

Quick hits

- Broad software dev process experience: IC, technical team lead, people manager, project management
- Deeply technical yet socially adept enough to stick in front of customers and other stakeholders
- Fierce advocate of diversity in the workplace particularly of women, LGBTQ+ people, and people of color

Professional Experience

Spaceflight Industries

2016-present

Software Development Manager - Ground & Control

- Responsible for delivering Gemini, the ground and control system for our next generation of Earth-imaging satellites. We learned a lot from Mercury, our first generation system used to control Pathfinder-1, and we took those lessons to design Gemini from the ground-up to be fast, resilient, and reliable.
- Drove architectural design discussions with developers to ensure functional requirements are met, system scalability as we launch more satellites, low-latency telemetry pipeline for real-time feedback during contact passes, and monitoring & alerting to identify problems and escalate them to operators.
- Prioritizing development tasks and triaging work to available resources to ensure company milestones are achieved and status is communicated to stakeholders.
- Coordinating closely with operations team, our internal customer, to ensure the system satisfies their use-cases, including UI for manual commanding during launch / early operations and full system automation after initial spacecraft check-out. Delivered high-quality code drops for operator evaluation prior to launch.
- Responsible for regular, stable release deployments to the staging and production environments and connected groundstations for full system rehearsals and system check-out.
- Working with the flight software team to ensure successful commanding of the spacecraft and downlinking of images, system logs, and telemetry reliably and securely.
- Leading software validation team to validate the software running our satellites, the software and hardware systems that tasks them from the ground, and everything in-between. Coordinating with the spacecraft hardware validation (AI&T) team to provide software necessary for hardware validation and check-out.
- Successfully managed updates to Mercury, our production ground and control software that commanded and tasked Pathfinder-1, our first imaging satellite, after its launch into LEO in September 2016.

EMC Isilon Storage Division

2010-2016

Consulting Performance Engineer

- Worked on finding cluster scalability pain-points and driving resolution of them across multiple teams in preparation for new hardware platforms that increase the supported cluster size by 2x.
- Led four teams (Infrastructure-, Test-, and Build-as-a-Service teams plus the Orchestration layer team) who are working to reinvent how Isilon builds products as the organization moves to a DevOps model.
- Architected overall DevOps system and ensured that the four teams integrated together. Technical consultant for the Infrastructure as a Service team due to my deep knowledge about the OneFS product as well as our internal infrastructure.
- Led the validation team upgrading the OneFS base OS from FreeBSD 7 to FreeBSD 10. Created tooling to test the development code in the standard OneFS automated regression system on virtual and real hardware well before the existing system could handle it.
- Led the team responsible for the creation of a performance build verification suite (PerfBVT) to detect performance regressions on branches during their development and prior to their merge to HEAD. The PerfBVT has blocked over a dozen performance regressions before they were merged to HEAD.
- Led performance testing and characterization of the OneFS 7.0 cornerstone features: multiwriter, enduring cache, and clones. Advised and assisted other OneFS 7.0 feature teams, including SMB 2.1, iSCSI, and SmartPools, on performance related issues.
- Led the performance aspect of the successful S200/X200 hardware beta. Worked closely with the beta customers to understand their workflows and assisted them in evaluating the new equipment.

Casey A. Peel

Seattle, WA

<https://kence.org>

IBM Corporation

2000-2010

Performance Lead for Tivoli Identity Manager

- Increased Tivoli Identity Manager performance in key product areas by 18 times and scalability of resident user population from 10k users to 5m users.
- Resolved customer critical situations both remotely and on-site.
- Assisted support teams when customers encountered performance- or scalability-related problems.
- Defined product performance and scalability objectives from customer interviews and marketing.
- Advised development teams on best practices for performance and scale, including: algorithms, caching, database design, and middleware tuning.
- Collaborated with product architects to ensure new features met customer performance and scale goals.
- Created performance test plans and sizings for project planning. Created and executed testcases to validate the product met performance and scale objectives. Created reports with perf metrics for external customers.
- Instructed test team in designing and running load and stress tests during the test cycle.
- Researched new product and middleware tunings to improve performance and scalability for released products. This was both a proactive activity as time permitted and reactive from customer interactions.
- Wrote and maintained documentation, including official product tuning guides, to assist sales teams, implementers, support, and customers with tuning. Created tools to troubleshoot performance problems.
- Advised sales engineers, support staff, and customers on deployment best practices for Tivoli Security products including Identity Manager, Directory Server, Directory Integrator, and Access Manager. Consulted with other product teams as a subject matter expert on Tivoli Directory Server and DB2.

