

OpenRTB 2.5

Publisher Integration Guide

For Publishers | Supply Partners | Header Bidding | Ad Servers

Endpoint: POST /openrtb/{PublisherKey}
Base URL: http://rtb.pubadhub.com

OpenRTB 2.5 bid request endpoint for publishers. A fill returns a USD bid and a click URL. No ad returns HTTP 204.

1. Overview

PubAdHub accepts OpenRTB 2.5 bid requests. Send one HTTP POST for each auction. When an ad is available, the response is a bid in US dollars plus a click URL. When no ad is available, the response is HTTP 204 with an empty body.

The publisher key in the URL is your Publisher Identity. Your Account Manager provides it.

2. Endpoint

Item	Value
Method	POST
URL	http://rtb.pubadhub.com/openrtb/{PublisherKey}
Example	http://rtb.pubadhub.com/openrtb/YOUR_PUBLISHER_KEY
Body	OpenRTB 2.5 Bid Request JSON
Success	HTTP 200 and a Bid Response JSON
No ad	HTTP 204 and an empty body
Bad request	HTTP 400 and a short JSON error

Replace YOUR_PUBLISHER_KEY with your Publisher Identity from your Account Manager. It may contain letters, numbers, underscores, and hyphens, and it must be 1 to 64 characters. Do not leave the braces in the live URL.

Use POST only. A GET request is not accepted as a bid request.

3. Authentication

There is no API token and no Authorization header. The Publisher Identity in the path identifies your account. Keep it in your server configuration, and do not publish it on a web page.

4. Headers

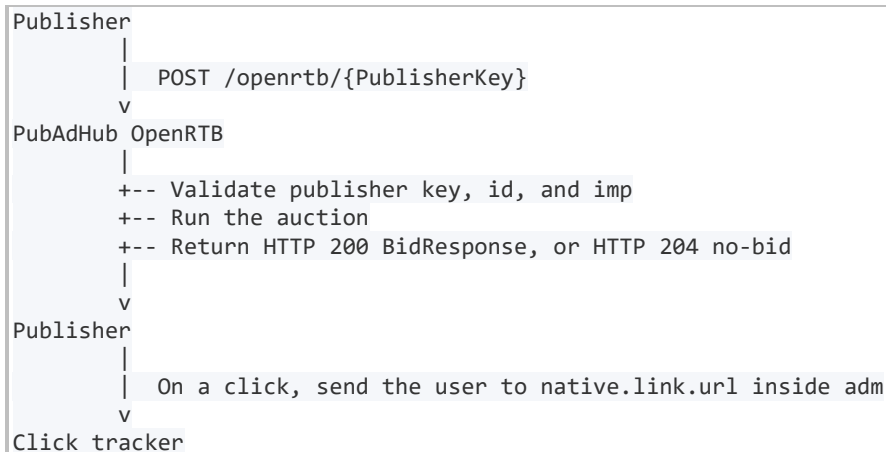
4.1 Request headers

Header	Required	Value
Content-Type	Yes	application/json
Accept	No	application/json

4.2 Response header

Every response includes x-openrtb-version: 2.5. Read the HTTP status before you read the body. A 204 response has no body.

5. Integration flow



- Build an OpenRTB 2.5 bid request for one impression.
- POST it to `http://rtb.pubadhub.com/openrtb/YOUR_PUBLISHER_KEY`.
- If the status is 200, read `id`, `cur`, and `seatbid[0].bid[0]`. Parse `adm` as JSON and use `native.link.url` as the click URL.
- A price below `imp.bidfloor` is not returned. HTTP 204 is the no-bid for that auction.
- If the status is 204, continue with your normal no-fill handling.
- When a user clicks the ad, send that user to `native.link.url`. Do not request that URL from your servers. A server-side call can be counted as a click.

6. Bid request

Replace YOUR_PUBLISHER_KEY with your Publisher Identity from your Account Manager. Send Content-Type: application/json and x-openrtb-version: 2.5. A 200 response is a bid. A 204 response means that no ad is available.

Method : POST

URL : http://rtb.pubadhub.com/openrtb/YOUR_PUBLISHER_KEY

Request body

```
{
  "id": "auction-123",
  "imp": [{
    "id": "1",
    "bidfloor": 0.10,
    "bidfloorcur": "USD",
    "tagid": "placement-1"
  }],
  "site": {
    "domain": "advertiser.example",
    "ref": "https://publisher.example/",
    "search": "running shoes"
  },
  "device": {
    "ua": "Mozilla/5.0",
    "ip": "8.8.8.8", "ipv6": "2001:db8::1",
    "geo": { "country": "US" }
  },
  "user": {
    "id": "click-123",
    "buyeruid": "user-456"
  }
}
```

Field rules are in section 8.

