



VAST Addendum:

Attribution Reporting Support

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Please email support@iabtechlab.com with feedback or questions. This document can be found online at <https://iabtechlab.com/vast>.

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This solution was submitted by Jon Guarino, Software Engineer, Google, and approved by the [Advanced TV Working Group](#).

About IAB Tech Lab

The IAB Technology Laboratory (Tech Lab) is a non-profit research and development consortium that produces and provides standards, software, and services to drive growth of an effective and sustainable global digital media ecosystem. Comprised of digital publishers and ad technology firms as well as marketers, agencies, and other companies with interests in the interactive marketing arena, IAB Tech Lab aims to enable brand and media growth via a transparent, safe, effective supply chain, simpler and more consistent measurement, and better advertising experiences for consumers, with a focus on mobile and TV/digital video channel enablement. The IAB Tech Lab portfolio includes the DigiTrust real-time standardized identity service designed to improve the digital experience for consumers, publishers, advertisers, and third-party platforms. Board members include AppNexus, ExtremeReach, Google, GroupM, Hearst Digital Media, Integral Ad Science, Index Exchange, LinkedIn, MediaMath, Microsoft, Moat, Pandora, PubMatic, Quantcast, Telaria, The Trade Desk, and Yahoo! Japan. Established in 2014, the IAB Tech Lab is headquartered in New York City with an office in San Francisco and representation in Seattle and London.

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Background

As part of its Privacy Sandbox initiative, Chrome has developed the [Attribution Reporting API](#), which provides a privacy-preserving mechanism to link conversion events back to the impressions or clicks that may have led to them, without the use of direct cross-site tracking via third-party cookies. To leverage Chrome's API, events must be registered in the browser as potential "attribution source" events. Other mechanisms may exist in other apps or devices to register such events and enable attribution reporting, without cookies, for a safer and more private online ad experience.

For video ads in particular, cooperation between video ad players and SDKs are needed to trigger these events, as well as with the parties receiving the events for conversion tracking. IAB Tech Lab's [Video Ad Serving Template \(VAST\)](#) is releasing this addendum to facilitate registration of attribution events.

On devices where a mechanism exists to register events (such as impressions, clicks) as "sources" for conversion attribution tracking, video ad SDKs can provide support for these registrations as described in this document.

Detecting Attribution Reporting in the Browser

Implementers may use the following check to determine if the Attribution Reporting API is available in the browser.

```
const featurePolicy = window.document.featurePolicy;
if (featurePolicy.allowedFeatures().includes('attribution-reporting')) {
  // The Attribution Reporting API is available for use.
  ...
}
```

If this feature is NOT available, all `attributionsrc/attributiontype` attributes may be ignored and all events treated as they would be normally.

Registering VAST Tracking Events

VAST events that may lead to conversion (impressions, tracking events, clicks) support optional attributes that enable ad servers to indicate which ones to register. All non-navigation events should be registered using a "ping" (e.g. element, Fetch API), while navigation events should be registered during the navigation itself (e.g. <a> element, `window.open`).

New `attributetype` and `attributesrc` for VAST Elements

In all versions of VAST certain elements are available for providing tracking URLs. As part of this addendum, a new attribute value labeled `attributetype` can be included to identify whether the provided URL is registered or a secondary URL is registered. The attribute labeled `attributesrc` identifies the URL to be registered.

These two attributes can be used for all trackable events, as applicable in all VAST versions, for the following elements:

- <Impression>
- <ClickThrough>
- <ClickTracking>
- <NonLinearClickThrough>
- <NonLinearClickTracking>
- <CompanionClickThrough>
- <CompanionClickTracking>
- <Tracking>

The value for `attributetype` is one of either `SINGLE-PING` or `DOUBLE-PING`.

- **SINGLE-PING:** the provided event URL is registered as the attribution source event.
- **DOUBLE-PING:** a second URL provided along with the standard event tracking URL is registered. *If double-ping registration type is used, a second URL must be provided as the value for `attributionsrc`, which is registered as the attribution source.*

Example: Single-Ping Impression Registration

If the VAST document contains:

```
<Impression attributiontype="SINGLE_PING">
  <![CDATA[http://adserver.com/impression?id=123]]>
</Impression>
```

the video ad SDK may record this event at impression time by adding the `attributionsrc` attribute to the `` element used to send the ping as follows:

```

```

or using the fetch method, such as:

```
const attributionReportingOptions = {
  eventSourceEligible: true,
  triggerEligible: false,
};
const options = {
  keepalive: true,
  method: 'get',
  redirect: 'follow',
  attributionReporting: attributionReportingOptions
};
window.fetch('https://adserver.com/impression?id=123', options);
```

