

# Data partner integration guide for audiences

Use this guide to integrate audiences with PubMatic. Data owners can create audiences using:

- Cookie IDs for mobile and desktop/web.
- iOS IDFA/Android device IDs for mobile apps.
- Custom IDs from ID providers who are integrated with PubMatic; contact your PubMatic account manager for details.

Data integration requires these steps:

1. [Audience Source creation](#)
2. [Audience registration](#)
3. [Data transfer](#)

## Audience source creation

Registering audiences requires an Audience Source/data partner ID (DPID); see, [Create and Edit an Audience Source](#).

## Audience registration

**i** Register audiences **ONLY ONCE** before data transfer

Register only the *new audiences* you send.

Data providers must register *new audiences* with source audience IDs before sending data to PubMatic. PubMatic ignores unrecognized audience IDs to avoid processing mistakenly sent data.

There are two ways to register audiences:

1. Register audiences with the Audience Registration APIs; see, [Register an Audience](#).
2. Bulk-register audiences in PubMatic at, **Publisher Account > Audience > Audiences > Bulk Upload Audiences**:

The screenshot shows the 'Audiences' management interface. At the top, there are tabs for 'Audience Settings' and 'Audiences'. A 'Bulk Upload Audiences' button is highlighted with a red dashed box. Below the tabs, there are search and filter options: 'Find: Search by Id / Name', 'Source: All Sources', and 'Status: Active'. There are also buttons for 'Create Audience' and 'View Usage Report'. The main area displays a table with 73 records. The table has columns for Source Audience ID, Source, Audience Name, Type, Shared With, Data CPM, Total Uniques, Deals, Status, and Creation Date. The 'Status' column shows 'Active' for all entries. The 'Deals' column shows values like 0 and 2. The 'Creation Date' column shows 'Dec 15, 2020'.

Source Audience ID	Source	Audience Name	Type	Shared With	Data CPM	Total Uniques	Deals	Status	Creation Date
			Basic	No Publishers No Buyers No DSPs	\$3.50	25	0	Active	Dec 15, 2020
			Basic	No Publishers No Buyers No DSPs	\$2.00	21	0	Active	Dec 15, 2020
			Basic	No Publishers No Buyers No DSPs	\$9.00	14	2	Active	Dec 15, 2020
			Basic	No Publishers No Buyers No DSPs	\$66.00	14	2	Active	Dec 15, 2020

You can bulk-register audiences by uploading a correctly formatted CSV file. To download the CSV template from PubMatic:

1. Click the **Bulk Upload Audiences** drop-down (circled in red above), then choose the **Bulk Upload Audiences** menu item.
2. In the **Upload Audiences** dialog click, **Download Create Template**, which is the one you use to create your audiences. When it's time to update your audiences, then you would use the **Download Update Audiences** template.
3. After you've filled in the template with your audience data (note the required fields), then return to the **Upload Audiences** dialog and click **Select File**.
4. When the **Upload Audiences** dialog displays the name of your template file, click **Upload Audiences** to send it to PubMatic and close the dialog.

## Data transfer

Transfer audience data to PubMatic using one of the following methods:

- [Server-to-server \(S2S\) data transfer](#)
- [Browser-side real-time \(HTTP 302 redirect\) data transfer](#)
- [Bulk audience data transfer using SFTP](#)



#### Important

PubMatic automatically removes user IDs older than 30 days. The best practice is to refresh data at least every 25 days.

The transfer options listed above require data submission using a specific set of parameters listed in the table below.