8. Request fields

Send these OpenRTB fields on the bid request.

OpenRTB field	Required	Description
URL {PublisherKey}	Yes	Your Publisher Identity, provided by your Account Manager.
id	Yes	Your auction id. It is returned on the bid response.
imp	Yes	One or more impressions. Only the first is bid on.
imp.id	Yes	Impression id. It is returned as bid.impid.
site.domain or app.domain	One of these	Brand domain, for example brand.com. A full URL is accepted and the host is used.
site.page	No	Page where the ad runs. Not an advertiser domain and not a deeplink. When no deeplink is sent, this page is used as ext.final_url when it is present.
imp.bidfloorcur	Recommended	Floor currency. USD is accepted. Any other currency is HTTP 204. If omitted, USD is used.
site.search or user.keywords	One of these	User search keyword.
device.geo.country	Recommended	Send US or USA. You may place the country in user.geo.country instead. Any other country receives no bid. If the country is omitted, the request is treated as US.
device.ua	Recommended	End-user browser user agent.
device.ip	Recommended	End-user IPv4 address. Send an IPv6 address in device.ipv6.
device.ipv6	Recommended	End-user IPv6 address. Send this when device.ip is omitted. Both addresses are accepted. IPv6 is not added to the click URL.
imp.bidfloor	Recommended	Your floor, in the same USD unit as price. A positive floor above the bid is HTTP 204. A bid equal to the floor can be returned.
imp.tagid	Recommended	Your placement or traffic-source id.
site.publisher.id	Recommended	Your own id for this request. When it is present, it is used as clickid on the click URL.
user.id	Recommended	Used as clickid on the click URL only when site.publisher.id is empty or omitted.
user.buyeruid	No	Your user id. It is appended to the click URL.
site.ref	Recommended	Referrer URL where the ad opportunity occurred.

ext.deeplink	No	Deeplink URL on the impression, site, app, or bid request. imp.native.ext.url is also accepted. Omit it for a homepage bid.
test	No	Set to 1 only for an integration test. A bid that still clears the auction is returned with price 0, and the click URL includes tsts=1. Do not send this in live traffic.

Deeplink URLs are read from ext.deeplink on the impression, site, app, or bid request, and from imp.native.ext.url. Send the standard OpenRTB fields in the table.

9. Bid response

A fill is HTTP 200. Content-Type is application/json. The header x-openrtb-version is 2.5. The body is one OpenRTB 2.5 BidResponse for the first impression only.

The tables below separate the OpenRTB 2.5 rule from what this endpoint sends. Extension fields are specific to this integration. Another publisher or demand partner may ignore them or define different ones.

9.1 Top-level BidResponse

These fields sit on the root object.

JSON path	Type	OpenRTB 2.5	This response
id	string	Required	Copied from the bid request id. Use it to match the response to your auction.
bidid	string	Optional	A new UUID for this response. The same value is sent as seatbid[0].bid[0].id.
cur	string	Optional. USD when omitted.	Always USD.
seatbid	array	Required when a bid is made.	One seat object. That seat contains one bid.

OpenRTB also defines a no-bid reason (nbr), custom data, and a response-level ext. This response does not send those fields.

9.2 SeatBid

seatbid[0] is the only seat in this response.

JSON path	Type	OpenRTB 2.5	This response
seatbid[].bid	array	Required	One bid, for imp[0] only. Additional impressions in the same request are not

bid on.

seatbid[].seat	string	Optional	Buyer seat id for this integration. When a seat id has been assigned, that value is sent. Otherwise, your Publisher Identity from the URL is sent.
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OpenRTB defines seatbid[].group. 0 means impressions can be won individually. This response does not send group. It contains one bid.

9.3 Bid object

seatbid[0].bid[0] is the only bid.

JSON path	Type	OpenRTB 2.5	This response
seatbid[].bid[].id	string	Required	Bidder-generated bid id. Same UUID as the top-level bidid.
seatbid[].bid[].impid	string	Required	The imp.id of the impression that received the bid. This endpoint bids on imp[0].
seatbid[].bid[].price	float	Required. The specification defines this as CPM.	EPC in USD for this click-based integration. See below.
seatbid[].bid[].adm	string	Optional	Always sent on a fill. Ad markup as a JSON string. See section 9.4.
seatbid[].bid[].lurl	string	Optional loss-notice URL.	Not sent. OpenRTB allows an exchange to call lurl when the bid does not win. Do not expect this field.
seatbid[].bid[].adomain	array of strings	Optional. Often required by an integration for advertiser block lists.	Advertiser host from site.domain or app.domain. One host, or an empty array when the advertiser was chosen from a keyword

and no domain was sent.

