

**ST FlowSpec for the Controlled-Load Service**  
**[<draft-suzuki-stfs-ctrl-load-svc-00.txt>](#)**

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Abstract

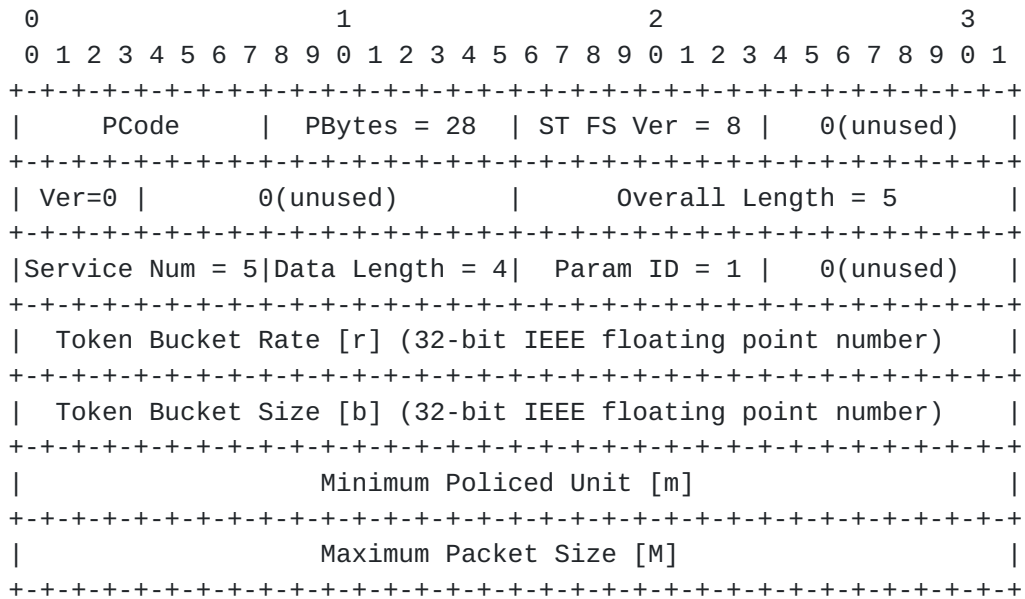
This memo specifies the ST FlowSpec format for the Controlled-Load service. The ST FlowSpec described in this memo applies to both [RFC1190](#) ST2 and [RFC1819](#) ST2+.

**1. Introduction**

This memo specifies the ST FlowSpec format for the Controlled-Load service defined in [\[1\]](#). The ST FlowSpec described in this memo applies to both the [RFC1190](#) ST2 [\[2\]](#) and the [RFC1819](#) ST2+ [\[3\]](#). This FlowSpec does not support parameter negotiations except for maximum packet size. This is because, in the ST2 and ST2+ environment, negotiated FlowSpec parameters are not always unique to each target. It is difficult for current datalink technologies to support heterogeneous traffic parameters to multiple receivers.

**2. FlowSpec Format**

The ST FlowSpec and RFlowSpec for the Controlled-Load Service have the following format:



The PCode field identifies common SCMP elements. The PCode value for the ST2 FlowSpec is two (2), for the ST2 RFlowSpec it is twelve (12), and for the ST2+ FlowSpec it is one (1).

The PBytes field for the Controlled-Load Service is twenty-eight (28) bytes.

The ST FS Ver (ST FlowSpec Version) field identifies the ST FlowSpec version. The ST FlowSpec version number for the Integrated Services is eight (8).

The Ver (Controlled-Load Service Version) field identifies the Controlled-Load Service version number. The current version is zero (0).

The Overall Length field is always set to five (5) words.

The Service Num (Service Number) for the Controlled-Load Service is five (5).

The Data Length (Per-Service Data Length) field is always set to four (4) words.

The Param ID (Parameter ID) field is always set to one (1).

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Intention of this field is compatibility with the Integrated Services FlowSpec format for the RSVP and does not have another meaning.

Definitions of the Token Bucket Rate [r], the Token Bucket Size [b], the Minimum Policed Unit [m] and the Maximum Packet Size [M] fields are given in [1]. See section 5 of [1] for details.

The ST2 or ST2+ agent, that creates the FlowSpec or the RFlowSpec element in the SCMP message, must assign valid values to all fields. The other agents must not modify any values except for the [M] field in the CONNECT message.

The [M] field in the CONNECT message is assigned by the origin or the intermediate agent acting as origin, and updated by each agent based on the MTU value of the datalink layer.

The negotiated value of [M] is set back to the origin or the intermediate agent acting as origin using the [M] field in the ACCEPT message that corresponds to the CONNECT message.

In the original definition of the Controlled-Load Service, the value of the [m] field must be less than or equal to the value of the [M] field. However, in the ST FlowSpec for the Controlled-Load Service, if the value of the [M] field is less than that of the [m] field, the value of the [m] field is regarded as the same value as the [M] field, and must not generate an error. This is because there is a possibility that the value of the [M] field in the CONNECT message may be decreased by negotiation.

In the ST2+ SCMP messages, the value of the [M] field must be equal to or less than 65535. In the ST2+ CONNECT message, the ACCEPT message that responds to CONNECT, or the NOTIFY message that contains the FlowSpec field, the value of the [M] field must be equal to the MaxMsgSize field in the message. If these values are not the same, FlowSpec is regarded as an error.

If the ST2 or ST2+ agent receives the CONNECT message that contains unacceptable FlowSpec, the agent must generate the REFUSE message.

The ST FlowSpec for the Controlled-Load Service does not have the Precedence (see section 4.2.2.3 of [2] or [section 9.2.2](#) of [3]) field. All of the ST2 and ST2+ functions that depend on the Precedence (ex. stream preemption of the ST2+) are not supported.

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### **3. Security Considerations**

Security considerations are not discussed in this memo.

#### References

- [1] J. Wroclawski, "Specification of the Controlled-Load Network Element Service", Internet Draft, November 1995, <[draft-ietf-intserv-ctrl-load-svc-01.txt](#)>
- [2] C. Topolcic, Ed., "Experimental Internet Stream Protocol, Version 2 (ST-II)", [RFC 1190](#), October 1990.
- [3] L. Delgrossi, L. Berger, Ed., "Internet Stream Protocol Version 2 (ST2) Protocol Specification - Version ST2+", [RFC 1819](#), August 1995.

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#### Author's Address

Muneyoshi Suzuki  
NTT Telecommunication Networks Laboratories  
3-9-11, Midori-cho  
Musashino-shi, Tokyo 180 Japan

Phone: +81-422-59-2119  
Fax: +81-422-59-3203  
EMail: [suzuki@nal.ntt.jp](mailto:suzuki@nal.ntt.jp)

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