

# Phillip Duncan

PRODUCTION ENGINEER · SYSTEMS ENGINEER

Seattle, Washington

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## ReadMe

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As an experienced Production Engineer with 10+ years of expertise in Linux Systems Engineering, CI/CD Framework development, and Server configuration and provisioning, I excel at improving existing pipelines and applications, as well as architecting and implementing solutions from scratch. My skills in collaborating with cross-functional teams have been invaluable in ensuring the performance, scalability, and reliability of build and test pipelines, applications, and infrastructure. Additionally, I have a track record of success in developing deployment pipelines ranging from bare-metal server provisioning to virtual machine and container based systems integration testing.

## JobLog

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### Meta, Inc (Facebook cont..)

Remote/Seattle, Washington

#### PRODUCTION ENGINEER (DEVELOPER PLATFORM)

May '22 - January '23

- Prototyped new configuration process to reduce release cycle time for new build platforms by 50% and led efforts to get internal releases within 6 months of upstream
- Managed Bazel-based build platform configurations for versioning Clang, GCC, and LLVM across 1,000+ internal project repositories
- Mentored newly promoted engineer on the team to support their technical and career growth at the new level

Remote/Seattle, Washington

#### PRODUCTION ENGINEERING MANAGER (STORAGE CONTAINERS)

April '20 - May '22

- Led team of engineers in developing new version of Meta's BLOB Storage Container Service API, improving service adoption plans despite supply chain constraints
- Recruited and onboarded 3 engineers, new hires and internal transfers, and provided career development mentoring to team members
- Defined quarterly OKR objectives and goals for the team, and led efforts to improve On-Call experience by reducing alarm noise and establishing new Service SLOs and SLAs for the Storage Container Service

### Facebook, Inc

Seattle, Washington

#### PRODUCTION ENGINEER (LINUX CONTAINERS TEAM)

November '18 - April '20

- Owned and improved Linux Container Image build system based on CPIO and RPM for the Base OS, which integrated with service containers and continuous build pipelines
- Led efforts to migrate infrastructure services to a new version of container execution using cgroupv2, while also working to define the new Core Container OS build, archival, and distribution systems
- Set up automation, monitoring, and tracking for migrating services, and developed performance tests to avoid regressions

Menlo Park, CA

#### PRODUCTION ENGINEER (LINUX KERNEL TEAM)

September '14 - November '18

- Designed and implemented new build and test infrastructure for the Linux Kernel, including migrating the build system from Jenkins to an internal build with Phabricator integration, providing internal audit support for changes pulled from upstream
- Created continuous build pipeline for the Kernel in Python and PHP, and integrated it into Production Release pipelines using a custom Job engine and Chef for configuration management
- Developed a generalized Python Test Framework for use by other teams in Infra for systems integration testing
- Designed and implemented Asset Reservation System for low-level systems testing, which allowed shared use of test hardware across multiple platforms and locations without conflict
- Asset Reservation System was built using a Python server with MySQL, a Python client for configuration on test hosts, and a Python CLI and PHP browser-based front-end for end-users, supporting multiple team adoptions
- Mentored junior engineers, interns, and bootcampers on technical and career growth

Palo Alto, CA & Dublin, Ireland

#### SUSTAINING LINUX SYSTEMS ENGINEER (HARDWARE SUSTAINING)

February '11 - September '14

- Developed a Test Framework in Python for hardware provisioning, correctness, and performance evaluation, for testing both internally and with external vendors
- Configured and automated provisioning for Facebook's server fleet across data centers, and automated firmware and system software upgrades during provisioning
- Worked with external vendors and internal Data Center engineers to test and address sustaining hardware issues, implementing tooling and automation to resolve issues, and developed tooling to monitor systems, collect data, and develop maintenance methodologies

**SITE RELIABILITY OPERATIONS ENGINEER (SITE RELIABILITY)**

June, '10 - February '11

- Managed provisioning of systems to ensure proper capacity needs were met, and handled site events, escalation, and resolution
- Automated alert actions and alarms to reduce manual effort and increase response times, while also performing standard systems and website troubleshooting, quickly diagnosing and resolving issues to mitigate risk
- Worked to ensure the reliability and scalability of the company's infrastructure, services, and applications, by implementing and maintaining monitoring, incident response, and disaster recovery procedures

**Godaddy.com Software Inc**

Gilbert, AZ

**HOSTING OPERATIONS LINUX SYSTEMS ADMINISTRATION (SHARED HOSTING)**

June '09 - June '10

- Provided shift and on-call coverage for system administration tasks, working closely with other departments to resolve major issues and ensure system availability and performance
- Automated provisioning of new systems, including high-availability "Grid" mini-cluster servers, and developed and automated internal provisioning systems for efficient and streamlined deployments
- Documented procedural steps for systematic mass deployments to the environment, and fulfilled requests for additional servers by configuring production and application servers and investigating issues occurring within the environment
- Ensured the reliability, security, and scalability of the company's Linux-based infrastructure through monitoring automation and incident response

Scottsdale, AZ

**VARIOUS**

June '06 - June '09

- Advanced Hosting Support Shift Manager
- Hosting Support Team Lead
- Server Support Representative

## Software Development

## Personal Interest Projects

**Programming Languages**

- Bash
- Python
- PHP
- C++
- Rust
- Golang

**Systems Projects**

- Addressable LED lighting with ESP32 dev board
- House monitoring with Home Assistant and Grafana

**Photography**

- Work From Home video and audio system setup
- RAW video input processing applying custom color LUT
- Amateur wildlife and event photography

## Systems Engineering

**Music Production & Processing**

- Mini game processing mic input frequency
- Frequency fed into Fourier Transform algorithm to move player
- Home studio productions of kids bedtime songs

**Platforms & Frameworks**

- LLVM/Clang
- Linux
- Linux Containers
- AWS
- Docker
- Phabricator
- Git
- Mercurial
- Jenkins
- Chef

**Fitness**

- Data processing .FIT activities importing into Grafana
- Completed Ironman 70.3 Washington '22