StreamhubAnalytics Swift plugin for Kaltura iOS applications

21th of Sept 2020	Programs tracking Ads tracking Sample app Samples logs
22nd of April 2021	Updated advertisingID → advertisingId Added instructions relative to asking for user consent permissions to track.
22nd of Sept 2021	Updated onMediaReady to make sure a new view_id is generated whenever the program identifier changes
27th of Oct 2021	Revised QoS tracking logic

This document describes the steps required to add and configure the StreamhubAnalytics plugin for Kaltura on iOS and tvOS applications.

Download the plugin and sample application at
https://streamhub-static-content.s3-eu-west-1.amazonaws.com/plugins/kaltura/releases/kaltura-ios-plugin.zip

The downloadable .zip file contains:

- Plugin-files: the 4 plugin files to be dropped in your iOS or tvOS app.
- Sample.logs: contains an http.log file that features API requests sent from the test app with the plugin configured.
- Test-app: contains a test app that shows an example of plugin integration and configuration.
    - The test app has a dependency on Kaltura Playkit. Make sure to run 'pod install' before any use.

Prerequisites

The plugin is written in Swift 4.2. If your application uses a more recent version of the Swift language, then make sure the **Use Legacy Swift Language Version** setting is set to Yes under **Build Settings.**

The plugin has no external dependencies. Just add the plugin files to your app and start collecting logs immediately.

Getting started

The integration is very straightforward, as the complexity of interacting with our Backend REST API is being abstracted by the plugin.

The plugin is written on top on the Kaltura iOS SDK
https://developer.kaltura.com/player/ios/getting-started-ios

Add the plugin files to your application

Drag and drop the 4 files from the uncompressed .zip archive into your Xcode application.

Initialize the StreamhubAnalytics plugin

1. In your application controller where the Kaltura player is initialized, create a property of type StreamhubAnalyticsKalturaBridge to hold an instance of this class. For example;

```
var shBridge: StreamhubAnalyticsKalturaBridge?
```

2. Ask permission to track

Starting with iOS 14.5 (release date 26th of April 2021) Apple requires that the apps that requires access to the device's advertising identifier need to explicitly ask for user permission (https://developer.apple.com/app-store/user-privacy-and-data-use/)

This can be achieve by first importing the AppTrackingTransparency dependency into the app:

```
import AppTrackingTransparency
```

Then, later in the code (for example during the app initialization) request the permission from the user:

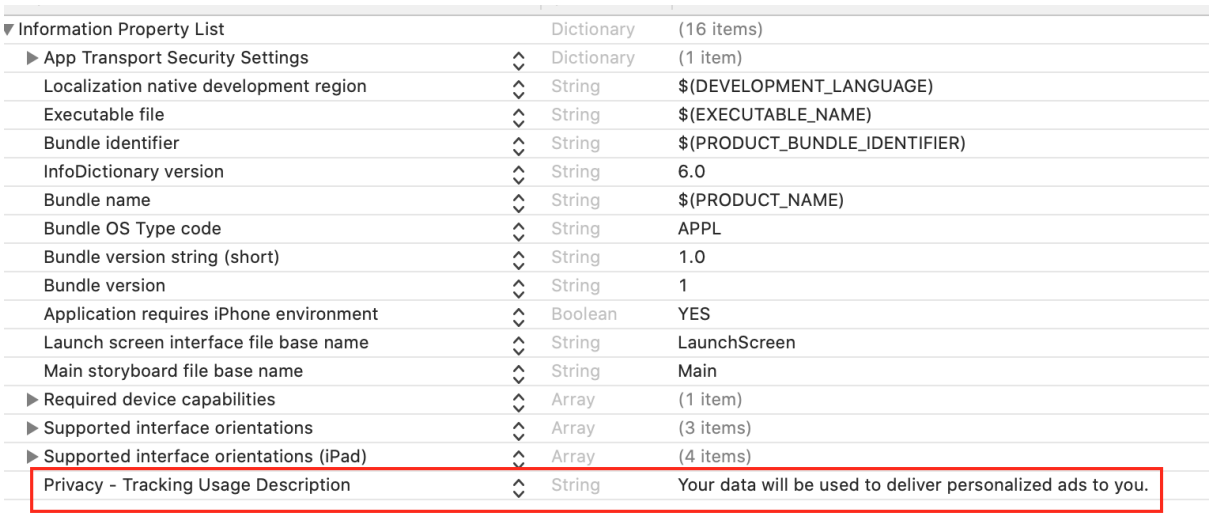
```
ATTrackingManager.requestTrackingAuthorization { status in
        switch status {
           case .authorized:
                print("tracking authorized by the user.")
              break
           case .notDetermined: break
           case .restricted: break
           case .denied:
              print("tracking denied by the user.")
              break
           @unknown default:
              break
        }
     }
```

Finally, update the Info.plist source code and add:

```
<key>NSUserTrackingUsageDescription</key>
<string>Your data will be used to deliver personalized ads to you.</string>
```

