

8. Frame formats

8.1 Overview

8.2 RPR packet options

Each packet has a time to live and options controlled by the first 2 bytes of the RPR header. The time to live and packet options are shown in Figure 8—3

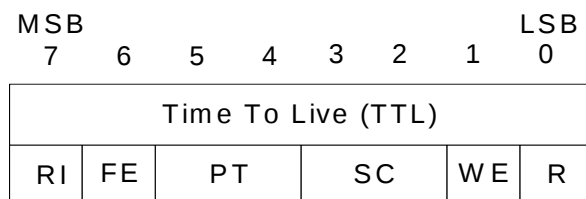


Figure 8—3—RPR Packet Options

The fields are described below:

8.2.1 Time to live (TTL)

This 8-bit field is a hop count that specifies the maximum number of hops the packet is expected to cover before reaching the destination. It shall be decremented every time a node forwards the packet. If the TTL value reaches zero, the packet is not forwarded. While the packet is traveling on a different ringlet (wrapped) due to failure protection, TTL is not decremented. The 8-bit field allows for a total of 255 nodes on a ring.

8.2.2 Ringlet identifier (RI)

This bit indicates the ringlet onto which the frame was originally transmitted. The following values are defined in Table 8—2

Table 8—2—Ringlet identifier values

Value	Description
0	outer ringlet
1	inner ringlet

8.2.3 Fairness Eligible (FE)

This bit is used to mark whether the packet is subject to the RPR fairness algorithm. The following values are defined in Table 8—3

Table 8—3—Fairness eligible values

Value	Description
0	Not subject to fairness
1	Eligible for fairness

8.2.4 Packet type (PT)

This 2-bit field identifies the type of the packet. The packet types are defined in Table 8—4:.

Table 8—4—Packet type values

Value	Description
00	Reserved
01	Control packet
10	Fairness packet
11	Data packet

8.2.5 Service Class (SC)

This 2-bit field is used to identify the service class of the packet. The following classes are defined in Table 8—5

Table 8—5—Service Class values

Value (bin)	Description
00	Class-C
01	Class-B
10	Class-A, subclass-A1
11	Class-A, subclass-A0

8.2.6 Wrap eligible (WE)

This bit indicates that the packet is eligible to be wrapped during a wrap condition. The following values are defined in Table 8—6

Table 8—6—Wrap eligible values

Value	Description
0	Steerable only
1	Wrap eligible

8.2.7 Reserved (R)

This bit is reserved for future use.

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