

Andrew Wood

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🔧 Software Craftsman

Focused and test-driven professional with extensive experience in software development, testing and solutions architecture, with demonstrative consistency of delivery within timelines and surpassing business objectives. Seeking a primary role in a forward-thinking and growing software development organization with a creative culture.

✓ Skills

Linux (CentOS, Ubuntu, CoreOS), MacOSX, OpenBSD	Java, Ruby, Bash, Groovy, Golang, Javascript	IntelliJ IDEA, Vim, Sublime, VSCode
Maven, Gradle, Ant, make, cmake	Spring, Spring Boot, Spring Integration, Apache Camel	RabbitMQ, Hazelcast, Kafka
Rails, SpringMVC, AngularJS, Wicket	JUnit, RSpec, Easymock	JMeter, k6.io, Cucumber
jQuery, CoffeeScript, CSS, SCSS/SASS, Node	Jaxb, Jackson, Json, XML, Haml	Postgresql, MySQL, BDB, CDB
git, hg, svn, cvs	concourse, Jenkins, Flux	Tomcat, Jetty, Glassfish
nginx, lighttpd, http	Capistrano, passenger, git-deployment	Docker, docker-compose, kind
Ansible, Chef	Kubernetes, Cloud Foundry, Spring Cloud	Ribbon, Feign, Eureka
Vault, credhub, OpenSSL	platform-automation, ytt, kapp	terraform, pulumi, crossplane
AWS, Azure, GCP, vSphere	TKG, Rancher, ESXi	Helm, BOSH, Argo

🏢 Professional Experience

VMware Tanzu Labs / Pivotal Software Inc. (Acquired by VMware) March 2018 - Present; Toronto, Ontario

Staff Field Engineer, Tanzu Global Tech Team [Jan 2022 - Present]

Responsibilities akin to a Customer Success Engineering role with a focus on building sharp tools to help customers with difficult problems, with a secondary directive to "shift left" the tooling for R&D to either be refined in-house or open-sourced.

Achievements

- Built an opinionated SRE dashboard for Tanzu Kubernetes for Operators that included a set of golang SLI probes to periodically create/delete and measure latency of k8s cluster and deployment creation as well as cluster and application availability. Metrics emitted to Wavefront and Grafana via Prometheus.
- Working with customers to determine their migration strategies for BOSH based deployments resulted in co-authoring tooling for live-migrating their virtual machines across disparate vcenter instances, which was instrumental in defining a strategic engagement type for customers with a desire to move their workloads to new hardware.

Staff Solutions Architect, Tanzu Labs Platform [Oct 2020 - Jan 2022]

Staff Solutions Architect responsible for remote engagements for Tanzu Customers. Responsible for pairing with customers with Tanzu Application Service (formerly PCF) and Tanzu Kubernetes Grid. Site Reliability Engineering, Platform-as-a-Product, User-Centric Design and Chaos Engineering all remained as core tenets for effectively leaving customers with a stable, scalable, observable and marketable platform.

Senior Solutions Architect, Pivotal Cloud Foundry Solutions [March 2018 - Oct 2020]

Senior Solutions Architect on the PCFS team. Worked on engagements with many Fortune-500 companies. Responsible for transforming enterprises via agile processes to introduce practices to deploy, maintain and measure Pivotal Cloud Foundry by: educating the customer on treating their Platform as a Product, and putting reliability first by way of implementing solid Engineering practices via Site (Platform) Reliability Engineering. Led by example: ceremonies practiced with the customers fostered change at the grass-root level (standups, iteration planning meetings, value stream mapping, 2x2s, demos, retros, branding exercises, etc) and served as an archetype for change in these companies. Pair programming was the norm, test-driven development and user centric design helped guide our customers' products to serve as deployment targets for hundreds/thousands of developers.

Regular practices included terraform centric management of the infrastructure (as code) for vSphere, AWS, Azure and GCP. Tests were regularly used to validate configuration and environmental sanity. Concourse was used to act as the continuous GitOps CI/CD and drove product install/feature upgrades/security patches. Site reliability engineering practices were instilled in customer teams to help identify Service Level Indicators for the platform and establish Service Level Objectives for the platform and its dependent systems. Chaos engineering principles and practices were conducted at regular cadences to help further increase reliability numbers.

