



User Guide

Amazon Mobile Analytics



Amazon Mobile Analytics: User Guide

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What Is Amazon Mobile Analytics?

Note

Amazon Mobile Analytics was discontinued on April 30, 2018. The features that were previously provided by Mobile Analytics are now provided by Amazon Pinpoint. If you're new to Mobile Analytics, you should use Amazon Pinpoint instead. If you currently use Mobile Analytics, see [Migrating from Amazon Mobile Analytics to Amazon Pinpoint](#).

Amazon Mobile Analytics was a service for collecting, visualizing, understanding, and extracting app usage data at scale.

Migrating from Amazon Mobile Analytics to Amazon Pinpoint

On April 30, 2018, the features of Amazon Mobile Analytics were migrated to Amazon Pinpoint.

As with Mobile Analytics, you can use Amazon Pinpoint to measure app usage and revenue. Amazon Pinpoint adds more analytics capabilities by allowing you to segment users based on your data. You can also run targeted messaging campaigns through push notifications, email, and SMS to increase user engagement. For more information, see [Amazon Pinpoint](#).

With Amazon Pinpoint, you can also export your data in real time through [Amazon Data Firehose](#), which provides additional features to transform, encrypt, and deliver raw analytics data. With Firehose *delivery streams*, you can choose various destinations for your data like Amazon Simple Storage Service (Amazon S3), Amazon Redshift, or Amazon OpenSearch Service.

If you're new to Mobile Analytics, use Amazon Pinpoint instead. If you're currently using Mobile Analytics, migrate from Mobile Analytics to Amazon Pinpoint by April 30, 2018. Your existing Mobile Analytics apps are supported by Amazon Pinpoint, but certain Mobile Analytics workflows require you to switch to the corresponding Amazon Pinpoint features:

| Workflow | Migration details |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mobile Analytics REST API for events submission | Is automatically redirected to the Amazon Pinpoint API. No action is required. |
| Mobile Analytics in the AWS Mobile SDKs. | Is supported via Amazon Pinpoint in the AWS Mobile SDKs or JavaScript library. Versions of the Mobile Analytics client in the SDKs will continue to report events, but with limited support for issues. See Migrating to Amazon Pinpoint in the AWS Mobile SDKs or JavaScript Library . |
| Mobile Analytics console | Is replaced by the Amazon Pinpoint console. See Migrating to the Amazon Pinpoint Console . |

| Workflow | Migration details |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Mobile Analytics querying API | Isn't available after April 30, 2018. You can calculate Mobile Analytics KPIs from raw data from event streams. |

Topics

- [Migrating to Amazon Pinpoint in the AWS Mobile SDKs or JavaScript Library](#)
- [Migrating to the Amazon Pinpoint API](#)
- [Migrating to the Amazon Pinpoint Console](#)

Migrating to Amazon Pinpoint in the AWS Mobile SDKs or JavaScript Library

After April 30, 2018, the Amazon Mobile Analytics client in the AWS Mobile SDKs will no longer be updated, and support for existing versions of the client will no longer be offered.

If you're currently using Mobile Analytics with the AWS Mobile SDKs, your apps will continue to report events to Mobile Analytics after this date. This event data will be visible in the Amazon Pinpoint console. However, we strongly recommend that you switch to the Amazon Pinpoint analytics features in the latest AWS Mobile SDKs or JavaScript library, which offer matching functionality. By migrating, you help ensure that you're able to use the latest features and that you receive support for any issues.

Use the steps in this section to migrate your Mobile Analytics app so that it uses Amazon Pinpoint through one of the following:

- The AWS Mobile SDK for Android
- The AWS Mobile SDK for iOS
- The AWS Amplify JavaScript library

If your app currently uses Mobile Analytics through the AWS Mobile SDKs for Unity or Xamarin, you can continue to use these SDKs without migrating until they support Amazon Pinpoint.

To migrate, you use AWS Mobile Hub or the AWS Mobile CLI to:

- Integrate the latest AWS Mobile SDK or JavaScript library with your app.
- Create the resources that your app requires to communicate with Amazon Pinpoint.

Then, you customize your app's configuration and IAM permissions so that it reports analytics data to the Amazon Pinpoint project that matches your Mobile Analytics app.

