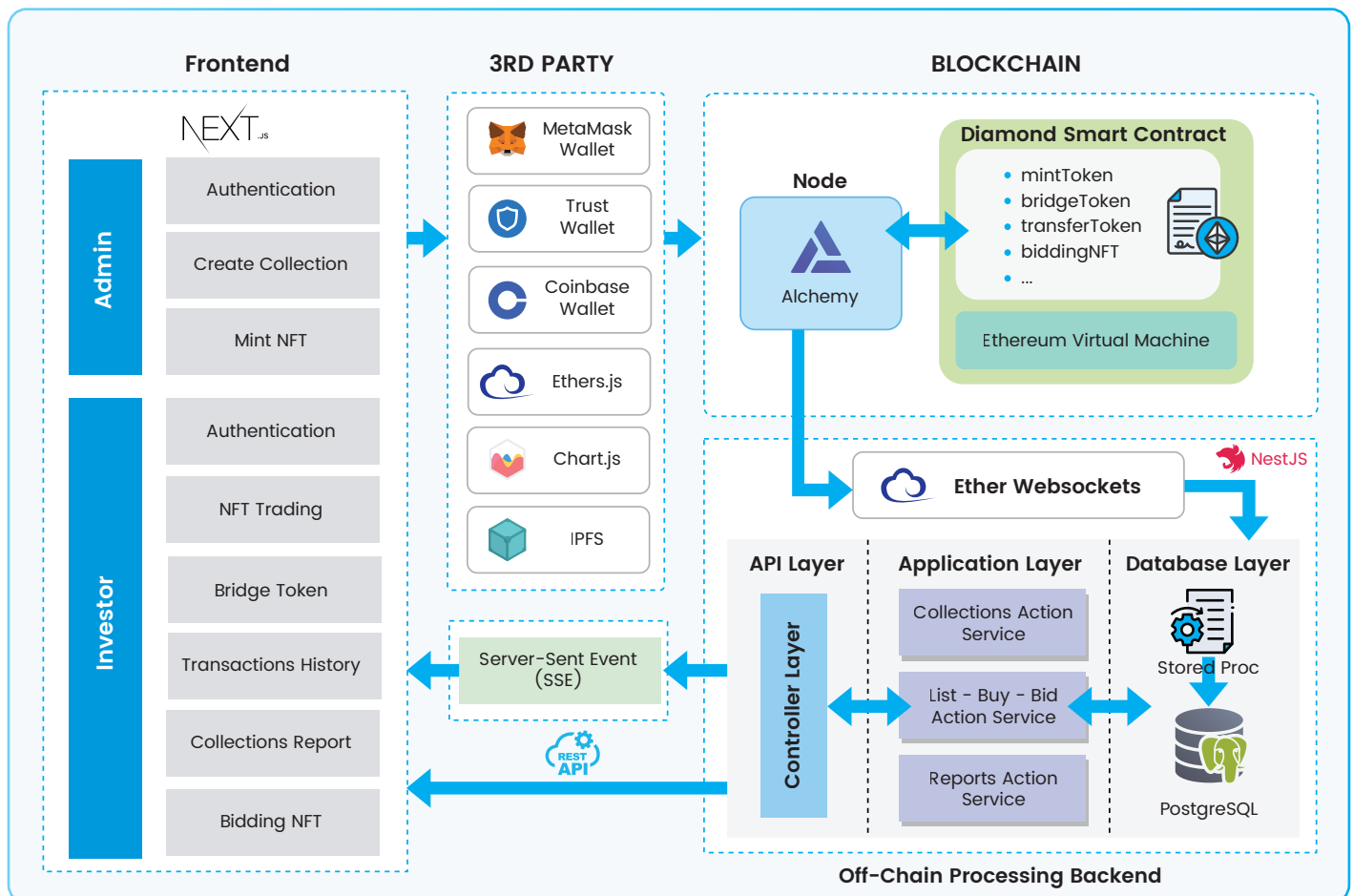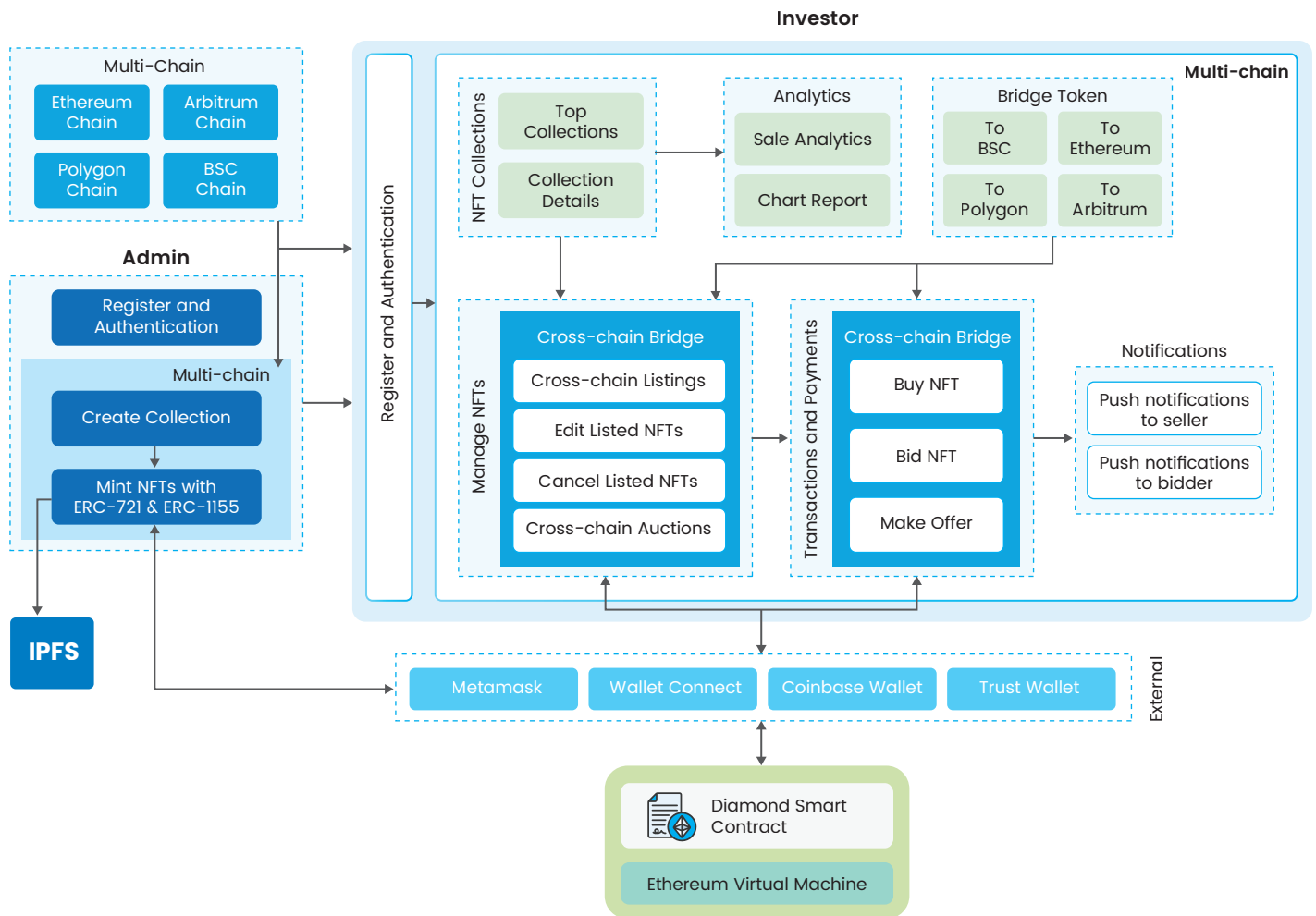# Web3 Powered NFT Marketplace Platform

