

# Mobile App Attribution: How Does It Work?

Derek Ooi | 12 Oct 2023

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Mentored 40+ emerging startups

100+ websites & mobile apps



# What you will learn

- What is Mobile App attribution?
- Web vs Mobile App attribution
- How does it work?
- Apple ATT & SKAdNetwork

# What is Mobile App Attribution?

# What we're familiar with

Analytics | All accounts > Demo Account | GA4 - Google Merch Shop

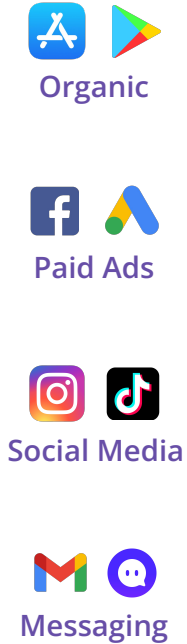
Try searching "MoM growth in users for each device type"

Traffic acquisition: Session default channel group

Search...

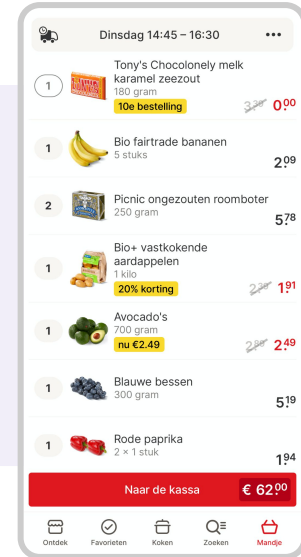
Session default channel group	Users	Sessions	Engaged sessions	Average engagement time per session	Engaged sessions per user
	96,857 100% of total	155,223 100% of total	134,820 100% of total	1m 51s Avg 0%	1.39 Avg 0%
1 Direct	50,175	73,754	66,947	1m 47s	1.33
2 Organic Search	26,461	42,068	37,282	1m 51s	1.41
3 Cross-network	11,547	14,083	13,302	1m 10s	1.15
4 Unassigned	9,405	7,045	21	1m 59s	<0.01
5 Referral	3,651	6,667	5,869	2m 28s	1.61
6 Organic Social	2,382	4,006	3,579	2m 42s	1.50
7 Email	1,903	5,303	4,797	3m 20s	2.52
8 Paid Search	1,381	2,756	2,676	0m 17s	1.94
9 Paid Shopping	114	141	54	0m 02s	0.47
10 Affiliates	102	133	119	0m 16s	1.17