Volunteer Experience

Distributed Proofreaders

2006-present

Distributed Proofreaders (pgdp.net) is the largest contributors of public domain eBooks to Project Gutenberg.

Lead Developer & System Administrator

- Removed code dependency on PHP magic quotes to enable running on PHP versions greater than 5.3.
- Created abstraction layer for the code's forum integration allowing migration from phpBB 2.x to 3.0 and then subsequently did the migration.
- Migrated project from CVS to git. Created git workflow documentation and gave git training classes to assist developers in the transition.
- Created and published development virtual machine with all middleware installed and configured to make it easier for new developers to get started as well as enable testing of later middleware versions.
- Developed WordCheck, a tool to help detect scannos and other OCR errors.
- Created the Site Progress Snapshot display and the round status graphs to alert users to later rounds of the site that need more volunteers. This balanced volunteer work and increased overall site throughput.
- Drove the community to consensus on how to update the site navbar to increase site discoverability and navigability and made the changes (the changes were easy, consensus was the hard part).
- Made extensive small changes to drive programming best practices and enforce coding standards on a 15-year-old very organically-grown code base with contributions by dozens of developers.

Publications

Team- and career-centric articles

Enabling teams to warp factor 10

<https://kence.org/2016/03/07/enabling-teams-to-warp-factor-10/>

Resume tips when applying for an SDET job

<https://kence.org/2016/10/27/resume-tips-when-applying-for-an-sdet-job/>

Popular technical articles

Secret sauce to including data_files in python bdist_rpm

https://kence.org/2015/03/09/secret-sauce-to-including-data_files-in-python-bdist_rpm/

Installing yaz for PHP on Ubuntu

<https://kence.org/2016/06/07/installing-yaz-for-php-on-ubuntu/>

CheckType parameters for processing XUnit test results

<https://kence.org/2017/04/04/checktype-parameters-for-processing-xunit-test-results/>

Work publications

IBM Tivoli Identity Manager Performance Tuning Guides

v5.x: <http://www-1.ibm.com/support/docview.wss?uid=swg27011444>

API: <http://www-1.ibm.com/support/docview.wss?uid=swg27009686>

scripts: <http://www-01.ibm.com/support/docview.wss?uid=swg27013557>

developerWorks: Troubleshooting IBM Tivoli Directory Server Performance

Part 1: <http://www.ibm.com/developerworks/tivoli/library/t-tds-perf>

Part 2: <http://www.ibm.com/developerworks/tivoli/library/t-tds-perf2>

Education

Texas A&M University, BS Computer Science, May 2000

Skills

- Project coordination: I've successfully led small teams and coordinated mid-sized teams across an organization to achieve a common goal all while keeping management apprised of our progress
- Languages: proficient in python, PHP, and bash for designing one-time scripts and maintainable product test suites; C/C++ coding in the late 90s – can read and tweak it but not proficient enough to develop in it; perl but I wouldn't admit this on a resume
- Extensive platform experience: Linux, Mac OS X, FreeBSD, AIX, and Solaris
- Database design and management with: MySQL and DB2; exposure to Oracle and PostgreSQL
- DevOps tooling experience: docker, Nomad, Terraform, AWS/GovCloud, VMware ESX/vSphere, Elasticsearch/Kibana, logstash
- DITL tools: Mac & Linux desktops, python, git, bash/ksh, standard unix toolchain
- Holy war sides: vim over emacs, Mac/Linux over Windows, Fedora over Ubuntu, Star Trek over Star Wars

Online Presence

- Blog: <https://kence.org>
- github: <https://github.com/cpeel>
- LinkedIn: <https://www.linkedin.com/in/caseypeel>