

Update on

Origin Validation Policy Considerations for Dropping Invalid Routes

draft-sriram-sidrops-drop-invalid-policy-02

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DISR Policy

What is DISR:

- DISR = Drop Invalid if Still Routable
 - Drop Invalid if a Valid or NotFound less specific route exists

Why DISR:

- If ROA for subsuming less specific prefix exists but there is no ROA for the more specific that you announce, then
 - DISR (working in ASes elsewhere) ensures that traffic for the more specific prefix still reaches you - correct destination (possibly via suboptimal / non-TE path)
 - Invalid announcements of your more specific prefix (by you or others) are rejected

Use case analysis & BGP/ROA data analysis - see IETF 101 presentation:

<https://datatracker.ietf.org/meeting/101/materials/slides-101-sidrops-origin-validation-policy-considerations-for-dropping-invalid-routes-00>

Addressing WG questions/comments

AS0 ROA

New wording in the draft:

The existence of an AS0 ROA for a prefix means that the prefix or any more specific prefix subsumed in it are forbidden from routing except when there exists a different ROA with a normal ASN for the prefix or the more specific prefix. DISR policy **MUST** apply the following exception: If a route is Invalid due to an AS0 ROA, then always drop the route.

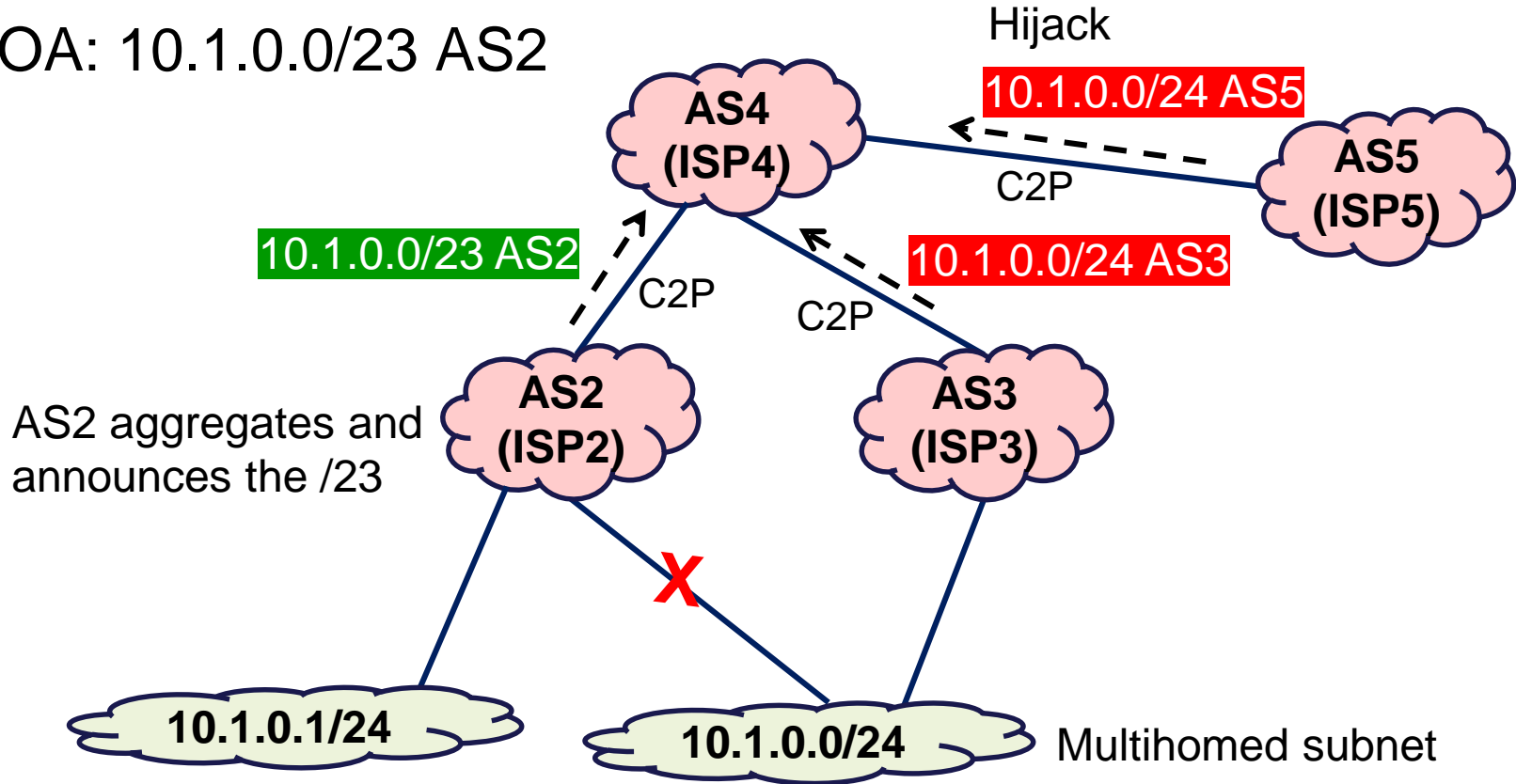
Default Route

New wording in the draft:

Any routes for 0.0.0.0/0 (IPv4) or ::/0 (IPv6) in the routing table must be excluded from consideration in the DISR policy.

