

## Windows Server 2003 Migration

OVERVIEW



As of July 14, 2015, Microsoft will end its support of Windows Server 2003. With that end-of-life (EOL) date upon us, it's time to prepare and migrate to either Windows Server 2008 or Windows Server 2012. Planning ahead for this migration will help ensure that you maintain an up-to-date server environment where you continue to enjoy updates, compliance and support.

### The Problem

Historically speaking, when it comes to server migrations, you've only had two options. The first option is to swap out all old, unsupported servers for newer versions. The second option is data center consolidation.

In this paper, we will take a deeper look at your options and break down the steps involved in each with specific emphasis on available print server migration paths.

### Replacing Old Servers with New Hardware

The biggest problem enterprises encounter when replacing old Windows Server 2003 hardware with Windows Server 2008/2012 is that you need to migrate everything from the 2003 server to the 2008/2012 server. Your 2003 servers potentially have file, print, DHCP, DNS, or other services on them. There are a variety of applications and methods to assist with the transfer of many of these services, but printing remains a particular migration challenge for most organizations.

When it comes to migrating the print service to your new server, here are the steps you'll need to go through:

1. **Create printer objects:** Create the printer object on the new server. To do this you will need to have the following information for each printer: Printer name, printer port value, driver name, and driver settings you want as defaults for when the printer gets installed (duplex option, paper trays, etc.). In addition to the above you will need to download the 64-bit version of the driver from the manufacturer. Herein lies a serious issue with upgrading to 64-bit 2008 or 2012 print servers; the manufacturers don't always make 64-bit versions of the 32-bit drivers. They usually only make 64-bit Universal or Global drivers that support most of their printers. You may think that you can just use the 64-bit Universal or Global driver – but not so fast. Windows print servers will not allow the driver names to be different, they must match exactly. That means you can't use a 32-bit HP LaserJet 4050 PCL 5 driver on the same printer that you want to use the 64-bit HP Universal PCL 5 driver, because the driver names don't match. Windows will let you add the two drivers but it will not associate the 32-bit driver to the printer unless it matches the 64-bit driver name (that is selected for the printer) exactly. So you end up being forced to use the 32-bit HP Universal PCL 5 driver that has the exact same driver name as the 64-bit HP Universal PCL 5 driver. Which leads to the next issue.

- 2. Reconfigure printing defaults:** Since you used new drivers and there is not a method to copy incompatible 32-bit driver settings from your 32-bit print server to your 64-bit print server, you will need to go through each printer on the old print server and record the settings and apply them to the new printers on the new server. Beware, the new universal/global drivers will not support all of the model-specific settings you had. The old drivers were developed for the specific HP 4050 model (in this example), and the new Universal drivers just don't include all the settings the old drivers had.
- 3. Delete end users' old printers and install the new printers:** Now that you have the printers created on the new print server and they are configured with the printing defaults as similar as possible to the old printers, you need to get the users to stop printing to printer objects on their desktops that point to the old print server, and get them to print to printer objects pointing to the printers on the new print server. You can attempt to create a script that says "If find printer A, replace it with printer B", but you will likely hit all kinds of roadblocks at this point. You will quickly find out that printers can be mapped to a print server by short names, long names, and all kinds of other names that somehow at some time resolved to the old print server. Perhaps you will just try to keep the same printer objects, but change the port value to the new print server value. Unfortunately, though, many problems that cause all kinds of printing issues are created when you have mismatching drivers on the desktop that don't map to what the print server expects, remember you had to switch to universal/global drivers in step 1 above. As you can see, this is a nightmare. So, to avoid all the associated problems of trying to change the existing printers to point to the new print server, you could simply script to delete all the printers and tell the users to find the printers in Active Directory and install the new printers from the new print server. This will solve the above problems, but your users will be irritated that they have to install printers again, and your help desk will be buried answering calls to help users find and install their printers.
- 4. Set the default printer:** Once you have helped the users install the new printers, you will also need to deal with the users who do not have the correct default printer set. Hopefully the help desk covered this when they were helping the users install the printers, but if they didn't, users will quickly discover that when they go to the old default printer expecting their print jobs, they won't be there. They might put in a ticket explaining the printer isn't working or they might figure out that the default printer is incorrect, but either way it takes a lot of time to get it figured out.

