Doug Wiegley

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Objective

To obtain a position in the field of software development.

Experience

A10 NETWORKS

Delivers appliance and virtual form factors for advanced packet load balancers with hardware acceleration, encryption, and L4-7 features. The same underlying accelerated network platform is also used to deliver carrier grade NAT, DDOS mitigation, and SSL intercept products.

Director of Software Engineering / Principal SW Engineer   4/2014 – present

- Led and managed a remote team that started with six people and grew to fourteen. Mentored junior through senior devs, and upcoming managers. Handled recruiting, retention, scheduling, and other standard project management duties. Advocated and used cross-functional agile processes for all development efforts. Provided architectural direction for all projects. Our team's focus was on cloud and cloud integrations, including licensing efforts, OpenStack, SDKs, and integrating the customer experience with all of A10's infrastructure systems.
- Represented A10 in the OpenStack community. Became core contributor in Neutron and LBaaS projects, a member of the project driver team for Neutron, implemented a massive split of neutron's codebase into neutron and each of its advanced services (lbaas, fwaas, vpnaas), as well as a lot of other minor features. Represented A10 at numerous OpenStack summits, design summits, and project midcycles. Moderated many design summit sessions, and presented at summits.
- Developed A10 LBaaS v2 openstack driver, with a common core for the older v1, and all versions of shipping ACOS. Supported hardware and virtual instances of the A10 load balancer devices.
- Helped design, build, and deploy a complete rewrite of A10's Global License Manager (GLM), which became A10's end customer business portal, including merging seven license clients, normalizing business processes, integrating with finance Oracle, adding pay-as-you-go licensing, subscription licensing, partner licensing, and bare-metal usb-key licensing, using ruby-on-rails as the main framework, and python with tornado for local and distributed proxies.
- Designed remote management backchannel into license subsystem, for unifying cloud management under the same portal.
- Developed appliance API abstraction library for the major versions of ACOS, used by OpenStack integration and forked by several dozen customers. Also wrote a "mini ACOS appliance" using python/flask and an open-source reverse proxy, as a mock in CI tests.
- Helped design an early SaaS offering of A10's load balancer services in AWS.
- Built and operated a production OpenStack cloud with 25 nodes, out of leftover hardware. Used by multiple cross functional groups within the company, and by our automated CI and appliance orchestration.
- Handled releases of openstack packages, python sdks, deployment of production services, setting up IPv6 redirects for company web and email traffic, and the license site was converted to be an identity provider, which took over authentication of all company www and support users.

UCEEM

A cloud based, turn-key embedded device management platform that enabled identity management, authentication to Google and Microsoft Active Directory, embedded device management, WAN enterprise Wi-Fi and RADIUS, and LTE connectivity, management, and diagnostics, using a mix of Ruby on Rails, Postgres, an abstracted cellular carrier API using Python/Django, a long-poll management server using Node.js, and a custom firmware SDK.

CTO/VP Software   3/2012 – 4/2014

- Provide technical strategy including defining the technical roadmap, giving architectural direction and interfacing with sales and marketing for cross-functional requirements.
- Manage multiple departments in the company including a team of eight developers plus contractors, the QA department, and human resources.
- Provide training, mentorship and Agile leadership to developers and contractors.
- Deployed and scaled the Uceem product suite including Rails web service, RADIUS slave deployment, tuning, and hardening.
- Designed and implemented a variety of features including Authorization, Radius, Device management, Identity management, Multiple subscription billing system, Network topology mapping, Log inference, Unified management object model via JSON, LDAP to JSON proxy, REST APIs, API signature mechanism, Event callouts from RADIUS to web, Email hooks, Longpoll hooks, and Device cmds.
- Integrated the system with a variety of 3rd party APIs including Google Auth, LDAP Auth, Paper Trail, Cradlepoint ECM, Verizon Soap, and TR-069.
- Wrote and released multiple open source rails gems including ones for reverse mac lookup, email_regex validation, generic mac address processing.

Parkside Software, LLC

A contract programming company that specializes in scalable web development, product architecture and emergency project management.

Owner   3/2011 – present

- Acted as CTO and/or Technical advisor for several software startups including 29Club and Gabnabit. Work included providing product architecture for both web, mobile and tablet platforms, interviewing development team, code reviews and ongoing technical advice.
- Conducted technology and scalability reviews with future recommendations for several company's current software including Cradlepoint's WiPipe Central management platform and a Costco link out website for Enduris, and Jot-It.
- Designed, managed and implemented projects for customers including converting a pencil/clipboard process into an iPad based web service, real-time data survey collection and integrating MongoDB for device log archiving into a management platform and making changes to increase scalability for Enduris, Cradlepoint, and Jot-It.
- Prototyped a variety of web applications for companies including Idealab, Jot-It, TapReply and VideoTube
- Managed a local and remote development team of software developers, Q/A testers and designers.
- Provided mentorship for students learning Ruby on Rails programming for Bloc.io.

iFanMedia / iCitizen

A cloud based mobile platform providing Radio, City and Community Apps on Apple/iOS and Android mobile phones based on Ruby-on-Rails, MySQL, REST APIs, and OpenX. The system currently has 40k users and processes 30k requests per day.

