J Bret Edwards

Infrastructure Engineer & Cloud Architect

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SUMMARY

Infrastructure and cloud engineer with over a decade of experience supporting and building large-scale distributed systems at Amazon Web Services. Deep expertise in Linux systems administration, EC2 fleet operations, cloud architecture, and infrastructure automation. Patent holder for edge-computing architecture. Founder of JBE Computer Solutions LLC, delivering open-source infrastructure automation and consulting services.

EXPERIENCE

JBE Computer Solutions LLC
Mar 2022 – Present

Founder & Owner
Rockwall, TX

- Founded an infrastructure automation consultancy focused on open-source solutions and self-hosted alternatives to commercial cloud services.
- Architect and deploy bare-metal Kubernetes (k3s) clusters using Ansible, Traefik, cert-manager, MetalLB, and Longhorn for storage.
- Develop and maintain Go-based web services and automation tooling, deployed via Docker and Kubernetes with automated CI/CD pipelines on GitHub Actions.
- Deliver solutions across the full spectrum of deployment models — colocation, self-hosted, hybrid, and public cloud — drawing on experience managing hybrid infrastructures dating back to Rackspace (RackConnect + Rackspace public cloud) and continuing through AWS and current self-built AWS integrations (Route 53, Lambda, AWS SDK).
- Researching and prototyping Ethereum proof-of-stake node operation as a service (NOaaS) as a flagship product offering.

Amazon Web Services (AWS)
Aug 2018 – Feb 2022

Systems Development Engineer II
Dec 2020 – Feb 2022

Systems Development Engineer I
Aug 2018 – Dec 2020 | Seattle, WA

- Worked within the EC2 Fleet Health and Lifecycle Management organization (Host Quality team), analyzing host failure patterns and reboot events across millions of instances to drive systemic fleet improvements.
- Designed and maintained automated reporting systems providing VP-level visibility into EC2 fleet reliability, directly informing prioritization across EC2 product and hardware engineering teams.
- Drove cross-team engagement to resolve systemic hardware and software issues at scale, reducing fleet-wide failure rates.
- Wrote Go tooling to store and query results from an embargoed CPU validation sweep: hosts were partitioned off from production, tests executed across all CPUs, and per-host results (host ID, instance IDs, per-test pass/fail, and metadata) were written to DynamoDB tables for fleet-wide analysis.
- Invented edge-computing infrastructure architecture awarded as US Patent 11,363,113 (filed June 2020; issued June 2022).

Amazon Web Services (AWS) Apr 2015 – Aug 2018

Cloud Support Engineer II Oct 2016 – Aug 2018

Cloud Support Engineer I Apr 2015 – Oct 2016 | Greater Seattle Area

- Provided expert technical guidance to AWS customers — from startups to enterprise — on EC2, IAM, Linux systems, and cloud architecture best practices.
- Served as EC2 Linux subject matter expert and held an EC2 Support Operations role — an unofficial designation with elevated privileges acting as an intermediary between the support organization and EC2 service teams, fielding the most complex escalations from support.
- Served as Support Launch Point of Contact for new AWS service launches, coordinating technical readiness across internal teams.
- Conceived, built, and maintained a multi-region fleet of EC2 instances that gave the support organization direct access to troubleshoot the new EC2 Nitro system (introduced with the C5 instance family); coordinated IAM permissions and recruited engineers across regions to expand coverage — the infrastructure remained in active use for two to three years after transitioning to the SysDE role.
- Authored internal knowledge base articles, runbooks, and technical training materials adopted team-wide; developed slide decks and recorded training videos for ElastiCache and EFS across the global Linux CSE profile, and hosted an in-person multi-day ElastiCache summit in Seattle with engineers traveling from AWS support sites worldwide.

Rackspace Technology Sep 2013 – Apr 2015

Linux Systems Administrator

- Supported international enterprise customers managing complex Linux stacks: MySQL, Apache, Redis, Memcached, Nginx, Tomcat, and VMware ESXi.
- Implemented high-availability solutions using Red Hat Cluster Suite (RHCS) and administered OpenStack environments via nova/supernova client.
- Earned Red Hat Certified Engineer (RHCE) and Red Hat Certified System Administrator (RHCSA) certifications in RHEL 6.
- Built networking expertise in Link Aggregation (LAG/LACP), VLANs, and IPv6 in enterprise environments.

Fry's Electronics Jun 2006 – Jan 2007

Electronic Components Sales Associate Dallas, TX

- Advised customers on component selection, custom PC builds, and hardware troubleshooting while maintaining full-time enrollment in engineering coursework.

PATENTS

Dynamic micro-region formation for service provider network independent edge locations

US Patent 11,363,113 B1 · Inventor: J Bret Edwards · Filed: June 18, 2020 · Issued: June 14, 2022

CERTIFICATIONS

Red Hat Certified Engineer (RHCE) — RHEL 6

Red Hat Certified System Administrator (RHCSA) — RHEL 6

EDUCATION

Computer Science — Junior standing (no degree conferred) 2006 – 2010

The University of Texas at Arlington

TECHNICAL SKILLS

Languages	Go (Golang), Python, Bash, HTML/CSS, Java, C/C++
Cloud & AWS	EC2, IAM, EBS, S3, RDS, DynamoDB, ElastiCache, EFS, Lambda, CloudFormation, Route 53
Containers & Orchestration	Docker, Kubernetes (k3s), Helm, Ansible
Networking & Ingress	Traefik, cert-manager, MetalLB, VLAN, LAG/LACP, IPv6, DNS
Linux	Red Hat / CentOS, Ubuntu, Arch — administration, RHCS, OpenStack
Data & Web	MySQL, Apache, Nginx, Redis, Memcached, Tomcat, VMware ESXi
Hardware & Storage	Server hardware diagnostics & quality (EC2 fleet scale), disk subsystems (LUN/RHEL, RAID, NVMe, EBS, local storage), hardware failure analysis; performance tuning across networking, disk I/O, Linux kernel parameters, and system-level configuration
Tools	Git, GitHub Actions, SSH, CI/CD pipelines, DockerHub