HUAWEI Ads SRN Interface

v1.0.5

Huawei Technologies Co., Ltd.

Content

1 Overview

If you use HUAWEI Ads to promote your mobile app, use the SRN function of HUAWEI Ads to check whether your app activation and in-app activities are from the ad clicks of HUAWEI Ads.

This article describes the different types of moving transformations and how to track them.
You can track multiple transformations for mobile apps:
Application activation: If you want to measure whether your ad can effectively attract users to install and use your mobile app, use the transformation tracking function to measure the ad effect. You can track the first time you open an ad after the app is installed.
In-app operations (such as purchase): If you use HUAWEI Ads to attract users to purchase or perform other operations in your app, you can use the conversion tracking function to measure the in-app conversion effect of ads.

1.1 SRN Interface Invoking Process

Following is the sequence of integration
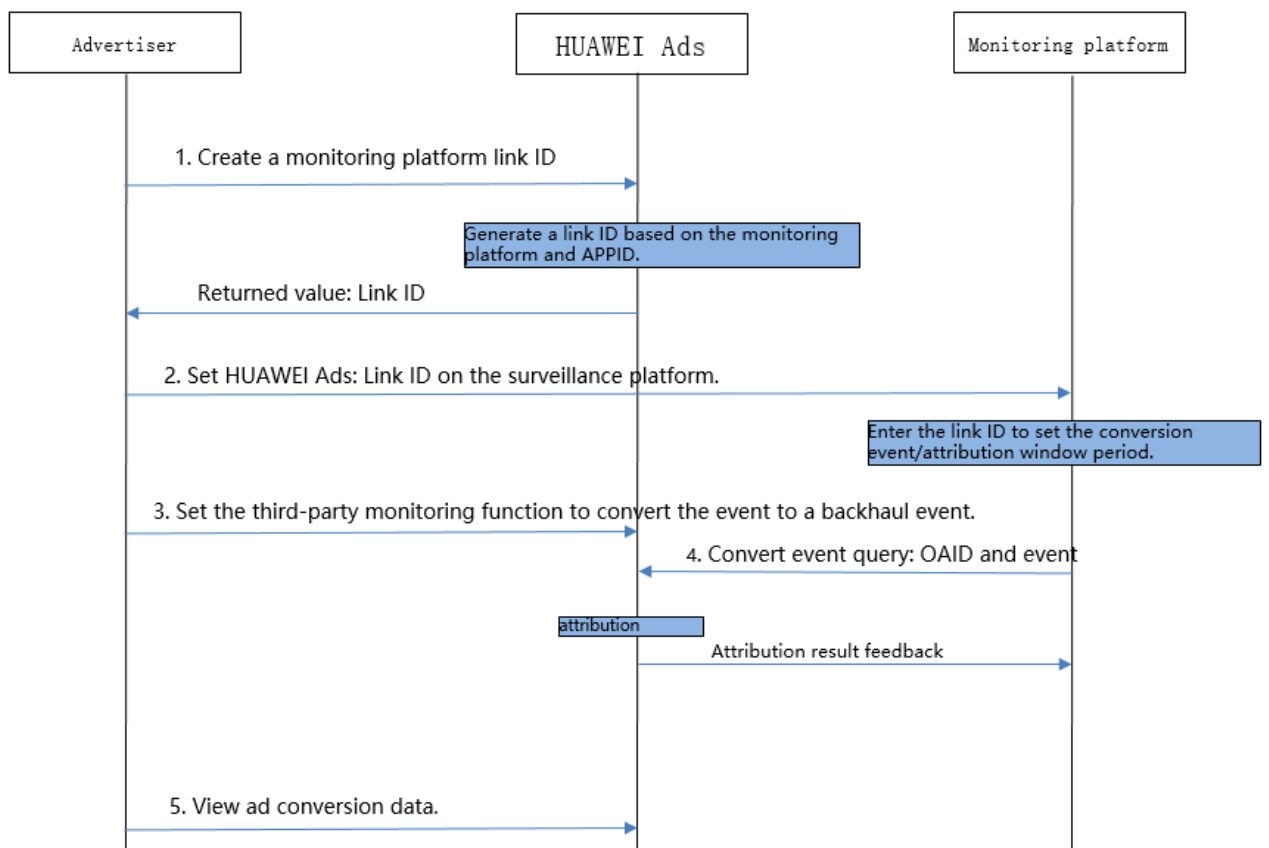
1. The advertiser creates an association with the analysis platform in HUAWEI Ads. HUAWEI Ads generates a unique link ID for each app of each account.

