

**Peter Gathua**

# Work Experience:

**Freddie Mac December 2013 - Present**

**Oracle SOA Architect / Middleware Engineer**

**Key Work Experience:**

* The current tasks involve Oracle SOA architect, general middleware engineering revolving around Oracle SOA Suite, OSB and leading effort to move the middleware engineering department to cloud services.
* Design and development of datacenter automation solutions. (Configuration of custom VM images, integration of cloud hosted environment to internal datacenter, and automated self-provisioning of middleware, database and webservers on virtualized environment). Use Java /grails 2 for user facing infrastructure and middleware request portal.
* Introduce Chef for DevOps (scripted infrastructure and servers configuration and deployment in the cloud as well as onsite in a versioned repeatable fashion).
* Enable seamless integration of cloud to onsite datacenters

**Global Investments , Northern Trust Bank September 2012 - October 2013**

**Sr. BPM and Integration Developer**

**Key Work Experience:**

* Led various design and Integration efforts around Oracle SOA/OSB 11G and IBM BPM 8.0.1;
* Utilized skills on both the Oracle and IBM software stacks to advise management and the Bank’s solutions architects on best practices and best way forward in matters of integrating their Oracle SOA Suite 11G based SOA layer to the IBM BPM stack.
* Functioned as a Java services developer or BPM developer as needed.

**DHS/ICE - OCIO Modernization Project June 2008 - May 2012**

**Sr. Software Architect / Developer / Operations & Maintenance Middleware Engineer**

**Key Work Experience:**

* The current tasks involve architecture design and develop of ICE applications. Currently working on the Visa Security Program (VSP) and Law Enforcement Centralized Access Development (LECAD). VSP is a business process management application used for (vetting and screening) of US Entry Visa application cases at embassies and consulates (posts) around the world. The application connects to other systems at various agencies to gather vetting data. This data is used in the decision-making workflow and a recommendation is made on each case to department of state to issue or refuse the Visa. The findings of each investigation are also returned with the recommendation.
* IBM WebSphere software stack specialist – help with configuration ranging from WAS network deployment cluster installation, Process Server, Integration, (BPM, WID), systems administration and deployment/apps troubleshooting.
* Assist the project chief architect with systems architecture and design. Assist and mentor the development team on development tasks especially those involving working with the Enterprise Integration Services (EIS) layer.
* Configure IBM MQ Series to communicate with WebSphere Appserver and set up inter-agency security via IBM DataPower network appliance firewall proxy configuration and security policies.
* Implement SPENGO/TAI single sign on for VSP. Specify the configuration necessary to use windows client SPENGO authentication to MS Active Directory Server with WebSphere App Server running on Red Hut Linux 5.X (Samba installed to enable the WAS Linux server to act as a client to the primary windows domain controller)
* Current Environment is the full stack of IBM WebSphere products backed by Oracle Databases and Java JEE.
* Created IBM Infosphere datastage ETL (extract-transform-load) scripts to migrate existing historical data into the new VSP schema to enable better analysis and reporting. Involved setting up complex data pipelines and writing custom data transformation logic.
* Develop major portions of the application using Java EE, Assist on LECAD to develop a visual linking tool (VLT) utilizing Adobe Flash Builder 4.5. The VLT Queries back-end web services for data on a subject, and then finds relationships in the data that it then displays on the main canvas using a hub and spoke model showing incidents, locations, persons etc and their relationship to the subject at the hub of the wheel. The tool is used to find non-obvious relationships in datasets housed in multiple law enforcement source repositories. Prior unique experience on a similar initiative was brought to bear on this effort and led to my role on LECAD project.

**NY Stock Exchange - Euronext October 2007 - April 2008**

**Sr. Software Lead Engineer on the Operations Support Group**

**Key Work Experience:**

* The task involved design and development of the NYSE Rules Tracker application based on Java/ J2EE, Spring framework, Spring web MVC, Hibernate 3, XML Web services and Adobe Flex 3 Rich Internet Client.
* The application is based on IBM WebSphere 6.1 application server, Sybase Database v12.5 and tracks NYSE regulatory rules development and submission to the SEC workflow. It also managed the associated approval process.

