

BGP Extensions for Routing Policy Distribution (RPD)

draft-ietf-idr-rpd-09

Robin Li

Liang Ou

Yujia Luo

Sujian Lu

Gyan Mishra

Huaimo Chen

Shunwan Zhuang

Haibo Wang

Overview

Thanks people below for their comments around WGLC

- Robert Raszuk,
- Donald Eastlake,
- Ketan Talaulikar,
- Jakob Heitz, ...

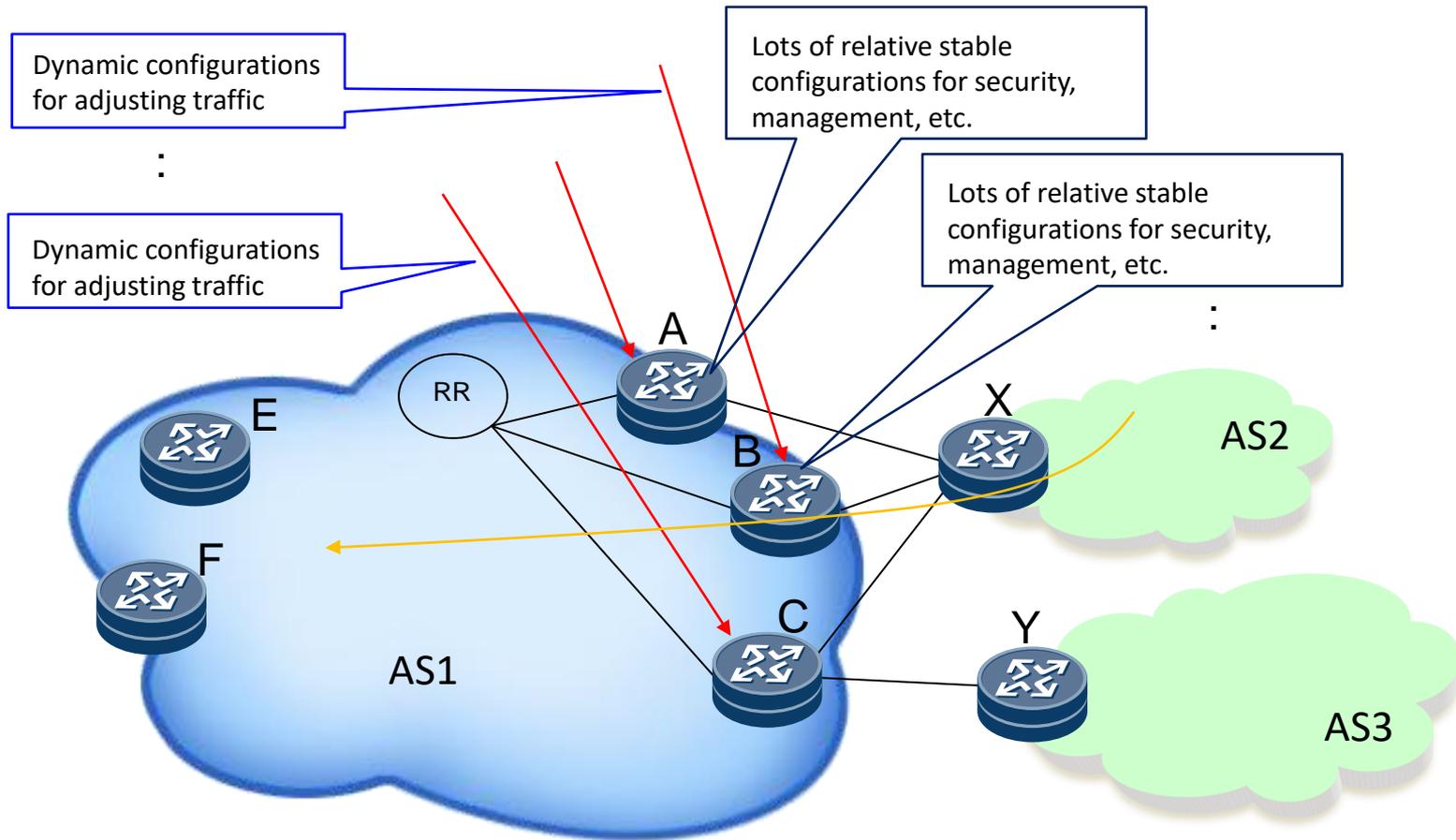
Updates to Previous Versions

- Updated Introduction
- Added Operations: use case, failure
- More Details on some fields in NLRI

Address:

