Richard J. Costine

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Synopsis of Development and SysAdmin Skills

Proficient usage, configuration, or recent development with:

- Java, including:
    - multithreading (java.util.concurrent)
    - networking (java.net)
    - NIO libraries
    - JDBC, both using and developing drivers
- OO concepts using the imperative style.
- Javascript, and AJAX
- J2EE technologies (EJBs, JMS, etc.)
- Hibernate
- Soap, and web-service client and service technologies.
- Salesforce API, and SOQL query language
- IBM Tivoli Products: Netcool, Proviso, as well as the Maximo Asset Management running under WebSphere.
- IBM Castiron Data Mapping appliance programming and configuration
- SAP JCO (Java connector option) client libraries
- Web application development using the Struts MVC framework
- Perl
- HTML, JSP, and CGI scripting; some PHP
- Java XML parsing APIs, and XSLT
- MS-SQLServer Transact, and MySql, and IBM DB2 Database Query languages
- Bourne-again shell (bash)
- Sendmail, DNS (bind8 and bind9), NFS, Apache, and IIS configuration

Occasional usage or configuration of:

- Cisco router and switch configuration (IOS)
- TCL and Expect scripting languages

Familiarity with:

- Spring framework concepts, and implementation, including configuring with Java annotations.
- Functional programming style, via the Scala programming language.
- Oracle Portal and Java PDK
- J2EE compliant application servers/containers, including Weblogic, and Oracle9iAS Container for Java (OC4J)
- Novell SilverStream (non-J2EE-compliant version)

Past usage, configuration, or development with:

- C and C++, Korn and Bourne shells, awk.
- Oracle PL/SQL, and Informix DBMS SQL
- Checkpoint Firewall-1, Socks Proxy
- Applescript
- REXX and VM exec and exec2 interpreters
- IBM MVS and VSE JCL
- VMS DCL
- Cobol, Fortran, and various assemblers (Macro-11, IBM Basic Assembler Language)

Operating systems used:

- Linux, Solaris, AIX, HP/UX, FreeBSD, NetBSD, BSD/OS
- Windows (DOS-era,95,2000,NT,XP,7)
- VM, VSE, MVS
- VMS

Professional Experience

Evolve IP, LLC., 989 Old Eagle School Rd., Wayne, PA 19087

June 2007 to Present

Java Developer

Designed, implemented, and provided support for a Java-based system to collect MOS (Mean Optimal Score) VoIP statistics from Edgewater IADs sent to it via Syslog. This system generated files which could be read by the IBM Proviso application "Bulk Loader" collector. Used Hibernate to persist the statistics into a MySQL database, and to perform the queries for the subsequent Proviso bulk load.

Designed and developed Java-based system to collect statistics such as CPU usage, and traffic summary information from Cisco "firewall switch module admin context" via an SSH connection. Statistics were stored in a MySQL database, and then were queried by a Perl program from the Net-SNMP agent using the "pass_persist" extensions by the IBM Proviso application. This enabled the standard Proviso SNMP collection mechanism to access and render the statistic.

Developed Java-based web application to display nightly job logs.

Developed Java-based File Transfer-queuing mechanism for distributing customer telephone call recording "WAV" and "MPG" to multiple customer FTP and sFTP sites.

Developed Java API wrappers to allow the company support portal code to easily update and view trouble tickets residing in IBM's Maximo Asset Management system. The underlying implementation invoked Maximo integration objects exposed via web services. The underlying API used classes generated by the wsdl2java utility to insert tickets into the database via a web services call. Direct DB2 queries via JDBC-based DAOs were used to fetch tickets.

Developed Java API wrapper to allow the company web-based provisioning tool to provision voice mail users. This tool connected to Linux machine using an open-source Java-based SSH client and ran shell scripts on the server which added and deleted voicemail users, and modify voicemail passwords.

Developed Java 'send/expect'-like library used to communicate with Broadsoft VoIP phone switch CLI during the customer provisioning process.

Developed Java API wrappers to allow the company provisioning tool to access XML-over-HTTP-based Broadsoft provisioning API. Used xmlbeans to map the underlying schema to Java classes.

Developed Java API wrappers to allow the company provisioning tool to access "911 Enable" SOAP API.

Developed Java program to access numerous SAP RFCs via the Java Connector Option (JCO).

System integrator

Developed orchestrations for the Castiron data mapping appliance to migrate data between a number of heterogeneous in-house and cloud-based endpoints:

>   Move Salesforce Account and Opportunity objects to SAP Business Partners and Contracts after a sale is closed.

>   Move Salesforce Account, Location and Opportunity objects to Maximo Customer, Location, and Agreement objects after a sale is closed.

>   Perform bulk database replication transfers between various Broadsoft call-center related MySQL databases for posting to Invision reporting system.

Send Maximo tickets to Salesforce "Case" objects to allow perusal by sales team.

Post customer invoice PDF files to Salesforce "Attachment" objects to allow perusal by sales team.

Ported Salesforce Data Loader tool from windows to Linux and used it to ETL Salesforce objects into a relational database for easy query by internal tools. Shell scripts invoke the Java-based Data Loader in batch mode, and keep track of the last run time. Only changed objects are copied after an initial load. This required intimate knowledge of the Salesforce data model, and of the Salesforce "SOQL" query language, as well as how to configure the Data Loader xml configuration files on the fly.

