



Karlsruhe Institute of Technology



# **KIRA – Scalable Zero-Touch Routing**

**(RTGWG IETF123)**

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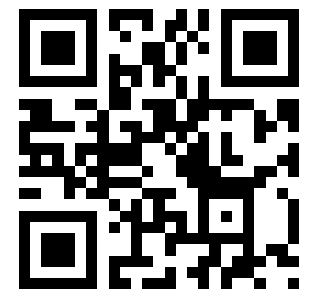


# KIRA – Motivation

- Why? Never lose control over your network infrastructure!
- Goal: provide highly resilient autonomous control plane connectivity
  - no manual configuration, no dependencies (just link layer connectivity)
  - support for inband, out-of-band, hybrid management/control
  - existing solutions not scalable, zero-touch, or topology specific
- Features
  - Scalability: 100,000s of nodes (in a single domain)
  - Zero-touch: no configuration required
  - Topological versatility: works well in wide variety of topologies
  - Supports mobility (Cellular, but also MANETs, LEO Satellites), multi-homing, and domain contexts
  - Need KIRA in every network infrastructure device → IETF Standard

# Standardization

- Internet-Draft <https://datatracker.ietf.org/doc/draft-bless-rtgwg-kira/>
  - State: Full protocol description ready for implementation
  - Introduction (0.5 pp.)
  - Overview (4 pp.)
  - Protocol Operation (17 pp.)
  - Protocol Specification (26 pp.)
  - Updated to -03: added end-system mode
- Please read and provide feedback on the RTGWG list!
- Want IETF RTG expertise



<https://s.kit.edu/KIRA>

# Running Code and Side Meeting

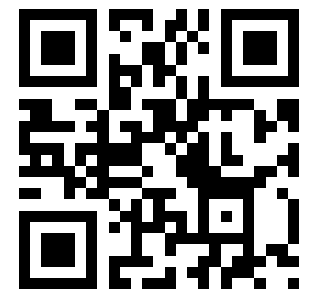
## ■ Running Code available

- Hackathon IETF 123
- Hackdemo Happy Hour
  - Monday, 21 July, Time: 19:00 - 20:00, Room: [Red Foyer](#)
- Native Routing Daemon Linux (Rust)
  - Forwarding Tier uses nftables
  - Does not fully cover Internet-Draft yet  
(need to update: wire format, forwarding tier to use 2-segments)

## ■ Side meeting:

**Wednesday July 23rd, 16.00–17.00h, Segovia**

- KIRA Intro, Q&A, collaboration, next steps towards standardization



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