

Tim Bailey-Jones



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Profile

Hands-on software developer & cloud engineer seeks a role on a product development team that can benefit from my wide-ranging expertise in Linux, AWS, GCP, K8S, frontend, backend, and DevOps. Remote from Florida.

Work Experience

01/2021 — 03/2024 ATLANTA, GA, US

Cloud Engineer

McKinsey & Company

McKinsey is a global management consulting firm founded in 1926.

- Developed automated build, deployment and security pipelines for Matter Foundations (MF), our Cloud Foundation product for all three clouds.
- Performed extensive end-to-end E2E testing spanning across 30 MF repos (hosted in GitHub)
- Updated documentation for deployment guide (Confluence)
- Paired with and mentored junior developers.
- Contributed to the AWS and GCP versions of MF.
- Continued to serve CandidPartners clients
- Represented McKinsey at AWS:ReInvent conference in 2021

Skills: AWS & GCP, Linux, Mac, bash, docker, terraform, python, node, Javascript/TypeScript, serverless, automated testing, DevSecOps pipelines (tfsec / checkov), GitLab, GitHub Actions, lambda, RDS, S3, Cloudwatch, Cloudtrail

05/2020 — 01/2021 ATLANTA, GA, USA

DevOps Engineer

CandidPartners.com

Candid Partners was a cloud consulting firm that was acquired and renamed Cloud by McKinsey in January 2021.

- Made dozens of improvements to AWS microservices for a Payment Gateway client, including a serverless lambda to encrypt credit cards, immediately after payment processings.
- Wrote python/boto script to migrate RDS databases from one engine to another, with minimal downtime and no data loss.
- Implemented parts of ELMA (Enterprise Logging, Metrics & Analysis), a serverless AWS-native logging application, for a prominent public-sector client.

Skills: AWS, terraform, Jenkins, python3, RDS, Lambda, PCI compliance, encryption, SQS/SNS, RDS, S3, Cloudwatch, Cloudtrail, etc.

Skills

Cloud Technologies:

- Linux (Debian/Ubuntu, RedHat/Amazon/Centos)
- Shell Scripting (bash/zsh), on-prem system admin.
- AWS - 3 certs (Sol. Arch., DevOps Pro, Developer Assoc).
- Google Cloud Platform (Prof. Architect Cert. 12/2023).
- Terraform / OpenTofu (AWS, GCP, Azure)
- Docker / Kubernetes / GKE / AKS
- Python / boto3

Programming Languages / Frameworks:

- GoLang (APIs, RDBMS work, containers/lambda)
- Node / Express (used for AWS lambda, CLI programs)
- Java (1.x through 1.8, command line, servlets, JDBC)
- C, C++ (Linux / commercial Unix)
- PHP / ColdFusion (side client: gotonight.com)
- JavaScript, Typescript, including ES6/ES7

User Interfaces:

- HTML / CSS, React, bootstrap, MaterialUI
- Text-based CLIs, ncurses, and X11/Gtk/Qt XWindows

Databases:

- AWS RDS, AWS Aurora, GCP CloudSQL
- SQL: Postgres, MySQL, SQL Server, HP Vertica, Oracle
- NoSQL: DynamoDB, MongoDB, Memcache/Redis

Publications

My LinkedIn Profile

<https://linkedin.com/in/timbaileyjones>

TimCodes (my tech blog)

<https://timcod.es>

Bailey-Jones (my career blog)

<https://Bailey-Jones.com>

Includes more technical details about some past roles.

My AWS Articles @ Stelligent

<https://stelligent.com/author/timbaileyjones/>

Social Media



Work Experience

08/2017 — 05/2020 RESTON, VA, US

DevOps Automation Engineer Stelligent Systems

Stelligent was an engineer-driven AWS Advanced Consulting Partner solely on DevOps CI/CD on AWS.

- Consulted with clients about technical and organizational DevOps practices.
- Contributed new features to open source tools like Stelligent mu (microservices in AWS).
- Conducted training sessions for client development teams on CI/CD topics, automated unit tests.
- Wrote technical articles for internal and external audiences.
- Implementation of repeatable, resilient CI/CD pipelines for applications and infrastructure.
- Represent the company at AWS Re:invent conferences in 2017 and 2018 (Las Vegas, NV)
- Clients included AQR Capital, 3M, Refinitiv/Thomson One, Atrium Campus, and RugsUSA.

Stelligent was acquired by Mphasis in Nov. 2018, and my role continued as before. The Stelligent brand is still being used by Mphasis.

