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Software Solutions Architect

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Experience

2005-present CommerceHub   *SE->Snr. SE->Software Architect*   Albany, NY
- Architected solutions and lead project teams for the leading SaaS provider of messaging, process modeling and onboarding solutions for the dropship industry.
- Business owner of the core platform team, focused on scalability, reliability and operations (10 engineers
- Solutions advisor to new product, professional services, maintenance and distributed testing platform teams
- Voted MVP 2012, runner up in 2011, 2010

2003-2005   Business Automation Services   *Software Developer*   Clifton Park, NY
- Designed and built client-server desktop applications for sale to northeastern municipal government.
- Prototyped new products such as GIS [ESRI] integration and an online tax payment system.

2002-2006   Webslum Internet Services   *Principal*   Wynantskill, NY
- Principal for a startup providing LAMP stack web hosting for hobbyists to build their own blogs.

2000-2003   PowerOne Media   *Programmer/Scripter*   Troy, NY
- Designed and built content management tools for a SaaS provider for local newspapers.

1999-2000   BusinessOnline   *Programmer/Scripter*   Guilderland, NY
- Scripted contract content management and web applications

Main projects

- Winter 2014: Appointed product owner of the core platform team, prioritizing the product backlog.

- Fall 2013: In preparation for the holiday shopping season, developed a metrics dashboard utilizing common OSS components and a to-be-open-sourced in-house collection tool (ScoreKeeper) to visualize processing load and allow support staff and executives to monitor the efficacy of tuning efforts.

- Fall 2013: In response to difficulty the engineers were facing with concurrency and our batch-scheduling engine, architected a new engine exercising actor model concurrency with Akka. This model proved to be 3x faster in a single component and allowed for parallelism of component instances.

- Summer 2013: Began a multi-stage re-architecting of our core system into independent services and resources to improve time to market, starting with our batch-scheduling engine.

- Summer 2013: Lead other architects in the development of a technical radar (similar to that of ThoughtWorks), outlining in tools, technologies and techniques worth considering for new solutions.

- Spring 2013: Built the first system-wide ER diagram for our core product as part of the analysis for a primary key widening project, detailing the relationships of over 600 entities.

- Spring 2013: Architected a new component for our file transfer service to poll customer web services. Component was built for scalability and flexibility to allow for thousands of concurrent requests to be made and the results routed back to individual business applications asynchronously.

- Spring 2013: On a dare, increased serial performance of inventory processing by 5x, mainly through pipelining. This allowed us to safely onboard a vendor who updates a million skus several times per day.

- Winter 2012: Worked as documentarian and evangelist for a highly successful source control transition from IBM Clearcase UCM to Mercurial affecting 40 engineers and operators.

- Spring 2012: Successfully lobbied for the formation of a permanent "platform" (API and architecture) team to tackle issues of scale. The first task of the platform team was the introduction of session failover for a six (now 20) silo workflow oriented web app.

- Fall 2011: Re-architected our batch distribution system to allow for greater parallelism, higher availability of work nodes, lower latency and increased safety from concurrent processing Exceptions. The key to this scheduling engine is an algorithm that uses the declared relationship between tenants on payloads to deduce which payloads would be unlikely to create race conditions.

- Most of 2011: Architected and implemented a file transfer gateway service – a multi-component suite hidden behind a message queue, allowing business applications to deliver files to and receive files from our customers without being aware of their communications details or opening holes in the firewall.

- Spring 2010: Designed and implemented a searchable, filterable, web application for viewing a log of message rejections and their reasons, replacing a manual "copy, paste, email" process, including a model for a business rule rejection and an interface for displaying JSON streams of hierarchical errors

- Summer 2009: Through refactored processing code, improved data modeling and extensive documentation grew our once-confusing Less-than-Truckload (LTL) messaging system by 300% YoY with decreased maintenance and greater customer satisfaction.

- Most of 2007, 2008: Designed and implemented a complex suite of messaging and visibility tools to help streamline Costco's drop ship returns process.

- Most of 2006: Designed and implemented an XML validation framework for business messages as part of construction of a new messaging platform that allowed for the delivery of core message rejection explanations directly to a highlighted field on a data entry form.

- Fall 2005: Implemented an engine for building complex state machines based on Statecharts diagrams and ported existing 108 FSAs to the new model. The state machine library was a core enabling technology and is slated to be open sourced.

- Spring 2005: As an after-hours project, built a .NET web application, integrated with a COM credit card processing service, to allow municipal residents to view, print and pay their tax bills online using data exported from our tax collection software.

- 2004: Built and installed a prototype GIS application, integrating GIS mapping layers and our planning database to allow our planning users to make many site specific decisions from their desktops.

- 2003: Implemented the Integrated Property System (IPS), a client-database suite for municipal government building, planning and zoning departments. IPS featured an entity association module that allowed end users to link entity data from multiple sources, informed by a "weighted" similarity algorithm

- 2002: Standardized content loading onto a single COM based platform for uniform input validation

- 2001: After 9/11, built a spider for internal users to search for local news on our network related to terror events, later made available to our newspaper partners.

Core Tech/Skills

Java / JVM	SQL (Microsoft)	UML/Ad-hoc modeling
Analysis & Documentation	Virtualization	Service Oriented Architecture
Message Queues (JMS)	JEE	Web Programming
Enterprise Integration	JavaScript	Concurrent programming
JVM performance optimization	Groovy	Continuous Integration
Source Control (Mercurial)	Batch Processing	C#
Actor Model Concurrency (Akka)	Scala	Metrics (Graphite, Statsd, Coda Hale)

Education

2013	Coursera, Functional Programming in Scala, Reactive Programming in Scala
2007	Sun Certified Java Programmer
1996-2000	Binghamton University, BA in English Literature and Rhetoric