

In-Depth Look @ Printing in Terminal Services Environments

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Introduction

Although the resurgence of terminal environments in the workplace simplified the management of end user systems and applications, it was not designed to properly support a very critical function: printing. Most end users email one another attachments or share drives on the network, however, many of them will also print emails or documents for future reference. Workplace documents do not yet fully exist in soft format; end users still require hard copies. Terminal Services complicates printing because it removes much of the printing process from the client computers. So, what are your options for supporting printing for multiple printers across multiple platforms?

Option 1: Install a Manufacturer's Server-Side Driver for Every Printer

The network administrator could install a printer driver on the server for every printer a user could possibly connect to his local terminal workstation. This solution proves sufficient as long as the printer driver has been tested and does not corrupt for some reason. So, what is the problem with this solution?

- ← A single bad driver could crash the entire server and significantly reduce productivity
- ← IT personnel become burdened with requests for new printer drivers to be added thereby reducing the time they could spend on other projects
- ← Users without an exact match to a printer driver cannot print, so they call technical support for help

Option 2: Autocreation

Microsoft and Citrix, the two primary contenders in Windows-based Terminal Services, created an extension to Option One by automatically installing a printer driver for every client printer. When a user connects to the server, the printer drivers for each of the clients' local printers are automatically installed on the server, given compatible drivers exist on the server. With the autocreation process, printers are typically mapped to tested generic drivers. So, what is the problem with this solution?

- ← If a compatible driver does not exist on the server, the user cannot successfully print
- ← A compatible driver for every local printer a user could attach to the local workstation must be maintained on the server
- ← Sacrifices printing capability and stability

Option 3: "Anything But Universal Printer Drivers"

Citrix and several other third party companies offer alternate printing solutions, each claiming to provide a Universal Printer Driver. These Universal Printer Drivers are built on a single generic driver, a lowest common denominator printer driver. The Citrix UPD solution, available in FR2 of MetaFrame XP, only uses the UPD if MetaFrame cannot find a true driver to autocreate the printer.

The UPD driver only exists because the autocreation of the actual printer failed. So, what is the problem with this solution?

← **Limited Printing Functionality:** One of the biggest drawbacks of a lowest common denominator printer driver is that it limits printing functionality. Different printers allow users to print with different margins, colors, resolution, paper orientation, paper trays, and many other options. The lowest common denominator printer drivers only allow users to access a limited number of these options and in a limited manner. The result? When a user prints a document, it might print only in black and white, stretch across the page, or pull paper from the wrong tray.

← **Data Format Issues:** Some printing solutions use PDF format to provide a lowest common denominator printer driver. These solutions create more hassles than they solve. With these solutions, users must change their behavior by clicking through multiple dialog boxes. Additionally, every time a user prints, a postscript distillation occurs to process the print job and places a processing burden on the server. Finally, these solutions create larger files than the traditional printing process. These larger files clog the network and bandwidth control forces users to wait long periods of time for their print jobs.

Option 4: ScrewDrivers™ v4 A Self-Configuring Printing System

ScrewDrivers v4 revolutionizes the Terminal Services printing paradigm. Instead of providing network administrators with a back-up solution for autocreation failures and bad printer drivers, ScrewDrivers v4 provides the only true Universal Printing Solution: the world's first self-configuring printing system with support for both network and local printers. When the user logs into a Terminal Services session, ScrewDrivers v4 queries the local machine for installed or mapped printers. AutoDriver™ creates the printer functionality required for each of the printers the user can access. When the user prints, the print job is sent to the spooler where ScrewDrivers uses a sophisticated, patent-pending technology to parse the resulting native Windows graphics commands. ScrewDrivers v4 then compresses and sends these same commands from the Terminal Server to the local workstation while maintaining the exact resolution, layout, and color space expected by the user. This technology enables ScrewDrivers v4 to print accurately to any printer, regardless of the language or interface it uses. Users are able to access printer specific features because ScrewDrivers v4 provides a truly universal printing system, not a driver based on the lowest common denominator printer driver. ScrewDrivers v4 supports any printer without ever installing another printer driver on the server.



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