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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'mii-diag.8' command

$ man mii-diag.8

MII-DIAG(8) System Manager's Manual MII-DIAG(8)

NAME

mii-diag - Network adapter control and monitoring

SYNOPSIS

mii-diag [options]<interface>

DESCRIPTION

This manual page documents briefly the mii-diag network adapter control and monitoring command. Addition documentation is available from http://scyld.com/diag/index.html.

This mii-diag command configures, controls and monitors the transceiver management registers for network interfaces, and configures driver op? erational parameters. For transceiver control mii-diag uses the Media Independent Interface (MII) standard (thus the command name). It also has additional Linux-specific controls to communicate parameters such as message enable settings and buffer sizes to the underlying device driver.

The MII standard defines registers that control and report network transceiver capabilities, link settings and errors. Examples are link speed, duplex, capabilities advertised to the link partner, status LED indications and link error counters.

OPTIONS

The mii-diag command supports both single character and long option names. Short options use a single dash (?-?) in front of the option

character. For options without parameters, multiple options may be concatenated after a single dash. Long options are prefixed by two dashes (?--?), and may be abbreviated with a unique prefix. A long op? tion may take a parameter of the form --arg=param or --arg param.

A summary of options is as follows.

-A, --advertise <speed|setting>

-F, --fixed-speed <speed|setting>

Speed is one of: 100baseT4, 100baseTx, 100baseTx-FD, 100baseTx-HD, 10baseT, 10baseT-FD, 10baseT-HD. For more precise control an explicit numeric register setting is also allowed.

-a, --all-interfaces

Show the status of all interfaces. This option is not recom? mended with any other option, especially ones that change set? tings.

-s,--status

Return exit status 2 if there is no link beat.

-D Increase the debugging level. This may be used to understand the actions the command is taking.

-g, --read-parameters

Show driver-specific parameters.

-G, --set-parameters value[,value...]

Set driver-specific parameters. Set a adapter-specific parame? ters. Parameters are comma separated, with missing elements re? taining the existing value.

-v Increase the verbosity level. Additional "-v" options increase the level further.

-V Show the program version information.

-w, --watch

Continuously monitor the transceiver and report changes.

-? Emit usage information.

DESCRIPTION

Calling the command with just the interface name produces extensive output describing the transceiver capabilities, configuration and cur?

rent status.

The '--monitor' option allows scripting link beat changes.

This option is similar to --watch, but with lower overhead and simpli?

fied output. It polls the interface only once a second and the output

format is a single line per link change with three fixed words

<unknown|down||negotiating|up> <STATUS> <PARTNER-CAP>

Example output: mii-diag --monitor eth0

```
down         0x7809 0x0000
negotiating  0x7829 0x45e1
up           0x782d 0x45e1
down         0x7809 0x0000
```

This may be used as

```
mii-diag --monitor eth0 |
  while read linkstatus bmsr linkpar; do
   case $linkstatus in
     up)   ifup eth0 ;;
     down) ifdown eth0 ;;
   esac
  done
```

It may be useful to shorten the DHCP client daemon timeout if it does

not receive an address by adding the following setting to /etc/syscon?

fig/network: DHCPCDARGS="-t 3"

SEE ALSO

ether-wake(8),net-diag(8),mii-tool(8).

Addition documentation is available from http://scyld.com/diag/in?

dex.html.

KNOWN BUGS

The --all-interfaces option is quirky. There are very few settings

that are usefully applied to all interfaces.

AUTHOR

The manual pages, diagnostic commands, and many of the underlying Linux

network drivers were written by Donald Becker for the Scyld Beowulf(?)

cluster system.