OpenRTB 2.5 defines price as CPM in the currency given by cur. This integration does not use CPM. price is earnings per click (EPC) in USD. Do not multiply or divide by 1000. The value is rounded to 4 decimal places. JSON numbers do not keep trailing zeros, so 0.2000 is returned as 0.2.

imp.bidfloor is compared in that same unit. imp.bidfloorcur must be USD. If it is omitted, USD is used. Any other currency is HTTP 204. A positive floor that is above the bid is HTTP 204. A bid equal to the floor can be returned. The below-floor amount is not included in a BidResponse.

When the request includes a keyword (site.search or user.keywords), price is the keyword bid. A test request (test set to 1) that still clears the floor and the rest of the auction is returned with price 0. A test flag does not turn a no-bid into a fill.

Campaign id, creative id, width, height, and deal id are optional OpenRTB bid fields. This response does not send them.

9.4 Ad markup (adm)

adm is a string, not an object. Parse the string as JSON. Every fill uses this shape, including when the bid request did not contain imp.native. There is no native version and there are no assets.

adm after parsing

```
{
  "native": {
    "link": {
      "url":
"https://click.example/track?encyp=ENCRYPTED&rtuli=9f3c2a1b0e8d7c6a5b4f3e2d1c0b9a87&clickid=click-123"
    }
  }
}
```

native.link.url is the click redirect. Send the end user to that URL on a real click. Do not call it from the bid server. The host in this example is a placeholder. The live URL is the click tracker configured for the integration.

The click URL carries the identifiers below. Values are appended only when they exist. Nothing on this URL is an OpenRTB macro, and nothing is substituted after the response is sent.

Query parameter	When it is present	Meaning
encyp	Always	Opaque encrypted value. It contains the Publisher Identity, advertiser id, bid amount, and a typo id of 0.

rtuli	Always	Internal request id for this auction. The click tracker uses it to associate the click with the logged bid. It is not the OpenRTB request id and it is not bid.id.
clickid	When site.publisher.id or user.id was sent	site.publisher.id when that value is present. Otherwise user.id.
uid	When user.buyeruid was sent	Your user id.
dl	When the bid is a deeplink	The deeplink URL from the bid request.
subi	When imp.tagid was sent	Your placement id.
ip	When device.ip is a valid IPv4 address	That address as an integer.
pli	When the campaign has a platform id	Platform id for the campaign.
cc	Always on a fill	Country used for the auction. This endpoint bids US only.
tsts	When test is 1	Marks the click URL as a test. The value is 1.

The OpenRTB request id is returned as the response id and is stored on the auction log. It is not a query parameter on the click URL. The bid id is not a query parameter on the click URL either. rtuli is the identifier that ties the click to the logged bid.

9.5 Bid extension (ext)

ext is an extension object. The fields below are not OpenRTB 2.5 core fields. This endpoint sends them on every fill. Another integration may not require final_url, and it may not read altered. Landing-URL checks and alternative-destination rules depend on the specification for that integration.

JSON path	Type	This response
seatbid[].bid[].ext.final_url	string	Absolute URL. A deeplink is used when one was sent. Otherwise site.page is used when it was sent. Otherwise the advertiser domain is used. A value without http:// or https:// is prefixed with https:// and a trailing slash. The string can be empty when none of those sources exist.
seatbid[].bid[].ext.altered	boolean	true only when imp.native.ext.alt is 1 or true, in any letter case. Otherwise false, including when imp.native is absent. This echoes the request flag. It does not mean the bidder changed

		the landing URL.
seatbid[].bid[].ext.advertiser_name	string	Advertiser host. Same host as the single adomain entry. Empty string when no domain was on the request.
seatbid[].bid[].ext.advertiser_id	string	Internal advertiser id for the brand that was bid.

9.6 Complete example

This example is a fill for the request in section 6. id matches that request. impid matches imp[0].id. bidid and bid.id are the same id. The sample UUID, seat, prices, hosts, and ENCRYPTED value are placeholders. Each live response uses a new UUID. lurl is omitted because this endpoint does not send it.

