



DEVELOPERS LIVE

Adobe Experience Platform SDKs & Launch Server Side

Emilia Dobrin

Aaron Hardy

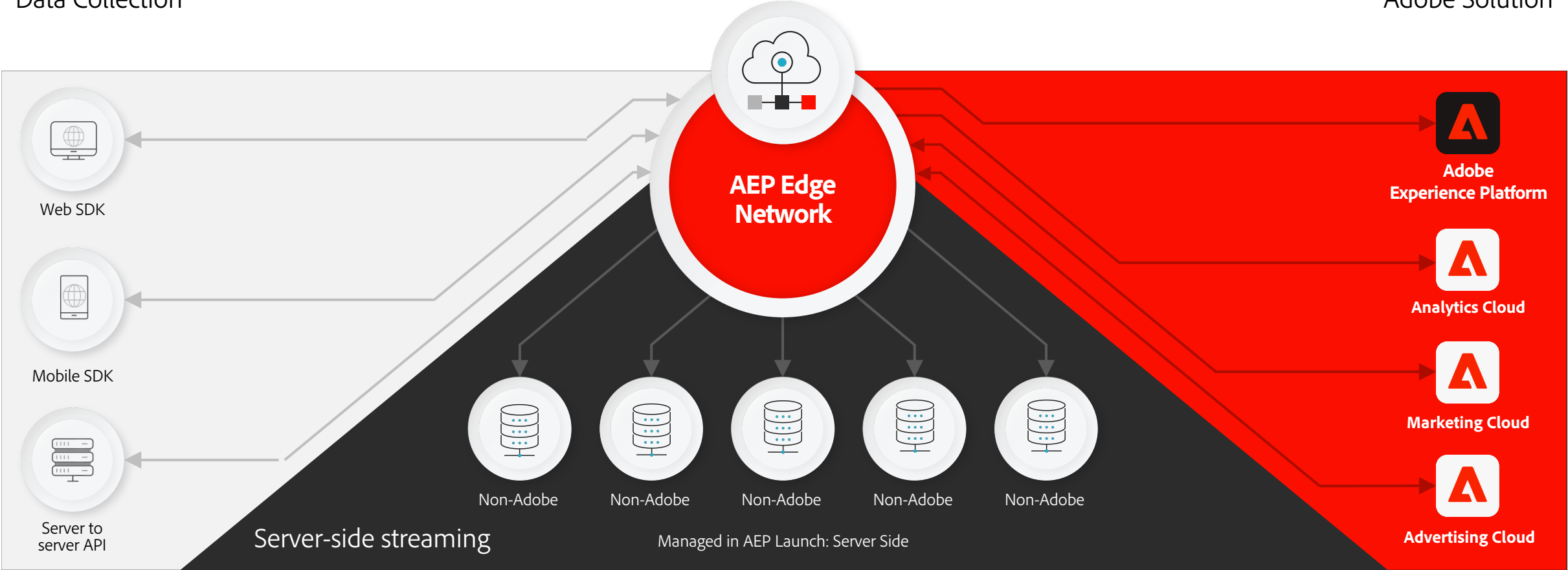
Rudi Shumpert



Adobe Data Collection

Data Collection

Adobe Solution



XDM in Adobe Experience Platform

- Provides common structures and definitions for any application to use in order to communicate with services on Adobe Experience Platform.
- By adhering to XDM standards, all customer experience data can be incorporated into a common representation delivering insights in a faster, and in a more integrated way.
- The blueprint for how the data is defined, ingested, and consumed.

The screenshot displays the Adobe Experience Platform interface for managing XDM schemas. On the left, a code editor shows the JSON definition for a 'Loyalty Program' schema. The main panel shows the 'Schemas > Loyalty Program' view, including a composition table and a structure tree.

```
1 {
2   "$id": "https://ns.adobe.com/acpdsttt20181003/schemas/ed121458657b8888",
3   "meta:altId": "_acpdsttt20181003.schemas.ed121458657b8888112d665e38080",
4   "meta:resourceType": "schemas",
5   "version": "1.1",
6   "type": "object",
7   "title": "Loyalty Program",
8   "description": "",
9   "meta:containerId": "tenant",
10  "meta:abstract": false,
11  "meta:extensible": false,
12  "meta:tenantNamespace": "_acpdsttt20181003",
13  "imsOrg": "978A148E5BA1153E0A495C41@AdobeOrg",
14  "meta:class": "https://ns.adobe.com/xdm/context/profile",
15  "meta:extends": [
16    "https://ns.adobe.com/xdm/context/profile",
17    "https://ns.adobe.com/xdm/data/record",
18    "https://ns.adobe.com/xdm/context/identitymap",
19    "https://ns.adobe.com/xdm/common/extensible",
```

PRODUCTION Prod (VA7)

Schemas > Loyalty Program

Composition

Schema

- Loyalty Program

Class \odot **+** Assign

- XDM Individual Profile

Mixins \odot **+** Add

- Loyalty Membership Mixin

Structure

- Loyalty Program
 - _acpdsttt20181003 | Object
 - level | String
 - loyaltyId | String
 - points | Long
 - _repo | Object
 - _id | String
 - createdByBatchID | String


Adobe Experience Platform Web SDK

Aaron Hardy





Demo Website

Product

Brown leather shoes 

XDM Commerce Example

 Add to cart


 Purchase

XDM Product Review Example

Email Address


demo@example.com

Rating

Great 

Comment

The leather is very soft but also seems durable.

