

GTA Revenue Pulse Technical Specification

Operators Integration Guide

Introduction

This document provides implementation guidance for the **nationwide revenue collection system designed for Nigeria’s gaming industry**, referred to as **Revenue Pulse**. Revenue Pulse is a centralized compliance framework that enables regulators to track and validate gaming transactions across all licensed operators in Nigeria. Its purpose is to ensure transparency, accountability, and accurate reporting of revenue generated within the industry.

As part of your compliance obligations, operators are required to expose **compliance API endpoints** that will make user betting and operational data available for ingestion by Revenue Pulse. These endpoints must provide collated data on a **daily basis**—or in exceptional circumstances, on a **weekly basis** as approved. This document outlines the technical specifications, data models, and integration requirements necessary for successful implementation, ensuring that your systems remain fully compliant with national regulatory standards.

Assumptions

In order to achieve compliance with the Revenue Pulse system, the following **baseline assumptions** must hold true for all operators. If your internal systems do not currently meet these assumptions, they **must be implemented before integration**.

1. **Public IP Address Capture** – All online interactions with your gaming service must capture the user’s public IP address. This information is required as part of the compliance data set.
2. **Unique Wallet Identifier** – Every user account must be associated with a unique wallet identifier. This ensures accurate tracking and prevents data duplication.
3. **User Resident State** – Each user’s state of residence must be captured and reported using the official state codes listed in the Annex.
4. **User Full Name** – If full names are captured in your system, they must be included in compliance data. Where names are not captured, a **consistent placeholder** must be used (e.g., “John Doe” or “Jane Doe”). The placeholder must remain **constant across all compliance windows** to avoid ambiguity.

Failure to implement these assumptions will prevent compliance integration. Operators are therefore **mandated to meet these requirements as the first step in their compliance journey**.

Scope & Audience

This document is intended for the **technical teams of licensed gaming operators in Nigeria** who are responsible for system integration, data management, and regulatory compliance. It provides

the detailed requirements for exposing compliance API endpoints, structuring data payloads, and ensuring secure, verifiable transmission of betting and operational records.

The scope of this document is limited to the **technical implementation of compliance endpoints** for integration with the Revenue Pulse system. It does not cover business processes, financial reporting methodologies, or legal interpretations of compliance obligations. Instead, it focuses exclusively on the **data model, API structure, validation rules, and operational standards** required to meet regulatory expectations.

The following are the key stages to understand

1. Data aggregation
2. Data integrity and Verifiability (operations tag)
3. Data Windowing (daily or weekly)
4. Data Check
5. Data Model

Data Collation

Operators are required to collate all user betting activities on a daily basis, covering the period from **00:00 to 23:59** for each calendar day. The aggregated data must be made available via the compliance API endpoint to be pulled by our systems.

Required Data Points

The data payload must include the following fields for each bet record:

Field Name	Type	Required	Description
wallet_id	String	Yes	Unique identifier for the user's betting wallet.
user_fulname	String	Yes	User's full name as registered with the operator.
user_country	String	Yes	Two-letter country code (NG).
user_state	String	Yes	Two-letter state code (see Annex).
user_mobile	String	Yes	User's phone number in E.164 format (e.g., +2348012345678).
event_id	String	Yes	Identifier for the gaming event (as defined in the Data Model section).
event_type	String	Yes	The type of gaming event e.g. football, golf, etc.

event	Model	Yes	The JSON data object containing additional information about the game event.
total_odds	Float	Yes	Total odds associated with the bet.
total_stake	Float	Yes	Amount wagered by the user.
total_payout	Float	Yes	Payout amount for the event (0 if none).
ip_address	String	Yes	Public IPv4/IPv6 address at time of bet.
season	String	Yes	The year the gaming session took place.
bet_status	String	Yes	Must be either WON or LOST.
created_on	Date Time	Yes	Date and time of the event in ISO 8601 format.

Data Format

- HTTP Method: GET
- Response Format: JSON (UTF-8 encoded)
- Transport: HTTPS (TLS 1.2+)
- Authentication: Operator identifier
- Batch Size: Up to 10, 000, 000 records per request

Data Integrity & Verification (Operations Tag)

To guarantee the integrity and verifiability of submitted data, each collated batch of bets must be signed and tagged. This ensures that the data received from your compliance API endpoint is complete, untampered, and independently verifiable by external systems.

