# AndesML - Integration Guide

AndesML is a SaaS product built using the cutting edge technology and machine learning to enable,

- e-commerce or marketplaces to monetize and optimize their digital space and thereby increase their net income
- brands or sellers to promote products or brands onsite through advertising campaigns, assuring them to reach right customers, at the right moment, with the right product, and thereby increase revenues and visibility

AndesML strives to minimize the workload for the Ecommerce/Marketplace while reducing the time for integration with any platform. The following are the touchpoints for integration with AndesML

1. Product Catalog
2. Sellers
3. Inventory
4. Price
5. Orders and returns
6. Ad Display

Data Integration

The following are the options for data integration

1. API Integration

We integrate with platform APIs

Or

Integrate your backend applications with our APIs

2. File transfer/Upload

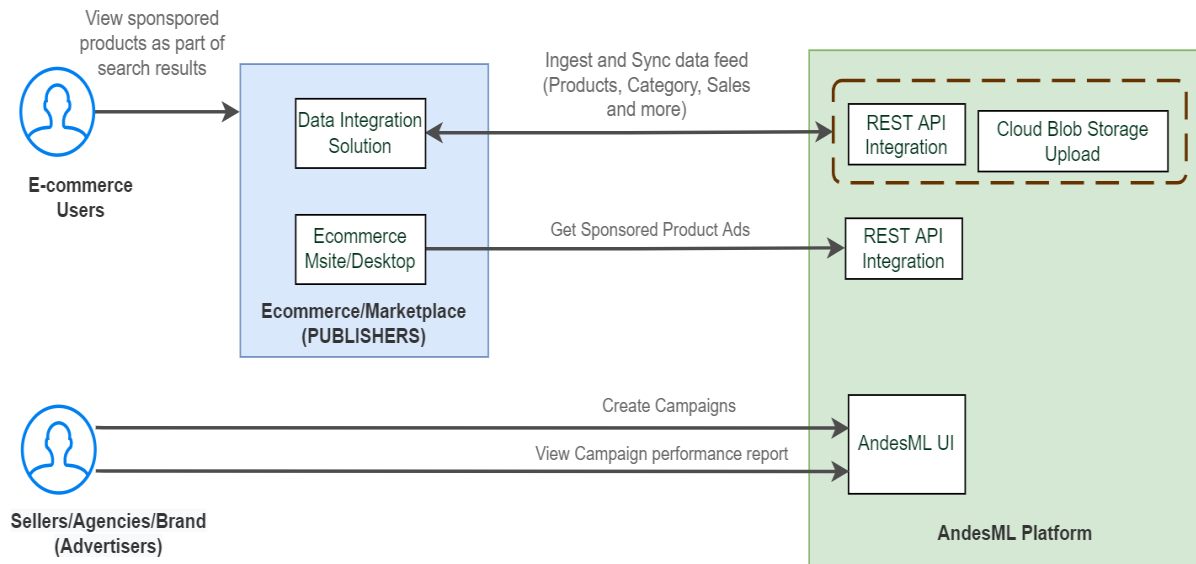Transfer/Upload the product feed in the CSV/XLS format

Ad Display

The AD impressions can be displayed on your platform in the following ways

1. Add AndesML Javascript/Typescript tag on all the relevant listing pages
2. Platform manages Ad rendering by calling AndesML Ad Serving API & Pixel Configuration

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## ❖ How does AndesML Works?



