

Multi-part TLVs in IS-IS

draft-ietf-lsr-multi-tlv-01

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Context

IS-IS TLV encoding uses an 8-bit length, limiting content to 255 octets
New technologies (SR, Flex-algo, Traffic Engineering extensions)
increase demand for advertising more than 255 octets of information
per object (links, prefixes)

Multi-part TLVs have been explicitly defined for some TLVs:

- GMPLS-SRLG [RFC5307]
- Router Capability TLV [RFC7981]
- IPv6 SRLG [RFC6119]
- ASLA SRLG [RFC8919]
- ASLA sub-TLV [RFC8919]

Extending the use of MP to other TLVs builds on the existing protocol framework

Some implementations have implemented MP for neighbor/prefix TLVs

With partial deployment behavior is unpredictable

Recent Draft History

First published in Jan 2022

WG Adoption Dec 2023

V1 Published Feb 2024

Changes in V1

Examples of “the key” used to identify the multiple TLVs which describe a single object were simplified

Text added to Deployment Considerations

“While it is not in scope for this document to mandate how implementations provide the means to prevent (or at least make less likely) partial deployment of MP-TLV for a given codepoint, it is important to emphasize the need to assist operators in avoiding inadvertent problematic deployment scenarios.”

Next Steps

Request WG last call

The need to send > 255 bytes exists today

There are existing interoperable implementations deployed

Draft is two years old – the deployment needs have existed for longer than that

Draft is mature – no further changes planned