Kaleb Smart

Senior Software Engineer

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Education

University of Alabama in Huntsville *Huntsville, AL*

Bachelor of Science in Computer Science, Magna Cum Laude *May 2016*

- Minor in Mathematics
- Minor in Russian

Skills

Languages Python, Groovy, JavaScript, C++

Frameworks Pytest, Behave, Jenkins, Angular, Flask, Docker, Packer, Laravel, Ansible, OpenStack, Artifactory, Jinja

Experience

ADTRAN *Huntsville, AL*

Senior Software Engineer Responsibilities *June 2014 - May 2020*

- Architect and design tooling for developers to work on customer-oriented deployments
- Serve on DevOps governance team to architect a company-wide vision of Continuous Integration/Continuous Deployment pipeline
- Spearhead the development of architectural runway and Developer Experience tooling as Scrum Master for system teams
- Collaborate with developers in Canada, Germany, and India to coordinate new product development efforts
- Architect and Maintain test aggregation and hardware resource management software for Continuous Integration pipelines

Projects

Hackathons

- Reduced build time of SDX-6210 software from 2.5 hours to 45 minutes by designing and implementing binary packages for infrequently changing code, then implementing a process to consume those in the product build.
- Containerized services running on SDX-6210 hardware to lay groundwork towards network feature virtualization for the product.

Release Notes and Security Documentation

- Designed generic templating software for automatically generating release notes and product security documentation for any product, which was adopted by all the Software Defined Networking products, reducing the time required to create and approve release notes from 2 weeks to 1 day.

SDX-6210

- Containerized cloud-based network element controller software to decrease software upgrade time by a factor of 6.
- Developed system level verification pipeline and test framework to validate the SDX-6210 and the cloud-based controller software a against customer requirements prior to software release. Sales engineers used the test results as a source of truth for what features could be demonstrated to a customer.
- Developed a CI pipeline information radiator and value stream map to visualize how software was flowing through our pipelines which resulted in additional efforts that both reduced the amount of time for software to be ready for release by 2 hours and increased the reliability of the CI pipeline by at least 20%.
- Spearheaded task force for collective ownership and troubleshooting of CI pipeline failures who reduced the amount of failures caused by test infrastructure to under 10% of the weekly average of 300 builds.
- Developed deterministic automated build procedure and integration for acquired and newly developed software.
- Created test asset diagnostics tooling which would dump application state and logs to quickly identify the cause of test failures.
- Designed replicatable hardware configurations based around customer deployments of our products, allowing our entire acceptance test suite to be ran on any of our testbeds, and reducing the testbed bringup time by a factor of 8.

Skynet and Hydra

- Developed testbed inventory and reservation service. It was adopted universally in the company by Continuous Integration pipelines, developers, and product stakeholders that had physical hardware requirements to visualize and control the priority, allocation, and utilization of testbed resources.
- Designed test results aggregation software and trend visualization that developers and product stakeholders used to ascertain the reliability of a software build or test suite.