AndesML needs to ingest the data of catalog, inventory, pricing, and order/returns of the e-Commerce/Marketplace platforms and store those in a secure database. This data will be used for creating campaigns and rendering the sponsored ads on the platform's category listing page and search listing page

## Types of Ads

➔ Sponsored Ads (Products)
➔ Sponsored Brands (Banner/Display)

## ❖ Touchpoints of Integration with AndesML

AndesML has three main integration points.
1. Data ingestion and synchronization
2. Ad rendering on platforms
3. LDAP Integration (Coming Soon)

## 1. Data Ingestion & Synchronization

### 1.1 Syncing Data

AndesML needs the data for the following modules to render its ads with higher efficiency at a frequency of near real-time /batch uploads
1. Product Catalog
2. Sellers
3. Inventory
4. Pricing
5. Orders and Returns

Callouts:
1. Product data has to be shared at the SKU level. If the product is hierarchically modelled, the system would need the corresponding parent IDs reference for the same
2. The ads would be displayed on the website at the same product hierarchy level as the listing page of the retailer's website. It has to be defined at beginning of the integration itself
3. The product PDP URL has to be defined for the combination of the product and the seller if there is a possibility of multiple sellers selling the same SKU
4. The inventory of the product has to be shared at the granularity of the seller level if there is a possibility of multiple sellers selling the same SKU

## 1.2 Approaches for Data Sync

AndesML provides the following options for data sync

1.  File upload/transfer to AndesML storage
2.  API push to AndesML
3.  API pull by AndesML from e-Commerce application

## 1.2.1   File upload/transfer to AndesML storage

In this approach, the e-Commerce platform integrating with AndesML can drop the files in the SFTP location shared to them by AndesML itself. AndesML will pull the files and load them into the appropriate Databases
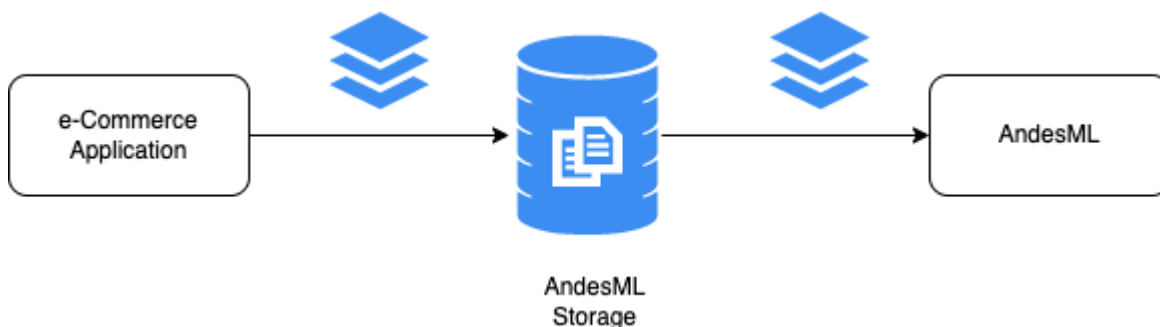


Callouts:

1.  File system location will contain 3 folders for every platform
    a.  Data - Location where the file is dropped
    b.  Error - Contains processed files with "_error"
    c.  Archive - Successfully proceed files will be archived
2.  The data processing in a file is non-atomic. i.e., partial failures will be allowed
3.  The file can be a quoted CSV or TSV file.
4.  The names of the files and their corresponding schema have to be shared at the beginning of the integration.
5.  The file of a specific entity should have a common base filename, with a timestamp appended to it in the format YYYYMMDDHH24MISS.
    E.g., the files for the product catalog should be as follows
    a.  Product_catalog_20220331223011.csv
    b.  Product_catalog_20220401123011.csv

6. When the files get picked by the job, they would be picked in the ascending order of the name of the file.
7. The AndesML job handles the Insert/Update/Upsert appropriately
8. The processed files would be archived and stored as per the retention policy

Advantages:
1. Easiest and better way to publish data to AndesML
2. Easier batch processing of all the files in a single attempt
3. No backend API integration. Hence this can be implemented without any changes to the existing code

Disadvantages:
1. This process cannot be a real-time job
2. Will need a feedback loop implemented to handle all the error scenarios

