

NETWORK DEVICES WITH PROXY ADDRESS RESOLUTION PROTOCOL

ABSTRACT

A network device includes a proxy ARP (address resolution protocol)
5 unit for comparing a target IP (Internet protocol) address contained in an
ARP request frame with a first set of IP addresses in a proxy ARP table of
the proxy ARP unit, and for generating an ARP reply frame containing a
MAC (media access control) address of the network device according to a
result of the comparison. In addition, the network device includes a routing
10 table for storing a second set of IP addresses for IP packet routing.
Furthermore, the network device includes a processing unit coupled
between the proxy ARP unit and the routing table. The processing unit is
operable for receiving the ARP request frame, assigning an IP address to a
host logging onto the network device, and updating the assigned IP
15 address into the proxy ARP table and the routing table respectively.

Figure 1