

RE: Route added by RRAS that overrides local LAN route on NIC

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*Source:*

<http://www.tech-archive.net/Archive/Windows/microsoft.public.windows.server.sbs/2006-10/msg02107.html>

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- *From:* [v-crinal@xxxxxxxxxxxxxxxxxxxxxxxx](mailto:v-crinal@xxxxxxxxxxxxxxxxxxxxxxxx) ("Crina Li")
  - *Date:* Tue, 10 Oct 2006 07:45:11 GMT
- 

Hi John,

Thanks for your update.

From current situation, please check if you have configured the network correctly on SBS and client computer:

SBS:

IP: Fixed IP address  
Gateway: your Hardware router IP  
DNS: SBS NIC IP as the only entry

In the DNS console (dnsmgmt.msc), right click your ServerName and click properties. In the Forwarders tab, your ISP DNS server IP should be inputted there.

On the client workstation, please make sure the configuration:

IP: Assigned by DHCP on SBS or your hardware router  
Gateway: hardware router  
DNS: SBS INTERNAL NIC IP as the only entry

And then recreate VPN to see if it helps. Please make sure you have disabled the second NIC on the SBS.

Thanks for your time and I look forward to hearing from you.

Best regards,

Crina Li (MSFT)

Microsoft CSS Online Newsgroup Support

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<http://www.microsoft.com/communities/newsgroups/en-us/default.aspx>

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Microsoft engineers can only focus on one issue per thread. Although we provide other information for your reference, we recommend you post different incidents in different threads to keep the thread clean. In doing so, it will ensure your issues are resolved in a timely manner.

For urgent issues, you may want to contact Microsoft CSS directly. Please check <http://support.microsoft.com> for regional support phone numbers.

Any input or comments in this thread are highly appreciated.

=====  
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| Thread-Topic: Route added by RRAS that overrides local LAN route on NIC  
| thread-index: AcbsHRHUAAf6uugcSyW0/DF1OTvIWA==  
| X-WBNR-Posting-Host: 65.184.34.228  
| From: =?Utf-8?B?Sm9obiBQaGlsaXBz?= <JohnPhilips@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>  
| References: <850ACC3C-EA74-409F-9BE7-D86A2147AFF0@xxxxxxxxxxxxxx>  
<wrMbnC36GHA.4348@xxxxxxxxxxxxxxxxxxxxxxxxxx>  
| Subject: RE: Route added by RRAS that overrides local LAN route on NIC  
| Date: Mon, 9 Oct 2006 20:35:02 -0700  
| Lines: 312  
| Message-ID: <D350384D-3067-45AC-A911-C90363B45A1E@xxxxxxxxxxxxxx>  
| MIME-Version: 1.0  
| Content-Type: text/plain;  
| charset="Utf-8"  
| Content-Transfer-Encoding: 7bit  
| X-Newsreader: Microsoft CDO for Windows 2000  
| Content-Class: urn:content-classes:message  
| Importance: normal  
| Priority: normal  
| X-MimeOLE: Produced By Microsoft MimeOLE V6.00.3790.1830  
| Newsgroups: microsoft.public.windows.server.sbs  
| Path: TK2MSFTNGXA01.phx.gbl  
| Xref: TK2MSFTNGXA01.phx.gbl microsoft.public.windows.server.sbs:303842  
| NNTP-Posting-Host: TK2MSFTNGXA01.phx.gbl 10.40.2.250

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| X-Tomcat-NG: microsoft.public.windows.server.sbs

| I am using SBS as the VPN server. This is a router between SBS and the internet that is performing NAT. I have the appropriate ports open and can successfully connect a WinXP RAS client to the VPN server. The problem is

| with the routes that get created on the RRAS when the client connects, not

| getting a successful connection. When the connection is up I can successfully

| get to the SBS server across the VPN. My issue is with the disruption to the

| connectivity to the other PCs on the LAN.

| Let me clarify what's happening with hopes you have seen this before:

| The server has a LAN address of 10.0.0.1 and is on a network 10.0.0.0/24.

| The route I am speaking of is the route to local LAN that is put in the routing table when you configure the NIC. In my case this route looks like

| this:

| Network Dest Netmask Gateway Interface Metric  
| 10.0.0.0 255.255.255.0 10.0.0.1 10.0.0.1 10

| 10.0.0.1 is the LAN address.

