



# Shortest Path Bridging IS-IS Data Models

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# Hi Level SPB Data

- Topology (Base VLAN)
  - Nodes and Links or Ports and LANs
  - Can build a Shortest Path Tree
- Multicast
  - Source Address & Source Bridge
  - Destination Multicast Address\* & Destination Bridges
  - Can build all pairs shortest path and populate multicast

\* Needs a Source Identifier

# SPB



## a) Hello Symmetric ECMT BASE-VID TLV

Res	M-T ID		S	Reserved	N-VIDs
Algorithm	Reserved	U/B	VID-IX	Base VID	

Per Bridge (But must be Base VID consistent for all bridges)

## b) SPB Instance TLV

MT-ID	S
Sub TLV type	
Nickname	
Nickname Priority	
Nickname Flags	
(SPVIDtrees)	
Bridge Identifier	
VID-IX	SP-VID

Per Bridge

## c) Link Metric Sub TLV

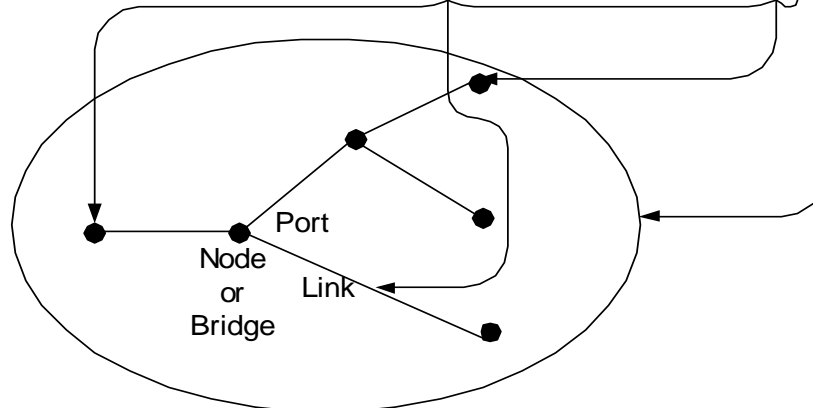
MT-ID	S
IS-IS Reachability TLV	
SPB-Link Metric	

Per Adjacency

## d) Multicast Group TLV

MT-ID	S
T/R	VID-IX
Source MAC	
Destination MMAC	

Per Bridge



# SPBB



## a) Hello Symmetric ECMT BASE-VID TLV

Res	M-T ID	S	Reserved	N-VIDs
Algorithm	Reserved	B	VID-IX	Base VID
Algorithm	Reserved		VID-IX	VID
Algorithm	Reserved		VID-IX	VID

Per Bridge (But must be Base VID consistent for all bridges)

## b) SPB Instance TLV

MT-ID	S	
Sub TLV type		
Nickname		
Nickname		Priority
Nickname		Flags
(SPVIDtrees)		
Bridge Identifier		
VID-IX	SP-VID	

PerBridge

## c) Link Metric Sub TLV

MT-ID	S	
IS-IS Reachability TLV		
SPB-Link Metric		

Per Adjacency

## d) SPB I-SID & Unicast B-MAC TLV

MT-ID	S		
Unicast B-MAC			
T	R	VID-IX	I-SID
T	R	VID-IX	I-SID

PerBridge



## Some Comments

- At this high level a lot of things look similar
  - SPB and SPBB are the same.
  - Trill looks similar
- If a LAN is point to point then Links and LANs are very similar, but if LANs are multipoint there is more.
- Where to put the additions to IS-IS