## Data transfer parameters

Parameter	Type	Required	API	SFTP	Description
dpid	integer		yes	yes	PubMatic data partner ID (DPID) assigned to the data partner at time of integration.
userid	string		yes	yes	The PubMatic user ID passed to the data partner by PubMatic.
uidtype	integer		yes	yes	A integer value that determines what the identity partner's PubMatic user ID represents: <ul style="list-style-type: none"><li>• 0 = UID represents a PubMatic cookie ID. Note: when using uidtype=0, you must first perform the <a href="#">UI D sync step below</a>.</li><li>• 1 = UID represents a device ID.</li><li>• A different identity partner ID registered with PubMatic.</li></ul> <div style="border: 1px solid #ffc107; padding: 5px;"><p> <b>uidtype is now required for all new integrations</b></p><p>Contact your PubMatic account manager to learn more about UID Type assignment and other identity partners supported by PubMatic.</p></div>
segid	string array		yes	yes	Use segid to send the complete list of audience IDs to which the user belongs. Each subsequent request for that user with the segid parameter overwrites the user's already existing audiences list.  <i>DO NOT</i> send segid in a request that also includes the addseg or remseg parameters.  Omitting segid removes the entire list of the user's audiences; see, <a href="#">Remove a user from audiences</a> .
addseg	string array		yes	no	Use addseg to send: <ul style="list-style-type: none"><li>• A complete list of comma-separated audience IDs to replace the user's current audiences.</li><li>• A list of new audiences to append to the user's current audiences.</li></ul> You can include addseg and remseg in the same request, but <i>DO NOT</i> send segid along with these parameters.
remseg	string		yes	no	Use remseg to send: <ul style="list-style-type: none"><li>• A complete list of comma-separated audience IDs to replace the user's current audiences.</li><li>• A list of audiences to remove from the user's current audiences.</li></ul> You can include remseg and addseg in the same request, but <i>DO NOT</i> send segid along with these parameters.
ip	string		yes	yes	Last known IP address of the user; optional when you send country in the request. Omit this parameter from the request if the user's last IP address is unknown.
country	string		yes	yes	Two-letter code for the user's country; for example, US, IN, CA; optional when you send the last known ip in the request. Exclude this parameter from the request if the user's country is unknown. If both country and ip are omitted, country defaults to US.

## Server-to-server (S2S) data transfer

Server-to-server data transfer is the best practice for submitting data to PubMatic since the servers communicate directly, so data transfer is highly-efficient. Build API calls using the parameters from the [data transfer parameter table](#) and make HTTP calls to the API endpoint:

```
http://aud.pubmatic.com/AdServer/Artemis
```

## Sample: standard call with audience IDs

In this request:

- 89 is the data partner's PubMatic-assigned ID (DPID).
- The user belongs to three audiences with IDs 123\_B, 98901, and 4532.
- uidtype=0 means the user ID represents a cookie ID.



If your user IDs represent PubMatic cookie IDs, you must first use [UID sync](#).

```
http://aud.pubmatic.com/AdServer/Artemis?dpid=89&userid=B8CB98E6-0FF0-4C2B-A161-4F89155C28F&segid=123_B,98901,4532&country=US&uidtype=0
```

### Sample: appending/removing audiences

This request for the same data partner (dpid=89) and user (userid=B8CB98E6-0FF0-4C2B-A161-4F89155C28F):

- adds audience ID 3242 to the user's existing list.
- removes audience ID 123\_B from the list.
- sets the user's country to US.
- specifies using the UID value as a device ID.

```
http://aud.pubmatic.com/AdServer/Artemis?dpid=89&userid=B8CB98E6-0FF0-4C2B-A161-4F89155C28F&addseg=3242&remseg=123_B&country=US&uidtype=1
```

### Browser-side real-time (HTTP 302 redirect) data transfer

Data partners who do not support server-to-server data transfer can pass data to PubMatic using browser-side real-time data transfer for each visitor as follows:

1. A user visits the website using a browser, which upon loading, executes the PubMatic pixel.
2. The PubMatic pixel invokes the data partner's pixel or URL to request the audience data for this visitor. To reduce the latency, this request is sent to the data partner only once in a pre-configured time interval per user; for example, once per day.
3. The data partner's system then redirects to the PubMatic Data Ingestion API using the HTTP 302 redirect. PubMatic shared the API URL with the data partner before the start of the integration. While redirecting to the API URL, the data partner's system must include all the IDs of the audiences to which the visitor belongs.