 Submit Review

Demo Schema

Composition

Schema

Experience Edge Demo - Dev Conf

Class ⓘ + Assign

- XDM ExperienceEvent

Mixins ⓘ + Add

- Product Review
- Environment Details
- Commerce Details
- AEP Web SDK ExperienceEvent Mixin

Relationships

None

Required fields

- _acopprod3.reviewerId
- _acopprod3.productSku
- _acopprod3.rating
- timestamp
- _id

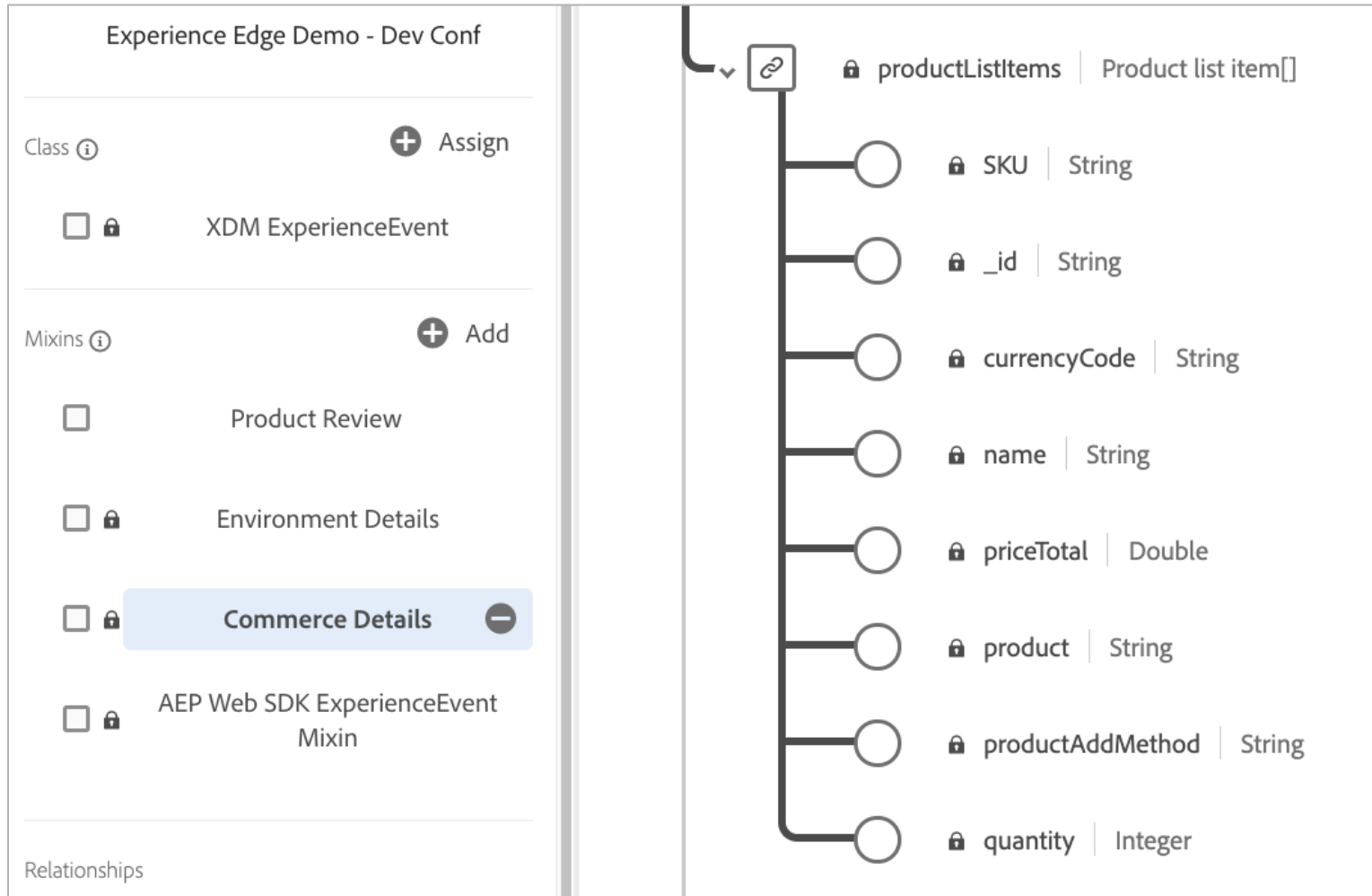
Structure

Search schema

Experience Edge Demo - Dev Conf

- > _acopprod3 | Object
- > commerce | Commerce
- > device | Device
- > environment | Environment
- > implementationDetails | Implementation details
- > placeContext | Place context
- > productListItems | Product list item[]
- > userActivityRegion | Object
- > web | Web information
- _id | String
- eventMergeld | String
- eventType | String
- identityMap | Map
- timestamp | DateTime

Demo Schema



Demo Schema

Composition

Schema

Experience Edge Demo - Dev Conf

Class ⓘ + Assign

XDM ExperienceEvent

Mixins ⓘ + Add

Product Review

Environment Details

Commerce Details -

AEP Web SDK ExperienceEvent Mixin

Relationships

None

Required fields

_acoprod3.reviewerId

_acoprod3.productSku

Structure

- commerce | Commerce
 - cartAbandons | Measure
 - checkouts | Measure
 - inStorePurchase | Measure
 - order | Order
 - productListAdds | Measure
 - productListOpens | Measure
 - productListRemovals | Measure
 - productListReopens | Measure
 - productListViews | Measure
 - productViews | Measure
 - purchases | Measure
 - saveForLater | Measure

Demo Schema

The screenshot displays the Adobe Experience Edge Demo - Dev Conf schema configuration interface, divided into two main panels: Composition and Structure.

Composition Panel:

- Schema:** Experience Edge Demo - Dev Conf
- Class:** XDM ExperienceEvent (with an Assign button)
- Mixins:** Product Review (highlighted), Environment Details, Commerce Details, and AEP Web SDK ExperienceEvent Mixin (with an Add button)
- Relationships:** None
- Required fields:** (empty)

Structure Panel:

- Search:** Search schema
- Root Node:** Experience Edge Demo - Dev Conf (with expand and edit icons)
- Object Node:** _acoprod3 | Object
 - productSku | String
 - rating | Integer
 - reviewText | String
 - reviewerId | String
- Commerce Node:** commerce | Commerce (with expand icon)
 - cartAbandons | Measure (with expand icon)
 - checkouts | Measure (with expand icon)
 - inStorePurchase | Measure (with expand icon)
 - order | Order (with expand icon)

Edge Configuration

Adobe Analytics

Report Suite ID (required) ×

acoprod3xdmcommonmobileweb

+ Add Report Suite

Adobe Audience Manager

Adobe Experience Platform

Sandbox (required)

Prod

Event Dataset (required)

Experience Edge Demo - Dev Conf

Profile Dataset

Select Profile Dataset

Adobe Target

Launch Server Side


Property ID (required)

Experience Edge Demo - Dev Conf

Environment ID (required)

Development


Launch - AEP Web SDK Extension Configuration





AEP Web SDK
Adobe
v2.3.0

The Adobe Experience Platform Web SDK allows for streaming data into the platform, syncing identities, personalizing content, and more.

