

## Re: Redirecting data sent to a local printer to another host and port on the network

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On 25 Jan 2004 12:54:53 -0800, fernandoronci@hotmail.com (Fernando Ronci) wrote:

*>I have a local network with an SCO 5.0.5 server running an accounting  
>application and several windows 98 workstations -each with its own  
>printer- accessing the SCO server via TinyTerm.  
>Here everything works OK. All client workstations have access to the  
>application and print to their respectively attached printers.  
>Also, there are two other Windows 98 workstations (each with its own  
>attached printer too) in a remote branch site, connected to the  
>central site through a cablemodem service provided by an ISP.*

If everything is going to the remote branch office via a single IP address (i.e. you're using NAT/PAT), then you can only have one remote netcat or LPR/LPD printer per IP port number. If you insist on implimenting this nightmare, you need to configure the router at the remote to redirect your netcat traffic to the workstation running the client lpd application. This is one case where using netcat just isn't gonna work.

Also, simply redirecting netcat traffic on port 9100 to port 515 on the client machine is not going to magically turn netcat into a LPR client. Only LPR clients talk to LPD print server daemons. LPR clients also use more than port 515.

*>The goal is to allow users at the remote site (who also access the  
>application on the SCO server via TinyTerm) to print to their local  
>printers.*

Since you're using TinyTerm, you need to setup the OSR5 server lpr print spooler for each Windoze printer. This is fairly trivial with a simple LAN topology, and close to a nightmare when running through multiple routers with NAT/PAT.

<http://www.censoft.com/support/ttip7.php?src=>

I'm not all that familiar with your unspecified Tiny Term version and have no real clue as to how your network topology is arranged, so I

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can't offer any specific port forwarding recommendations. (Hint: No numbers, no specific answers).

*>For one client, the approach taken at the central site was  
>to configure a network printer on the SCO server and point it to a  
>windows 98 machine running a proxy (in this case the product used was  
>'hhproxy' for windows) which maps and forwards all traffic sent to  
>port 515 to the IP address (and port 515) of the actual remote  
>workstation at the branch site where the print job originated.*

The proxy server adds yet another layer of complications to the puzzle. It will also NOT solve the NAT problem. I like the idea, but it just won't work.

*>That  
>remote workstation runs 'winlpd', a windows lpd daemon that catches  
>traffic on port 515 and prints it on its local printer. This is  
>working perfectly well for this 1st remote client workstation.*

Yep. You've apparently successfully redirected port 515 on the router to a specific machine. However, from a single WAN IP address, you can only redirect port 515 to a single Windows workstation. Worse, LPR/LPD opens ports other than 515 which may or may not go through your unspecified make and model of firewall. Basically, lpr/lpd is rather NAT firewall unfriendly. I can usually make it work, but every once in a while, I run into a firewall that hates LPR/LPD.

*>The problem arises when I have to set up printing for the 2nd remote  
>client workstation because the mapping of port 515 already goes to the  
>1st one.*

Yep.

*>Can anyone please tell me what I did wrong or why netcat (and  
>therefore remote printing) is not functioning the way I thought it  
>should ?*

Netcat is not a protocol translator. You can't use it to juggle port numbers. Netcat can be set to use just about any port number. LPR/LPD cannot.

*>What would be the recommended or most appropriate approach  
>for this ?*

I never thought you'd ask. How much \$\$\$ do you have invested in your firewalls? If they are the typical low end Linksys, DLink, or Netgear boxes, toss them and get a VPN firewall and build a real Virtual Private Network. NONE of the issues you're fighting are a problem with VPN's, which deliver the entire office network space to the remote office without any translations or black magic. I maintain one system with 4 remote offices. Since everything appears as one big

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network from anywhere, I have no problems with any software or services. The routers use the IPSec protocol to argue among themselves and deal with security. Therefore, there is no added software on any of the client or server boxes.

I've used a variety of VPN routers for the purpose. My favorite is Sonicwall, but it's rather expensive. There are numerous cheaper models in the \$100-\$200 from the usual bottom of the line router vendors. All that I've tried work fine. If you have some questions on how a VPN works, ask here.

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