**Lockheed Martin, Corp., May 2006 - September 2007**

**Sr. Architect and Software Engineer on the ERA NARA Project**

**Key Work Experience:**

* The [Electronic Records Archives (ERA)](http://www.archives.gov/era/) system for the National Archives and Records Administration (NARA). ERA is a CMMI level 5 project. System will capture and preserve the electronic records of the federal government, regardless of format, ensure hardware and software independence, and provide access to the American public and Federal officials for the life of the Republic.
* As a senior member of the Architecture team, my responsibilities include the Systems Software Set Up and Applications Architecture and Design.
* Utilized technologies based around Oracle Database 10g clusters, BEA WebLogic Platform 9.X, SOA (Service Oriented Architecture), Web Services, XML based (A)synchronous Messaging on JMS server, Business Process Orchestration BPEL Workflows, loosely coupled Portal and Enterprise Applications Integration (EAI) based on XML Web services. Enterprise Service Bus (ESB), Enterprise Content Management utilizing EMC Documentum content management stack 5.3
* Architecture and Prototyping tools include Tomcat, WebLogic eclipse plugins for Hibernate, Struts, WebLogic page flows framework and the Spring Framework, Borland Star Team and Architect toolset. Application deployment environment consists of Linux and Unix systems.
* Implemented Core Java based services such as integrity seal on documents, package decomposition and manifest verification service, security classification scanning service, etc.

**Northrop Grumman, Corp., July 2005 - May 2006**

**Product Release Manager and Sr. LInX Software Engineer**

**Key Work Experience:**

* The Law Enforcement Information Exchange (LInX). Provides a way for inter-agency data and knowledge sharing and can lead to easier identification and resolution of criminal or potential terrorist activity.
* Mainly responsible for vendor relationship and release schedule and production builds of LInX system, and Index database administration (patching, upgrades, and backup / restore).
* Technologies used include Oracle 9i, BEA WebLogic platform 8.1, Java J2EE, EJB, Artificial Intelligence based on Ontology to conceptualize and describe relationships that exist in the vast law-enforcement sourced databases. Scalable Vector Graphics (SVG) to visualize relationships inherent in the data, and discover hidden links and associations between people, places and incidents. XML based web services using SOAP, WSDL, XACML, and SAML standards to integrate data from other agencies such as FBI’s R-DEX data.
* Responsible for leading the building and testing the Free Text Search ontology based database.

**SRA International, Inc., November 2003 - July 2005**

**Sr. Software Engineer**

**Key Work Experience:**

* Global Directory Services (GDS). Responsible for Systems Integration and the design and development of Public Key Infrastructure (PKI), web services and LDAP related GDS applications. Also responsible of development of Standard Operating Procedures, Installation instructions and general support for the applications.
* Interface with customer to define and collect requirements for new software systems or enhancements to existing systems. Works with LDAP directory servers and web application servers. Worked with the DoD Net-Centric Initiative, on Oracle 10g, XML based web services using SOAP, WSDL, XACML, SAML standards. Worked with primarily Java J2EE technologies, deployed on Unix.

**American Council of Life Insurers, Washington DC, May 2002 - March 2003**

**Sr. Developer and Project Manager**

**Key Work Experience:**

* Designed and developed custom SQL scripts to be used to clean up the data in the IMIS CRM packages’ backend schema. Developed MS SQL Integration services custom ETL scripts to do bulk data loads into the IMIS database. Database Administration duties included Design and Implementation of a backup and restore plan and Performance tuning the Enterprise production Microsoft SQL Server 2000 database instance.
* Developed a new rules engine and billing and invoicing application for ACLI that replaced an existing application. Was responsible for writing a scalable, maintainable system that could be easily modified to meet new regulations enacted in congress. The system was estimated to have saved ACLI hundreds of thousands of dollars.
* Designed and implemented an XML based system for data interchange within the Life Insurance Industry. Worked in conjunction with StateNet Corporation to define a standard XML Schema (XSD) to be used by the ACLI industry group of 450 companies nationwide. Developed an application to validate and load XML data feeds into any schema based on an xml-mapping file.

**Department Of Natural Resources, Washington State November 2000 - January 2002**

**Sr. Web Applications Developer and Team Lead**

**Key Work Experience:**

* Architected and led development of the FPARS application. FPARS tracts forestry activity provides workflow for the forestry permit application processes and allows Inspectors to review and manage Commercial forestry practices and track tract ownership and leases. Further, the application integrates to the states financial system to automatically feed it tax relevant data. A notification module notifies the pertinent government officials via e-mail based on configurable event triggers. A notification history-viewing module allows users to review previous notifications and retrieve any past notices of interest. FPARS also includes a full search capability on 17 different input criteria.
* Integrated the FPARS java, J2EE based system with Oracle Geographical Information System (GIS) map info system as well as OTG document management software that includes full image scanning, annotations, digitizing for electronic storage. These images and maps are later retrieved and viewed directly via the FPARS system.
* Was responsible for Mentoring and training DNR Staff on Java JSP, and EJB development, WebLogic and Oracle App server development and administration.

