

NexaMarket

Database Schema Documentation

v2.4.1 PostgreSQL 15 August 4, 2026

1 Overview

NexaMarket is a multi-tenant marketplace by **Nexa Inc.** handling customer accounts, merchant storefronts, product catalogs, order processing, payments, and inventory. All timestamps are `TIMESTAMPTZ`; soft deletes use nullable `deleted_at` with partial unique indexes. All monetary columns store integer cents.

6 tables | 4 enums | 12 FK | 18 indexes | ~20M total rows

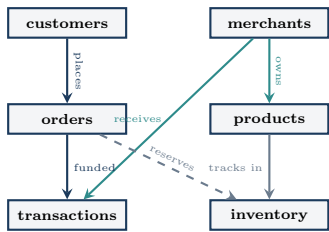


Figure 1: Dashed link via `order_items`.

2 Table Definitions

2.1 customers | ~2.1M rows

Column	Type	Constraints / Notes
id	BIGSERIAL	🔑 PK surrogate key.
external_id	UUID	🔑 UQ API identifier.
email	VARCHAR(255)	🔑 UQ Login; UNIQUE WHERE deleted_at IS NULL.
full_name	VARCHAR(150)	Display name.
password_hash	TEXT	bcrypt/argon2 digest.
phone	VARCHAR(20)	E.164, nullable; indexed.
default_currency	CHAR(3)	Default 'USD'.
email_verified_at	TIMESTAMPTZ	NULL until confirmed.
created_at	TIMESTAMPTZ	Default now(); indexed DESC.
updated_at	TIMESTAMPTZ	Auto-updated.
deleted_at	TIMESTAMPTZ	Soft-delete, nullable.

2.2 merchants | ~48K rows

Column	Type	Constraints / Notes
id	BIGSERIAL	🔑 PK surrogate key.
external_id	UUID	🔑 UQ Public storefront ID.
store_name	VARCHAR(200)	🔑 UQ Display name.
slug	VARCHAR(200)	🔑 UQ URL-safe; UNIQUE WHERE deleted_at IS NULL.
owner_email	VARCHAR(255)	🔑 UQ Contact / login.
payout_method	VARCHAR(30)	stripe wise bank.transfer.
payout_destination	VARCHAR(255)	Stripe acct ID or IBAN.
commission_bps	SMALLINT	Default 500 (5.00%).
status	VARCHAR(20)	pending active suspended closed.
created_at	TIMESTAMPTZ	Default now(); indexed.
updated_at	TIMESTAMPTZ	Auto-updated.
deleted_at	TIMESTAMPTZ	Soft-delete, nullable.

2.3 products | ~1.9M rows

Column	Type	Constraints / Notes
id	BIGSERIAL	PK surrogate key.
merchant_id	BIGINT	FK FK → merchants.id; indexed.
external_id	UUID	UQ Public identifier.
title	VARCHAR(300)	Indexed; GIN trigram (pg_trgm) for search.
description	TEXT	Markdown body.
category	VARCHAR(80)	Indexed; electronics fashion home ...
base_price_cents	BIGINT	Smallest currency unit.
currency	CHAR(3)	Default 'USD'.
is_digital	BOOLEAN	Default FALSE.
tags	TEXT[]	PG array for search.
created_at	TIMESTAMPTZ	Default now().
updated_at	TIMESTAMPTZ	Auto-updated.
deleted_at	TIMESTAMPTZ	Soft-delete, nullable.

2.4 inventory | ~4.3M rows

Column	Type	Constraints / Notes
id	BIGSERIAL	PK surrogate key.
product_id	BIGINT	FK FK → products.id; CASCADE.
sku	VARCHAR(64)	UQ Merchant-defined.
variant_label	VARCHAR(200)	e.g. 'Size L / Blue'.
quantity_available	INTEGER	Default 0; CHECK $i \geq 0$.
quantity_reserved	INTEGER	Pending-order hold; CHECK $i \geq 0$.
warehouse_location	VARCHAR(100)	Bin ref, nullable.
low_stock_threshold	INTEGER	Default 5.
created_at	TIMESTAMPTZ	Default now().
updated_at	TIMESTAMPTZ	Auto-updated.

