BGP Prefix Origin Validation
draft-ietf-sidr-pfx-validate-03

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Clarifications

• Rewrote section 2 to be Even Clearer
• Newly defined terminology:
  – Covered: a ROA covers a route prefix if it matches it in the usual CIDR prefix match way
  – Matched: A ROA matches a route prefix if it covers it and the maxlength of the ROA is >= the route prefix length
• Clarify that the criterion for “invalid” is “covered, not matched”
  – This was a cause of confusion
Validity States

• Not Found: No ROA *covers* the route prefix.
• Valid: At least one ROA *matches* the route prefix.
• Invalid: At least one ROA *covers* the route prefix, but no ROA *matches* it.
Example

• ROA set:
  – 10/8maxlength 16 origin AS 690
  – (and nothing else, this is an example!)

• Route to be matched:
  – 10.0.0/24 origin AS 42

• Some readers believed that in this example the route validation state should be “not found”

• Hopefully it is now clear it is “invalid”
Other Changes

• Fixed some bugs in pseudo-code
Pending for -04

• Default validation states for routes that don’t have one explicitly assigned
  – Proposed default is “not found”
• 03 and earlier restrict validation lookup step to EBGP routes.
  – Use cases exist for doing validation on IBGP and locally-originated routes
  – Thus, relax previous restriction
Discussion, possibly for -04

• If we are going to allow validation to be run against local routes...
• ... we have to think about what “local” means.
• This is less obvious than it might seem
  – Private ASNs for peering with stubs
  – Confederations
  – Local-AS
  – ...
Next Steps

• Several implementations
• Authors feel we’re about done
• Spin -04, then WGLC?