Privacy-Preserving Policy Verification of Interdomain Routing



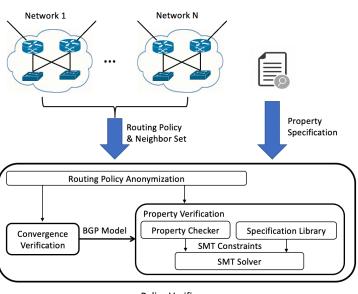
Challenge:

- Network operators need to ask "what-if" questions to ensure safe routing configurations
- State of art network verification schemes do not scale to large networks
- Networks are unwilling to publicly reveal routing policies

Solution:

- We accelerate the verification process by exploiting the routing decision process
- We propose an anonymization scheme for routing policies

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Policy Verifier

Scientific Impact:

- We derive sufficient conditions for safe routing policies
- We propose a scalable control plane verification model
- We anonymize routing policies without comprising utility

Broader Impact and Broader Participation:

- Address a critical gap of performing scalable routing verification in a privacypreserving manner.
- Involve three female undergraduate students in the research