



This guide demonstrates the AI-native P2P settlement flow:
listing USDT for sale, matching with a buyer, escrow lock,
fiat payment with automated verification, and escrow
release. No manual "Confirm" button — the Settlement
Engine verifies payment via API/webhook.

BigT.AI — P2P Settlement — Cross-Rail Swap with AI
Verification

1. Dashboard Overview

The P2P dashboard shows all active swaps with their current status, rate, and transaction references.

P2P Settlement

Cross-rail asset swaps with automated AI verification.

swap-7713218813390e79

Expired

50 USDT ⇄ **50.5 USD**

Escrow: 0x122a2abca4...

► Timeline

swap-860e4fe1f6fdb975

Completed

100 USDT ⇄ **101 USD**

Escrow:
0x929156fdeb...

PayPal: PAY-
FC89152FF0

► Timeline

swap-dd1a989e3062f767

Expired

50 USDT ⇄ **50.5 USD**

Escrow: 0x0221ba5b3c...

► Timeline

swap-591b39e73aff45b9

Completed

100 USDT ⇄ **101 USD**

Escrow:
0xf739c26a2c...

PayPal: PAY-
4636F6CA66

► Timeline

swap-...

Expired

The dashboard shows all active swaps with status, rate, and transaction references. Each card displays the swap ID, asset pair (e.g. 100 USDT ⇄ 101 USD), color-coded status badge, and expandable timeline.

2. Seller Lists USDT

Submit a DID-signed limit order to the Settlement Engine.

```
const signature = signPayload(
  { sellerDid, giveToken: "USDT", giveAmount: "100",
    giveChain: "ethereum", wantCurrency: "USD",
    wantAmount: "101", wantRail: "paypal" },
  sellerPriv,
);
```

The seller submits a signed limit order: sell 100 USDT for \$101 USD via PayPal. The Settlement Engine validates the DID signature. Status: ACTIVE. Order expires after validUntil.

3. Buyer Matches Order

Buyer submits a signed market order. Rate is locked at match time via CoinGecko oracle.

```
const signature = signPayload(
  { orderId, buyerDid, amount: "100" },
  buyerPriv,
);
```

The buyer matches the order with a DID-signed market order. The rate is locked via CoinGecko. Status: MATCHED. A unique swapId is created for the lifecycle.

4. Seller Locks USDT in Escrow

Seller deposits USDT into escrow. The Engine confirms after 12 blocks.

```
// On-chain: USDT.transfer(escrowAddress, 100e6)
const res = await fetch(`/api/p2p/swaps/${swapId}/transitions`, {
  method: "POST",
  body: JSON.stringify({ action: "escrow_lock", txHash, signature }),
});
```

The seller deposits USDT into escrow. The Engine polls Ethereum, waits 12 confirmations, and transitions to ESCROW_LOCKED. The buyer sees funds secured before sending fiat.

5. Buyer Sends Fiat via PayPal

Buyer sends USD via PayPal. The Engine monitors for incoming payment automatically.

```
const res = await fetch("/api/p2p/payments/send", {
  method: "POST",
  body: JSON.stringify({ swapId, paypalTxRef, amount: "101", currency: "USD", signature }),
});
```

The buyer sends USD via PayPal to the Engine's business account. No seller confirmation needed — the Engine verifies automatically. Status: PAYMENT_PENDING. 30-min timer starts.

6. Engine Auto-Verifies Payment

Key innovation: no human "Confirm" button. The Engine verifies payment programmatically.

```
const res = await fetch(`/api/p2p/swaps/${swapId}/transitions`, {
  method: "POST",
  body: JSON.stringify({ action: "verify", signature }),
});
```

The Engine verifies payment via PayPal API polling or webhook. Replaces Binance P2P's manual "Confirm" button. No seller can lie about non-receipt. Status: PAYMENT_VERIFIED.

7. Engine Releases USDT from Escrow

Once payment is verified, the Engine signs the escrow release. USDT is transferred on-chain.

```
const res = await fetch(`/api/p2p/swaps/${swapId}/transitions`, {
  method: "POST",
  body: JSON.stringify({ action: "release", txHash, signature }),
});
```

The Engine signs the escrow release. USDT is transferred from escrow to the buyer's wallet on-chain. Status: ESCROW_RELEASED.

8. Engine Payouts Seller

The Engine sends USD from its business account to the seller's PayPal.

```
const res = await fetch(`/api/p2p/swaps/${swapId}/transitions`, {
  method: "POST",
  body: JSON.stringify({ action: "payout", payoutRef, signature }),
});
```

The Engine sends USD to the seller's PayPal. Swap COMPLETED. Total time: ~3-5 minutes. All DID-signed, auditable.

9. History View

Completed, expired, and cancelled swaps are visible in the history page.

Swap History

Completed, expired, and cancelled swaps.

swap-7713218813390e79

50 USDT ⇄ **50.5 USD**

3 timeline · did:key:z6Mknoyo...

Expired

swap-860e4fe1f6fdb975

100 USDT ⇄ **101 USD**

6 timeline · did:key:z6Mknoyo...

Completed

swap-dd1a989e3062f767

50 USDT ⇄ **50.5 USD**

3 timeline · did:key:z6Mknoyo...

Expired

swap-591b39e73aff45b9

100 USDT ⇄ **101 USD**

6 timeline · did:key:z6Mknoyo...

Completed

swap-edadef685adf10cf

50 USDT ⇄ **50.5 USD**

3 timeline · did:key:z6Mknoyo...

Expired

swap-8f9e9be6118cd6d1

100 USDT ⇄ **101 USD**

6 timeline · did:key:z6Mknoyo...

Completed

The history page lists completed, expired, and cancelled swaps. Each entry shows the asset pair, final status, timeline steps, and party DIDs.

Comparison: Binance P2P vs AI Settlement

Complete Timeline

```
MATCHED      14:20:00  Rate locked: 1.0012
ESCROW_LOCKED 14:23:15  Tx: 0x7a9f...
PAYMENT_PENDING 14:24:00  PayPal: PAY-7f3c91
PAYMENT_VERIFIED 14:24:10  Auto-verified via webhook
ESCROW_RELEASED 14:24:30  Tx: 0x8b4d...
COMPLETED    14:25:00  Payout: PAYOUT-abc
```

Full Demo Flow

```
// 1. Seller submits signed limit order (POST /api/p2p/orders)
// 2. Buyer matches with signed market order (POST /api/p2p/orders/:id/match)
// 3. Seller locks USDT in escrow (POST .../transitions, action: escrow_lock)
// 4. Buyer sends fiat via PayPal (POST /api/p2p/payments/send)
// 5. Engine auto-verifies payment (POST .../transitions, action: verify)
// 6. Engine signs escrow release (POST .../transitions, action: release)
// 7. Engine payouts seller (POST .../transitions, action: payout)
// 8. Both parties see COMPLETED status on dashboard
```

Key difference from Binance P2P: **no seller "Confirm" button**. The Settlement Engine verifies payment programmatically — deterministic, auditable, instant.