| After the RAS client connects there is another route added so the two entries of interest look like this:

| Network Dest Netmask Gateway Interface Metric  
| 10.0.0.0 255.255.255.0 10.0.0.1 10.0.0.1 10 <--this route is always there

| (before and after the VPN client connects)

| 10.0.0.0 255.255.255.0 10.0.0.115 10.0.0.121 1 <--this

| route added when client connects (in addition to the host route that is also

| added like you usually see for each client)

| 10.0.0.115 is the address assigned to the RAS client (using DHCP).

| 10.0.0.121 is the Internal Interface on the server used by RAS. As you can

| see after this route is added the server is routing to 10.0.0.0 via the RAS

| tunnel vs. the LAN Interface so the PCs on the 10.0.0.0/24 local subnet are

| "disconnected" from the server. The only thing I could think of what that this was related to something that is configured automatically since there

| are two NICs in the server, but I ran the the Internet Connection wizard and

| set-up up the server to use one NIC for Internet and LAN.

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```
|
| I was able to pull the ipconfig and routing table (without and with RAS
client
| connected) from the server. They are below.
|
| As you will see by the route table, there is a route as I described .
| Network Destination Netmask Gateway Interface
Metric
| 0.0.0.0 0.0.0.0 10.0.0.254 10.0.0.1
1
| <----- Default route
| 10.0.0.0 255.255.255.0 10.0.0.1 10.0.0.1
10
| <----- Route for interface LAN
|
| After the RAS client connects, I get a 2nd entry for
10.0.0.0/255.255.255.0
| but the gateway is the RAS client's assigned address, the Interface is
the
| RRAS internal interface address, and the metric is 1. This causes the
server
| to route all traffic destined for the local LAN to be routed over the
tunnel
| to the remote client. As expected the resulting effect is the server
cannot
| route packets to any of the machines on the local LAN which is very bad as
| as it breaks the local area network.
|
| Output of ipconfig /all and route print (without RAS client connected).
|
| Windows IP Configuration
|
| Host Name . . . . . : SERVER1
| Primary Dns Suffix . . . . . : kuzma.local
| Node Type . . . . . : Unknown
| IP Routing Enabled. . . . . : Yes
| WINS Proxy Enabled. . . . . : Yes
| DNS Suffix Search List. . . . . : kuzma.local
|
| PPP adapter RAS Server (Dial In) Interface:
|
| Connection-specific DNS Suffix . :
| Description . . . . . : WAN (PPP/SLIP) Interface
| Physical Address. . . . . : 00-53-45-00-00-00
| DHCP Enabled. . . . . : No
| IP Address. . . . . : 10.0.0.121
| Subnet Mask . . . . . : 255.255.255.255
| Default Gateway . . . . . :
| NetBIOS over Tcpip. . . . . : Disabled
|
| Ethernet adapter Server Local Area Connection:
```

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```
|
| Connection-specific DNS Suffix . :
| Description . . . . . : Intel(R) PRO/1000 MT Network
Connection
| Physical Address. . . . . : 00-13-72-F7-3C-AB
| DHCP Enabled. . . . . : No
| IP Address. . . . . : 10.0.0.1
| Subnet Mask . . . . . : 255.255.255.0
| Default Gateway . . . . . : 10.0.0.254
| DNS Servers . . . . . : 10.0.0.1
|
```

```
| C:\Documents and Settings\Administrator>route print (without RAS client
| connected)
```

```
| IPv4 Route Table
```

```
=====
| Interface List
| 0x1 ..... MS TCP Loopback interface
| 0x10002 ...00 53 45 00 00 00 ..... WAN (PPP/SLIP) Interface
| 0x10003 ...00 13 72 f7 3c ab ..... Intel(R) PRO/1000 MT Network
Connection
|
```

```
=====
| Active Routes:
| Network Destination Netmask Gateway Interface
Metric
| 0.0.0.0 0.0.0.0 10.0.0.254 10.0.0.1
1
| 10.0.0.0 255.255.255.0 10.0.0.1 10.0.0.1
10
| 10.0.0.1 255.255.255.255 127.0.0.1 127.0.0.1
10
| 10.0.0.121 255.255.255.255 127.0.0.1 127.0.0.1
50
| 10.255.255.255 255.255.255.255 10.0.0.1 10.0.0.1
10
| 127.0.0.0 255.0.0.0 127.0.0.1 127.0.0.1
1
| 224.0.0.0 240.0.0.0 10.0.0.1 10.0.0.1
10
| 255.255.255.255 255.255.255.255 10.0.0.1 10.0.0.1
1
| Default Gateway: 10.0.0.254
|
```

```
=====
| Persistent Routes:
| None
```

