

Models for adaptive-streaming-aware CDNI - Logging

draft-brandenburg-cdni-has-02, section 3.4

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Recommendations

- Because of its benefits (in particular simplicity, universal support by CDNs and support by all log-consuming applications), we recommend that the per-chunk logging of Option 4.1 be supported by the CDNI Logging interface as a "High Priority" (as defined in <draft-itef-cdni-requirements>) and be a mandatory capability of CDNs implementing CDNI.
- Because of its very low complexity and its benefit in facilitating some useful scenarios (e.g. per-session analytics), we recommend that the CCID mechanisms of Option 4.2 be supported by the CDNI Metadata interface and the CDNI Logging interface as a "Medium Priority" (as defined in <draft-itef-cdni-requirements>) and be an optional capability of CDNs implementing CDNI.

Recommendations

We recommend that:

- (i) the ability for the uCDN to request that the CCID field be included in log entries provided by the dCDN be supported by the relevant CDNI interfaces (tentatively the CDNI Metadata interface) and
- (ii) the ability for the dCDN to include the CCID field in CDNI log entries (when the dCDN is capable of doing so) and indicate so inside the CDNI Logging interface (in line with the "customizable" log format expected to be defined independently of HAS),

be supported as a "Medium Priority" (as defined in <draft-ietf-cdni-requirements>) and be an optional capability of CDNs implementing CDNI.

Recommendations

Because it can be achieved with very little complexity and it provides some clear storage/communication compression benefits, we recommend that some existing very common compression techniques (e.g. gzip) be supported by the CDNI Logging interface as a "Medium Priority" (as defined in <draft-ietf-cdni-requirements>) and be an optional capability of CDNs implementing CDNI.

Recommendations

Because of its complexity, the time it would take to understand the trade-offs of candidate summarization approaches and the time it would take to specify the corresponding support in the CDNI Logging interface, we recommend that the log summarization discussed in option 4.3 and option 4.5 not be supported by the CDNI Logging interface at this stage and be kept as candidate topic of great interest for a rechartering of the CDNI WG once the first set of deliverables is produced.

When doing so, we suggest to investigate the notion of complementing the "push-style" CDNI logging interface supporting summarization by an on-demand pull-type of interface allowing an uCDN to request the subset of the detailed logging information that it may need but is lost in the summarized pushed information.

Recommendations

We note that while a CDN only needs to adhere to the CDNI Logging interface on its external interfaces and can perform logging in a different format within the CDN, any possible CDNI Logging approach effectively places some constraints on the dCDN logging format. For example, to support the "Do-Nothing" Approach, a CDN need to perform and retain per chunk logs. As another example, to support the "Full HAS awareness/per-Session-Logs" Approach, the dCDN cannot operate on logging format that summarize "more than" or "in an incompatible way with" the summarization specified for CDNI Logging. However, the authors feel such constraints are (i) inevitable, (ii) outweighed by the benefits of a standardized logging interface and (iii) acceptable because in case of incompatible summarization, all/most CDNs are capable of reverting to per-chunk logging as per the Do-Nothing Approach that we recommend be used as the base minimum approach.