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## Getting Started

Nielsen-DCR is supported on mobile apps and web browsers.

Digital Content Ratings (DCR) responds to the shifting, complex multi-platform, multi-device and multi-distribution landscape by providing comprehensive measurement of digital content consumption—including streaming video, static web pages and mobile apps—across all major devices and platforms.

In order to get started with Nielsen-DCR and retrieve an `appid` to configure this integration, you must sign a license agreement on the [Nielsen engineering portal](#).

There will be an NDA to sign prior to accessing the download. Nielsen requires you fill out your company info and have a Nielsen representative before getting started.

You must also go through a pre-certification process with your Nielsen representative before shipping this implementation to production.

## Mobile

To get started with Nielsen-DCR and Segment, you'll want to first integrate your mobile app with our [iOS](#) or [Android](#) sources.

### iOS

To install Nielsen DCR via Segment on iOS, please follow the instructions in the Segment-Nielsen-DCR repository [README](#).

### Android

To install Nielsen DCR via Segment on Android, please follow the instructions in the Segment-Nielsen-DCR repository [README](#).

## Web

If you'd like to measure video on the web, all you have to do is add your **App ID** in your Segment settings and enable this destination for a JS source. We will load the Nielsen SDK onto your browser.

## Screen / Page

Segment supports translating `screen` or `page` to Nielsen as a Static App Measurement event. We will translate the following properties to the expected Nielsen metadata:

SEGMENT PROPERTY NAME	NIELSEN	NIELSEN DESCRIPTION
<code>type</code>	<code>type</code>	Required. Segment hardcodes <code>'static'</code>
<code>name*</code>	<code>section</code>	Required. Section of site
<code>integration option</code>	<code>segB</code>	Required (optional for web). Segment A.
<code>integration option</code>	<code>segC</code>	Required (optional for web). Segment B.
<code>integration option</code>	<code>crossId1</code>	Standard episode ID (mobile only)

\* On web and mobile, you can map a custom property to `section` using the **Custom Page/Screen Section Property Name** setting. If this setting is left blank, Segment will fallback on the top-level `name`.

## Track

Segment only supports sending `track` events as outlined in our [Video Spec](#). To get started tracking video content through Segment, make sure you are using a media player that has an API which allows you to detect the player state such as video or ad plays. For example, you would not be able to collect ad plays using YouTube since their YouTube SDK does not expose any hooks into player states during ad plays.

**IMPORTANT:** If you do not implement the Segment [Video Spec](#) properly with key lifecycle events, this integration will not behave properly.

Again, also refer to our [Video Spec](#) and implement video tracking as outlined there. We will map the semantic

events and properties to Nielsen's relevant methods and metadata.

## Heartbeats

Nielsen expects a heartbeat called with `playheadPosition` during session play every second until the stream is completed, paused or interrupted (due to ad breaks or buffering). The playhead position is the current location in seconds of the playhead from the beginning of the asset. For livestream, Segment expects a negative integer that represents the offset in seconds in relation to the current timestamp. For example, if content is being livestreamed at 8PM but the viewer is 30 seconds behind, the value of this property should be -30. You can override this and pass the current time in seconds to Nielsen by toggling the

Enable Default to Current Time for Livestream Playhead Position Setting.

Segment will set a timer to call this heartbeat event `-(void) playheadPosition: (long long) playheadPos), setTimeout (web))` every second in background. You do **NOT** have to call the Segment equivalent heartbeat event (Video Content/Ad Playing) each second. You should follow our spec and call the Segment heartbeat event every 10 seconds (recommended). While we will keep state of our own playhead position for these background heartbeats, when we do receive an explicit Segment heartbeat event, we will respect its `properties.position` and restart the background heartbeats from that position.

## Playback Events

When you call Video Playback Started and Video Playback Resumed, Segment will call the Nielsen-DCR play method with the relevant `channelInfo`:

```
NSDictionary *channelInfo = @{
    // channelName is optional for DCR, if not present Nielsen asks to set default
    @"channelName" : options[@"channelName"] ?: @"defaultChannelName",
    // if mediaURL is not available, Nielsen expects an empty value
    @"mediaURL" : options[@"mediaUrl"] ?: @"",
};

(void) play: (id) channelInfo;
```

From there we will map to the relevant events on the instance as outlined below:

NIELSEN-DCR SPEC	SEGMENT VIDEO SPEC
<code>-(void) stop</code> and Heartbeat timer stopped	Video Playback Paused
<code>-(void) stop</code> and Heartbeat timer stopped	Video Playback Interrupted
Heartbeat timer stopped	Video Playback Buffer Started
Heartbeat timer updated	Video Playback Buffer Completed
Heartbeat timer stopped	Video Playback Seek Started
Heartbeat timer updated	Video Playback Seek Completed
<code>-(void) end</code> and Heartbeat timer stopped	Video Playback Completed

Web supports the use case of tracking a user switching back and forth from amongst multiple videos at the same time. To do so, Segment checks the metadata on playback interrupted events and sends Nielsen updated metadata if we see that the video content has changed. We do so by storing the current `asset_id` in memory and checking to see if the `asset_id` value has changed.

For playback events, Segment's video spec expects either `ad_asset_id` or `content_asset_id` depending on whether the video is an ad or content. Segment will default to mapping `ad_asset_id` to Nielsen's ad metadata `assetid` and `content_asset_id` to Nielsen's content metadata. The default Segment property can be overridden in your

integration settings: Custom Content Asset Id Property Name OR Custom Ad Asset Id Property Name.

## Content Events

NIELSEN-DCR SPEC	SEGMENT VIDEO SPEC
-(void)loadMetadata:(id)metadata;	Video Content Started
Heartbeat timer updated	Video Content Playing
-(void) end and -(void) stop	Video Content Completed

## Content Properties (Labels)

NIELSEN-DCR METADATA	SEGMENT PROPERTY
assetid	asset_id
program	program
title	title
segB	options.segB
segC	options.segC
airdate	airdate
isfullepisode	full_episode
length	total_length
pipmode	options.pipmode
type	'content' (hardcoded)
adLoadType	options.adLoadType
hasAds	options.hasAds
crossId1	options.crossId1
crossId2	options.crossId2

Note that iOS and Android expect different casing. We expect `snake_case` for iOS and `camelCase` for Android.

## Ad Events

The Segment-Nielsen-DCR integration has logic to check for type in case of a preroll ad. If the type is preroll, Segment calls Nielsen's `loadMetadata` method with metadata values for content followed by `loadMetadata` with ad (preroll) metadata. Otherwise, Segment simply calls `loadMetadata` with the ad metadata.

NIELSEN-DCR SPEC	SEGMENT VIDEO SPEC
-(void)loadMetadata:(id)metadata; and Heartbeat timer started	Video Ad Started

NIELSEN-DCR SPEC	SEGMENT VIDEO SPEC
Heartbeat timer updated	Video Ad Playing
-(void) stop and Heartbeat timer stopped	Video Ad Completed

NIELSEN-DCR AD METADATA	SEGMENT PROPERTY
assetid	asset_id
type	type
title	title

NIELSEN-DCR AD CONTENT METADATA	SEGMENT PROPERTY
assetid	asset_id
adloadtype	options.ad_load_type
type	content (hard coded)
title	title
program	program
segB	options.segB
segC	options.segC
airdate	airdate
isfullepisode	full_episode
length	total_length
pipmode	options.pipmode

Note that iOS and Android expect different casing. We expect `snake_case` for iOS and `camelCase` for Android.

## Integration Specific Options

Example on passing destination specific option values through on iOS

```
options:@{
  @"integrations": @{
    @"nielsen-dcr" : @{
      @"pipmode" : @"2017-05-22",
      @"adLoadType": @"c3 value",
      @"channelName": @"c4 value",
      @"mediaUrl" : @"c6 value",
      @"hasAds": @"true",
      @"crossId1": @"cross id1 value",
      @"crossId2": @"cross id2 value"
    }
  }
}
```

Example for Android:

```
Map<String, Object> nielsenOptions = new LinkedHashMap<>();
nielsenOptions.put("pipmode", "c3 value");
nielsenOptions.put("adLoadType", "c4 value");
nielsenOptions.put("channelName", "c6 value");
nielsenOptions.put("mediaUrl", "c6 value");
nielsenOptions.put("hasAds", "true");
nielsenOptions.put("crossId1", "cross id1 value");
nielsenOptions.put("crossId2", "cross id2 value");

Analytics.with(context).track("Video Playback Started", new Properties(), new Options().setIntegrationOptions("nielsen-dcr", nielsenOptions));
```

## Pipmode

Current state of picture-in-picture (PIP) mode on device. Pass in `true` if the video measurement is displayed in PIP mode. Otherwise, Segment defaults to `false` if no value is present.

