Rejeev Divakaran

Blog: http://rejeev.blogspot.com

Summary

Expertise in Enterprise Application Architecture
Expertise in Requirements Analysis and Domain Modeling
Expertise in Java EE Technology and Standards
Expertise in Oracle RDBMS
Expertise in Data modeling
Expertise in Performance Engineering
Expertise in Enterprise Application Security

Chief Architect of iLogistics - an application for oil & gas logistics
Member of the Expert Group for the Java EE 6 Specification (JSR 316)

Experience in Deploying High Availability, high volume applications
R&D experience in application server internals
Experience in Capacity planning and Hardware selection

Education

PGDIT from Indian Institute of Information Technology - Kerala (2002)

B Tech from University of Kerala (1995)

Memberships and Achievements

Member of Java Community Process(JCP) (www.jcp.org)
Member of Expert Group for Java EE 6 Specification(JSR 316)
Member of Internet Society (ISOC) (www.isoc.org)
Member of OWASP (www.owasp.org)
First prize for the Blogging contest by Sun Microsystems (http://java.sun.com/community/javavisualvm/)

Experience

Chief Architect – OGL Product Suite (Aug 2006 – To date)
IBS Software Services (www.ibsplc.com)

OGL Product Suite consists of mainly two products (besides the software services provided to OGL domain) – iLogistics and Vessel Management System (VMS)

iLogistics is a comprehensive logistics solution for the upstream Oil and Gas Industry. It manages the movement of people and material to remote (both onshore and offshore) oil platforms, Rigs and Camps. It also manages (scheduling, tracking, resource allocation and travel requirements) of the Personnel On Board (POB) at remote platforms and Rigs. It can be used for all three modes of transport – Aviation

(Rotary wing and Fixed wing), Marine (Vessels) and Land (Car, Truck, Bus, Train).

Journey Request, Aviation, Marine, Land, Pax dispatch, Material dispatch, Material Movement Request, POB and Camp are the main modules. It has integration with many other external systems like SAP (for material movement), JDE (personal information), BluSky (for Vessel tracking).

iLogistics is very complex J2EE Application built on top of Oracle and WebLogic (and Glassfish). It has over 2.5 million lines of code, over 20,000 classes, over 1200 database tables. It has Swing based think client, JSP based browser clients and Web Services interfaces.

The engineering team for OGL product suite is about 120 engineers with five Architects (me being the chief architect).

iLogistics has an annual revenue of about $10 million.

Major customers include Shell, Chevron and BP. These companies use iLogistics for their worldwide exploration and production operations.

Roles and Responsibilities

Chief Architect of two products (iLogistics & Vessel Management System) in the 'oil & gas logistics' (OGL) line of business

Leading the Architecture team for OGL products suite – There is an Application architecture team (AAT) of five architects who is responsible for architectural decisions and design review.

Requirements Analysis & Domain modeling – Analyze the requirements for product enhancement with the help of Business Analysts and domain experts. Develop the Use Case document and analysis models (ER diagrams, process flow diagrams) with the help of Business Analysts.

Data modeling – Identify the database tables, columns and relationships between the tables.

System Design (Sub systems, modules, layers, interface specification …) – Identify the modules, exposed APIs for each module, interactions between the modules. Identify the persistence mechanism (hibernate, SQLDAO, entity beans etc).

Deciding the right deployment architecture – Develop a deployment architecture to avoid single point of failure and to support an availability of 99.5% uptime, keeping the cost of deployment minimum.

Performance Engineering – iLogistics is being used in remote locations with very low network bandwidth (as low as 64kbps) and very high latency (as high as 1200ms). Performance of the application at such extreme conditions is very critical. Performance tuning typically involves database tuning, query tuning and J2EE tuning. Performance testing is done at simulated network conditions to ensure performance at extreme conditions. Load testing is done at each release to ensure the capacity of the application.

Capacity planning & Hardware selection – For each new deployment capacity planning (determination of the amount of CPUs, amount of RAM, storage space and network bandwidth) and hardware selection needs to be done.

Ensuring different security compliances (OWASP, SOX, PCI …) – Fortune 10 companies have strict security compliance requirements. iLogistics has been tested and certified by KPMG for security vulnerabilities.

Decide the integration strategy with other external systems

Mentoring junior Architects & Developers

Assist sales team in pre sales activities

Develop design guidelines and coding standards

Identify re-usable components

Keeping abreast of new technology trends and evaluating how to best leverage evolving technologies

Recommend the technology roadmap for OGL product suite

Technical Lead (Sep 2004 – Aug 2006)
BEA Systems (now Oracle) (www.bea.com)

Provide design consultancy to customers in the development of mission critical enterprise applications using Java EE
Recommend Java EE best practices for implementing complex business requirements
Help customers in analyzing performance issues
Help customers in capacity planning

Development Engineer (Sep 2002 – July 2004)
Pramati Technologies (www.pramati.com)

Implement new features for the EJB container of the Pramati Application Server
Ensure J2EE 1.3 specification compliance for the EJB container
Improve the performance of the Pramati Application Server
Analyze and fix defects in Pramati Application Server

Junior Manager (Jul 1995 – Mar 2001)
Steel Authority of India (www.sail.co.in)

Maintaining the Energy Management System at Durgapur Steel Plant

Skills

- Requirements Analysis & Domain modeling
- Data modeling & Database design
- System design – defining sub systems, modules, interface specification …
- Deployment architecture selection
- Capacity planning & hardware selection
- Performance Engineering
- Security Architecture selection
- Application integration
- Application migration and cut over from old system to new system
- Enterprise Application Security – OWASP Top 10
- Java EE Technologies – EJB, JMS, JDBC, JTA, Web Services
- O/R mapping frameworks – Hibernate, JPA, Entity beans, EJB 3.0
- Working knowledge of .NET technologies (ASP.NET and ADO.NET)
- Database tuning and SQL query tuning (Oracle only) using STATSPACK, AWR report, Explain Plan, Oracle Enterprise Manager etc
- Java Application profiling using thread dumps, profiling tools like YourKit, VisualVM, Jstat, Jhat etc
- Load testing and Performance Testing
- Design documentation using Rational Rose
- Programming languages – Java, SQL, C#