

# Flooding Scope PDUs

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# V1 Changes

Only covering changes since V00 - more details at:

<http://tools.ietf.org/agenda/86/slides/slides-86-isis-0.pdf>

16 bit TLV support introduced

# Overview

Introduce a new LSP with flooding scope encoded in the LSP header (also new CSNP/PSNP)

Minimize the use of limited PDU type space

Define new flooding scopes

LSPs for each scope are kept in a scope specific LSDB

Not backwards compatible

# Standard TLV Limitations

Limited to 255 octets/TLV

Increasing sub-TLV use means a single object (e.g. a link) could require more than 255 octets to describe it

This requires repetition of base object identifier in multiple TLVs

Receivers must treat the multiple TLVs as additive.

# Extended TLVs (and sub-TLVs)

## Extended-TLV Format

	# octets
+-----+	
Type	2
+-----+	
Length	2
+-----+	
Data	1 - 65535
+-----+	

Type and Length encoded in network byte order

Maximum Length limited by LSP-MTU

No change to LSP-MTU support

Not an excuse to bloat TLV Types

Not backwards compatible

# Extended TLVs Rules

Extended TLVs and extended sub-TLVs are permitted only in Flooding Scoped PDUs which have a flooding scope designated for their use

Extended TLVs and extended sub-TLVs **MUST** be used together

Standard TLV code points/formats supported

- The eight bit type is encoded as an unsigned 16 bit integer
- The eight bit length field is replaced by the 16 bit length field
- The length **MAY** take on values greater than 255

# Extended TLV and Flooding Scope

X   Scope (1 – 127)
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“X” is **P**riority (LSP)  
**R**eserved(CSNP)  
**U**nsupported(PSNP)

Scopes 1 – 63 use Standard TLVs  
Scope (64 – 127) use Extended TLVs

Mixing of Standard/Extended TLVs forbidden

# Questions?