**Investor Services, TD Waterhouse Securities Corp January 2000 - October 2000**

**Sr. Web Applications Developer**

**Key Work Experience:**

* Led Team of 5 developers that developed ‘Broker Console’ corporate portal. Wrote Oracle 8i PL/SQL stored procedures, EJB middle Tier components deployed on BEA WebLogic Server. JSP, HTML, Java and Java Script were used to develop the presentation tier. This portal was designed to be the broker’s main workspace, integrating research and customer service into a single interface. The system was also tied in to Siebel CRM system.

**New Boston Systems (Sapphire Technologies) June 1998 - December 1999 Financial Database Applications Developer**

**Key Work Experience:**

* As an employee of Sapphire, I worked at clients including Bankers Trust (Duetsche Bank) as part of an EDS (Electronic Data Systems, Plano, TX) Team that did Y2K certification of critical brokerage applications. I also worked as a development DBA on the EDS Vendor2000 website, and later helped to performance tune the site.
* Worked at SG Cowen, NY in their back office operations (CAGE department), on development Team to design and develop the Sybase SQL Server based Operational Data store that supports the reporting function of the back-office systems (Trade settlements).
* Prepared extensive analysis and user interviews to identify functional needs.
* Extracted data from the Oracle corporate data warehouse and loaded the data into the data store.
* Worked on ASP and COM based reports distribution component on the same project.
* Developed Adhoc analytical reports for use in the cage department to track errors in trade.

**Hunter Green Associates October 1996 - May 1998**

**Systems Administrator and Applications Developer**

**Key Work Experience:**

* As an employee of Hunter green, I worked on projects at clients including MasterCard International and Merrill Lynch on projects ranging from Human Resources Applications database, to a Fixed Income trades system. My duties included database design and development, Client Server development, report writing, and web development.

# Education:

**BS in Computer Science and Numerical Analysis**. Graduated: Summa Cum Laude

William Paterson University – Wayne, NJ

**MS (Financial Engineering)**

Stevens Institute of Technology – Hoboken, NJ.

**Part-time Graduate student – MS CS, 2016 Projected**

Harvard University – Cambridge, MA

# Skills:

* Sun Certified Enterprise Architect for JAVA J2EE, since 2002 (Architecture, Design and Development)
* IBM Certified Integration Developer - Business Process Manager V 7.5 Advanced: (Process Designer, Integration Designer -WID, Process Server-WPS, Process Center, and WebSphere Enterprise Service Bus –WESB).
* IBM Certified BPM Developer - WebSphere Lombardi Edition V7.2
* IBM WebSphere Server Network Deployment Installation and Administration.
* IBM WebSphere DataPower SOA Appliance XI50.
* IBM MQ-Series and Message broker installation and administration and development.
* IBM Tivoli Identity Management Server stack. (Directory etc)
* In memory distributed caching (Coherence – formerly Tangosol)
* Oracle Service Oriented Architecture Infrastructure Implementation Certified Expert
* Oracle BPM formerly: BEA AquaLogic ALBPM (BPM) Development.
* Oracle Service Bus (OSB) – Administration and (Design, Integrate services), OWSM, UDDI
* BEA WebLogic Integration Server development and administration.
* BEA WebLogic Server 6.0 – 11.x Deployment and Server Administration.
* Oracle SOA Suite 11g / Oracle BPM Suite - Business Process Management Software development.
* Oracle Fusion Middleware - Composite SOA applications development for the Oracle ADF environment
* Microsoft Visual Studio .Net (C# and VB.Net). Prior Versions 6 (Visual InterDev and ASP/VB 6)
* Microsoft Internet Information Server IIS, Basic Unix and Linux Systems Administration
* Oracle Database Server 7.3-11g Administration. And development (PLSQL)
* Microsoft SQL Server/ Sybase System 10/11 (T-SQL development) and Administration.
* Good knowledge of network technology, security and components such as routers, switches, servers.
* Web & Enterprise content management. EMC Documentum 5.X, JOOMLA 1.7, Wordpress.
* Parallel and cloud computing. Demonstrated knowledge of Amazon AWS SDK, Cloud computing around Hadoop and related toolsets (PIG, HIVE, R, MAHOOT, HBASE, SCOOP, FLUME), Cloudera CDH 4.X; Graduate research focus is around [Effective and Efficient Enterprise Workflow Automation] with emerging technologies.