Topics

- [Step 1: Look Up Your Project ID](#)
- [Step 2: Integrate the AWS Mobile SDK or JavaScript Library](#)
- [Step 3: Enable Amazon Pinpoint Analytics](#)
- [Step 4: Delete the Amazon Pinpoint Project That Mobile Hub Created](#)
- [Step 5: Update the App ID in Your App Configuration](#)
- [Step 6: Update the App ID in the IAM Role](#)
- [Step 7: Build and Test](#)

Step 1: Look Up Your Project ID

The projects that are listed in the Amazon Pinpoint console include the apps that you defined in Mobile Analytics. Look up the project ID for the app that you're migrating. You'll use it in later steps when you customize your app's configuration and IAM permissions.

1. Sign in to the AWS Management Console and open the Amazon Pinpoint console at <https://console.aws.amazon.com/pinpoint/>.
2. On the **Projects** page, find the app that you're migrating, and note the value in the **ID** column.

Step 2: Integrate the AWS Mobile SDK or JavaScript Library

To connect to Amazon Pinpoint from your app, integrate the AWS Mobile SDK or JavaScript library with your code.

For Android or iOS Apps

For Android or iOS apps, integrate the AWS Mobile SDK for Android or iOS. To integrate, see [Get Started \(Android and iOS\)](#) in the *AWS Mobile Developer Guide*. This topic helps you:

- Create a project with Mobile Hub. The **Messaging & Analytics** feature is enabled by default.
- Connect your app to the backend AWS resources that Mobile Hub provisions.
- Integrate the AWS Mobile SDK for Android or iOS with your app.

For JavaScript Apps

For web or mobile JavaScript apps, integrate the AWS Amplify library. To integrate, see [Get Started \(Web\)](#) or [Get Started \(React Native\)](#) in the *AWS Mobile Developer Guide*. These topics help you:

- Use the AWS Mobile CLI to create a project. Analytics and web hosting are enabled by default.
- Create backend AWS resources for your app.
- Connect your app to the backend resources.
- Integrate the AWS Amplify library with your app.

Step 3: Enable Amazon Pinpoint Analytics

Now that you've integrated the latest version of the AWS Mobile SDK or JavaScript library, you can submit analytics events by using Amazon Pinpoint instead of Mobile Analytics.

For Android or iOS Apps

To update your Android or iOS app, see [Add Analytics to your Mobile App with Amazon Pinpoint](#) in the *AWS Mobile Developer Guide*.

For JavaScript Apps

To update your JavaScript app, see [Add Analytics \(Web\)](#) or [Add Analytics \(React Native\)](#) in the *AWS Mobile Developer Guide*.

Step 4: Delete the Amazon Pinpoint Project That Mobile Hub Created

When you created a project in Mobile Hub, a corresponding project was automatically created in Amazon Pinpoint. You aren't using this Amazon Pinpoint project. Instead, you're using the project that matches your original Mobile Analytics app.

1. Open the Amazon Pinpoint console at <https://console.aws.amazon.com/pinpoint/>.

2. On the **Projects** page, find the project that was created by Mobile Hub. It's named as *mobilehubprojectname_MobileHub*.
3. Copy the project ID.
4. Use a terminal to delete the project with the following AWS CLI command:

```
$ aws pinpoint delete-app --application-id project-id
{
  "ApplicationResponse": {
    "Id": "d2b352520bcc4f5492ddbd7ef05f9147",
    "Name": "amamigrationdocstest_MobileHub"
  }
}
```

The project is removed from Amazon Pinpoint.

Step 5: Update the App ID in Your App Configuration

Customize the default configuration for your app so that it reports analytics data to the Amazon Pinpoint project for your Mobile Analytics app.

For Android or iOS Apps

Your app now includes a cloud configuration file that connects it to the backend resources that Mobile Hub creates. After you update the app ID in the file, your app sends analytics data to the Amazon Pinpoint project for your Mobile Analytics app.

1. In your app package, open the `awsconfiguration.json` file.
2. In the `PinpointAnalytics` object, replace the value for `AppID` with the ID that you got from the Amazon Pinpoint console.

```
. . .
"PinpointAnalytics": {
  "Default": {
    "AppId": "app-id",
    "Region": "us-east-1"
  }
},
. . .
```

For JavaScript Apps

Configure the AWS Amplify Analytics module in your app code so that your app reports analytics data to the Amazon Pinpoint project for your Mobile Analytics app.

To update your app code, see the [Manual Setup](#) instructions for the Analytics module in the AWS Amplify documentation. In the configuration code, for the appID parameter, use the ID that you got from the Amazon Pinpoint console.

