Rowin Andruscavage

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Objective: Systems design, analysis, and optimization using simulation and rapid prototyping.

Proficient: **Computing:** UNIX (clusters, Linux, SUN, SGI), OpenStack, AWS, VMware
Languages: Python, Ruby, PERL, Bash, Java, C/C++, Matlab, SQL, XML/XSLT, Office macros, SCM: Git, Hg, Perforce
Analysis & Visualization: UML, FEA, 3D rendering & animation, graphics manipulation/scripting
Technologies: open source, HW/network/OS/application health monitoring & tuning, LAMP/Tomcat, NGINX, Varnish, F5 BigIP, Elastic Stack, Couchbase, ADC/DAC interfaces

Experience: **Senior Engineer, Systems Architecture**, T-Mobile, Bellevue WA — *May 2018-pres.*

- DevOps infrastructure lead for enterprise DIGITS rich communications service.
- Automate CI/CD of resilient conferencing platform across multiple datacenters using Jenkins and Ansible on OpenStack, monitored with Check_MK and secured Elastic Stack event log aggregation.

Senior DevOps Engineer, Global Eagle, Seattle WA — *2014-2018*

- Automation for largest non-government provider of satellite internet for maritime, terrestrial, and aviation markets.
- Develop and maintain CI/CD pipeline for hybrid satellite / long-range wifi data centers at sea aboard cruise ships and ferries using Stackato + Chef, migrated to Docker + Ansible. ServerSpec TDD from Github/Gerrit, using Jenkins to orchestrate test-kitchen Vagrant instances w/ linting in RuboCop, Foodcritic.
- Upgrade and maintain Elasticsearch-Logstash-Kibana data pipeline for realtime usage and billing reports. Fleet monitoring and notification w/ Icinga2, Sensu, and Serf. Automated baremetal shipboard cloud provisioning in concert with AWS infrastructure. Prototyped high availability architecture using HAProxy and Keepalived with libvirt-kvm.

Senior Systems Engineer, The Walt Disney Company, Seattle WA — *2012-2014*

- Oncall support for Walt Disney Parks and Resorts Online – the highest volume travel website worldwide processing millions of dollars' worth of transactions daily.
- Work with geographically distributed teams using ITIL practices to set up and maintain Dev, QA, LT, and Prod environments through lifecycle of hundreds of sites while maintaining PCI DSS compliance.
- Automation of operations with Bamboo CI pipeline, Rundeck, and migration to Chef-based deployments. SME for Couchbase NoSQL DB. Disaster Recovery datacenter migration.

Software Development Engineer, Microsoft (via Volt), Redmond WA — *2012*

- As aerodynamicist for Flight, created flight dynamics models and tuning procedures for a variety of simulated aircraft. Development, test, and release C++ and Lua on a tight monthly schedule.
- Integrated DATCOM into aircraft flight dynamics modeling pipeline. Improved propeller fidelity with solver based on Goldstein vortex theory.

Systems Engineer, SAIC, Naval Surface Warfare Center, Carderock MD — *2009-2012*

- Developed, deployed, and supported 100+ node clusters for submarine sonar system training simulators used at naval bases across the USA. Provided documentation and training to enable aggressive crew training schedules in DISA COMSEC environments.
- Engineered high-performance network and SAN for 20-node rendering cluster periscope and immersive dome projection. Rapid deployment using Cobbler and Perceus.
- Developed and deployed remote touchscreen interface instructor consoles with interactive system health monitoring.

Systems Architect, The Boeing Company - Integrated Defense Systems, Arlington VA   *2004-2009*

- Advanced Modeling and Simulation tech demo showcase for joint Command & Control exercises in civil, defense, and international applications.
- Systems architect for sophisticated multi-site interactive theaters. Designed and deployed flexible network and fiber switching infrastructure to deliver operator consoles and content for multiple events at classification levels up to TS/SCI, including several remotely-operated field offices.
- Test & evaluation of new components deployed across enterprise for optimal compression and network settings. Establish training criteria, knowledge base, and community of practice, presented at BTEC16 (Boeing Technical Excellence Conference).
- Event automation with Vista Systems Spyder and ThinkLogical fiber KVM switching. Deployed core services for each network: DHCP+DNS, RAID file repository, Nagios monitoring. Remastered LiveCDs for maintenance and imaging. Implement custom event orchestration scripts, including "VNCequencer" which coordinated and labeled multi-screen remote displays, record/playback, and traffic shaping to fit bandwidth constraints. Implemented PC AV capture, real-time multicast, record/playback with VLC.

