CDNI Logging Formats for HTTP and HTTP Adaptive Streaming Deliveries
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CDNI Working Group
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Scope

- Objectives:
  - Define CDNI Logging <u>formats/fields</u> corresponding to <u>content delivery</u> that uses <u>HTTP</u> or <u>HTTP adaptive streaming</u>

- Non-objectives:
  - Define encoding & transport
  - Define log format for other CDNI event than delivery (errors, notifications,…)

Logs for HTTP Adaptive Streaming

- Whether we want to define Logs specifically for HTTP Adaptive Streaming or not, and whether we want to rely on adaptive-streaming awareness in dCDN or not, is part of the broader debate on how CDNI WG wants to handle HTTP Adaptive Streaming
- This is aiming to help refine the understanding of (i) what are the potential gains/optimizations that can be achieved and (ii) what sort of adaptive-streaming awareness is needed, in the dimension of logging

CDNI Logging for regular HTTP Delivery

- Triggers

Event	Description
content Request	Reception and processing of a request for a content

- Fields

Field	Description
Current-Time	
Time-to-Serve	
Client-IP	
Action	
Status-Returned	
Bytes-Transferred	
Method	
URI	
Content-Type	

CDNI Logging for HTTP adaptive Delivery

- Assumes "adaptive-streaming awareness" in dCDN
- Three CDNI Logging formats discussed:
  - Segment-Based Logging:
    - same as regular HTTP Logs + info derived from adaptive-streaming awareness
  - Event-Based Logging:
    - Records all significant "event" for an adaptive session
    - Achieves significant "compression" with only small loss of information
  - Summary-based Logging:
    - Records a summary of session life
    - Achieves massive compression but loses more information
    - Details TBD

CDNI Logging for HTTP adaptive Delivery

- Triggers

Event	Description
Representation Change/ Bitrate Upshift.	
Representation Change/ Bitrate Downshift	
Representation Change/ Bitrate TBD	
Session Seek	
Session Stop	
Session Close	

- Additional Fields

Field	Description
event-code	

CDNI Logging for Delivery

- ## Header Fields

Field	Description
Format-Version	
Log-Type	
Log-ID	
Log-Timestamp	

- ## Per Log Line Fields

Field	Description
Log Record Digest	

- ## Footer Fields

Field	Description
Log Digest	

Impact on CDNI Metadata

- META-X [HIGH] *The CDNI Metadata Distribution interface shall support an optional mechanism allowing the Upstream CDN to indicate to the Downstream CDN which CDNI Log format is to be provided for all, for specific sets of, or for specific content items delivered using HTTP adaptive streaming*

Flexible Set of Log Fields

- Discussion concluded we may want to support flexible set of log fields
  - CDNI WG defines a set of well-known fields
  - uCDN signals to dCDN (eg via CDNI Metadata interface) which fields are required
  - dCDN includes the requested set of fields in log to uCDN

Feedback from the room?