Example: Double-Ping Impression Registration

If the VAST document contains:

```
<Impression attributiontype="DOUBLE_PING"
  attributionsrc="https://adserver.com/registerAttrSrc?id=123&t=1" >
  <![CDATA[https://adserver.com/impression?id=123]]>
</Impression>
```

the video ad SDK may record this at impression time by using `attributionsrc` on the `` element to report and register the URL from the `attributionsrc` attribute of the `<Impression>` element:

```

```

Important! When using `DOUBLE_PING` attribution registration, you *must ensure all URLs are properly escaped for use as XML attributes*. Specifically, any ampersand characters must be encoded (`'&'` instead of `'&'`).

Alternatively, two separate calls to the `fetch` method may be used, one for the standard impression event and another specifically for the URL intended for attribution registration, as demonstrated below:

```
const attributionReportingOptions = {
  eventSourceEligible: true,
  triggerEligible: false,
};
const options = {
  keepalive: true,
  method: 'get',
  redirect: 'follow',
  attributionReporting: attributionReportingOptions
};
window.fetch('https://adserver.com/impression?id=123', options);
window.fetch('https://adserver.com/registerAttrSrc?id=123', options);
```

Example: Single-Ping Clickthrough Registration

If the VAST document contains:

```
<VideoClicks>
  <ClickThrough attributiontype="SINGLE_PING">
    <![CDATA[https://adserver.com/click?id=123&r=http%3A%2F%2Flanding.page]]>
  </ClickThrough>
</VideoClicks>
```

when responding to a user click event, the video ad SDK can make the clickthrough eligible for attribution registration by adding the `attributionsrc` attribute to the anchor tag:

```
<a href="https://adserver.com/click?id=123&r=http%3A%2F%2Flanding.page"
  attributionsrc>
  ...
</a>
```

or with the open method as:

```
window.open('https://adserver.com/click?id=123&r=http%3A%2F%2Flanding.page',
  '_blank', 'attributionsrc');
```

Example: Double-Ping Clickthrough Registration

If the VAST document contains:

```
<VideoClicks>
  <ClickThrough attributiontype="DOUBLE_PING"
    attributionsrc="https://adserver.com/registerClkAttrSrc?id=123">
    <![CDATA[https://adserver.com/click?id=123&r=http%3A%2F%2Flanding.page]]>
  </ClickThrough>
</VideoClicks>
```

when responding to a user click event, the video ad SDK can include the URL from the `attributionsrc` attribute on the `<ClickThrough>` element as the `attributionsrc` attribute of the anchor tag in order to have the browser send it an registration-eligible ping during navigation:

```
<a href="https://adserver.com/click?id=123&r=http%3A%2F%2Flanding.page"
  attributionsrc="https://adserver.com/registerClkAttrSrc?id=123">
  ...
</a>
```

or alternatively, by setting that URL as the value of the third argument to the `open` method as such:

```
const encodedAttrSrc =
  encodeURIComponent('https://adserver.com/registerClkAttrSrc?id=123');
window.open('https://adserver.com/click?id=123&r=http%3A%2F%2Flanding.page',
  '_blank', `attributionsrc=${encodedAttrSrc}`);
```

Note: The URL from `attributionsrc` must be URI encoded as in the example above to be properly loaded.

Tracking Events

Other tracking event types can be handled the same way impression trackers are handled above.

Example: Click Trackers

When necessary, non-navigation click trackers can also be handled the same way as impression events and other tracking events; however, this will cause them to be registered as "event" and not "navigation" attribution sources and may not be preferred.

Some VAST documents may allow click trackers to be properly registered as "navigation" events. For example, both <ClickThrough> and <ClickTracker> demonstrated as follows:

```
<VideoClicks>
  <ClickThrough>
    <![CDATA[https://adserver.com/click?id=123&r=http%3A%2F%2Flanding.page]]>
  </ClickThrough>
  <ClickTracker attributiontype="SINGLE_PING">
    <![CDATA[https://ads3p.com/clkTrack?id=987]]>
  </ClickTracker>
</VideoClicks>
```

can potentially be reported with a single anchor tag in a way that makes the click tracker eligible for "navigation" event registration:

```
<a href="https://adserver.com/click?id=123&r=http%3A%2F%2Flanding.page"
  attributionsrc="https://ads3p.com/clkTrack?id=987" >
  ...
</a>
```

Future Attribution Reporting API updates may allow for multiple URLs to be registered via attributionsrc at once, making this technique more usable for scenarios with multiple click trackers requesting registration.