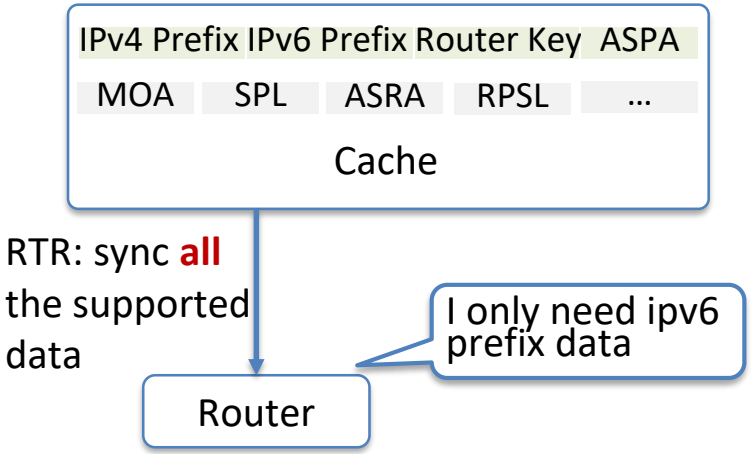
IETF Hackathon

IETF 125
14–15 March 2026
Shenzhen, China

Project 1: Selectively Synchronizing RPKI Data to Routers

Problem to Solve

The RTR protocol synchronizes **all types of RPKI data** from the cache to the router in full, regardless of whether the router actually needs or uses those data.



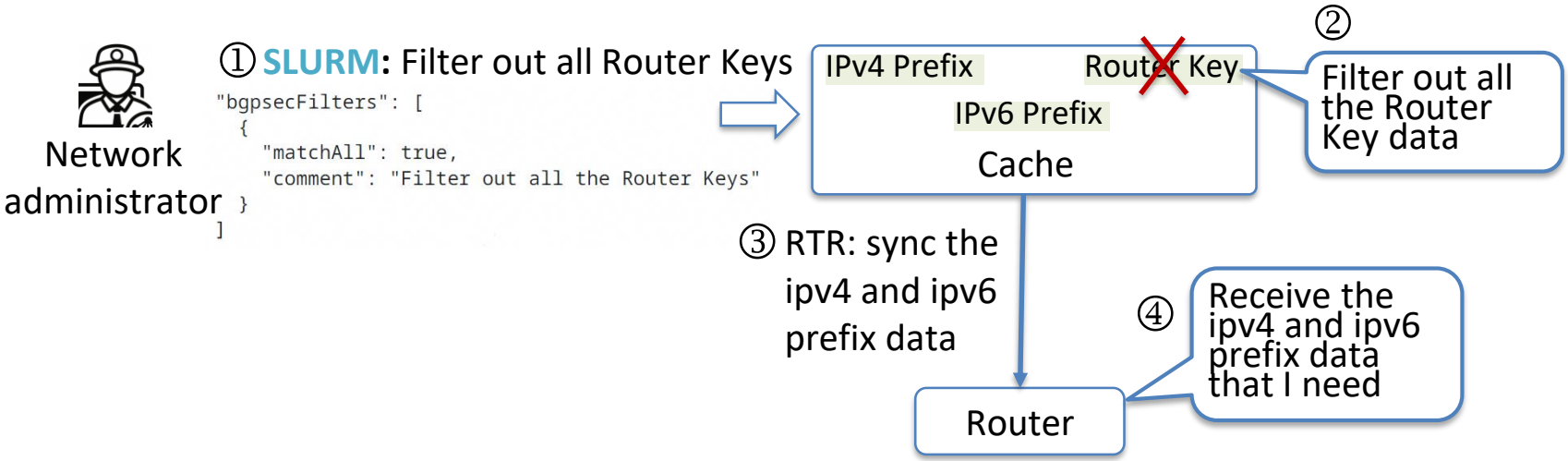
Hackathon Plan

1. *Scheme Refinement:* Discuss a feasible technical scheme for development.
2. *Open-Source RTR Based Development:* Analyze RTR source code, build the on-demand synchronization prototype
3. *Scheme Revision & Standard Update:* Review development problems, adjust the scheme for engineering feasibility, and update the drafts.

[1] https://datatracker.ietf.org/doc/draft-fu-sidrops-enhanced-slurm-filter/
[2] https://datatracker.ietf.org/doc/draft-geng-sidrops-rtr-selective-sync/

