DLT Network Interoperability
Challenges in the Web3 World

IETF113

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Problems

- Poor (no) interoperability of DLT Networks today

- Desirable "interoperability" features:

  - Digital assets can freely move across DLT networks

  - Satisfying Atomicity & Consistency properties

  - Satisfying Security & Integrity properties

- Foundation for the legal & economic layers

- (Hype and lack of infrastructure investments)

Gateways for DLT Networks

- Lessons learned from the Internet Architecture
- One or more Gateways in each DLT network
  - BGP model
- Gateway hides interior DLT-specific characteristics
- Gateway owned/operated by legal entities
- Implements Secure Asset Transfer protocol (ODAP)

Scope of Work
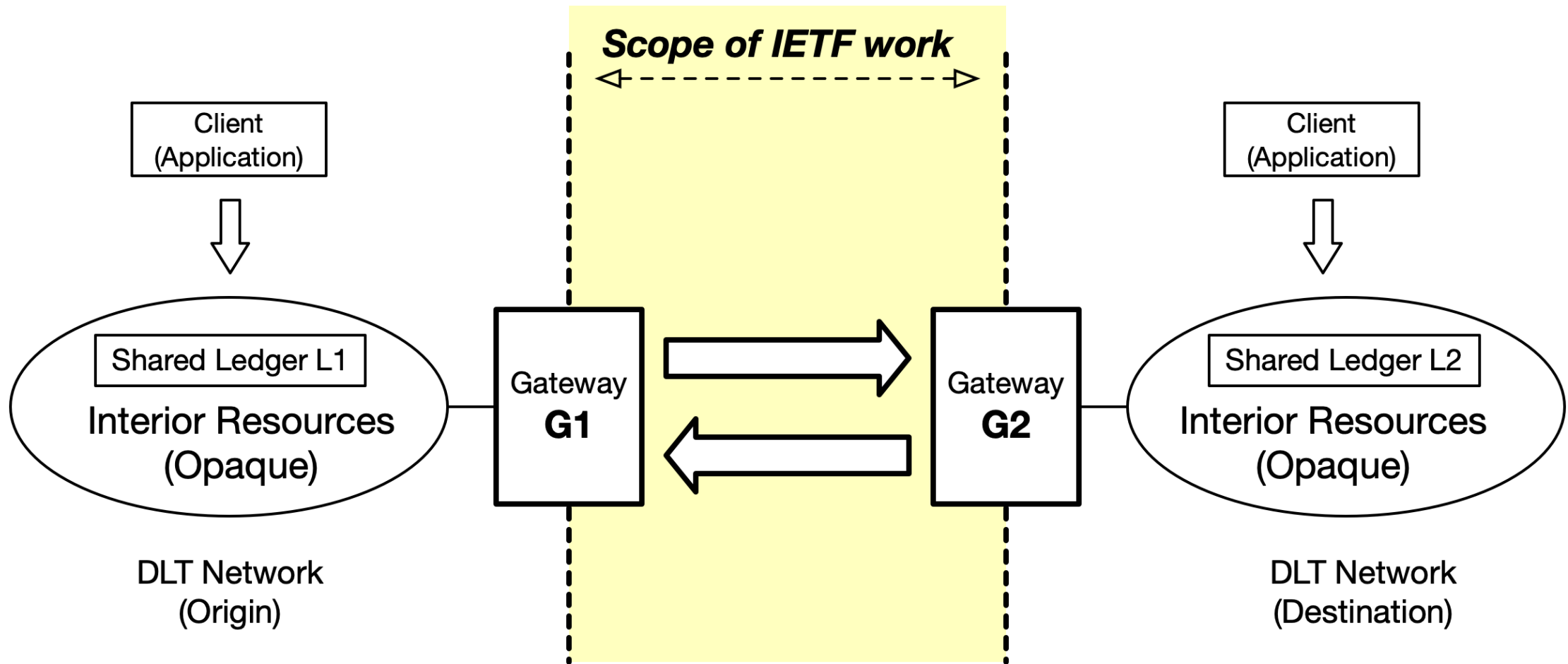
Scope of Work

- Gateway API-endpoint definitions
- Resource identifiers/addresses
- Payload definition
- Message flows
- Secure channel establishment (e.g. TLS1.3)
- Terminology (extending NIST & ISO)

List of current technical specifications

- Gateway architecture draft

- Secure Asset Transfer protocol draft

- Gateway Crash Recovery draft

- Gateway Discovery draft

- Data sharing/export

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Welcome to join discussion group

- Group has been meeting bi-weekly since Sept 2020

- Operates under IETF IPR Rules (IETF Note Well)

- Regular meeting information
  - Every second Tuesday 8am-PST/ 11am-EST/ 16:00-UK
  - Zoom

- IETF mail-list
  - https://www.ietf.org/mailman/listinfo/blockchain-interop

Why the IETF

- Neutrality & openness
- Long history of Internet Architecture development
- History of gateway protocols (e.g. BGP4, IPsec/IKE)
- Strong expertise in security protocols
    - IPsec, IKE, Kerberos, TLS, JWT, JWE, CoAP, RATS, etc.
- Existing liaisons (e.g. ITU, W3C, 3GPP, etc.)

Thank You & Questions

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