

Using the FDDI Status Utility

This appendix gives an overview of `fdistat`, the FDDI status utility, Cisco's monitoring tool for the CDDI and FDDI EISA SCO adapters. This utility is a standalone application that works in conjunction with the FDDI driver. It supports the SMT Management Information Base (MIB).

Invoking the `fdistat` Utility

The `fdistat` utility was loaded into your system with the EISA SCO adapter driver software. (See the chapter, "Installing the Adapter Software.")

The format of the **`fdistat`** command is as follows:

```
fdistat [-f fddiNum][-l] [-p] [-h]
```

where:

`-f fddiNum` specifies the FDDI interface number of the EISA SCO adapter for which you are gathering statistics. The default is 0, or the first EISA SCO adapter.

Using the optional **`-l`**, **`-p`**, and **`-h`** parameters will change the amount of information displayed when using the **`fdistat`** command.

`-l` indicates that the utility will display statistics in long form. The default is short. The long form displays a snapshot of statistics in the FDDI MIBs.

`-p` perpetually displays the short form of information. It provides continual updates to a basic set of data, which is useful for monitoring the adapters. This option will continue to display until you press **DEL**.

`-h` displays all FDDI status utility options.

Invoking the fddistat Utility

fddistat—Short Form

The short form of the **fddistat** command provides you with most of the statistics you need to monitor the FDDI EISA SCO adapter.

Figure B-1 gives an example of the fddistat short form without additional usage commands.

Figure B-1 fddistat Command Short Form—Example

```
# fddistat

-----
FDDI Adapter Statistics [1.0]      (fddi0)
-----
Serial Number          000103205
Model Number          3C32-TCP
HW Rev                4.2
Main FW Rev           4.4
Boot FW Rev           3.0
Driver Rev            1.1
Upstream Nbr          00:02:d0:02:1f:92 (00:40:0b:40:f8:49) [ CISCO ]
Downstream Nbr        00:02:d0:02:1b:c7 (00:40:0b:40:d8:e3) [ CISCO ]
MAC Address            00:02:d0:02:15:8d (00:40:0b:40:a8:b1) [ CISCO ]
T-Neg                 187704(15.000 msec)
Frame Count           1642873
Error Count            0
Lost Count             0
Tvx Expired Count     1
Ring Op Count         1
RMT State              ring-op
Ler Estimate           15
Lem Reject Count      0
Lem Count              0
Connect State          active
Media Type             FIBER
Attachment Class       single
Adapter Diagnostics    Pass

#
```

The definitions of the short form **fddistat** command parameters are as follows:

- Serial Number—Displays the adapter's serial number.
- Model Number—Displays the model number of the EISA SCO adapter.

- HW Rev—Displays the hardware revision of the EISA SCO adapter.
- Main FW Rev—Displays the revision of the main firmware residing in the Flash memory of the adapter.
- Boot FW Rev—Displays the revision of the boot firmware in the adapter.
- Driver Rev—Contains the revision of the driver installed.
- Upstream Nbr—Contains the address of the media access control's (MAC's) current upstream neighbor, defined as the previous MAC that sent frames to this MAC.
- Downstream Nbr—Contains the address of the MAC's current downstream neighbor.
- MAC Address—Contains the adapter's MAC address.
- T-Neg—Contains the TReq value agreed on by all MACs in the ring.
- Frame Count—Contains a count of all frames that the MAC has seen on the ring.
- Error Count—Displays a count of all error frames detected by this MAC. Frames that were detected as bad by a previous station are not included in this count.
- Lost Count—Contains a count of all frames and tokens received by this MAC that have an error.
- Tvx Expired Count—Displays the number of times the TVX timer expired because of a problem on the ring.
- Ring Op Count—Shows the number of times the ring becomes active from an inoperable state.
- RMT State—Shows the ring management state. Ring management (RMT) identifies stuck beaconing, initiates traces, provides notification of MAC availability, and detects duplicate addresses that prevent ring operation. This field will have one of the following values:
 - Isolated—The initial state of RMT.
 - Non_Op—The ring is not operational.
 - Ringop—The ring is operational.
 - Detect—A duplicate address was detected and rendered the ring nonoperational.

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- Non_Op_Dup—The ring is not operational because this MAC has a duplicate address.
- Ring_Op_Dup—This MAC has a duplicate address.
- Directed—This MAC sends beacon frames to notify the ring of a stuck condition.
- Trace—The MAC initiates a trace function. Trace provides a recovery mechanism from a stuck beacon.
- Ler Estimate—The link error rate estimate defines the long-term estimated error rate for the link. This value is the exponent of 10^{-x} ; for example, if the indicated value is 11, the estimated error rate is 10^{-11} . Thus, the higher the value of Ler Estimate, the lower the link error rate. Values range from 10^{-4} to 10^{-15} .
- Lem Reject Count—Indicates the link error monitor rejected count—the number of times a link was disabled because the link error rate reached the cutoff threshold.
- Lem Count—Indicates the link error monitor count or the number of recorded link errors received. This value is used to estimate the link error rate. The link error monitor helps measure link performance and isolate faulty links that pass initial tests.
- Connect State—Indicates the connect state of this port. It groups physical connection management (PCM) states and PC-Withhold flag states. The connect states follow:
 - Disabled—The port is disconnected.
 - Connecting—The port is attempting to connect.
 - Standby—The connection is withheld or is the inactive port of a dual homing EISA SCO adapter.
 - Active—The port is active.
- Media Type—Displays the physical media type connected to the adapter.
- Attachment Class—Displays the attachment class of the adapter, single or dual.
- Adapter Diagnostics—Indicates if the adapter internal diagnostics passed or failed.

Note If any adapter internal diagnostics test fails, enter the command **fddistat -l** to see which test failed and the error code.

fdistat—Long Form

The long form of the `fdistat` command displays the basic statistics, and also statistics from several other groups including the following:

- FDDI adapter statistics
- General group
- SMT group
- MAC group
- Port group
- Attach group

The parameters in these groups conform to the groupings in the Workgroup Director network management software. Refer to the *Workgroup Director User Guide* or the FDDI MIB, the SMT specification, and the MAC specification to learn more about these parameters.

fdistat—Perpetual Form

The perpetual form of the `fdistat` command displays the short form information and continually updates the counter until you press **DEL**. (See Figure B-2.)

Figure B-2 `fdistat` Command Perpetual Form—Example

```

console# fdistat -p

Frame-Ct   Error-Ct   Lost-Ct   Tvx-Exp-Ct   Ring-Op-Ct   Lem-Ct-s   Ring
-----
1891328538      3         0       2192       70232         0   up
1891329806      3         0       2192       70232         0   up
1891331315      3         0       2192       70232         0   up
1891332623      3         0       2192       70232         0   up
1891334661      3         0       2192       70232         0   up
1891337049      3         0       2192       70232         0   up
1891338155      3         0       2192       70232         0   up
1891339991      3         0       2192       70232         0   up

console#

```

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