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WHITE PAPER

Remote Printing for Today's Workforce:

How to Achieve Anywhere, Any Device Printing

Process Fusion

A recent study by the Telework Research Network projected a 63% increase in remote working in the US alone in next five years. As enterprise remote workforces continue to grow rapidly through deployment of mobile, insitu, virtual, consultants, contractors and partnership workers; the need to equip them with the ability to print from anywhere, on any device, is now a pre-requisite for effective print infrastructure enablement. But at what cost is this enablement and which tools are available to enable effortless, secure and manageable printing for your remote and mobile users?

Infrastructure Challenges:

Early adopters of remote print enablement quickly noted that such an open approach to virtual print, to and from the print servers in the data centre, carried with it a hefty drawback; that of slow access and printing speed. The lag was attributed principally to bandwidth saturation, as print files passed to, and then from, the data centre to local printers, and frequently doing so at the wrong printer, with users grudgingly waiting. What was needed was an effective way to speed up the data transfer without throwing big money at the infrastructure pipes, across locations and offices. Print management was also a struggle, with any concept of secure, confidential pull printing being hindered with multiple weakness points, as documents are printed to a wrong printer.

Users' requirements however, have remained relatively simple and unwavering, regardless of work location or employment status. They continue to expect the same functionality, speed and familiarity offered back at the base location (wherever that may be), and are oblivious of the IT infrastructure issues unfolding behind the scenes. The heart of the remote/mobile print issue is that while the users are in close proximity to the printers and at their client devices, application processing and print job creation actually occur on the central server housed hundreds of miles away in the data center. The process of accurately routing server-generated print jobs to a client-specified printer can be challenging, labour intensive and extremely ungratifying.

IT Admin & User Challenges:

One option is to allow the remote/mobile users to choose their own printers. But should ITs automatically allow new users, internal or external to the organization, to pick a printer from a drop down menu of options? Another problem here is how to accurately identify which printer these users can output potentially sensitive documents to. Most printers look alike physically, have similar naming conventions and can exist in vast numbers in some organizations. The blasé answer is to offer a printing infrastructure that looks and feels the same regardless of print location. In other words, offer a true universal printing environment with linked queue enablement. But how do you begin to provide such a climate in the constantly changing fat, thin, and mobile computing environments of today?

One answer is to deploy a single virtual print queue that can give users the same fast and seamless printing experience anywhere. How is this achieved? Using a universal printer interface, print jobs are compressed, encrypted and stored on a holding server. Users can choose to release the print document, to the printer and at the time they want, by way of a print authentication device. User-authenticated printing provides the additional benefit of print security, as mobile workers (such as doctors, nurses and other healthcare workers) can use their employee credentials to physically release and pick up the print output on demand, reducing the chances of data breach.

Nevertheless, accurate universal printer identification does not necessarily overcome the user issues of weak performance and frustrating speeds from choked bandwidth and poor processing speeds. Lockton, a global insurance brokerage firm with multi-country operations and workers commuting in between, successfully used print stream compression technology as a simple, low overhead, non-invasive solution to overcome their exceptionally slow printing speeds to several regional offices on the WAN. With Lockton Europe's data centre and print servers located in London, UK, excessive bandwidth was used when uploading and downloading print data caused by bloated native print spool files, resulting in excessively slow printing. By converting print spool files to PDFs whereby print data was compressed by as much as 90%, printing became significantly faster as a result of bandwidth claw back. Reducing bandwidth usage for every print job significantly increases the speed of all print jobs across any network. Remote workers can also preview, print, email as an attachment, or archive each print job in PDF format.

Enhanced Printing in a Virtual-Enabled World

For remote printing in a Citrix XenDesktop, VMware View or Microsoft Hyper-V environment, speed of access and print output security remain high priorities. In the back office within the virtual data centre, solving printer driver incompatibility issues needs to be high on the agenda to enhance and ring-fence server stability. This can be simply facilitated again by replacing the myriad of manufacturer printer drivers with a universal print driver, allowing control of the print landscape with remote deployment, centralized management and end-to-end data protection. It's worth noting from the outset that when virtual images are created, a large number of printer drivers are added to the image, causing increased printer administration due to incompatibility issues and potential problems with corrupt print drivers. To overcome this scenario, savvy virtualization ITs deploy a "golden image" adoption rule achieved again via a universal print driver. Here, regardless of printer makes or model; users working from home, in the head office or at remote sites, print jobs are manipulated via compression into much smaller PDF files which can then be seamlessly redirected to the user's locally-attached printer or to a network printer. Check that any universal print solution you consider works with the latest hypervisors, to deliver consistently fast, secure and future-proofed remote printing.

About Process Fusion

Process Fusion is a software company and a cloud solution provider. We help organizations transform inefficient, paper (labor) intensive business processes into a secure, automated, mobile ready Digital First experience for all participants.

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