## 1.2.2   API Integration - Platform to call AndesML API

In this approach, the e-Commerce application has to call the APIs provided by the AndesML to post their data.
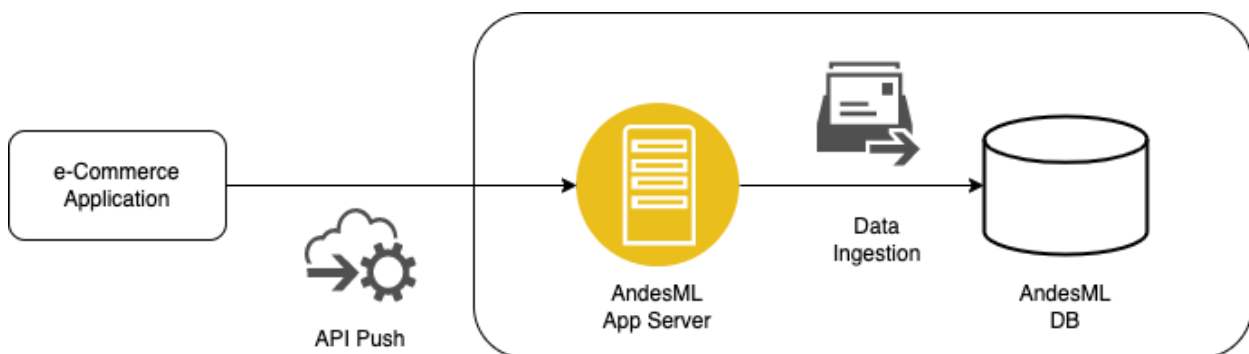


Callouts:
1. The APIs would be custom-built for the client to reduce the coding effort on the client's side.
2. The API request body cannot exceed more than 512 KB.
3. Appropriate error message to be shared in the response

4. All the APIs should send the authorization token issued for them in the request headers
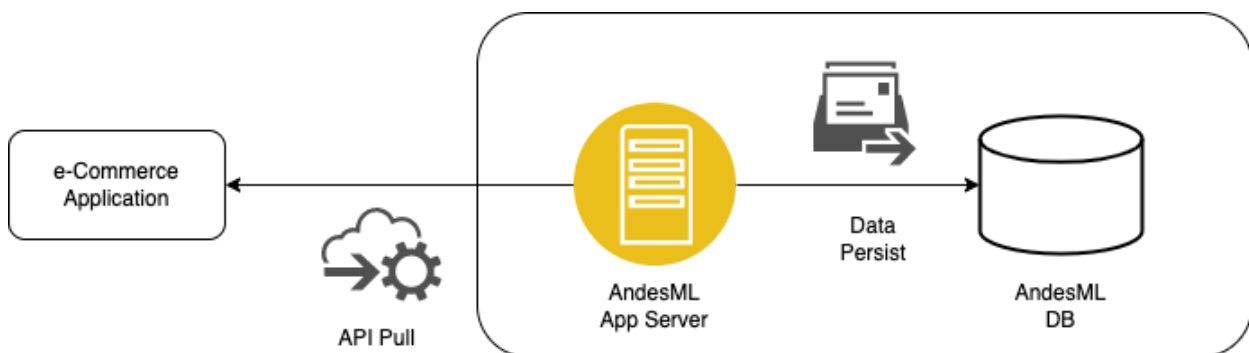
Advantages:

1. This approach is better for fast incremental updates
2. It can be used for near real-time changes

Disadvantages:

Require development on the platform side to integrate with AndesML

## 1.2.3   API Integration - AndesML to call your Platform API

AndesML also provides the option of pulling the data from the e-Commerce platform using the platform's APIs, provided there are APIs for all the entities needed, with all the mandatory fields available.

