

ARP

Section: Linux Programmer's Manual (8)

NAME

arp - manipulate the system ARP cache

SYNOPSIS

arp [-vn] [-H type] [-i if] -a [hostname]

arp [-v] [-i if] -d hostname [pub]

arp [-v] [-H type] [-i if] -s hostname hw_addr [temp]

arp [-v] [-H type] [-i if] -s hostname hw_addr [netmask nm] pub

arp [-v] [-H type] [-i if] -Ds hostname ifa [netmask nm] pub

arp [-vnD] [-H type] [-i if] -f [filename]

DESCRIPTION

Arp manipulates the kernel's ARP cache in various ways. The primary options are clearing an address mapping entry and manually setting up one. For debugging purposes, the **arp** program also allows a complete dump of the ARP cache.

OPTIONS

-v, --verbose

Tell the user what is going on by being verbose.

-n, --numeric

shows numerical addresses instead of trying to determine symbolic host, port or user names.

-H type, --hw-type type

When setting or reading the ARP cache, this optional parameter tells **arp** which class of entries it should check for. The default value of this

parameter is **ether** (i.e. hardware code 0x01 for IEEE 802.3 10Mbps Ethernet). Other values might include network technologies such as ARCnet (**arcnet**) , PRONet (**pronet**) , AX.25 (**ax25**) and NET/ROM (**netrom**).

-a [hostname], --display [hostname]

Shows the entries of the specified hosts. If the **hostname** parameter is not used, **all** entries will be displayed.

-d hostname, --delete hostname

Remove any entry for the specified host. This can be used if the indicated host is brought down, for example.

-D, --use-device

Use the interface **ifa**'s hardware address.

-i If, --device If

Select an interface. When dumping the ARP cache only entries matching the specified interface will be printed. When setting a permanent or **temp** ARP entry this interface will be associated with the entry; if this option is not used, the kernel will guess based on the routing table. For **pub** entries the specified interface is the interface on which ARP requests will be answered.

NOTE: This has to be different from the interface to which the IP datagrams will be routed.

-s hostname hw_addr, --set hostname

Manually create an ARP address mapping entry for host **hostname** with hardware address set to **hw_addr** class, but for most classes one can assume that the usual presentation can be used. For the Ethernet class, this is 6 bytes in hexadecimal, separated by colons. When adding proxy arp entries (that is those with the **publish** flag set a **netmask** may be specified to proxy arp for entire subnets. This is not good practice, but is supported by older kernels because it can be useful. If the **temp** flag is not supplied entries will be permanent stored into the ARP cache.

NOTE: As of kernel 2.2.0 it is no longer possible to set an ARP entry for an entire subnet. Linux instead does automagic proxy arp when a route exists and it is forwarding. See [arp\(7\)](#) for details. Also the **dontpub** option which is available for delete and set operations cannot be used with 2.4 and newer kernels.

-f filename, --file filename

Similar to the **-s** option, only this time the address info is taken from file **filename** set up. The name of the data file is very often */etc/ethers*, but this is not official. If no filename is specified */etc/ethers* is used as default.

The format of the file is simple; it only contains ASCII text lines with a hostname, and a hardware address separated by whitespace.

Additionally the **pub**, **temp** and **netmask** flags can be used.

In all places where a **hostname** is expected, one can also enter an **IP address** in dotted-decimal notation.

As a special case for compatibility the order of the hostname and the hardware address can be exchanged.

Each complete entry in the ARP cache will be marked with the **C** flag.
Permanent entries are marked with **M** and published entries have the **P** flag.

FILES

/proc/net/arp,
/etc/networks
/etc/hosts
/etc/ethers

SEE ALSO

[rarp\(8\)](#), [route\(8\)](#), [ifconfig\(8\)](#), [netstat\(8\)](#)

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