Android Library Release Notes

As of version 5 the comScore libraries use a new public API.

Upgrading existing implementations of version 2 and 3 of the comScore library will require a small amount of code changes.

These code changes are explained in an appendix of the implementation guides.

Library Version 5.0.4.1601104

Release Date: November 4, 2016

Data Collection Model Version: 2.11

Supported OS Versions: 2.3 – 7.1 (Android API levels 9 – 25)

New features and improvements:

 [TAG-2802] Ensure the vCE component is immediately disabled – or not started – as soon as a provided PublisherConfiguration disables the vCE component.

Bug fixes:

- 1. [TAG-2820] Prevent compiler warnings referring to the use of API methods which are not recommended to be used.
- 2. [TAG-2849] Prevent calls to the Aggregate method from interpreting labels which are not provided in the arguments of the calls.
- 3. [TAG-2861] Rename the notifyBufferEnd method on the StreamingAnalytics class to notifyBufferStop to align with implementation documents and the API on other platforms.
- 4. [TAG-2863] Provide the notifyCustomEvent method on the StreamingAnalytics class.

Known issues and limitations:

There were no known issues for this release.

Library Version 5.0.3.161102

Release Date: November 2, 2016

Data Collection Model Version: 2.11

Supported OS Versions: 2.3 – 7.1 (Android API levels 9 – 25)

[TAG-2852] Rebuild the deliverables for version 5.0.3 of the comScore library with different compiler settings to prevent unnecessary *lint* warnings from appearing when an application project is built with the comScore library for the first time.

There were no code changes in this release.

Library Version 5.0.3.160921

Release Date: October 28, 2016

Data Collection Model Version: 2.11



Supported OS Versions: 2.3 – 7.1 (Android API levels 9 – 25)

New features and improvements:

- 1. First public release of comScore library version 5.x.
- 2. [TAG-2202] Include instrumentation for mobile in-application ad viewability for campaigns tagged with a comScore vCE tag by introducing a vCE component.
 - This feature Android 4.0.3 (API level 15) or higher to function properly. If the application is running on devices with Android 4.0.2 (API level 14) or lower then this feature will not be enabled/available.
- 3. [TAG-2238, TAG-2242, TAG-2506, TAG-2645] Refactor and re-implement the public API and underlying internal logic. This includes changes like:
 - Rename most public API methods to introduce a new naming scheme as well as adherence to platformspecific naming conventions.
 - Implement improvements for performance and stability as well as for future proofing the public API for implementations for combinations of different comScore products.
 - Implement a new approach to configurating the library, including support for multiple partner and/or client configurations while collecting data only once.
- 4. [TAG-2250] Include data collection model version label ns ap smv in the collected data.
- 5. [TAG-2291] Enable Usage Properties Auto Update by default.
- 6. [TAG-2444] Deliver the library as an AAR file instead of a JAR file.
- [TAG-2491, TAG-2527, TAG-2596] Implement streaming analytics v5 API and data collection model features. This
 includes a completely new API for streaming analytics implementantions.
- 8. [TAG-2738] Include label ns_st_li=1 for live media types when using the streaming tag wrapper class for reduced requirements implementations.

Bug fixes:

1. [TAG-2553] Ensure that any label that is overridden by setting its value as a persistent label makes it into the measurement request.

Known issues and limitations:

There were no known issues for this release.

Library Version 3.1608.19

Release Date: August 22, 2016 Supported OS Versions: 1.6 – 6.0

New features and improvements:

No feature requests were included in this release.

Bug fixes:

1. [TAG-2685] Fixed an issue which could randomly cause null pointer exception in the Task.java class to be thrown when the library tries to access storage.

Known issues and limitations:



There were no known bugs prior to this release.

Library Version 3.1607.05

Release Date: July 14, 2016

Supported OS Versions: 1.6 - 6.0

New features and improvements:

No feature requests were included in this release.

Bug fixes:

1. [TAG-2553] Fixed an issue which prevented the implementation from being able to override c12 and ns_ak as persistent labels.