Callouts:

1. API should be available for AndesML to Integrate

Advantages:

1. Entire implementation can be done by AndesML team

Disadvantages:

1. Maybe a very delayed approach due to the rate limiters and available hours of the APIs.

## 2. Ad Serving Solutions

AndesML supports 2 approaches for integration to display ads on their ecommerce sites

1. Integration using Java Script provided by AndesML
2. Client Manages Ad rendering by calling AndesML Ad Serving API & Pixel Configuration

## 1. Integration using Java Script provided by AndesML
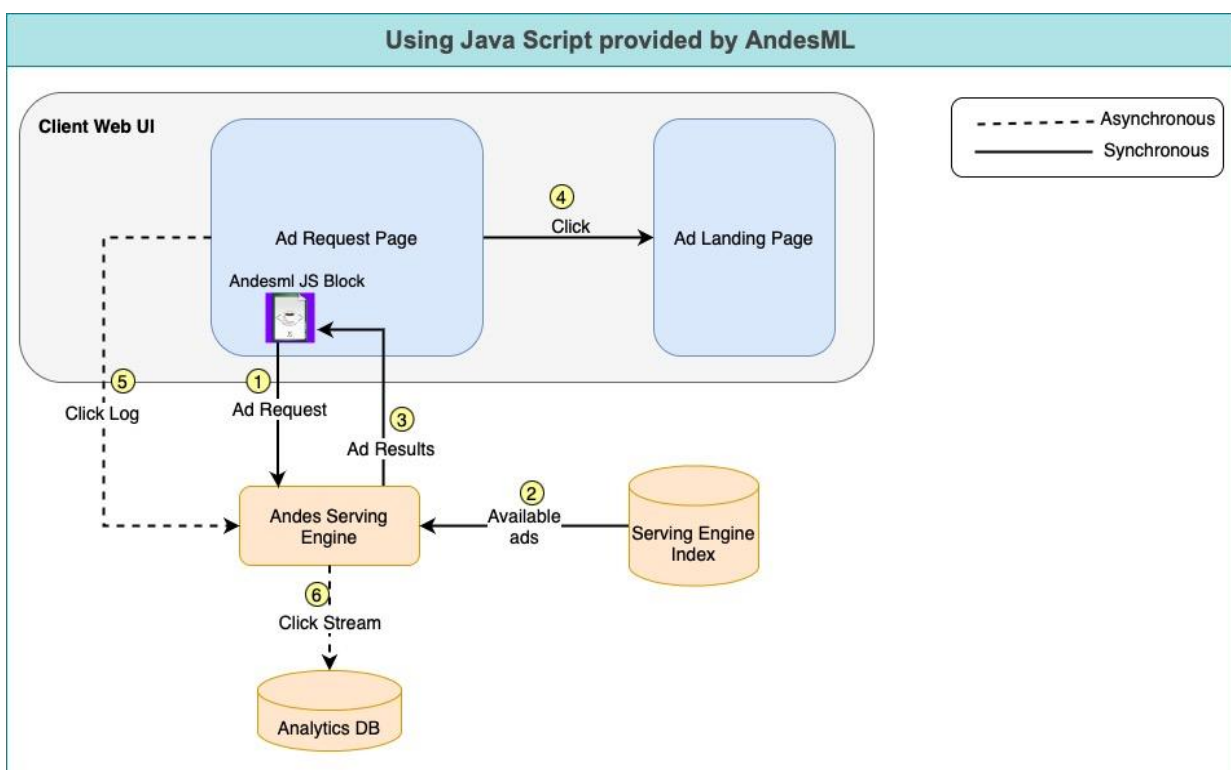


- Typically the best, for POC ensuring quick solution with faster results & development efforts
- Dedicated top slots for displaying the Sponsored Products
- In this approach, AndesML provides the HTML tag with a Javascript that e-Commerce have to just place on the appropriate listing pages
- Ads start showing up on all the appropriate pages in the designated areas as the campaigns get created and products get associated with them

Disclaimer: The ads and the organic search results would be listed in their designated sections, so there is a probability of result overlap between the two sections

