

RAFFLE



Raffle Maniac: A Web3 Solution for Verifiable, Automated Prize Draws

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Raffle Maniac is a decentralized raffle platform built to redefine transparency, automation, and fairness in online prize draws. Designed and developed by Performix Business Services, the platform enables creators to launch verifiable raffles on-chain using NFT-based tickets and Chainlink-powered randomness.

Performix led the full-cycle development, encompassing smart contracts, automation logic, UX design, and operational readiness for mainnet deployment. The result: a secure, scalable, and provably fair platform ideal for community giveaways, brand activations, and reward-based campaigns.

Project Objectives

Performix was tasked with building a raffle ecosystem that:

- Eliminates bias through verifiable randomness (Chainlink VRF)
- Enables creators to launch raffles independently with transparent rules
- Supports automated winner selection and payout
- Delivers NFT-based ticket ownership and on-chain traceability
- Maintains audit-ready security and financial isolation between raffles

Core Architecture

Smart Contract Layer

- Raffle Engine (Raffle.sol)

Handles ERC-721 NFT ticketing, ticket validation, prize pool accounting, winner selection, and payouts. Includes full reentrancy protection and configurable safety mechanisms.

- Factory Contract (RaffleFactory.sol)

Deploys new raffles with constraints (e.g., one active raffle per creator), enforces minimum ticket prices, and applies a creation fee. Maintains systemic control and consistency.

- Chainlink VRF & Automation

- VRF (Verifiable Random Function): Generates tamper-proof randomness for winner selection.
- Automation: Periodically scans raffles to trigger draws, handle payouts, and reclaim unclaimed prizes without manual input.

RaffleManiac

Transparency and automation for decentralized raffles



METAMASK



WalletConnect

Technical Features

Category	Highlights
Ticketing	Each ticket is a unique ERC-721 NFT, ensuring immutable ownership and verifiable sales history.
Prize Accounting	Automatic fund splitting between prize pool and house cut at each sale.
Security	Reentrancy protection, validated user input, emergency pause controls, refund queue, and unclaimed prize recovery.
Transparency	Every raffle event (creation, ticket purchase, payout) is logged and publicly verifiable on-chain.
Automation	Chainlink Automation monitors raffles and executes upkeep (draws, payouts, and reclamations) autonomously.
Admin Console	Real-time management dashboard for fee withdrawal, raffle oversight, and system monitoring.

UX & Platform Design

Performix emphasized a clean, intuitive UX to make blockchain interaction seamless for non-technical users.

Key Screens

- **Create Raffle:** Intuitive form for setup with progress indicators and input validation

The screenshot shows a web application interface for creating a raffle. On the left is a sidebar with a 'Raffles' section containing 'Overview', 'Profile', and 'Create Raffle' (which is highlighted). Below 'Create Raffle' are 'Dark mode' and 'Light' toggle buttons. The main content area has a top navigation bar with 'Switch to Desktop', 'Welcome T', and 'Connect Wallet'. The 'Create Raffle' form is titled 'Basic' and includes a progress indicator 'Step 1 of 3' with a 'Next' button. The form has two input fields: 'Raffle name' and 'Description'. A hint text above the first field says 'Pick a catchy raffle name and add a short selling pitch.' The bottom of the sidebar shows social media links for 'Instagram' and 'Discord'.

Figure 1. Create Raffle — basic details entry

- **Overview Gallery:** Searchable list of active and ended raffles with real-time prize pools.