# Attribution for Mobile Apps



## Example Conversions:

- Installs
- Registration
- Add to Cart
- Checkout
- Orders



# Analytics Tools - Examples



Web



User Behaviour

Attribution

Unified Analytics Solution



Mobile App



User Behaviour

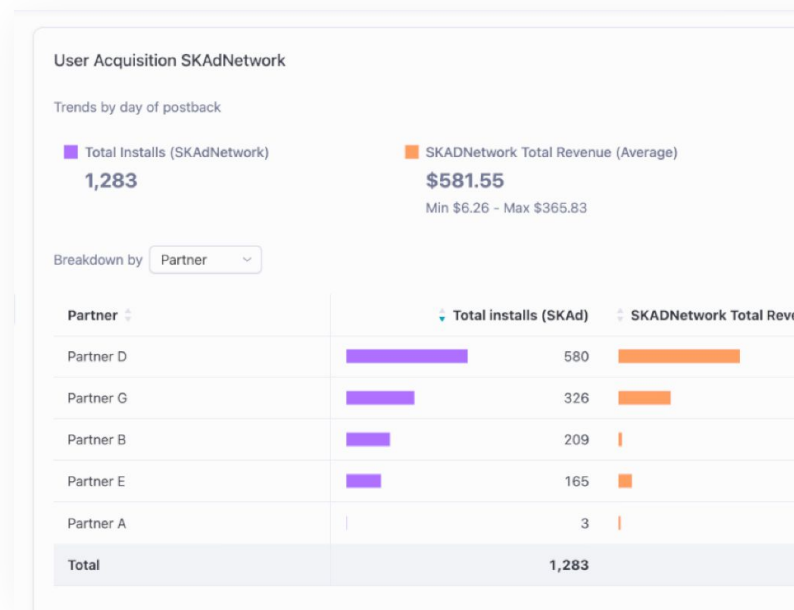


Attribution

Multiple Analytics Solutions

# What is an App Attribution tool?

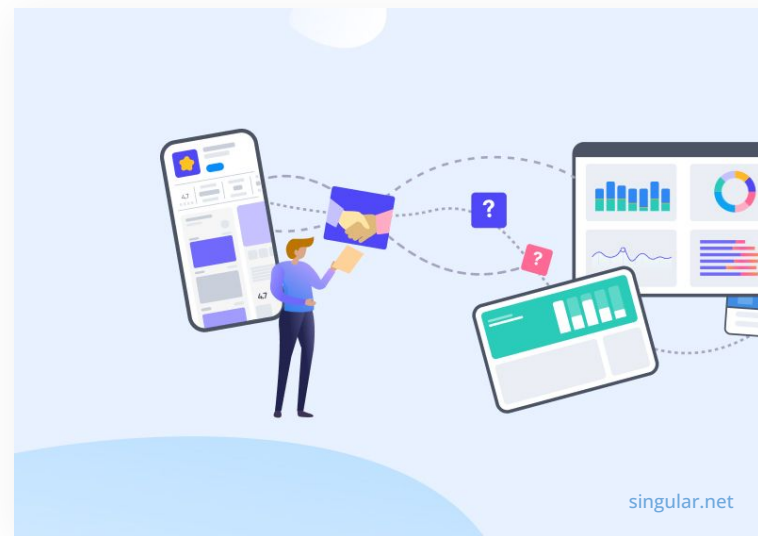
- A third-party tool, also known as **MMP** - Mobile Measurement Partner.
- Help us understand which **acquisition sources** are driving installs, conversions, and revenue.
- To understand different **touch-points** before conversions.
- Configuration of **Apple SKAdNetwork** conversions.





# Why do you need an App Attribution tool?

- A single **centralised view** of campaign performance across multiple channels.
- **Integrates** seamlessly with Self-Attributing Networks (SANs) like Meta, Google, etc.
- App Attribution tools **forward conversion events** to SANs without additional development.
- **Fraud prevention** features - avoid paying for fake clicks and installs.



# Example App Attribution tools

**KOCHAVA**★

Best for:

Free access to full tool which is accessible for early stage startups

**branch**

Best for:

- Reliable deeplinking solution
- If you need additional features link Journeys, Deep Views, etc.

**ADJUST**

Best for:

Robust integrations with ad networks and good overall usability

**AppsFlyer**

Best for:

A good all-rounder tool catered for performance marketers

and more...

