SATP
Problem Space & Goal

IETF115 – SATP BOF

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Thomas Hardjono (MIT), Martin Hargreaves (Quant) and Venkatraman Ramakrishna (IBM)
Digital Asset Networks on the Internet

• Growing number digital asset networks
  • Operates on TCP/IP Internet (e.g. propagation)
  • Relies on many IETF standards
• Introduces new security & privacy challenges
• Requiring new public standards
SATP Problem Statement

• Poor interoperability of digital asset networks
  • Difficult to securely move assets across networks

• Poor scalability:
  • Bilateral agreements
  • Proprietary transfer protocols

• Lack of standards on security for asset transfers
  • Increases risks and inhibits industry growth
SATP Goal

• An interoperability protocol that permits the secure movement of a unique *value-bearing data-object* (“asset”) from one network to another,

• while guaranteeing that the data-object is *valid* in one network only at any one time, and that

• the transfer is *verifiable* by an independent authorized 3rd party
Proposed Scope of Work

Scope of IETF work

Secure Asset Transfer Protocol

Origin Network NW1
State Data DB1

Gateway G1

Gateway G2

Destination Network NW2
State Data DB2

Client (Application)
Assumptions

• Both networks share common semantics about the data-object and the notion of validity
• One or both networks are opaque
• “Gateways” implementing the transfer protocol are trusted
• Information subsets (views) of a data-object maybe shared with authorized external parties
Proposed Approach: Gateway Model

• Interoperability “lessons learned” from the Internet Architecture
• One (or more) gateway in front of each network
• Peer gateways implement a Secure Asset Transfer Protocol (SATP)
• Each gateway handles (hides) the interior characteristics of its network
Proposed Starting Point

• Collect Use-Cases:
  • draft-ramakrishna-sat-use-cases-00

• Develop a common Architecture
  • draft-hardjono-sat-architecture-00

• Initial design for asset transfer
  • draft-hargreaves-sat-core-00

• Initial design for sharing asset-related data
  • draft-ramakrishna-sat-data-sharing-00
Thank You & Questions