



adaptTo()

EUROPE'S LEADING AEM DEVELOPER CONFERENCE

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Apply Scoring within the Adobe Experience Platform

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Your host



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- Since 2020 at diva-e
- Profession: Analytics, AEP & Target

Agenda

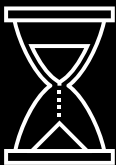
1. Introduction RFM Score
2. Introduction Adobe Experience Platform
3. Hands-On

Introduction RFM Scores

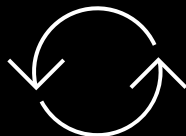
Introduction RFM Scores

- RFM stands for “**R**ecency”, “**F**requency” and “**M**onetary”
- Scoring calculation: Quintiles (five “buckets”) of the values of...
 - Recency – Recent visit
 - Frequency – Number of visits within a defined time period
 - Monetary – Generated monetary value
- Main purpose: Simple indicator for the value of a customer (user)
- *Disclaimer: Even though RFM scoring is a widely known method among marketers there are plenty of variants and discussions*

Introduction RFM Scores



Recency



Frequency
(within last 30 days)



Monetary

Score 1 to 5
(*Quintiles of the values*)

Score 1 to 5
(*Quintiles of the values*)

Score 1 to 5
(*Quintiles of the values*)

Example: 4

Example: 2

Example: 3

Combined Score:

Example: 43
(*4 & (2+3)/2*)

Introduction RFM Scores

- A common RFM Score classification





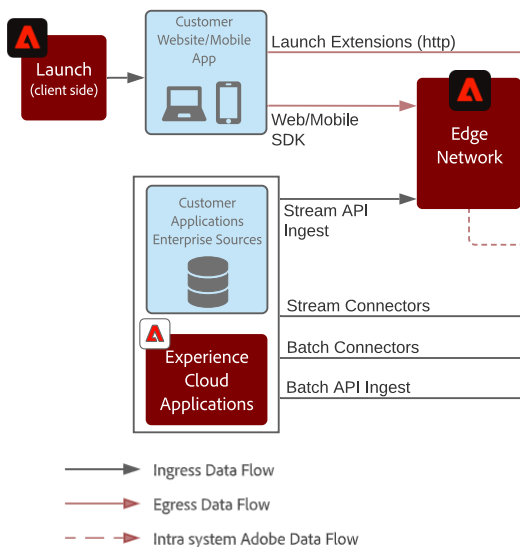
Introduction Adobe Experience Platform

Introduction Adobe Experience Platform

- Adobe Experience Platform (**AEP**) described as Customer Data Platform (**CDP**) solution from Adobe
- CDP = Platform for stitching data from multiple sources into one (customer) profile by available identifiers for **analysis**, **calculation** or **activation** purposes
- Adobe in-house development
- Adobe plans / uses AEP as the underlying architecture for most Adobe Experience Cloud technologies