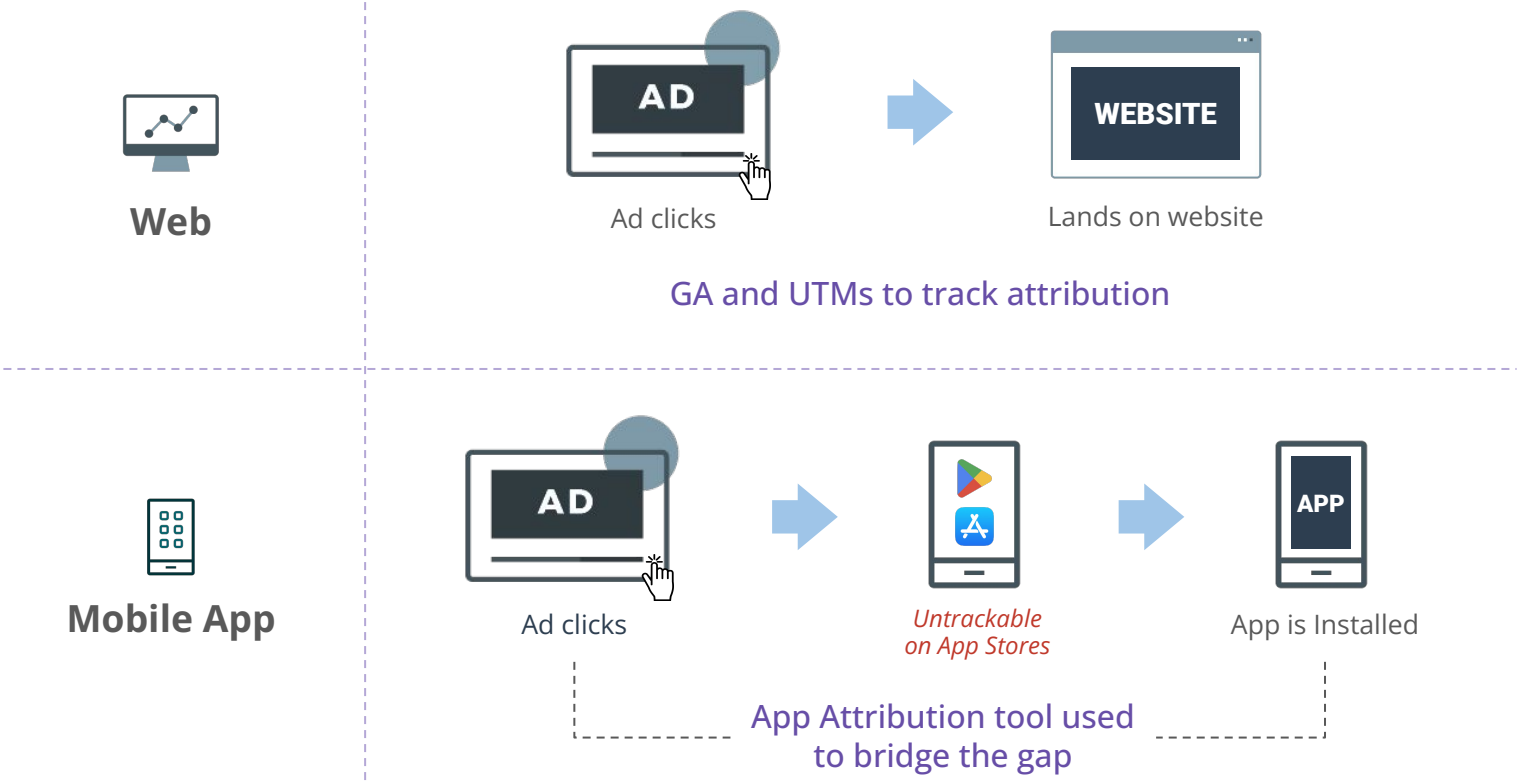
## What about Firebase / GA4?

- **Limited partner integration** - key networks like Meta, TikTok, Twitter are not available.
- **Dynamic Links** with UTMs can be used for attribution but not as reliable.
- Dynamic Links will also be **deprecated by August 2025**.
- It's a more suitable for user behavior tracking than attribution.



# Web vs App Attribution

# Web vs App Attribution



# Web vs App Attribution



## Web (Google Analytics)



## Mobile App Attribution Tools

### Tracking Implementation

- GA Tracking Code

- SDK implementation

### Traffic Sources

- Based on referrer data or UTM parameters

- Direct integration with Ad Network (Self-attributing Networks)
- Other paid or non-paid channels use custom app links similar to UTMs.

### Conversions

- Flexible, as defined by users

- Fixed standard events OR custom events depending on tools.

### User Identifier

- Client ID / User ID

- Deterministic: Device IDs
- Probabilistic: IP, User Agent

### Attribution Window

- Up to 90 days

- Depending on tools, max 30 days

### Attribution Logic

- Last non-direct click

- Last click for most tools

How does it work?

# Pre-requisites

- **Choose** an app attribution tool / MMP.
- Implement the **SDK** in the app source code.
- Plan and Implement conversion **events** based on your KPIs.
- Some **setup** within the tool is also needed.

