OpenRTB 2.6 cheat sheet

The fields and codes you look up most, on a few printed pages. Fields marked * are required.

Print this page, or download the PDF. Every name links to its full reference page.

Bid request skeleton

```
{
  "id": "req-1",
  "imp": [{ "id": "1", "banner": { "w": 300, "h": 250 }, "bidfloor": 0.5, "bidfloorcur": "USD" }],
  "site": { "domain": "news.example", "page": "https://news.example/a", "publisher": { "id": "pub-1" } },
  "device": { "ua": "...", "ip": "203.0.113.0", "devicetype": 2 },
  "user": { "id": "u-1" },
  "regs": { "gdpr": 0 },
  "source": { "schain": { "complete": 1, "ver": "1.0", "nodes": [{ "asi": "ssp.example", "sid": "1", "hp": 1 }] } },
  "at": 1, "tmax": 300, "cur": ["USD"]
}
```

Bid request

BidRequest	Type	What it carries
acat	string array	An allow list of advertiser categories in the taxonomy named by BidRequest.cattax.
allimps	integer = 0	Flag for whether the impressions in this request are all the impressions available in that context, such as every slot on a page or every spot in a…
app	object	An App object describing the non-browser application where the impression appears: bundle, store URL, publisher, and content.
at	integer = 2	The auction type: 1 for first price, 2 for second price plus.
badv	string array	A block list of advertiser domains, such as competitors of the publisher.
bapp	string array	A block list of advertised apps by app store ID.
bcat	string array	A block list of advertiser categories in the taxonomy named by BidRequest.cattax, which defaults to IAB Content Taxonomy 1.0 codes such as IAB25 and…
bseat	string array	A block list of buyer seat IDs that may not bid on this request.
cattax	integer = 1	The category taxonomy used by BidRequest.bcat and BidRequest.acat, as a value from the AdCOM Category Taxonomies list.
cur	string array	The currencies bids may use, as ISO 4217 codes.
device	object	A Device object describing the device that will show the ad: user agent, IP address, device type, operating system, identifiers, and location.
dooh	object	A DOOH object describing a digital out-of-home screen or group of screens.
id *	string	The exchange's ID for this bid request, used to track the responses that come back.
imp *	object array	The array of Imp objects, one per impression on offer.
regs	object	A Regs object listing the legal and regulatory signals that apply, such as COPPA, GDPR, US Privacy, and GPP.
site	object	A Site object describing the website where the impression appears: domain, page URL, publisher, and content.
source	object	A Source object describing the upstream origin of the request and who makes the final sale decision, including the transaction ID and, since 2.6,…
test	integer = 0	Test mode flag: 0, the default, means a live auction, and 1 means the auction is a test and not billable.
tmax	integer	The maximum time in milliseconds the exchange will wait for bids, network latency included.
user	object	A User object describing the person using the device, who is the advertising audience.
wlang	string array	An allow list of creative languages as ISO 639-1 two-letter codes.
wlangb	string array	An allow list of creative languages as IETF BCP 47 tags, which can name regional and script variants such as pt-BR or zh-Hant.
wseat	string array	An allow list of buyer seat IDs, such as advertiser or agency accounts, permitted to bid on this request.

Impression

Imp	Type	What it carries
audio	object	An Audio object, present when the impression is offered as audio, such as a streaming radio or podcast ad break.
banner	object	A Banner object, present when the impression is offered as display.
bidfloor	float = 0	The minimum acceptable bid for this impression, as a CPM in the currency named by Imp.bidfloorcur.
bidfloorcur	string = USD	Currency of Imp.bidfloor as an ISO-4217 alphabetic code such as USD or EUR.

Imp	Type	What it carries
clickbrowser	integer	Which browser opens when a user clicks the ad in an app: 0 for an embedded in-app browser, 1 for the device's native browser.
displaymanager	string	Name of the SDK, mediation partner, or player that will render the ad, typically in apps and video players.
displaymanagerver	string	Version of the SDK, mediation partner, or player named in Imp.displaymanager.
dt	float	Estimated time the impression will be delivered, as Unix epoch milliseconds in a float.
exp	integer	Advisory number of seconds that may pass between the auction and the moment the impression is actually shown.
id *	string	Identifier for this impression, unique within the bid request.
iframebuster	string array	Names of the iframe buster files the publisher supports.
instl	integer = 0	Interstitial flag: 1 when the ad is shown full screen or as an interstitial, 0 when it is not.
metric	object array	An array of Metric objects reporting measured properties of the impression, such as recent viewability or click-through rate, so buyers can price it.
native	object	A Native object, present when the impression is offered as native.
pmp	object	A Pmp object listing the private marketplace deals that apply to this impression, with a flag saying whether open-market bids are still accepted.
qty	object	A Qty object stating how many impressions one play of the ad counts as, for screens seen by more than one person at once.
refresh	object	A Refresh object describing how this ad slot reloads automatically: what triggers it, the minimum interval, and how many times it has refreshed…
rwdd	integer = 0	Rewarded flag: 1 when the user receives something for watching the ad, such as an extra game life or a free article, 0 otherwise.
secure	integer	Whether the impression requires HTTPS for all creative assets and markup: 1 for secure, 0 for not.
ssai	integer = 0	How server-side ad insertion affects asset and tracker retrieval: 0 unknown, 1 all client-side, 2 assets stitched server-side with tracking fired…
tagid	string	The seller's identifier for the ad placement or tag that started the auction.
video	object	A Video object, present when the impression is offered as video.