Process Overview

1. Hashing
 - The entire bets JSON payload only must be serialized in a canonical form:
 - UTF-8 encoding

- Sorted by creation data and time
 - No extra whitespace beyond standard JSON formatting
 - A SHA-256 hash is generated over this canonical JSON payload.
2. Encoding
- The resulting 32-byte SHA-256 hash must be encoded as a Base32z string (Crockford's human-friendly Base32 variant).
 - This encoded value is referred to as the Operations Tag.
3. Inclusion
- The Operations Tag must be included in the submission:
 - As a top-level field (**opt_tag**) in the JSON payload, and
4. Verification
- Regulators or external systems can reproduce the hash from the received payload and compare it against the supplied Operations Tag. A mismatch indicates data tampering or an invalid payload.

Field Definition

Field Name	Type	Required	Description
opt_tag	String	Yes	Base32z-encoded SHA-256 hash of the payload, used for verification

Step 1: Payload Serialization

Only the top-level JSON '**bets**' array data (green color) is to be serialized

```
{  
  ...  
  "bets": [  
    {  
      "wallet_id": "USR987654",  
      "full_name": "John Doe",  
      "state_code": "LA",  
      "stake_amount": 1000.00,  
      "payout_amount": 3500.00  
    }  
  ]  
}
```

Data Windowing

The **default data collation window** is **daily**. Operators must submit data covering **00:00 to 23:59** for each day. In exceptional circumstances where daily data cannot be generated (e.g., system downtime, force majeure), a **weekly window** may be temporarily allowed. This means that, by default, **all operators must make daily user betting data available** for compliance API collection.

Required Fields for Windowing

Field Name	Type	Required	Description
opt_date	Date Time	Yes	The date and time of the operation (i.e., when data was collated). Must use ISO 8601 format (e.g., 2025-09-05T23:59:59Z).
window	Integer	Yes	The window index: • For daily windows: day of year (1–365/366). • For weekly windows: week of year (1–52, ISO 8601 standard).
window_class	String	Yes	Must be "daily" or "weekly", depending on the reporting window.

Example (Daily Window)

```
{
  ...
  "opt_date": "2025-09-05T23:59:59Z",
  "window": 248,
  "window_class": "daily",
  "bets": [
    {
      "wallet_id": "USR987654",
      "event_id": "EVT20250905-001",
      "total_stake": 1000.00,
      "total_payout": 3500.00
    }
  ]
}
```

Compliance Notes

- The **daily window** is **mandatory** unless explicit approval is granted for weekly collation.

- Weekly collation is a **temporary exception** and must revert to daily as soon as the exceptional condition ends.
- Operators must ensure that `opt_date`, `window`, and `window_class` are **populated correctly** for every collation.
- Incorrect or missing window metadata will result in an annulled compliance.

Data Check

Operators must expose two **compliance API endpoints** to allow regulators to validate and pull collated betting data. These endpoints extend the operator's existing API structure.

Endpoints

1. Meta Check Endpoint

URL Structure:

```
https://{baseApiUrl}/compliance/metacheck/{nuance}
```

Call Frequency: Every **8 hours** (3 times per day).

Expected Response:

- Must return the **Operations Tag** of the most recent collated dataset.
- This enables regulators to verify whether new data is available without pulling the full dataset.

Example Response:

```
{  
  "nuance": 10245,  
  "opt_tag": "9h4z6t1r5p8k0w7x2y..."  
}
```

2. User Betting Data Endpoint

URL Structure:

```
https://{baseApiUrl}/compliance/userbetings/{nuance}
```

Call Frequency: Once for every collated dataset.

Expected Response:

- Must return a valid **JSON data object** containing the full dataset in the format outlined in the **Data Model** section.

Example Response (truncated):

```
{
  "nuance": 10245,
  "opt_tag": "9h4z6t1r5p8k0w7x2y...",
  "opt_date": "2025-09-05T23:59:59Z",
  "window": 248,
  "window_class": "daily",
  "bets": [
    {
      "wallet_id": "USR987654",
      "user_fulname": "John Doe",
      "user_state": "LA",
      "total_stake": 1000.00,
      "total_payout": 3500.00
    }
    ...
  ]
}
```

Nuance Handling

- **Nuance Definition:**
A **constant numeric value** uniquely associated with each operator.
- **Purpose:**
Used as a lightweight validation mechanism to confirm request authenticity.
- **Implementation:**

- Operators must include the same nuance value as a **URL parameter** and as a **top-level JSON field** in every response.
- The operator may choose to validate the nuance before returning a response.
- **Assignment:**
The regulator will assign a unique nuance value to each operator.

Compliance Notes

- The **Meta Check** endpoint must be available and respond within **700 milliseconds** to ensure timely verification.
- The **User Betting Data** endpoint must return the most recent collated dataset from the last completed window within **6000 milliseconds**. If an operator's system cannot meet this time requirement, the data collation may be split into 2–3 batches, ensuring no overlaps, as overlaps may count double against the operator.
- Any mismatch between the **Operations Tag** reported by `/metacheck` and the data returned by `/userbetings` will be flagged as a compliance violation.

