

Revised Error Handling for BGP Update Messages

draft-ietf-idr-optional-transitive-04.txt
(will be renamed after the IETF)

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Reasoning

- Session reset is too disruptive (for both EBGP and IBGP)

- No distinction between good / bad routes

- Only small number of routes involved in malformed

- Error handling must be at the route level

- Remove the bad, and keep the good

- Equally effective in removing bad routes even when every update is malformed

Summary of Changes

- Combined with draft-chen-ebgp-error-handling-00
- Use "treat-as-withdraw" / "attribute discard" (instead of session reset) whenever possible in order to minimize the impact on routing.
- Cover the well-known attributes as well as optional attributes in the revised error handling
- Specify that errors with the Attribute Flags should be fixed locally
- Remove the "Neighbor-Complete flag", and also the check for Partial flag
- Guideline for IBGP in Operational Considerations

What about IBGP?

- “treat-as-withdraw” alone may not be enough for IBGP
- Operational remedy
 - Identify the routes handled by treat-as-withdraw
 - Trace back to the ingress router and apply filters
- Not pursuing automation of the procedures in protocol
 - Issues from EBGP typically dominate
 - Require significant changes to the protocol
- New text in Operational Considerations:
 - When a malformed attribute is indeed detected over an IBGP session, we recommend that routes with the malformed attribute be identified and traced back to the ingress router in the network where the routes were sourced or received externally, and then a filter be applied on the ingress router to prevent the routes from being sourced or received.
- Considered, not pursued: option to retain old-style error handling for IBGP

Errors with Attribute Flags

- Can be fixed locally
- “Be liberal with what you accept”
- No need to reset the session!
- Another option would be treat-as-withdraw