



Problem Statement 04

RPKI Route Origin Validation (ROV) & Collateral Damage

References: <https://taejoong.github.io/files/publications/li-2025-router.pdf>
[Working Group: MAPRG](#)

Problem Statement:

Build a real-time monitoring framework to detect and mitigate **collateral damage** in partial RPKI Route Origin Validation (ROV) deployments.

Focus Areas

- **Measurement:** Detect prefixes that are RPKI-invalid but still traffic-served due to partial deployment.
- **Quantification:** Analyze the impact on reachability across ASes—identify affected prefixes and measure recovery paths.
- **Mitigation:** Prototype a system similar to "ImpROV" to reroute around unreliable validation peers.
- **Visualization:** Develop dashboards showing invalid prefix impact across networks.

Why It Matters

As partial ROV deployment grows, even enabled networks can suffer collateral effects from invalid announcements. This hackathon enables participants to explore solutions for real-world routing resilience.