MATT BRASSEY

Email: matt@brassey.io | LinkedIn: linkedin.com/in/MBrassey
GitHub: github.com/MBrassey | Website: brassey.io

SUMMARY

As Engineering Manager at Blueprint, I've designed and implemented a robust microservice architecture alongside a unified blockchain gateway. This gateway aggregates blockchain data from the individual microservices using both third-party APIs and blockchain nodes that I manage. It delivers accurate live and historical block, balance, staked balance, NFT balance and transaction data across 25+ unique blockchain protocols - all delivered through a standardized OpenAPI specification of my design. I built a hybrid blockchain infrastructure from the ground up to power these services, combining on-premises bare-metal server deployments, cloud-based node instances and third party RPC providers.

My current routine involves deploying, monitoring, upgrading & maintaining profitable mainnet validators and data rpc nodes across several L1's such as Avalanche, Ethereum, Algorand, Solana, Audius and Canton. Synchronizing and obtaining archival and structured historical blockchain data for our robust blockchain data api's. Integrating both local and third-party web3 APIs, managing chain data snapshots and implementing efficient indexing solutions. Additionally, I've developed custom Node Exporter and Grafana metrics for real-time visibility into key operational details such as peer count, block height, validator version, uptime, and resource utilization. I've created a custom ETH2 indexer utilizing Redis for bidirectional mapping between ETH1 deposit addresses and corresponding ETH2 validator public keys.

Previously, at a leading cryptocurrency exchange, I maintained over 200 cryptocurrency wallets, managed deposits, withdrawals, and address functionalities and integrated new layer 1 & 2 protocols. I was responsible for full-stack blockchain operations, database integration, node setup, and API server development primarily in NodeJS. Holding a Full Stack Web Developer Certification and a Certified Blockchain Architect credential, I'm deeply focused on Blockchain, Staking, Node/ Validator Operation, Smart Contracts, DeFi, and Web3, continuously advancing my knowledge and contributions to the decentralized technology renaissance.

TECHNICAL SKILLS

Code: Node.js, Next.js, JavaScript, React, TypeScript, Solidity, Hardhat, Truffle, Ethers.js, Web3.js, Bash, C#, and supplementary languages (augmented through AI tools).

Applications: Azure Data Studio, Azure DevOps, Claude, GitHub Copilot, Git, Grafana, NPM/Yarn, Docker, Remix, Slack/Teams/Discord, Vercel, Vim, Visual Studio, VS Code.

Core Protocols & APIs: Most EVM chains (Ethereum, Polygon, Avalanche, Arbitrum) & Layer 2s, L1 protocols (Solana, Cardano, Cosmos, NEAR), ZK chains (Aleo, zkSync), Algorand, Aptos, Bitcoin, Hedera, Tezos. Infura, Alchemy, RapidAPI, QuickNode, web3.js, ethers.js.

Contract Interaction: AAVE, Balancer, Chainlink VRF, PancakeSwap, SushiSwap, Uniswap.

Engineering Manager (2023 – 2025)
Blueprint, inc Remote **|** NYC, NY

As the lead for blockchain infrastructure at Blueprint, a <u>hivemind.capital</u> venture startup specializing in blockchain services, I've personally designed and built the entire backend for the flagship blockchain wallet portfolio and financial analytics product. I've orchestrated the creation and oversight of our comprehensive blockchain infrastructure, including the design, testing, and deployment of fleets of full nodes and profitable validators across multiple protocols. This includes automating installation and configuration processes and developing microservice APIs to expose blockchain data to our frontend applications. I've also driven substantial cost savings by migrating resource-intensive nodes, such as Solana and archival Ethereum, Avalanche & Algorand, from cloud-based solutions to bare-metal systems hosted in an on-premises datacenter, where I handle the physical setup and management of the network & servers.

