One-Time Address-Prefix Based ORF

draft-zeng-idr-one-time-prefix-orf-00

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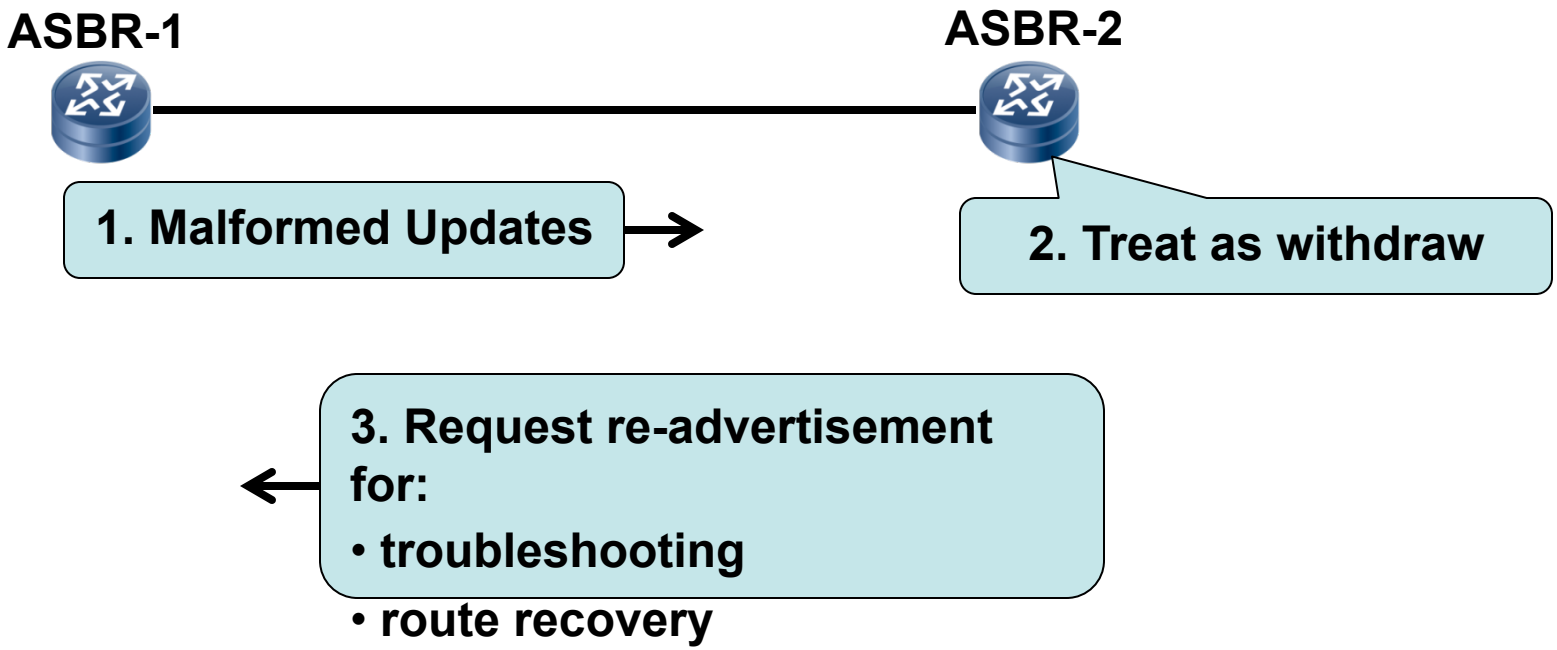
Motivation

- In some scenarios operators need to retrieve routes with specific prefixes from peers
  - e.g. after treating malformed updates as withdraw

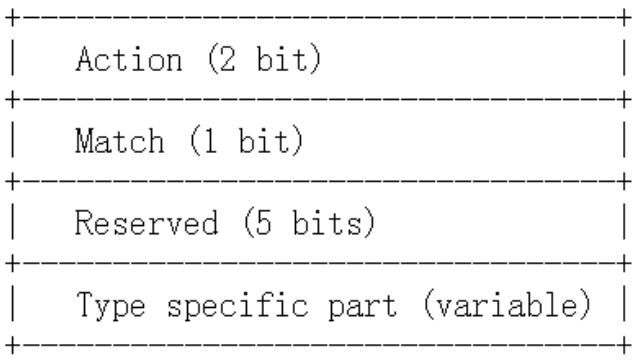


Motivation (cont.)

- Route Refresh [RFC2918] may not be suitable
  - Whole Adj-RIB-Out re-advertisement
  - Unnecessary route processing overhead
  - Unnecessary bandwidth consumption
  - Makes troubleshooting difficult due to large amount of Updates
- A lightweight operational tool is needed

One-time Address-Prefix ORF

- A new ORF type used to solicit one-time refresh for specific prefixes
  - Only used as one-time filters and MUST not change any previously installed ORF entry



  - **Action**: ignored on receiver (no impact on peers' ORFs)
  - **Match**: reuse matching rules of Address-Prefix ORF (RFC5292)
  - **Type specific part**: reuse format of Address-Prefix ORF
- One-Time ORF may be used in combination with enhanced RR for consistency validation of a subset of RIB

Next Steps

- Solicit comments & feedbacks
- Revise the draft

Backup Slides

Alternate solutions I

- A new ORF Action: REFRESH
  - Pros:
    - Avoid defining new one-time ORFs for each normal ORF types
  - Cons:
    - There is no mechanism in ORF to negotiate a new Action
    - The last unused action value (only 2 bits):
      - ADD, REMOVE, REMOVE-ALL, REFRESH?

Alternate solutions II

- A new mechanism: Refresh Route Filter (RRF)
  - As an extension to plain refresh: selective refresh
  - Pros:
    - A lightweight tool, can be enabled independent from ORF
    - Shares filter type registry with ORF
  - Cons:
    - Filtering mechanism similar to ORF, duplicated framework