

Eric Cozzi

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Systems Software Engineer

Overview

As a Systems Software Engineer and Technical Lead, I have over 30-years of proven experience in the design, prototype, development and debugging of commercial software products. With several pending patents, I am an expert in the development of high-quality, innovative product solutions. Skilled in all phases of the software development project life cycle, I have taken products from customer requirements through to implementation and enhancement in both pre-IPO and Fortune-100 companies. My key qualifications include:

- Python / C / C++ / Bash
- API & Microservice Development
- Cross Platform Development
- TCP, UDP & Multicast Networking
- Cloud Computing
- Innovator & Patent Inventor
- Docker / Podman / Kubernetes
- Effective use of Design Patterns
- Modern Tools and Processes
- Standards Based Development
- Agile Development Process
- Test Driven Development
- Specification Development
- Professional Scrum Master
- Application Debugging

Experience

[Hewlett Packard Enterprise](#) (formerly [Cray, Inc.](#)), Saint Paul, MN

Expert Systems Software Engineer VI, Cray Management Systems (CMS)

2014 – Current

Hewlett Packard Enterprise is a global leader in supercomputing; designing and building some of the world's most advanced computing systems for government, industry and academia. Cray initially hired me as a contractor in 2012. 18 months later I was hired permanently. In 2019, Hewlett Packard Enterprise (HPE) acquired Cray.

Development of the HPE Dragon Distributed Runtime for HPC workflows.

- The Dragon distributed runtime will power complex post-exascale workflows that can scale, that are cloud-native, that can access data efficiently, that can span multiple systems, and that can be used with multiple languages on heterogeneous hardware.

Development of HPE Cray EX Image Management System (IMS)

- Subject matter expert and lead developer for the HPE Cray EX Image Management System (IMS) used to build & customize node images. IMS reimaged the legacy image management tools for the HPE Cray EX system. The IMS Service runs as a Kubernetes pod within the HPE Cray EX cluster. IMS exposes a RESTful CRUD API managing images, image recipes, SSH public keys and IMS jobs. IMS Jobs can be used to build a new image from an image recipe or enable the customization of an existing image.

Technical Presenter at the 2018 Cray Users Group (CUG) conference in Stockholm, Sweden

- Presented on changes to the Cray image management tools to support building ARM based images.

Team Scrum master

- Earned the Professional Scrum Master I (PSM I) certification from Scrum.org

Development of Cray XC-50 Image Management Tools

- Assisted in the development of a set of Cray administration tools to manage local RPM repositories and image recipes used to build compute node images.
- Architect and lead software developer for the design and implementation of a set of changes to enable building cross-platform (ARM) images using QEMU hardware virtualization. In this role I interfaced with a cross-project tiger team to ensure that ARM based support was released on time and with appropriate testing.

Development of OpenStack based Cray Management System

- Contributed to the development, build, packaging, installation, configuration and triage of the OpenStack based Cray management system. I was among one of the first developers to be assigned to this highly visible project.

Development of OpenStack Managed E-Login Node

- Assisted in the redesign and development of an OpenStack Ironic managed "Cray External Login (ELogin) Node." The ELogin node provides login, development (programming environment) and job submission (Work Load Management (WLM)) services to users of the Cray XC supercomputer.

Automated Cray-Installation Testing

- Developed a Python based testing framework to automate and test the installation of Cray's XC versioned SMW/CLE software within a VirtualBox environment with the goal of increased product quality and reduced need for testing on real Cray hardware.

[Sococo](#), Mountain View, CA & Twin Cities, MN
Senior Software/Network Infrastructure Engineer

2010 – 2012

Sococo Team Space is a real-time, high-availability SAAS application offering a virtual online "office" environment. Using the Team Space client, Team Space members can login to their virtual office from the comfort of their home, or remote location, click into each other's offices or a shared conference room, and talk, share screens & video, make phone calls and chat instantaneously all with the ease of the cloud.

