

Modifying Intel e1000 Driver Parameters

Overview

This document outlines modifying Intel e1000 driver parameters in order to fix the speed and or duplex of Intel Gigabit network interface cards on Linux based systems.

Extract

Command Line Parameters

Duplex (adapters using copper connections only)

Valid Range: 0-2 (0=auto-negotiate, 1=half, 2=full)

Default Value: 0

Defines the direction in which data is allowed to flow. Can be either one or two-directional. If both Duplex and the link partner are set to auto-negotiate, the board auto-detects the correct duplex. If the link partner is forced (either full or half), Duplex defaults to half-duplex.

Speed (adapters using copper connections only)

Valid Settings: 0, 10, 100, 1000

Default Value: 0 (auto-negotiate at all supported speeds)

Speed forces the line speed to the specified value in megabits per second(Mbps). If this parameter is not specified or is set to 0 and the link partner is set to auto-negotiate, the board will autodetect the correct speed. Duplex must also be set when Speed is set to either 10 or 100.

Modifying Intel e1000 Driver Parameters

To modify the settings for the Intel e1000 driver, edit the `/etc/modules.conf` file.

1. Edit the `/etc/modules.conf` file with the vi editor

```
vi /etc/modules.conf
```

2. Apply the desired variables to the `options e1000` line in the following format:

```
options e1000 Duplex=2 <options directive> <driver> <parameter>=<variable>,<variable>
```

Where `<variable>`, `<variable>` represents `device1,device2`. If there is not already an `options` line then create one:

- In *insert* mode, navigate to the end of the last line.
- Press enter to create a new line.
- Add the options line as specified above

For example, to set the speed to 100 Mbps, Full duplex for one Ethernet port, edit the `options e1000` line to reads the following:

Note: The parameters are case sensitive.

```
options e1000 Duplex=2 Speed=100
```

3. Save the changes and exit

4. Reboot the system

Modifying Intel e1000 Driver Parameters

Document Revision B

Date: 16th May 2003

Document Author & Designer: Matthew R Richards

ContentKeeper Technologies

218 Northbourne Avenue

Braddon ACT 2612

Australia

PH +61-2-62614950

Fax +61-2-62579801

info@ContentKeeper.com

www.ContentKeeper.com