Achievements

- Built an SRE team at RBC that built SLO dashboards for the platform itself; fostered a culture of proactive monitoring
- Cloud Foundry deployments practiced on a regular (8-13 week) cadence with customers, gained industry leading expertise on building Platforms-as-a-Service
- Kubernetes deployments were a regular occurrence with

- Stress testing the Platform was a common demand from customers; answering the question of how much traffic can prod handle before pointing prod traffic at it; k6.io and influxdb was a proven stack
- Spearheaded Game day exercises as a regular occurrence on numerous teams; bringing down an environment on purpose to upskill proved to be an invaluable exercise
- Key member of platform team assigned to the NHSx's Covid app; built to handle massive traffic patterns of 70k AMQP messages per second

Exchange Solutions Inc. *June 2014 - March 2018; Toronto, Ontario*

Software Architect

Software Architect, reporting directly to Director of Development, Chief Architect and CTO. Manager of four Developers and one Software Architect. Responsible for defining coding standards, research and development and was instrumental in initiating a Continuous Delivery effort across the technology team.

Achievements

- Primary driver for moving to Kubernetes for build pipelines and production deployment/scalability resiliency.
- Built multiple on-premises (initially as a proof-of-concept) CoreOS Kubernetes clusters for Lab, Development and Prod using Ansible, Cloud-config and eventually Ignition.
- Dockerized and Helmified multiple legacy projects to run on Kubernetes
- Implemented multiple systems utilizing Apache Camel, RabbitMQ and numerous Enterprise Integration Patterns for two major clients.
- Responsible for maintaining coding standards across the development team, enforcing testability and design of asynchronous systems.
- Facilitated a production machine learning exercise to decouple an optimization component from an offer management service
- Implemented Hazelcast caching to solve broader problems of session state for a large integration system
- Authored proposal for a Continuous Delivery concept and built proof-of-concept with two other architects in a four-day "innovation vacation"
- Instrumental in gathering grass-roots support for changing the corporate culture (on-prem vs cloud, siloed teams vs one comprehensive team, information sharing vs information exclusivity)

Factor[e] Design Initiative *September 2013 - June 2014; Hamilton, Ontario*

Senior Software Developer / DevOps

Senior Developer, reported directly to CTO. Instrumental in migrating 180+ websites from legacy platform to Digital Ocean (cloud provider). Wrote custom tooling for migrating applications from

legacy host; utilizing fail-fast patterns (written in Bash as it seemed most idiomatic), temporary sshfs mounts and Capistrano.

Achievements

- Implemented chef-server and ~200 chef-clients with a centralized chef-repo. Performance tuned chef- server. Mentored junior developer, able to roll-out infrastructure changes to all nodes in seconds.
- Responsible for developing multiple Rails sites for clients. Ruby, coffeescript, Rails, Bash and chef were core technologies.

Afilias Canada Corporation *October 2009 - September 2013; Toronto, Ontario*

Software Developer, Registry Services

Senior Developer for a Scrum team of five, worked directly with Senior Architect. Contributed to design and architecture of product redesign. Lead developer for a PHP/REST interface to manage DNS for DNS resellers. Redesigned client-facing Java SDK for interacting with REST API. Responsible for various bug fixes in legacy products written in Java, PHP, Perl and Bash. Introduced automation and continuous integration to software build cycles, smoke tests and release management.

Achievements

- Involved in the design and implementation of a back-end conversion from synchronous to asynchronous operation of provisioning utilizing Spring Integration/AMQP with RabbitMQ as a messaging broker. Increased reliability, reporting and reduced provisioning time significantly as compared to legacy system.
- Designed and implemented a Maven plug-in that automated the tracking of released software versions in a machine written XML structure within SVN that introspectively resolved POM file SNAPSHOT releases to concrete tracked versions. Completely eliminated existing versioning problems in the DNS Registry rewrite project and reduced build-to-QA schedule by a business day.
- Scrum Developer for the Managed DNS Service product, key player in implementing a Scrum agile development methodology to save a derailed project from out-of-scope requirements backlog. Key player in implementing daily Scrum meetings, backlog review, sprint planning and review sessions while keeping progressing work visible in a communal burn-down chart. Worked closely with QA, Operations and Database Operations teams to implement iterative development in two week sprints. Tremendously effective in bringing confidence and transparency to management and project stakeholders on project status and delivering features as-promised, on-time and completely tested.
- Abstracted configuration entities in legacy DNS Registry system to exist in a standardized fashion to ease ad-hoc production operational changes without having to sacrifice downtime.