Key Accomplishments:
- *Operation of profitable mainnet validators for several distinct L1's with $500m+ AUM.*
- *Automated several layer 1 & 2 blockchain node/validator setups and configurations.*
- *Synchronize several fleets of distinct node types from checkpoint, snapshot and genesis.*
- *Develop microservices to obtain live & historical data from various blockchain nodes.*
- *Built a unified blockchain data API gateway service architecture and openapi spec.*
- *Create and implement custom metrics for data visualization in Node Exporter / Grafana.*
- *Developed AWS launch templates for 10+ blockchain nodes with unique specifications.*

Senior Wallet Operations Engineer (2021 – 2023)
Bittrex, inc Remote **|** Seattle, WA

Highly performant Wallet Operations Engineer primarily responsible for maintaining wallet uptime within one of the world's largest cryptocurrency wallet infrastructures. Operating within a CI/CD pipeline, I contributed code that was deployed to production daily. My contributions were focused around Docker and JS/TS based implementations of blockchain node and wallet components with the occasional tweak to C# worker code. My workflow typically included in-depth research, dev environment testing, code approval and production deployment. I worked directly with coin dev teams and stakeholders across 250+ cryptocurrency projects to ensure key performance and uphold profitable business relationships.

Key Accomplishments:
- *Integrated native blockchains with multiple asset support, onboarded dependent assets.*
- *Closely monitored and prepared various blockchain components for hard-forks/updates.*
- *Frequently added or modified settings within MySQL databases to support new tokens.*
- *Wrote custom Alpine & Ubuntu Dockerfiles to install node/wallet software from source.*
- *Created specifications around fee structure and methods of interacting with blockchains.*
- *Performed funds swaps for tokens moving to mainnet or between various blockchains.*
- *Troubleshooting deposits and withdrawals by walking worker code in VS/VS Code.*

Operations Center Administrator (2015 – 2021)
Taos, an **IBM** company Remote **|** Culver City, CA

Lead Systems Administrator at Sony Pictures Entertainment via Taos/IBM (MSP). Participated in daily continuous integration of Ansible codebase. Responsible for the automation and success of monthly patching for over 900 Windows and Linux based systems. Recognized by staff for being a key component in the retainment of the term contract. Intense attention to detail with clear and concise communication across various teams. Critical thinking with the ability to balance personal experience with standard operating procedure under pressure to effect quick and logical solutions. Practice excellent, clean technical documentation skills on a daily basis.

Key Accomplishments:
- *Effective Contributor to Ansible Codebase via Github Enterprise.*
- *Maintain 98+% Security Compliance across over 900 Windows/Unix systems.*
- *Utilize automation technologies to deploy, patch and configure vms / instances.*
- *Develop script based solutions to simplify & automate administrative tasks.*
- *Developed robust documentation around debugging and testing software components.*

Systems Engineer (2013 – 2015)
FLEXTECHS On Site **|** Boise, ID

Configured and installed web servers, domain controllers, desktop nodes and network equipment for various endpoint locations. Headed physical bare metal datacenter deployments. Re-imaged Ubuntu and Windows *thinclients*, utilized apt, Zenworks and NAL commands to configure, install and update software.

Key Accomplishments:
- *Lead a team of technicians, triaging tasks and delegating work on a daily basis.*
- *Developed menu-driven bash scripts to automate spreadsheet & config file generation.*
- *Created Docker Containers to containerize web applications & setup auto-deployments.*
- *Maintenanced and upgraded physical server and network equipment at on site locations.*

Founder, CEO (2009 – 2013)
EcoServer, LLC Remote **|** Romoland, CA

I established a directly solar-powered website hosting platform by colocating server equipment in a solar-powered data center facility in Romoland, CA, integrating WHMCS & cPanel for VPS hosting deployment. I later sold this entity to Viridio. As a full-stack developer, I handled client applications from wireframing to building web applications to specifications, developed Docker containers for automated deployments via Dockerhub, GitHub, and Jenkins, and scripted automatic application backups.

Key Accomplishments:
- *Deployed physical bare metal server, security and networking infrastructure.*
- *Maintained full stack client applications utilizing HTML/CSS Javascript, PHP & MySQL.*
- *Developed, deployed and hosted front and back end applications to client specifications.*

Boise State University, Boise ID

- AAS in Computer Networking and Administration, credits transferred to UAT.