## Step 1: Import AppsFlyerLib

In your global Application class, import `AppsFlyerLib`:

```
Java Kotlin  
  
import com.appsflyer.AppsFlyerLib;
```

## Step 2: Initialize the SDK

In the global Application `onCreate`, call `init` with the following a

```
Java Kotlin  
  
AppsFlyerLib.getInstance().init(<AF_DEV_KEY>, null, this
```



# Types of Attribution

## Self-Attributing Networks (SANs)

- Attribution tool integrates directly with ad networks.
- Attribution tool & ad networks exchanges data about conversions and campaigns.
- No app links setup required.
- No SDK from ad networks needed.



## Attribution App Links

- Any other sources without direct integration can use "app links".
- When visiting links, the attribution tool records the campaign and user data.
- Example:  
`https://example.app.link/?~channel=drip&~campaign=free_gift&~feature=email`



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# Self-Attributing Networks

The screenshot shows the Facebook integration setup page in AppsFlyer. At the top, there is a navigation bar with the Facebook logo and a link to "Learn how to integrate this partner >". Below this is a horizontal menu with icons for Retargeting, Cost, Ad revenue, View-through, Audiences, SKAN, Advanced Privacy, and Data richness. The main content area has tabs for Integration, Attribution link, Cost, Ad revenue, SKAN, and Permissions. The "Integration" tab is active, showing the "Facebook integration" section. It includes a toggle for "Activate partner" which is turned on. Under "General settings", there is a "Facebook App Id" field containing the value "111111111111111111111111" with a green checkmark. Below that is a toggle for "Limit Facebook use of users' personal information (CCPA)" which is turned off. The "Install attribution" section has a radio button for "Hours" and a selected radio button for "Days". At the bottom, there is a slider for "Install click-through lookback window" with a value of 1 day selected, and a range from 1 to 30 days.

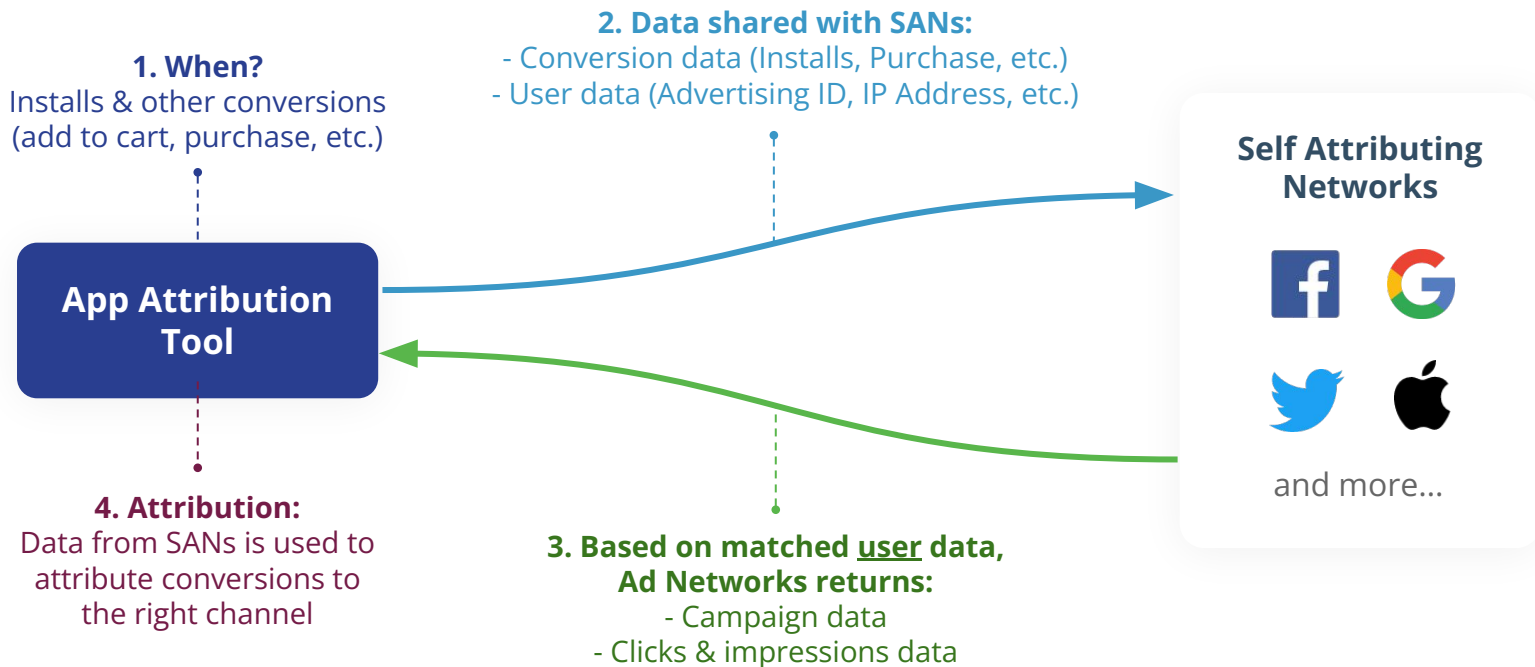
Example of **Integration Setup** (Appsflyer)