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```
|
| Microsoft Windows [Version 5.2.3790]
| (C) Copyright 1985–2003 Microsoft Corp.
|
| C:\Documents and Settings\Administrator>route print (after RAS client
| connects)
|
| IPv4 Route Table
|
|=====
| Interface List
| 0x1 ..... MS TCP Loopback interface
| 0x10002 ...00 53 45 00 00 00 ..... WAN (PPP/SLIP) Interface
| 0x10003 ...00 13 72 f7 3c ab ..... Intel(R) PRO/1000 MT Network
| Connection
|
|=====
|
|=====
| Active Routes:
| Network Destination Netmask Gateway Interface
| Metric
| 0.0.0.0 0.0.0.0 10.0.0.254 10.0.0.1
| 1
| 10.0.0.0 255.255.255.0 10.0.0.1 10.0.0.1
| 10
| 10.0.0.0 255.255.255.0 10.0.0.115 10.0.0.121
| 1
| <- note this route is added when the RAS client connects which overrides
| the
| route above to the local LAN
| 10.0.0.1 255.255.255.255 127.0.0.1 127.0.0.1
| 10
| 10.0.0.115 255.255.255.255 10.0.0.121 10.0.0.121
| 1
| 10.0.0.121 255.255.255.255 127.0.0.1 127.0.0.1
| 50
| 10.255.255.255 255.255.255.255 10.0.0.1 10.0.0.1
| 10
| 65.184.34.228 255.255.255.255 10.0.0.254 10.0.0.1
| 1
| 127.0.0.0 255.0.0.0 127.0.0.1 127.0.0.1
| 1
| 224.0.0.0 240.0.0.0 10.0.0.1 10.0.0.1
| 10
| 255.255.255.255 255.255.255.255 10.0.0.1 10.0.0.1
| 1
| Default Gateway: 10.0.0.254
|
|=====
| Persistent Routes:
```

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| None

| Have you ever heard of this before. What would be making RRAS add this route?

| Thanks,

| John

| ""Crina Li"" wrote:

| > Hi John,

| >

| > Thank you for posting in SBS newsgroup.

| >

| > I am sorry for the delayed response due to weekend. Please understand that

| > the newsgroups are staffed weekdays by Microsoft Support professionals to

| > answer your systems and applications questions. Your understanding is | > greatly appreciated!

| >

| > From your description, do you mean the LAN clients will lose the connection

| > with SBS if you create VPN to SBS from remote client?

| >

| > To narrow down the problem, would you please help me collect the following

| > information?

| >

| > 1. Are you creating VPN to SBS or router from remote client? It means are

| > you using router or SBS as VPN server?

| > 2. Post the ipconfig/all result from SBS, remote client and LAN client

| > before creating VPN and after creating VPN.

| > 3. Post the route print result.

| >

| > Also, you may need to follow the steps below to configure VPN access on an

| > SBS environment:

| >

| > 1. Run CEICW, follow the wizard and select Enable firewall and then make

| > sure Virtual Private Networking (VPN) is selected in the Services

| > Configuration page. And make sure you have typed the public FQDN of the SBS

| > server on the Web Server Certificate page.

| > 2. Run Remote Access Wizard in Server Management\Internet and

| > E-mail\Configure Remote Access, and select VPN access in the Remote Access

| > Method page. After finishing this wizard, RRAS is configured to allow

| > inbound VPN access, and it can assign IP addresses to the VPN clients

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by

|> using DHCP.

|>

|> Note: When we run the remote access wizard to set up the VPN service, we

|> need to input the public IP address or the public FQDN of the SBS server.

|> We need to make sure that the address can be accessed from the internet.

|>

|> 3. On the VPN client, go to <https://publicFQDN/remote>, clear I'm using a

|> public or shared computer, log in and download Connection Manager.

|> 4. Install Connection Manager on the VPN client.

|> 5. Is there a hardware router installed in front of the SBS server? If so,

|> ensure that the port forwarding for TCP 1723 and GRE port (protocol number

|> 47) are opened. PPTP VPN is negotiating a connection on TCP port 1723 and

|> send data to and from the PPTP server using the GRE protocol (IP Protocol

|> 47, 0x2F if you are looking in Network Monitor). You should open port 1723

