JASON PARROTT

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Background

10+ year experienced Linux administrator building and maintaining reliable, elegant, and supportable systems

Professional Experience

- **Lead Software Engineer**   September 2015 - Present
  FactSet Research Systems   Norwalk, CT

  – Assisted in FactSet's transition to a global company, adding region/zone support to FactSet.io, deploying hardware to five regional POPs allowing for self-service application deployment. Built Apache Traffic Server CDN add-on, allowing for static asset deployment behind our Dyn-based anycast network. Dramatically improved performance and reduced downtime for customers outside of the US

  – Developed end-to-end application and infrastructure observability add-ons including healthchecks (*Go*, *Kafka*, *Nagios* plugins), metrics (*Go*, *Kafka*, *OpenTSDB*, *MapR*, *Grafana*), logging (*Ruby on Rails*, *Go*, *Syslog*), alerting (*Go*, *Twilio*, *Pushover*), and status pages (*Ruby on Rails*) for internal incident communication

  – Developed containerized Database as a Service platform for *PostgreSQL*, *Redis*, and *RabbitMQ*, leveraging FactSet.io Container Manager, including automatic provisioning, monitoring, self-service backups and restores, and supporting advanced forking/follow/rollback features (*Go*, *WAL-E*)

  – Developed Identity API add-on, providing an authorization and authentication add-on for FactSet.io apps using *OAuth*, *OpenID Connect*, and *JWT*, federating employee, service, and client accounts

  – Introduced, deployed, and supported OpenStack Infrastructure as a Service (Liberty, Mitaka, Newton, and Ocata), managing onboarding, training, day-to-day operational support, release upgrades, and high availability

  – Developed Kerberos SSO authorization add-on for the FactSet.io (PaaS) HTTP Router

  – Developed application idle support in FactSet.io, reducing hardware utilization

  – Integrated *Infoblox* DNS appliance automation and tooling into the build system, eliminating manual tickets and reducing turnaround time

- **Lead Unix Systems Engineer**   September 2013 - September 2015
  FactSet Research Systems   Norwalk, CT

  – Designed and built FactSet.io, a Platform as a Service, including Container Engine (*Go*, *Docker*), Container Manager (*Go*, *Zookeeper*, Google Omega), HTTP Router (*Node.js*, *Redis Sentinel*), Git SSH Proxy (*Go*), Slug Compiler (*Ruby*, *Cloud Foundry* and *Heroku* buildpacks), Log Aggregation (*Heroku Logplex*), Platform API (*Go*, *PostgreSQL*), Web Dashboard (*Node.js*, *React*, *Webpack*), and CLI (*Go*). Currently used by 3500 applications and 575 active developers, driving FactSet's migration off OpenVMS monolithic codebase to microservices, allowing rapid integration of new company acquisitions, and primary infrastructure for FactSet's new web-based Workstation

  – Led R&D effort to find a new storage system for 20TB of client portfolio data on VMS, ultimiately recommending *MapR Tables*, building prototype tools, benchmarking performance, and testing various failure scenarios

  – Worked with various teams to graph on-call alerts, categorizing them, then reducing alerts dramatically with targeted improvements

  – Improved system crash response with automated ticket creation, detailed system details (charts, last minute process list, related ticket list), and automatic recovery attempts, all but eliminiating the largest source of on-call alerts

- **Senior Unix Systems Engineer** October 2011 - September 2013
  FactSet Research Systems Norwalk, CT

  – Wrote a Java-based virtual serial port concentrator for VMWare to complement our *Conserver* infrastructure for physical serial consoles

  – Implemented inventory collection of hardware and software health, versions, and applications, integrating internal and third party APIs

  – Introduced *OpenStack Swift* object storage, drastically reducing storage costs for our commercial news and research content

  – Led several large migration projects (HP G1 → G7, Solaris decommission in favor of Linux, Physical → Virtual), including assisting developers in application migration, providing a point of communiation, and organizing gantt charts and tickets

  – Inherited the MySQL Database team, maintaining, upgrading, troubleshooting, and on-call support for 100+ content and application databases for various client-facing development teams

  – Built network switchport automation to automatically change VLAN and update switchport descriptions during box build

  – Designed and built a self-service *MySQL* provisioning system based on *Linux CGroups*, *Pacemaker*, and *Percona Monitoring* tools, with a Rails-based interface for management, requests, query review, metrics, and alerting

  – Designed and built a self-service *Elasticsearch* provisioning system for FactSet's new FactSearch search/autocomplete system and Central Logging Platform

  – Investigated, installed, and supported *Vertica* for new analytics applications

- **Unix Systems Engineer** June 2008 - October 2011
  FactSet Research Systems Norwalk, CT

  – Maintained and supported 1000+ Red Hat Enterprise Linux and Oracle Solaris servers

  – Led architecture and creation of server build and installation automation leveraging *DNS*, *PXELinux*, *Kickstart*, *Ruby on Rails*, and tight integration with internal ticketing system and monitoring systems.

  – Developed multi-layer rolling patching system: daily *Ksplice* live kernel-patching, weekly *Yum* security package updates of non-sensitive packages, quarterly kernel and "minor release" reboot coordination with full Errata and RHN integration

  – Planned and executed *NetBackup* upgrades, *Sun StorageTek L700* maintenance, and migration to *Exagrid* disk storage

  – Maintained several virtualization environments, starting on *Xen*, migrating to *KVM*, and eventually settling on *VMWare*

  – Managed provisioning, ACLs, quotas, and NFS exports on various file storage appliances (*NetApp*, *Isilon*, *Oracle ZFS*)

  – Implemented configuration management while following change control policies and rolling installs (*CFEngine*, *Git*, *Gerrit*)

- **Research Lab Staff** May 2005 - May 2008
  ECE/CIS Department, University of Delaware Newark, DE

  – Maintained and supported 700 Solaris, Windows, Linux, and Macintosh desktops and servers

  – Built, configured, and maintained several undergraduate computer laboratories, research clusters, and servers for faculty and graduate students using *UNIX shell scripting*, *C programming*, *MPICH*, and Linux/Solaris system administration skills

  – Performed daily backups and quarterly archives using *Bacula*, *Amanda*, as well as custom Bash and batch scripts based on textitrsync

  – Developed web-based projects such as a trouble ticket system, network monitoring application with *mrtg*, backup information page, and software licence database using *php*, *python*, and *mysql* with *html*, *css*, and *ajax* using a *subversion* code repository

  – Developed console-based projects such as a *procmail* and python based email parser and systems information database using *RCS* revision control

  – Installed and upgraded megabit and gigabit wiring in several campus buildings

  – Developed wiki-based documentation site for documenting lab procedures and a Trac-based documentation site for software projects

- **Owner/Webmaster**   March 1999 - August 2006
  Superiorserve   Wilmington, DE

    – Designed, built, and maintained company web site

    – Worked on-site to troubleshoot desktop computer malfunctions

- **IT Assistant**   Summer 2004, Summer 2005
  Advanced Power Control, Inc.   Newark, DE

    – Installed and configured Windows machines for HVAC automation control

    – Repaired employee Dell brand laptops and desktops under a Premier Access Technician certification

Education

- **University of Delaware, Newark, DE**   May 2008
  Cumulative GPA 3.782/4.0

    – B.E.E., Electrical Engineering (GPA 3.822)

    – B.S., Computer Science with Honors (GPA 3.917)

    – Minor: Mathematics

Honors and Awards

- 2015 Charles J. Snyder Technologist of the Year, FactSet