

TED BURGHART

Eastern Massachusetts

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EXPERT SOFTWARE DEVELOPER

From being an early adopter of object-oriented programming through deploying the latest innovations in globally distributed computing, I've spent decades practicing, and preaching, the art and science of developing predictable, highly reliable software systems. Through all phases of the process from concept to deployment, I've proven adept at seeing the big picture and handling the most complex details, helping organizations large and small deliver exemplary levels of quality and performance within appropriate timeframes. My ideal position allows me to apply my expertise and enthusiasm solving new challenges in a hands-on technical role.

PROFESSIONAL EXPERIENCE

BASHO TECHNOLOGIES, INC. Bellevue, Washington (Remote) 2014-present

Senior Engineer

I joined BASHO after having become intrigued with their technology while at Nokia. In this multi-faceted role I took on enhancing our fork of the Erlang/OTP platform while developing new features for the Riak distributed database and the tools employed to build and test it. I increased Erlang VM kernel performance on modern CPUs significantly, and changes to core OTP applications improve their, and Riak's, stability and security in production deployments. Additionally, I designed and implemented major new features in the database core, led the transition of Riak onto OTP-20, and developed build and workflow support tools integrated with the industry-standard Rebar3 framework. I've also contributed fixes and features to open-source projects outside BASHO including Erlang, Rebar3, and others.

ITINERANT PROGRAMMER Internet 2013-2014

Consultant/Contractor

After leaving Nokia, I took on a variety of projects allowing me to explore areas of professional interest. Many of these entailed combining RWD strategies with innovative less-than-mainstream servers improving on the content, performance, and maintenance limitations of static pages and impenetrable scripts.

NOKIA CORPORATION Burlington, Massachusetts 2010-2013

Distributed Systems Engineer

I joined Nokia to build their next-generation global big-data repository at a period when they had over one billion active customers and were selling a million phones per day. In support of our goal of an eventually consistent datastore with access and query capabilities supporting 300 million concurrent users, I developed a number of foundational capabilities including masterless service management, patented full-stack multi-domain security policy and context propagation, and a REST model providing common publish-subscribe operations for data propagation and analytical updates. Nokia's adoption of the Microsoft smartphone ecosystem pre-empted the full realization of the original project goals and led to the dissolution of the team developing it.

FORRESTER RESEARCH, INC. Cambridge, Massachusetts 2009-2010

Contractor

I was brought in to replace the user-based access control of Forrester's subscription web services with a SAML RBAC federated identity system. The Shibboleth framework was selected to handle assertion lifecycle and propagation, and I developed a new authentication and authorization library as well as cookie management and JAAS adapters to support legacy and externally-credentialed users. Lastly, Spring and related dynamic configuration technologies were used to integrate the services into the Tomcat, Apache and Drupal servers comprising the service infrastructure.

V.I. LABORATORIES, INC. Waltham, Massachusetts 2008-2009

Chief Architect

I was recruited to design and lead the development of Vi's next-generation software confidentiality and integrity assurance products. I designed and implemented a dynamically configurable C++ processing pipeline for manipulating executable image files on multiple platforms, and assisted in the development of modules that

allowed it to produce uniquely identifiable executables that were tamper and threat resistant across numerous physical and virtual environments. The project showed impressive improvements over its predecessor in all areas, including security and platform support, but was abruptly de-funded before completion due to the impact of global financial events on the organization's sales revenue.

EMC CORPORATION Hopkinton & Bedford, Massachusetts 2004-2008
Consultant Software Engineer; Consulting Technologist

My initial role was as a key architect, developer, and mentor for a modular, cross-platform storage management framework that provided the foundation for EMC's industry-leading CIM/WBEM enterprise storage management tools. I then transitioned to a new security group, where I designed and prototyped a common security platform, building on the platform abstractions underlying the previous framework and providing an infrastructure for integrating local and enterprise security services into applications. I also served as a technical consultant for the \$2.1B acquisition of RSA Security and Network Intelligence, forming a new, comprehensive security technology division. Following the acquisition, I moved to RSA's CTO office, where I focused on security management in large and multi-domain environments, consulting on security adoption initiatives across EMC's product families. While this strategic role was interesting, when the opportunity to lead a small team in a direct development role presented itself, I chose to leave for Vi Labs.

HITACHI COMPUTER PRODUCTS, INC. Waltham, Massachusetts 2000-2004
QUADRASIS, INC.
Sr. Principal Engineer; Chief Architect

I was recruited by Hitachi to fill the senior technical role in the group that developed their CORBA Security Service, used widely in telecom and advanced government research. I developed cross-platform C++ libraries abstracting hardware, operating system, and middleware, allowing customers to use our products on any major OS with any major ORB. As web services became a market force, I worked with our CTO and senior staff to develop and patent the Quadrasis EASI Security Unifier, providing policy-driven routing and transformation of security operations between disparate consumers and security service providers. Development and marketing of EASI was spun off into Quadrasis, where with a small team we built the concept into a truly impressive product line. Even with a successful global pilot deployment in a large financial organization, though, we were ahead of our time (*see my work at Forrester a decade later*) and couldn't maintain a steady revenue stream.

TECHNICAL EXPERTISE

I'm expert in all phases of development of reliable, performant, and scalable software in major compiled languages across Unix, Linux, and Windows, as well as their native scripting and tools. I'm also fluent in a wide range of functional, OO, and procedural languages, virtual environments, data formats, communication protocols, the technologies underlying current distributed computing, and the historical successes and failures that led to their use. In short, if it enables distributed computing, I'm probably more than familiar with it.

BACKGROUND

I received a diploma in Business Computer Programming in 1980 from Computer Processing Institute in Bridgeport, CT, after 1200 hours of night classes while working full-time as a machinist. It wasn't until several years later that I transitioned from mechanical to software engineering, initially by writing programs to perform repetitive and time-consuming vibration-dampening calculations. I've since learned dozens of programming languages on my own and continue to dive into new technologies whenever I can.

Along the way I've earned awards and recognition from an array of organizations, been a voting and contributing delegate in several industry standards bodies, and written and presented on a variety of distributed computing subjects to a diverse range of audiences. I'm also a multiple patent holder in the field of distributed systems security and a passionate advocate of software predictability.

OUTSTANDING REFERENCES AVAILABLE