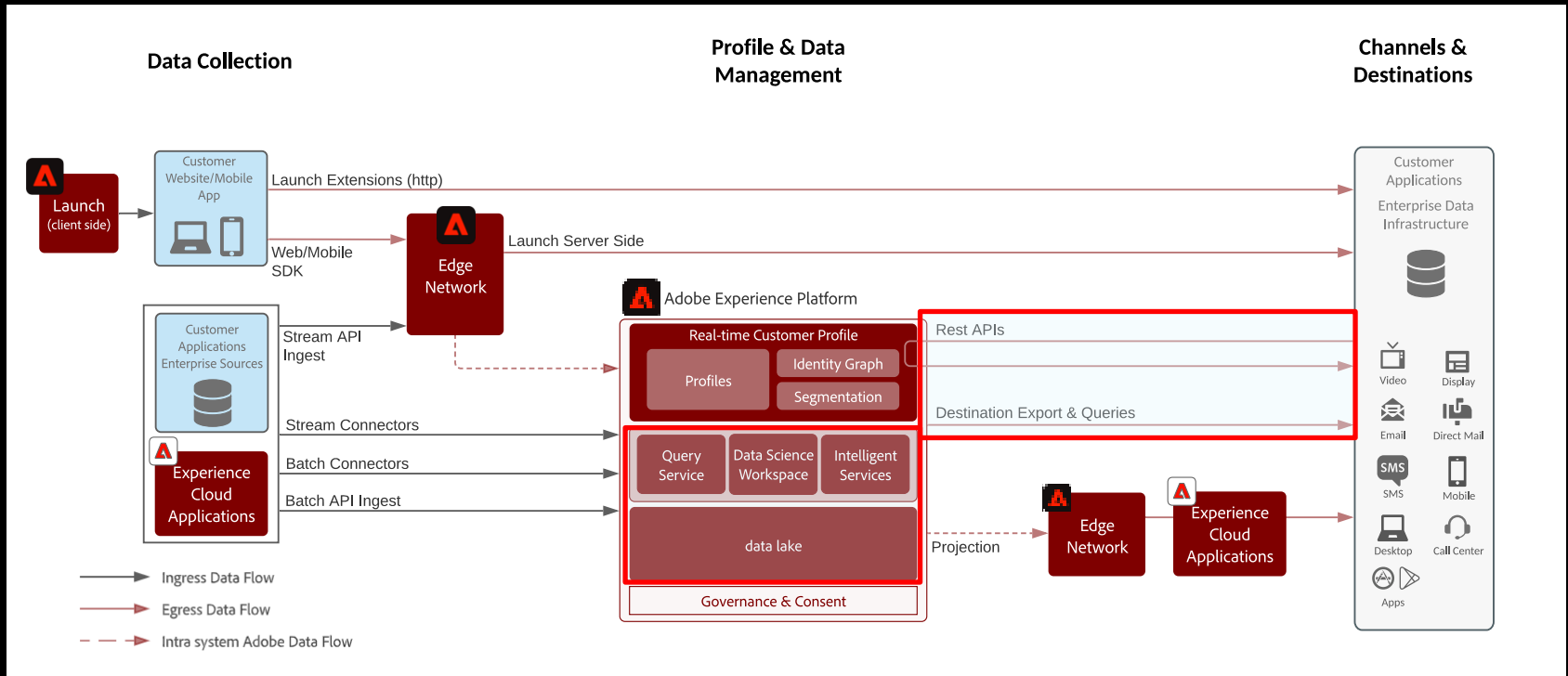
Introduction Adobe Experience Platform

Data Collection



Data lake = PostgreSQL

Introduction Adobe Experience Platform



Data lake = PostgreSQL

Hands-On

Data Basis

- Mockup Data (timestamp, visitor ID, monetary value)

	_spnam.dateTime	_spnam.adaptToID	_spnam.monetaryValue
0	2021-05-27T10:38:55.000Z	9951006429483	-
1	2021-05-27T10:38:57.000Z	7689838134355	191.77
2	2021-05-27T10:38:59.000Z	7118558766541	756.45
3	2021-06-19T14:12:20.000Z	8162847970089	-
4	2021-06-19T14:12:20.000Z	9642349765439	-
5	2021-05-31T00:16:05.000Z	8850888751970	-
6	2021-06-04T11:23:49.000Z	7233500407272	-
7	2021-06-02T10:37:56.000Z	8911820530191	-
8	2021-05-29T06:00:02.000Z	5878580149947	-
9	2021-06-21T01:17:35.000Z	3470423398314	-
10	2021-06-16T00:42:23.000Z	6552366190473	-
11	2021-06-17T00:00:29.000Z	4994428003785	-
12	2021-06-22T16:32:05.000Z	5402342731637	-

Hands-On

Schemas

Schemas > **adaptto_rfm_input_schema**

Composition

Schema

- adaptto_rfm_input_schema**

Class **XDM ExperienceEvent** + Assign

Field groups **adaptto_rfm_fieldgroup** + Add

Identities

None

Relationships

None

Required fields

- _spnam.adapttoID**
- timestamp**
- _id**

Structure

Search schema

- adaptto_rfm_input_schema**
 - _spnam** | Object
 - adapttoID** | String
 - dateTime** | DateTime
 - monetaryValue** | Double
 - _id** | String
 - eventMergeld** | String
 - eventType** | String
 - identityMap** | Map
 - producedBy** | String
 - timestamp** | DateTime

Schemas > **adaptto_rfm_output_schema**

Composition

Schema

- adaptto_rfm_output_schema**

Class **XDM Individual Profile** + Assign

Field groups **adaptto_rfm_output_fieldgroup** + Add

Identities

Primary: **_spnam.adapttoID** | string

Relationships

None

Required fields

- _spnam.adapttoID**

Structure

Search schema

- adaptto_rfm_output_schema**
 - _repo** | Object
 - _spnam** | Object
 - adapttoID** | String
 - RFMScore** | String
 - _id** | String
 - createdByBatchID** | String
 - modifiedByBatchID** | String
 - personID** | String
 - repositoryCreatedBy** | String
 - repositoryLastModifiedBy** | String

