Gerhard van Andel

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Technical Proficiencies

linux, python, go, docker, posix shell, ruby, aws, gcp, elk, html5, css, javascript, vuejs

Experience

Ball Aerospace **Boulder, CO**

Software Engineer II: Command and Control *January 2021 - Present*

- Member of the Ball Aerospace's Cosmos core team and I work on projects related to Cosmos v5 and optimizing Cosmos for distributed and cloud environments. Cosmos is an open source command and control platform built using Ruby, Rails, Redis, and Vuejs. https://cosmosc2.com/.

Digitalglobe/Maxar **Westminster, CO**

Staff DevOps Engineer *May 2017 - January 2021*

- (2017-2021) secret clearance
- Develops platforms and tools which provide insights and observability into the availability, performance, and reliability of services. These platforms include production monitoring, capacity management, and incident detection. Including the automated recovery systems using log parsing and performance metrics analysis with integrations to Email, Slack, Jira, Elasticsearch, and Pagerduty.
- Investigate, triage, and troubleshoot production problems with on-call support to 24x7 operational teams managing the satellite ground system. Increase visibility into the health of the system, ensure higher success rates, and decrease computational waste across multiple domains through design changes in service operational flows.
- Retrofitted automation to manage uploading data from a local data-center to AWS S3. Publishing and monitoring SLAs and SLOs of customer expectations of up-time and throughput. Generating over a quarter million in revenue.
- Worked with management and development teams to move geospatial image processing systems running in a high performance computing environment from a locally managed data-center to a cloud based solution while meeting the demands of up-time, and processing capabilities and communicating cost impact. Provided real time metrics of system health, performance improvements, bottleneck detection, and cost with both a scalable and elastic design.

Colorado State University **Fort Collins, CO**

Network Operation Assistant *August 2014 - May 2017*

- Assisted in the monitoring and maintenance on an enterprise network, including troubleshooting TCP/UDP/IP connections for both wired and wireless connections. Created network topology maps of wired and wireless infrastructure across an infrastructure of 180 buildings and, assisted with telecom management by prototyping and designing low cost network monitoring using raspberry pi's and a distributed reporting system to show link status of end users to help correlate reported customer problems to device reporting.

Education

Colorado University (CU) **Boulder**

Masters of Science: Computer Science *Fall 2019 - Present*

Colorado State University (CSU) **Fort Collins**

Bachelors of Science: Applied Computing Technology, Minor in Business Administration *Fall 2014 - Spring 2017*

Coursework

CSU - CS455 - Distributed Systems: Concurrent programming, thread pools and safety, non-blocking I/O, scalable server design, distributed mutual exclusion, distributed graph algorithms, distributed objects.

- **Shortest Paths in a Network Overlay** - *Java* - Construct a logical overlay over a distributed set of nodes, and then computing shortest paths using Dijkstra's algorithm to route packets within the overlay.
- **Scalable Server Design** - *Java* - Using non-blocking I/O multiplexing to receive from 100's of clients to a single thread then process messages on a fixed sized thread pool.

Notes: Completed kessel run in less than 13 parsecs, rescued the crew of the Kobayashi Maru on my fourth attempt