▼ ALLOY

Name ⓘ
alloy 

IMS Organization ID ⓘ
FAF554945B90342F0A495E2C@AdobeOrg  Restore to default

Edge Domain ⓘ
edge.adobedc.net  Restore to default

Edge Configurations

[Learn more](#)

Choose from list Enter values

Edge Configuration ⓘ
Experience Edge Demo - Dev Conf ▼

Production Environment ⓘ
Production Environment

Staging Environment ⓘ
Staging Environment

Development Environment ⓘ
Development Environment

Launch Rule

Name

Add to Cart

IF - Determines **when** you want the rule to fire

EVENTS ⓘ

Core - Click +

CONDITIONS ⓘ

+ Add

THEN - Determines **what** you want the rule to do

ACTIONS ⓘ

AEP Web SDK - Send Event +

Launch Send Event Action

Extension

AEP Web SDK

Action Type

Send Event

Name

AEP Web SDK - Send Event

> ADVANCED OPTIONS

Instance

alloy

Type (optional) ⓘ

commerce.productListAdds

XDM Data ⓘ

%addToCartXdm%

Merge ID (optional) ⓘ

Dataset ID (optional) ⓘ

Render visual personalization decisions ⓘ


Decision Scopes (optional) ⓘ

Enter values Data Element


Add scope


Demo Website

Product

Brown leather shoes 

XDM Commerce Example

 Add to cart


 Purchase

XDM Product Review Example

Email Address


demo@example.com

Rating

Great 

Comment

The leather is very soft but also seems durable.

 Submit Review

Add to Cart Event

```
▼ events: [{xdm: {eventType: "commerce.productListAdds",...}, query: {,...}}]
  ▼ 0: {xdm: {eventType: "commerce.productListAdds",...}, query: {,...}}
    ▶ query: {,...}
    ▼ xdm: {eventType: "commerce.productListAdds",...}
      ▶ commerce: {productListAdds: {value: 1}}
      ▶ device: {screenHeight: 1600, screenWidth: 2560, screenOrientation: "landscape"}
      ▶ environment: {type: "browser", browserDetails: {viewportWidth: 2048, viewportHeight: 1080}}
      ▶ eventType: "commerce.productListAdds"
      ▶ implementationDetails: {name: "https://ns.adobe.com/experience/alloy/reactor"}
      ▶ placeContext: {localTime: "2021-02-05T11:54:41.608-07:00", localTimezoneOffset: -25200}
      ▼ productListItems: [{quantity: 1, currencyCode: "USD", SKU: "SHOES456", name: "Brown leather shoes"}]
        ▼ 0: {quantity: 1, currencyCode: "USD", SKU: "SHOES456", name: "Brown leather shoes"}
          SKU: "SHOES456"
          currencyCode: "USD"
          name: "Brown leather shoes"
          priceTotal: 52.81
          quantity: 1
          timestamp: "2021-02-05T18:54:41.608Z"
      ▶ web: {webPageDetails: {URL: "https://aaronius.github.io/demo/"}, webReferer: ""}
```

Purchase Event

```
▼ events: [{xdm: {eventType: "commerce.purchases",...}}]
  ▼ 0: {xdm: {eventType: "commerce.purchases",...}}
    ▼ xdm: {eventType: "commerce.purchases",...}
      ▼ commerce: {order: {currencyCode: "USD", priceTotal: 52.81,...}, purchases: {value: 1}}
        ▼ order: {currencyCode: "USD", priceTotal: 52.81,...}
          currencyCode: "USD"
          ▶ payments: [{paymentAmount: 52.81, paymentType: "Credit Card"}]
          priceTotal: 52.81
          ▶ purchases: {value: 1}
          ▶ device: {screenHeight: 1600, screenWidth: 2560, screenOrientation: "landscape"}
          ▶ environment: {type: "browser", browserDetails: {viewportWidth: 2048, viewportHeight: 1198}}
          eventType: "commerce.purchases"
          ▶ implementationDetails: {name: "https://ns.adobe.com/experience/alloy/reactor", version: "2"}
          ▶ placeContext: {localTime: "2021-02-05T12:02:12.227-07:00", localTimezoneOffset: 420}
          ▼ productListItems: [{quantity: 1, currencyCode: "USD", SKU: "SH0ES456", name: "Brown leather shoes", priceTotal: 52.81}
            ▼ 0: {quantity: 1, currencyCode: "USD", SKU: "SH0ES456", name: "Brown leather shoes", priceTotal: 52.81}
              SKU: "SH0ES456"
              currencyCode: "USD"
              name: "Brown leather shoes"
              priceTotal: 52.81
              quantity: 1
              timestamp: "2021-02-05T19:02:12.227Z"
            ▶ web: {webPageDetails: {URL: "https://aaronius.github.io/demo/"}, webReferrer: {URL: ""}}
```