Hands-On

Scoring with AEP Query Service

Four SQL Statements

1. Final Output into Target Dataset
2. RFM Output
3. RFM Score Calculation
4. Interim Calculation



Four SQL Statements

```
-- Final Output into Target Dataset  
---CREATE TABLE adaptto_rfm_output_dataset WITH  
(schema='adaptto_rfm_output_schema', rowvalidation='false') AS  
---INSERT INTO adaptto_rfm_output_dataset
```



Four SQL Statements

```
-- RFM Output
SELECT
    STRUCT(adapttoID AS adapttoID,
           CONCAT(RScore,FMScore) AS RFMScore
    ) AS _spnam

FROM
```

Four SQL Statements

```
-- RFM Score Calculation
(SELECT
    adapttoID,
    CASE
        WHEN (RValue / MAX(RValue) OVER ()) BETWEEN 0 AND 0.2 THEN '1'
        WHEN (RValue / MAX(RValue) OVER ()) BETWEEN 0.2 AND 0.4 THEN '2'
        WHEN (RValue / MAX(RValue) OVER ()) BETWEEN 0.4 AND 0.6 THEN '3'
        WHEN (RValue / MAX(RValue) OVER ()) BETWEEN 0.6 AND 0.8 THEN '4'
        WHEN (RValue / MAX(RValue) OVER ()) BETWEEN 0.8 AND 1 THEN '5'
        ELSE 'x'
    END AS RScore,
```

Four SQL Statements

```
CEILING ( (CASE
WHEN (FValue / MAX(FValue) OVER ()) BETWEEN 0 AND 0.2 THEN '1'
WHEN (FValue / MAX(FValue) OVER ()) BETWEEN 0.2 AND 0.4 THEN '2'
WHEN (FValue / MAX(FValue) OVER ()) BETWEEN 0.4 AND 0.6 THEN '3'
WHEN (FValue / MAX(FValue) OVER ()) BETWEEN 0.6 AND 0.8 THEN '4'
WHEN (FValue / MAX(FValue) OVER ()) BETWEEN 0.8 AND 1 THEN '5'
ELSE 'x'
END
+
CASE
WHEN (MValue / MAX(MValue) OVER ()) BETWEEN 0 AND 0.2 THEN '1'
WHEN (MValue / MAX(MValue) OVER ()) BETWEEN 0.2 AND 0.4 THEN '2'
WHEN (MValue / MAX(MValue) OVER ()) BETWEEN 0.4 AND 0.6 THEN '3'
WHEN (MValue / MAX(MValue) OVER ()) BETWEEN 0.6 AND 0.8 THEN '4'
WHEN (MValue / MAX(MValue) OVER ()) BETWEEN 0.8 AND 1 THEN '5'
ELSE '1'
END) / 2) AS FMScore
```