University of Advancing Technology (UAT), Tempe AZ

- Major in Network Security with a minor in Artificial Life Programming. Recruited for my first Engineering role before graduating.

Full Stack Software Developer: University of Arizona, Phoenix AZ

- A 24-week intensive program focused on computer science, web technologies and software development. Verify at: LinkedIn.

Blockchain Architect: The Blockchain Council

- Certification through examination and training. Verify at: Credential.net.

Blockchain Developer: Dapp University

- Solidity/React development, testnet/mainnet deployment. Verify at: LinkedIn.

Linux+ & LPIC Certified

- Verify at (Code: ZXBLYLREC3R159MJ): Verify.CompTIA.org.

OPERATIONS & PROJECTS

Algorand Participation Nodes | allo.info | allo.info | allo.info | allo.info
Audius Validators | 17 Validator Fleet
Avalanche Validators | avascan.info | avascan.info | avascan.info | avascan.info | avascan.info | avascan.info | avascan.info | avascan.info
Canton Validator | cantonscan.com
Chainlink Operator | github.com/MBrassey/chainlink
Ethereum Validators | beaconchain.io | beaconchain.io
- MEV boosted. Geth execution client, Prysm beaconchain client, Prysm validator client.
Solana Validator | solanabeach.io | solana.theblueprint.xyz

Base | base.brassey.io
- Web3 dashboard for Base L2 blockchain with comprehensive wallet connectivity including MetaMask, Coinbase, and WalletConnect.
-
ETH 2 Lookup | eth2lookup.vercel.app
- Bidirectional mapping between ETH1 deposit addresses and corresponding ETH2 validator public keys, enabling staked balance calculation against ETH1 addresses.

TossUp | MBrassey/toss-up | mbrassey-toss-up.on.fleek.co
- Fully decentralized betting platform using Chainlink VRF, Ethereum Smart Contracts, IPFS & React frontend, Solidity, Web3, Remix IDE, Jest, Truffle and Ganache.

waviii.io | MBrassey/waviii.io | waviii.io
- Fully Decentralized ERC-20 Token, Wallet, Exchange & Price Chart using RESTful APIs.

- React, Web3, Axios, JSX, Deployment: Heroku, GH-Pages & Fleek (IPFS).

RECOMMENDATIONS

"Matt has been an integral part of the Wallet Operations team for the last two years and has consistently demonstrated his ability to efficiently manage and maintain complex wallet infrastructure and integrate new blockchain projects. His strong technical knowledge allows him to implement innovative solutions and significantly improve our operational processes." - Artem Tarasov

"I worked with Matt for two years and it was an absolute pleasure. His work ethic set the bar for the team. He is an outstanding Blockchain Wallet Engineer. He knocked all of his assigned projects out of the park. He is excellent at writing clear and precise technical documentation. Last, but not least, he was always available to troubleshoot issues with fellow engineers no matter what his workload was like at the time." - Scott Sisco

"Matt is a hard worker and was able to produce great code in a neat and timely manner. His contributions to our projects were beyond valuable, he shows a great understanding of the technologies we used within our full stack web app." - Ryan Brown

"It was awesome to watch the project come together thanks to Matt's ability to translate wireframed concepts into reality, and deep knowledge of the technologies our app is built upon." - Matthew Ondrovic

CODING CHALLENGES

Algorand Coding Challenge: Fix The Bug!

View my correct solution & awarded NFT.

Successfully resolved a critical transaction bug in the Algorand blockchain environment that was preventing payment transfers.

Key Challenges:

- Diagnosed and fixed a "TypeError: Argument must be byte array" error in payment transaction code.
- Set up an Algorand development environment with AlgoKit, Docker, and Node.js.
- Implemented proper data encoding for blockchain transactions following Algorand SDK specifications.
- Demonstrated deep understanding of blockchain transaction fundamentals and debugging skills.
- Documented the solution process and shared knowledge with the developer community.