Symcor Inc. *August 2000 - May 2009; Mississauga, Ontario*

Software Developer, Core Statement Solutions

Project development lead for multiple PHP and Java projects. Designed and maintained an open source Java build environment utilizing Maven, Artifactory, SVN and Eclipse that supported a team of approximately 10 developers, 20 active projects and hundreds of daily code commits. Facilitated daily automated builds, and automated daily report generation for management. Responsible for designing, developing and maintaining software applications across multiple facets of the company, including development, marketing and production. Provided maintenance and backup scripts for Linux, Solaris and Windows environments and migrated existing source code from many projects to CVS from VSS.

Achievements

- Designed and implemented a Job and Quality Control application in Java/Wicket that acted as a centralized workflow application to control the bulk loading of digital financial documents, reducing the number of production loading errors by approximately 25%.
- Setup and supported approximately 50 Linux and Solaris machines across five environments and maintained gated procedures for sequential code promotion, reducing the number of customer acceptance testing and production errors.
- Implemented a GBean for internal billing system that leveraged jCIFS and Quartz scheduler to build reports, PDF documents and automatically integrate reconciliation reports into a legacy Windows NT tier, removing the need for manual reconciliation and report extraction.
- Initiated proof of concept indexing solution using MySQL that implemented a dynamic indexing scheme so that actors are able to add indexes on-the-fly, without the need to change the schema. Reduced both load and access development implementations by an order of magnitude.
- Built a proof of concept Native XML Database storage solution, which illustrated the inherent benefits of storing native XML documents and implemented the requisite search, storage and indexing functionalities. Reduced overall storage quota by 90% by eliminating all repeated data.
- Designed and implemented a standardized Java software platform that served documents via a common XML-RPC webservice interface for multiple financial institutions that reduced external development time. This concentrated support knowledge and costs by phasing out legacy applications.
- Developed a custom PHP application for RBC Visa's in-house call centre, supporting hundreds of Customer Service Representatives, (some of them visually impaired) that reduced the average time on service calls by minutes.
- Assisted in building a custom modularized Content Management System in PHP, responsible for the electronic targeting and delivery of marketing messages to end users, which proved to be a very popular software product with the sales team.
- Developed Postscript parsing program to insert "tray pulling" logic to facilitate production requirements for coloured coversheets to reduce production sorting time and errors.

Optus Ebusiness Solutions *August 2000 - January 2001; Toronto, Ontario*

Software Developer and Network Support

Reported directly to VP of development, responsible for delivering software applications for a quickly

growing software company. Maintenance, installation, configuration and troubleshooting of 10 Linux servers. Supported hosted applications in an on-call manner.

Achievements

- Developed CSR web application software that provided a robust interface for users to search and retrieve financial statements in an instantaneous manner under very aggressive project timelines.
 - Implemented security and encryption standards to meet and exceed industry standards for numerous financial institution clients.
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✿ **Training**

- Certified Kubernetes Administrator - CNCF, 2021
 - Certified Kubernetes Application Developer - CNCF, 2019
 - Elastic Search Training - Toronto, ON - 2015
 - Puppet Labs Puppet Training - Toronto, ON - 2012
 - ExitCertified - Spring Core Training - Montreal, QC - 2010
 - Zend PHP Certified Engineer - Toronto, ON - 2005
 - Xenos d2e Document Transformation Certification - Richmond Hill, ON - 2002
 - Sun Java Certified Programmer - Toronto, ON - 2001
 - IBM Java Lifecycle Training - Markham, ON - 2001
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🦋 **Extracurricular, Hobbies and Interests**

- Film Photography [Instagram: @](#)
 - [Mechanical Wristwatches](#)
 - [Yirgacheffe](#) coffee
 - [Go](#)
 - Minor Hockey Coach - Dundas Minor Hockey Association
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