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Objective

An architect, agile lead and/or mentor role where I can apply a successful track record delivering leading-edge solutions. I emphasize server-side open-standards and COTS solutions that are agnostic with regard to any specific platform or language, and I try to make use of thin (browser) clients as often as possible. I typically focus on Java Enterprise and related technologies, but employ C, C++ and other technologies when appropriate. I leverage integrated dependency management (Maven, Nexus), continuous integration (Jenkins) and defect tracking tools (Redmine) to increase team productivity and facilitate management, customer oversight, integration and distribution. My over-arching goal is to deliver flexible open standards-based solutions with zero or minimal licensing costs that can be readily enhanced and extended and can integrate and inter-operate with existing and future systems.

Technologies

***Enterprise Technologies*:** Virtualization (VMs, ESXi, KVM), cloud (AWS) and Linux deployment environments. SOA enterprise solutions deployed on application and web servers such as Apache Tomcat and HTTP, WebLogic, JBoss, Glassfish, Resin and so forth. Service technologies such as REST (JAX-RS, Node.js) and JAX-WS (web services/SOAP), including service proxy patterns. XML (JAXB, various markup languages, XSD and XSL) and JSON technologies. Messaging technologies such as JMS, AMQP and Google protocol buffers. Web technologies such as JSP, Struts, JSF, servlets, portals, XSLT, XHTML (Saxon). Again, I emphasize open source-based solutions and COTS whenever possible.

Database and Search Engine Technologies: Couchbase (NoSQL) document and key-value based databases, Lucene search indexing, Oracle, MySQL, Sybase, DB2, Informix. N1QL , SQL, PL/SQL, SQLXML. JPA, Hibernate and other object-to-relational technologies.

Client-side Technologies: HTML, XHTML, CSS, JavaScript, jQuery, AJAX, JSON. When possible client-side content is generated on the server-side to work with all major web browsers without the use of third-party add-ons or plug-ins. This is done using mainstream and open-standards sever technologies such as JSP, Struts, JSF, and XSL (including XPath 2.0 and XQuery 2.0, Saxon). Where required client-side Java may be used (Java Web Start).

Other Technology Skills: Streaming technologies (UDP, RTP, codecs). Messaging (JMS, AMQP), event management (Elasticsearch logstash), integration testing, various programming languages such as C/C++ with STL as required.

Cross-Platform Integration, Legacy System Integration: Java Connector Adapter (JCA), TCP/IP, CORBA, ICE, Tuxedo, and many other protocols. Integration with Microsoft technologies and languages such as .NET, C#, VB. Legacy technology and system migration and integration.

System Life Cycle Development: Agile development, SDLC, SLM. Requirements gathering, data and system modeling, case scenarios, low-cost proof-of-concept R&D efforts and prototyping, localization (internationalization), infrastructure and framework development, tooling, version management and policies (GIT, GitHub, GitLab, SVN, CVS). Best practices leadership incorporating defect tracking (Redmine, Jira), continuous integration (Jenkins), release management (Nexus) tools. Deployment packaging (RPM, yum).

Security Clearance: TS/SCI adjudicated in September, 2012 (valid until September, 2017).

Employment History

01/14-Present: **Lead Software Systems Engineer, Soliel LLC, Vienna, VA**

In January of 2014 the software development group for Soliel consisted of me and my laptop. My first task was to build out the server infrastructure for a new lab and establish a software development process. The company desired on-site servers, so I built several commodity servers that can host 20 to 30 virtual systems each in a ESXi or KVM hypervisor environment.

Next I set up corporate and software development infrastructure servers. These include OpenVPN, BIND DNS, DHCP, Alfresco (content management), a file server, CM (GitLab, an open source Git repository), defect tracking (Redmine), continuous integration (Jenkins), dependency management and software distribution (Nexus), and development and integration (ESXi and KVM) servers. All data is automatically backed up to Amazon S3 on a nightly basis, and each server has UPS communications to allow it to safely shut down before the batter is exhausted. I added two servers for our cloud initiative effort. The only cost for all of this infrastructure was for the hardware to deploy the servers on.

I assembled an agile development team and established a development process. Redmine is used to create a work backlog from which work is moved into milestones for each sprint. As code is checked into Git, comments indicate the feature or defect ticket with which the code is associated. An automated build is triggered on the Jenkins server when the code is pushed to the repository and the associated ticket is updated on the Redmine server with a reference to the code. The result is a world-class round-trip development process that allows management and customer communication and oversight.

