

## KEITH T. GARNER

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### HIGHLIGHTS

My unique combination of programming skill, system administration, and intra-personal and presentation skills has allowed both myself and the organizations I've worked for to excel. I do best in a generalist role often finding non-obvious solutions due to my broad knowledge.

- **TiVo2Podcast** – Ruby script to automate downloading content from a TiVo, transcoding, then putting into a feed for podcast retrieval using TiVo's metadata.  
<http://www.kgarner.com/blog/archives/category/geek/coding/tivo2podcast/>
- “[Large-Scale Mail with Postfix, OpenLDAP and Courier](#)” published in the February 2003 (Issue #106) of Linux Journal
- “[Using the Encap Package Management System to Manage Non-System Packages](#)” published on Linux Journal website in December 2003
- Lead programmer and designer on **ezRETS**, a cross-platform ODBC driver that retrieves data from RETS servers. Supported on Windows, Linux, and OS X.  
<http://www.crt.realtors.org/projects/rets/ezrets>
- Programmer and designer on **libRETS**, a cross-platform generic RETS library with bindings to many languages including Ruby, PHP, .NET. Supported on Windows, Linux, and OS X.  
<http://www.crt.realtors.org/projects/rets/librets>
- Completely automated a manual EDI process utilizing DOSemu, Expect, Perl, and Bash. Resulted in annual savings of \$50,000.

### SKILLS

**Languages:** Ruby, C, C++, Java, Perl, Expect, SQL, Bash, PHP

**Web Technologies:** Apache, Tomcat, Java Servlets/JSP, HTML

**Server Technologies:** BIND, Squid, SSH, VPN, Sendmail, Postfix, Samba

**Databases:** PostgreSQL, MySQL, Oracle

**Operating Systems:** Linux, Solaris, Mac OS X, Windows, AIX

### EDUCATION

University of Illinois, Urbana, IL  
B.S. in Computer Science, College of Engineering

### PROFESSIONAL EXPERIENCE

**National Association of REALTORS®**, Chicago, IL

Aug 2001 to Present

**Vice President**, Information Technology Services, 9/2008-Present

Responsible for IT department in both Chicago and DC office, covering desktop support, infrastructure, and development with a \$6 million budget and 30 personnel. Environment includes 180+ servers (65% Linux,) VoIP, 600+ Lotus Notes/Domino databases, Java, Oracle, 350 staff desktops, and Websphere.

- Advised and promoted move from Websphere to Drupal.
- Authored Ruby scripts for metric gathering, report generation, phone billing, and automating capture of phone debugging information.
- Migrated e-mail and calendaring from Lotus Notes/Domino to Microsoft Outlook/Exchange, with staff change-over happening in just 4 weeks.
- Oversaw buildout and start of migration to virtualized environment.
- Oversaw network redesign to modern firewall design and security. Hands on with the IP renumbering effort and other tasks as needed during the event.
- Mentored Managing Director of application development to shrink the pending project queue from many months late to on-time deliveries.
- Instituted metrics to track projects and infrastructure items such as unscheduled downtime, alerts, and database statistics.
- Oversaw both programming, production, and support of custom e-commerce and membership systems, including web service hooks for 3<sup>rd</sup> party vendor interaction.
- Frequent contact with elected leadership on their technology challenges, actively supporting them within the context of their NAR service.

**Managing Director**, Center for REALTOR® Technology (CRT), 9/2006-9/2008

Continued the daily responsibilities of Strategic Architect, but with additional responsibilities of managing a staff of 4 and \$2 million budget.

- Absorbed responsibility of RETS committee budget and back-end administration from Information Technology Service department.
- Brought CRT technology survey development in-house for cost savings and increased quality.
- Created “Bloggers' Lounge” at mid-year and annual conferences as a gathering hub and outreach to social media savvy members.

**Strategic Architect**, Center for REALTOR® Technology (CRT), 8/2001-9/2006

Founding member of “skunk-works” department focused on advocacy, education, and implementation. Developed open source projects from proof of concepts to full software packages in a variety of languages to demonstrate concepts and/or fill holes in the market place. Educated REALTORS® in technology through presentations and continuing education sessions at local, state, and national meetings to positive reviews. Authored articles promoting technology for CRT's newsletter and blog. Acted as a technology advisor to NAR leadership and upper management. Participated in the Real Estate Transaction Standard (RETS) committee.