Review Event


```
▼ events: [{xdm: {eventType: "product.review",...}}]
  ▼ 0: {xdm: {eventType: "product.review",...}}
    ▼ xdm: {eventType: "product.review",...}
      ▶ device: {screenHeight: 1600, screenWidth: 2560, screenOrientation: "landscape"}
      ▶ environment: {type: "browser", browserDetails: {viewportWidth: 2048, viewportHeight: 1080}}
      ▶ eventType: "product.review"
      ▶ implementationDetails: {name: "https://ns.adobe.com/experience/alloy/reactor"}
      ▶ placeContext: {localTime: "2021-02-05T12:05:47.122-07:00", localTimezoneOffset: -25200, timestamp: "2021-02-05T19:05:47.122Z"}
      ▶ web: {webPageDetails: {URL: "https://aaronius.github.io/demo/"}, webReferrer: ""}
      ▼ _acoprod3: {productSku: "SHOES456", reviewerId: "demo@example.com", rating: 4, reviewText: "The leather is very soft but also seems durable."}
        productSku: "SHOES456"
        rating: 4
        reviewText: "The leather is very soft but also seems durable."
        reviewerId: "demo@example.com"
```

Adobe Experience Platform Mobile SDK

Emilia Dobrin



Launch – AEP Edge Network Extension Configuration



Adobe Experience Platfo...
Adobe Systems
v1.0.2

The Adobe Experience Platform Edge Network mobile extension allows for sending XDM formatted data to Adobe Experience Platform and Adobe Experience Cloud solutions, by leveraging Experience...

Edge Configuration

Edge Configuration (required) ⓘ

Experience Edge Demo - Dev Conf ▾

Production Environment ⓘ

Production Environment

Staging Environment ⓘ

Staging Environment

Development Environment ⓘ

Development Environment

See Adobe Experience Platform Edge Network mobile extension documentation for more [details](#).

Include AEP Edge Network to your mobile application dependencies

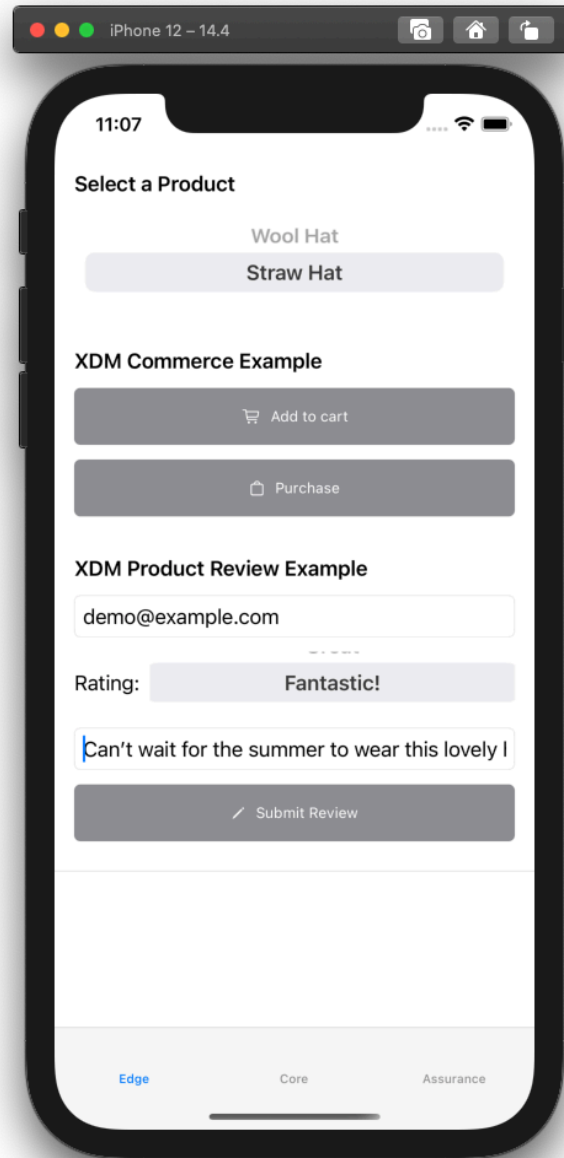
iOS - Cocoapods

```
1 use_frameworks!  
2 target 'YourTargetApp' do  
3     pod 'AEPCore'  
4     pod 'AEPLifecycle'  
5     pod 'AEPIdentity'  
6     pod 'AEPSignal'  
7     pod 'AEPEdge'  
8 end
```

Android - Gradle

```
1 implementation 'com.adobe.marketing.mobile:sdk-core:1.+'  
2 implementation 'com.adobe.marketing.mobile:edge:1.+'
```

Demo Mobile Application



CommerceSchema object

```
import Foundation
import AEPEdge

public struct CommerceSchema : XDMSchema {
    public let schemaVersion = "1.0"
    public let schemaIdentifier = ""
    public let datasetIdentifier = ""
    public init() {}

    public var commerce: Commerce?
    public var eventMergeId: String?
    public var eventType: String?
    public var identityMap: IdentityMap?
    public var productListItems: Array<ProductListItemItem?>?
    public var timestamp: Date?

    enum CodingKeys: String, CodingKey {
        case commerce = "commerce"
        case eventMergeId = "eventMergeId"
        case eventType = "eventType"
        case identityMap = "identityMap"
        case productListItems = "productListItems"
        case timestamp = "timestamp"
    }
}

extension CommerceSchema {
    public func encode(to encoder: Encoder) throws {
        var container = encoder.container(keyedBy: CodingKeys.self)
        if let unwrapped = commerce { try container.encode(unwrapped, forKey: .commerce) }
        if let unwrapped = eventMergeId { try container.encode(unwrapped, forKey: .eventMergeId) }
        if let unwrapped = eventType { try container.encode(unwrapped, forKey: .eventType) }
        if let unwrapped = identityMap { try container.encode(unwrapped, forKey: .identityMap) }
        if let unwrapped = productListItems { try container.encode(unwrapped, forKey: .productListItems) }
        if let unwrapped = XDMFormatters.dateToISO8601String(from: timestamp) { try container.encode(unwrapped, forKey: .timestamp) }
    }
}
```

