

FDDI Frames Per Token Limit

Feature Summary

This feature allows the interface to transmit multiple frames per token, instead of only a single frame at a time. Users can specify the maximum number of frames to be transmitted with each token capture. In certain network configurations this can improve throughput.

Benefits

Throughput is significantly increased, which benefits customers with heavy or very bursty traffic.

List of Terms

frame—Logical grouping of information sent as a data link layer unit over a transmission medium.

token—Frame that contains control information. Possession of the token allows a network device to transmit data onto the network.

Platforms

This feature is supported on the following platforms:

- Cisco 4000, Cisco 4000-M
- Cisco 4500, Cisco 4500-M
- Cisco 4700, Cisco 4700-M

Supported MIBs and RFCs

None.

Configuration Tasks

To configure the FDDI interface to transmit a maximum number of frames per token capture, take the following steps:

Step		Command
Step 1	Enter global configuration mode.	configure terminal
Step 2	Enter interface configuration mode.	interface fddi0
Step 3	Show fddi command options.	fddi ?
Step 4	Show fddi frames-per-token command options.	fddi frames-per-token ?
Step 5	Specify the maximum number of frames to be transmitted per token capture.	fddi frames-per-token <i>number</i>

Configuration Example

This section shows how to configure the FDDI interface to transmit four frames per token capture:

Step 1 Enter global configuration mode:

```
4700#configure terminal
```

Step 2 Enter interface configuration mode:

```
4700(config)#interface fddi0
```

Step 3 Show the **fddi** command options:

```
4700(config-if)#fddi ?
```

```
encapsulate           Enable FDDI Encapsulation bridging
frames-per-token      Maximum frames to transmit per service opportunity
t1-min-time           Line state transmission time
token-rotation-time   Set the token rotation timer
valid-transmission-time Set transmission valid timer
```

Step 4 Show **fddi frames-per-token** command options:

```
4700(config-if)#fddi frames-per-token ?
```

```
<1-10> Number of frames per token, default = 3
```

Step 5 Specify 4 as the maximum number of frames to be transmitted per token:

```
4700(config-if)#fddi frames-per-token 4
```

Command Reference

fddi frames-per-token

To specify the maximum number of frames that the FDDI interface will transmit per token capture, use the **fddi frames-per-token** command. Use the **no** form of this command to revert to the default value.

fddi frames-per-token *number*

no fddi frames-per-token

Syntax Description

number Maximum number of frames to transmit per token capture. Valid values are from 1 to 10.

Default

3.

Command Mode

Interface configuration mode

Usage Guidelines

This command first appeared in Cisco IOS Release 11.2 P.

Possible values are from 1 to 10; the default value is 3. Changing the value will increase or decrease the maximum number of frames that the FDDI interface can transmit when it receives a token. Increasing the value does not necessarily mean more frames will be transmitted on each token capture. This is heavily dependent on the traffic load of the specific interface.

When the interface captures a token, it will transmit all of the frames that are queued in the interface's transmit ring, up to a maximum value specified by the **fddi frames-per-token** command.

If there are no frames ready for transmission, the token will be passed on, and no frames are transmitted. If there are less than the **fddi frames-per-token** value in the transmit ring, all frames in the transmit ring will be transmitted before the token is passed on. If there are more than the **fddi frames-per-token** value in the transmit ring, the specified value will be transmitted before the token is passed on. The remaining frames in the transmit ring will remain queued until the token is captured again.

