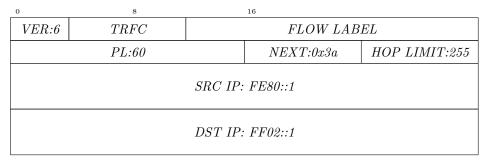
## IPv6 Packet



## MTU Option

0		8	16
	TYPE: 0x05	LNGTH: 0x01	RESERVED1
MTU: 1500			

# **Prefix Option**

0	8	16				
TYPE: 0x03	LENGTH: 0x04	PREFIX LEN: 64	RESERVED1			
	VALID LIFETIME: 2592000					
PREFERRED LIFETIME: 604800						
RESERVED2						
PREFIX: 2001:DB8:ACAD:1::						

## Router Advertisement Message

0	8	16		
TYPE: 0x86	CODE: 0x00	$CHECKSUM:\ 0x00000$		
Hop Limit: 0x40	RESERVED	Router Lifetime: 0x0708		
Reachable Time: 0x00000000				
Retrans Timer: 0x00000000				

## Link Layer Option

0		8	16
	TYPE: 0x01	LENGTH: 0x01	
LINK LAYER ADDRESS: 0060.3E5A.5801			

## ICMPv6 Neighbor Solicitation Message

0	8	16		
TYPE: 0x87	CODE: 0x00	CHECKSUM		
$R \mid S \mid O$	Reserved			
Target Address: 2001:DB8:ACAD:1::B				

#### ICMPv6 Neighbor Advertisement Message

0	8	16	
TYPE: 0x88	CODE: 0x00	CHECKSUM	
R S O	$R \mid S \mid O$ Reserved		
Target Address: 2001:DB8:ACAD:1::B			

## ICMPv6 Echo Message

_(	0	8	16
	TYPE: 0x80	CODE: 0x00	CHECKSUM: 0x0000
IDENTIFIER: 2		IFIER: 2	SEQUENCE NUMBER: 1

## ${\bf ICMPv6\ Echo\ Message\ 2}$

0	8	16
TYPE: 0x81	CODE: 0x00	CHECKSUM: 0x0000
IDENTIFIER: 2		SEQUENCE NUMBER: 1

## R0#show ipv6 eighbors

Link-layer Addr Interface  $IPv6\ Address$ AgeState $Gig\theta/\theta$ 2001:DB8:ACAD:1::A0 0090.2B89.2D86 $REA\,CH$ Gig0/1000A.41E4.42D4  $2001:DB8:A\,CA\,D:2::A$ 0  $REA\,CH$ FE80::20A:41FF:FEE4:42D4000A.41E4.42D4 $Gig\theta/1$  $\theta$  $REA\,CH$ 0 REACH $Gig\theta/\theta$ FE80::290:2BFF:FE89:2D86 0090.2B89.2D86

#### 1 R0# show ipv6 neighbors 2

0	8	16			
	$IPv6\ Address$	Age	Link-layer Addr	State	Interface
	2001:DB8:ACAD:1::A	28	0090.2B89.2D86	REACH	$Gig\theta/\theta$
	2001:DB8:ACAD:2::B	0	000A.41E4.42D4	REACH	Gig0/1
	2001:DB8:ACAD:2::A	28	000A.41E4.42D4	REACH	Gig0/1
	FE80::20A:41FF:FEE4:42D4	28	000A.41E4.42D4	REACH	Gig0/1
	FE80::290:2BFF:FE89:2D86	28	0090.2B89.2D86	REACH	$Gig\theta/\theta$