Step 6: Update the App ID in the IAM Role

When you created a project by using Mobile Hub or the AWS Mobile CLI, an IAM role was created in your AWS account. This role includes a policy that allows your app to report events and update endpoints with Amazon Pinpoint. The role includes the project ID for your Mobile Hub project. Update this ID so that your app can communicate with the Amazon Pinpoint project for your Mobile Analytics app.

1. Open the Mobile Hub console at <https://console.aws.amazon.com/mobilehub/>.
2. Choose the project that you created.
3. At the top-right of the console, choose **Resources**.
4. Under **AWS Identity and Access Management Roles**, the console shows the IAM role that was provisioned in your AWS account. Choose the role.

The IAM console opens, and the **Roles** page is shown.

5. Under **Permissions**, expand the policy named as *project-name_mobileanalytics_MOBILEHUB_mobile-hub-project-id*.
6. Choose **Edit policy**.
7. On the **Edit** page, choose the **JSON** tab.
8. In the JSON editor, where the policy allows the `mobiletargeting:UpdateEndpoint` action, update the value that's assigned to the Resource key. Change the app ID to the ID that you got from the Amazon Pinpoint console.

```
. . .  
{  
  "Effect": "Allow",  
  "Action": [  
    "mobiletargeting:UpdateEndpoint"
```

```
    ],  
    "Resource": [  
        "arn:aws:mobiletargeting:*:123456789012:apps/app-id*"br/>    ]  
}  
.  
.  
.
```

Important

Remember to keep the wildcard character (*) following the app ID.

9. Choose **Review policy**, and then choose **Save changes**.

Step 7: Build and Test

Now that you've integrated the latest AWS Mobile SDK or JavaScript library, and have updated your app code, your app reports events to Amazon Pinpoint. As Amazon Pinpoint receives events, it updates the charts on the **Analytics** pages in the console.

1. Build your updated app, and run it on a test device or emulator.
2. Launch your app, and perform other actions in your app that cause it to report events to Amazon Pinpoint.
3. Open the Amazon Pinpoint console at <https://console.aws.amazon.com/pinpoint/>.
4. On the **Projects** page, choose the project for your app.
5. In the navigation menu, choose **Analytics**.
6. Check the charts to verify whether Amazon Pinpoint is showing the analytics that you expect. For example, the **Sessions** chart indicates how many times you open the app, and the **New endpoints** chart indicates how many test devices or emulators launch the app for the first time. Custom events are shown on the **Events** page. Allow up to 15 minutes for the charts to display an event.

Migrating to the Amazon Pinpoint API

After April 30, 2018, the Mobile Analytics REST API will automatically redirect requests to the Amazon Pinpoint API. Events that your application reports to Mobile Analytics are automatically sent to Amazon Pinpoint.

Migrating Off of the Mobile Analytics Querying API

After April 30, 2018, the Mobile Analytics Querying API will no longer be supported. Amazon Pinpoint offers an event streams feature that lets you stream events data in real time to Amazon Kinesis Data Streams or Amazon Data Firehose. Through a Firehose delivery stream, this data can be delivered to Amazon Redshift, Amazon S3, or Amazon OpenSearch Service. You can then access the data and use it to calculate the KPIs that are provided by the Querying API.

KPI Metrics Based on Event Data

Use the following table for guidance when you're calculating KPI metrics that are based on the event data that's streamed by Amazon Pinpoint.

| Metric | Mobile Analytics KPI | How to calculate with Amazon Pinpoint events |
|----------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lifetime user count | <code>/kpis/new-users/lifetime-count</code> | Obtain the total unique number of <code>client_id</code> values. |
| Daily active users (DAU) | <code>/kpis/dau/count</code> | For each day, obtain the count of events that have an <code>event_type</code> of <code>_session.start</code> and a unique value for <code>client_id</code> . |
| Monthly active users (MAU) | <code>/kpis/mau/count</code> | For each 30-day interval, obtain the count of events that have an <code>event_type</code> of <code>_session.start</code> and a unique value for <code>client_id</code> . |
| New users | <code>/kpis/new-users/count</code> | For each day, obtain the count of events that have an <code>event_type</code> of |

