

Re: Force IP packets on the wire.

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- *From:* "Volodymyr Shcherbyna" <v_scherbina@xxxxxxxxxxxxxxxxxx>
 - *Date:* Wed, 15 Apr 2009 15:24:21 +0200
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Hello,

- 1) Can the stack optimization be turned off by some configuration value?

I am afraid, no. If it is possible, this would be done by a compilation condition of network stack. I got a similar case in my experience, when Windows was sending the SMB traffic via "optimized" way by sending data via direct send handlers, and not through TDI subsystem, thus the TDI_SEND IRPs were not generated. So, there was a preprocessor definition in code to send via TDI or to send via direct send handlers. Ironically, XP builds of stack were sending via direct send handlers, and Vista – via TDI_SEND IRPs, which probably explains why Vista is so slow :). So I suppose a short answer to your question is: no.

- 2) Are there any reliable 3rd party IP stacks that do not provide this

level

of optimization.

Probably. Never met any ...

- 3) Or write code that the destination IP is spoofed (non-local destination) at the application level and then, at say the NDIS level (or TDI) the IP of the other NIC in the PC is substituted?

This direction could be investigated. I would say you can try to play with passthru NDIS sample, should not take much time to write a prototype.

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"Thomas" <stephen.wheeler@xxxxxxxxxxxx> wrote in message
news:edp0k1QvJHA.228@xxxxxxxxxxxxxxxxxxxxxxxxxxxx

Thank you for your reply.

You confirm my understanding. However I have 3 follow on questions.

- 1) Can the stack optimization be turned off by some configuration value?
- 2) Are there any reliable 3rd party IP stacks that do not provide this level of optimization.
- 3) Or write code that the destination IP is spoofed (non-local destination) at the application level and then, at say the NDIS level (or TDI) the IP of the other NIC in the PC is substituted?

Thanks.

"Volodymyr Shcherbyna" <v_scherbina@xxxxxxxxxxxx> wrote in message
news:eV0\$g7NvJHA.4956@xxxxxxxxxxxxxxxxxxxxxxxxxxxx

It would not work within one machine, i.e. if you try to connect to IP which belongs to your own machine stack will optimize the call, and there will be no data on the wire, however, there will be some traces on TDI level (i.e., TDI_CONNECT and completion routine will be called), but on NDIS there will be void.

Use another machine ...

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"Thomas" <stephen.wheeler@xxxxxxxxxxxx> wrote in message
news:u661WbFuJHA.1088@xxxxxxxxxxxxxxxxxxxxxxxxxxxx

I am sure this has been addressed before but I can not find a reference to a solution. I am writing a network test tool for testing a networked device (kind of like a switch). The tool will use 1 PC that will have multiple (4) NIC's and each NIC may have quad ethernet ports. I want to send IP (TCP/UDP) traffic from one port to another through my network device. I

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recall that WinSock will "short circuit" the packet in this case and the traffic will not appear on the wire (nored through my network device). Is there a way to force WinSock to send IP traffic via the wire and not via internal routing. I have been able to send traffic via a layer 2 NDIS driver but I want to support true IP type connections for example TCP handshake.

Thanks