Skills: AWS, terraform, CloudFormation, Linux, Docker, ECS, S3, RDS, Lambda, CICD Pipelines, Jenkins, CodeBuild/CodeDeploy, CodeCommit

Additional tech details for this role:

<https://bailey-jones.com/post/resume-details-stelligent>

09/2016 — 04/2017 TAMPA, FL, USA

Sr. Software Engineer Impulse Point (now OPSWAT)

Responsibilities related to Impulse's flagship product SafeConnect, which is a managed on-site Linux cluster providing network access control (NAC) to universities and businesses:

- Converted existing local SVN codebase to cloud-based git repositories, hosted by Atlassian BitBucket
- Implementing bug fixes and new feature development (Linux, Angular 1.x, Java 7, Tomcat 7).
- Adding Netconf-based programmatic router control to SafeConnect (with Juniper JunOS).
- Create, update and deprecate technical and developer documentation as needed (Confluence)
- Assisted Customer Service department as needed to replicate bugs reported by end-users.
- Researching moving existing product to cloud (AWS)

Skills: Porting · Linux · Databases · C++ · Java · Mac OS X · Python · Shell Scripting · XML · Web Applications · REST · System Administration · Troubleshooting · Open Source · Networking · TCP/IP · Devops · Cloud Computing · Ansible · SQL · JavaScript · HTML5 · Angular 1.x

Additional tech details for this role:

<https://bailey-jones.com/post/resume-details-impulse>

Work Experience

07/2015 — 09/2016 TAMPA, UNITED STATES

Sr. Advisory Systems Engineer Syniverse Technologies

Technical Lead for VisProactive (VPA) development team. Business context:

- Live ingestion of International Cellular Roaming traffic
- Near-realtime detection of related error messages & timeout conditions that prevent serving carriers from processing calls of roaming travelers
- Alerting the Network Operation Centers of both serving and home carriers so they can collaborate in resolving these errors ASAP.

Initial VisProactive release: Uniroam/SS7GSM data feeds.

- Led the creation of backend services to ingest data, run summarization queries every 15 minutes, and compare latest 6 summary records to each other to programmatically identify anomalies and trends on a variety of key fields. Database: Oracle.
- Created alerting infrastructure to allow users to select which thresholds they wanted to see alerts for, and which emails should receive alerts.

Subsequent VPA releases for MDR/UDR, SS7CDMA feeds

- Each edition used the same overall architecture as the first.
- Converted Oracle DB to Vertica (5.0 through 7.3).
- Implemented load-balancing functionality to backend Vertica databases using open-source Octopus-LB program.
- Implemented process monitor for all feeds using open-source SupervisorD.org program, to allow web-based control of VPA services.
- Performed advanced SQL tuning of large summarization queries, including techniques which override the cost-based optimizer, therefore eliminating the need to run "UPDATE STATISTICS" statements periodically, and in turn, decreasing maintenance windows.
- Designed & Implemented a real-time MDR CE (Mobile Data Roam Correlation Engine) in C++, to match start & stop RADIUS messages and stream them to Vertica Database.
- Migrated two Visproactive releases (Uniroam & SS7GSM) from Oracle to Vertica 5.0.8.
- Participated in Vertica migrations from 5.0.8, to 5.1, and again to 6.1.
- Led team through Java 1.6 to 1.7 migration
- Profiled, Monitored & Tuned dev/test/prod systems with hundreds of JVMs to manage network connections, memory usage, and to minimize GC activity.

Work Experience

Syniverse Technologies (continued)

Contributions to enterprise architecture company-wide:

- Led VPA team through pilot SCM migration from Telelogic Synergy to Subversion 1.6. Based on our successful experience, all products under active development within Syniverse were migrated to Subversion server (with WANDisco plugins).
- Introduced use of Jenkins for CI/CD infrastructure to build software hosted in Subversion. Based on successful experience with VPA team the centralized built team adopted Jenkins to bring CI/CD to rest of company.

Backend Development performed for other products (2001-2010)

- STARS (Streamliner Terminal Access Reporting System)
- CNAM-LIDB (Calling Name & Line Information Database),
- MDR (Mobile Data Roaming)
- AAA Broker (Authentication, Authorization & Accounting).

Additional tech details for this role:

<https://bailey-jones.com/post/resume-details-syniverse>

10/1999 – 04/2001 TAMPA, FL, US

Owner & Principal Consultant LinuxTampa.com

Custom software development using Linux, BSD and other open platforms. Projects included:

- Embedded systems, including the world's first Linux-based ATM cash machine. KDE/Qt/C++ on RHEL 5.
- Created a Java/SWT desktop application for managing police dashcam videos and accompanying GPS travel logs, deployed on Fedora Linux.
- Implemented custom Day-trader stock monitoring for Australian Stock Market (using iguana2.com's Spark API) - C / C++
- Webhosting services (LAMP Stack) on co-located physical servers and virtualized VPS systems. Managed about 80 domain worth of mostly-static content. Mostly HTML/PHP.
- Ported legacy applications from ancient and closed commercial Unix systems to the brave new open world, targeting Linux as new platform. Mostly C, Python, PHP.
- Created a backend for an internet to generate Windows Media Players skins with artist-specific artwork, embedded lyrics, and Javascript logic to display lyrics within media player synchronized to the music currently being played. PHP/JS.