| Metric | Mobile Analytics KPI | How to calculate with Amazon Pinpoint events |
|----------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <p><code>_session.start</code> and a value for <code>client_id</code> that wasn't reported previously.</p> |
| Session count | <p><code>/kpis/sessions/count</code></p> | <p>For each day, obtain the count of events that have an <code>event_type</code> of <code>_session.start</code> .</p> |
| Daily revenue | <p><code>/kpis/daily-revenue/sum</code></p> | <p>For each day, obtain the events that have an <code>event_type</code> of <code>_monetization.purchase</code> , and compute the sum of the values that are reported for the <code>_item_price</code> attribute.</p> |
| Paying daily active users (PDAU) | <p><code>/kpis/pdau/count</code></p> | <p>For each day, calculate the DAU metric, but include only those devices that have made one or more purchases in the past. A purchase is indicated by an <code>event_type</code> of <code>_monetization.purchase</code> .</p> |

| Metric | Mobile Analytics KPI | How to calculate with Amazon Pinpoint events |
|------------------------------------|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Paying monthly active users (PMAU) | /kpis/pmau/count | For each day, calculate the MAU metric, but include only those devices that have made one or more purchases in the past. A purchase is indicated by an event_type of _monetization.purchase . |
| Custom events count | /events/ <i>custom-event-name</i> /count | For each day, obtain the count of events that have an event_type that matches the name you that you assigned to the custom event. Calculate max, min, and sum values by parsing the values that are assigned to metrics and custom attributes. |

| Metric | Mobile Analytics KPI | How to calculate with Amazon Pinpoint events |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Week 1, week 2, and week 3 retention | <p><code>/kpi/week-1-retention/count</code></p> <p><code>/kpi/week-2-retention/count</code></p> <p><code>/kpi/week-3-retention/count</code></p> | <p>To calculate the retention for a specific day:</p> <ol style="list-style-type: none"> 1. Obtain the original active users for that day. Active users are indicated by events that have an <code>event_type</code> of <code>_session.start</code> and a unique value for <code>client_id</code>. 2. Obtain the subsequent active users from the weeks that followed the day that you're measuring. 3. Compare the original active users with the subsequent active users. The retention equals the number of subsequent active users that match one of the original active users. Identify matches by comparing <code>client_id</code> values. |

| Metric | Mobile Analytics KPI | How to calculate with Amazon Pinpoint events |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Day 1, day 3, day 5, and day 7 retention | <pre data-bbox="591 306 935 386">/kpis/day-1-retention/count</pre> <pre data-bbox="591 436 935 516">/kpis/day-3-retention/count</pre> <pre data-bbox="591 567 935 646">/kpis/day-5-retention/count</pre> <pre data-bbox="591 697 935 777">/kpis/day-7-retention/count</pre> | <p data-bbox="1068 306 1495 386">To calculate the retention for a specific day:</p> <ol data-bbox="1068 436 1495 1629" style="list-style-type: none"> <li data-bbox="1068 436 1495 831">1. Obtain the original active users for that day. Active users are indicated by events that have an <code>event_type</code> of <code>_session.start</code> and a unique value for <code>client_id</code>. <li data-bbox="1068 856 1495 1117">2. Obtain the subsequent active users from the days that followed the day that you're measuring. <li data-bbox="1068 1142 1495 1629">3. Compare the original active users with the subsequent active users. The retention equals the number of subsequent active users that match one of the original active users. Identify matches by comparing <code>client_id</code> values. |

Example Events

The following examples demonstrate the JSON attributes that you can parse when you query the data store that holds your event data.

Example Example Session Start Event

```
{
  "application_key": "a1b2c3d4e5f6g7h8i9j0k1l2m3n4o5p6",
  "account_id": "111122223333",
  "event_type": "_session.start",
  "timestamp": 1517537724812,
  "arrival_timestamp": 1517537778048,
  "unique_id": "A1B2C3D4-E5F6-G7H8-I9J0-K1L2M3N4O5P6",
  "cognito_id": "us-east-1:a1b2c3d4-e5f6-g7h8-i9j0-k1l2m3n4o5p6",
  "cognito_identity_pool_id": "us-east-1:a1b2c3d4-e5f6-g7h8-i9j0-k1l2m3n4o5p6",
  "platform": "iOS",
  "model": "iPhone",
  "platform_version": "11.2.2",
  "make": "apple",
  "locale": "en_US",
  "sdk_version": "2.4.16",
  "sdk_name": "aws-sdk-iOS",
  "app_package_name": "com.example.package",
  "app_version_name": "11.02.0",
  "app_version_code": "28198.0",
  "user_agent": "aws-sdk-iOS/2.4.16 iOS/11.2.2 en_US",
  "app_title": "ExampleApp",
  "attributes": {
    "_clientContext": <client context>,
    "_session.id": "70cf4faf-BAAABA8A-20180202-021524806",
    "_session.startTime": "1517537724811"
  },
  "metrics": {}
}
```