## 2. Integration by calling Ad Serving API provided by AndesML
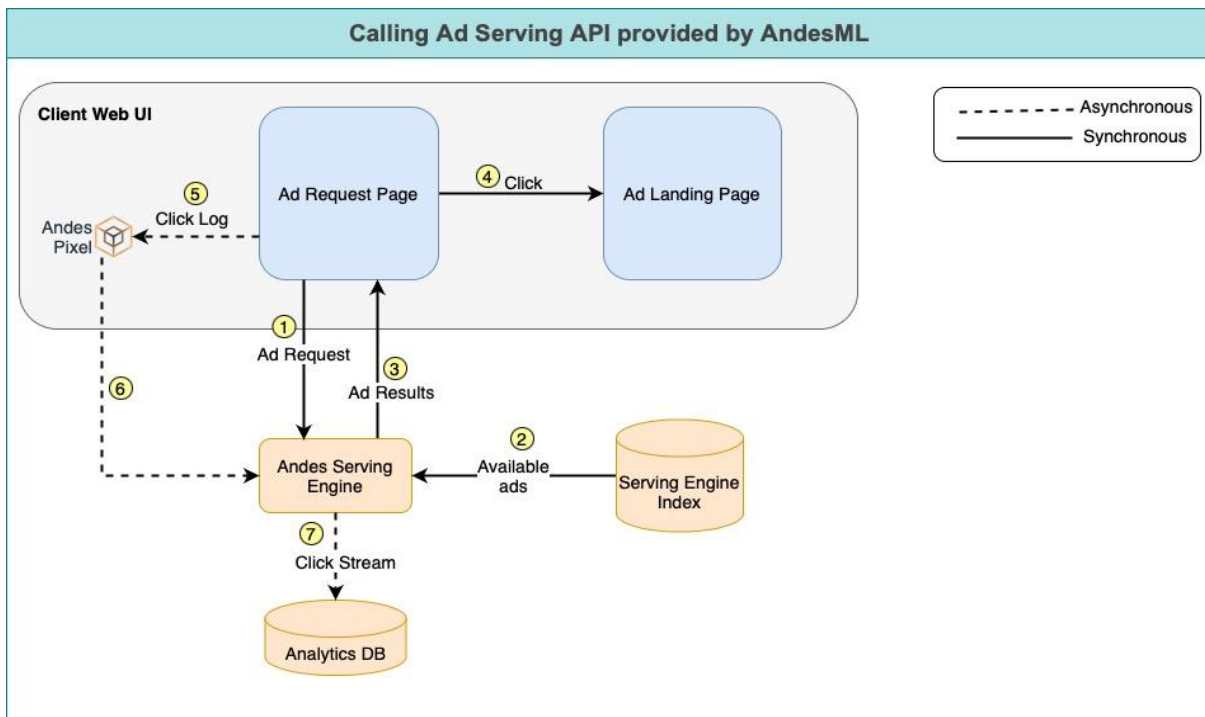


- e-Commerce platform gets flexibility or control on the products to be displayed on the category or search listing page for rendering ads
- Allows e-Commerce platform to merge sponsored products with organic search results
- For more details on development refer to appendix section A

## Testing the Integration

Preview Staging Environment: Marketplaces can integrate with AndesML's preview environment for testing the flow if they wish to test on a lower non-prod environment, before testing on production.