Add to Cart Event

```
/**
 * /// Creates and sends an add to cart commerce event to the Adobe Experience Edge Network.
 * func sendAddToCartXDMEvent() {
 *     /// Get the selected ProductItem from the picker
 *     let productItem = products[productIndex]
 *
 *     /// Create list with the purchased items
 *     var product1 = ProductListItemItem()
 *     product1.name = productItem.name
 *     product1.priceTotal = productItem.price
 *     product1.sku = productItem.sku
 *     product1.quantity = 1
 *     product1.currencyCode = productItem.currencyCode
 *
 *     let productListItems: [ProductListItemItem] = [product1]
 *     var productAdd = ProductListAdds()
 *     productAdd.value = 1
 *
 *     /// Create Commerce object and add ProductListAdds details
 *     var commerce = Commerce()
 *     commerce.productListAdds = productAdd
 *
 *     /// Compose the XDM Schema object and set the event name
 *     var xdmData = CommerceSchema()
 *     xdmData.eventType = "commerce.productListAdds"
 *     xdmData.commerce = commerce
 *     xdmData.productListItems = productListItems
 *
 *     /// Create an Experience Event with the built schema and send it using the AEP Edge extension
 *     let event = ExperienceEvent(xdm: xdmData)
 *     Edge.sendEvent(experienceEvent: event)
 * }
```

Purchase Event

```
/// Creates and sends a cart purchase event to the Adobe Experience Edge Network.
func sendPurchaseXDMEvent() {
    // Get the selected ProductItem from the picker
    let productItem = products[productIndex]

    // Create list with the purchased items
    var product1 = ProductListItem()
    product1.name = productItem.name
    product1.priceTotal = productItem.price
    product1.skU = productItem.skU
    product1.quantity = 1
    product1.currencyCode = productItem.currencyCode

    let purchasedItems: [ProductListItem] = [product1]
    let orderTotal: Double = computeOrderTotal(purchasedItems: purchasedItems)

    // Create PaymentItem which details the method of payment
    var paymentsItem = PaymentsItem()
    paymentsItem.paymentAmount = orderTotal
    paymentsItem.paymentType = "Credit card"

    // Set the Order information and create Purchases action
    var order = Order()
    order.priceTotal = orderTotal
    order.payments = [paymentsItem]
    order.currencyCode = "USD"
    var purchases = Purchases()
    purchases.value = 1

    // Create Commerce object and add Purchases action and Order details
    var commerce = Commerce()
    commerce.order = order
    commerce.purchases = purchases

    // Compose the XDM Schema object and set the event name
    var xdmData = CommerceSchema()
    xdmData.eventType = "commerce.purchases"
    xdmData.commerce = commerce
    xdmData.productListItems = purchasedItems

    // Create an Experience Event with the built schema and send it using the Platform extension
    let event = ExperienceEvent(xdm: xdmData)
    Edge.sendEvent(experienceEvent: event)
}
```


Data received in Adobe Experience Platform

Adobe Experience Platform

PRODUCTION Prod (VA7)

Home Workflows CONNECTIONS Sources CUSTOMER Profiles Segments Identities PRIVACY Policies Requests DATA MANAGEMENT Schemas Datasets Queries Monitoring Connections ADMINISTRATION Sandboxes

Datasets > Experience Edge Demo - Dev Conf

Delete dataset Preview dataset

Dataset activity Data governance

Total records: 110
Size of data: 228.86 KB

Ingested records February 4, 2021 - February 7, 2021: 19
Ingested batches Today: 5
Ingested batches February 4, 2021 - February 7, 2021: 3

Failed batches Today: 0
Failed batches February 4, 2021 - February 7, 2021: 0

Ingested records

Ingested batches Failed batches

BATCH ID	INGESTED ↓	RECORDS INGESTED	RECORDS FAILED	NEW PROFILE FRAGMENTS	EXISTING PROFILE FRAGMENTS	STATUS
01EY085YAEYZB6NKWVA9FK2NVC	2/7/2021, 11:20 PM	2	0	-	-	Success
01EY07A2X1YGQYJ03P3TENS4Q	2/7/2021, 11:04 PM	1	0	-	-	Success
01EY06F14450PCHDCBMSMGV3G9	2/7/2021, 10:50 PM	6	0	-	-	Success

Experience Edge Demo - Dev Conf

Name: Experience Edge Demo - Dev Conf

Description:

Dataset ID: datasetidexample

Table name: experience_edge_demo_dev_conf

Profile:

