

Signaling Prefix Origin Validation Results from a Route-Server to Peers

NANOG

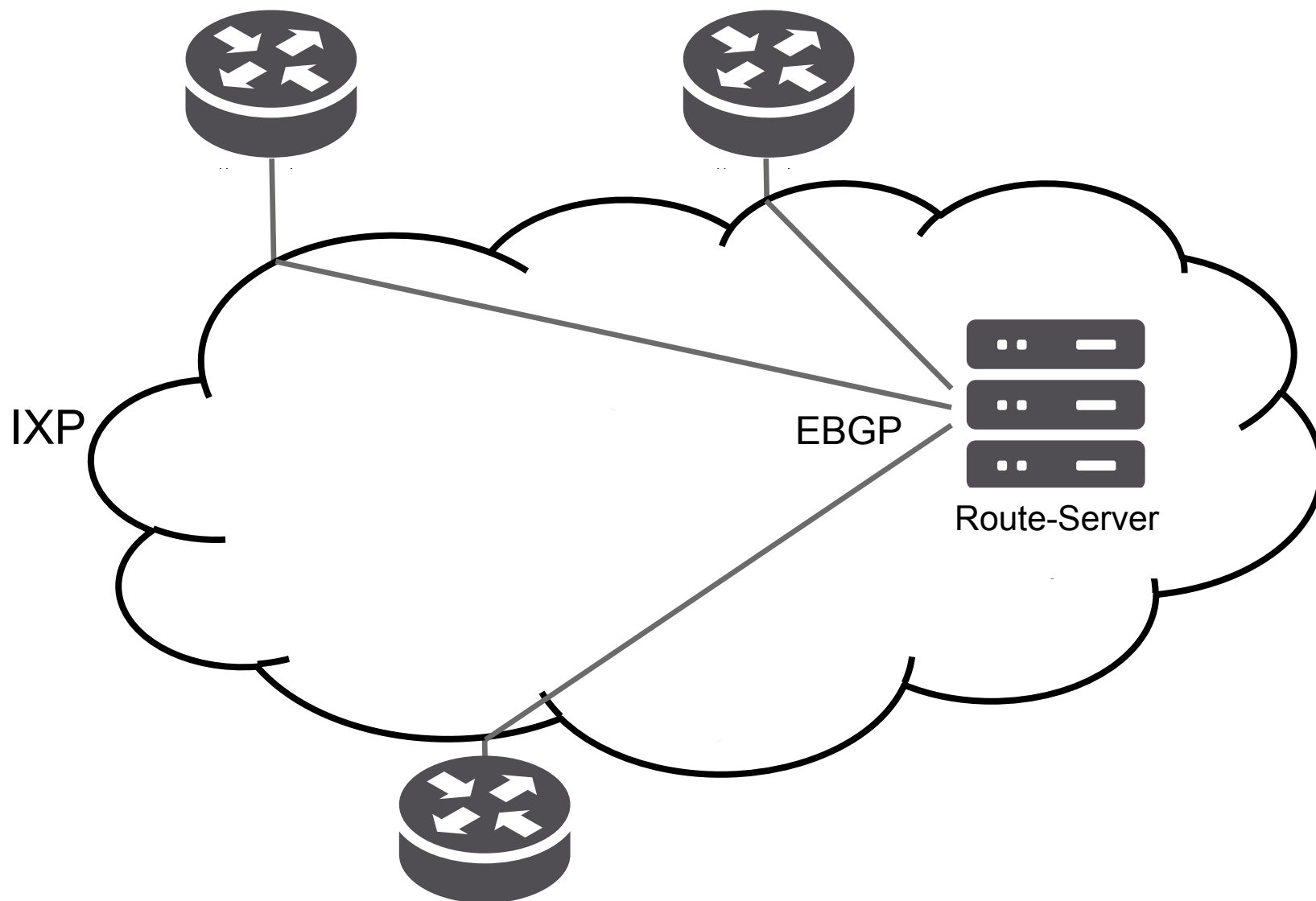
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Motivation

- Boost acceptance and usage of RPKI-based prefix origin validation
- Increase the security of the Internet routing system
- Increase data quality at IXP's route-servers