CTO   3/2010 – 12/2012

- Provided architectural direction for the entire product suite.
- Provided management and mentoring including leading a team of four developers and managing contractors.
- Increased productivity and feature turn around by leading team use of Agile and SCRUM development processes.
- Deployed, rewrote and maintained the iFan Mobile API Platform including systems for content distribution, live host interaction, in-context social media conversations and viral sharing.

- Designed and implemented a variety of features including a cloud-based municipal business license database with support for listing customization, mobile-to-mobile chatting, daily deals, mobile ad serving, promotions and analytics.
- Setup and maintained the product development system including automated centralized builds for rails, iOS, and Android, production environments utilizing cloud servers, and basic company services like email, calendar, and bug tracking.

Mirapoint / Critical Path

An appliance-based email/messaging platform, with mail store and security filtering features. Currently delivering five nine's reliability for millions of mailboxes worldwide.

Architect   2008 – 9/2011

- Improved product performance, stability and maintainability by modifying SMTP to increase throughput by 4x to 20x, rewriting parts of the filtering subsystem, rewriting the asynchronous network engine inside the Mirapoint FastPath MTA, redesigning and rewriting the threading model for the database server, and rewriting the socket passing library to be fully asynchronous.
- Designed and implemented a variety of features including calendar support for co-existing Exchange servers, a search indexer for use with a Lucene search daemon, and operator viewable comprehensive lifecycle timing data for all messages.
- Integrated parts of the Mirapoint and Critical Path code bases including missing authentication and other MTA features.
- Interacted with a variety of departments including QA, technical publications, support, sales and marketing to work on product planning, emergency customer hot site resolutions, training and other issues.

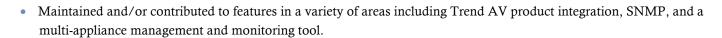### Principal Engineer   2005 – 2008

- Provided management and mentoring including technical leadership for a team ranging from 3 to 25 engineers in porting the Mirapoint OS to Linux and providing support, code reviews and code integration to offsite engineers and contractors.
- Improved product performance, stability and maintainability by leading the redesign of key subsystems, converting threaded programs from I/O blocking to fully preemptible kernel threads, redesigning sections of the Cyrus mailbox architecture, and creating a platform abstraction library.
- Improved product development process by porting benchmarking service to new OS, creating new build system, implementing new installer and adding a variety of test suites.
- Designed and implemented a variety of features including the software half of a bonding NIC failover, unique user IDs for login, auditing and access permissions, IMAP UNSELECT, a three-tier aware folder caching daemon, and a service for publishing and synchronizing folder information to/from LDAP
- Owned a variety of areas including the administration modules, SMTP/MTA, POP, IMAP, DB, and antivirus.

Member of Technical Staff   2000 – 2005

- Improved product performance and stability by creating a highly scalable memory cache, stabilizing the SSL subsystem and standardizing the email address parser.
- Improved product development process by designing nightly performance tests and creating a graphical code review system.
- Designed and implemented a variety of features including greylisting, real-time billing interface, central license server, secure transaction-safe real-time logging, antivirus engine integration framework, custom MIME parser to detect viruses, LDAP tool to synchronize appliance configuration.
- Added hardware support including a diskless version of the appliance, 64-bit atomic integer routines, factory reset feature, automatic hardware detection, and driver back porting.
- Added operating system support including FreeBSD kernel changes for TCP rate/connection limiting and assisting with the port from FreeBSD2 to FreeBSD4.

- Maintained and/or contributed to features in a variety of areas including Trend AV product integration, SNMP, and a multi-appliance management and monitoring tool.

Hewlett-Packard

R&D Software Engineer, Web JetAdmin Project   1996-2000

A web-based application for remote management of network peripherals including printers and scanners.
- Designed and implemented a variety of features including automatic discovery of network nodes, SMTP, BOOTP, alert notification using SNMP traps and polling.
- Maintained and/or contributed to features in a variety of areas including SNMP, HTTP, and a firmware downloader.
- Cross-ported to a variety of Operating systems including Windows NT, Windows 9X, Linux, Solaris, HP-UX, and OS/2.

Skills

- Languages: C, C++, Lisp, Ruby, Python, Perl, Shell, Assembly
- Web Development: Rails, REST, OAuth, XML, JSON, YML, Google Maps, WebDAV, SAML, XMLSig, SOAP
- Cloud Providers: AWS, EC2, S3, DyanamoDB, Rackspace, Digital Ocean, Cloud, PaaS
- Messaging: SMTP, MIME, LDAP, Auth, POP, IMAP, iCal, Antivirus, Antispam, Greylisting, Reputation
- Networking: TCP/IP, UDP, ARP, DNS, DHCP, NTP, SNMP, HTTP, SSL/TLS, iptables, ipsec, multicast
- Network Management: SNMP, TR-069, CWMP, RADIUS, WAN/Cloud management
- Operating Systems/Tools: Linux/Unix, Windows, OS/X, Vagrant, Mysql, Postgres, MongoDB, Redis, memcache
- Kernel Programming: Concurrency, Multi-threading, Asynchronous programming, Drivers
- Other skill areas: Sleepycat, Ferret/Solr/Lucene , System administration, Telecommuting, Rails scalability
- Leadership: CTO, Product architecture, Team management, Agile

Education

Carnegie Mellon University   1992 - 1996

Bachelor of Science, Computer Science, minor Psychology