ARMOR: BUILDING A COMMUNITY FOR PROTOCOL RESILIENCE

HOTRFC LIGHTNING TALK
IETF 124
NICK SULLIVAN - CDT

END-TO-END CONNECTIVITY

Deep-packet inspection systems actively block or modify protocol handshakes, with studies showing **up to 15 % of TLS connections** are manipulated by on-path devices.

Traffic throttling and injection degrade performance or inject fake responses, causing application failures.

Targeted protocol blocking forces services to fall back to less efficient or less secure methods, fragmenting end-to-end reliability.

ARMOR: A NEW MAILING LIST

Existing IRTF groups each cover part of the space

- MAPRG does measurement
- HRPC handles policy/human-rights
- PEARG focuses on privacy enhancements
- GAIA explores global access and architectural connectivity

No single forum is dedicated to end-to-end technical resilience and deployment research in adversarial or disrupted environments.

VISION

Cross-community space for empirical studies, protocol enhancements, and deployment lessons

Example topics

- Best practices for designing an overlay network for end-to-end connectivity
- Protocol deployment: ECH and MASQUE
- Measurement & metrics: Quantify interference patterns and countermeasures

NEXT STEPS

- Who we need: Operators, implementers, measurement experts, protocol researchers
  - First steps: Subscribe to ARMOR list
  - Next: Side-meeting happening Monday, November 3, 2025 7:00-8:00PM, Room: Duluth

https://mailman3.irtf.org/mailman3/lists/armor@irtf.org/