#### Data partner must also

Provide the audience ID-to-audience name mapping to PubMatic only once at the start of the integration.

### Browser-side sample requests

In this request, which updates the entire audiences list:

- 89 is the data partner's PubMatic-assigned ID.
- B8CB98E6-0FF0-4C2B-A161-4F89155C28F is the PubMatic user ID (from [UID sync](#)).
- the last known IP of the user: 74.125.236.123.
- the user's country: US.
- the user's DMP source audience IDs: 123\_B, 98901, and 4532.
- uidtype=0 specifies that the user ID should be handled as a cookie ID (use [UID sync](#) when passing uidtype=0).

```
http://aud.pubmatic.com/AdServer/Artemis?dpid=89&userid=B8CB98E6-0FF0-4C2B-A161-4F89155C28F&ip=74.125.236.123&country=US&segid=123_B,98901,4532&uidtype=0
```

This request is also for data partner 89 and user ID B8CB98E6-0FF0-4C2B-A161-4F89155C28F. It removes and appends values to the audiences list:

- submits the user's last known IP as 74.125.236.123.
- sets the user's country as US.
- adds audience 3242 to the user's existing list of audiences.
- removes audience 123\_B, leaving the user's updated audiences as: 98901, 4532, 3242.
- Sets uidtype=1 to specify that the user ID should be handled as a device ID.

```
http://aud.pubmatic.com/AdServer/Artemis?dpid=89&userid=B8CB98E6-0FF0-4C2B-A161-4F89155C28F&ip=74.125.236.123&country=US&addseg=3242&remseg=123_B&uidtype=1
```

For more information on all available parameters, see [Data transfer parameters](#).

## Bulk audience data transfer using SFTP

Use SFTP to transfer audience data to PubMatic within a tab-delimited file, where each row of the file contains the audience parameters separated by a tab character, with each row ending with a carriage-return as follows:

```
[DPID] [TAB] [USERID] [TAB] [SEGID] [TAB] [IP] [TAB] [COUNTRY] [TAB] [UIDTYPE] [CR]
```

The [SEGID] parameter refers to the *Source Seg ID* that was assigned to the audience during [audience registration](#). You can submit multiple, comma-separated, source audience ID's.

For more information on the other parameters, see [Data transfer parameters](#).



### You must provide either

[IP] (last known IP address) or [COUNTRY] (two-letter country code). If [IP] is unknown, add two TABs between [SEGID] and [COUNTRY] with no additional blank/space characters. If neither [IP] nor [COUNTRY] are added to the entry, PubMatic will set the [COUNTRY] to US by default.

## File name format

File names follow the pattern:

```
<DPID>_<TIMESTAMP>_<MD5SUM>.tsv.gz
```

- format should be Unix; for example, 1596695461984.
- <MD5SUM> is an MD5 32-character hexadecimal checksum computed on the file content before compression.

If your organization is workload managed by a team, you can also include <WORKERID> as part of the file name to help track and manage the team member's workload:

```
<DPID>_<TIMESTAMP>_<MD5SUM>_<WORKERID>.tsv.gz
```



### While the transfer is in progress

Suffix the file with, \* .UPLOADING, then rename it upon completion.

PubMatic supports compression formats such as, gzip , bzip2 , and others. If you have any questions or issues uploading a compressed file, please contact your PubMatic account manager for assistance.



The tsv.gz suffix must follow the uploaded file name. Please verify that the file name is correct once upload completes.

## Sample entries

```
103 5AFCD4CD-F9B6-4E53-B63D-BFB2CF44941D 4666 74.125.236.123 0
```

```
103 34E1EA68-8EDA-4254-9BD0-AB24BCC13914 4666 US 1
```



### Bulk transfer notes

1. FTP lets a single user batch upload data for multiple partners, while HTTP allows data for only a single partner.
2. HTTP lets a DMP add/remove an audience for a given user id, but FTP requires the DMP to send all the user's audience IDs, which overrides the existing audience stored with PubMatic.
3. FTP allows only one new line entry for each audience for a given user.

