

# Kit Plummer

## Technology Architect & Software Engineering Practitioner

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## Profile

A technology architect and engineer focused on distributed computing, open source development, software delivery operations, and emergent innovation culture. Current holder of TS-SCI clearance.

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## Skills

- **Problem Solver**  
Analyzing hard problems and providing quick and maintainable solutions that allow organizations to be ready for market opportunities.
- **Change Agent**  
In tune with start-up and enterprise practices, excelling at evolving engineering practices towards optimum delivery requirements.
- **Service**  
Communicating needs between customers, engineers and operators, helping both to focus on their respective tasks - effectively and efficiently.

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## Experience

### **Ion Channel**

*Founder/CTO 2015-*

Business development and award of multiple \$1M+ contracts with various intelligence community agencies, addressing software supply-chain requirements and source-code cybersecurity.

- Established and staffed engineering team in Portland OR focusing on ‘product’-oriented development
- Coordinated initial feature requirements from customer/system/process consulting and analysis
- Led engineering team through dev tools, process and methods selection
- Rolled out continuous delivery infrastructure and processes to automate delivery of source and artifacts to customers

Design and development of initial software supply-chain product/service offerings

- Microservices-based architecture targeting AWS infrastructure with automated test and delivery
- Services written in Ruby and Golang deployed with Docker containers to AWS ECR/ECS
- Integration with upstream data providers (NIST NVD, language ecosystems, Github) and ingest to local datastores
- API, CLI, and UI development to support governance, risk and compliance operations in multiple operational targets

## **AirGap / RadiantBlue technologies**

*Chief Engineer* **2012-2015**

Consulting organizations on the “modern software engineering” enterprise

- Communicating the need for enterprises to accommodate a flexible culture, to accommodate technology change, preventing debt and allowing for the right tool to be applied to the job at hand
- Analyzing existing processes and documenting infrastructure and automation opportunities
- Training on infrastructure-as-code tools (ie. Puppet, Chef) and cloud and container tools (Openstack and Docker)

Developing open source alternative solutions for defense and intelligence systems, to enable rapid and emergent innovation opportunities

- Utilizing public and private cloud technologies (e.g. Amazon Web Services(AWS): EC2, S3/Glacier, Route53, RDS, etc.; Heroku PaaS; OpenShift) as well as emerging technologies such as NoSQL, map-reduce, and dynamic software frameworks
- Consulting on continuous integration, continuous delivery and infrastructure-as-code practices
- Supporting open source operations, serving as a board member at [The Codice Foundation](#)
- Working with the [Distributed Data Framework](#) project, providing Puppet and AWS support to support dynamic provision and auto-configuration of large-scale deployments

Managing development and operation of a workflow automation engine for delivery of software components

- Architected and implemented private cloud infrastructure based on Openstack, Puppet and Docker, and augmented by AWS compute and storage resources
- Designed a workflow engine for distributed task operations using Mongo, Grails,

PostgreSQL, and Activiti

- Developed Ruby microservices connecting external data sources (e.g. NIST vulnerability database, VirusTotal, fossology)
- Worked with agencies to capture security process/audit, transport, and component manifesting requirements
- Integrating Amazon Web Services for elastic test agents, and disaster recovery flows for system images and software artifacts

### **MaestroDev**

*VP, Product Engineering* **2011-2012**

Led the design and development of a DevOps tool suite to support emerging enterprise markets with software development-through-operations workflow automation

- Managed a globally distributed staff of software engineers, designers, technical writers, and administrators
- Communicated with executive stakeholders regarding strategy, execution and operational needs
- Worked with customers and test sites to optimize the delivery, monitoring and operation of system components
- Built a Ruote-based workflow engine that integrated best-of-breed tools in the SCM, CI, deployment, provisioning and configuration management arena

### **Dozer Software LLC**

*Principal* **Present**

- Provide rapid prototyping, system design, and software engineering services to local, defense and mining organizations

### **Accenture National Security Services**

*Technical Architect* **2007-2010**

Developed a semantic wiki/text engineering platform for document/intelligence inference for US ARMY CDI

- Processing document similarity and entity extraction algorithms to create “linkable” relationships
- Integrating open source projects Grails, GATE, UIMA, Tika, Jena to minimize costs and license constraints
- Architected for component distribution and high-scalability using publish-subscribe/XML/RDF interconnects

Architected and designed a dynamic data discovery and visualization service platform for USAF (SAF)

- Utilizing off-the-shelf software frameworks (Grails and OSGi) for maximum developmental performance
- Implemented multiple search algorithms to identify location/geo-based and other information
- Following Scrum agile software engineering methodology with geo-distributed team

Established and architected an open source contextual collaboration suite for the USAF

- Developed early prototype using Java/OSGi frameworks and HTTP interfaces
- Ported design to Ruby and Rails, RESTful, and Service-Oriented Architecture
- Published whitepapers and spoke at various Open Source and defense conferences and symposiums

### **Raytheon Missile Systems – Advanced Programs**

*Principal Software Engineer 2005–2007*

Developed a tactically-aware service integration platform, based on Enterprise Service Bus principals

- Created software development kit (API, documentation and tooling) for service developers
- Developed information assurance and security mechanisms to support multi-level classification support
- Participated in industry Expert Groups to drive specifications and standards towards company needs
- Operated in an Open development environment using GForge, Subversion, Maven, and Continuum

Lead engineer for the development of an unmanned system's mission computer/processing platform

- Performed processing platform trade study, researching against performance, scalability, size, weight, power, and interconnection requirements
- Supported initial flight testing of hardware, applied modifications to design as necessary
- Engineered a custom interface and mount for easy connection of communications and power adapters
- Integrated tactical and commercial datalinks to provide mobile ad-hoc network connectivity

Served as a Co-Chair of the Communications Technology Interest Group and Software Engineering Networks

- Organized and participate in large symposiums and workshops, reviewing content and managing events
- Fostered Open Technology Development and the use of Open Source software and tools

**Raytheon Missile Systems – Operations Research: Systems Engineer 2003-2005**

**Systems Integration Plus, Inc.: Systems Engineer 2001-2003**

**ITT Technical Institute: Adjunct Instructor 2001-2003**

**Pilot2Pilot Incorporated: President 2000-2001**

**Marine Corps Community Services: IT Special Projects Manager 1997-2000**

**United States Air Force: Wideband/Satellite Radio Technician 1990-1994**

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# Education

**University of Maryland**, Adelphi, Maryland December 2008 Master of Software Engineering

**University of Maryland**, Kadena AB, Okinawa, October 1999 Bachelor of Science in Computer Studies

**University of Arkansas**, Camp Foster, Okinawa, September 1999 Completed training, course work and requisite projects for mid-level management certification

**Green Hills Software**, Tucson, AZ October 2003 Completed training and certification for Integrity RTOS

**Redhat**, San Francisco, CA May 2001 Completed RHCE training and certification

**Wind River Systems**, Alameda, California September 2001 Completed coursework covering VxWorks 5.4 and Tornado 2.0

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# Activities

[The Codice Foundation](#), Founder and Board Member

[Open Tucson](#), Founder

[OVMTB High School Mountain Bike Team](#), Founder and Team Director

[National Interscholastic Cycling Association](#), Level I Certified Coach

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# Links

[Github](#), Source code

[kitplummer.github.io](#), Blog