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Summary

Visionary **Software Architect** and effective **Java Team Lead** with nearly 17 years of experience designing, building and evolving ambitious, flexible, scalable and high-quality software. Deep, up-to-date knowledge of SOA and security technologies and practices.

Core Competencies

- ▶ Tactical and Strategic **Software Architecture**
- ▶ **Mentoring** and **Team Leadership**
- ▶ **Object-Oriented Analysis and Design (OOAD)**
- ▶ **Java 6** Implementation (SE, EE , Swing)

Experience

Apr. 2003 – Apr. 2009 **Software Architect**

Layer 7 Technologies, Vancouver, BC

Played a pivotal role in designing, documenting and implementing the core architecture of the company's flagship web services security appliance product, the **SecureSpan Gateway**. Developed many reusable services and frameworks to increase the productivity of the team and streamline the development of new features. Designed and implemented many of the critical subsystems in the company's product portfolio, including:

- ▶ The Gateway's core message processing engine, which attempts to resolve every request to a policy (using a combination of URL and XML payload) then executes the policy
- ▶ Most of the Gateway's Identity and Access Management (IAM) functionality: Authentication and authorization, LDAP abstraction, user and group management, identity mapping, PKI integration and extremely rich support for federated identity standards
- ▶ A declarative RBAC framework that allows end users to write granular access control policies to secure Gateway administration functionality. Layer 7 developers declare the permissions required to access their APIs using Java 5 annotations, and never need to write authorization code.
- ▶ A flexible and high-performance audit system that selectively records messages meeting user-defined criteria while minimally impacting the flow-through performance of unaudited traffic.
- ▶ Co-authored the Gateway's class-leading clustered replay protection feature
- ▶ High-level design of the critical Policy Migration and Remote System Monitoring features of the company's new Enterprise Service Manager product
- ▶ The Process Controller, a daemon responsible for the reliability and monitoring of Gateways.

Frequently assisted with pre-sales activities, including requirements capture and analysis, RFP responses and on-site Proof of Concept implementations, and was often able to find ways to meet novel requirements with minimal or no code changes.

Jul. Sep. 2000 – Apr. 2003 Senior Software Developer and Gateway Project Leader

Infowave Software, Vancouver BC

Initially a **Senior Software Developer** with the company's Enterprise Architecture and Advanced Technologies Group. Evaluated the technology assets of several acquisition prospects and supported management in setting the company's strategic direction by evaluating emerging mobile technologies and building prototypes. Co-wrote a Technology Partnerships Canada proposal that resulted in a \$7M investment in the company by the Canadian government.

Promoted to **Gateway Product Leader**; led the team responsible for evolving, testing, deploying and supporting the central Gateway (Internet application server) component of the company's innovative and extremely user-friendly Symmetry Pro product line. Served as principal point of contact both for the outsourced supplier of the software and for the managed hosting company where it was deployed. Travelled to customer sites to assist with installations in customer data centers.

Developed several enhancements and additional modules that were not covered under the software supplier's statement of work:

- ▶ Maintained and enhanced a JMS-based mail notifier that sent "push" notifications via SMS to handheld devices
- ▶ Designed and implemented a flexible monitoring daemon that would remotely invoke Gateway APIs and send heartbeat and failure notifications over SNMP and SMTP.
- ▶ Retargeted the product from Linux/Oracle to Windows/ SQL Server, by implementing an automated Ant build system that extracted the vendor's source code bundle and applied patches before invoking the vendor's build system.

Sep. 1999 - Nov. 2000 Senior Software Developer

GlobalMedia.com, Vancouver BC

Drove the requirements-gathering, specification, database design, software architecture and implementation of very substantial parts of the company's next-generation web application infrastructure:

- ▶ Designed and implemented content selection software used to intelligently and automatically select fresh and pertinent content from a hierarchically-organized repository
- ▶ Designed and implemented a template-driven Web publishing system to allow publishers to build dynamically customized content-driven sites out of reusable components while maintaining presentation independence via the use of XML data and XSLT stylesheets
- ▶ Gathered requirements, wrote specifications and designed object and data models for a generic e-commerce product information management system required to support any conceivable product line
- ▶ Participated in the specification, analysis, design or implementation of nearly all the company's software engineering projects

Mar. 1997 - Sep. 1999 Lead Windows Developer

Eloquent Systems, North Vancouver BC

Provided detailed technical guidance and mentoring to the Windows development team.

- ▶ Maintained and enhanced GENCAT, Eloquent's end-user application development toolkit
- ▶ Ported existing GENCAT functionality from Advanced Revelation (DOS) to OpenInsight (Windows), comprising approximately 40 forms and 126,000 lines of 4GL code
- ▶ Designed and implemented a complete generic data entry system which includes runtime screen generators, dynamic and complex data validation routines, and dynamically bound event handling code

- ▶ Designed and implemented a framework for internationalizing GENCAT applications, allowing users to translate entire applications into any Western language without reprogramming or recompiling.
- ▶ Served as the “last line of defense” behind technical support analysts in escalated support issues

1992 – 1997

Data Processing Manager and Application Developer

Go Direct Marketing Inc., Vancouver BC

As Data Processing Manager:

- ▶ Was responsible for the integration of data from wildly diverse applications and formats into CRM databases
- ▶ Implemented a process that allowed relatively unskilled data processing personnel to execute data processing jobs without writing code

After promotion to Application Developer:

- ▶ Maintained and enhanced tools for restructuring and "cleaning" name and address data
- ▶ Maintained, enhanced and documented the company’s extensive suite of mission-critical marketing information management and data processing tools
- ▶ Designed and implemented a back-end point-of-sale purchase tracking system to receive retail purchase transaction data from POS terminals
- ▶ Designed and conducted training sessions to familiarize staff with computer, database and networking concepts
- ▶ Designed and implemented a marketing database analysis and reporting system which greatly eased the development of complex analyses and significantly reduced the time required to deliver meaningful results

Other Skills

Libraries and Frameworks

- ▶ **Spring** (AOP and Dependency Injection)
- ▶ **Hibernate/JPA**
- ▶ **SOA/Web Services** frameworks (CXF, Axis)
- ▶ **Apache** (collections, HTTPClient)

Security

- ▶ **PKI** (certificates, PKIX, revocation checking)
- ▶ **WS-Security, XML Digital Signatures** and **XML Encryption**
- ▶ **Identity and Access Management (IAM)** standards (X.509, LDAP, SAML, XACML, WS-Trust)

Tools

- ▶ Advanced **Ant** scripting
- ▶ Competent user of **Maven** and **Ivy**
- ▶ Expert **IntelliJ IDEA** user, productive in **NetBeans** and **Eclipse**

Platforms

- ▶ Comfortable and productive in all modern **operating systems** (OS X, Linux and Windows)
- ▶ Advanced **Linux system administration**
- ▶ **Database Design** and Implementation:
 - MySQL
 - Some Oracle

Networking and Distributed Systems

- ▶ Web services, RMI
- ▶ Distributed Caches (Mainly JBossCache)
- ▶ JMS, MQSeries, TIBCO EMS

Natural Languages

- ▶ Excellent spoken and written English
- ▶ Basic proficiency in French