Four SQL Statements

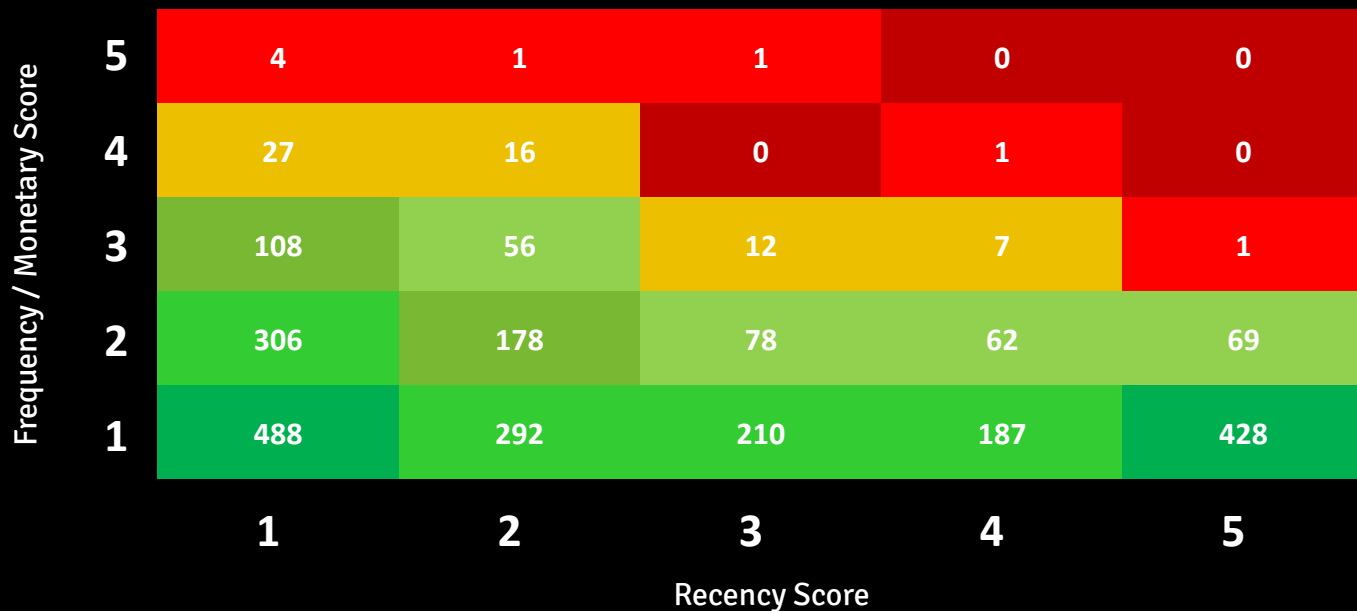
```
-- Interim Calculation
FROM (
SELECT
  _spnam.adapttoID AS adapttoID,
  MIN(DATEDIFF('2021-06-30T23:59:59Z',adaptto_rfm_input_dataset._spnam.DateTime)) AS Rvalue,
  COUNT(DISTINCT adaptto_rfm_input_dataset._spnam.DateTime) AS Fvalue,
  CAST(SUM(adaptto_rfm_input_dataset._spnam.monetaryValue) AS int) AS Mvalue

FROM adaptto_rfm_input_dataset

WHERE adaptto_rfm_input_dataset._spnam.DateTime > '2021-05-31T23:59:59Z'

GROUP BY _spnam.adapttoID));
```

RFM Score Example



```
POST 'https://platform.adobe.io/data/foundation/query/schedules'  
--header 'Authorization: Bearer {ACCESS_TOKEN}' \  
--header 'x-gw-ims-org-id: {IMS_ORG}' \  
--header 'x-api-key: {API_KEY}' \  
--header 'x-sandbox-name: {SANDBOX_NAME}' \  
--header 'Content-Type: application/json' \  
--data-raw '{  
  "query": {  
    "dbName": "<sandbox>:all",  
    "sql": "<SQL STATEMENT>;",  
    "name": "RFM",  
    "description": "RFM Scheduled Query."},  
  "schedule": {  
    "schedule": "0 0 12 * *",  
    "startDate": "2021-10-01T12:00:00.000Z"}}'
```

*Please note:
One line and no quotes*

Hands-On

Scores and AEP Profiles

Enable Schema & Dataset for Profile

Schemas > adappto_rfm_output_schema

Composition

Schema

adappto_rfm_output_schema

Class

XDM Individual Profile

Field groups

adappto_rfm_output_fieldgroup

Identities

Primary: _spnam.adaptoID | string

Relationships

None

Required fields

_spnam.adaptoID

Structure

Search schema

adappto_rfm_output_schema

- _repo | Object
- _spnam | Object
 - RFMScore | Short
 - adaptoID | String**
 - _id | String
 - createdByBatchID | String
 - modifiedByBatchID | String
 - personID | String
 - repositoryCreatedBy | String
 - repositoryLastModifiedBy | String

Schema properties

Display name

adappto_rfm_output_schema

Description

Description

Type

Schema

Profile

Created

7/20/2021, 12:42 PM

Last modified

8/9/2021, 1:18 PM

adappto_rfm_output_dataset

Name

adappto_rfm_output_dataset

Description

Dataset created as a result of query ser...

Dataset ID

60f6ad88a5bb051947da6dd2

Table name

adappto_rfm_output_dataset

Profile

Schema

adappto_rfm_output_schema

Source

Schema

Profile example

Profiles > Profile GkwUpkFmhSITp49sBw

Detail Attributes Events Segment membership

Profile using merge policy Default Profile

[View JSON](#)

ATTRIBUTE ↑	VALUE	PATH
adapttolD	8162847970089	._spnam.adapttolD
id	8162847970089	identityMap.adapttoid.0.id
RFMScore	21	._spnam.RFMScore



Thank you!
Any questions?