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UK Interoperability Standards

Open Forum 2019

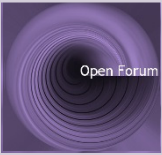


27th November 2019



**SIP Overload Control (SOC)
Task Group**

Philip Williams – BT
Chair of Group



Since last Open Forum

Published by NICC

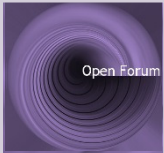
ND1653 - Overload Control for SIP in UK Networks

- Based upon RFC7415 - SIP Rate Control
 - New oc-algo parameter value "nxrate"
 - Same protocol family as RFC7339 – SIP Overload Control
- Consensus Approval 1
 - Required SOC TG to submit Internet Draft (for RFC) for the new value
- Consensus Approval 2, 3
 - I-D alignment

Submitted to IETF

Internet Draft - SIP Non-eXempt Rate Control

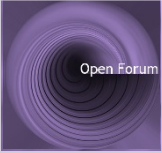




Significant events

Begin date	End date	Events	Scope	version
June 15		1st TG meeting	SOC	
6 Feb 16		1 st draft	ND1653	0.0.1
8 Mar 16		8 th TG meeting	ETSI GOCAP dropped (RFCs)	
5 Sept 18	19 Sept	TG Approval	ND1653	0.3.0
1 Nov 18	9 Nov	TG Approval	ND1653	1.0.3
15 Nov 18	14 Dec	Consensus Approval 1	ND1653	1.0.6 (1.1.0)
6 Feb 19	13 Feb	TG Approval	ND1653 (CA follow-ups)	1.0.7
29 May 19	26 June	TG Approval	Internet Draft	0.0
2 July 19	10 July	TG Approval	I-D, ND1653	1.0, 1.0.9
12 July 19	29 July	Consensus Approval 2	ND1653 (I-D alignment)	1.0.10
9 Aug 19	23 Aug	Consensus Approval 3	ND1653 (I-D alignment)	1.0.11
3 Oct 19		Submitted	Internet Draft	00
21 Oct 19		Publication	ND1653	1.1.1





Session Initiation Protocol (SIP) Non-eXempt Rate Control draft-williams-soc-nxrate-control-00.txt

Abstract

A SIP overload control signalling protocol framework has previously been published, with the flexibility to allow different SIP request rate limiting algorithms to be selected. This document proposes a similar algorithm of maximum rate type with two advantages over existing proposals. Firstly, it **exempts certain classes of SIP requests** that are fundamental to correct operation of the SIP protocol which, if rejected by control, would worsen rather than improve SIP performance. Secondly, it allows target servers to control SIP traffic from sources not compliant with this document so that it **can be deployed in heterogeneous network environments**.

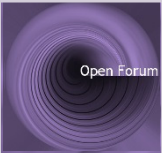
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10. Syntax

This specification extends the existing definition of the Via header field parameters of [RFC7339] as follows:

```
algo-list =/ "nxrate"
```





Relationship between RFCs, I-D, ND1653

RFC7339 - SIP Overload Control

oc-algo: "loss"

- oc value applies to **all** requests
- target/server behaviour undefined

RFC7415 SIP Rate Control

oc-algo: "rate"

- Via header parameters:
oc, oc-algo, oc-validity
- oc-algo negotiation client-server

- source/client rate restriction algorithm

- oc value applies to **non-exempt** requests only
- exempt requests & priorities defined
- target rate algorithm for non-compliant or conforming sources

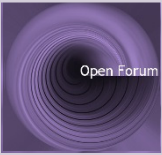
Internet-Draft
SIP Non-eXempt Rate Control
oc-algo: "nx-rate"

- target/server adaptation behaviour for distribution over sources defined, with SLAs

ND1653 Overload Control for SIP in UK Networks

oc-algo: "nx-rate"

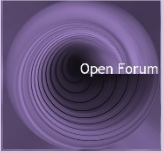




Reflections


- Several standards to choose from
 - IETF (SIP) or ITU (generic)?
- Historically, overload control standards have often been poorly designed
 - ANSI SS7 MTP congestion control, ITU ISUP ACC, ...
 - Not just protocol language, but dynamics of functions
 - Analysis & modelling important
 - SIP RFCs ok, but omitted solutions for trickier aspects
- CP interconnect today is more complex?





Questions?





Thank You