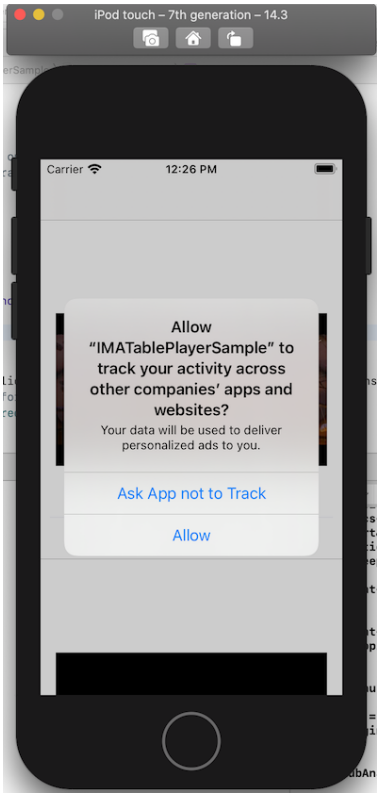
Within the <dict>... </dict>

This should show as



Information Property List	Dictionary	(16 items)
App Transport Security Settings	Dictionary	(1 item)
Localization native development region	String	$(DEVELOPMENT_LANGUAGE)
Executable file	String	$(EXECUTABLE_NAME)
Bundle identifier	String	$(PRODUCT_BUNDLE_IDENTIFIER)
InfoDictionary version	String	6.0
Bundle name	String	$(PRODUCT_NAME)
Bundle OS Type code	String	APPL
Bundle version string (short)	String	1.0
Bundle version	String	1
Application requires iPhone environment	Boolean	YES
Launch screen interface file base name	String	LaunchScreen
Main storyboard file base name	String	Main
Required device capabilities	Array	(1 item)
Supported interface orientations	Array	(3 items)
Supported interface orientations (iPad)	Array	(4 items)
Privacy - Tracking Usage Description	String	Your data will be used to deliver personalized ads to you.

At execution, the user will be prompted (example below) to accept or deny tracking and as a consequence the device advertising identifier will be or won't be accessible by the plugin (the screen consent should be presented only once and the user choice will be saved to the device for later usage)



Please note that this request for permission is required by Apple and that the advertising identifier won't be readable if the user has not been explicitly prompted to consent (and if he declines)
Apple has warned that failiing to comply with this policy could result in the app being rejected from the App Store

3. Next, you will need to create an instance of StreamhubAnalyticsKalturaBridge, and supply initialisation parameters to it

```
self.shBridge = StreamhubAnalyticsKalturaBridge(partnerId: PARTNER_ID,
                                                endPoint: "",
                                                playerId: PLAYER_ID,
                                                isLive: IS_LIVE,
                                                userId: USER_ID,
                                                analyticsId: ANALYTICS_ID,
                                                userAgent: USER_AGENT,
                                                playerTitle: PLAYER_TITLE);
```

The table below gives a clarification the parameters:

Parameter name	Type	Description
partnerId	String	“kaltura”
endPoint	String	You can choose to point to a testing development server during the integration testing phase. Otherwise, leave this field empty and the plugin will setup `http://stats.streamhub.io` which is the production endPoint for submitting stats.
isLive	Boolean	Specify if the video content is either a Live or a VoD program. Default is **false**.
playerId	String	Unique identifier of the player playing the video. It is a unique identifier for the player in both your system and ours. You can generate your own unique identifier or contact your Streamhub account manager to get one generated for you.
userId	String	If your application users are logged, you can use this field to provide any user identifier. This will allow you to get analytics detailed at the user level of your audience.
analyticsId	String	The main tracking code that has been provided to you by your Streamhub account manager.
userAgent	String	Hardcoded user-agent string used to attribute the views to a device category. Please check the sample app for an example of user-agent.
playerTitle	String	A user-friendly name associated with the playerId. This information might have already been shared with your account manager during the pre-integration phase.

Your Streamhub account manager can help you with the initialisation parameters, if needed.

4. Finally, register the Kaltura player with the StreamhubAnalytics plugin bridge.

```
self.shBridge!.registerPlayer(player: self.player);
```

5. Build and test your application. We recommend that you capture the logs HTTP requests in a similar format as the ones in the **/sample.logs** folder and send those to us for review.

Notes regarding the userAgent parameters

At the time of writing, in native apps you will not be able to retrieve a dedicated user-agent String programmatically.
Therefore, we recommend that you derive the user-agent from one of these examples, depending on which device your are targeting:

AppleTV
com.example.apple-samplecode.TVMLCatalog/1.0 iOS/9.0 model/AppleTV5,3 build/13T5365h.

iPad
iPad; U; CPU OS 9_2 like Mac OS X; en-us; iPad5,3

iPhone
iPhone; CPU iPhone OS 7_0 like Mac OS X