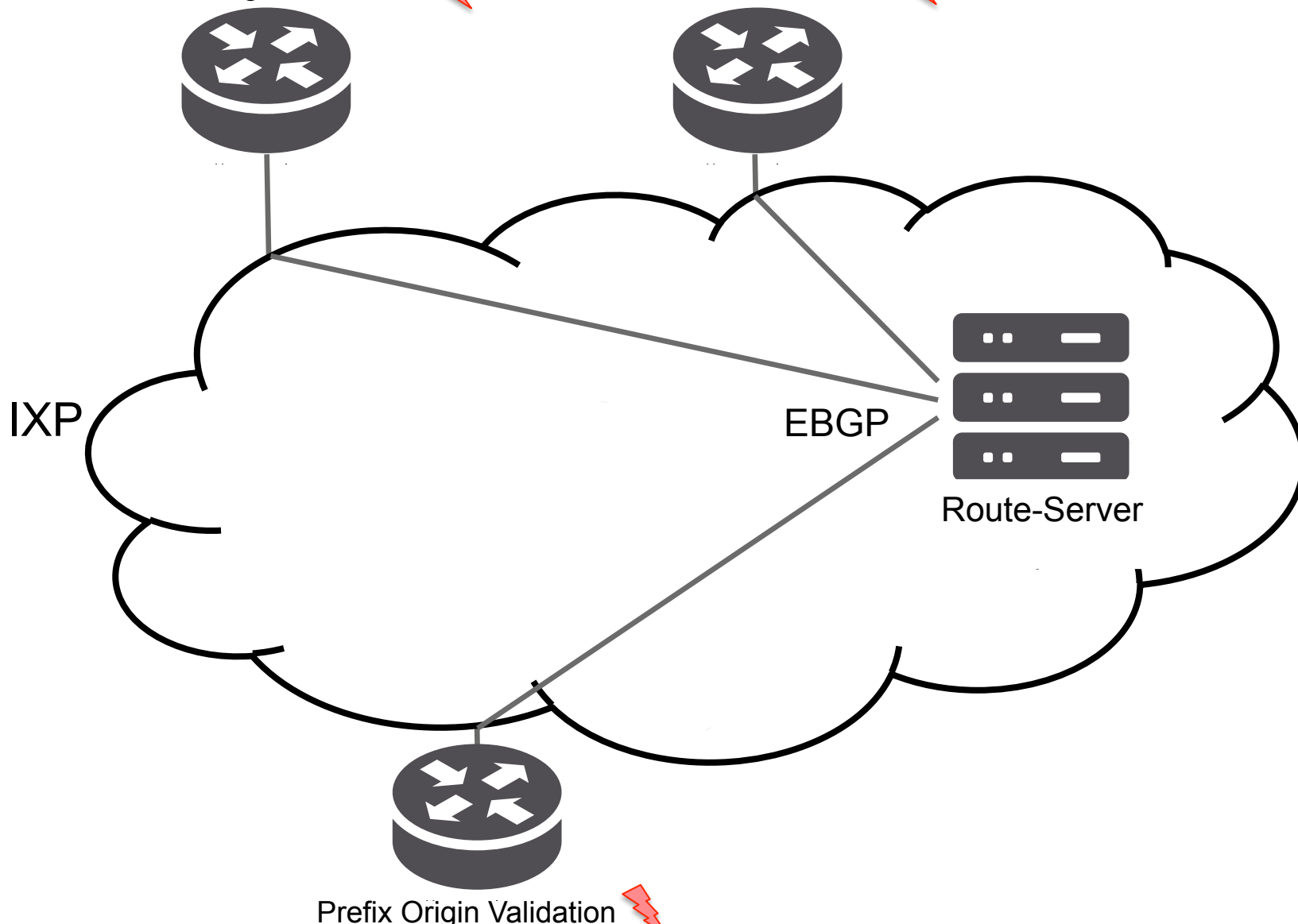
IXP – Route-Server Architecture



