

Re: Multihomed Win2k Server Routing Issue

Source:

http://www.tech-archive.net/Archive/Win2000/microsoft.public.win2000.ras_routing/2005-05/msg00128.html

- *From:* "Robert L [MS-MVP]" <noreply@xxxxxxxxxxxx>
 - *Date:* Wed, 18 May 2005 22:16:28 -0600
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Did I answer this question before? Think about that the default GW is 192.168.1.1 and all traffic 0.0.0.0 except 192.168.1.x will go to 192.168.1.1. Your Cisco router must have a route point all 0.0.0.0 including 192.168.3.x to outside port. So, you need to add one more route point back to 192.168.1.250 if it goes to 192.168.3.x. The following quotation from <http://www.ChicagoTech.net> may help.

Network Routing Analysis

In our Lab, we have a network small network connecting to our main network through 3COM wireless router and the main network has another Cisco router connecting to the Internet. The computers in the Lab can ping main network computers and the Internet. But computers in the main network can't ping the lab computers. Here are settings:

LAB IP: 192.168.2.0 mask 255.255.255.0, GW (default gateway): 192.168.2.1 connecting to 3com router and then to 10.0.0.100 as GW in main network that 10.0.0.0 and 255.255.0.0. Main network has Cisco router GW is 10.0.0.2.

Analysis 1: before changing the route table, any computers in 192.168.2.0 can access the resources on 10.0.0.0 network and the Internet because all traffic goes to 192.168.2.1 GW to 10.0.0.0 network and then through 10.0.0.2 GW to the Internet. However, computers on network 10.0.0.0 can't access the 192.168.2.0 network because all traffic will go to 10.0.0.2 GW.

Resolutions: all 10.0.0.X clients need to know how to get back to the 192.168.2.0 network. This can be accomplished in several ways:

- 1) Add a GW to each client pointing to 10.0.0.100 by using *add 192.168.2.0 mask 255.255.0.0 10.0.0.100*. Here is the route table after adding the route.

```
=====
Interface List
0x1 ..... MS TCP Loopback interface
0x1000003 ....00 01 03 28 89 cf ..... 3Com EtherLink PCI
0x1000004 ...00 90 27 55 44 07 ..... Intel(R) PRO Adapter
=====
```

```
=====
Active Routes:
Network Destination    Netmask          Gateway          Interface  Mretric
0.0.0.0                0.0.0.0         10.0.0.2        10.0.0.11  1
10.0.0.0              255.255.0.0     10.0.0.11      10.0.0.11  1
=====
```

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```
10.0.0.11 255.255.255.255 127.0.0.1 127.0.0.1 1
10.0.0.20 255.255.255.255 10.0.0.11 10.0.0.11 1
10.255.255.255 255.255.255.255 10.0.0.11 10.0.0.11 1
127.0.0.0 255.0.0.0 127.0.0.1 127.0.0.1 1
192.168.2.0 255.255.255.0 10.0.0.100 10.0.0.11 1
224.0.0.0 224.0.0.0 10.0.0.11 10.0.0.11 1
255.255.255.255 255.255.255.255 10.0.0.11 10.0.0.11 1
Default Gateway: 10.0.0.2
```

=====
Persistent Routes:

None

2) Add route on the Cisco pointing 192.168.2.0 mask 255.255.255.0 10.0.0.100. The client then would send the 192.168.2 traffic to

10.0.0.2 which should then forward the packet to 10.0.0.2 and send the client an ICMP Redirect to use 10.0.0.2 when talking to 192.168.2.x.

3) Also rather than adding static routes, you could configure the 2 routers to dynamically learn each others routes via a routing protocol like RIP or OSPF.

Don't send e-mail or reply to me except you need consulting services. Posting on MS newsgroup will benefit all readers and you may get more help.

Bob Lin, MS-MVP, MCSE & CNE

How to Setup Windows, Network, Remote Access on <http://www.HowToNetworking.com>

Networking, Internet, Routing, VPN Troubleshooting on <http://www.ChicagoTech.net>

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"Uberstein" <pharmboy@xxxxxxxxxxxxx> wrote in message
news:1116469182.414574.22150@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx...

Help!!! I have been tasked with managing a network as follows.

Multihomed Win2k Server, 2 NICs. Approx. 40 client workstations.

On server, NIC 1 (192.168.1 subnet) has address 192.168.1.250, netmask 255.255.255.0. Default gateway is set to 192.168.1.1 (Cisco router). This NIC is connected to an unmanaged switch, which in turn has a bunch of 192.168.1.xx clients connected. These clients have default gateway set to 192.168.1.1, 192.168.1.250 will NOT work for some reason, which seems wrong. The router (which connects in turn to the internet) is also connected to this switch. Router internal address is 192.168.1.1.

NIC 2 (192.168.3 subnet) has address 192.168.3.250 and netmask of 255.255.255.0. NIC 2 is connected to another unmanaged switch, with a bunch of 192.168.3.xx clients connected to it. These machines have default gateway set to 192.168.3.250.

>From any machines in 192.168.3 subnet, I can ping 192.168.1.250, and/or any machine in the 192.168.1.xx subnet no problem...

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The Problem(tm) is when I try pinging 192.168.3.250 (or any machine on the .3 subnet) from ANY machine in the 192.168.1.xx subnet, no go. Times out. With gateway set to 192.168.1.1, tracert (to 192.168.3.250) gets that far (first hop, 192.168.1.1) and no further. With gateway set to 192.168.1.250 (which SEEMS like it ought to work) tracert doesnt even get response on first hop. (Which should be 192.168.1.250). Thing is, I can PING 192.168.1.250 just fine from machines on 192.168.1 subnet, it just refuses to be a gateway.

Also, there is no internet for 192.168.1.xx PC if gateway is set to anything but router internal IP address. Again, it SEEMS like the .1.250 NIC on the server SHOULD be able to route packets from the .1.250 subnet to the ..3.250 subnet and thus serve as a gateway between the subnets like the .3.250 NIC does, but it doesn't.

Routing table for server follows:

Active Routes:

Network	Destination	Netmask	Gateway	Interface	Metric
0.0.0.0	0.0.0.0	0.0.0.0	192.168.1.1	192.168.1.250	1
127.0.0.0	255.0.0.0	255.0.0.0	127.0.0.1	127.0.0.1	1
192.0.0.192	255.255.255.255	255.255.255.255	192.168.1.250	192.168.1.250	1
192.168.1.0	255.255.255.0	255.255.255.0	192.168.1.250	192.168.1.250	1
192.168.1.250	255.255.255.255	255.255.255.255	127.0.0.1	127.0.0.1	1
192.168.1.255	255.255.255.255	255.255.255.255	192.168.1.250	192.168.1.250	1
192.168.3.0	255.255.255.0	255.255.255.0	192.168.3.250	192.168.3.250	1
192.168.3.250	255.255.255.255	255.255.255.255	127.0.0.1	127.0.0.1	1
192.168.3.255	255.255.255.255	255.255.255.255	192.168.3.250	192.168.3.250	1
224.0.0.0	224.0.0.0	224.0.0.0	192.168.1.250	192.168.1.250	1
224.0.0.0	224.0.0.0	224.0.0.0	192.168.3.250	192.168.3.250	1
255.255.255.255	255.255.255.255	255.255.255.255	192.168.1.250	192.168.1.250	1

Default Gateway: 192.168.1.1

Persistent Routes:

None

What can I do to fix this issue?

Any help at all much appreciated, I'm stumped here. Been at this issue for weeks.