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Stream Control Transmission Protocol (SCTP) Chunk Flags Registration

Abstract

This document defines the procedure for registering chunk flags with the Internet Assigned Numbers Authority (IANA) for the Stream Control Transmission Protocol (SCTP). It updates RFC 4960 and also defines the IANA registry for contents for currently defined chunk types. It does not change SCTP in any other way.

Status of This Memo

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Table of Contents

1. Introduction 3
2. Conventions 3
3. IANA Considerations 3
3.1. Updated IETF-Defined Chunk Extension 3
3.2. New IETF Chunk Flags Registration 4
3.3. Initial Registrations 4
3.3.1. DATA Chunk Flags 4
3.3.2. INIT Chunk Flags 5
3.3.3. INIT ACK Chunk Flags 5
3.3.4. SACK Chunk Flags 5
3.3.5. HEARTBEAT Chunk Flags 5
3.3.6. HEARTBEAT ACK Chunk Flags 5
3.3.7. ABORT Chunk Flags 5
3.3.8. SHUTDOWN Chunk Flags 5
3.3.9. SHUTDOWN ACK Chunk Flags 6
3.3.10. ERROR Chunk Flags 6
3.3.11. COOKIE ECHO Chunk Flags 6
3.3.12. COOKIE ACK Chunk Flags 6
3.3.13. ECNE Chunk Flags 6
3.3.14. CWR Chunk Flags 6
3.3.15. SHUTDOWN COMPLETE Chunk Flags 6
3.3.16. AUTH Chunk Flags 7
3.3.17. ASCONF ACK Chunk Flags 7
3.3.18. PAD Chunk Flags 7
3.3.19. FORWARD TSN Chunk Flags 7
3.3.20. ASCONF Chunk Flags 7
4. Security Considerations 7
5. Acknowledgments 7
6. Normative References 8

1. Introduction

[RFC4960], which currently defines the Stream Control Transmission Protocol (SCTP), provides a procedure to define new chunk types. However, several protocol extensions currently being discussed need to define new chunk flags for existing chunks.

This document updates RFC 4960 to overcome this limitation. It defines the procedure to register chunk flags and specifies the registry entries for existing chunk types. The protocol is not changed in any other way. Therefore, only Section 14.1 of [RFC4960] is affected.

2. Conventions

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC2119].

3. IANA Considerations

Section 3.1 provides the updated procedure for SCTP Chunk Type registration; it replaces Section 14.1 of [RFC4960].

Section 3.2 provides a new procedure for SCTP Chunk Flag registration. A registry entry must be created for each SCTP Chunk Type.

Section 3.3 provides the SCTP Chunk Flag registry values for the SCTP Chunk Types specified in [RFC3758], [RFC4820], [RFC4960], [RFC4895], and [RFC5061].

3.1. Updated IETF-Defined Chunk Extension

The assignment of new chunk type codes is done through an IETF Review action, as defined in [RFC5226]. Documentation of a new chunk MUST contain the following information:

a) A long and short name for the new chunk type;

b) A detailed description of the structure of the chunk, which MUST conform to the basic structure defined in Section 3.2 of [RFC4960];

c) A detailed definition and description of intended use of each field within the chunk, including the chunk flags if any. Defined chunk flags will be used as initial entries in the chunk flags table for the new chunk type;

d) A detailed procedural description of the use of the new chunk type within the operation of the protocol.

The last chunk type (255) is reserved for future extension if necessary.

For each new chunk type, IANA creates a registration table for the chunk flags of that type. The procedure for registering particular chunk flags is described in the following Section 3.2.

3.2. New IETF Chunk Flags Registration

The assignment of new chunk flags is done through an RFC required action, as defined in [RFC5226]. Documentation of the chunk flags MUST contain the following information:

a) A name for the new chunk flag;

b) A detailed procedural description of the use of the new chunk flag within the operation of the protocol. It MUST be considered that implementations not supporting the flag will send '0' on transmit and just ignore it on receipt.

IANA selects a chunk flags value. This must be one of 0x01, 0x02, 0x04, 0x08, 0x10, 0x20, 0x40, or 0x80, which MUST be unique within the chunk flag values for the specific chunk type.

3.3. Initial Registrations

This section describes the initial values of the chunk flag tables, one table for each chunk. Most tables are currently empty. IANA used these values to create the new registry.

3.3.1. DATA Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference
0x01	E bit	[RFC4960]
0x02	B bit	[RFC4960]
0x04	U bit	[RFC4960]

3.3.2. INIT Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.3. INIT ACK Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.4. SACK Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.5. HEARTBEAT Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.6. HEARTBEAT ACK Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.7. ABORT Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference
0x01	T bit	[RFC4960]

3.3.8. SHUTDOWN Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.9. SHUTDOWN ACK Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.10. ERROR Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.11. COOKIE ECHO Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.12. COOKIE ACK Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.13. ECNE Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.14. CWR Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.15. SHUTDOWN COMPLETE Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference
0x01	T bit	[RFC4960]

3.3.16. AUTH Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.17. ASCONF ACK Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.18. PAD Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.19. FORWARD TSN Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

3.3.20. ASCONF Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference

4. Security Considerations

This document does not add any additional security considerations in addition to the ones given in [RFC4960].

5. Acknowledgments

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