

IS-IS Support for Unidirectional Links

draft-ginsberg-isis-udl-01.txt

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V1 Changes

Only covering changes since V00 - more details at:

<http://tools.ietf.org/html?draft=draft-ginsberg-isis-udl-00.txt>

Introduced a mechanism to minimize LSP flooding on adjacency bringup

Goals

Modest Protocol Extensions

No IP Encapsulation

No Static Configuration of neighbor Information

Allow UDL on the Return Path

Reliable Adjacency Maintenance

Reliable LSP Updates

Minimum Additional Network Wide Protocol Traffic

Support for Pt-Pt and LAN subnetworks

Basic Mechanisms

Sending Hellos

- IS-T sends hellos as normal

- IS-R sends hello information in “UDL-LSPs”

Adjacency Maintenance

- IS-T relies on existence of return path rooted at IS-R to IS-T

- IS-R maintains as normal

Update Process

- IS-T operates as DIS on LAN (even on Pt-Pt links)

- IS-R operates as non-DIS on LAN (even on Pt-Pt links)

- IS-R may use UDL-LSPs to send PSNP equivalent

- Special rules for UDL-LSPs

LSP Range sub-TLV

Sub-TLV Format

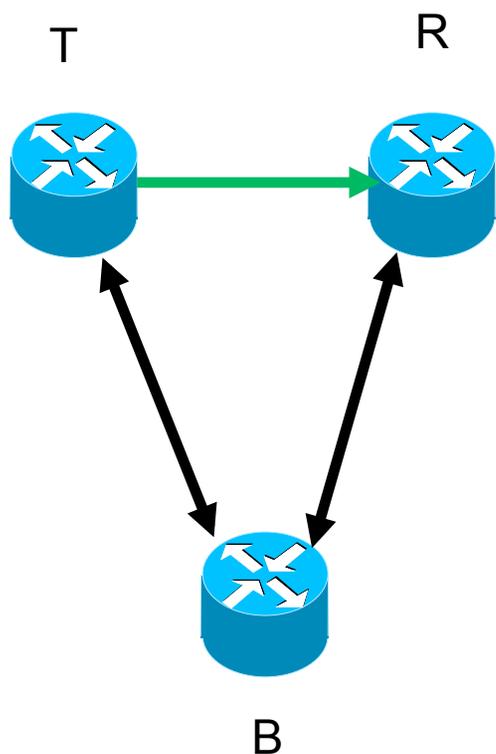
	# octets
+-----+	
Type (8)	1
(To be assigned by IANA)	
+-----+	
Length (ID Length+2) * 2	1
+-----+	
Start LSP ID	ID Length +2
+-----+	
End LSP ID	ID Length + 2
+-----+	

Specifies a range of LSPs for which the requestor requires an update.

Would be used following adjacency UP.

Requires UDL LAN/P2P IS-Neighbor sub-TLV to identify the associated adjacency.

Simple UDL Topology – Pt-Pt Adjacency Establishment



1. T sends P2P-IIH (State Init, Local Cid n)-> R
2. R sends UDL-LSP (State Init, Local Cid p, Neighbor T, Neighbor Cid n, [Local LAN Address])
3. UDL-LSP Propagated by B to T
4. T sends P2P-IIH (State UP, Local Cid n, Neighbor R, Neighbor Cid p)
5. R sends UDL-LSP (State UP, Local Cid p, Neighbor T, Neighbor Cid n, [Local LAN address])
6. T sends CSNPs to R
7. **T floods only LSPs which changed as a result of adjacency UP to R**
8. **R may send LSP Range sub-TLV to T to request full /partial LSP flood**

WG Item

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