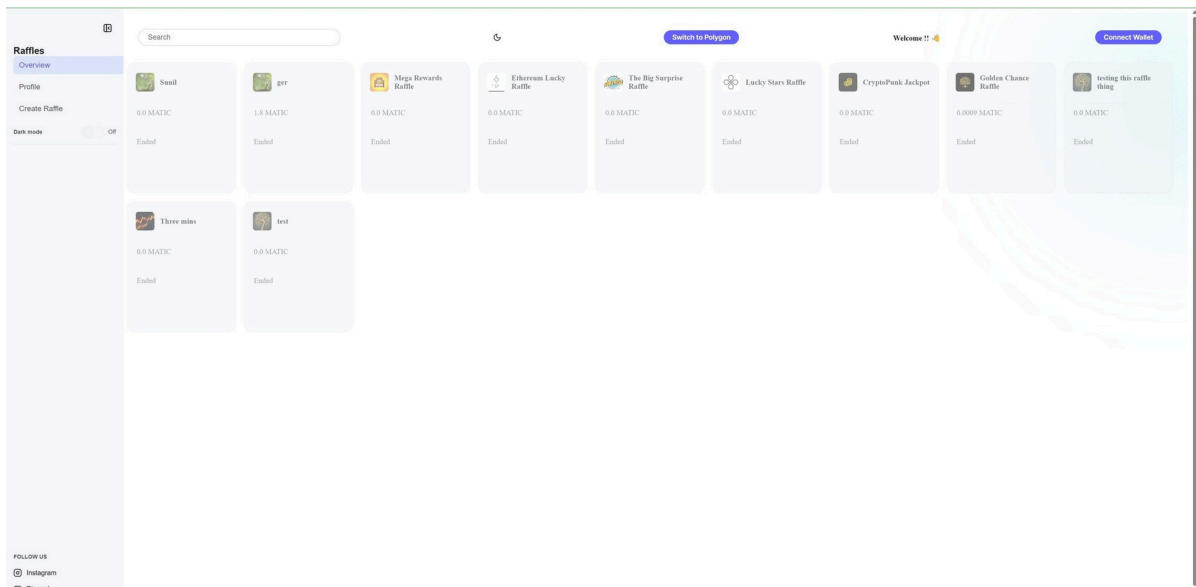


Figure 2. Overview Gallery—Displays active and ended raffles with their prize values, network prompts, and quick navigation.

- **Profile Page:** Displays raffles created, tickets owned, and transaction links.

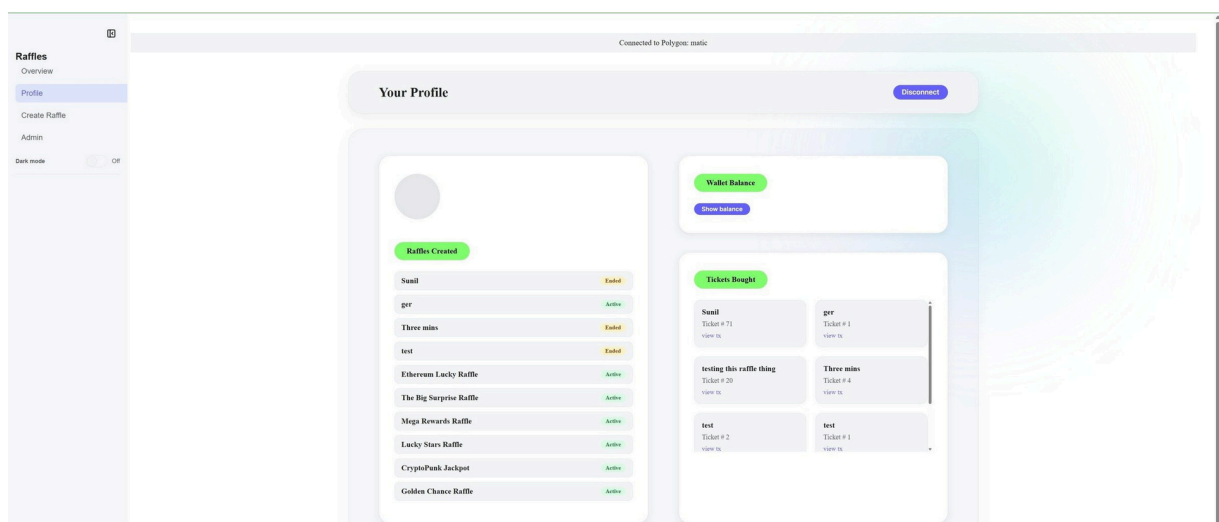


Figure 3: Profile — created raffles, purchased tickets, wallet balance.

- **Admin Dashboard:** Manages factory settings, system fees, and manual draw triggers.