I am the lead developer and mentor for our agile team. Our current effort is a cloud-compatible distributed network of systems to facilitate mission planning, execution, and post-mission analysis of military operations at the tactical edge. The systems must work in a restricted network environment that is subject to disconnections, high-latency and low bandwidth. Systems discover one another and provide a service discovery infrastructure for war-fighters to access capabilities. A NoSQL-based persistence service allows for ad hoc database creation as well as pub/sub capabilities. Other core capabilities include communications (chat, VOIP), planning, situational and analysis displays and access to resources down to the individual war-fighter level.

05/07-01/14: **Senior Software Engineer, Boeing, Fairfax, VA**

SOA architect, lead developer and mentor. I deliver solutions that integrate and inter-operate disparate systems over local and wide area networks (LAN, WAN) under restricted communications conditions such as SATCOM links.

My most recent effort involved designing and working as the lead developer to deliver a remote operations system that integrates manned and unmanned air, ship and other systems to provide a situational awareness and make the various system capabilities accessible via a cloud-deployed system.

The design facilitates easily integrating and inter-operating existing and future commercial and government partner systems. The communications interfaces are fault tolerant and based on open standards services and streaming APIs (REST, SOAP, RTP, UDP, TCP/IP) to deliver SIGINT and other data. Legacy and/or poorly designed systems are integrated using adapters to isolate idiosyncratic interfaces so the data and capabilities can be leveraged over a common API.

I make extensive use of virtualization (VMWare, KVM), services and streaming technologies (RTP with various codecs). XML technologies (web services/WSDL, REST, XSD, JAXB) define interfaces, which allows code to be auto-generated that is compatible across most platforms (Linux, Windows) and languages (Java, .NET, Python). I use third party libraries (Apache, SourceForge, Google) that are open source (Apache 2.0, BSD, Latex, LGPL, MIT) unless absolutely necessary.

I've developed a simplified software development kit (SDK) for Java that embodies the best practices of web service communications over unreliable communications links that partners may use to simplify publishing and subscribing to data.

05/03-5/07:   Senior Software Engineer/lead developer, IBA, Falls Church, VA

I worked on systems for U.S. Citizenship and Immigration Services (USCIS). We employed J2EE technologies such as EJB, JSP, Struts, XSL 2.0 (XSLT and XSL:FO using XPath and XQuery 2.0 using Saxon) and Oracle 9i technologies (schema design and development, packaged PL/SQL stored procedures and functions, SQL XML). Other technologies included JMS, JavaMail, XML, iText (an Open Source PDF and RTF framework) and XSQL (another Oracle XML database servlet interface). Two Intranet and two major Internet applications using these technologies are deployed in a Resin and IIS environment, including two of the most-visited U.S. government web sites. A DOJ public trust clearance was required by DHS for this project. I performed extensive work with Struts (including extending the framework) and with many Open Source technologies from SourceForge and the Apache Foundation. In addition to the PL/SQL and SQL XML work, I also used a custom object-to-relational mapping interface in our model 2 framework. I also served on the team as a J2EE, Oracle and platform subject matter expert and as a mentor, integration and deployment expert.

11/02-5/03:   Managing Consultant, Venturi Technology Associates, deployed in Chantilly, VA.

I was the lead developer and team manager responsible for heading up a team of 11 developers for a J2EE project using JSP, Jakarta Struts, EJB, WebLogic and Oracle 9i technologies. In addition to my development responsibilities, I was responsible for assigning deliverables to team members and providing them with guidance and hands-on assistance to make sure that those deliverables were completed on-time. The project is a high transaction volume public transportation fare collection system used in major US, UK and other cities worldwide. As an architect I led and mentored the team on a very demanding delivery schedule. I provided leadership and took concepts through design, development and integration. I also was a liaison with our counterpart team in San Diego.

6/02-11/02:   Software Engineer Consultant. Whitaker Consulting, deployed Washington, DC.

