

Frame Relay - Additional Topics

Discard Eligibility List / Group

Gives the router the ability to set the discard eligibility bit on a frame. A Discard Eligibility list (DE-List) sets the DE Bit in the frame-relay header to '1' for traffic that matches the criteria. Frame Relay switches drop packets with the DE bit set FIRST, when congestion occurs.

```
>frame de-list <1-10> protocol <see list> or use an interface
>int s0
>frame-relay de-group 1 221 (DLCI 221 - example)
```

Protocol List:

apollo	Apollo Domain
appletalk	AppleTalk
arp	IP ARP
bridge	Bridging
clns	ISO CLNS
clns_es	ISO CLNS End System
clns_is	ISO CLNS Intermediate System
compressedtcp	Compressed TCP
decnet	DECnet
decnet_node	DECnet Node
decnet_router-l1	DECnet Router L1
decnet_router-l2	DECnet Router L2
ip	IP
ipx	Novell IPX
vines	Banyan VINES
xns	Xerox Network Services

IP **split horizon** checking is disabled by default for Frame Relay encapsulation so routing updates will come in and out the same interface.

Frame-Relay Traffic Shaping

Form of bandwidth management - such as: buffering, congestion detection (including frame relay Forward Explicit Congestion Notification and Congestion Notification capabilities), and rate limiting.

1. Configure a peak rate to limit outbound traffic to either Committed Information Rate (CIR) or Excess Information Rate (EIR)
2. Configure BECN to support a per-VC basis.
3. Setup **queuing at the VC level**. Priority, Custom, and Weighted Fair queuing.

```
>map-class frame-relay [name]
>frame-relay traffic-rate average
average = CIR or average rate
peak traffic rate = CIR
```

```
>int s0
>frame-relay
>int
```

Frame-Relay Switching

A means of **switching packets based on the DLCI**, which can be considered the Frame Relay equivalent of a MAC address. You perform switching by configuring a Cisco router or access server into a Frame Relay network.

```
>frame-relay switching
>frame-relay intf-type [dce | dte | nni] (DCE is the default)
>frame-relay route in-dlci out-interface out-dlci
Specifies a static route for PVC switching.
```

```
interface Serial0
ip address n.n.n.n m.m.m.m
encapsulation frame-relay
frame-relay interface-dlci 201
Router - A
```

DTE
Router-A



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