

STEPHEN-MICHAEL BROOKS

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Senior Software Engineer (TS/SCI) with 7+ years of experience designing and delivering high-availability backend systems in AWS, Azure, and OCI. Proven track record of organizing work among engineers, architecting scalable solutions, and mentoring engineers. Adept at translating customer needs into technical requirements and delivering features that improve reliability, performance, and usability.

Seeking a senior or principal engineering position that blends deep technical ownership with opportunities for direct customer engagement. Interested in roles that involve designing scalable services, leading cross-functional initiatives, and collaborating closely with customers to shape product direction and ensure exceptional reliability.

PROFESSIONAL EXPERIENCE

Senior Software Engineer

Oracle, Seattle, WA

May 2024 – Aug 2025

- Led architecture and development of new control plane for OCI commercial and disconnected cloud service bridge, enabling visibility of specially approved observability information for uncleared OCI service operators. The MTTR improvements are estimated to be ~60% for all OCI service incidents in disconnected clouds.
- Designed and implemented the transition from an MVP to a resilient, GA-ready application by restructuring the datastores to bring the service from a 1-to-1 commercial region to airgapped region data pipeline to a fully region-agnostic 1-to-n architecture.
- Collaborated with 3+ cross-functional teams, reducing design rework by ~25%

Software Engineer

Microsoft Azure, Redmond, WA

Jul 2021 – May 2024

- Designed the architecture and devised the implementation plan for increasing resiliency by reducing outages to near-zero for our MVP single-node based architecture to a multi-node one
- Led the design and implementation of data security and integrity features for air-gapped data transfers handling 500+ TB of enterprise data monthly.
- Led the design and implementation of a custom integration testing framework enabling developers to test changes without deploying all application components, increasing developer velocity by an estimated 30–40% for small and medium-size contributions.
- Scrum and technical lead for a 5-person Agile team under a new engineering manager
- Implemented direct feedback from enterprise customers, leading to iterative changes that increased adoption and confidence in the new product offerings.
- Served as a primary on call engineer resolving hundreds of internal and external customer incidents per year.

Systems Development Engineer, EC2

Amazon Web Services, Seattle, WA

Mar 2019 – Jul 2021

- Primary on call supporting ~3,000 EC2/EBS services. Constant communication with service owners across the globe to resolve issues and perform incident analysis and RCAs
- Co-created a homegrown service that greatly increased asynchronous communication bandwidth between cleared and uncleared service operators and support engineers. Additionally, this service empowered uncleared engineers to perform specially approved tasks so that the limited number of cleared operators did not have to be involved.
- Reduced average high-severity incident resolution time from 4 hours to 2.5 hours.
- Deployed hundreds of services during new air-gapped region build efforts, closely working with service owners to troubleshoot and correct incompatibilities along the way

Systems Analyst

Amazon Web Services, Seattle, WA

Jun 2018 – Mar 2019

- Developed operational tools reducing Kinesis Firehose issue mitigation errors by ~20%.
- Led patching efforts across 250+ service fleets, completing updates 30% faster with zero downtime.
- Rearchitected the patching deployment pipelines for all of the S3 indexing service to improve scalability and eliminating manual patching efforts on thousands of instances

DevOps Engineer

Ericsson Inc., Plano, TX

Jan 2017 – Jun 2018

- Managed observability dashboards for 6 distinct services
- Provided research, proof of concept, and implementation plan for replacing Zabbix metric agents with Prometheus agents to reduce costs, flexibility, and scalability of observability tooling across all of the Network Services organization
- Developed automated functional UI regression and validation test suites for applications used across ~12 teams and radio technicians on-site
- Assisted lead engineers with research and implementation plans for on-prem OpenStack monitoring solutions

Radio Frequency Transmission Systems Journeyman

USAF & Texas Air National Guard

Apr 2010 – Apr 2019

- Engineered communications for missions supporting 200+ deployed personnel across 5 geographic sites, ensuring 100% operational readiness.
- Trained and led 6 technicians, improving troubleshooting proficiency by ~30% through structured drills and mentoring.

TECHNICAL SKILLS

Languages: C#, Java, Python, Elixir, C++

Cloud: AWS, Azure, Oracle Cloud Infrastructure (OCI)

DevOps: Docker, Kubernetes, Linux, CI/CD, IaC (Terraform)

Other: System Design, Observability, Agile Leadership, Software Architectures

PUBLICATIONS

Jafarzadeh, M., **Brooks, S.**, Yu, S., Prabhakaran, B., & Tadesse, Y. (2021). A wearable sensor vest for social humanoid robots with GPGPU, IoT, and modular software architecture. *Robotics and Autonomous Systems*, 139, 103536. <https://doi.org/10.1016/j.robot.2020.103536>

EDUCATION

B.S., Telecommunications Engineering

University of Texas at Dallas (2018)

A.S., Electronic Systems Technology

Community College of the Air Force (2013)