Systems Engineer, The Boeing Company - Air Traffic Management, McLean VA   *2001-2004*

- Director of high profile R&D lab shared by engineering and demo teams supporting GCNSS (Global Communication, Navigation, and Surveillance System) contract for FAA. Showcase satellite networking capabilities of Connexion by Boeing aircraft, depicting live trajectory in FlightViz, passenger cabin video surveillance, and messaging with federal air marshals.
- Worked with IT teams to connect lab to airline ETMS (Enhanced Traffic Management System) network. Deployed datafeed logging, archive, and proxy service for ASDI (Aircraft Situation Display to Industry) and displayed via AADS (Aircraft Activity Display System). Analyzed BTS (Bureau of Transportation Statistics) data using PERL and Octave. Created Java web frontend to FAA Advisories DB.
- Developed UML-C++ discrete event simulation IDE supporting 20 developers on SUN 24-node HPC simulation clusters. Contributed unit conversion & constants library, coordinate transformations, XML data log schema, and XSLT export filters for analysis and visualization in TAAM (Total Airspace and Airport Modeler). Provided rsync between East and West clusters and CM procedures for Clearcase. Dramatically improved remote access using VNC (Virtual Network Computing) and Cygwin's XFree86 to support OpenGL 3D rendering.

Product Development Engineer, PATMOS Int'l Corp., Ocean City MD   *2000*

- Design & prototype supercomputing blade clusters with drbd RAID, MOSIX process-migration, PVM/MPI, in a unique recursive network topology

UN DevBusiness.com Webmaster, World Bank, Washington DC   *1999-2001*

- Upgraded ColdFusion frontend and database backend to streamline schema.
- Worked closely with management to improve & update site serving 2,000+ clients.

Undergraduate Research, Cornell University, Ithaca NY   *1996-1999*

- Studied granular flow properties in microgravity for ISS experiment.
- Refined & automated stroboscopic image processing with PERL and Gimp-Script.

Cornell R/C Aircraft Team   *1999*

- Post-processing of inflight video to correlate attitude with multiple GPS data.

Cornell Rigid Airfoil Team, catamaran wingsail watercraft   *1996-1997*

- Performed CFD (computational fluid dynamics) analysis of multi-element cambered airfoil, constructed 1/6 scale articulating model.
- Preparation and test sail of previous adjustable-camber carbon-fiber wingsail vessel on Cayuga lake.

Homebuilt aircraft   *1994-1996*

- Machined and assembled wing for the *Quail*, a single-seat aluminum airplane
- Built R/C glider and gas powered models. Successfully landed maiden flight after practicing on PC sim.

Training: **Certified Jenkins Engineer**, Kryterion, Redmond WA   *2017*

Certified Scrum Master, Valtech, Seattle WA   *2013*

RHCE / RHCSA 300, RedHat, Tysons Corner VA   *2011*

Engineer-in-Training, DLLR, Baltimore MD   *2009*

Fundamentals of Engineering Examination

Education: **University of Maryland Global Campus**, Shady Grove, MD   *2024*

Doctor of Business Administration
Evidence-based scientific management program

University of Maryland, College Park, MD   *May 2007*

M.S. Systems Engineering, conc. in wireless networks
Thesis: *Arcology Optimization and Simulation Framework*
Optimal routing of recursively scaleable transit networks using SimPy and LP_Solve.

Cornell University, Ithaca, NY   *May 2001*

B.S. Mechanical & Aerospace Engineering

Eleanor Roosevelt HS, Greenbelt, MD   *June 1996*

Science & Technology Magnet Program

Activities: **Oom Yung Doe** : 2nd degree black belt, Instructor; 1 gold, 8 silver medals in state tournaments   *2016,2017*

Tae Kwon Do : 3rd degree black belt, instructor   *1992-2012*

Paper aircraft : website, distance award in 2008 New Millennium Paper Airplane Contest   *1998-pres.*

Cornell Student Linux User's Group, ASME : webmaster   *1996-1999*