# Congestion Status Precondition for SIP

draft-alexander-congestion-status-preconditions-00.txt

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# Introduction

- Goal: Congestion-based Admission Control
- Congestion Status Precondition – “cong” – proposes to delay session establishment until a determination of the congestion level in the network can be made
- Utilizes two other drafts to delay session establishment until the status of congestion in the network is determined:
  - draft-babiarz-tsvwg-rtecn-04.txt: Real-time ECN draft defines new semantics for the Explicit Congestion Notification (ECN) bits in the IP header for real-time inelastic flows
  - draft-alexander-rtp-payload-for-ecn-probing-01.txt: Defines an RTP payload format for ECN probing

# Background

- Real-time ECN draft defines new semantics for ECN marking in the context of real-time inelastic flows
  - Defines two levels of congestion
- RTP payload format for ECN probing defines new RTP payload
  - Dynamically selected RTP payload type value
  - Fields in payload used for detection of devices not conformant to Real-time ECN draft
- Admission control achieved by using stream of probe packets prior to session establishment to detect presence of congestion in network
- Use case outlining use of Real-time ECN and RTP payload format for ECN for admission control is available
  - draft-alexander-rtecn-use-cases-00.txt



# Congestion Status Precondition

- Example

```
m=audio 50002 RTP/AVP 0 8 18
c=IN IP4 192.168.1.200
a=rtpmap:0 PCMU/8000
a=rtpmap:8 PCMA/8000
a=rtpmap:18 G729/8000
a=curr:cong e2e none
a=des:cong mandatory e2e sendrecv 104
```

- Note 1: No *rtpmap* attribute for probe format
- Note 2: *104* value in desired-status line

# Congestion Status Precondition

- Note 1: Congestion Status Precondition tied to use of probe format
  - view preconditions as applying to *all rtpmap* attributes for a media type
  - specification of probe “media” in *rtpmap* attribute redundant
- Note 2: Selection of dynamic payload type for probe format in new parameter *additional-data*, consisting of new type *payload-type* for Congestion Status precondition

desired-status = "a=des" precondition-type SP strength-tag SP status-type SP
direction-tag SP ***additional-data***

precondition-type = "cong" | "qos" | token
***additional-data = "" | payload-type***
***payload-type = 96-127***



# Next Steps

- Feedback
  - *additional-data* parameter
  - Precondition tied to use of RTP payload format for ECN
  - Other comments
- Q&A
- List Discussion