Key enum values

device.devicetype

1 Mobile/Tablet - General
2 Personal Computer
3 Connected TV
4 Phone
5 Tablet
6 Connected Device
7 Set Top Box
8 OOH Device

device.connectiontype

1 Ethernet; Wired Connection
2 WIFI
3 Cellular Network - Unknown Generation
4 Cellular Network - 2G
5 Cellular Network - 3G
6 Cellular Network - 4G
7 Cellular Network - 5G

video.plcmt

1 Instream
2 Accompanying Content
3 Interstitial
4 No Content/Standalone
5 Pause
6 Screensaver
7 Overlay
8 Squeezeback
9 In-scene

api

1 VPAID 1.0
2 VPAID 2.0
3 MRAID 1.0
4 ORMMA
5 MRAID 2.0
6 MRAID 3.0
7 OMID 1.0
8 SIMID 1.0
9 SIMID 1.1

video.protocols

1 VAST 1.0
2 VAST 2.0
3 VAST 3.0
4 VAST 1.0 Wrapper
5 VAST 2.0 Wrapper
6 VAST 3.0 Wrapper
7 VAST 4.0
8 VAST 4.0 Wrapper
9 DAAST 1.0
10 DAAST 1.0 Wrapper
11 VAST 4.1
12 VAST 4.1 Wrapper
13 VAST 4.2
14 VAST 4.2 Wrapper
15 VAST 4.3
16 VAST 4.3 Wrapper

pos

0 Unknown
1 Above The Fold
2 Locked (fixed position)
3 Below The Fold
4 Header
5 Footer
6 Sidebar
7 Fullscreen
8 Partial Screen
9 Top Left
10 Top Right
11 Frame the content
12 Double box
13 Double box with background
14 Bottom Left
15 Bottom Right
16 L shape
17 Reversed L shape

Bid response

BidResponse	Type	What it carries
bidid	string	A response ID the bidder generates for its own logging and tracking.
cur	string = USD	The currency of every bid price in this response, as an ISO 4217 code.
customdata	string	An optional string the bidder asks the exchange to store in the exchange's own cookie for this user, written in base85 cookie-safe characters.
id *	string	The ID of the bid request this response answers, copied from BidRequest.id.
nbr	integer	A code explaining why the bidder is not bidding, such as 2 for an invalid request or 8 for an unmatched user.
seatbid	object array	The array of SeatBid objects, one per buyer seat, that carries the actual bids.

SeatBid	Type	What it carries
bid *	object array	The array of Bid objects made for this seat, each tied to one impression in the request.
group	integer = 0	Whether the seat's bids must be won together: 0, the default, lets each impression be won on its own, while 1 means the seat wants all of them or…
seat	string	The ID of the buyer seat, such as an advertiser or agency account, on whose behalf these bids are made.

Bid	Type	What it carries
adm	string	The ad markup, sent in the bid so the exchange can serve it if the bid wins: HTML for banners, a VAST document for video and audio, or a native…
adomain	string array	The advertiser's domain, used to check the bid against the publisher's advertiser block list.
burl	string	The billing notice URL, which the exchange calls when a winning bid becomes billable under its own policy, typically on delivery or view.
cat	string array	Categories describing the creative, in the taxonomy named by Bid.cattax, or IAB Content Taxonomy 1.0 when that field is absent.
crid	string	The bidder's creative ID, used by exchanges for ad quality checks, creative approval, and reporting problems back to the bidder.
dealid	string	The ID of the private marketplace deal this bid is made under, copied from Deal.id in the impression's Imp.pmp.
h	integer	The height of the creative in device-independent pixels.
id *	string	The bidder's ID for this bid, used for logging and tracking.
impid *	string	The ID of the impression this bid is for, copied from Imp.id in the request.
lurl	string	The loss notice URL, which the exchange calls when it knows this bid lost.
mtype	integer	The type of markup in this bid, so the exchange can match it to the right media object on the impression: 1 banner, 2 video, 3 audio, 4 native.
nurl	string	The win notice URL, which the exchange calls when this bid wins the auction.
price *	float	The bid price as a CPM, the price per thousand impressions, even though the bid buys a single impression.
w	integer	The width of the creative in device-independent pixels.

Substitution macros

- ${AUCTION_ID}
- ${AUCTION_BID_ID}
- ${AUCTION_IMP_ID}
- ${AUCTION_SEAT_ID}
- ${AUCTION_AD_ID}
- ${AUCTION_PRICE}
- ${AUCTION_CURRENCY}
- ${AUCTION_MBR}

- `${AUCTION_LOSS}`
- `${AUCTION_MIN_TO_WIN}`
- `${AUCTION_MULTIPLIER}`
- `${AUCTION_IMP_TS}`
- `${AUCTION_DISCOUNT_PCT}`
- `${AUCTION_DISCOUNT_CPM}`

No-bid reasons (nbr)

- `0` Unknown Error
- `1` Technical Error
- `2` Invalid Request
- `3` Known Web Crawler
- `4` Suspected Non-Human Traffic
- `5` Cloud, Data Center, or Proxy IP
- `6` Unsupported Device
- `7` Blocked Publisher or Site
- `8` Unmatched User
- `9` Daily User Cap Met
- `10` Daily Domain Cap Met
- `11` Ads.txt Authorization Unavailable
- `12` Ads.txt Authorization Violation
- `13` Ads.cert Authentication Unavailable
- `14` Ads.cert Authentication Violation
- `15` Insufficient Auction Time
- `16` Incomplete SupplyChain
- `17` Blocked SupplyChain Node
- `500+` Exchange-specific