

# Appendix E

## Logging and Tracing

This appendix contains instructions for using the HP/UX logging and tracing tools. For a complete description, see the HP/UX man pages.

### Logging

You can log messages that record events such as errors, warnings, and state transitions. Logging starts automatically when the system boots. With an additional command, you can specify the kind of messages to log, and for what entity. For example, the following command logs FDDI disaster and warning messages:

```
nettl -log disaster warning -entity fddi
```

Other classes of messages include error and information messages. For a description of the classes, see the section “Message Summary” later in this chapter.

Messages are logged to the default log file `/usr/adm/nettl.LOG00`.

For the system to find the correct message file in HP-UX 9.01 installations, make the following modifications:

**Step 1** Add the following line to `/etc/src/sh`:

```
LANG=C;export LANG
```

**Step 2** Add the following line to `/.cshrc`:

```
setenv LANG C
```

You should also make this change to the `.cshrc` of each additional user who will use logging and tracing.

**Step 3** Add the following lines to `/.profile`:

```
LANG= C
export LANG
```

You should also make this change to the `.profile` of each additional user who will use logging and tracing.

## Viewing Log Data

Use the HP/UX **netfmt** command to view logged data. The following command displays messages logged to the default log file:

```
netfmt -f /usr/adm/nett1.LOG00
```

## Message Summary

This section contains a summary of the kinds of messages you could encounter. Messages are divided into four classes:

- Disaster (60xx)—Indicates events that may cause serious system or network problems. If you see a disaster message, you should take the station offline until you can determine what the problem is and correct it.
- Error (61xx)—Indicates events that do not affect overall performance, but may cause applications to fail or crash.
- Warning (63xx)—Indicates events that the network may recover from without user intervention.
- Information (66xx)—Indicates events that cause state changes in the network.

## Disaster Messages

6000 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* detected an error in the power-on diagnostic self-tests. The status field *0x%x* indicates the nature of the error.

6001 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* did not receive a watchdog response within a timer value set by the driver. The counter field *%d* indicates the cumulative number of times this has occurred.

6002 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* received notification that the node processor on the adapter had a fatal exception. The status field *0x%x* indicates the type of exception.

## Error Message

6100 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* detected a DMA error in a transfer across the EISA bus. The status field *0x%x* indicates the type of error.

## Warning Messages

6300 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* has lost ringop status on the FDDI ring. The counter field *%d* indicates the cumulative number of times this has occurred.

6301 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* received an error allocating buffer space (mbufs) for a packet. The packet for which this error occurred has been dropped. The counter field *%d* indicates the cumulative number of times this has occurred.

6302 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* received an error allocating a transmit buffer descriptor for a packet. The packet for which this error occurred has been dropped. The counter field *%d* indicates the cumulative number of times this has occurred.

6303 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* received a packet with a frame status error indication. The status field *0x%x* indicates the type of error.

6304 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* received an error writing a command to the communication register on the adapter. The status field *0x%x* indicates the command that failed.

6305 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* received an error reading a command from the communication register on the adapter. The status field *0x%x* indicates the command that failed.

## Information Messages

6600 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* has received ringop status on the FDDI ring. The counter field *%d* indicates the cumulative number of times this has occurred. The adapter can now send and receive data packets.

6601 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* has received a data packet with an unknown ethertype field. The ethertype value is 0x%x.

6602 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* has received a data packet with an unknown service access point (SAP) field. The SAP value is 0x%x.

6603 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* has received an unknown ioctl request. The ioctl command value is 0x%x.

6604 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* has received an unknown command from the node processor on the adapter. The command is 0x%x.

6605 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* received a request to transmit an unsupported packet header type from the system. The header type is *%d*.

6606 *%d*—EISA FDDI LAN driver for the adapter in slot *%d* received a request to transmit an unsupported protocol address family packet from the system. The protocol address family is *%d*.

## Tracing

Tracing provides a detailed record of frames received and transmitted by the FDDI adapter.

To start tracing, enter the **nettl** command as follows:

```
nettl -traceon pduin pduout -entity fddi -f /usr/adm/trace.TRC0
```

In this example, trace data is logged to the file `/usr/adm/trace.TRC0`. Use the `-f` parameter to specify any log filename. If you do not specify a filename, log data is dumped to the screen.

**Note** The `nettl` logging and tracing daemons must be running.

To stop tracing, enter the following command:

```
nettl -traceoff -entity fddi
```

## Viewing Trace Data

Use the HP/UX **netfmt** command to view logged data. The following command displays messages logged to the default log file:

```
netfmt -N -f /usr/adm/trace.TRC0
```

The log filename you specify with the **netfmt** command should be the same filename you used when you started the log file.