John Scudder's point about multi-homing

ROA: 10.1.0.0/23 AS2



- Combination of things: multi-homing, no ROAs, link failure
- Shouldn't AS2 withdraw the aggregate?
- Multi-homed customers need to be clueful about RPKI

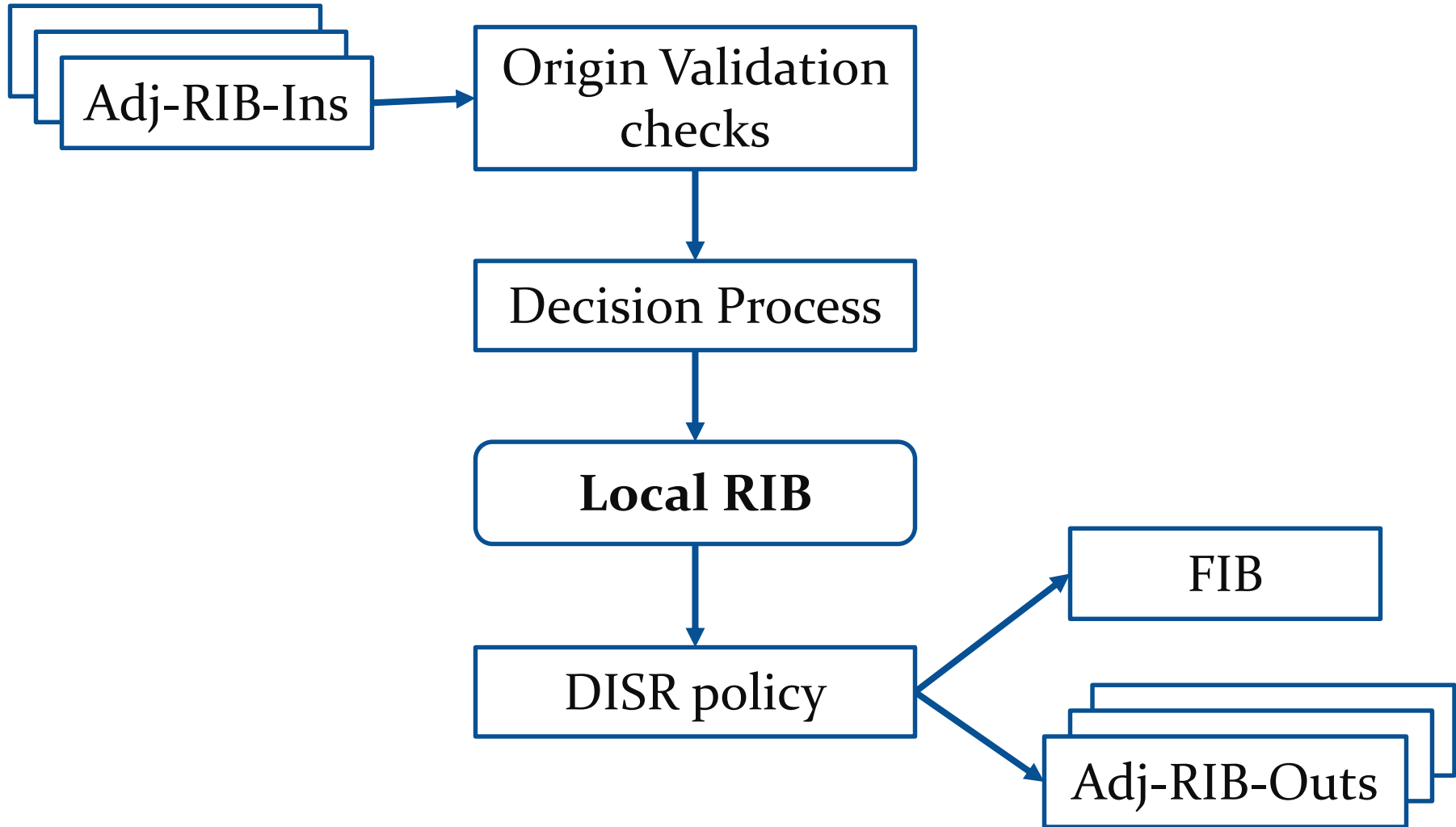
Conceptual Implementation of DISR

The draft (-02) has been updated to include the conceptual implementation as described in the next 2 slides.

Conceptual Implementation of DISR

(Part 1 of 2)

With inputs from Jeff Haas



Conceptual Implementation of DISR

(Part 2 of 2)

When a Valid/NotFound route is added to Loc-RIB, check if there are any more specific prefixes in FIB / Adj-RIB-Outs subsumed by the route prefix; If such more specific prefix route is Invalid, then remove it from FIB / Adj-RIB-Outs.

When a Valid/NotFound route is withdrawn from Loc-RIB, check if there are any more specific prefixes in Loc-RIB subsumed by the route prefix; If such more specific prefix route is Invalid, then add the route to FIB and Adj-RIB-outs.

When router is notified of RPKI state change, then list all the prefixes effected by it. Rerun route selection decision and DISR policy for those prefixes.