CustomerOnboardingService Technical Documentation

Overview

The **CustomerOnboardingService** is the main entry point for onboarding new customers in a banking context. It coordinates the overall onboarding workflow by:

- Accepting customer identity details
- Delegating identity and AML verification to the **CustomerValidationService**
- Not performing its own validation or scoring logic
- Returning the result of the validation step and onboarding decision

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API Endpoint

POST `/`

Request Schema:

- `customerId` (string)
- `fullName` (string)
- `nationalId` (string)
- `birthDate` (date)

Response Fields:

- `onboardingStatus`: String
- `validationDetails`: Ob ject
- `timestamp`: ISO-8601

Common Error Patterns

1. HTTP 400 Bad Request

Symptoms:

- Malformed JSON or missing required fields

Logs:

```
Unset
ERROR  - Missing required input: customerId
```

Root Causes:

- Client sends incomplete or improperly formatted payload

Resolution:

- Validate all required fields are included and types are correct

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2. HTTP 404 Not Found

Symptoms:

- Endpoint returns 404

Logs:

```
Unset
WARN [platform-http] - No consumers available on endpoint:
platform-http:/
```

Root Causes:

- Camel route not active or incorrectly mapped

Resolution:

- Check YAML DSL route definition, ensure `path: /` matches actual request URL

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3. HTTP 500 Internal Server Error

Symptoms:

- Runtime failure during external service dependency failure

Logs:

```
Unset
ERROR [camel] - Error evaluating choice block:
java.lang.NullPointerException
```

Root Causes:

- Incorrect use of Camel Simple expressions (`random()` or string interpolation)
- Unexpected downstream error

Resolution:

- Add fallback logic for downstream errors

Log Interpretation Guide

Log Pattern	Meaning	Suggested Action
`Error calling downstream service`	Failed to call downstream service	Check URL, service availability

| `NullPointerException` | Incorrect JSON template or unquoted interpolation (unexpected error) | Check indentation and syntax |

Contact

For ownership or incident escalation, contact the Customer Onboarding Team via `#cust-onboarding-core` or log an issue in the `ONBOARDING-SVC` JIRA project.

OpenAPI Spec

```yaml
openapi: 3.0.0
info:
  title: Customer Onboarding Service
  version: 1.0.0
  description: >
    API to initiate customer onboarding by calling identity and AML
validation
    services. Returns a combined result with onboarding decision.

paths:
  /onboardCustomer:
    post:
      summary: Start onboarding process for a customer
      requestBody:
        required: true
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/CustomerOnboardingRequest'
```

```yaml
      responses:
        '200':
          description: Onboarding completed successfully
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/CustomerOnboardingResponse'
        '400':
          description: Bad request or malformed input
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/ErrorResponse'
        '422':
          description: Validation failure from downstream service
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/ErrorResponse'
        '500':
          description: Internal server error
          content:
            application/json:
              schema:
                $ref: '#/components/schemas/ErrorResponse'

components:
  schemas:
    CustomerOnboardingRequest:
      type: object
      required:
        - customerId
        - fullName
        - nationalId
        - birthDate
      properties:
        customerId:
          type: string
          example: "CUST-102938"
          description: Unique identifier for the customer
```

```yaml
      fullName:
        type: string
        example: "Alice Smith"
        description: Full legal name of the customer
      nationalId:
        type: string
        example: "XYZ987654"
        description: Government-issued national identity number
      birthDate:
        type: string
        format: date
        example: "1985-07-15"
        description: Customer's date of birth

  CustomerOnboardingResponse:
    type: object
    properties:
      customerId:
        type: string
        example: "CUST-102938"
        description: Unique identifier for the customer
      onboardingStatus:
        type: string
        enum: [ACCEPTED, REJECTED]
        example: "ACCEPTED"
        description: Final onboarding result
      validationDetails:
        type: object
        description: Results from identity and AML validation services
        properties:
          identityStatus:
            type: string
            enum: [VERIFIED, FAILED, REVIEW_REQUIRED]
            example: "VERIFIED"
            description: Identity validation result
          amlStatus:
            type: string
            enum: [PASS, FAIL]
            example: "PASS"
            description: AML screening result
```

```yaml
      timestamp:
        type: string
        format: date-time
        example: "2025-05-15T08:55:00Z"
        description: ISO-8601 timestamp of onboarding completion

  ErrorResponse:
    type: object
    properties:
      error:
        type: string
        example: "Validation Error"
        description: General classification of the error
      message:
        type: string
        example: "Customer matched the OFAC sanctions list."
        description: Detailed explanation of the error
      code:
        type: string
        example: "AML-VALIDATION-001"
        description: Application-specific error code
      timestamp:
        type: string
        format: date-time
        example: "2025-05-15T08:12:00Z"
```