## SFTP server details and access

Provided separately by PubMatic. Contact your PubMatic account manager with questions.

## Unique identifier (UID) sync



### PubMatic can process data only from PubMatic user IDs

To use data from other sources when using `uidtype=0`, a data provider must create a user-match table between PubMatic's user IDs and their own user IDs.

Steps for user sync-up:

1. The data provider must provide PubMatic with an image pixel similar to:

```

```

2. If data comes from a publisher, then PubMatic incorporates the image pixel from step 1 in a PubMatic pixel. The publisher must fire the PubMatic pixel across their website to maximize coverage across their users. Firing the pixel also lets the data provider create the match-table.
3. If data comes from a buyer, PubMatic fires the image pixel from step 1 across PubMatic's site.

## Remove a user from audiences

Use one of the following methods to remove a user from all of their audiences (DMPs and publishers can use either method):

1. When sharing data via a [Server-to-Server \(S2S\) call](#) or [browser redirect mechanism](#), exclude the `segid` parameter from the S2S call to PubMatic. See [Data transfer parameter reference](#).

### EXAMPLES:

```
http://aud.pubmatic.com/AdServer/Artemis?dpid=89&userid=5AFCD4CD-F9B6-4E53-B63D-BFB2CF44941D&uidtype=[Identity_Partner_ID]
```

OR

To send a list of audiences to remove using the `remseg` parameter:

```
http://aud.pubmatic.com/AdServer/Artemis?dpid=89&userid=5AFCD4CD-F9B6-4E53-B63D-BFB2CF44941D&remseg=123_B,3242&uidtype=[Identity_Partner_ID]
```

2. When sharing data via a bulk file, do not pass any audience ID in the file for the user record. Audiences in the latest record are stored for the user ID, overwriting the user's previous audiences.

## API response codes

Once your API request has been processed by PubMatic, the system returns a response to let you know whether the request was successful or a problem occurred. When you send the request, the following happens at the HTTP layer:

- Returns HTTP response code 200 (Ok) when the request successfully completes.
- Returns HTTP response code 400/500 if issues occur while processing the data.

A successful request also includes a `StatusOK: Success` code from PubMatic. If an error occurs, the response includes codes from PubMatic to identify what may have gone wrong. The table below lists all PubMatic response codes for this API.

ID	Code	Message
1	StatusBadRequest	Bad request: uidType passed multiple times.
2	StatusInternalServerError	Internal Server Error: demand partner settings not found.
3	StatusBadRequest	Bad Request: uidtype parameter not passed.
4	StatusInternalServerError	Internal Server Error: failed to validate uidType.
5	StatusBadRequest	Bad request: unregistered uidType.
6	StatusBadRequest	Following audiences are unregistered: [list of audiences].
7	StatusBadRequest	segId audiences are unregistered so dropping request.
8	StatusBadRequest	addSegs audiences are unregistered so dropping request.
9	StatusBadRequest	remSegs audiences are unregistered so dropping request.
10	StatusBadRequest	Bad request: user guid not passed.

11	StatusBadRequest	Bad request: <code>userId</code> passed multiple times.
12	StatusBadRequest	Bad request: multiple <code>countryCodes</code> present in request.
13	StatusBadRequest	Bad request: multiple IPs present in request.
14	StatusBadRequest	Invalid request.
15	StatusBadRequest	Bad request: no audiences present in this request.
16	StatusBadRequest	Bad request: no <code>segId</code> audiences to process for third party provider.
17	StatusBadRequest	Bad request: <code>userID</code> size is greater than 384 bytes
18	StatusBadRequest	Bad request. user <code>guid</code> format invalid.
19	StatusOK	Success.