- Built and maintained CRT's departmental Linux servers for LDAP, mail, source code repositories, web, and file servers.
- Lead programmer on ezRETS, an open-source cross-platform ODBC driver that retrieves data from RETS servers utilizing libRETS. Supported on Windows, Linux, and OS X. <http://www.crt.realtors.org/projects/rets/ezrets>
- Programmer on libRETS, a cross-platform generic RETS library with bindings to many languages including Ruby, PHP, .NET, utilizing libCURL, Boost, expat, cppunit. Supported on Windows, Linux, and OS X. <http://www.crt.realtors.org/projects/rets/librets>
- Programmer on java-based application-specific LDAP editor JAMM for managing e-mail domains. Still in use on my personal server. <http://jamm.sourceforge.net/>
- Programmer on java-based RETS server Variman. <http://www.crt.realtors.org/projects/rets/variman>

- Created and implemented the CRT blog in August 2005, becoming NAR's first entry into social media. <http://blog.realtors.org/crt/>
- Instrumental in creating the REALTOR® Secure program, a technology security auditing and awareness program for associations, brokerages, and technology vendors servicing real estate.

**The Net Squad**, Oakbrook, IL

Aug 2000 to May 2001

**Internet Solutions Architect**, Principal

Responsible for working with early stage companies to develop their first generation systems, internal and external. Responsibilities in the home office include design, implementation, and maintenance of company network and UNIX based systems, services, and infrastructure.

- Designed and implemented a rules-based e-mail subscription system in Java with a web-based administration system using JSP/Servlets, both utilizing an Oracle DB.
- Designed and deployed two Linux-based firewalls.
- Implemented and deployed company backup system.
- Deployed the company e-mail system.

**Resource Information Management Systems (RIMS)**, Naperville, IL

Jan 1999 to Aug 2000

**Manager of Technical Architecture**, Development

Responsible for managing 4 technical architects designing and implementing new software systems for external and internal projects. Responsibilities included developing proof-of-concept projects using new technology, assisting the Development Department in preparing and deploying applications in the RIMSLink facility, helping to shape company policy towards Open Source Software including evaluating which licenses to use when releasing software.

- Key company source for UNIX, Linux, Open Source Software, and Internet technology.
- Presented seminars on Internet Security, and Linux and Open Source Software at the annual Association of RIMS Clients (ARC) convention.
- Assisted in recruiting of technical staff by doing initial evaluations of candidates.
- Completely automated a manual EDI process resulting in annual savings of \$50,000 utilizing DOSemu, Expect, Perl, and Bash
- Worked with CTO to plan long term strategy on Internet applications including the targeting of tools which could be released as open source.
- Promoted increased communication throughout the company by creating newsgroups and assisting in the creation of departmental web sites.

**Strategic Technology Resources (STR)**, Chicago, IL

Aug 1997 to Jan 1999

**Consultant**

Responsible for working with project leads on short term projects to deliver multi-tier Java based object oriented solutions.

- Member of team that created a 3270/CICS-to-JavaBean application suite. Oversaw the transaction building and testing GUI in Java using the Swing toolkit.
- Built a proof-of-concept web-based health claim submission engine using Java and CORBA.
- Built internal demo of Java and MQSeries to increase company knowledge into MQSeries.

## PERSONAL PROJECTS

- **TiVo2Podcast** – Ruby script to automate downloading content from a TiVo, transcoding, then putting into a feed for podcast retrieval using TiVo's metadata.  
<http://www.kgarner.com/blog/archives/category/geek/coding/tivo2podcast/>
- Use and tweak DD-WRT on personal firewall with use of ipv6 support.
- Administrate co-located Linux server shared by 10 people, maintaining their e-mail, web sites, databases, and source code repositories.
- Using Arduino to build controller for traffic light.
- Moderator of the Linux Users' of Northern Illinois (LUNI) mailing list and often assist others on the list
- Spoke on Linux and open-source at Comdex Fall 2001
- Member of the ACM@UIUC 1995-1997, chairperson of ACM's Linux Users' Group 1996-1997