IS-IS Extensions for Advertising Router Info

draft-ginsberg-isis-rfc4971bis-00.txt

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Router Capability TLV Format

TYPE: 242

LENGTH: from 5 to 255

VALUE:

Router ID (4 octets)

Flags (1 octet)

Set of optional sub-TLVs (0-250 octets)

Flags

```
0 1 2 3 4 5 6 7
+-+-+-+-+-+-+-+-+
| Reserved  |D|S|
+-+-+-+-+-+-+-+-+
```

New Text

"The Router ID SHOULD be identical to the value advertised in the Traffic Engineering Router ID TLV [RFC5305]. If no Traffic Engineering Router ID is assigned the Router ID SHOULD be identical to an IP Interface Address [RFC1195] advertised by the originating IS. If the originating node does not support IPv4, then the reserved value 0.0.0.0 MUST be used in the Router ID field and the IPv6 TE Router ID sub-TLV [RFC5316] MUST be present in the TLV. Router CAPABILITY TLVs which have a Router ID of 0.0.0.0 and do NOT have the IPv6 TE Router ID sub-TLV present MUST be ignored."

IPv6 only router

"… If the originating node does not support IPv4, then the reserved value 0.0.0.0 MUST be used in the Router ID field and the IPv6 TE Router ID sub-TLV [RFC5316] MUST be present in the TLV. Router CAPABILITY TLVs which have a Router ID of 0.0.0.0 and do NOT have the IPv6 TE Router ID sub-TLV present MUST be ignored."

Today routers MUST have at least 1 IPv4 address in order to send Router Capability TLV. This restriction is removed by this revision.

Backwards compatibility issues:

> **Continue to configure one IPv4 address and use it as Router-id until all nodes have been upgraded (no change to existing behavior)**

IPv4 Router ID

"The Router ID SHOULD be identical to the value advertised in the Traffic Engineering Router ID TLV [RFC5305]. If no Traffic Engineering Router ID is assigned the Router ID SHOULD be identical to an IP Interface Address [RFC1195] advertised by the originating IS…"

Clarifies that value SHOULD (not MUST) be consistent with TLV 134.

WG adoption requested