Multicast Service Models

draft-acg-mboned-multicast-models-02

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IETF 100, Prague, 14 Nov 2017

Draft history

- Original purpose:
  - Document multicast service models (at a high level)
  - Discuss their use cases; document deployment examples
  - Recommend use of SSM

- Feedback given at IETF99:
  - Strip back on text on the models
  - Focus on deprecating interdomain ASM and promoting use of SSM

- New -02 draft posted with first attempt to define what we mean by deprecating interdomain ASM

Simplifying multicast support on backbones

- Initial proposal made by David Farmer on Internet2 multicast list
  - See https://lists.internet2.edu/sympa/arc/wg-multicast/2017-06/msg00001.html

- "I propose that **general purpose classic IPv4 ASM be deprecated** on the Internet2 R&E Backbone. The primary propose of this change is to simplify multicast support for the new MPLS based R&E Backbone, by mostly eliminating the need for MSDP. SSM for both IPv4 and IPv6, and Embedded-RP for IPv6, should continue to be supported on the Internet2 R&E Backbone, as they do not require MSDP. "

- David also mentions some ways that "legacy" MSDP could be supported during a phase-out (see the link above), but the goal is longer-term simplification of multicast support

Contents of -02 update

- Description of ASM / SSM service models trimmed

- New section 7 – recommendations on ASM / SSM deployment, with subsections:
  - Rationale
  - Deprecating interdomain ASM
  - Intradomain ASM
  - IGMPv3/MLDv2 support
  - Multicast addressing considerations
  - Application considerations
  - ASM / SSM transition – protocol mapping

Details… (1/2)

- What about ASM intradomain?
  - Not precluded

- What about IPv6?
  - Deprecate Embedded-RP interdomain for IPv4 parity

- Make MSDP Historic?
  - No, as may be used within "private" domains

- What about IGMP/MLD?
  - RFC6434bis makes MLDv2 support a MUST
  - IGMPv3 support recommended (make a MUST and use 2119?)

Details… (2/2)

- Filter non-SSM multicast traffic interdomain?
  - No; should allow for a transition period with mappings used

- Recommended that application developers choosing to use multicast, develop and engineer their applications to use SSM rather than ASM

- Noted may map (*,G) to (S,G); vendor-specific methods exist, non-IETF, but an interim method only

- Use SSM, to push the source discovery problem from the network to the application

Summary wording (section 7)

- "This document recommends that the use of interdomain ASM is deprecated, i.e., only SSM is to be used for interdomain multicast. Further, it also strongly recommends the use of SSM for all multicast scenarios, be they run inter or intradomain."

- Comments?

- One list comment by Albert Manfredi that we should not strongly recommend against ASM, in general
  - "*There are uses of multicast that specifically want to avoid having the destinations know the source(s), which is often exactly why multicast is used.*"

Thoughts?

- Are we heading in the right direction?
  - Deprecate interdomain ASM, promote SSM

- Should we keep one draft, split to two, or just kill all the pre-amble on SSM and ASM models?

- Draft published as intended BCP
  - So we should add RFC2119 language
  - MUST, (NOT) RECOMMENDED?

- Next steps?