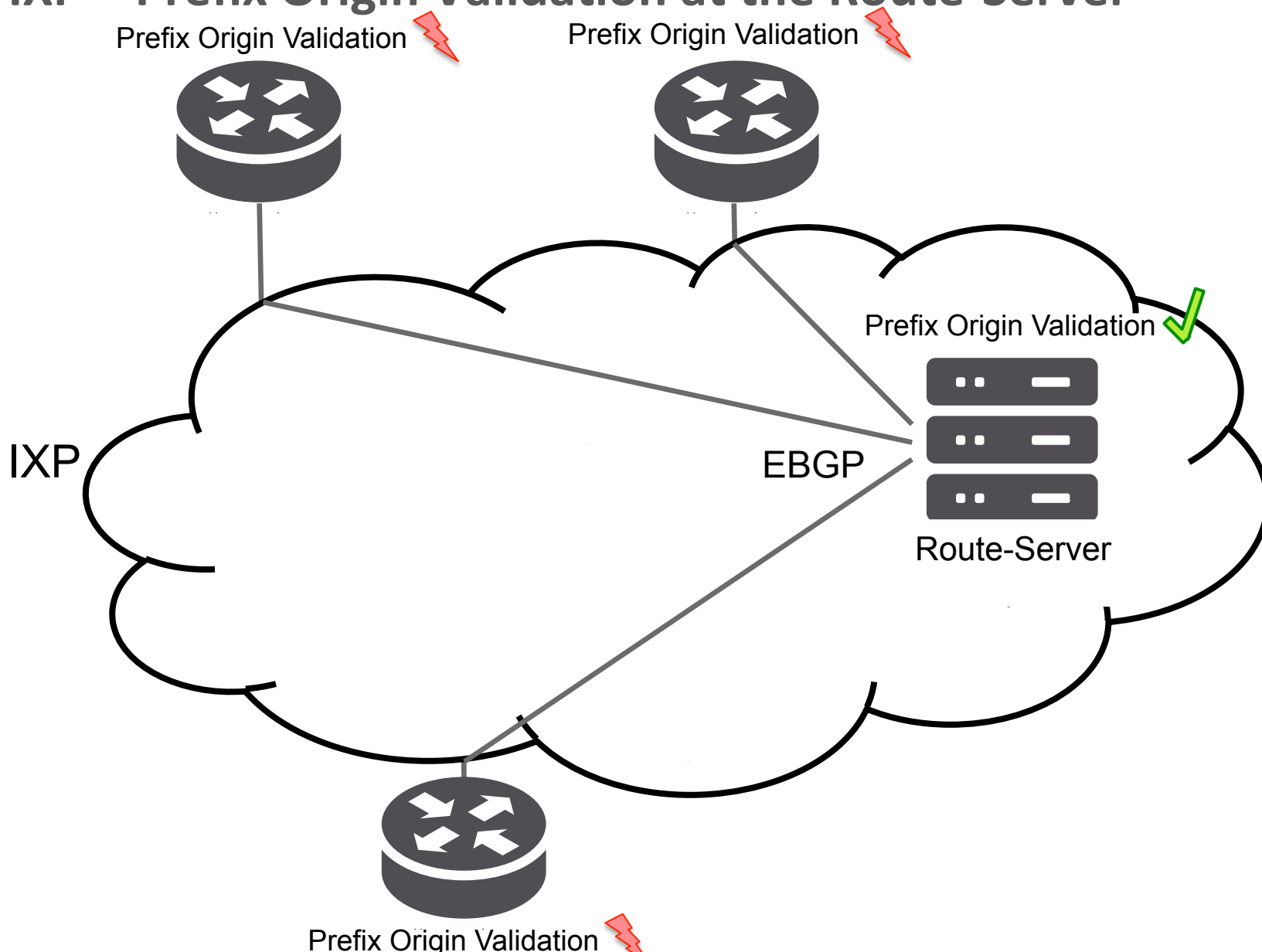
IXP – Prefix Origin Validation Support

Prefix Origin Validation ⚡