- 5. Set the printer settings:** Now that the user has their printers back and the correct default printer configured, the next help desk calls will likely go something like this: “I used to have a pre-set configuration that specified to use duplex, a specific confidential watermark, and to use the legal paper in tray 5. Now all my presets are missing. How do I get them back?” The help desk personnel then get to explain that the user has to re-create them. At this point, your help desk personnel are usually met with hostility and terrible feedback. All end users know is that they had their printers removed, had to re-install them, and then had to reconfigure all their old settings – all because of a migration that IT undertook. That leaves a bad taste in their mouths when it comes to IT experiences.

As you can see, this process is both arduous and full of tricky situations that can make your life – and your users’ lives – miserable.

### Data Center Consolidation

Given the difficulties involved in replacing old hardware with new, and the general expense required in having hardware at remote locations (management, security, upgrades, power and air conditioning, etc.), you may want to consider a server consolidation initiative instead. With new technologies it is rather simple to move file services to the datacenter and allow users to access files over better WAN connections (which weren’t available back when the 2003 file servers were put in place). So you may be tempted to consolidate your print servers as well into a single, centralized print server.

But even in this scenario, printing services still pose major problems. Some of the issues you’ll encounter include **all of the above steps** for replacing the 2003 print server, as well as:

- 1. WAN Congestion:** When a print job is sent across a WAN and rendered on a centralized print server, the rendering increases the print job file size significantly (sometimes more than 10X their original size). This causes significant congestion on the WAN when the print job is then sent back across the wan to the physical printer, which causes other WAN-sensitive applications like Citrix and VMware to fail or be significantly impacted.
- 2. Slow Printing:** In addition to causing problems with other WAN-dependent applications, your users will likely grow impatient and frustrated by the increased amount of time it takes to print because the print job has to cross the WAN to the print server, get rendered, then make the second trip across the WAN to the physical printer. This usually results in increased help desk calls and frustration with IT.

3. **WAN Single Point of Failure:** If the WAN ever goes down, then users won't be able to print. This can be solved with redundant WAN connections and higher quality routers that can auto-fail over but now you have additional costs and management.
4. **Print Server Single Point of Failure:** Regardless of the WAN connection, your print server now becomes a single point of failure. This can be mitigated with software that sits in front of two identical print servers, but then the additional software becomes a single point of failure and you now have additional print servers to maintain.

As you can see, these options each have their own problems. With PrinterLogic, though, you can avoid all of the issues above.

### The Solution

At PrinterLogic, our goal is to Eliminate Print Servers. By doing so, we help reduce your help desk calls and save your organization a lot of money. And when it comes to migrating your existing Windows Server 2003 servers to Windows Server 2008 or 2012, our approach can make your life a whole lot easier.

For each of the scenarios above, let's take a look at how PrinterLogic can simplify the process.

#### Eliminating Your Print Servers

When replacing your old servers with new servers, you can easily migrate the file, DNS, DHCP and other roles to the new server. But instead of dealing with the above mentioned problems of migrating the print service role to the new server, you can instead use PrinterLogic to simply convert all existing users' printers to centrally managed direct IP printers, and then manage them via PrinterLogic's web-based administrator. Your users keep all the same printer drivers, printer settings, and default printers. Your users will never notice a change.

#### Centralizing Enterprise Printer Management

If you decide to consolidate your servers, then you can simply migrate the file and DNS roles to the datacenter, then migrate DHCP to the router. After that, you can use PrinterLogic to silently convert your end users' printers to centrally managed IP printers and manage them with PrinterLogic's web-based administrator. Once again, your users keep all the same printer drivers, printer settings, and default printers. Your users will never notice a change. With this solution you eliminate the need for the print server altogether and complete your server-less office or server consolidation/infrastructure initiatives.

Regardless of the size of your business or the complexity of your print environment, and regardless of the approach you decide to take when migrating your Windows Server 2003 servers, PrinterLogic can help you navigate the challenges. We've helped thousands of customers in over 120 countries simplify and streamline their print environments, and we look forward to applying our decade of experience to solving your organization's printer management challenges.

To learn more, or to get started with a free trial, please visit [www.printerlogic.com](http://www.printerlogic.com).