SMF-07 Update

draft-ietf-manet-smf-07

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Background Refresh

- Still EXP submission target

- We considered a WGLC on version 06

- But, decided to make more improvements
  - Many editorial a few technical

- 07 Submission on Feb 25
SMF-06 -> 07

• Core design remains the same
• Revised areas
  – Editorial throughout
  – Some TLV revisions and more clarification on IANA and namespace issues.
  – TLV types revised slightly related to IANA assignments
    • Relay Algorithm TLVs
    • Router Priority TLVs
  – Appendices Relay Set Selection Algorithm descriptions updated
    • Intent was to improve and clarify implementation issues
  – More thoroughly addressed multiple interface operation and considerations.
SMF “Relay Algorithm” TLVs

- Two types:
  - SMF_RELAY_ALG (message TLV), and
  - SMF_NBR_RELAY_ALG (addr block TLV)
- Both use an 8-bit “value” field:

<table>
<thead>
<tr>
<th>Value</th>
<th>Algorithm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>CF</td>
</tr>
<tr>
<td>1</td>
<td>S-MPR</td>
</tr>
<tr>
<td>2</td>
<td>E-CDS</td>
</tr>
<tr>
<td>3</td>
<td>MPR-CDS</td>
</tr>
<tr>
<td>4-127</td>
<td>Future Assignment with STD action</td>
</tr>
<tr>
<td>128-239</td>
<td>No STD action required</td>
</tr>
<tr>
<td>240-255</td>
<td>Experimental Space</td>
</tr>
</tbody>
</table>

- Use of SMF_RELAY_ALG TLV could be REQUIRED in a deployment to indicate SMF participation.
  - Should this be a RECOMMENDED operational policy?
SMF “Router Priority” TLVs

• Two types:
  – \texttt{SMF\_RTR\_PRIORITY} (message TLV)
  – \texttt{SMF\_NBR\_RTR\_PRIORITY} (addr block TLV)

• Currently defined with an 8-bit “value” field.

• Possibly a more flexible SMF “metric” TLV type might defined to serve this role?
  – More efficient use of TLV type space
  – Sub-typing could allow different metric types to be identified.
Possible Future Minor Changes

• Consideration for a well-known range of site-scoped IPv6 multicast
  – Presently one
  – Could provide further flexibility

• _Further_ clarification of multiple interface operation
Proposed Plan

• First Goal: Minor Revision/WGLC/IESG submission phase

• Follow-on Areas
  – Better discussion of gateway interoperability and interaction
    • Best practice?
  – Group-specific extensions
  – Standard Forwarding Information Base primitives
  – SMF MIB
  – SEAL
    • Encapsulation variant using SMF techniques for CDS and DPD