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Raisanen, Vilho Implementing service quality in IP networks Wiley c2003. TK 5105.5 R35

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Banzon, Peter Antonio B. Experimental analysis of the performance of new TCP extensions over hybrid satellite networks LG 995 2001 E64 B35

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Donahoo, Michael J. TCP/IP sockets in C practical guide for programmers. Morgan Kaufmann c2009.

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This pathfinder contains suggested materials on TCP/IP that are available at the College of Engineering Library II. However, some references were not included.

We welcome suggestions for new pathfinder topics.

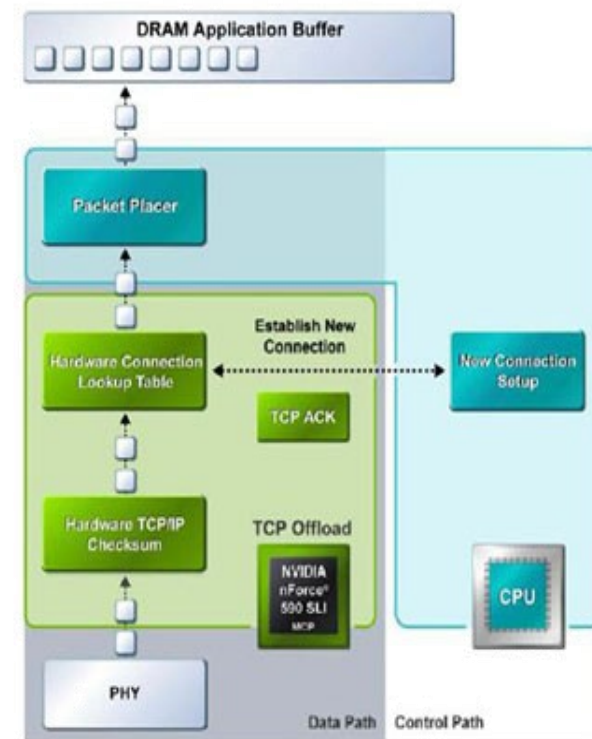
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http://www.firingsquad.com/hardware/socket_am2_chipset_showdown/images/TCP_IP_nVidia.jpg

PATHFINDER

TCP/IP



What is TCP/IP?

(http://www.webopedia.com/TERM/T/TCP_IP.html)

- (pronounced as separate letters) Short for **Transmission Control Protocol / Internet Protocol**, the suite of communications protocols used to connect hosts on the Internet. TCP/IP uses several protocols, the two main ones being TCP and IP. **TCP/IP** is built into the UNIX operating system and is used by the Internet, making it the de facto standard for transmitting data over networks. Even network operating systems that have their own protocols, such as Netware, also support TCP/IP.

TCP (<http://www.webopedia.com/TERM/T/TCP.html>)

- Abbreviation of Transmission Control Protocol, and pronounced as separate letters.

- is one of the main protocols in TCP/IP networks. Whereas the IP protocol deals only with packets, TCP enables two hosts to establish a connection and exchange streams of data. TCP guarantees delivery of data and also guarantees that packets will be delivered in the same order in which they were sent.

IP

(<http://www.webopedia.com/TERM/I/IP.html>)

- (pronounced as separate letters) Short for Internet Protocol. IP specifies the format of packets, also called datagrams, and the addressing scheme. Most networks combine IP with a higher-level protocol called Transmission Control Protocol (TCP), which establishes a virtual connection between a destination and a source.

- IP by itself is something like the postal system. It allows you to address a package and drop it in the system, but there's no direct link between you and the recipient. TCP/IP, on the other hand, establishes a connection between two hosts so that they can send messages back and forth for a period of time.

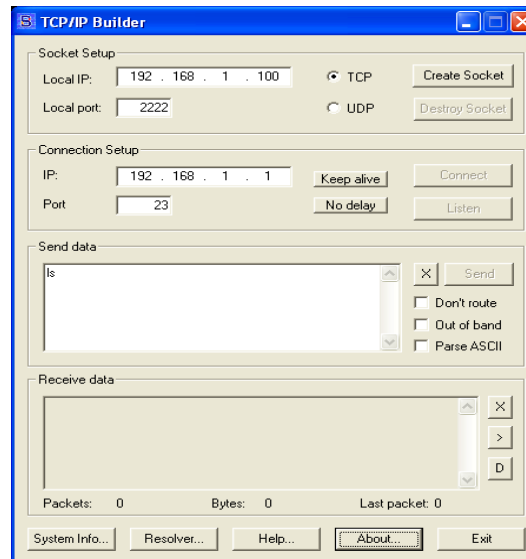
- The current version of IP is IPv4. A new version, called IPv6 or IPng.

What is IPv6?*

IPv6 is short for "Internet Protocol Version 6". IPv6 is the "next generation" protocol designed by the **IETF** to replace the current version Internet Protocol, IP Version 4 ("IPv4").

Most of today's internet uses IPv4, which is now nearly twenty years old. IPv4 has been remarkably resilient in spite of its age, but it is beginning to have problems. Most importantly, there is a growing shortage of IPv4 addresses, which are needed by all new machines added to the Internet.

IPv6 fixes a number of problems in IPv4, such as the limited number of available IPv4 addresses. It also adds many improvements to IPv4 in areas such as routing and network autoconfiguration. IPv6 is expected to gradually replace IPv4, with the two coexisting for a number of years during a transition period. (*Source: <http://www.ipv6.org/>)



TCP/IP Builder: <http://www.drk.com.ar/builder/Builder.PNG>

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