

NAT – The Motion Picture – The Script

Welcome to NAT, the motion picture, brought to you by draytek.co.uk

In this short animation, we'll show how a PC, connected to your Vigor router requests and then displays a web site, passing from your private network, onto the public Internet, and then back inside your own network.

You'll also see you how the NAT facility helps protect against rogue or unsolicited packets.

[Image : Google's Front Page.]

A PC user on your LAN enters a web address into his or her browser.

[Image : The back of the PC and an Ethernet Cable]

The PC sends a page request out, via its default gateway. in this case, your Vigor router.

[Image Vigor Router. Packet wanders up to NAT table and gets scanned]

The Vigor router examines the page request.....and adds the record into the NAT Active Sessions Table. The NAT Sessions Table can hold thousands of records simultaneously.

In order to pass the page request out onto the Internet, the Vigor translates the page request.

Firstly, the Vigor replaces the private source IP address with the router's public IP address. Secondly, the Vigor adds a pseudo port to the request in order to mark it for identification upon its return journey, as we'll see later.

The page request packet is then sent onward to the Internet.

[Image : Packet leaves router, passing evil packet as it does so]

Any incoming data packets are examined and compared to the information held in the NAT table.

[Image : NAT table scanned, no match found, siren sounds]

Any unrecognised packets are destroyed.

[Sound Effect : Evil packet says “Oh oh!”]

[Image : Evil packet is destroyed, leaving only his shoes. Good packet returns from the Internet and gets scanned]

Where an incoming packet does match a NAT table entry, the packet is translated back into a local packet...

[Image : NAT table is examined]

...replacing the destination address with the originating PC's own IP address.

[Image : Packet wanders off back out of the router, towards the LAN]

The packet, or packets, now containing the requested web page are then forwarded back to the originating PC, there the web page will then appear for the user.

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