BidResponse

```
{
  "id": "auction-123",
  "bidid": "7c1e4b2a-9f08-4d6e-a1b3-2e5f8c0d4a61",
  "cur": "USD",
  "seatbid": [{
    "seat": "YOUR_SEAT_OR_PUBLISHER_KEY",
    "bid": [{
      "id": "7c1e4b2a-9f08-4d6e-a1b3-2e5f8c0d4a61",
      "impid": "1",
      "price": 0.2,
      "adomain": ["advertiser.example"],
      "adm":
        "{\n\"native\":{\n\"link\":{\n\"url\":\n\"https://click.example/track?encyp=ENCRYPTED&rtuli=9f3c2a1b0e8d7c6a5b4f3e2d1c0b9a87&clickid=click-123\n\"}}}\",
      "ext": {
        "altered": false,
        "final_url": "https://advertiser.example/",
        "advertiser_name": "advertiser.example",
        "advertiser_id": "BRAND-ID"
      }
    }
  ]
}]
}
```

adm in that object is one string. After you parse the string, the markup is the object in section 9.4. The click URL in the sample answers a request that sent user.id click-123 and the advertiser domain advertiser.example. That sample has no site.publisher.id, so clickid is user.id.

Example item	How to read it
id, bidid, cur, seatbid, seat, bid id, impid, price, adomain, adm, ext.final_url, ext.altered, ext.advertiser_name, ext.advertiser_id	Returned on every fill. adomain and advertiser_name can be empty. final_url can be empty. altered is false unless the request set the alt flag.
0.2, YOUR_SEAT_OR_PUBLISHER_KEY, advertiser.example, click.example, BRAND-ID, ENCRYPTED, the sample UUID	Illustrative. Replace the seat with the seat id for your integration, or with your Publisher Identity when no seat id has been assigned.
lurl	Optional in OpenRTB 2.5. Not returned. Left out of this example on purpose.

10. No-bid

OpenRTB no-bid handling depends on the integration. Two forms appear in specifications:

- HTTP 204 No Content with an empty body.
- HTTP 200 with an empty body, or HTTP 200 with no bids, where that integration accepts it. Some callers also expect a no-bid reason. Confirm that with the integration specification before you rely on it.

This endpoint uses HTTP 204 with an empty body. The header x-openrtb-version is 2.5. There is no Content-Type and there is no JSON. Do not parse a body. This endpoint does not use HTTP 200 with an empty body, an empty seatbid array, or a no-bid reason field.

HTTP 204 is returned when:

- The country is not the United States. US and USA are accepted. If the country is omitted, the request is treated as US.
- The request has no advertiser domain and no keyword.
- The Publisher Identity is not enabled for this endpoint.
- No advertiser matches the domain or keyword.
- The advertiser is blocked for this publisher or country.
- No homepage or deeplink campaign is available.
- A cap is already met, or the current hour is outside the allowed hours.
- A deeplink was sent and that advertiser has no verified deeplink campaign.
- imp.bidfloorcur is not USD, or the bid is below a positive imp.bidfloor.

HTTP 204 is a normal result. It is not an error. Do not retry the same auction in a loop.

11. Errors

HTTP 400 means the call itself is invalid. Fix the request before you retry. Do not treat 400 as a no-bid.

11.1 Invalid Publisher Identity

Invalid publisher key

```
{ "error": "Invalid publisher key" }
```

The Publisher Identity is missing, contains characters other than letters, numbers, underscores, and hyphens, or is longer than 64 characters.

11.2 Invalid bid request

Invalid bid request

```
{ "error": "Invalid OpenRTB bid request" }
```

The body is not JSON, id is missing or blank, or the first impression has no id. A single impression object is accepted and is treated as the first impression.

A 200 from this endpoint is a JSON BidResponse whose id equals the request id. If you receive HTTP 200 and the body is not valid JSON, or the id does not match, discard that response. This endpoint does not return a partial bid object.

HTTP status	Body	What to do
200	BidResponse JSON	Match id to your request. Match impid to imp[0].id. Read price as USD EPC. Parse adm and use native.link.url on a real click.
204	Empty	No ad. Do not parse JSON.
400	JSON error	Correct the Publisher Identity or the bid request. Do not treat this as a no-bid.

12. Click tracking

The click URL is native.link.url inside the adm string. It is an absolute URL on the click tracker for this integration. It already includes rtuli. It includes clickid when site.publisher.id or user.id was sent. site.publisher.id is used when it is present. Otherwise user.id is used.

Redirect the end user to that URL when the ad is clicked. Do not prefetch it, and do not call it from your bid server. Opening it outside a real user click can record a click.

