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#### IDR Meeting:

Date: 3/22 time: 15:20-1720:

Agenda:

15:20-15:30

Chair status report

Susan Hares & John Scudder

15:30-16:00

draft-uttaro-idr-add-paths-guidelines-00 Roberto Fragassi

16:00-16:30

draft-dong-idr-fsm-subcode-00

Jie Dong

Adjourn.

# IDR Working Group status

Susan Hares (skh@ndzh.com)

John Scudder (jgs@juniper.net)

## Presenting at IDR

- No draft, no slot
- Slides at least one day before, or no slot

### **Document Status**

- New Working Group Documents
  - draft-chen-bgp-ext-opt-param
- WGLC carried out, revisions needed
  - draft-ietf-idr-link-bandwidth
- WGLC completed
  - draft-ietf-idr-bgp-bestpath-selection-criteria
  - draft-ietf-idr-bgp-identifier

## **Charter Update**

The Inter-Domain Routing Working Group is chartered to standardize, develop, and support the Border Gateway Protocol Version 4 (BGP-4) [RFC 4271] capable of supporting policy based routing for TCP/IP internets.

The main objective of the working group is to support the use of BGP-4 by IP version 4 and IP version 6 networks. The working group will also continue to work on improving the robustness and scalability of BGP.

IDR will review extensions made to BGP in other working groups at least at WG document adoption and during working group last calls. The IDR working group will also provide advice and guidance on BGP to other working groups as requested.

# Charter Update — Work Items

The IDR working group will work on correctness, robustness and scalability of the BGP protocol, as well as clarity and accuracy of the BGP document set. The group will also work on extensions beyond these areas when specifically added to the charter. The current additional work items are:

# Charter Update — Work Items

- Relax the definition of BGP identifiers to only require AS-wide uniqueness. This change must be made in a backward compatible way.
- Specify a means to non-disruptively introduce new BGP Capabilities to an existing BGP session.
- Upgrade of the base BGP specification to Full Standard
- Define AS PATH based Outbound Route Filtering.
- MIB v2 for BGP-4
- Augment the BGP multiprotocol extensions to support the use of multiple concurrent sessions between a given pair of BGP speakers. Each session is used to transport routes related by some sessionbased attribute such as AFI/SAFI. This will provide an alternative to the MP-BGP approach of multiplexing all routes onto a single connection.
- Support for four-octet AS Numbers in BGP.
- Revisions to the BGP 'Minimum Route Advertisement Interval' deprecating the previously recommended values and allowing for withdrawals to be exempted from the MRAI.
- Advertisement of multiple paths for the same address prefix without the new paths implicitly replacing any previous ones. Each path is identified by a path identifier in addition to the address prefix.

- Revised error handling rules for optional transitive BGP attributes so that a BGP speaker is no longer required to reset the session over which a malformed attribute is received. Provide guidelines for authors of documents that define new optional transitive attributes, and re-assess procedures for existing optional transitive attributes
- Specify Link Bandwidth Extended Community for use in unequal cost load balancing.
- The definition of an "Accumulated IGP Metric" attribute for BGP to report the sum of the metric of each link along the path. This attribute is for use in a restricted environment where:
  - all ASes are subject to the administrative control
  - some form of tunneling is used to deliver a packet to its next BGP hop
  - where the path for a route leads outside the AS to which the BGP speaker adding the attribute belongs.
- Advertisement of the best external route in BGP to assist with resolution of the next hop in the chosen data plane.

## Milestones

- Aug 2010 Submit AS-wide Unique BGP Identifier for BGP-4 as a Proposed Standard
- Aug 2010 Submit Dynamic Capability for BGP-4 to IESG as a Proposed Standard
- Mar 2010 Solicit work items for scalability improvements
- Aug 2010 Submit ASpath ORF draft to IESG as a Proposed Standard
- Aug 2010 Submit MIB v2 for BGP-4 to IESG as a Proposed Standard
- Nov 2010 Submit BGP Support for Four-octet AS Number Space (revised version) to IESG as a Proposed Standard
- Nov 2010 Submit Revisions to the BGP 'Minimum Route Advertisement Interval' to IESG as a Proposed Standard
- Nov 2010 Submit Advertisement of Multiple Paths in BGP to IESG as a Proposed Standard
- Nov 2010 Submit BGP Link Bandwidth Extended Community to IESG as a Proposed Standard
- Nov 2010 Submit Advertisement of the best external route in BGP to IESG as a Proposed Standard
- Dec 2010 Submit Multisession BGP to IESG as a Proposed Standard
- Dec 2010 Submit Error Handling for Optional Transitive BGP Attributes to IESG as a Proposed Standard
- Dec 2010 Submit ASpath ORF to IESG as a Proposed Standard
- Dec 2010 Revise WG charter
- Mar 2011 Submit The Accumulated IGP Metric Attribute for BGP to IESG as a Proposed Standard
- Mar 2011 Progress base BGP specification (RFC 4271) as Full Standard

# Scalability Improvements

- Concern expressed from time to time regarding scalability of BGP
- Examples
  - IBGP scaling, with route reflector mesh (number of routes)
  - Message scaling in interdomain (path hunting)
- Internet drafts for scalability improvements are welcome
  - Suggestions: keep in mind deployability and solve demonstrated problems
  - Reminder: IDR WG is chartered to work on the BGP protocol; other groups exist for more far-reaching proposals

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