- Architected, developed and operationally oversaw Sococo's PSTN VoIP Gateway infrastructure. The PSTN VoIP Gateway is a C/C++, real-time, multi-threaded, high-availability, cloud-based, client/server Linux daemon enabling Sococo Team Space's 25,000+ members to make telephone calls directly from within the Sococo Team Space environment. Direct Incoming Dial (DID) and standard PBX features were spec'd, but never fully developed.
- Contributed to the development of Sococo's cross-platform (Windows, Linux, Mac and iOS) abstraction layer and core application engine as a member of the 6-person Client Platform Team using the Agile development process.

[Cisco Systems, Inc.](#), San Jose, CA
Software Engineer IV

2005 – 2010

Cisco Systems is a leading supplier of networking solutions including network routers, switches and VoIP & video conferencing solutions. Worked in Cisco's elite Emerging Technologies Group tasked with developing and incubating next-generation, \$Billion product ideas.

- Contributed to the development of the Cisco IPICS product which enables comprehensive communication interoperability and incident management/response between disparate IP and RF based radio networks. Served as Senior Engineer since the product's inception and Technical Lead for 3.0/4.0 versions.

[Level\(3\) Communications, Inc.](#) (formerly [Telverse Communications](#)), Sunnyvale, CA
Senior Software Engineer

2001 – 2005

Level(3) Communications, formerly Telverse Communications, built wholesale and retail VoIP, video and data communication services delivered over broadband communication networks.

- Developed and maintained C/C++ based internal customer provisioning system. This system integrated several separate systems (Billing, Dial Tone, Voicemail, et. al) using a common MySQL database.

[SurfControl, Inc.](#) (formerly [SurfWatch Software](#)), Sunnyvale, CA
Senior SurfWatch Software Engineer

1997 – 2001

When installed on a PC, enterprise-proxy server or corporate firewall, SurfWatch prevents access to Internet sites deemed inappropriate, including those which are sexually explicit or a variety of other categories.

- Primary developer in charge of the SurfWatch SDK, a C/C++, cross-platform, multi-threaded API that translates a URL into a block or allow response as determined by SurfWatch's criteria and filters. The SDK is the core of all SurfWatch's server-based filtering products.
- Lead redesign of backend customer subscription system. This high-traffic, mission critical system enforced SurfWatch's business policies while allowing users access to updated SurfWatch filters.
- Developed the SurfWatch for Windows 98 product which utilized the Winsock 2.0 Service Provider interface.

[Mustang Software, Inc.](#), Bakersfield, CA
Software Engineer

1994 – 1997

Mustang Software was a leading developer of Bulletin Board Systems (BBS's) providing online messaging, file transfer and interactive gaming before the Internet became popular.

- Project lead and primary developer in charge of the Wildcat! Navigator, an AOL-style graphical interface to Wildcat!'s traditional ASCII/ANSI interface.
- Developed and documented the Wildcat! Navigator Software Development Kit.

Skills	Platforms: Linux (RHEL, CentOS, SuSE), UNIX, Mac, Windows Languages: C/C++, Python, Shell Scripting
Patents	• Communication System with State Dependent Parameters (pending), Cisco Systems, filed 2007 • Managing Status and Access for a Variable Source Content Stream (pending), Cisco Systems, filed 2007 • Virtual Area Based Telephony Communications (pending), Sococo, filed 2011
Education	San Jose State University; San Jose, CA; BS in Computer Science / Math Minor
Certifications	• Unix System Administration Certificate, San Jose State University • Cisco Certified Network Associate (CCNA), Cisco Systems Inc. (expired 1/2010) • Professional Scrum Master™ I (PSM I)
Interests	• First Aid & CPR Certified • Cubmaster for Boy Scouts of America Cub Scout Pack 297 in Roseville, MN • Licensed HAM Radio Operator with the call sign, KF6WOQ • I have studied culinary arts at numerous cooking schools, including l'Ecole Ritz-Escoffier in Paris, France and the Tante Marie Cooking School in San Francisco, California • Woodworking • International Travel