Example Example Monetization Event

```
{
  "application_key": "a1b2c3d4e5f6g7h8i9j0k1l2m3n4o5p6",
  "account_id": "111122223333",
  "event_type": "_monetization.purchase",
  "timestamp": 1517537662978,
```

```
"arrival_timestamp": 1517537778020,
"unique_id": "A1B2C3D4-E5F6-G7H8-I9J0-K1L2M3N4O5P6",
"cognito_id": "us-east-1:a1b2c3d4-e5f6-g7h8-i9j0-k1l2m3n4o5p6",
"cognito_identity_pool_id": "us-east-1:a1b2c3d4-e5f6-g7h8-i9j0-k1l2m3n4o5p6",
"platform": "iOS",
"model": "iPhone",
"platform_version": "11.2.5",
"make": "apple",
"locale": "zh_CN",
"sdk_version": "2.6.5",
"sdk_name": "aws-sdk-iOS",
"app_package_name": "com.example.package",
"app_version_name": "5.03",
"app_version_code": "5.03.1",
"user_agent": "aws-sdk-iOS/2.6.5 iOS/11.2.5 zh_CN",
"app_title": "ExampleApp",
"attributes": {
  "_currency": "CNY",
  "_product_id": "product_id",
  "_transaction_id": "123456789012345",
  "_clientContext": <client context>,
  "_session.duration": "152021",
  "_session.id": "e79da94c-9BD1DF63-20180202-021345277",
  "_session.startTime": "1517537625277",
  "_item_price_formatted": "¥128.00"
},
"metrics": {
  "_item_price": 76.5811965811966,
  "_quantity": 1.0
}
}
```

In these examples, *<client context>* is the `x-amz-client-context` request header that you provide when you submit a `PutEvents` request to the Mobile Analytics REST API. For more information, see [PutEvents](#).

Migrating to the Amazon Pinpoint Console

After April 30, 2018, the Mobile Analytics console will automatically redirect to the [Amazon Pinpoint](#) console. After this date, the Amazon Pinpoint console will also show all data from apps that report events using the Mobile Analytics client in the AWS Mobile SDKs. In addition to analytics reports, the Amazon Pinpoint console offers functionality to create user segments and set

up targeted messaging campaigns. Your campaigns can message your audience through channels for email, mobile push, and SMS. After you launch a campaign, you can monitor its performance through campaign analytics.

REST API Reference

Note

Amazon Mobile Analytics was discontinued on April 30, 2018. The features that were previously provided by Mobile Analytics are now provided by Amazon Pinpoint. If you're new to Mobile Analytics, you should use Amazon Pinpoint instead. If you currently use Mobile Analytics, see [Migrating from Amazon Mobile Analytics to Amazon Pinpoint](#).

This is the Amazon Mobile Analytics REST API reference. It contains examples of the following events, requests, and operations.

Topics

- [Making HTTP Requests to Mobile Analytics](#)
- [PutEvents](#)
- [Examples](#)

Making HTTP Requests to Mobile Analytics

Note

Amazon Mobile Analytics was discontinued on April 30, 2018. The features that were previously provided by Mobile Analytics are now provided by Amazon Pinpoint. If you're new to Mobile Analytics, you should use Amazon Pinpoint instead. If you currently use Mobile Analytics, see [Migrating from Amazon Mobile Analytics to Amazon Pinpoint](#).

If you don't use the [AWS Mobile SDK](#), you can perform Mobile Analytics operations over HTTP using the POST request method. The POST method requires you to specify the operation in the header of the request and provide the data for the operation in JSON format in the body of the request.

HTTP Header Contents

Mobile Analytics requires the following information in the header of an HTTP request:

Host

The Mobile Analytics endpoint. This value must be `https://mobileanalytics.us-east-1.amazonaws.com`

X-Amz-Date

The date. Must be specified in ISO 8601 standard format, in UTC time. For example:

```
20130315T092054Z
```

Authorization

The set of authorization parameters that AWS uses to ensure the validity and authenticity of the request. For more information, see [Signature Version 4 Signing Process](#).