Known issues and limitations:

There were no known bugs prior to this release.

Library Version 3.1508.28

Release Date: September 2, 2015 Supported OS Versions: 1.6 - 6.0

New features and improvements:

- 1. [TAG-1500, TAG-1606, TAG-1636] Added Android Build Serial '01234567890ABCEDF' to the list of unusable source values for unique device IDs.
 - This source value was determined to be shared by a large number of Android devices in Asia. When the application cold starts and the unique device ID is determined to be based on this unusable source value then it will be regenerated automatically.
- 2. [TAG-1400] Extracted Streaming Tag plugin classes for MediaPlayer and VideoView from the library as a first step towards improving these plugins and releasing them separately.
- 3. [TAG-1666] Expanded wrapper class with new media change notification methods (playVideoContentPart, etc.). The new methods add an enum parameter for the media type into the method signature. The implementation documentation has been updated to use these new methods. The previously existing methods have been marked as deprecated and will be removed in a future update.
- 4. [TAG-1668] Expanded the new media check in the wrapper class its media change notification methods (playVideoContentPart, etc.) to be able to include extra metadata labels as part of the detection mechanism.

Bug fixes:

- 1. [TAG-1597] Minor coding improvements.
- 2. [TAG-1661] Modified some of the synchronised blocks of code. The involved logic is using the internal task executor and no longer needs sychronisation. This change also prevents a potential deadlock from occuring.

Known issues and limitations:

• There were no known bugs prior to this release.



Library Version 3.1502.26

Release Date: March 3, 2015 Supported OS Versions: 1.6 – 5.0

New features and improvements:

1. [TAG-1314] Cleaned up the example projects by removing obsolete settings files.

Bug fixes:

- 1. [TAG-1310] Modified the logic to remove expired cache files to prevent a potential issue where measurement cache files could be removed without being flushed.
- [TAG-1323] Improved the internal task executor which runs queued tasks on a background thread to also handle
 all timed tasks instead of using a timer to fix an issue that could sporadically cause an ANR (application not
 responding) to be reported.
- 3. [TAG-1270] Added handling for sporadic cases where the *Connectivity Change Broadcast Receiver* cannot be unregistered and an exception is thrown.
- 4. [TAG-1361] Improved the logic used in the Streaming Tag classes to throttle rapidly recurring *play* and *pause* event notifications.
- 5. [TAG-1367] Corrected the logic used for triggering the *keep-alive* event to be able to properly handle scenarios that have live transmission initially turned off (like scenarios with an *opt-in wall*).

Known issues and limitations:

There were no known bugs prior to this release.

Library Version 3.1412.08

Release Date: December 15, 2014 Supported OS Versions: 1.6 – 5.0

New features and improvements:

- $\textbf{1.} \quad \texttt{[TAG-844]} \ \textbf{Added support for non-String label values in setLabels and setLabel} \ \textbf{API method calls}.$
- 2. [TAG-1101] Improved the resolution of [TAG-799] released in version 2.1407.11 to control the behavior on a perconnection basis and only for the connections created by the comScore library.
- 3. [TAG-1122] Added logic to collect the processor architecture in label ns_ap_ar.
- 4. [TAG-1171, TAG-1257, TAG-1262] Modified the StreamingTag wrapper class used by the Reduced Requirements Video Metrix implementation to include new API methods playVideoAdvertisement, playAudioAdvertisement, playVideoContentPart and playAudioContentPart to differentiate between video+audio and audio-only media consumption. The playVideoAdvertisement and playAudioAdvertisement methods accept a metadata object.
- 5. [TAG-1204] Added a *BroadcastReceiver* class which can be used for capturing the *referrer* on the com.android.vending.INSTALL_REFERRER intent.
- 6. [TAG-1230] Integrated the Streaming Tag library classes into the Application Tag.

Bug fixes:

1. [TAG-1157] Fixed an issue that could caused calls to setEnabled(false) to causes a crash.



Known issues and limitations:

• There were no known bugs prior to this release.

Releases prior to version 3.x have been removed from the release notes due to their age.