- Why RPD for dynamic traffic adjustment?
- P2P or P2MP?
- Issues on Failure

Why RPD for dynamic traffic adjustment

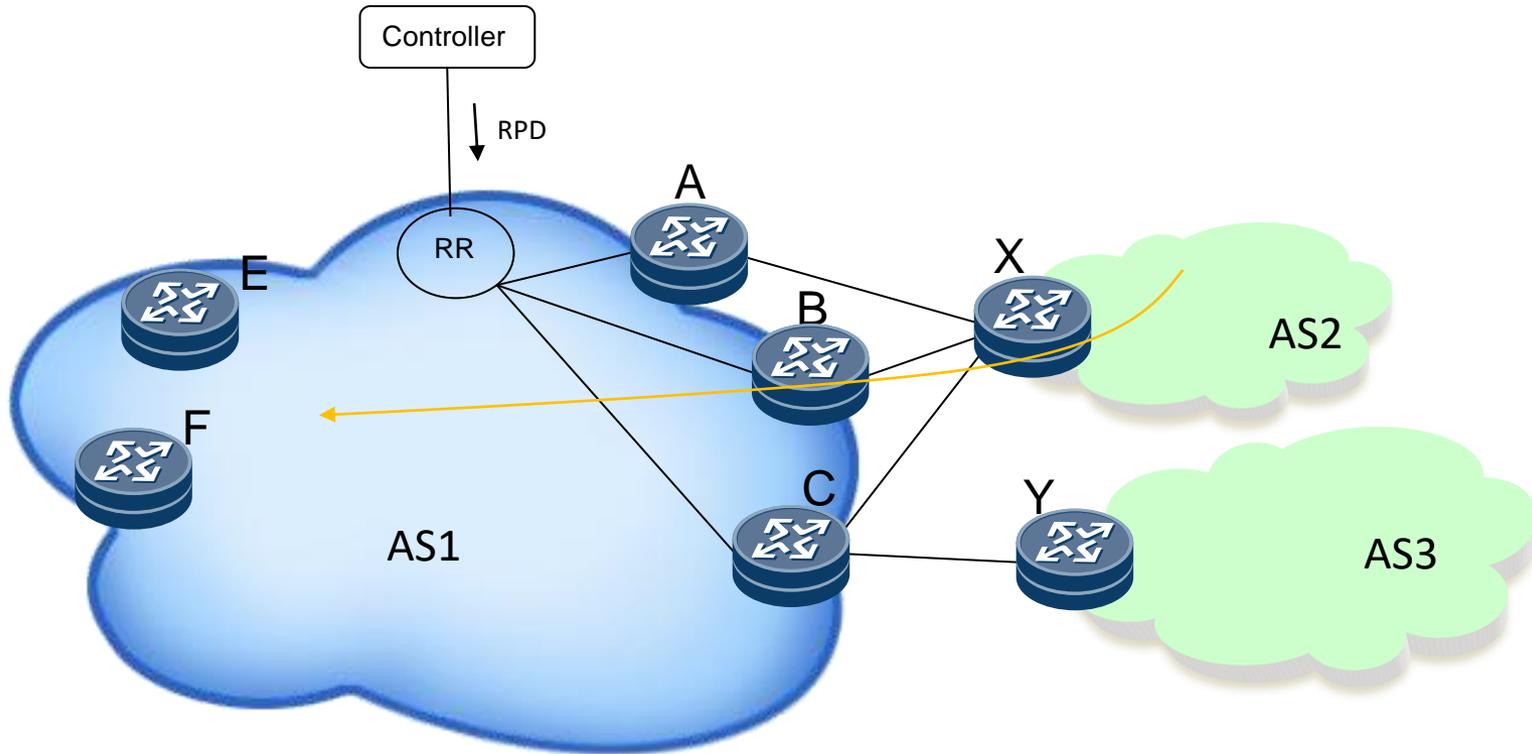


Using configurations, whenever traffic is not expected, change/add/delete some configurations on some routers

- Complex and Error Prone
- Hard to maintain

P2P or P2MP?

Typical Application Scenario



- Controller sends RPD route to RR
- RR reflects it to A, B, C, etc. This is P2MP.
- A, B, C extract policy from RPD route
 - apply policy to all remote peers if peer IP in NLRI of RPD is 0;
 - otherwise, apply policy to the peer indicated by peer IP

Peer IP in NLRI
does not change
P2MP behavior

Issues on Failure

- Failure for router to install route: Bug, need to be fixed

- Failure of Controller or Session to Controller
 - Existing mechanisms such as
BGP GR to keep route for some time
BGP Long-lived Graceful Restart (LLGR)

 - Worst case: RPD routes for adjusting traffic are withdrawn
The traffic takes its old path. Acceptable

Next Step

Comments