You may store the bid for the life of that auction only. Do not reuse a click URL on a later auction.

13. Country, currency, and floors

Ads are available for the United States only. Send device.geo.country as US or USA. user.geo.country is used when the device country is empty. GB, GBR, and every other country receive HTTP 204. If you omit the country, PubAdHub treats the request as US.

cur is USD. price and imp.bidfloor are EPC amounts in USD, not CPM. A non-USD floor currency is HTTP 204. A bid below a positive floor is HTTP 204.

14. Test bids

Add "test": 1 to the bid request only while you are integrating. The flag is applied only after the bid has passed the floor and the rest of the auction. price is then 0, and the click URL includes tsts=1. If the auction would have been a no-bid, the test flag does not create a fill. Remove test before you send live traffic.

15. Response validation checklist

Use this list to judge a live response. The Result column is what this endpoint does today.

Check	Result	Detail
Response id matches the request id	Implemented	id is copied from the bid request.
Impression id matches the bid impression	Implemented	impid copies imp[0].id. Only the first impression is bid.
Price and currency follow this integration	Implemented	cur is USD. price is EPC, not CPM, rounded to 4 decimal places. A below-floor bid or a non-USD floor is HTTP 204.
Ad markup is valid and contains the click URL	Implemented	adm is a JSON string. After parsing, native.link.url is the click redirect.
Click or auction identifier is on the click URL	Partial	rtuli is always present and ties the click to the auction log. clickid is site.publisher.id when that value was sent. Otherwise clickid is user.id. The OpenRTB request id and the bid id are not query parameters on the click URL.
Landing URL and extension fields	Implemented on every fill	ext.final_url, ext.altered, ext.advertiser_name, and ext.advertiser_id are always present. They are integration extensions, not a universal requirement. advertiser_name, adomain, and final_url can be empty.
Alternative destination flag	Implemented as a passthrough	altered is true only when imp.native.ext.alt is 1 or true. This endpoint does not decide that the destination changed. Support for that flag depends on the caller.
lurl	Not sent	Optional in OpenRTB 2.5. Absence is expected for this endpoint.

JSON structure and data types	Implemented	id, bidid, impid, cur, seat, adm, and the extension strings are strings. price is a number. altered is a boolean. adomain is an array of strings. seatbid and bid are arrays.
Response within the caller timeout	Not implemented	tmax is not read. Timeout handling is not verified in this endpoint. Agree the time limit with your integration contact.
No-bid follows this integration	Implemented	HTTP 204 with an empty body. HTTP 200 with an empty body is not used.

16. Integration checklist

Use this list before you go live.

- Publisher Identity received from your Account Manager.
- POST URL set to `http://rtb.pubadhub.com/openrtb/YOUR_PUBLISHER_KEY`.
- Content-Type and x-openrtb-version: 2.5 are sent.
- Body includes id, imp.id, and an advertiser domain or a keyword.
- device.ua, device.ip or device.ipv6, device.geo.country, imp.tagid, site.publisher.id or user.id, and site.ref are populated with live values.
- HTTP 200 parsing reads id, impid, price, cur, adm, and ext, then parses native.link.url.
- price is handled as USD EPC, not as CPM.
- HTTP 204 is handled as no-fill, with no JSON parse.
- HTTP 400 is logged and is not retried unchanged.
- The end user is redirected to native.link.url only on a real click.
- A deeplink is sent in ext.deeplink or imp.native.ext.url only when you have a landing URL.
- The seat value you expect is confirmed: assigned seat id, or your Publisher Identity.
- test is omitted from production requests.
- A live test covered one fill, one no-bid, and one invalid request.

17. Quick reference

Item	Value
Endpoint	POST <code>http://rtb.pubadhub.com/openrtb/{PublisherKey}</code>
Protocol	OpenRTB 2.5

Publisher Identity	Path parameter. Your Account Manager provides your Publisher Identity.
Required JSON	id, imp, imp.id, plus an advertiser domain or a keyword
Country	US or USA. Other countries are no-bid.
Currency	USD
Price	bid.price, USD earnings per click. Not a CPM.
Click URL	Parse adm, then native.link.url
Landing URL	ext.final_url. Integration extension. Not a core OpenRTB field.
Seat	Assigned seat id, or the Publisher Identity when no seat id is assigned
Fill	HTTP 200 BidResponse
No ad	HTTP 204, empty body
Bad call	HTTP 400

Questions about your Publisher Identity, enabled brands, or floors should be sent to your PubAdHub Account Manager.