I was a developer, mentor and integrator for an INS visa recipient Information System. This project used J2EE, EJB, JSP, JDBC, Oracle, XML, Jakarta Struts and other Open Source technologies running on a Resin EJB/HTTP server. The system is used by Department of Homeland Security (DHS) personnel to designate schools and training programs to participate in the SEVP. Exchange visitors in designated programs are tracked by program officials and Department of State personnel to monitor their compliance with rules and regulations for exchange visitors and their dependents. The goal is to protect against terrorist attacks such as those committed by the terrorists who attended flight schools in the US and later used that training to attack the United States on September 11, 2001.

9/00-7/02:   Software Engineer and Lead Consultant. UUNet, Ashburn, VA.

My roles at UUNet included R&D, data modeling, architecture, proof-of-concept prototyping, design, architecture, team tooling, lead developer, mentor and integrator. Project phase one has involved server-side development in C++ of a transaction server accessed via HTTPS/CGI. This transaction server uses STL (standard template library) and ODBC to Oracle 8i. It is cross-platform compatible (Unix and Windows NT), uses TCP/IP or Winsock and is fault-tolerant, able to maintain user and resource sessions across re-boots. Multiple sessions per user and multiple resources per user are supported with provisions for session timeouts. The server employs user authentication using encryption. Support is provided for Snap-On protocols, including a web-enabled client (via HTTP/HTTPS) and other clients via TCP/IP.

In phase two, Swing clients use EJBs under WebLogic Server, which in turn uses CORBA to communicate with a C++ AIX/Tuxedo DB2 WebLogic Enterprise Server. I also served as an architect, designed and developed a platform-portable XML rule engine-based email collection system. I performed data modeling, lead the database developers, developed a re-usable framework, mentored and lead the Java developers, and developed the e-mail collector and rules-engine portion of the project. Users define rules describing how to analyze incoming email in order to create, prioritize and assign trouble tickets to the proper work group. The rules are stored as XML in Oracle. Technologies used include Java, C++/STL, Oracle OCI, and the SMTP and POP3 protocols. On both the phase II trouble ticketing and email systems I gathered end-user requirements, performed data modeling and architecture, developed coding frameworks and coding standards, coordinated development, addressed issues and lead the integration efforts for releases.

2/00-9/00:   **Systems Consultant. DaimlerChrysler and Kmart World HQ, Troy, MI**

I performed object-relational design and lead development for web-enabled software at Daimler Chrysler using Java, JSP, XML and JDBC technologies. I also developed a Java Swing GUI and an object-to-relational (OR) mapping system using the Java reflection API that communicates over JDBC to Oracle and Informix at Kmart World Headquarters. While at Kmart I also engaged in some exciting work using XML and XSL server-side Java technologies on Apache HTTP and Tomcat to deliver dynamic web content. During the three projects I served on I served as an architect, developed framework classes, mentored and lead developers and performed integration.

2/99-2/00:   **Object Technology Consultant. Detroit Edison, Detroit, MI**

I was a change agent for the Object Technology Center of Excellence (OTCoE) in Detroit Edison's Technology Center (NTC). My role was to research and perform hands-on evaluations of potential J2EE technologies and vendor offerings (such as EJB or IDE products), then design and develop proof-of-concept prototypes. Once a technology and implementation strategy was chosen, I developed an implementation plan and selected tools to be used by teams. I was then assigned as a hands-on consultant/mentor to transfer the new technologies to a corporate project team as a data modeler, lead architect and developer. I developed client-side Java using Swing as had extensive experience with server-side Java, including servlets, JDBC, and EJB. I received extensive hands-on training from Sun Microsystems, Quoin Incorporated, Java University and several hard-core JavaOne workshops. The majority of my time was spent as a member of the architecture transition team leading the conversion of the corporation's Electric Choice Implementation Project from JDBC to EJB. This was a highly visible project mandated by state law to deregulate the electric industry in the state of Michigan.

6/86-2/00:   **Various Software Engineering Positions**

For the sake of brevity I have removed details for positions held between college graduation and 2000, including positions at General Dynamics, Unisys, Helm Inc., APT, The Virtual Group and work as an independent consultant. A lot of this stuff is pretty cool, but the resume is simply too long. I can provide an appendix of these job descriptions on request.

Education: **BSBA With Highest Distinction. University of Arizona, Tucson, AZ, May, 1986.**

Double Major in Management Information Systems and Operations (production/service) Management with a 3.93/4.00 GPA. UA Honors program. Phi Kappa Phi honor society.

Military: **US Marine Corps. 6/1976 - 4/80.** Honorable Service.

References: Available upon request.