

Re: Win2k Internet Connection Sharing: How does it work

Source:

<http://www.tech-archive.net/Archive/Win2000/microsoft.public.win2000.networking/2004-05/0780.html>

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Date: 05/10/04

Date: Mon, 10 May 2004 13:47:35 -0500

"thomas"stopspammers"" <"thomas"stopspammers\ ""@jollans.com> wrote in message news:c7o8rl\$p9f\$03\$1@news.t-online.com...

- > *How does Win2k Internet connection sharing work? Can I access*
- > *Computers _inside_ the LAN from the internet?*

Generally,..No....except there is always a "...but..".

- > *i found out that different comps in the LAN expose the same address to the*
- > *internet. What is that? A normal gateway should give _every_ host an*
- > *internetwide IP address.*

No it wouldn't. It doesn't give Clients anything for that matter. ICS is a light-weight NAT Service (Network Address Translation). All clients appear to the Internet as the IP# of the Gateway itself. It is always the same number, and it is always the number of the public side of the Gateway. All client machines have/get/receive an address from one of the three RFC Private Address ranges (typically 192.168.?.?) and these addresses are not compatible with the Internet.

- > *It can't be a http proxy because other protocols work too and it can't be*
- a
- > *catch-all-proxy, can it?*

No. It is not a "proxy" at all. A "NAT" system, and a "proxying" system are two completely different *competing* technologies. On the surface they appear to produce the same end result, but the methods used are different.

- > *So, is it possible to make services inside the*
- > *LAN available to the world (maybe, if there's no other way, port*
- > *forwarding)?*

I don't know if the ICS of Windows2k can even do it or not, but here is an explanation of the terminology & technology. I never used ICS and have only used the more robust variation of RRAS/NAT in Server2000 & 2003

It exact terminology would vary from manufacturer to manufacturer. They tend to re-write the dictionary to suit themselves and terminology isn't as "standardized" as it should be. But anyway the method to make a private machine within the system available to the outside world would be "Static NAT" or "Port Forwarding" or even a combination of the two. Static NAT focuses on the Layer3 addresses (IP#s) while Port Forwarding focuses on the Layer4 addresses (ports). In most "real life" situations it is a combination of the two but is often still referred to only as "Static NAT" (..that terminology issue again..).

There is another variation of Static called "One-to-One NAT" where everything coming to One public address is passed to One private address without considering the ports at all.

The normal Standard NAT that is commonly used today is really "NAT Overload", but nobody calls it that anymore. The old original standard NAT required the same number of public IP#s as there were clients on the private side. The clients were match one-to-one between their private address and a single public address. Essentially it was identical to the Static One-to-One NAT except that it was dynamic instead of static.

Then someone had the idea of using the random client Source Port # as a "session identifier" to maintain the relationship of the user to their public IP#. This was "NAT Over Load". This method allowed multiple users on a private system to all be able to be NAT'ed at the same time with only a single public IP#. This is the most common method out there now and is pretty much just referred to as simply "NAT" by most people.

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