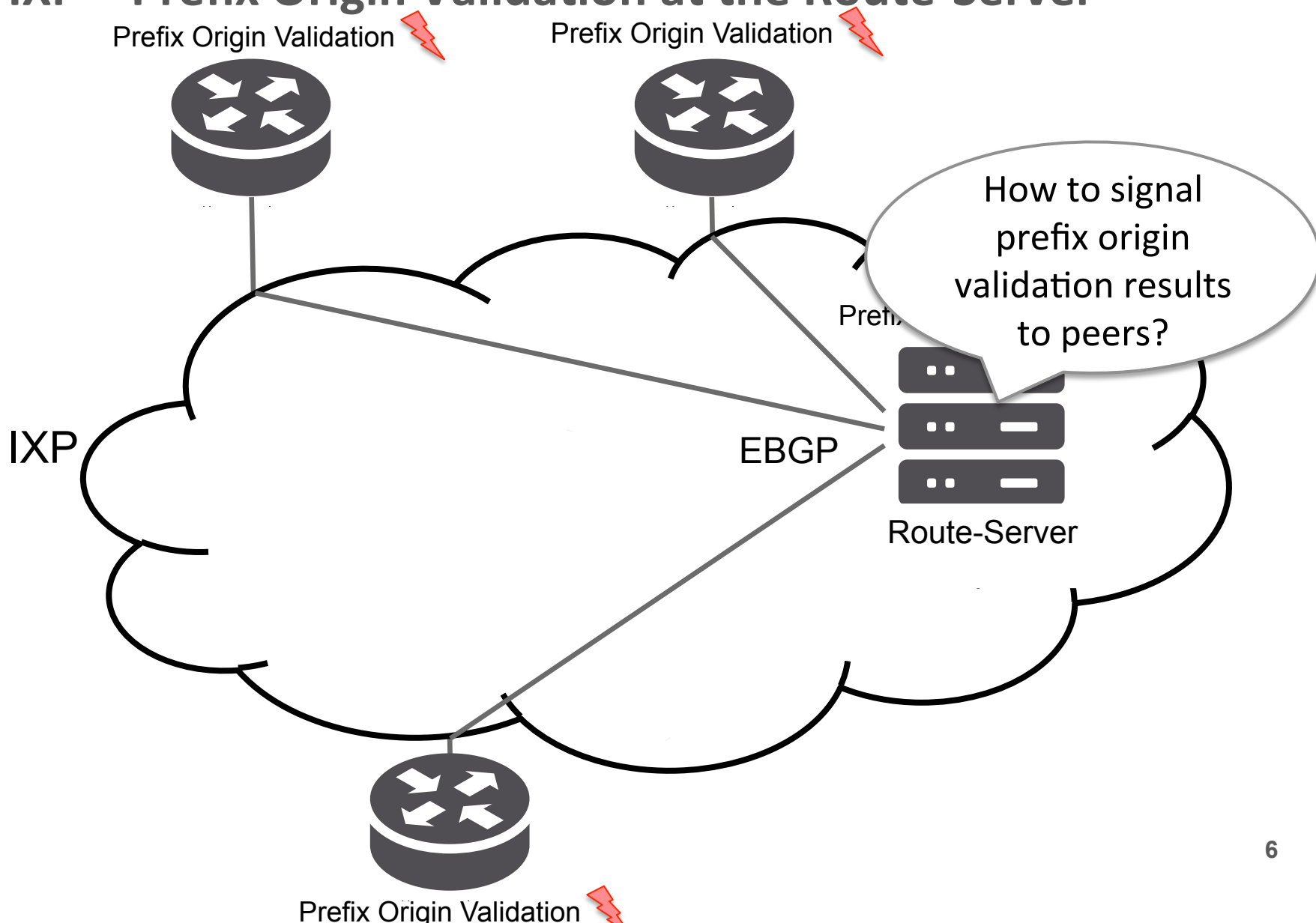
Prefix Origin Validation ⚡



