

TraceRouteSix

Traceroute6

Traceroute6 uses the Hop-Limit field of the IPv6 protocol to elicit an ICMPv6 Time Exceeded ICMPv6 message from each gateway ("hop") along the path to some host. Just as with *traceroute*, it prints the route to the given destination and the RTT to each gateway/router.

The following are a list of possible errors that may appear after the RTT for a gateway (especially for OSes that use the [KAME](#) IPv6 network stack, such as the BSDs):

!N : No route to host

!P : Administratively prohibited (i.e. Blocked by a firewall, but the firewall issues an ICMPv6 message to the originating host to inform them of this)

!S : Not a Neighbour

!A : Address unreachable

! : The hop-limit is ≤ 1 on a Port Unreachable ICMPv6 message. This means that the packet got to its destination, but that the reply only had a hop-limit large enough that was just large enough to allow it to get back to the source of the *traceroute6*. This option was more interesting in IPv4, where bugs in some implementations of the IP stack could be identified by this behaviour.

Traceroute6 can also be specified to use ICMPv6 Echo messages to send the probe packets, instead of the default UDP probes, by specifying the `-I` flag when running the program. This may be useful in situations where UDP packets are blocked by a packet filter or firewall, while ICMP ECHO requests are permitted.

Note that on some systems, notably Sun's Solaris (see [SolarisTraceroute](#)), IPv6 functionality is integrated in the normal *traceroute* program.

– Main.TobyRodwell - 06 Apr 2005

-- Main.SimonLeinen - 26 Feb 2006