Secure Asset Transfer Protocol
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Secure Asset Transfer Protocol (SATP) Implementation Guide
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Abstract

This memo provides guidelines to developers of gateway systems, digital asset networks and client applications for the Secure Asset Transfer Protocol (SATP). Multiple gateways can represent the same digital asset network following the SATP standards, which necessitate basic implementation guidelines as outlined in this document. It also serves as an introduction to the SATP processing workflow for those new to the SATP standards.

About This Document

This note is to be removed before publishing as an RFC.

The latest revision of this draft can be found at https://anawhj.github.io/draft-song-satp-implementation-guide/draft-song-satp-implementation-guide.html. Status information for this document may be found at https://datatracker.ietf.org/doc/draft-song-satp-implementation-guide/.

Discussion of this document takes place on the Secure Asset Transfer Protocol mailing list (mailto:sat@ietf.org), which is archived at https://mailarchive.ietf.org/arch/browse/sat/. Subscribe at https://www.ietf.org/mailman/listinfo/sat/.

Source for this draft and an issue tracker can be found at https://github.com/anawhj/draft-song-satp-implementation-guide.

Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of BCP 78 and BCP 79.

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Table of Contents

1. Introduction

This document proposes implementation guidance from the perspective of developers of peer gateways and digital asset networks.

The Secure Asset Transfer Protocol (SATP) facilitates communication between peer gateways and other entities such as digital asset networks and client applications. A digital asset network can be connected to multiple peer gateways to enable asset transfers while ensuring interoperability. To ensure consistency across multiple peer gateways, appropriate guidelines are necessary.

Peer gateways must implement a secure asset transfer mechanism that meets essential requirements related to atomicity, consistency, isolation, and durability (ACID). Security and privacy are also critical requirements. Therefore, this document involves several considerations beyond the SATP interface.

The existing SATP core documents ([SATcore], [SATarch]) provides most of the key implementation guidelines, but this document offers a more elaborated description of each phase within peer gateways and digital asset networks.

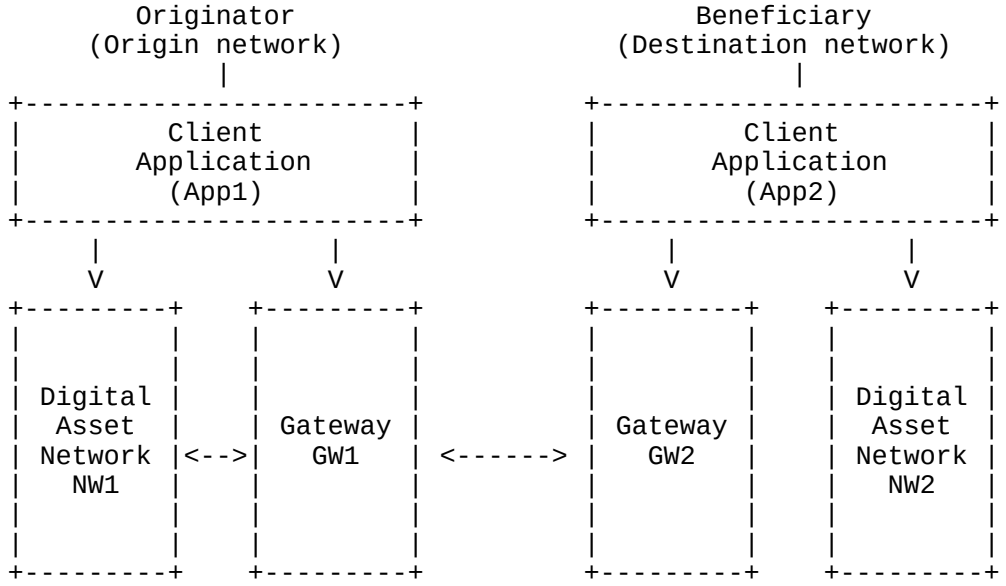

Figure 1. Scope of the SATP implementation

2. Conventions and Definitions

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in BCP 14 [RFC2119] [RFC8174] when, and only when, they appear in all capitals, as shown here.

3. Security Considerations

TBA

4. IANA Considerations

There are no IANA considerations related to this document.

5. References

5.1. Normative References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <https://www.rfc-editor.org/rfc/rfc2119>.

[RFC8174] Leiba, B., "Ambiguity of Uppercase vs Lowercase in RFC 2119 Key Words", BCP 14, RFC 8174, DOI 10.17487/RFC8174, May 2017, <https://www.rfc-editor.org/rfc/rfc8174>.

5.2. Informative References

[SATarch] Hardjono, T., Hargreaves, M., Smith, N., and V. Ramakrishna, "Secure Asset Transfer (SAT) Interoperability Architecture", June 2024, <https://datatracker.ietf.org/doc/draft-ietf-satp-architecture/>.

[SATcore] Hargreaves, M., Hardjono, T., Belchior, R., and V. Ramakrishna, "Secure Asset Transfer Protocol (SATP) Core", July 2025, <https://datatracker.ietf.org/doc/draft-ietf-satp-core/>.

Acknowledgments

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