability to upgrade software when new versions are made available, access to download links for all triCerat software updates released within the 365-day plan period, access to triCerat's web-based interactive support system, assistance with problems involving the installation or operation of triCerat software, and new customer training in the operation of any triCerat software.

Benefits of tricare[®]support

- Access via email, internet, and phone
- Unlimited number of opened incidents or inquiries
- Ability to upgrade to new software versions
- Access to triCerat's web-based interactive support system
- Assistance with installation and operation
- New customer training of triCerat software
- Extended support is available (including 24/7)
- All support emails are answered within 24 hours

Printing is triCerat's Business

triCerat Offers:

- driverless printing
- mixed environment compatibility
- ease-of-use for admin and end user
- enhanced end user experience
- resolve print spooler issues
- triMeta, triCerat's custom file format
- triCare Support with world wide technical assistance
- one simple solution

Simplify Printing, and all triCerat software, is a seamless and simplified experience to the end user, allowing users to personalize settings and system administrators to make changes without the user even knowing.

Other competitors offer print solution software that is only compatible with their own product. If you need any additional support, such as ICA support, you still have to buy the company's entire print package. This is costly and illogical. No customer should have to purchase additional software, especially not after problems arise from software that is already installed. If you still need to buy a solution for enterprise printing, you might as well invest in the best technology available and not have your hands tied with only one company!



A Look Into triCerat's Future

triCerat's support engineers work closely with developers to use customer feedback to improve our software. triCerat goes above and beyond to use your recommendations to recode their software to best suit your needs.

ScrewDrivers v5

The newest version of ScrewDrivers not only comes with a new and improved TMF print job format, it has features to make printing even easier, including:

- Auditing and monitoring capabilities
- Automatically crops redundant and wasted pages in a printout
- Reduces ink usage
- Cloud-based printing
- Full feature support of printer server printers
- Location-based printing profiles
- Additional configuration options

ScrewDrivers Scanning Edition

Look forward to an additional scanning feature that is simple to install, configure, and use.

- Support document scanners, card scanners, and digital cameras from clients connected to your Citrix/TS farm
- Support remote WIA and TWAIN scanning
- Support all 32- and 64-bit versions of Windows Terminal Services, Remote Desktop, as well as Citrix Presentation Server, XenApp, XenDesktop

ScrewDrivers for Mac Clients

triCerat is excited to introduce our technology to Mac users. ScrewDrivers will support Apple OSX clients over Citrix ICA and provide Mac users with full printing support.

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.