NAME

in.rdisc, rdisc – network router discovery daemon

SYNOPSIS

/usr/sbin/in.rdisc [**–a**] [**–f**] [**–s**] [*send-address*] [*receive-address*]

/usr/sbin/in.rdisc **–r** [**–p** *preference*] [**–T** *interval*] [*send-address*] [*receive-address*]

AVAILABILITY

SUNWcsu

DESCRIPTION

in.rdisc implements the ICMP router discovery protocol. The first form of the command is used on hosts and the second form is used on routers. On a host, **in.rdisc** is invoked at boot time to populate the network routing tables with default routes. On a router, it is also invoked at boot time in order to start advertising the router to all the hosts.

Host (First Form)

On a host, **in.rdisc** listens on the **ALL_HOSTS** (224.0.0.1) multicast address for **ROUTER_ADVERTISE** messages from routers. The received messages are handled by first ignoring those listed router addresses with which the host does not share a network. Among the remaining addresses, the ones with the highest preference are selected as default routers and a default route is entered in the kernel routing table for each one of them.

Optionally, **in.rdisc** can avoid waiting for routers to announce themselves by sending out a few **ROUTER_SOLICITATION** messages to the **ALL_ROUTERS** (224.0.0.2) multicast address when it is started.

A timer is associated with each router address. The address will no longer be considered for inclusion in the routing tables if the timer expires before a new *advertise* message is received from the router. The address will also be excluded from consideration if the host receives an *advertise* message with the preference being maximally negative.

Router (Second Form)

When **in.rdisc** is started on a router, it uses the **SIOCGIFCONF** **ioctl**(2) to find the interfaces configured into the system and it starts listening on the **ALL_ROUTERS** multicast address on all the interfaces that support multicast. It sends out *advertise* messages to the **ALL_HOSTS** multicast address advertising all its **IP** addresses. A few initial *advertise* messages are sent out during the first 30 seconds and after that it will transmit *advertise* messages approximately every 600 seconds.

When **in.rdisc** receives a *solicitation* message, it sends an *advertise* message to the host that sent the *solicitation* message.

When **in.rdisc** is terminated by a signal, it sends out an *advertise* message with the preference being maximally negative.

OPTIONS

–a Accept all routers independent of the preference they have in their *advertise* messages. Normally, **in.rdisc** only accepts (and enters in the kernel routing tables) the router or routers with the highest preference.

–f Run **in.rdisc** forever even if no routers are found. Normally, **in.rdisc** gives up if it has not received any *advertise* message after soliciting three times, in which case it exits with a non-zero exit code. If **–f** is not specified in the first form then **–s** must be specified.

–r Act as a router, rather than a host.

–s Send three *solicitation* messages initially to quickly discover the routers when the system is booted. When **–s** is specified, **in.rdisc** exits with a non-zero exit code if it can not find any routers. This can be overridden with the **–f** option.

–p *preference* Set the preference transmitted in the *solicitation* messages. The default is zero.

–T *interval* Set the interval between transmitting the *advertise* messages. The default time is 600 seconds.

SEE ALSO

in.routed(1M), **ioctl**(2), **icmp**(7P), **inet**(7P)

Deering, S.E.,ed ''*ICMP Router Discovery Messages*,'' RFC 1256, Network Information Center, SRI International, Menlo Park, Calif., September 1991.