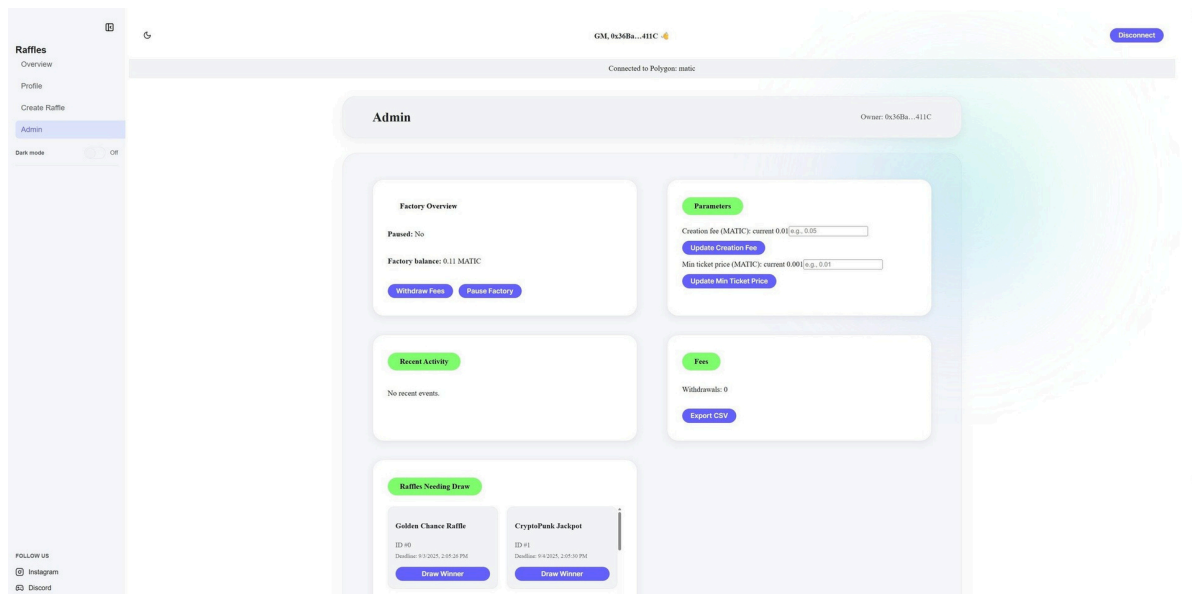


Figure 4: Admin — parameters, factory balance, draw-winner actions, CSV exports.

- **Wallet Connection:** Secure entry point via MetaMask or Wallet Connect with chain guidance.

Design Principles

- Glassmorphism UI for a polished Web3 aesthetic
- Auto-save for drafts and fault-tolerant session recovery
- Guided onboarding for wallet and gas fee understanding

Security & Fairness Framework

Performix implemented multiple layers of trust:

- **On-chain Prize Pool Isolation:** Only winner payouts are authorized.
- **Verifiable Randomness:** Chainlink VRF ensures immutable, unbiased results.
- **Fail-safe Recovery:** If automation fails, winners can claim manually within the claim window.
- **Operational Safeguards:** Multi-sig controls for factory parameters and fee withdrawals.

RAFFLE MANIAC FLOW CHART

CREATOR INITIATES RAFFLE.



CREATE RAFFLE VIA UI FORM



RAFFLEFACTORY SOL
DEPLOYS NEW RAFFLE



RAFFLE SOL
HANDLES, TICKETING
+ PRIZE POOL



PLAYER BUYS
NFT TICKET
TAN5/I317



CHAINLINK VRF
GENERATE RANDOM
WINNER



AUTOMATION TRIGGERS
DRAW + PAYOUT



WINNER RECEIVES PRIZE
UNCLAIMED PRIZES RECLAIMED

Deployment & Readiness

Performix ensured full deployment integrity through the following steps:

1. Deploy Raffle.sol and RaffleFactory.so
2. Configure Chainlink VRF (coordinator, subscription ID, gas, key has
3. Fund contracts with LINK for randomness and upkeep.
4. Register Chainlink Automation (150k–250k gas limit)
5. Seed and verify test raffles end-to-end
6. Integrate frontend UI with live contract events and admin APIs

The system passed comprehensive unit and integration testing using Hardhat, covering:

- Ticket sales and bulk purchase validation
- Refund and emergency pause handling
- Automation flows for draw, payout, and prize reclamation

Impact & Outcomes

Through this project, Performix demonstrated its ability to deliver enterprise-grade blockchain solutions with real-world usability.

Key achievements include:

- A fully decentralized raffle platform ready for production deployment
- End-to-end automation with minimal operational overhead
- Transparent and fair randomness powered by Chainlink
- Secure smart contract architecture with modular upgradability
- User experience tailored for both Web3 natives and newcomers

Conclusion

The Raffle Maniac project showcases Performix's expertise in bridging blockchain engineering and user-centric design.

By combining audited smart contracts, secure automation, and a refined UX, Performix successfully delivered a platform that embodies trust, transparency, and technological sophistication — setting a new benchmark for fair digital raffles.