

# CDNI Rate Pacing

draft-caulfield-cdni-rate-pacing-00

CDNI Working Group

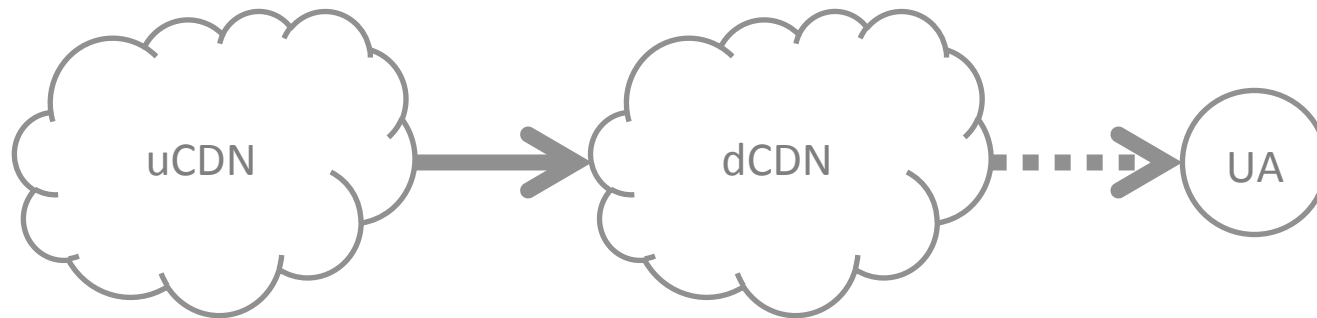
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# Rate Pacing Concept

uCDN may wish to control the rate at which a dCDN delivers content on its behalf



dCDN may be compensated per byte delivered  
∴ may send content faster than necessary

# Progressive Download Use Case

User begins viewing a long piece of content but quits before the playback ends

For example:

- Video encoded at 3 Mbps

- 6 Mbps link between User and dCDN

- User begins watching but quits after 5 minutes

With rate pacing: dCDN delivered only 5 min of data

Without rate pacing: dCDN delivered 10 min of data

# Rate Pacing Algorithm

Token bucket algorithm with two arguments:

- 1) Rate – number of tokens added per second
- 2) Size – maximum number of tokens in the bucket

dCDN need not implement token bucket but data must fit the envelope of a token bucket algorithm

# CDNI Interfaces Impact

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<b>Interface</b>	<b>Impact</b>
FCI	defines a new “RatePacing” capability
RRI	no direct impact
MI	defines a new “RatePacing” metadata object
LI	defines a new field “sc-rate” (next slide)
CI	no direct impact

# Rate Pacing Logging Field

Is a new logging field necessary?

Logging draft defines:

- time-taken – time between start and completion of processing the request by the Surrogate
- sc-total-bytes – bytes sent including headers
- sc-entity-bytes – bytes sent excluding headers

Rate Pacing draft defines:

- sc-rate – the average rate at which a response was sent

# Next Steps

Solicit comments on draft before next meeting