User Agent

Information about the user agent originating the request.

X-Amz-Client-Context

Information about the client interacting with Mobile Analytics. Data in a client context describes the app and the environment in which it runs. For details about the contents of the client context, see [PutEvents](#).

X-Amz-Security-Token

If you sign your request using temporary security credentials, you must include the corresponding security token in your request by adding the X-Amz-Security-Token header.

For information on signing requests using temporary security credentials in your REST API requests, see [Signing and Authenticating REST Requests](#).

Content-Type

Specifies JSON and the version. For example, `Content-Type: application/json`

Content-Length

The payload size in bytes.

HTTP Header Example

The following is an example header for an HTTP request for Mobile Analytics.

```

POST /2014-06-05/events HTTP/1.1
Host: mobileanalytics.us-east-1.amazonaws.com
X-Amz-Date: <Date>
Authorization: AWS4-HMAC-SHA256 Credential=<access_key>/20140709/us-east-1/
mobileanalytics/aws4_request, SignedHeaders=content-length;content-type;host;user-
agent;x-amz-client-context;x-amz-date;x-amz-security-token;x-amz-target,
  Signature=<signature>
User-Agent: <User agent string>
x-amz-Client-Context: {"client":
{"client_id":"<client_id>","app_title":"<app_title>","app_version_name":"<app_version_name>","a
{},"env":
{"platform":"<platform>","model":"<model>","make":"<make>","platform_version":"<platform_version
x-amz-security-token: <Security token>
Content-Type: application/json
Content-Length: <Payload size bytes>
Connection: Keep-Alive

```

HTTP Body Content

The body of an HTTP request contains the data for the operation specified in the header of the HTTP request. The data must be formatted according to the JSON data schema for Mobile Analytics. For the PutEvents operation, the body content of the HTTP request consists of an array of one or more events.

HTTP Body Example

The following is an example of the body for an HTTP request for Mobile Analytics.

```

{
  "events": [
    {
      "eventType": "<Event type>",
      "timestamp": "<ISO 8601 date>",
      "session": {
        "id": "<Session id>",
        "startTimestamp": "<ISO 8601 date>"
      },
      "attributes": {
        "<Optional string name>": "<Optional string value>",
        "...",
        "<Optional string name>": "<Optional string value>"
      }
    },
  ],

```

```
    "metrics": {
      "<Optional string name>": <Optional numeric value>,
      ...
      "<Optional string name>": <Optional numeric value>
    }
  },
  ...
]
```

PutEvents

Note

Amazon Mobile Analytics was discontinued on April 30, 2018. The features that were previously provided by Mobile Analytics are now provided by Amazon Pinpoint. If you're new to Mobile Analytics, you should use Amazon Pinpoint instead. If you currently use Mobile Analytics, see [Migrating from Amazon Mobile Analytics to Amazon Pinpoint](#).

The PutEvents operation records one or more events. You can have up to 1,500 unique custom events per app, any combination of up to 40 attributes and metrics per custom event, and an infinite number of attribute or metrics values.

Topics

- [Requests](#)
- [Responses](#)

Requests

Client Context Header

Syntax

```
x-amz-Client-Context: {
  "client": {
    "client_id": "<client_id>",
    "app_title": "<app_title>",
```

```
        "app_version_name": "<app_version_name>",
        "app_version_code": "<app_version_code>",
        "app_package_name": "<app_package_name>"
    },

    "custom": {},

    "env": {
        "platform": "<platform>",
        "model": "<model>",
        "make": "<make>",
        "platform_version": "<platform_version>",
        "locale": "<locale>"
    },

    "services": {
        "mobile_analytics": {
            "app_id": "<mobile_analytics_app_id>"
        }
    }
}
```

Description

The operation takes the following request header.

x-amz-client-context

The request header.

client

Name-value pairs that describes the client application.

client_id

A unique identifier representing this installation instance of your app.

Type: String

Default: None

Required: Yes

app_title

The title of your app. For example, **My App**.

Type: String

Default: None

Required: Yes

app_version_name

The version of your app. For example, **V2.0**.

Type: String

Default: None

Required: No

app_version_code

The version code for your app. For example, **3**.

Type: String

Default: None

Required: No

app_package_name

The name of your package. For example, **com.example.my_app**.