|> on the router and also make sure IP Protocol 47 is allowed.

|>

|> I appreciate your time and look forward to hearing from you.

|>

|> Best regards,

|>

|> Crina Li (MSFT)

|>

|> Microsoft CSS Online Newsgroup Support

|>

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|>

|> =====

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|>  
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doing  
|> so, it will ensure your issues are resolved in a timely manner.  
|>  
|> For urgent issues, you may want to contact Microsoft CSS directly.  
Please  
|> check <http://support.microsoft.com> for regional support phone numbers.  
|>  
|> Any input or comments in this thread are highly appreciated.  
|>  
|> =====  
|>  
|> This posting is provided "AS IS" with no warranties, and confers no  
rights.  
|> -----  
|> | Thread-Topic: Route added by RRAS that overrides local LAN route on  
NIC  
|> | thread-index: AcbqJyGWs4FS1gogRLGjAUd4XC/dGA==  
|> | X-WBNR-Posting-Host: 65.184.34.228  
|> | From: =?Utf-8?B?Sm9obiBQaGlsaXBz?=  
<JohnPhilips@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>  
|> | Subject: Route added by RRAS that overrides local LAN route on NIC  
|> | Date: Sat, 7 Oct 2006 08:42:01 -0700  
|> | Lines: 31  
|> | Message-ID: <850ACC3C-EA74-409F-9BE7-D86A2147AFF0@xxxxxxxxxxxx>  
|> | MIME-Version: 1.0  
|> | Content-Type: text/plain;  
|> | charset="Utf-8"  
|> | Content-Transfer-Encoding: 7bit  
|> | X-Newsreader: Microsoft CDO for Windows 2000  
|> | Content-Class: urn:content-classes:message  
|> | Importance: normal  
|> | Priority: normal  
|> | X-MimeOLE: Produced By Microsoft MimeOLE V6.00.3790.1830  
|> | Newsgroups: microsoft.public.windows.server.sbs  
|> | Path: TK2MSFTNGXA01.phx.gbl  
|> | Xref: TK2MSFTNGXA01.phx.gbl microsoft.public.windows.server.sbs:303427  
|> | NNTP-Posting-Host: TK2MSFTNGXA01.phx.gbl 10.40.2.250  
|> | X-Tomcat-NG: microsoft.public.windows.server.sbs  
|> |  
|> | I have a SBS 2003 with dual NICs, but I am running the machine in a  
|> single  
|> | NIC configuration. I have set-up RRAS for remote access, which I  
have  
|> done  
|> | many times before on other machines (both SBS and Win2003). For this  
|> | particular machine, when a RAS client connection, the RRAS on the

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server

|> adds

|> | a 2nd route for the local LAN to the routing stack. With the same  
|> | destination, but with the vpn client's assigned IP address as the  
gateway.

|> |

|> | To illustrate:

|> |

|> | Before the VPN client connects, the routing table contains

10.0.0.0/24

|> with

|> | a gateway of 10.0.0.1 (Server Local Area Connection address) on  
Interface

|> | 10.0.0.1. This entry has a metric of 10.

|> |

|> | After the VPN client connects, the routing table contains a 2nd entry  
of

|> | 10.0.0.0/24 with a gateway of 10.0.0.118 (the address assigned to the  
RAS

|> | client) on interface 10.0.0.121 (RRAS Internal Interface). This

entry

|> has a

|> | metric of 1. Since this route has a lower metric it becomes the

|> preferred

|> | route for the LAN and not of the PCs on the LAN can communicate with  
the

|> | server.

|> |

|> | When the RAS client disconnects the route is removed, and the PC on  
the

|> LAN

|> | can reach the server again. I have dug through the RRAS configs many

|> times

|> | and can't explain this. Does anyone know what could be causing this?

|> Or,

|> | can you provide some pointers on how you control the routes that get

|> added to

|> | the server when a RAS client connects? Also, does anyone know if you  
a

|> | 10.0.0.0 network number is a problem. This is a class A private  
network,

|> and

|> | I normally use 192.168.x.x which is a class C. Could this be some  
issue

|> with

|> | the 10.0.0.0 being treated different due to it's class?

|> |

|> | Thanks,

|> | John

|> |

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|>  
|  
.