# Self-Attributing Networks

ENABLED	YOUR EVENT NAME	AD PARTNER EVENT NAME
<input checked="" type="checkbox"/>	INSTALL	MOBILE_APP_INSTALL
<input checked="" type="checkbox"/>	OPEN	fb_mobile_activate_app
<input checked="" type="checkbox"/>	REINSTALL	fb_mobile_activate_app
<input checked="" type="checkbox"/>	ADD_TO_CART	fb_mobile_add_to_cart
<input checked="" type="checkbox"/>	PURCHASE	fb_mobile_purchase
<input checked="" type="checkbox"/>	VIEW_ITEM	fb_mobile_content_view
<input checked="" type="checkbox"/>	ACHIEVE_LEVEL	fb_mobile_level_achie...

Example of **Event Forwarding Setup** (branch.io)

# Self-Attributing Networks



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# Attribution App Links

Example Link (Appsflyer Onelink):

`app.appsflyer.com/com.app.123?pid=braze&c=birthday&af_adset=customer`

Unique link generated by your app attribution tool.

Pass campaign data to the app attribution tool by adding campaign parameters to end of a link. Some examples:

**pid** : The traffic channel  
**c** : The marketing campaign  
**af\_adset** : Adset data

Notes:

1. Different tools will have different set of parameters, but they often refer to similar info.
2. The parameters above are just examples, there are other parameters.

# App Links variations by tools

Different attribution tools have different format:

 branch

Branch link:

<https://test.app.link/?~channel=braze&~campaign=birthday&~feature=customer>

 ADJUST

Adjust tracker URLs:

<https://app.adjust.com/abc123?campaign=birthday&adgroup=customer&creative=banner1>

 AppsFlyer

Appsflyer OneLink:

[https://yourbrand.onelink.me/1a6f?pid=braze&c=birthday&af\\_adset=customer&af\\_ad=banner1](https://yourbrand.onelink.me/1a6f?pid=braze&c=birthday&af_adset=customer&af_ad=banner1)



# Example App Link with additional features

## Example from Branch.io:

`https://test.app.link`

Default link for your app

`?~channel=braze  
&~campaign=birthday  
&~feature=customer`

Campaign details

`&$deeplink_path=player%2Fsong%2F1241131`

**Deep Link** URI Scheme

`&$desktop_url=https%3A%2F%2Ftestweb.com%2F`

URL to **route** user if link is opened on Desktop

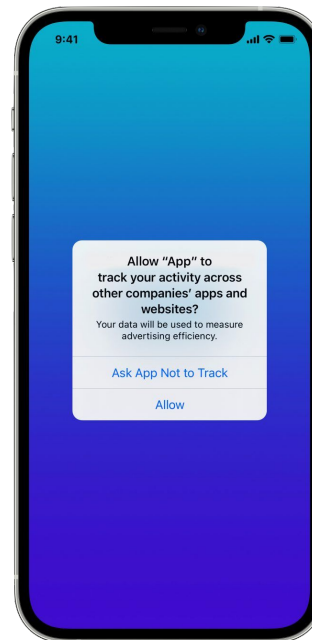
`&$ios_url=https%3A%2F%2Ftestweb.com%2F  
&$android_url=https%3A%2F%2Ftestweb.com%2F`

