Multi-part TLVs

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Problem statement

• Traditional TLVs contain up to 255 bytes of data. Sometimes, this is not enough.
• Some TLVs do not describe what to do when you run out of space.
Introduction

• Some TLVs (e.g., Router Capability, SRLG) specify that multiple TLVs of the same TLV type are legal.
• Not all do. Oops.
• We should:
  • Have a solution for old TLVs.
  • Have a default solution for new TLVs.
  • Not override solutions for TLVs that have an explicit solution.
Proposal

• Use multiple TLVs to carry more data.
• Same TLV code point.
• This is a “multi-part TLV” (MP-TLV).
• If the TLV contains specifiers (i.e., a ‘key’), replicate the key in each part.
• Example: Extended IS Reachability TLV (type 22). Key is:
  • 7 octets of system ID and pseudonode number
  • 3 octets of default metric
• We will add more examples.
Capability

• Add a router capability for this.