Schema: Experience Edge Demo - Dev Conf

Source: Schema

Created: 2/1/2021, 6:26 PM

Last modified: 2/7/2021, 10:39 PM

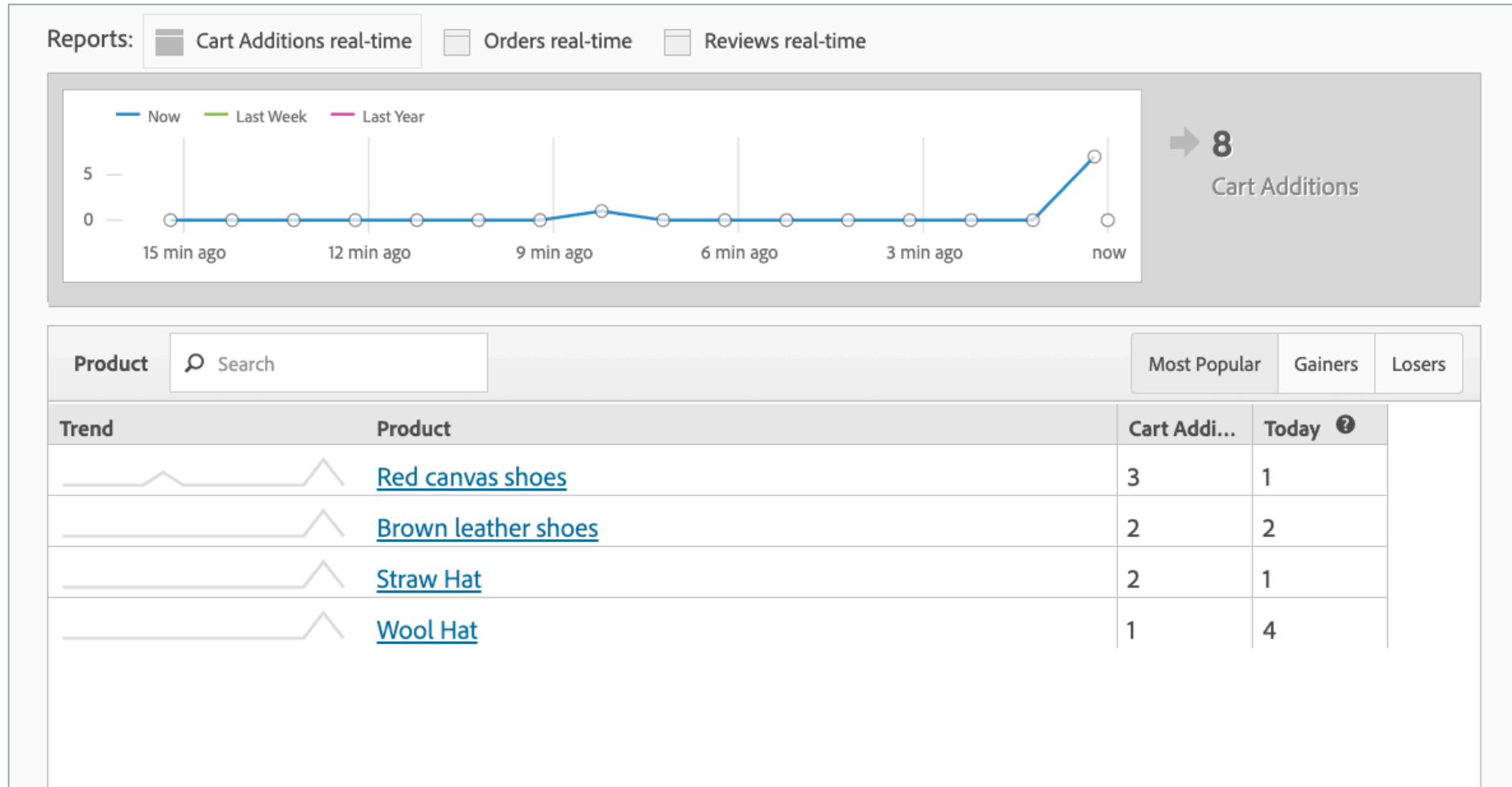
ADD DATA

Choose files

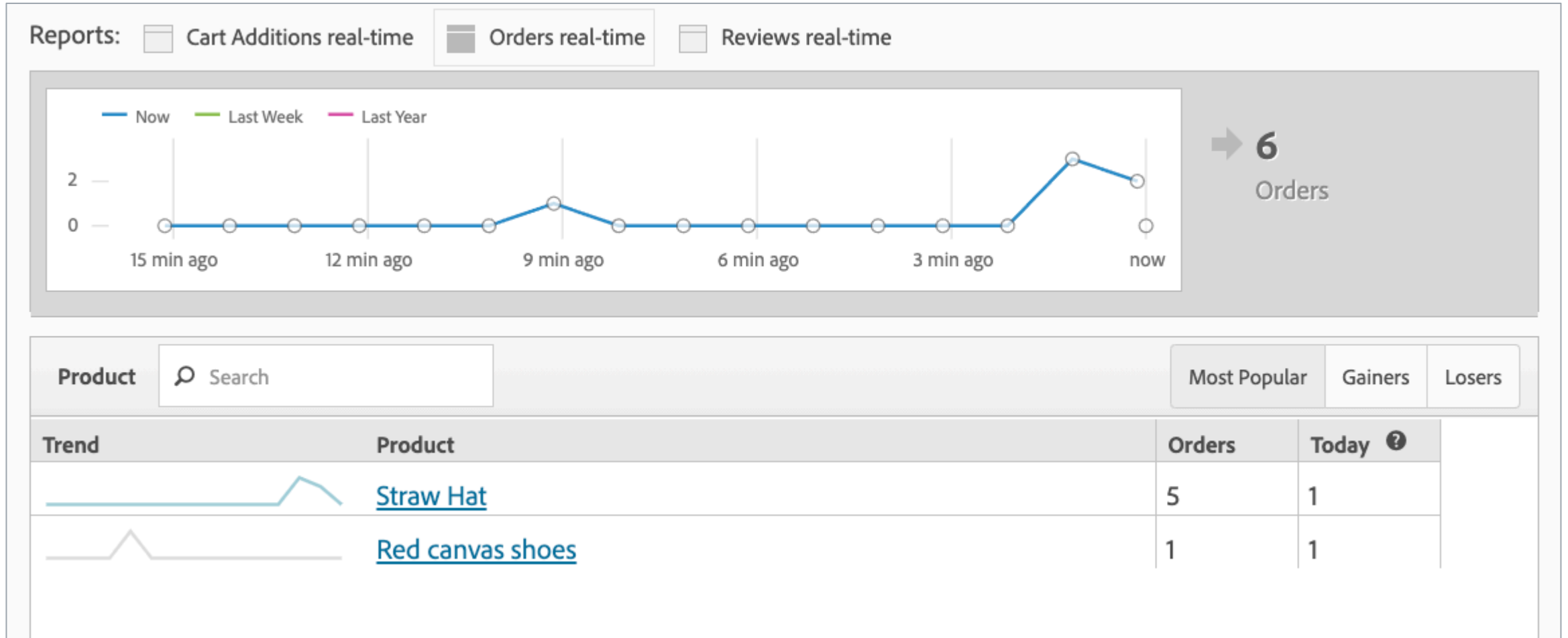
Terms of Use Privacy Policy Language: English

Copyright © 2021 Adobe Inc. All rights reserved.