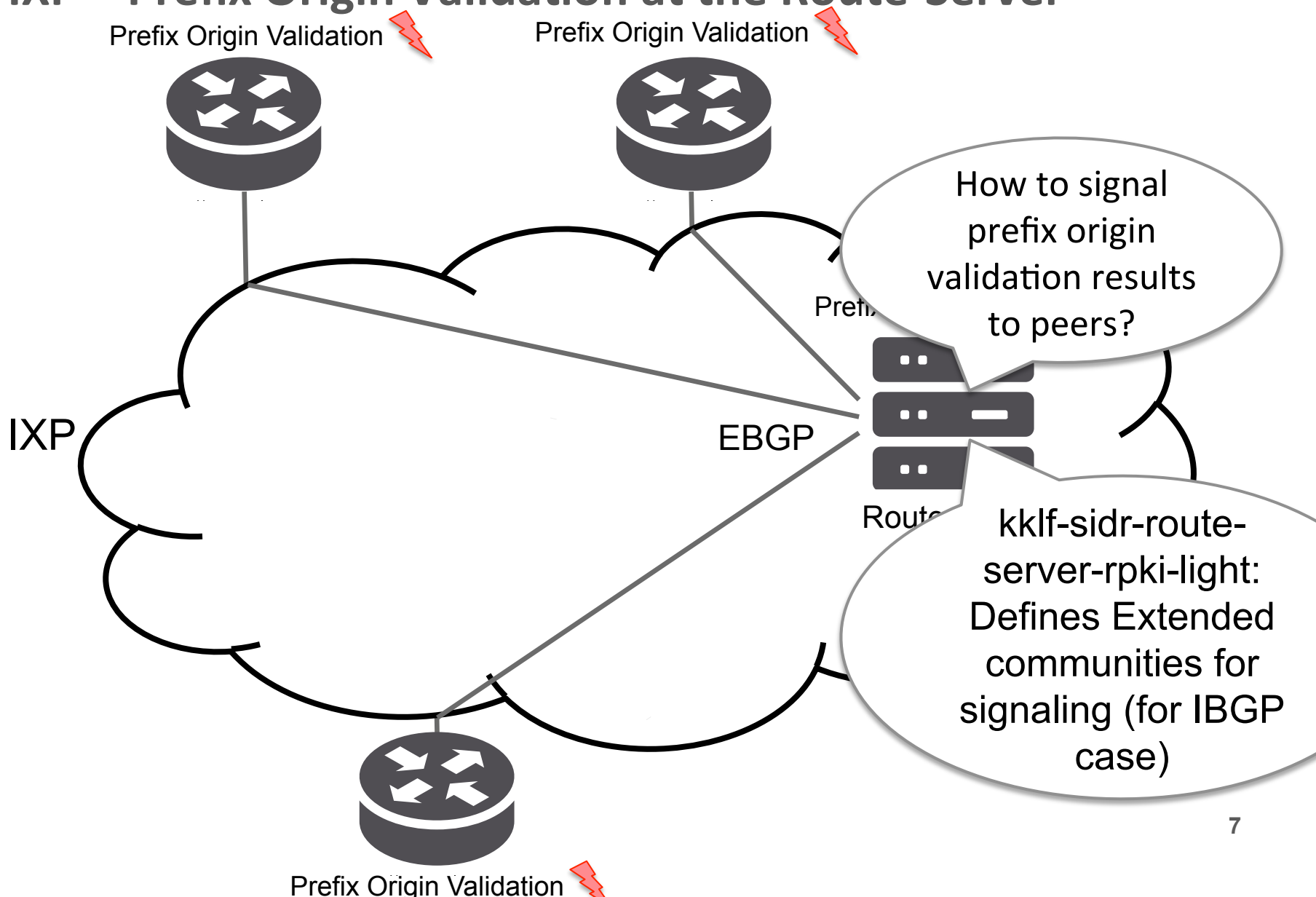
IXP – Prefix Origin Validation at the Route-Server