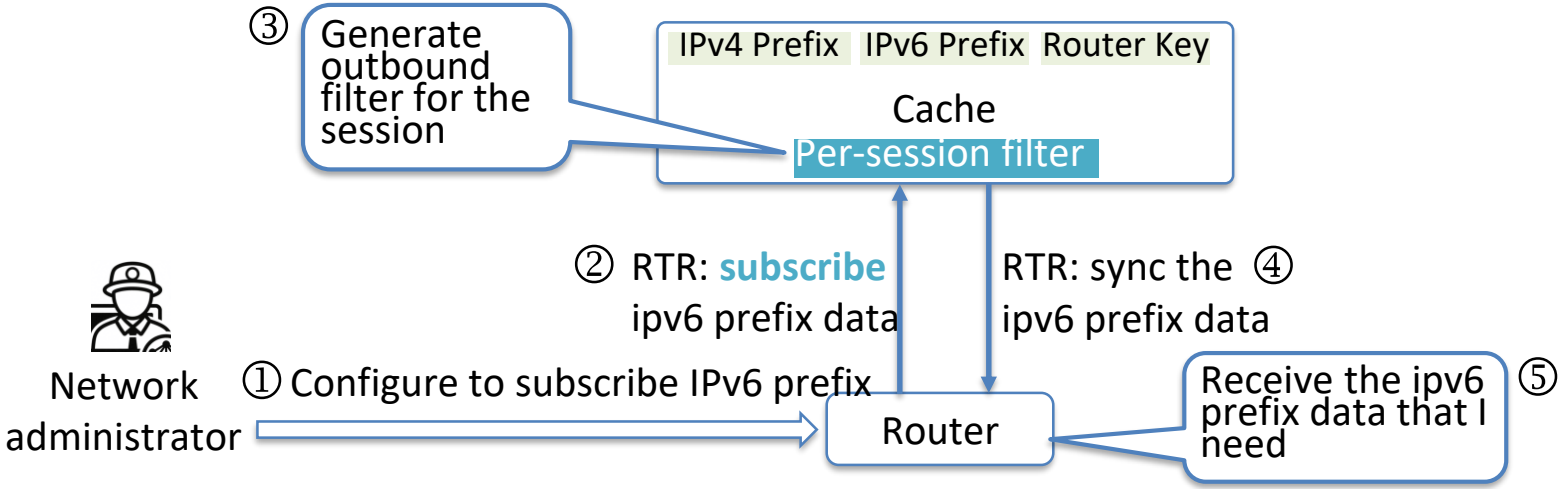
What got done

- The **first** key extension to the RTR software:
  - **Extending the SLURM mechanism** [RFC8416]: This extension enables filtering of specific types of RPKI data.



What got done (Cont.)

- The **second** key extension to the RTR software:
  - **Extending the RTR protocol**: The Client can subscribe to specific types of RPKI data from the server via the Subscribe PDU. The server will only synchronize the subscribed types of RPKI data to the Client.



Wrap Up

Team members:

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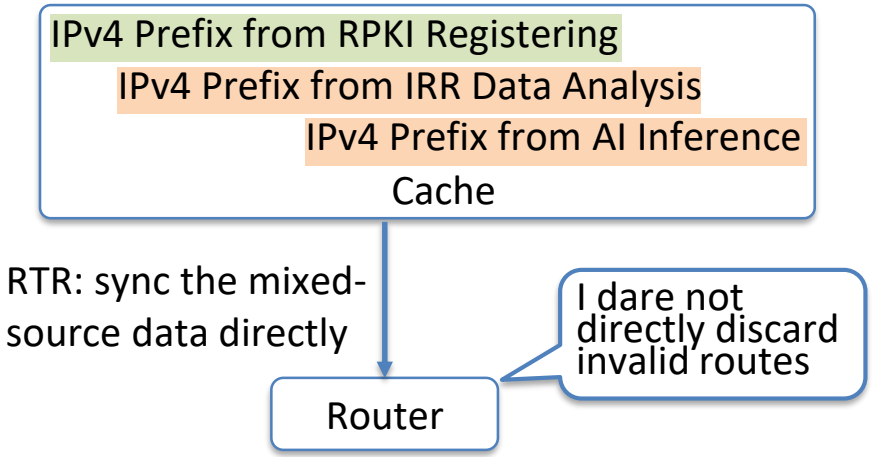
- **Github Link:** https://github.com/XiaoTianCan/stayrtr-SelectiveSync
- **Related Documents**

[1] https://datatracker.ietf.org/doc/draft-fu-sidrops-enhanced-slurm-filter/

[2] https://datatracker.ietf.org/doc/draft-geng-sidrops-rtr-selective-sync/

Project 2: RPKI-based Validation with Prioritized Resource Data

- **Background:** Some network operators may complement RPKI data using IRR or AI inference. However, unlike data registered in RPKI, complemented data has relatively low credibility.
- **Problem:** Conservative treatments to potentially invalid routes, to avoid false filtering.
- **Solution:** Mark the RPKI data with credibility/priority, and Modify the route validation algorithm to support more validation outputs



What got done

- Priority-Aware ROV Algorithm:
  - Support multi-priority validation states
  - Enable differentiated handling policies for prioritized invalid routes

Wrap Up

Next:

- RTR protocol extensions
- SLURM extensions
- Data merging and management
- Extended validation algorithms

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- **Related Document**

https://datatracker.ietf.org/doc/draft-zhang-sidrops-prioritized-route-validation/