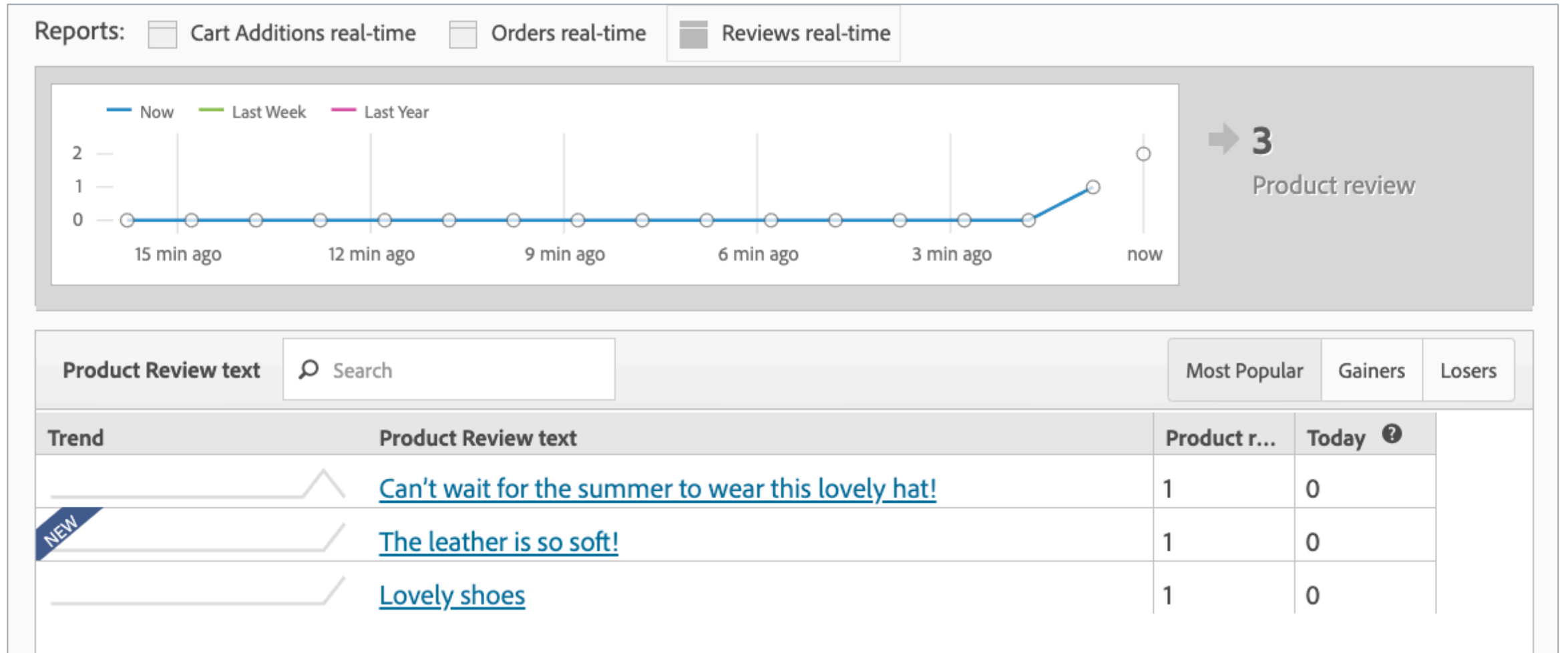
Data received in Adobe Analytics



Data received in Adobe Analytics



Data received in Adobe Analytics



Edge Configuration - Launch Server-Side

Adobe Analytics

Report Suite ID (required)

[+ Add Report Suite](#)

Adobe Audience Manager

Adobe Experience Platform

Sandbox (required)

Event Dataset (required)

Profile Dataset

Adobe Target

Launch Server Side

Property ID (required)

Environment ID (required)

Adobe Experience Platform Launch Server Side

Rudi Shumpert



Adobe Experience Platform Launch Server Side


Edit Data Element Latest ▾

<p>Name</p> <input type="text" value="eventType"/>	<p>Path (required)</p> <input type="text" value="arc.event.xdm.eventT..."/>
<p>Extension</p> <input type="text" value="Core"/>	
<p>Data Element Type</p> <input type="text" value="Path"/>	

Adobe Experience Platform Launch Server Side

Installed Catalog


Search



Adobe Cloud Connector
Adobe Systems · v1.0.0

Server side extension that allows users to send data to 3rd party external sources.

Configure ▾



Core
Adobe · v1.0.2

Provides default condition and data element types available to all Launch properties.

Configure ▾

Adobe Experience Platform Launch Server Side

Latest eventType product.review -> collect product feedback to webhook > Action Configuration

Cancel

Keep Changes

Extension
Adobe Cloud Connector

Action Type
Make Fetch Call

Name
Send productSku and reviewText to Webhook

Request

Method (required) POST URL (required) https://webhook.site/e030f262-ba41-493f-9e27-38009f8b2cd6?productsku={{productSKU}}&re...

Query Params Headers Body

Query Params

KEY	VALUE
productsku	{{productSKU}}
reviewtext	{{reviewText}}

+ Add Another

Advanced

Save the request response

Adobe Experience Platform Launch Server Side

Webhook.site Docs & API Custom Actions WebhookScript Terms & Privacy Support ★ Upgrade Copy Edit

Password Alias Schedule CSV Export Custom Actions Settings... Run Now XHR Redirect Settings... Redirect Now CORS Headers Auto Navigate Hide Details More

REQUESTS (68/500) Newest First

- POST** #53a35 108.162.245.7
02/09/2021 1:23:21 AM
- POST** #bc4ed 108.162.245.125
02/09/2021 1:22:33 AM
- POST** #1a3d3 108.162.245.91
02/09/2021 1:01:40 AM
- POST** #a0671 108.162.245.125
02/09/2021 1:00:44 AM
- POST** #82c79 108.162.245.97
02/09/2021 1:00:11 AM
- POST** #fef79 108.162.245.147
02/09/2021 12:39:54 AM
- POST** #df95a 162.158.107.170
02/09/2021 12:38:27 AM
- POST** #52b5f 162.158.107.170
02/09/2021 12:09:39 AM
- POST** #98250 108.162.245.27
02/09/2021 12:08:50 AM
- POST** #a224a 108.162.245.37

Request Details

[Permalink](#) [Raw content](#) [Export as](#)

POST <https://webhook.site/e030f262-ba41-493f-9e27-38009f8b2cd6?productsku=HAT089&reviewtext=Lovely%20hat%20for%20this%20demo%21>

Host 108.162.245.7 [whols](#)

Date 02/09/2021 1:23:21 AM (9 hours ago)

Size 57 bytes

ID 53a353a6-cadd-4764-a40f-719504ae9ed6

Files

Query strings

productsku HAT089

reviewtext Lovely hat for this demo!