IXP – Prefix Origin Validation at the Route-Server



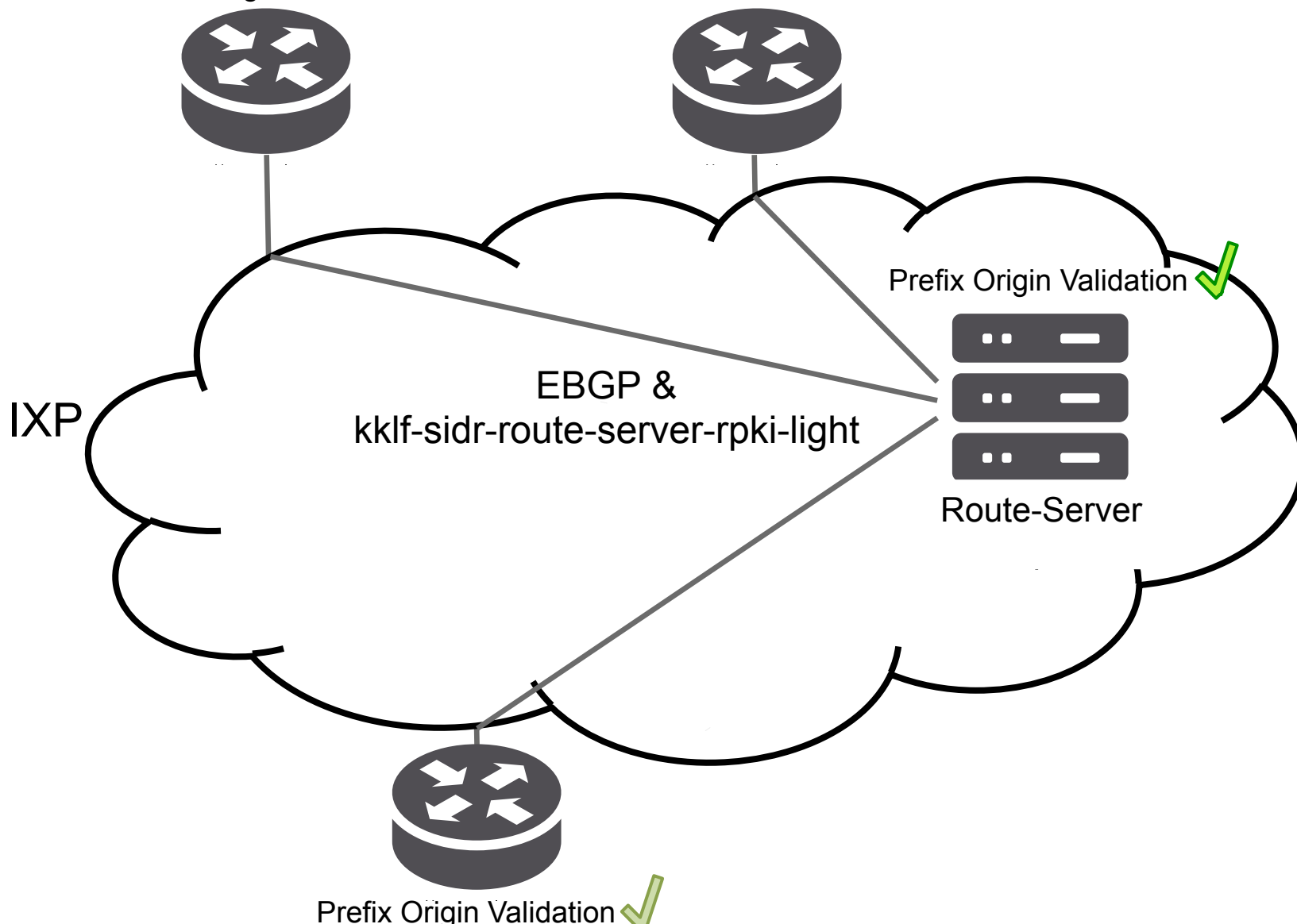
IXP – Prefix Origin Validation at the Route-Server



IXP – Prefix Origin Validation at the Route-Server

Prefix Origin Validation ✓

Prefix Origin Validation ✓



kklf-sidr-route-server-rpki-light

- Internet Draft (IETF)
- Joint work: DE-CIX, AMS-IX, France-IX
- Accepted as SIDR working group document

What Worked Well?

- Cooperation within the community (e.g. other IXPs)
- A lot of interest within the community – some do not like the concept (“Do not mess with my BGP”)
 - Deployment of RPKI is not very common (about 9% of all prefixes available at the Route-Server in DE-CIX Frankfurt are covered by a ROA)
- Prototyping is easy - hard part is to make it scale to 1000 route server peers
 - Software to prototype is available (e.g. Bird, rtrlib, RIPE NCC Validator)
 - Production-grade software is missing

Next Steps?

- Understand if the community adopts RPKI
 - Chicken-Egg-Problem
- Enhance prototype implementation:
 - More control
 - Better monitoring capabilities
 - Stable toolchain
- Release the “Prefix Origin Validation at the Route-Server” feature in 2016?