Data Model

Operators **must implement and maintain** the following JSON data model. This schema represents the exact structure regulators will pull through the compliance API.

Compliance Requirement:

- Any deviation (e.g., malformed JSON, missing required fields, invalid types) will be treated as **non-compliance** for the respective reporting window.
- An **email notification** will be sent to the operator specifying the ingestion result.
- Operators must **fix and resubmit within the compliance window**. Persistent failures will be deemed a **deliberate attempt to avoid compliance**.

JSON Structure

```
{
  "nuance": 2025609812398610000,
  "operator": "Naija CollBet",
  "domain": "www.naijacoolbet.com",
  "year": 2025,
  "opt_tag": "bw4ogkry58ikqc4tgnjeg54hp466zii5xeyanu7aezxniw9gh9ho",
  "opt_date": "2025-09-05T12:02:09.5958659Z",
  "window": 5,
  "window_class": "daily",
  "bets": [
    {
      "wallet_id": "BTX8900",
      "user_country": "NG",
      "user_state": "LA",
      "user_fullname": "Joey Jacs",
      "user_mobile": "07035401400",
      "ip_address": "102.88.114.7",
      "season": "2025",
      "event_id": "ED3209993",
      "event_type": "football",
      "event": {
        "league": "Professional Development League",
        "fixture": "Ipswich U23 vs Coventry City U23",
        "location": "London"
      },
      "ticket": "7E9-162F6887",
      "total_odds": 14.03,
      "total_stake": 120,
      "total_payout": 1700.436,
      "bet_status": "Won",
      "created_on": "2025-07-28T17:12:13.163837Z"
    }
  ]
}
```

Field Specifications

Field	Type	Required	Description
nounce	Number (int64)	✓	Unique constant numeric identifier per operator (assigned by regulator).
operator	String	✓	Registered operator name.
domain	String	✓	Primary domain used by the operator.
year	Integer	✓	Reporting year.
opt_tag	String	✓	SHA-256 → Base32z encoded operations tag (see <i>Data Integrity</i>).
opt_date	Date Time	✓	Timestamp of data collation (UTC recommended). ISO 8601
window	Integer	✓	Daily → day of year (1–365/366). Weekly → week of year (1–52).
window_class	String	✓	Window classification. (daily, weekly)
bets	Array	✓	Collection of user bets.

Bet Object

Field	Type	Required	Description
wallet_id	String	✓	User's wallet/account identifier.
user_country	String	✓	User's country code. (ISO 3166-1 alpha-2)
user_state	String	✓	User's state of residence. (state code per Annex)
user_fullname	String	✓	User's full legal name. (<i>corrected from user_fulname</i>)

Field	Type	Required	Description
user_mobile	String	✓	User's mobile number (MSISDN format recommended).
ip_address	String	P	Public IP address tied to the event. Must be provided for all online activities.
season	Integer	✓	Season or gaming year.
event_id	String	✓	Unique identifier of the gaming event.
event_type	String	✓	Type of event (e.g., football, casino).
event	Object	✓	Event details (league, fixture, location).
ticket	String	✓	Unique bet/ticket identifier.
total_odds	Float	✓	Total odds of the bet.
total_stake	Float	✓	Amount wagered.
total_payout	Float	✓	Total payout (0 if lost).
bet_status	String	✓	Outcome of the bet. Won, Lost
created_on	Date Time	✓	Bet creation timestamp. (ISO 8601)

Annex

The following annexes provide reference information to support consistent implementation of the compliance endpoints. Operators should strictly adhere to these specifications when preparing and submitting data.

Annex A: Nigerian State Codes

Operators must use the official two-letter state codes offered by the Nigerian Federal Government when populating the `user_state` field. The table below is only a sample.

State	Code	State	Code
Abia	AB	Kebbi	KE

State	Code	State	Code
Adamawa	AD	Kogi	KO
Akwa Ibom	AK	Kwara	KW
Anambra	AN	Lagos	LA
Bauchi	BA	Nasarawa	NA
Bayelsa	BY	Niger	NI
Benue	BE	Ogun	OG
Borno	BO	Ondo	ON
Cross River	CR	Osun	OS
Delta	DE	Oyo	OY
Ebonyi	EB	Plateau	PL
Enugu	EN	Rivers	RI
Edo	ED	Sokoto	SO
Ekiti	EK	Taraba	TA
Federal Capital	FC	Yobe	YO
Gombe	GO	Zamfara	ZA