

MULTICAST DISTRIBUTION AND REACHABILITY SIGNALING

DRAFT-REKHTER-GEO-DISTRIBUTION-CONTROL-03

DRAFT-REKHTER-MDRS-00

DRAFT-REKHTER-MDCS-00

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NOTE

This material was originally presented to IDR and MBONED in IETF 83. The full use case is presented in those sessions.

As was recommended in those sessions, the BGP specific changes have been extracted from the geo-distribution draft into the mdcs and mdrs drafts for IDR. The operational case for geo-distribution will be requested to be made a MBONED working group document.

<http://www.ietf.org/proceedings/83/slides/slides-83-idr-6.pdf>

PROBLEM 1: CAN THE CUSTOMER RECEIVE CONTENT VIA MULTICAST

- Ability of content-provider to determine content-receiver network destination areas where multicast-delivery option is available at a given current time period.

This is especially critical for the successful introduction of multicast service since multicast enablement of global network infrastructure (which entails network equipment hardware/software/configuration updates) will not be flashed cut network-wide but rather will be phased in by areas over some extended period of time

PROBLEM 1: CAN THE CUSTOMER RECEIVE CONTENT VIA MULTICAST

Why not just annotate unicast routes for the customers?

- Those routes are not guaranteed to be in any specific protocol. For example, may be in an IGP or BGP.
- Unicast routes for customer networks usually represent aggregated networks. More specific prefixes that represent subsets of customers who could/could not receive multicast traffic would bias unicast forwarding.

PROBLEM 2: IMPLEMENTING BROADCAST BLACKOUTS

- Ability of content-provider to restrict multicast delivery of a given content on a designated multicast channel (S,G) to exclude a set of content-receiver network destination areas

This is to support compliance with geo-restriction (“black-out”) requirements that frequently exist for certain categories of live-event content distribution

“In broadcasting, the term blackout refers to the non-airing of television or radio programming in a certain media market. It is particularly prevalent in the broadcasting of sports events, although other television or radio programs may be blacked out as well.”

[http://en.wikipedia.org/wiki/Blackout_\(broadcasting\)](http://en.wikipedia.org/wiki/Blackout_(broadcasting))

PROBLEM 2: IMPLEMENTING BROADCAST BLACKOUTS

Why shouldn't CPE provide this filtering?

- CPE devices may be tampered with. Such tampering may include interception of signaling information that may otherwise be useful for limiting content distribution.
- E.g.
http://m.computerworld.com/s/article/9224838/Ore._man_convicted_for_helping_thousands_steal_Internet_service

MULTICAST DISTRIBUTION CONTROL SIGNALING (MDCS)

Document request to IDR:

- We need a new SAFI that will be associated with a flowspec encoding that is used for multicast control plane filtering.
- We're documenting a use case where Constrained Route-Target Filtering is being used for non-VPN reachability. (This is already permitted by the spec, we're not asking for a protocol change.)
- We'd like IDR to adopt this draft to document the usage of flowspec encoding with this SAFI for this application.
- That's it.

MULTICAST DISTRIBUTION REACHABILITY SIGNALING (MDRS)

Document request to IDR:

- We need a new SAFI.
- We'd like IDR to adopt this draft to document its use.
- That's it.