A Look at Classification for Origin Validation

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origin validation terms
RFC6811

- **covered**: route prefix

- **matched**: route prefix

- **NotFound**: validation state

- **valid**: validation state

- **invalid**: validation state

- ???: VRP database not available/complete?

  "SHOULD initialize to **NotFound**"

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prefix classification
NOT knowing origin AS

- RS-AllwaysINVALID = **covered** AND not **matched** for any *acceptable* origin AS

- RS-maybeVALID = **matched** for some *acceptable* origin AS

- RS-ROA-notFound = **notFound**

- RPKI validator output can be converted to RPSL route-set and prefix-filters

- RS-AllwaysINVALID can be used like Martians filter – but would need to be updated more frequently :-)

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validation state under incomplete database?

- correct validation state requires a complete snapshot of all validated ROAs (NotFound and Invalid can change when missing ROAs show up)

- when incomplete (potentially no) ROA snapshot information is available marking as NotFound (previously known as "unknown") is questionable

- operator is better served by distinct additional pseudo validation state e.g. "unverified" to allow differentiated policy

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