URL to **route** user if link is opened on Mobile

# iOS: App Tracking Transparency & SKAdNetwork

# What is App Tracking Transparency (ATT)?

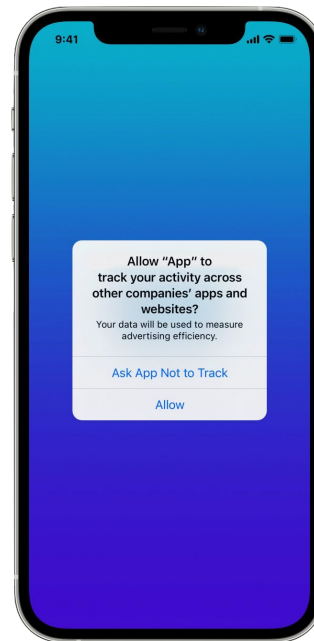
- Apple's updated **privacy and data collection policy** starting from iOS14.5
- Requires mobile apps to ask for **user's permission** to track them across other apps and websites.
- A **popup** is shown to ask for user's permission to access their device's **IDFA** for tracking purposes.
- **IDFA** is used by ad networks to identify users for attribution and audience building.



# Impact of ATT

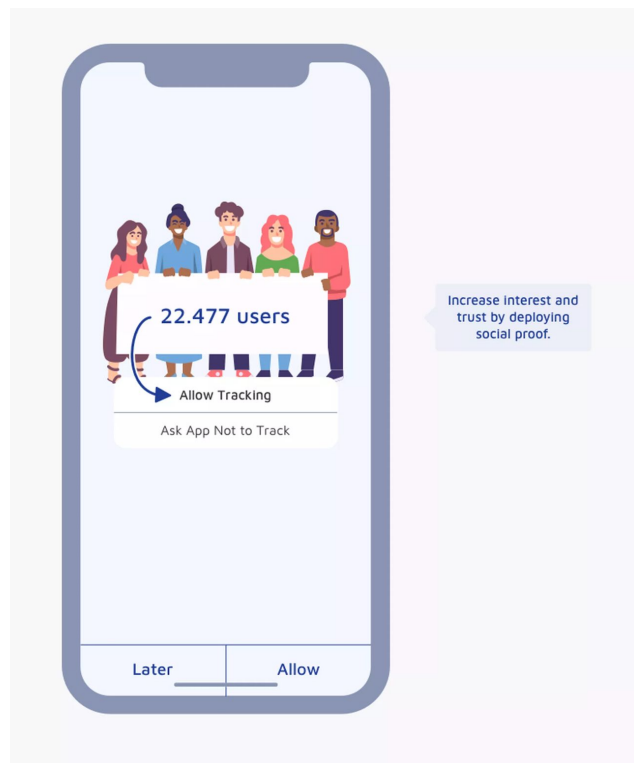
Impacts if user selects “Ask App Not to Track”:

- **Targeted ads** based on user activity on the app cannot be run.
- **Audience building** based on user behaviour is not possible.
- Conversion reporting will be based on **SKAdNetwork**.
- **Delay** in conversion data, leading to delay in ad optimization.