Web3 NFT marketplace platform with Cross-Chain Bridge capability allows minting, trading, bidding and customizing NFTs on multiple blockchain networks

- ERC-1155 based Diamond Smart Contract
- Minting, Trading, Bidding NFTs
- Cross-Chain Bridge on Multiple Chains

- Minting process to allow users to mint their own NFTs on multiple blockchain networks
- Listing, Buying, Making offer and Bidding NFTs
- Cross-chain transfer of NFTs on multiple blockchain networks
- Co-ownership of an NFT using ERC-1155 smart contract
- Ability to customize NFTs
- Pre-defined reports for top NFT collections trading volume
- Push Notifications to traders

Investor

Multi-Chain
- Ethereum Chain
- Arbitrum Chain
- Polygon Chain
- BSC Chain

Admin
- Register and Authentication

Multi-chain
- Create Collection
- Mint NFTs with ERC-721 & ERC-1155

IPFS

Register and Authentication

Multi-chain

NFT Collections
- Top Collections
- Collection Details

Analytics
- Sale Analytics
- Chart Report

Bridge Token
- To BSC
- To Ethereum
- To Polygon
- To Arbitrum

Manage NFTs
Cross-chain Bridge
- Cross-chain Listings
- Edit Listed NFTs
- Cancel Listed NFTs
- Cross-chain Auctions

Transactions and Payments
Cross-chain Bridge
- Buy NFT
- Bid NFT
- Make Offer

Notifications
- Push notifications to seller
- Push notifications to bidder

External
- Metamask
- Wallet Connect
- Coinbase Wallet
- Trust Wallet

Diamond Smart Contract

Ethereum Virtual Machine

Frontend
NEXT.js

Admin
- Authentication
- Create Collection
- Mint NFT

Investor
- Authentication
- NFT Trading
- Bridge Token
- Transactions History
- Collections Report
- Bidding NFT

3RD PARTY
- MetaMask Wallet
- Trust Wallet
- Coinbase Wallet
- Ethers.js
- Chart.js
- IPFS

BLOCKCHAIN

Node
Alchemy

Diamond Smart Contract
- mintToken
- bridgeToken
- transferToken
- biddingNFT
- ...

Ethereum Virtual Machine

Ether Websockets

NestJS

Off-Chain Processing Backend

API Layer
Controller Layer

Application Layer
- Collections Action Service
- List - Buy - Bid Action Service
- Reports Action Service

Database Layer
- Stored Proc
- PostgreSQL

Server-Sent Event (SSE)

REST API

Benefits

Supports a diverse range of digital assets, including digital art, in-game items, music, videos, and more

Allows sellers to customize their NFT listings with detailed descriptions, images, and other media, enhancing the overall presentation of their assets to potential buyers

Boosts the NFTs liquidity with cross-chain transfer and fractional NFTs

Supports trading NFTs across different blockchain ecosystems

Deploys multiple tokens types in a single smart contract with ERC-1155

Allows creating non-fungible tokens as well as semi-fungible tokens

Supports batch transfers to reduce transaction cost

Technologies

BSC, Ethereum, Polygon, Arbitrum

Diamond Smart Contract, Ethereum VM

Token standards: ERC-1155, ERC-721, ERC-20, BEP-1155, BEP-721, BEP-20

MetaMask, Trust Wallet, Coinbase Wallet, WalletConnect

Ethers.js, Ether Websockets, Chart.js, Alchemy, IPFS

Solidity, Node.js, NestJS, Next.js, React

Server-Sent Events, Hardhat, wagmi

PostgreSQL

TMA solutions

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