

# IS-IS Prefix Attributes for Extended IP and IPv6 Reachability

draft-ietf-isis-prefix-attributes-01.txt

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# Changes since IETF-92

**Authors of draft-xu-isis-routable-ip-address-01 have joined in co-authoring this draft.**

**Clarifying text on router-id added**

**Minor editorial changes**

**Early allocation of codepoints requested**

# Router-id

**RFC 5305/RFC 6119 (TE ) allow use of Router-ID for purposes other than TE.**

**When source router-id sub-TLV included prefix reachability TLVs router-id MUST be the same as TLV 134/TLV140**

**The originating router SHOULD also advertise the corresponding address-family specific router ID TLV(s) regardless of whether TE is enabled or not.**

**Last call requested**  
**Also for draft-ietf-isis-route-preference-01.txt**

# IPv4/IPv6 Extended Reachability Attributes sub-TLV

## Prefix Attribute Flags

Type: 4 (suggested - to be assigned by IANA)

Length: Number of octets to follow

Value

(Length \* 8) bits.

```
 0 1 2 3 4 5 6 7...  
+ - + - + - + - + - + - + ...  
|X|R|N| ...  
+ - + - + - + - + - + - + ...
```

(Applies to TLVs 135, 235, 236, 237)

# IPv4/IPv6 Extended Reachability Attributes sub-TLV (2)

## X-Flag

- Indicates prefix is injected from an external source (redistributed)
- Ignored for TLVs 236, 237 (IPv6 already has such a flag)
- Preserved when leaked

## R-Flag

- Set when prefix has been leaked from one level to another (UP or DOWN)

## N-Flag

- Set when the prefix identifies the advertising router i.e., the prefix is a host prefix advertising a globally reachable address
- The advertising router MAY choose to NOT set this flag even when the above conditions are met.
- Preserved when leaked

# IPv4/IPv6 Source Router ID sub-TLV

**When reachability advertisement is leaked the source of the advertisement is not known. When prefix has N-flag set source information is useful.**

## **IPv4 Source Router ID**

**Type: 11 (suggested - to be assigned by IANA)**

**Length: 4**

**Value: IPv4 Router ID of the source of the advertisement**

## **IPv6 Source Router ID**

**Type: 12 (suggested - to be assigned by IANA)**

**Length: 16**

**Value: IPv6 Router ID of the source of the advertisement**

**Preserved when leaked**