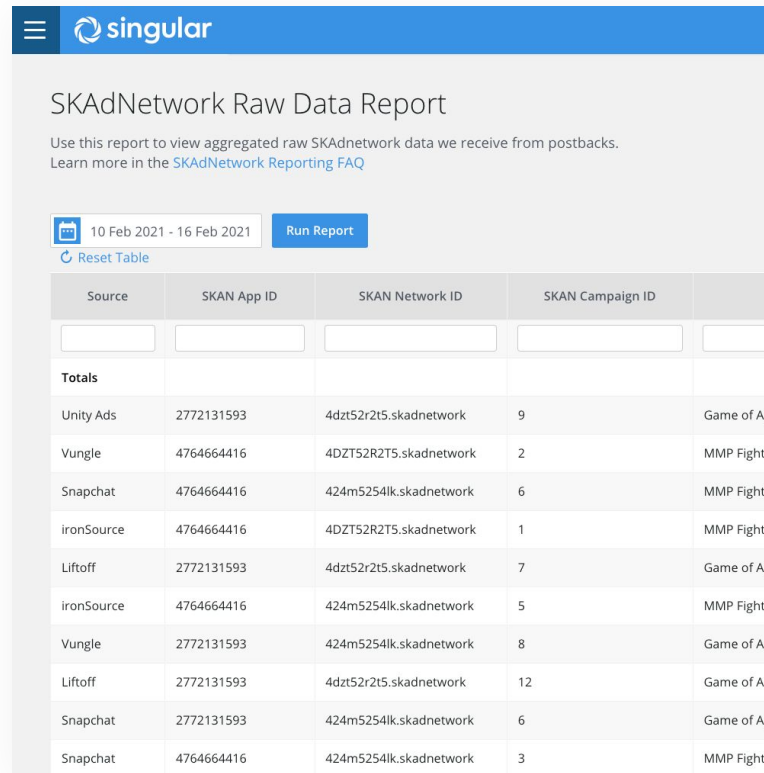
# Getting more Opt-ins

- Find **creative ways** to improve the UX strategy.
- Designing a **persuasive** pre-prompt screen
- **Testing** your new prompt.
- Recommended article by Adjust:  
<https://www.adjust.com/blog/getting-the-opt-in/>



# What is SKAN (SKAdNetwork)?

- A **framework** created by Apple to support mobile app attribution while preserving **user privacy**.
- Track **install attribution** (and other **conversions**) without exposing IDFA.
- Never real-time, data is **delayed** by 24 - 48 hours.
- Network, campaign, and conversion data is available but in an **aggregated view**.



SKAdNetwork Raw Data Report

Use this report to view aggregated raw SKAdnetwork data we receive from postbacks.  
Learn more in the [SKAdNetwork Reporting FAQ](#)

10 Feb 2021 - 16 Feb 2021 [Run Report](#)

[Reset Table](#)

Source	SKAN App ID	SKAN Network ID	SKAN Campaign ID	
<b>Totals</b>				
Unity Ads	2772131593	4dzt52r2t5.skadnetwork	9	Game of A
Vungle	4764664416	4DZT52R2T5.skadnetwork	2	MMP Fight
Snapchat	4764664416	424m5254lk.skadnetwork	6	MMP Fight
ironSource	4764664416	4DZT52R2T5.skadnetwork	1	MMP Fight
Liftoff	2772131593	4dzt52r2t5.skadnetwork	7	Game of A
ironSource	4764664416	424m5254lk.skadnetwork	5	MMP Fight
Vungle	2772131593	424m5254lk.skadnetwork	8	Game of A
Liftoff	2772131593	4dzt52r2t5.skadnetwork	12	Game of A
Snapchat	2772131593	424m5254lk.skadnetwork	6	Game of A
Snapchat	4764664416	424m5254lk.skadnetwork	3	MMP Fight

# SKAN Conversion Setup

- To track **conversions**, App Owner needs to configure their SKAN conversions.
- Limited to **63 bits** or “conversion values”.
- Each conversion value can be a combination of up to **six (6) events, event counts, or revenue ranges**.
- SKAN can only attribute **one conversion** value within **24h** right after install.