2. The advertiser associates the link ID obtained from HUAWEI Ads with the account of the analysis platform on the analysis platform.

3. The advertiser configures conversion events on the analysis platform and specifies the conversion events to be sent back to HUAWEI Ads. List of conversion events supported by HUAWEI Ads. For details, see section 2.1.6 "Conversion Types."

4. After receiving the conversion event from the app, the analysis platform sends an SRN request to HUAWEI Ads. The HUAWEI Ads returns the attribution result in a response.

5. The advertiser views the conversion data on HUAWEI Ads.

2 Interface Description

2.1 SRN request and response

2.1.1 Overview

HUAWEI Ads supports the SRN mode of attribution. Third-party analysis platforms or advertisers' analysis platforms can use the SRN API provided in this document to send attribution requests. HUAWEI Ads SRN responds based on the attribution method provided by Huawei and returns the attribution result.

2.1.2 Request Format

To comply with the laws and regulations of each region or country, HUAWEI Ads is deployed in different regions around the world, and data in each region is strictly isolated.

The data processing location of the analysis platform may be different from that of HUAWEI Ads. Therefore, the attribution request of the analysis platform needs to be sent to the following URLs of HUAWEI Ads:

1. Europe: https://ppscrowd-dre.op.dbankcloud.com/action-lib-track/srn/v1

2. Asia, Africa, and Latin America: https://ppscrowd-dra.op.dbankcloud.com/action-lib-track/srn/v1

3. Russia: https://ppscrowd-drru.op.dbankcloud.com/action-lib-track/srn/v1

Protocol: HTTPS

Method: POST

Content type: application/json

Data character code: UTF-8

Body format: JSON

The parameters in the body are described as follows:

Parameter Name	Type	Mandatory (M)/Optional (O)	Description
channel	string	M	Provider name of the ad placement analysis tool, which can be the same as the platform abbreviation in section 1.1 "Preparations."
link_id	string	M	The advertiser creates an account association on the HUAWEI Ads. When the advertiser requests an SRN API, the HUAWEI SRN performs interface authentication.
oaid	string	O	Original OAID, in plaintext. GMS mobile phones can use Google's GAID.
tracking_enabled	string	O	Indicates whether to enable oaid-based ad tracking. The options are as follows: 0: not support ad tracing. User profiling, precise recommendation, and precise marketing are not performed. 1: ad tracing is supported.
ip	string	M	IPv4 address of the conversion event, in plain text.
conversion_type	string	M	Conversion type. For details about the supported types, see section 2.1.6.
conversion_time	string	M	Time when a conversion event occurs. The value is a Unix timestamp, in seconds.
custom_conversion_type	string	O	Custom conversion type. This parameter is mandatory when conversion_type is set to custom. The value can contain only letters and underscores (_).
conversion_extend	Conversion	O	Supported conversion types and additional parameters. For details, see the definition of the Conversion object.
conversion_params	string	O	The conversion parameter supports

Parameter Name	Type	Mandatory (M)/Optional (O)	Description
			customized character strings in JSON format. Example: {"key1":"value1","key2":"value2"}
click_lookback	int	O	Period of time after an ad is clicked within which an install can be attributed, or matched, to the ad.. The value ranges from 7 to 30 days. The default value is 30 days.
viewthrough_lookback	int	O	Period of time after an ad is viewed within which an install can be attributed, or matched, to the ad. The value ranges from 1 to 7 days. The default value is 7 days.
user_agent	string	M	User agent in UTF-8 format, which is encoded using URLEncode, for example, Mozilla/5.0 (Linux; Android 10; WLZ-AL10 Build/HUAWEIWLZ-AL10; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/70.0.3538.64 Mobile Safari/537.36..
carrier	string	O	Mobile country code + mobile network code, for example, 46002
network_type	string	O	How to access the Internet, such as Wi-Fi and 4G
gaid	string	O	Google ad ID, in plaintext.
gaid_tracking_enabled	string	O	Indicates whether to enable GAID-based ad tracking. The options are as follows: 0: not support ad tracing. User profiling, precise recommendation, and precise marketing are not performed. 1: ad tracing is supported.