Raw Content

```
{
  "SKU": "HAT089",
  "reviewText": "Lovely hat for this demo!"
}
```

Format JS

Headers

connection	close
cf-request-id	08270e84850003a14e102000000001
cf-connecting-ip	2a06:98c0:3600::103
cf-worker	production-faf554945b90342f0a495e2c.reactorstrea
x-stack-id	production
x-request-id	95F77A87-E965-4BF0-83F8-E6730D2F067B
x-property-id	PR43559c971ee54a9aa025d6838518a20f
x-organization-id	FAF554945B90342F0A495E2C@AdobeOrg
x-konductor-received-at	2021-02-09T06:23:21.164Z
x-konductor-dispatched-at	2021-02-09T06:23:21.165Z
x-environment-id	ENf3c5f22123de498585f3673a5daba9a1
cdn-loop	cloudflare; subreqs=1
cf-ew-via	15
content-type	text/plain; charset=UTF-8
cf-visitor	{"scheme":"https"}
content-length	57
cf-ray	61eb804da4e23a14-SEA
accept-encoding	gzip
host	webhook.site

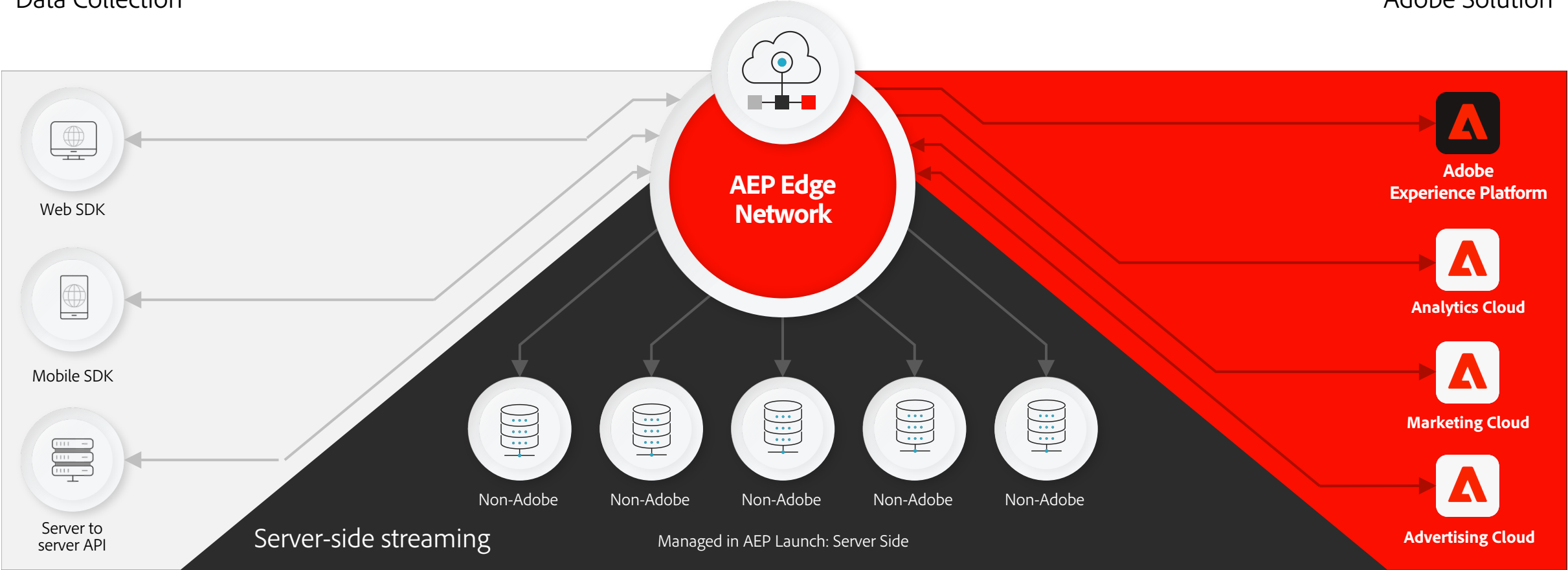
Form values

(empty)

Adobe Data Collection

Data Collection

Adobe Solution



AEP SDK's Feed the Adobe Experience Platform

Data Ingestion

- Using schemas to layout and validate the data



Catalog

- Dataset repository, Batches, Streams
- Representation of the logical data in AEP, tying a data set to a schema
- Library of Schemas



Segmentation

- Audience creation
- Enables personalization & activation



Real-time Customer Profile

- Creating a merged customer view based on multiple data fragments



References

XDM

- <https://experienceleague.adobe.com/docs/experience-platform/xdm/>

Adobe Experience Platform Launch Server Side

- <https://experienceleague.adobe.com/docs/launch/using/server-side-info/server-side-overview.html?lang=en#server-side-info>

Adobe Experience Platform Web SDK

- Documentation: <https://docs.adobe.com/content/help/en/experience-platform/edge/home.html>
- Source Code: <https://github.com/adobe/alloy/>

Adobe Experience Platform Edge Network Mobile SDK

- Documentation: <https://aep-sdks.gitbook.io/docs/v/AEP-Edge-Docs/>
- iOS SDK source code: <https://github.com/adobe/aepsdk-edge-ios>
- Swift sample app: <https://github.com/adobe/aepsdk-sample-app-ios/tree/main/Swift>
- Android sample app: <https://github.com/adobe/aepsdk-sample-app-android>

