

Android Library Release Notes

Version 6.0.0 of the Comscore library introduces public API changes. Upgrading existing implementations of older library versions will require a small amount of code changes, which are explained in an appendix of the implementation guides.

Library Version 6.0.0.191011

Release Date: October 14, 2019

Data Collection Model Version: 6.0

Supported OS Versions: 4.1 - 9.0 (Android API levels 16 - 28)

Feature changes:

1. (TAG-3628) Simplify and future-proof Streaming Tag implementation design and improve consistency of API naming and design of all library elements.

Description: Aside from applying internal redesign to remove the root causes of some difficult to reproduce bugs, the overall design of the solution is a few years old and can use an overhaul to apply new insights. Feature changes include:

- Integrate the `ReducedRequirementsStreamingAnalytics` solution into the 'standard' `StreamingAnalytics` solution to have a single Streaming Tag implementation.
- Provide Streaming Tag metadata objects with setters to allow developers to provide metadata without knowledge of label names. *Support for the use of hashmaps with labels from existing implementations is available (see appendix with update instructions in the implementation instructions).*
- Remove API elements which are no longer needed.

Resolution: Apply the changes and increment the major version number accordingly.

2. (TAGLANDR-187, TAG-3995, TAG-4173) Compile the library with the *Position Independent Executable* (PIE) flag and drop support for Android versions below 4.1 (API level 16).

Description: Android 4.1 introduced the *Position Independent Executable* (PIE) flag. To prevent abuse of an Android vulnerability the library needs to support this flag. This requires the minimum-supported Android version to be increased to 4.1 (instead of 2.3 which was applicable for previous library versions). This change includes removing any workarounds that applied to Android OS versions below 4.1.

Resolution: Remove workarounds to have backwards compatibility with older Android versions and implement a safeguard mechanism to ensure the library fails silently when running on Android versions below 4.1. This major version of the library the minimum-supported Android version is 4.1 and deliverables are compiled with the PIE flag.

3. (TAG-5090) Add Distributed Content Tagging functionality.

Description: Provide a simple solution for tagging distributed content in applications.

Resolution: Add the `notifyDistributedContentViewEvent` API method.

4. (TAG-5131) Make all transmission secure (HTTPS) by default.

Description: Transmission was non-secure by default which does align with contemporary practices.

Resolution: Let transmission be secure by default.

5. (TAGLANDR-188, TAG-4169) Drop support for *mips* and *mips64* architectures.

Description: The *mips* and *mips64* architectures are no longer supported by the Android NDK which is used by the library.

Resolution: Remove support for *mips* and *mips64* architectures.

Bug fixes:

1. (TAG-4965) Prevent crashes when `StreamingAnalytics` or `ReducedRequirementsStreamingAnalytics` API methods are called to notify of streaming events while the `Analytics` instance is already de-allocated.

Problem: When an application starts its termination routine it calls the destructor of all static instances. The library internally uses a static instance which could end up being referenced from other threads while it is being destroyed, causing a crash. While this issue was fixed in a previous library version not all use cases could be resolved.

Resolution: Apply internal design changes to resolve this for all use cases.

2. (TAG-5738) Correct per asset playback counter unique and largest-consecutive playback metrics collection.

Problem: The data for unique and largest-consecutive playback of the current asset playback counter is reset when an asset transitions into IDLE state. This means merging of intervals upon resuming playback — i.e., the playback counter is not incremented — occurs against an empty history.

Resolution: Ensure the data for unique playback and largest-consecutive playback per asset playback counter is reset only when the asset playback counter is incremented.

3. (TAG-5739) Improve elapsed time metrics collection.

Problem: There are use cases where elapsed time does not include time-spent outside of playback.

Resolution: Ensure the data for elapsed time is collected as soon as state changes from *idle*.

Known issues and limitations:

- There were no known issues for this release.