## Ad load type

Type of ad load. Pass in `dynamic` to indicate Dynamic Ad Insertion (DAI). Otherwise, Segment defaults to `linear`.

## Channel Name and Media URL

The SDK is started by calling the play API with the `channelName` and `mediaURL` parameters. If no value is passed in, Segment defaults to `defaultChannelName` for `channelName` and an empty String for `mediaURL`.

## Cross Id 1

Standard episode ID.

## Cross Id 2

Content originator ID. This value is only required for distributors.

# FAQ

## How do you determine App Name?

Segment-Nielsen-DCR iOS retrieves the application name from your app's `Info.plist` application bundle name as returned by `CFBundleName`.

For Android, we retrieve the name of the application package from the [PackageManager](#).

## How do you determine App Version?

Segment-Nielsen-DCR retrieves the application version from your app's `Info.plist` application bundle name as returned by `CFBundleVersion`.

For Android, we retrieve the version of the application package from the [PackageManager](#).

## What are the Nielsen-DCR `clientId` and `subbrand` values?

The Parent Client ID and Sub-Brand (VCID) values are automatically populated through the AppID, which is Nielsen Supplied. By default, `clientId` and `subbrand` are set up in Nielsen backend configuration to capture brand and sub-brand information. The fields get populated from backend for a registered client `appid`.

## Can I override the Nielsen-DCR `clientId` and `subbrand` values?

In the event that your app contains multiple brands and sub-brands, Segment lets you override the `clientId` and `subbrand` values, to give credit to another brand or sub-brand. In your Segment dashboard, under "Client Id Property Name", indicate a payload property to be mapped to the Nielsen `clientId`. To override a `subbrand`, indicate a payload property to mapped to Nielsen `subbrand` under "Subbrand Property Name".

# Settings

Segment lets you change these destination settings from the Segment app without having to touch any code.

SETTING	DESCRIPTION
Custom Ad Asset Id Property Name	<code>string</code> . Segment will map our <code>asset_id</code> property to Nielsen's <code>assetId</code> field. If you would like to set up a custom property mapping for ad asset ids please indicate the name of the property here.
AppID	<code>string</code> . Enter your Nielsen DCR App ID.
Client Id Property Name	<code>string</code> . By default, <code>clientid</code> and <code>subbrand</code> are setup in Nielsen backend configuration to capture brand and sub-brand information. The fields get populated from backend for a registered client appid. But if an app contains multiple brands and sub-brands and client is willing to give credit to another brand or sub-brand then please indicate which property value from your payload you want to use to override <code>clientId</code> .
Custom Content Asset Id Property Name	<code>string</code> . Segment will map our <code>asset_id</code> property to Nielsen's <code>assetId</code> field. If you would like to set up a custom property mapping for content asset ids please indicate the name of the property here.
Content Length Property Name	<code>string</code> . Segment will map our <code>total_length</code> property to Nielsen's <code>length</code> field by default. If you would like to set up a custom property mapping please indicate the name of the property here.
Custom Page/Screen Section Property Name	<code>string</code> . Segment will map the page/screen <code>name</code> field to Nielsen's <code>section</code> field. If you would like to set up a custom property mapping for the page/screen section name please indicate the name of the property here.
Instance Name	<code>string</code> . You can optionally define the explicit name of the Nielsen instance we initialize its SDK with.
Enable Debug Mode	<code>boolean</code> , defaults to <code>FALSE</code> .  Check this setting if you would like to activate the Debug flag. Once the flag is active, it logs each API call made and the data passed. Note: DO NOT: activate the Debug flag in a production environment.
Enable Default to Current Time for Livestream Playhead Position	<code>boolean</code> , defaults to <code>FALSE</code> .  For livestream video positions please enable this setting if you want Segment to default to sending the current time in seconds. If you would like Segment to calculate an offset position value based of <code>properties.position</code> do not enable this setting.
Enable Production Mode	<code>boolean</code> , defaults to <code>TRUE</code> .  By default we will use production mode. Uncheck this setting if you are developing or testing this integration.
Subbrand Property Name	<code>string</code> . By default, <code>clientid</code> and <code>subbrand</code> are setup in Nielsen backend configuration to capture brand and sub-brand information. The fields get populated from backend for a registered client appid. But if an app contains multiple brands and sub-brands and client is willing to give credit to another brand or sub-brand then please indicate which property value from your payload you want to use to override <code>subbrand</code> .

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