

Kevin Molloy

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Senior DB Architect

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In 1997, Mr. Molloy formed Molloy Software Associates (MSA), a small company that offers software development and database administration services. From 1998 to 2005, Mr. Molloy was the lead architect and developer of DARS, an IDMS data replication software suite for Oracle, SQL/Server, and DB/2 systems. In addition to his very large database and data warehousing experience, Mr. Molloy has set up high availability solutions using Oracle Real Application Clusters (RAC) and deployed contingency sites utilizing Oracle Data Guard. Mr. Molloy has served as a consultant for Oracle Corporation for performance, DB design, and system availability issues for very large database (VLDB) systems.

In 2009, in addition to Mr. Molloy's database architect position, he obtained a research position with Dr. Amarda Shehu's Computational Biology lab at George Mason University (<http://www.cs.gmu.edu/~ashehu>). Mr. Molloy is currently working on his PhD in Computer Science (with Dr. Shehu as his advisor). He is also serving as a graduate teaching assistant for CS 321 (Software Requirements/Design Modeling).

Education

George Mason University	PhD in Computer Science	In Progress
George Mason University	MS in Computer Science	August 2011
George Mason University	BS in Computer Science	May 1998

Certifications

Oracle Database 11g Administrator Certified Associate	July 2010
CompTia Security+ 2008 Edition	Sept 2009

Publications

- B. Olson, K. Molloy, A. Shehu. "In Search of the Protein Native State with a Probabilistic Sampling Approach". Journal of Bioinformatics and Computational Biology, pages 383-398, vol. 9, 2011.
- B. Olson, K. Molloy, A. Shehu. "Enhancing the Sampling of the Conformational Space Near the Protein Native State". BIONETICS Intl. Conf on Bio-inspired Models of Network, Information, and Computing Systems, Boston, MA, December 2010.
- K. Molloy, Dr. Daniel Menascé. "Method and Model to Assess the Performance of Clustered Databases: The Oracle RAC Case". Proceedings from CMG'10 Conf Orlando, FL. December 2010.

Talks

- "Method and Model to Assess the Performance of Clustered Databases: The Oracle RAC Case." CMG'10 Conf Orlando, FL. December 2010.

Project Experience Summary

NAVSEA – SLDCADA (Oct 2006 – current) DBA team lead for large (80,000+ users) application. Performed migration from Oracle 9i to 10g Real Application Cluster (RAC), then to 11gR2 RAC. Implemented high availability architecture solutions using: multiple data centers, geographic load balancers and content switches, Oracle RAC, LDAP bidirectional replication, data guard, multiple web servers and J2EE containers. Tasks include ensuring DISA security compliance, implementing monitoring solutions for timely error detection to ensure high availability and acceptable application performance, capacity planning and performance forecasting, workload characterization studies used in benchmark testing with Load Runner, SQL/application performance tuning and implementing Oracle partitioning to speed up batch/report operations.

Navy Weapons Inventory and Planning (OSE and OIS Implementation) (Sept 1999 – Current)

Provide Oracle DBA support for custom forms/reports applications. Tasks include providing in depth performance analysis/recommendations, database design review/enhancements, Dataguard and online backup/recovery support, and PL/SQL package and trigger maintenance.

Lead Software Architect for DARS (1998 – 2005)

Redesign and rewrite DARS, an IDMS to RDBMS replication solution offered by International Software Products, Inc (ISP). As part of this solution, an entirely new testing methodology was implemented to improve product reliability. The new design offered solutions that completely displaced the on going replication processing from the mainframe to UNIX and Windows platforms (i.e. all CPU demand was removed from the mainframe). Near real time replication was also achieved using a collection of C programs (running under z/OS) that utilized IBM's MQ series product to establish distributed queues across heterogeneous environments. This revised version of the software is still considered today to be the industry leading solution to which all other IDMS replication products are compared (see www.ispinfo.com for more information regarding DARS and its capabilities).

(Additional experience references are available upon request).

Oracle 7.3, 8i, 9i, 10g, 11gR2 16 years experience as a DBA on HP/UX , Windows, Linux, and Solaris platforms. Logical and physical modeling of both OLTP and DSS applications. Production support for instances including performance modeling, capacity planning, space management, and security auditing. Expert at performance tuning and backup/recovery/disaster planning. Extensive experience with Oracle RAC, ASM, Data Guard and Enterprise Manager.

UNIX 21 years of UNIX experience, including system level programming and performance tuning. Extensive C and C++ programming experience.

Web Development Experience with JSP (java server pages), Perl/CGI, and PL/SQL pages interfacing with Oracle DBs.