Internet Engineering Task Force (IETF)

M. Tuexen

Request for Comments: 6006

Much to University of Applied Sciences

Request for Comments: 6096 Muenster Univ. of Applied Sciences Updates: 4960 R. Stewart

Category: Standards Track Huawei

ISSN: 2070-1721 January 2011

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.

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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;

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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

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	Chu	ınk	Flag	Value		Chunk	Flag	Name		Referer	nce	
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3.3.3. INIT ACK Chunk Flags

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-	-	•
Chunk Flag Value	Chunk Elaa Nama	Doforonco
Cliulik Flag Value	I CHUIIK FLAY NAME	Reference
}		

3.3.4. SACK Chunk Flags

+		
Chunk Flag Value	Chunk Flag Name	Reference
+		

3.3.5. HEARTBEAT Chunk Flags

+	·+	++
Chunk Flag V	alue Chunk Flag	Name Reference
+	+	++

3.3.6. HEARTBEAT ACK Chunk Flags

+	.+	 +
Chunk Flag Value		•
+	.+	

3.3.7. ABORT Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference
•	T bit	[RFC4960]

3.3.8. SHUTDOWN Chunk Flags

Chunk Flag Value Chunk Flag Name Reference	
Chunk Elag Value Chunk Elag Name Deference	-
- I CHUNK FLAG VALUE I CHUNK FLAG NAME I KETELENCE	- 1
	•

3.3.9. SHUTDOWN ACK Chunk Flags

+		+
Chunk Flag Value	Chunk Flag Name	Reference
+		+

3.3.10. ERROR Chunk Flags

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Chunk Flag Value	Chunk Flag Name	Reference
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3.3.11. COOKIE ECHO Chunk Flags

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3.3.12. COOKIE ACK Chunk Flags

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Chunk Flag Value	l Chunk Flag Name I	Reference
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T	r ₁	

3.3.13. ECNE Chunk Flags

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3.3.14. CWR Chunk Flags

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Chunk Flag Value	-	•
Chulik Flag Value	Chunk Flag Name	Kererence
+		+

3.3.15. SHUTDOWN COMPLETE Chunk Flags

Chunk Flag Value	Chunk Flag Name	Reference
•	T bit	[RFC4960]

3.3.16. AUTH Chunk Flags

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•						•				•		•
- 1		Ch.	I.	F1 - ~	V-1	- 1	Chumle	F1 - ~	Mama		Dafamamaa	
- 1		cni	ınĸ	FLad	value	- 1	Chunk	FLAG	Name		Reference	- 1
		•		5			•	9				
_										ъ.		

3.3.17. ASCONF ACK Chunk Flags

+	+	
Chunk Flag Value	Chunk Flag Name	Reference
+		

3.3.18. PAD Chunk Flags

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•		•		•	•
Chunk Flag	value	Cnunk Flag	, name	кетегепсе	ı
+		<u> </u>		<u>.</u>	i.

3.3.19. FORWARD TSN Chunk Flags

+		
Chunk Flag Value		
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3.3.20. ASCONF Chunk Flags

+	+		+-	+
-	•		•	•
Chunk Flag	value	Chunk Flag	Name	Keterence
<u> </u>		_	•	•

4. Security Considerations

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

5. Acknowledgments

The authors wish to thank Anna Brunstroem, Gorry Fairhurst, Russ Housley, Suresh Krishnan, and Dan Romascanu for their invaluable comments.

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Authors' Addresses

Michael Tuexen Muenster University of Applied Sciences Stegerwaldstr. 39 48565 Steinfurt DE

EMail: tuexen@fh-muenster.de

Randall R. Stewart Huawei Chapin, SC 29036 US

EMail: randall@lakerest.net