TCP/IP Packets: How AppleTalk Encapsulation Works (11/94)

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TOPIC ---

TCP/IP packets are encapsulated in an AppleTalk packet for transmission over an AppleTalk network (for example, LocalTalk). When a router ships this encapsulated packet to the recipient Macintosh, how does the Macintosh know how to strip off the TCP/IP packet surrounding the data?

The Macintosh must know how to strip off AppleTalk packet information to get at the data, but what happens to the TCP/IP packet stored within that? If something, like MacTCP, is installed, this could take care of it. However, how does the GatorBox manage this, because the Macintosh can use NFS servers as AFP servers with no additional software other than the AppleShare workstation drivers installed?

DISCUSSION ---

As you stated, when the Macintosh receives TCP/IP packets encapsulated within AppleTalk packets, two steps are taken. The first is the stripping of the AppleTalk information and the passing of the enclosed data to the appropriate communications application or driver.

The second step is the interpretation of the TCP/IP packets by the receiving program. If you are using MacTCP, it handles the TCP/IP information in the same way that the AppleTalk drivers handle the AppleTalk information. If you are using an application that is not using MacTCP, like NCSA Telnet, then the application is responsible for providing the same functionality as that provided by MacTCP.

A GatorBox or similar device acts as a higher-level gateway. It translates NFS (Network File System) protocols into AFP (AppleTalk Filing Protocol) and presents it to a Macintosh. The Macintosh "sees" an AppleShare server and sends AFP requests to that server. These AFP requests are translated into NFS requests by the GatorBox software and are then sent to the host.

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