Conversion object definition:

Parameter Name	Type	Mandatory (M)/Optional (O)	Description
revenue	float	O	Benefit Amount
price	float	O	Price of a single offering
value	float	O	Transformation value
currency	string	O	Currency. Use the ISO 4217 alphabetical code, for example, USD, EUR, CNY.
content_type	string	O	Offering type.
content_list	string[]	O	Offering name list.
content_id	string	O	Product ID.
quantity	int	O	Offering quantity
payment_info_available	boolean	O	Available Payment Information
validated	string	O	Verification
receipt_id	string	O	Receipt No.
order_id	string	O	Order No.

Request body example:

```
{
"channel":"your channel name",
"link_id":"mznAk15d6wso3yBzUGTw",
"oaid":"f7df757d-b3bb-9352-befb-76d2bf431251",
"tracking_enabled":"1",
"ip":"192.168.5.23",
"conversion_type":"activate",
"conversion_extend":
{
"revenue":"10.0",
"value":"10.0",
"currency":"USD"
},
"conversion_time":"1582160596",
```

"user_agent ":"Mozilla/5.0 (Linux; Android 10; WLZ-AL10 Build/HUAWEIWLZ-AL10; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/70.0.3538.64 Mobile Safari/537.36",

"carrier":"46002",

"network_type":"4G"

}

2.1.3 API authentication

To ensure API security, HUAWEI Ads needs to authenticate the request body. The request is processed only after the authentication succeeds.

The Authorization field is added to the request header of an SRN request. Digest authentication is used to authenticate the validTime and response parameters in Authorization.

The format of the Authorization field is as follows:

Authorization: Digest validTime="validTime", response="HMAC-SHA256 (body, key) "

- ValidTime indicates the request initiation time. The value is a Unix timestamp, in milliseconds.

  The HUAWEI Ads compares the value of validTime with the time when the HUAWEI Ads server receives the SRN request. If the time difference exceeds 5 minutes, the authentication fails and the request is considered invalid.

- response indicates the signature of the message body. The digital signature algorithm is HMAC-SHA256. Response parameters are generated in HMAC-SHA256 (Body, Key) mode. In the following ways:

  a) Body: JSON character string sent by the server. The encoding format is UTF-8.

  b) Key (secretKey): The secret key used for SRN interface authentication is assigned by HUAWEI Ads to the analysis platform through emails. This key is used for authentication when the SRN is sent to Huawei Advertising.

  c) The signature is a hexadecimal character string, which is used as the response value in Authorization.

  Note: The JSON character string in the request body must be the same as that in the signature.

2.1.4 API Authentication Example

The following example is used only for commissioning. This field is filled using the actual value in the formal SRN message.

element	Example:
validTime	1584601255506
Body	{"channel":"your channel name","link_id":"mznAk15d6wso3yBzUGTw","oaid":"f7df757d-b3

element	Example:
	bb-9352-befb-76d2bf431251","tracking_enabled":"1","ip":"192.168.5.23","conversion_type":"activate","conversion_extend":{"revenue":"10.0","value":"10.0","currency":"USD"},"conversion_time":"1582160596","user_agent ":"Mozilla/5.0 (Linux; Android 10; WLZ-AL10 Build/HUAWEIWLZ-AL10; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/70.0.3538.64 Mobile Safari/537.36","carrier":"46002","network_type":"4G"}
Key	qN/XhvvuGV6BqVS1F18mig1JH+dQ/+6qUqJ/GaA1KFI=
response	efbcef709c2f2f1373e2856cdc30d44b27166ac5e6ac54630bc380620cb19f24
Request header parameters	Digest validTime="1584601255506", response="efbcef709c2f2f1373e2856cdc30d44b27166ac5e6ac54630bc380620cb19f24"

2.1.5 Response Description

After receiving the SRN request from the analysis platform, the Huawei ad platform verifies the data and returns a claim response based on the attribution result. The response body is as follows:

1. Format: JSON
2. Content:

Parameter Name	Type	Mandatory	Description
result_code	Int	M	1: yes; 0: no Error code: 4001: Signature verification failed. 4002: The data JSON format is incorrect and cannot be parsed. 4003: The mandatory field is missing or the format is invalid. 4004: link_id mismatch 4005: Other errors
error_msg	String	O	Error message displayed when the result_code field returns an error code.
campaign_id	String	O	ID of the advertisement plan associated with the conversion event.
campaign_name	String	O	Ad plan name associated with the conversion event. The value is in the URLEncode format.

sub_site_id	String	O	ID of the ad regional node or publisher associated with the conversion event.
adgroup_id	String	O	ID of the ad task associated with the conversion event.
adgroup_name	String	O	Name of the ad task associated with the conversion event. The value is in the URLEncode format.
content_id	String	O	Creative ID of the associated conversion event.
ad_name	String	O	Creative name of the associated conversion event. The value is in the URLEncode format.
ad_type	String	O	Ad format, such as interstiti, banner, and video.
event_type	string	O	Event type. The options are as follows: Touch to expose. If a click event exists, the click event is returned first. Otherwise, the exposure event is returned.
event_time	string	O	Time when an event occurs. The value is a Unix timestamp. The unit is second.

2.1.6 Conversion Type

Supported conversion types	Description
activate	The user opens the app for the first time.
register	The user initiates a registration behavior.
retain	Open the app on the next day after the user is activated.
paid	The user generates a payment behavior.
browse	The user browses the video.
collection	The subscriber adds the favorite's behavior.
preOrder	The user places an order.
subscribe	A user subscribes to a service or channel.
login	The user completes the login behavior.
update	Used to track update events
reservation	A user has reserved a service.
addToCart	The user adds to the shopping cart.
threeDayRetain	Start the app three days after the activation.
sevenDayRetain	Open the app within seven days after activation.

deliver	Shipment after the user places an order
orderSigning	Sign for the order after the user places the order.
firstPurchaseMemberCard	First Purchase
purchaseMemberCard	Purchase Membership
addQuickApp	A user opens a fast app and adds it to the desktop.
addToWishlist	Add a product or service to the wish list.
openedFromPushNotificatio n	Used to track the event that an app is opened from a push notification.
reEngage	Open the app.
form_submit	Used to track form submission behavior
consult	Get effective advice
effectiveLeadsForm	The form lead placed by the advertiser is confirmed as a valid lead after being called back.
potentialCustomerForm	Confirming a Lead Placed by an Advertiser as a Potential Customer After Calling Back
custom_acquisit	Obtain valid customers.
book	Obtain valid reservation
consultOnline	A user consults on a web page.
effectiveLeadsOnline	Advertiser's consultation component confirms the consultation dialog.
potentialCustomerOnline	Advertiser's consulting component confirms the behavior of staying in service.
phoneDialing	The user clicks the call button.
effectiveLeadsPhone	The phone component of the advertiser is connected.
potentialCustomerPhone	Confirming that the phone component of the advertiser is a potential customer after being connected
followScan	Number of QR code scanning follow times after the landing page is displayed.
leadsLottery	After the lottery, submit the mobile number and report it successfully.
addPaymentInfo	Used to track payment information configuration status.
startTrial	Used to track the start of a free trial of a product.
initiatedCheckout	Used to track closing events
invite	The user initiates an invitation (social) behavior.
search	The user performs search.

share	The user performs the sharing behavior.
travelBooking	Used to track travel booking events (and related revenue)
rate	Used to track commodity/application rating events
contentView	Traces content view events.
custom	Used to track custom conversion events.
custom_ landingpage	Used to trace customized conversion events on the landing page.
landingpageClick	The user clicks the button.
coupon	The user clicks the button for claiming a voucher.
navigate	The user clicks the navigation button.
lottery	Click the raffle button.
vote	The user clicks the voting button.
redirect	The user switches to another page.
gamePackageRedemption	Redeem a gift package.
gamePackageClaiming	Claiming a Gift Package
createRole	Creating a role
authorize	Authorization (gaming)
tutorialCompletion	Complete the novice tutorial (game)
achievementUnlocked	Tracking the event of unlocking a user's achievement
spentCredits	Event used to track the bonus point consumption of a user.
levelAchieved	Event that a user reaches the game level
loanCompletion	The user completes the service.
preCredit	Number of pre-crediting times
credit	Number of credit lines
follow	Followed by users
forward	Forwarded by user
read	Read by users
like	Liked by users
comment	Commented by users