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Introduction

This document defines the verification specification for the **Ixatria Age Verification System**. The system is designed to comply with regulatory requirements for age-restricted purchases by validating the age of a customer.

This document will define two primary API flows for age validation:

1. **Embedded Camera Flow:** A flow where the validation image is captured by an integrated camera, typically found in a dedicated vending or verification machine (e.g., a Vending Machine Controller, or VMC).
2. **Customer Phone Flow:** A flow where the validation image is captured using the customer's personal mobile phone.

Functionally, both flows achieve the same core objective: validating the customer's age against required criteria. However, their historical application and architectural characteristics differ:

- **Customer Phone Flow (Asymmetrical Message Flow):** This method is typically employed when a customer's phone is used for image capture. The information flow is **asymmetrical**,involving multiple steps and relying on communication between the mobile device, the service backend, and the vending device.
- **Embedded Camera Flow (Symmetrical Call):** This method is historically used when a single device (e.g., a VMC) provides both the hardware camera and the vending logic (e.g., deciding whether to dispense a purchase). This utilizes a **single, synchronous backend route** for the entire validation process.

The following sections will detail the architecture, data models, and API specifications for both verification flows.

Embedded Camera Flow

(Symmetrical Call)

This is a normal REST API call where the image data is provided at call time and the socket blocks until a response is provided.

Integrator Requirements

Integrators must implement the following requirements for this flow:

1. **Hardware:** The vending machine hardware must have an integrated camera capable of capturing a medium quality image.
2. **Image Parameters:** .The image needs to be either a base64 string or file sent using multipart/form-data, the file size limit is 5MB and the format should be either jpeg or png. Otherwise there are no requirements, but higher resolution will result in better accuracy.
3. **Response Handling:** Parse the age verification REST response received from the backend and apply the result in the MDB response or the device's firmware session logic.

Age Verification REST Call

POST /api/v1.0/verification/image

Age Verification REST Response JSON Structure

Name	Type	Description
success	boolean	If the OCR process was successful
reason	string	Error context on failure
age	number	The age detected in the ID image

Customer Phone Flow - recommended

(Asymmetrical Message Flow)

The Customer Phone Flow utilizes the customer's personal device for capturing the verification image. This flow is necessary when the vending machine or point-of-sale device does not have an integrated camera, or when a higher level of privacy and security is required by processing the image off-device. The process involves an asymmetrical communication pattern:

Customer Mobile => Ixatria Frontend/Backend => VMC / Ixatria MDB Client

Process Steps

- A session requires age verification.
- A QR code is provided to the customer (via sticker or integrated display).
    - The encoded URL encodes the unique device ID.
- Using our frontend the customer takes a picture of their ID.
- The image is sent to our backend for OCR.
- The OCRed age is sent to the embedded device (VMC or Ixatria MDB Client).

Note: In most cases, Ixatria uses a unique per session ID. It is encoded into a URL message payload and is the first message a device receives when connecting via SSE. This is the primary identifier we require / use. Age verification may optionally pass extra information depending on customer needs **but any extra info will not be used: eg: product, slot: session metadata etc.**

Integrator Requirements

Integrators must implement the requirements for this flow:

4. **QR Code Provision:** Display the age verification QR code (on a sticker or via integrated display) to direct the customer to the Ixatria frontend.
5. **Backend Connection:** The embedded device (VMC or Custom MDB Client) must connect to the Ixatria backend using an API key and listen for Server-Sent Events (SSE).
6. **Message Handling:** Parse the age verification message received from the backend and apply the result in the MDB response or the device's firmware session logic.

Note: Currently, age verification is done on a **session** basis. Ex: A customer selects > 1 items from a vending machine, at least one requires age verification, Ixatria verifies the age, and the controller (VMC) or custom MDC client then uses the response to **finish the session** with a success or failure.

Currently most vending machines in Europe and the USA are functionally separated so that either all of the products in a particular vending machine require age verification or none of them do.

Age Verification Response Message JSON Structure (Device ID) DEPRECATED

Name	Type	Description
successfulDetection	boolean	If the OCR process was successful
detectedAge	number	The age detected in the ID image

Age Verification Response Message JSON Structure (Session ID)

Name	Type	Description
success	boolean	If the OCR process was successful
reason	string	Error context on failure
age	number	The age detected in the ID image