## ❖ Data Integration Solutions

### Vtex Adapter

AndesML has implemented an adapter to pull the necessary data via the APIs of VTEX. This approach can be used for any e-Commerce/Marketplaces that are running on VTEX
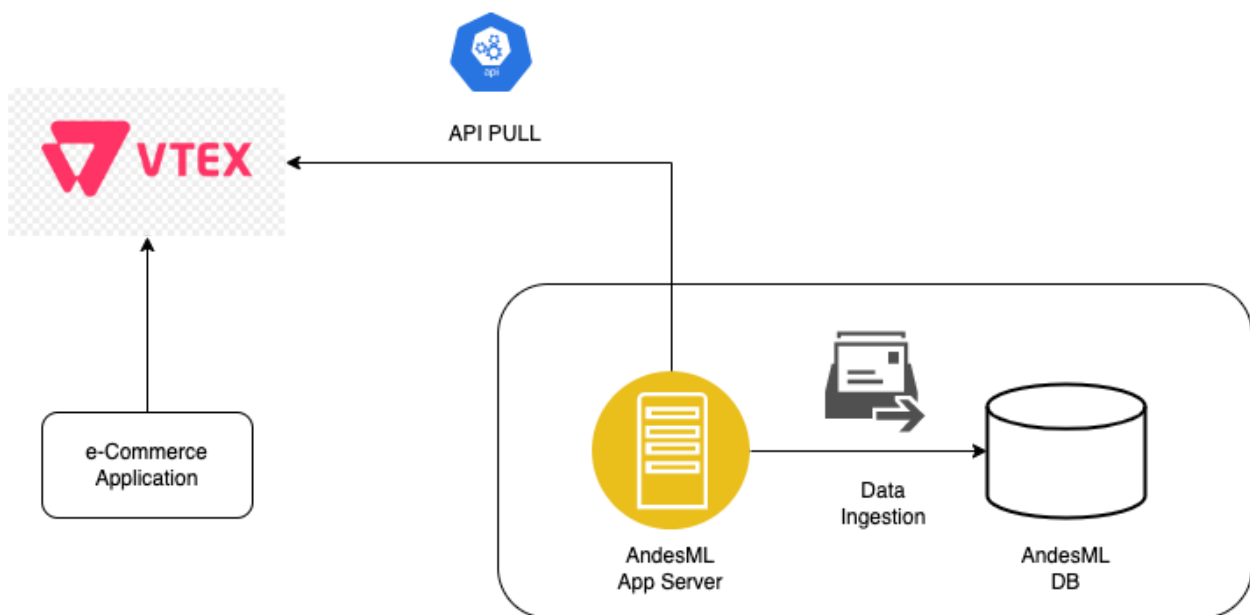
# Appendix

## Section A

Approach consists of major two actions to be performed by client side,
1. Making calls to Impression (ad serving) API from client server side
2. Add Pixel Tags on Frontend for andesml to track the ad clicks & manage user identity using cookie approach

**Step 1 :** Make Call to andesml Impression APIs through different pages like CLP & PLP with required parameters & headers(shared below). And use the response attributes for rendering the ads on Frontend

- APIs are authentication driven (will be shared by andesml)
  Authentication Type : 0Auth2.0
  Token Type : Bearer
  Grant Type : Client Credentials with Client ID, Client Secret , Access Token URL

- Make call to Impression APIs
  Client development team to implement the  UI code to call andesml API on respective target pages like  category Listing Page, Search Listing page & & use the response to display the ads on site
  <u>API Parameters</u>
  - andes_user_id: Andesml Pixel will help with this value. Its non-mandatory
  - total_results* : Its on client to request the no of sponsored products wish to display on that page slot
  - Mandatory Header attributes (will be shared by andesml)

- Important response attributes to be saved at client side
  - adId : advertisement ID
  - campaignId : Campaign ID
  - requestType : Type of page - Category or search listing page
  - categoryName : Category value been passed if CLP page rendered the ad
  - searchKeyword : Search value been passed if SLP page rendered the ad
  - productId : Product ID
  - adcost : Cost available in impression

**Step 2 :** Front end team to add below two GTM script tags that would help andesml to authenticate the client & add user identity in the browser cookie

    a.       Header tag : andesml Authentication

    b.       Body tag  : For Click event tracking

**Step 3 :** Frontend team to add below trigger , when user clicks on the Sponsored Ads to capture click event for andesml. **clickInfo attributes can be collected from Impression API response

**Step 4 :** Frontend team to add below trigger ,when user places an order(thank you page) to publish an event to andesml which would be used for Conversion tracking