

Morgan Bauer

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Experience

Morgan is an Open Source Software (OSS) Engineer for IBM working on Kubernetes. He has extensive experience in the creation of open source software, containerized software development and complex system architecture. Morgan also enjoys working with cross-functional teams, and presenting at conferences and meetups.

Specialties: Containers, Kubernetes, Cloud Computing, Open Source Software Development, & Developer Advocacy
IBM **San Jose, CA**

Open Source Maintainer

July 2015 – current

Kubernetes – SIG-Node

- Formed SIG-Node-CI group to raise quality of existing end-to-end tests
- Analyzing and cleaning up existing sig-node tests to increase quality
- Triaging and fix sig-node testing failures to increase velocity
- Deprecating and removing failing and superseded testing suites to remove duplication and unnecessary work
- Increase visibility of critical test groups by centralizing to a single top-level dashboard

Hyperledger Fabric - Enterprise Permissioned Blockchain for Business

- Maintained EVM (Ethereum Virtual Machine) chaincode for fabric by guiding new committers through contribution process
- Implemented ethereum json-rpc 2.0 endpoints for Remix IDE to connect with Fabric network to manage and deploy EVM smart contracts
- Drive Fabric adoption by implementing Truffle compatibility resulting in conference keynote
- Mentored LinuxFoundation Intern to create WebAssembly Chaincode for Fabric
- Improved code quality of Gossip Protocol by removing race-conditions to re-enable integration testing and community usage
- Increased Fabric unit testing speed to increase contributor velocity by targeting slowest tests
- Implemented Kubernetes and Docker backends for Blockhead Ethereum Service Broker and port from ruby to go

Kubernetes – SIG-Service-Catalog

- Maintainer and founding community member of Service-Catalog an implementation of the OpenServiceBroker API (OSBAPI)
- Implemented OSBAPI to expose thousands of existing IBM CloudFoundry services to Kubernetes
- Collaborated with multiple cloud providers to adopt CloudFoundry service concept for cross-cloud compatibility
- Created CI pipeline in Travis and transitioned entire pipeline to CNCF infrastructure driven by Prow
- Implemented aggregated APIServer (predating CRDs) for Kubernetes native object behavior
- Ensured multi-architecture compatibility by communicating with stakeholders of PowerPC and S390X

Maintainer of Docker/Moby Engine Core

- Maintainer of Docker ClassicSwarm (Docker-native cluster management predating Kubernetes)
- Decoupled the server side API from the engine leading to separate client and server binaries
- Triaged community issues by performing fixes and writing documentation
- Increased code quality by performing corrective changes and enabling static analysis

Developer Advocate for Open Source

Ongoing

- Design & Execute Education on Cloud Native Technologies
 - Customizing content for internal and external audiences of both technical and nontechnical nature
 - Demonstrate value of containerization to improve application development and deployment
 - Encourage contributions back to upstream projects
- Grow IBM Open Source committer base by 300 through mentorship and education on Applied use of Git with GitHub
- Decreased new contributor fatigue to Kubernetes communities with increased documentation on node-e2e-test and videos on YouTube

Lenovo

Rochester, MN

Software Engineer

October 2014 – May 2015

Manager of Managers (Lenovo XClarity Cluster Management)

- Administered secure source code repository and auditing with git, ssh, & gpg
- Built automation with maven, jenkins, & guestfish for an end to end pipeline - source code to deployable Virtual Machines

IBM

Software Engineer

Rochester, MN

July 2012 – September 2014

Manager of Managers (Lenovo XClarity Cluster Management)

- Project bring-up from first principles using maven, artifactory, jenkins
- RESTful API design and documentation with Restlet
- Componentized program with OSGi bundles and services
- Source control administration and education with RTC & git
- JUnit, EasyMock, Sonar for code quality at > 80% line and branch coverage

VMControl

- Drove unit testing among the team, and increased coverage from 0% to 26% on 200kloc
- Software Testing of Legacy Systems with JUnit, EasyMock, & PowerMock
- Java, Maven, SVN, & Python

Education

University of Florida

Masters of Engineering in Computer Engineering

Gainesville, FL

2010 – 2012

University of Florida

Bachelors of Science in Computer Engineering, Minor in Business Administration

Gainesville, FL

2006 – 2010

Conference Talks

Kubcon EU 2020: A Journey Through Kubernetes Admission Controller Taxonomy

Hyperledger Global Forum 2020: Hyperledger Fabric 101 Workshop

TruffleCon 2019 Keynote: Truffle Support For Hyperledger Fabric

OpenSourceSummit Japan 2019: Hyperledger Fabric 101: Permissioned Blockchain Platforms

OpenSourceSummit China 2019: Creating your First Smart Contract on Hyperledger Fabric

ApacheCon NA 2018: Comparisons of Cloud Native Communities

Kubcon EU 2018: Building a Fault-Tolerant Resource Controller on Kubernetes

CloudFoundry Summit 2018: Open Service Brokers for the CF Container Runtime

CloudFoundry Summit 2018 Hackathon: Project Blockhead - Winning Project

CloudFoundry Summit EU 2017: Getting a Handle on Your Microservices: Istio and the Open Source Broker API

Interests

Amateur Radio - General Class License KN6AQX

Photography - Travel Snapshots, Nikon D500 DSLR

Rust Programming Language