Additional tech details for this role:

<https://bailey-jones.com/post/resume-details-linuxtampa>

Work Experience

02/1998 – 08/1999 TAMPA, FL, US

Software Designer / Informix DBA Perot Systems / Technical Resource Connection

Client: Eagle Asset Management: <https://eagleasset.com>

- Handled a Y2K remediation / conversion project
- Migrated a financial securities management application called GIM-II from an old Sequent/Informix-5 environment to a new Solaris/Informix-7.3 cluster, upgrading the application version as well.
- Sifted through hundreds of locally-developed Informix 4GL programs and custom shell scripts. Ported and re-implemented them as appropriate, while discarding unused scripts.
- Created logical/physical mappings of their largest, most active Informix tables across 5 mirrored drives in a way to distribute I/O amongst the devices.
- Create database migration processing script driven by GNU Make's parallel execution feature (minus-j switch) to take advantage of multiple CPUs.
- Implemented a new real-time data feed in Java from Bloomberg's finance server to GIM-II's pricing table.

Additional tech details for this role:

<https://bailey-jones.com/post/resume-details-perot>

08/1998 – 01/1998 DUNEDIN, FL, US

C++ Software Engineer Nielsen Media Research

Software maintenance for Galaxy Explorer report server in C++ (for TV ratings industry).

09/1995 – 02/1997 ORLANDO, FL, US

C++/X-Windows Software Developer Technisource / Lucent / AT&T

Client: AT&T Microelectronics / Lucent Technologies

- Created Application framework called ACE for automating semiconductor manufacturing equipment. Implemented in C and X11/Motif on Solaris 5.x.
- Created ACE framework enabled development teams for specific equipment to easily implement custom X11 GUIs for each factory station, that also communicated station status to central process control.

Key features of ACE framework (all on Solaris 2).

- The "flat-embedding" of xterm terminal processes (using Xlib's XReparentWindow function in such a way that they appeared to be part of the primary ACE window, but were in fact, subprocesses).
- Multiple tabs (before browser had them), allowing factory workers to easily switch between multiple xterm processes and pluggable X11 modules specific to each station's equipment.
- Macro record and playback capability to allow ACE to programatically cut-and-paste from one terminal process into another. This eliminated errors from human mistyping, and reduced equipment idle times between batches.

Work Experience

Technisource / Lucent / AT&T (continued)

ACE was successfully deployed to both chip factories in Orlando (a 6-inch wafer fab, and a newer 8-inch wafer fab), and then later to similar chip factories in Spain, Singapore and Thailand. Supported chip fab processes included: plasma etch, lithography, deposition, ionization, furnace, cleaning/polishing, & wafer cutting, wet/dry etch, lithography, photo-mask, chemical deposition, ion implant, and final die cut processing.

Additional tech details for this role:

<https://bailey-jones.com/post/resume-details-lucent>

05/1992 — 08/1995 PALM HARBOR, FL, US

C/Unix Software Developer Transportation Systems Consulting

- Joined as entry-level C/Unix developer for continuing development of large ncurses-style terminal application called AMIS-2000. AMIS helps aircraft operators fulfill the record-keeping requirements of aircraft maintenance mandated by the American FAA (Federal Aviation Authority) and the British CAA (Civil Aviation Authority).
- Produced highly portable code to run on a variety of commercial Unix and open-source Linux/BSD platforms (most Unix vendors from this era had their own proprietary compilers instead of simply using gcc).
- Implemented changes to dozens of CRUD screens & printed reports as directed.
- Created alternative implementations of AMIS's database API (originally version interfaced to Unify-2000 RDBMS). These enabled AMIS to be sold to new customers already using other databases such as Informix and Oracle 6.x/7.x.
- Implemented the printing of barcodes on AMIS maintenance reports to speed data-entry when signed forms return from the hangar floor. The print driver I wrote supported 3 or 4 different dot-matrix printers that were in use at the time.
- As customers began accessing AMIS via PCs running telnet clients instead of serial-port dumb terminals ("green screens"), I modified our ncurses wrapper to take advantage of the PCs ability to display certain kinds of text dialogs in appropriate colors (errors in red, warnings in yellow, notifications in green, data fields in a different color than field labels).

Additional tech details for this role:

<https://bailey-jones.com/post/resume-details-tsc>

Music

I play an absurd number of musical instruments in a variety of ensembles in the Tampa Bay area.

- Trumpets (B-flat, C, and E-flat)
- Cornets
- Trombones (2 tenors, and 2 bass)
- Mellophones (B-flat & F)
- Double French horn
- Baritones (American & British styles)
- Euphonium (cheap Chinese maker)
- Tubas (a B-flat and an E-flat)
- Bassoon
- Nylon-string guitars (Yamaha & Esteban)
- Electric bass & string bass
- Recorders (soprano, alto & soprano)
- Hammered dulcimer
- Others owned, but not fluent in: violin, oboe, accordion

Ensemble types:

- Brass quintets
- British-style brass band
- Dixieland Jazz band
- Community concert bands
- Symphony orchestras
- Pit orchestra (for musicals on-stage)

Genres:

- Classical
- Dixieland Jazz
- Other Jazz
- Americana
- Show Tunes / Musicals
- Some pops / 1940s through 1980s

Other Interests

- Home Improvement
- Rural Living
- News / Economy
- Technology
- Languages (some Spanish and German)