SurePay Webhook Integration — Expectations & Discussion Points

# 1. Goal

Allow SurePay to notify our School Payments System whenever a student makes a payment (UGX / USD). Our system will validate, enrich (map student\_id → school’s canonical ID), persist the payment, and sync to QuickBooks.

# 2. Webhook Endpoint

Production: POST https://<our-domain>/api/webhooks/SUREPAY  
Staging/UAT: POST https://staging.<our-domain>/api/webhooks/SUREPAY  
HTTPS only, TLS 1.2+

# 3. HTTP Headers (Required)

|  |  |  |
| --- | --- | --- |
| Header | Type | Description |
| X-School-Code | string | Unique school code we assign |
| X-Signature | string | HMAC-SHA256 of raw body with the school’s webhook secret |
| X-Timestamp | string | Unix timestamp or RFC 1123 Date (replay protection) |
| Content-Type | string | application/json |

# 4. Payload Contract

Minimum fields required:

{  
 "event\_id": "evt-1001",  
 "transaction\_id": "txn-2002",  
 "student\_id": "prov-001",  
 "amount": "250000",  
 "currency": "UGX",  
 "status": "SUCCESS"  
}

# 5. Responses from Our System

200 OK - {"status":"ok"}  
200 OK (idempotent) - {"status":"ok","idempotent":true}  
400 Bad Request - invalid payload/signature  
404 Not Found - no active SurePay account

# 6. Delivery Expectations

Retry on 5xx and 429 with exponential backoff. Do not retry on 400/404. Duplicate events are handled idempotently. Events may arrive out of order; we will update status accordingly.

# 7. Security

HTTPS (TLS 1.2+).  
HMAC-SHA256 signature required.  
Replay protection (5 minutes window).  
Optional IP allowlisting if SurePay provides outbound IPs.

# 8. Testing / UAT

SurePay to provide test payloads (SUCCESS, FAILED, PENDING, REFUNDED). We will provide staging endpoint + secret. Postman/cURL samples can be shared.

# 9. Asks to SurePay

1. Confirm units for amount (major vs minor).  
2. Confirm retry strategy (max attempts, backoff).  
3. Provide sample payloads for all statuses.  
4. Provide outbound IPs for staging/prod.  
5. Timeline for schema changes (notice period).  
6. Clarify if event versioning is supported.

# 10. Example Success Payload

{  
 "event\_id": "evt-2001",  
 "transaction\_id": "txn-5005",  
 "student\_id": "prov-009",  
 "amount": "150000",  
 "currency": "UGX",  
 "status": "SUCCESS",  
 "narration": "Term 2 Fees",  
 "payment\_channel": "MOMO",  
 "payer\_phone": "2567XXXXXXX",  
 "fee\_amount": "2000",  
 "settlement\_date": "2025-08-22T10:00:00Z",  
 "metadata": {"reference": "SP-2025-09-001"}  
}