2.5 orders | ~6.1M rows

Column	Type	Constraints / Notes
id	BIGSERIAL	PK surrogate key.
customer_id	BIGINT	FK FK → customers.id; RESTRICT.
external_id	UUID	UQ Customer-facing order #.
status	VARCHAR(20)	pending confirmed shipped delivered cancelled; indexed (partial WHERE pending).
subtotal_cents	BIGINT	Line items sum.
tax_cents	BIGINT	Default 0.
shipping_cents	BIGINT	Default 0.
total_cents	BIGINT	subtotal + tax + shipping.
currency	CHAR(3)	Default 'USD'.
shipping_address_id	BIGINT	FK FK → addresses.id; SET NULL.
placed_at	TIMESTAMPTZ	Default now(); indexed DESC.
updated_at	TIMESTAMPTZ	Auto-updated.

2.6 transactions | ~5.9M rows

Column	Type	Constraints / Notes
id	BIGSERIAL	PK surrogate key.
order_id	BIGINT	FK, UQ FK → orders.id (1:1); RESTRICT.
merchant_id	BIGINT	FK FK → merchants.id; RESTRICT.
external_id	UUID	UQ Payment reference.
provider	VARCHAR(30)	stripe wise paypal.
provider_txn_id	VARCHAR(255)	UQ Gateway ref; nullable; UNIQUE WHERE NOT NULL.
amount_cents	BIGINT	Total charged.
platform_fee_cents	BIGINT	Nexa cut.
merchant_payout_cents	BIGINT	amount minus platform-fee.
currency	CHAR(3)	Default 'USD'.
status	VARCHAR(20)	pending authorized captured refunded failed; indexed (partial WHERE pending).
captured_at	TIMESTAMPTZ	Populated on capture.
created_at	TIMESTAMPTZ	Default now(); indexed DESC.

3 Enumerated Types & Foreign Keys

order_status		pending, confirmed, shipped, delivered, cancelled			
merchant_status		pending, active, suspended, closed			
payout_method		stripe, wise, bank_transfer	txn_status		pending, authorized, captured, refunded, failed

Child	Column	Parent (On Delete)
products	merchant_id	merchants.id (CASCADE)
inventory	product_id	products.id (CASCADE)
orders	customer_id	customers.id (RESTRICT)
orders	shipping_address_id	addresses.id (SET NULL)
transactions	order_id	orders.id (RE- STRICT)
transactions	merchant_id	merchants.id (RESTRICT)

4 Representative Queries

Active listings

```
SELECT m.store_name, p.title, p.base_price.cents,
i.quantity_available
FROM products p
JOIN merchants m ON m.id=p.merchant_id
JOIN inventory i ON i.product_id=p.id
WHERE p.deleted_at IS NULL
AND m.status='active'
AND i.quantity_available>0
ORDER BY p.created_at DESC LIMIT 50;
```

Daily revenue (30d)

```
SELECT DATE(captured_at) AS day,
COUNT(*) AS txn_count,
SUM(amount_cents) AS gross,
SUM(platform_fee_cents) AS revenue
FROM transactions
WHERE status='captured'
AND captured_at>=now()-INTERVAL '30d'
GROUP BY day ORDER BY day DESC;
```

Low-stock alert

```
SELECT p.title, i.sku,
i.quantity_available, i.low_stock.threshold
FROM inventory i
JOIN products p ON p.id=i.product_id
WHERE i.quantity_available
<=i.low_stock.threshold
AND p.deleted_at IS NULL
ORDER BY i.quantity_available ASC;
```

Migration v2.4.1

- `inventory.low_stock.threshold` added (default 5).
- `provider_txn_id` made nullable; partial unique index.
- GIN trigram index on `products.title` (pg-trgm).
- All timestamps migrated to `TIMESTAMPZ` in v2.3.0.
- Monthly partitioning for `customers` and `orders`.