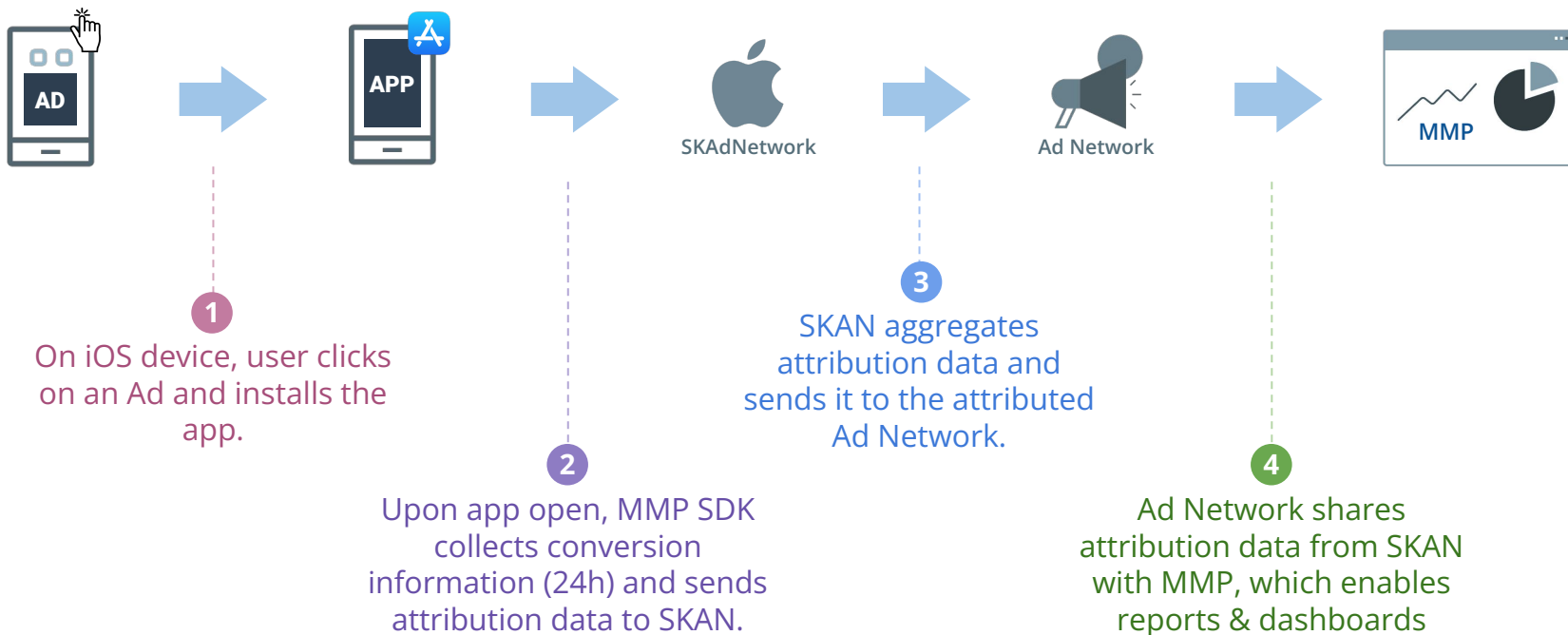
Setup mode  6 Bits

Conversion value window

**Map conversion values**

CV	<input type="checkbox"/> Mapping type	Mapped value		Actions
1	<input type="checkbox"/> Total revenue	Min 0	Max 0.05	<input type="radio"/> + <input type="trash"/>
2	<input type="checkbox"/> Total revenue	Min 0.05	Max 0.22	<input type="radio"/> + <input type="trash"/>
3	<input type="checkbox"/> Total revenue	Min 0.22	Max 1.06	<input type="radio"/> + <input type="trash"/>
4	<input type="checkbox"/> Total revenue	Min 1.06	Max 5	<input type="radio"/> + <input type="trash"/>
5	<input type="checkbox"/> Total revenue	Min 0	Max 0.05	<input type="radio"/> + <input type="trash"/>
	<input type="checkbox"/> Event	Level Up		<input type="trash"/>
6	<input type="checkbox"/> Total revenue	Min 0.05	Max 0.22	<input type="radio"/> + <input type="trash"/>
	<input type="checkbox"/> Event	Level Up		<input type="trash"/>
7	<input type="checkbox"/> Total revenue	Min 0.22	Max 1.06	<input type="radio"/> + <input type="trash"/>
	<input type="checkbox"/> Event	Level Up		<input type="trash"/>
8	<input type="checkbox"/> Total revenue	Min 1.06	Max 5	<input type="radio"/> + <input type="trash"/>
	<input type="checkbox"/> Event	Level Up		<input type="trash"/>

# How does SKAN work?





# Thank you!

Feel free to reach out to me if you have any questions.



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