

Streaming Media Tracing

Chris Lemmons

CTA WAVE SMT WG for the IETF CDNI WG

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Outline

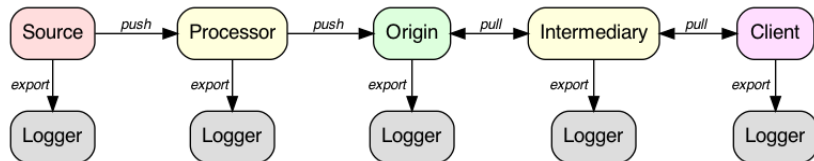
- ▶ Who is doing this?
- ▶ What are they doing?
- ▶ Why do we care?

Who

- ▶ Consumer Technology Association (CTA)
- ▶ Web Application Video Ecosystem (WAVE)
- ▶ Primary Use Case: Streaming Media
- ▶ Goal: Interoperable Tracing

Three Components

- ▶ **Pull:** Data is being requested. (HTTP)
- ▶ **Push:** Data is being sent unsolicited.
- ▶ **Export:** Data was transmitted and now we're logging it.



Pull

- ▶ Request Header provides visibility into request chain
- ▶ Response Field provides visibility into response chain
- ▶ Both use Structured Field Values
- ▶ Both represent the graph of the trace
 - ▶ Not just an ordered list

Format

(Reminder: The SMT has not fully reached consensus, this is a work in progress.)

- ▶ Field is list of sublists.
- ▶ Each element of that list is a server, intermediary, or client.
- ▶ Each element of those sublists represents one of their requests.
- ▶ Sublist elements are relative indicies to indicate the target of the request.

Example

What this might look like if a full chain were exported from a client:

Trace-Data:

```
() ;n=OriginB,  
( ) ;n=OriginA,  
(0 1) ;n=Intermediary,  
(0) ;n=Client
```

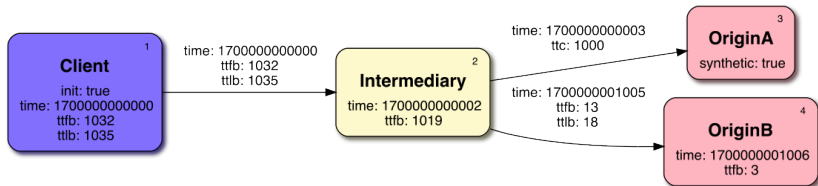


Example 2

And if you add a bunch of data to it:

Trace-Data:

```
( );n=OriginB;time=1700000001006;tftb=3,  
( );n=OriginA;synthetic,  
(  
  0;time=1700000000003;ttc=1000  
  1;time=1700000001005;tftb=13;tftb=18  
) ;n=Intermediary;time=1700000000002;tftb=1019,  
(  
  0;time=1700000000000;tftb=1032;tftb=1035  
) ;n=Client;init;time=1700000000000;tftb=1032;tftb=1035
```



Where are we now?

- ▶ Near the beginning of the “pull” stage.
- ▶ Still working on the details of the data format.
- ▶ Starting with timing data.
- ▶ Will be defining much more as we go.

How does this impact CDNI?

- ▶ There will eventually be configuration elements.
 - ▶ CDNI may choose to allow them to be configured.
 - ▶ Or it may choose not to.
- ▶ It will eventually offer export (logging).
 - ▶ These interfaces are likely to be of interest.
 - ▶ But it's hard to tell exactly what they will look like.
 - ▶ They might fit into CDNI logging-shaped things, though.

Questions

- ▶ Time permitting.