Type: String

Default: None

Required: No

custom

User defined name-value pairs that describe this installation of the application.

Type: Map

Default: None

Required: No

env

Name-value pair that describes the device that runs the event.

platform

The operating system of the device. For example, **iphoneos**.

Type: String

Valid values: `iphoneos`, `android`, `windowsphone`, `blackberry`, `macos`, `windows`, `linux`

Default: None

Required: Yes

model

The model of the device. For example, **Nexus**.

Type: String

Default: None

Required: No

make

The manufacturer of the device. For example, **Samsung**.

Type: String

Default: None

Required: No

platform_version

The version of the operating system of the device. For example, **4.0.4**.

Type: String

Default: None

Required: No

locale

The locale of the device. For example, **en_US**.

Type: String

Default: None

Required: No

services

Name-value pair that contains service specific sections.

mobile_analytics

Name-value pair that describes service specific attributes.

app_id

The value obtained from the Mobile Analytics console to record data to.

Type: String

Default: None

Required: Yes

Request Body

Syntax

```
{
  "events": [
    {
      "eventType": "<Event type>",
      "timestamp": "<ISO 8601 date>",
      "version": "v2.0",
      "session": {
        "id": "<Session id>",
        "startTimestamp": "<ISO 8601 date>"
      },
      "attributes": {
```

```
        "<Optional string name>": "<Optional string value>",
        ...
        "<Optional string name>": "<Optional string value>"
    },
    "metrics": {
        "<Optional string name>": <Optional numeric value>,
        ...
        "<Optional string name>": <Optional numeric value>
    }
},
...
]
```

Description

This operation takes the following request content.

Events

An array of JSON objects representing a batch of unique event occurrences in your app. Each JSON object in the array consists of the following:

eventType

A name signifying an event that occurred in your app. This is used for grouping and aggregating like events together for reporting purposes.

Type: String

Default: None

Required: Yes

timestamp

The time the event occurred in ISO 8601 standard date time format. For example, **2014-06-30T19:07:47.885Z**

Type: String

Constraints: Must follow ISO 8601 format

Default: None

Required: Yes

attributes

A collection of key-value pairs that give additional context to the event. The key-value pairs are specified by the developer.

This collection can be empty or the attribute object can be omitted.

Type: JSON object of key-value pairs (String:String)

Constraints: Key can be up to 50 characters or less and the value can be up to 200 characters.

Default: None

Required: No

metrics

A collection of key-value pairs that gives additional measurable context to the event. This key has the following key-values pairs. The pairs specified by the developer.

This collection can be empty or the attribute object can be omitted.

Type: JSON object of key value pairs (String:Number)

Constraints: Key can be up to 50 characters.

Default: None

Required: No

session

Describes the session. Session information is required on events to be aggregated in console reports. Events submitted without session information are still exported to S3 or Redshift but are not aggregated for inclusion in reports. This key has the following key-value pairs.

id

A unique identifier for the session.

Type: String

Default: None

Required: Yes

startTimestamp

The time the event occurred in ISO 8601 standard date time format. For example, **2014-06-30T19:07:47.885Z**

Type: String

Constraints: Must follow ISO 8601 format

Default: None

Required: Yes

version

Describes the version. This value must always be **v2.0**.

Type: String

Constraints: Must always be **v2.0**.

Default: None

Required: Yes

JSON Example

```
{
  "events": [
    {
      "metrics": {
        "Score": 12345,
        "TimeInLevel": 64
      },
      "session": {
        "id": "<session id>",
        "startTimestamp": "2014-06-30T19:07:47.885Z"
      },
      "attributes": {
        "LevelName": "Level1",
        "CharacterClass": "Warrior",
        "Successful": "True"
      }
    }
  ]
}
```

```
"eventType": "LevelComplete",
"version": "v2.0",
"timestamp": "2014-06-30T19:07:47.885Z"
}
]}
```

Responses

Syntax

```
HTTP/1.1 202
x-amzn-RequestId: <A request id>
Content-Type: application/json
```

Response Headers

This operation has the following response codes.

202 Accepted

The request has been accepted for processing, however the events have not been fully processed.

400 Bad Request

The x-amz-client-context header is missing or invalid.

OR

The event payload is missing or invalid.

403 Forbidden

The request is not authorized to perform this action.

413 Request Entity Too Large

The payload is too large. The payload cannot exceed 1024 KB.

Examples