Network Monitoring

Configured IBM Tivoli Netcool Omnibus Fault Management probe and object server.

Configured IBM Tivoli Network Manager (ITNM), also known as "Precision".

Configured IBM Tivoli Impact policies.

Configured IBM Proviso network statistics gathering system.

Configured Nagios.

Configured Syslog-ng.

Maintained IBM Maximo Asset Management System. This involved build and deployment of the Maximo application ear file to the IBM WebSphere server, and application of fixpacks. This also involved troubleshooting of in-house developed custom code classes.

Billing Systems

Maintained Billsoft taxation software. This involved applying monthly "rpm" upgrades to the in-house Billsoft program, and applying any supplementary patch files.

Developed scripts to automate nightly billing processes. These scripts were responsible for invoking programs that synchronized SAP parties and contracts with Highdeal party and subscription objects.

Developed Java program and wrapper scripts to automate the monthly tax filing to Billsoft. This involved familiarity with the underlying schema for the Highdeal billing and rating engine in order to convert its usage data to input for the Billsoft EzTax20 program.

Developed AJAX-based frontend to facilitate customer invoice generation, publication, and delivery. The backend server used PHP to deliver the content.

ATX Telecommunications, Inc., 2100 Renaissance Boulevard, King of Prussia, PA 19406

September 2002 to May 2007

Java Developer

Designed, implemented and provided support for a number of internal and customer-facing web applications. These applications used the Tomcat application server to deliver dynamically generated HTML to the end user. These applications were written as JSPs, some using the Struts framework. All invoked Java library classes to perform a number of important tasks, such as:

> Providing the storefront site, catalog, and virtual shopping cart for a chemical-supply house (Thomas Scientific).

> Maintaining "change-order" revenue in the ATX customer database.

> Keeping track of "wholesale order" life-cycle flow, the last stage of which was to enter the order into a preexisting, legacy, Customer Relations Management (CRM) database.

> Managing "Network Service Requests". These requests also followed a life cycle, but with parallel-paths that could eventually converge. Using a predefined "reference flow", order checklist items were created and assigned to different groups in the CRM system. As users checked off items to indicate they were done, new "successor" items would be opened for additional groups to complete until the entire order completed its life cycle.

Designed and developed a menu interface using the Swing-inspired, character-cell Charva library.

This menu interface was designed to allow customer support to securely login to telephone switches via a secure shell (ssh).

Ported a number of legacy Informix 4GL programs to Tomcat/JSP/Java environment. The utilities are used to keep track of toll-free numbers status, associate which ATX customer the toll-free number belongs to, and add or remove the toll-free numbers from the switch (by adding the appropriate rows to a "queue" table).

Used the JfreeChart freeware package to develop customized graphs for a "Balanced Scorecard" company performance metrics utility. Used AWT in classes that extended implementations of JfreeChart's Plot interface.

Developed numerous utility packages to assist in implementing the business logic classes. These included: a base class for generating SQL that would map a set of tables and facilitate development by removing the requirement that the extender of the class know how to write SQL queries.

Participated in design meetings, the goal of which was to come up with a comprehensive, flexible, data-driven, object design that would connect the various legacy systems using the existing Tomcat application server environment.

Served as a mentor for a number of the intern and junior-level programming staff.

Zone Telecom, Inc., 200 Lake Drive East, Suite 200, Cherry Hill, NJ 08002

April 2001 to July 2002

Java Developer

Developed a system to extract and maintain web log information for the customer website

> Designed and wrote a "logger" Java class to handle logging of HTTP requests. The class implemented the SilverStream AgiLogger interface, and was set up to write to on Oracle database through a connection pool.

> The logging data was extracted from the database and written to an "Apache-format" logfile. It was then fed into a package called WebTrends to provide daily, weekly, and monthly summary reports to the marketing team.

> Wrote a number of programs (primarily written in Perl and PL/SQL) to automate the process of getting the log data from the database and into a format that could be processed by the WebTrends package.

> Installed and configured the WebTrends product itself.

Developed backend Java programs for the "intranet" team. These programs implemented the business logic part of a framework which generated web-enabled reports. The report programs processed metrics data from our Oracle datawarehouse. This intranet was developed using Weblogic as an application server platform.

Developed a stand-alone Java application which automated the verification of customer information in our database against a local phone company website and the superpages.com website. Our customer service staff was doing the verification process manually, by connecting to the websites using their browser for each new customer registration. This was a tedious and time-consuming process. After automating it, the provisioning department ran much more efficiently.

Developed backend business logic, DB accessor, and EJBs for the Enterprise Communications Manager (ECM) platform team.

Responsible for Oracle Portal software, and for portletizing our existing JSPs and servlets.

Cross-trained in the Jakarta struts framework in order to participate in the development of the front-end (HTML-generating) part.

(Working with both Portal and Struts required a familiarity with XML, since both use XML-based configuration and tag library descriptor files.)

Senior Systems Engineer (as needed)

Performed various system and network administration tasks on Sun (Solaris 7 and 8) server hardware, Cisco IP network routers, and Checkpoint firewalls. Those tasks included, but were not limited to the following: evaluation and configuration of access and translation rules on the Cisco and Checkpoint systems, setup of VPN between the New Jersey and Los Angeles sites, and installation and configuration of a number of Sun servers, OS software and utilities (such as CVS).

iMedium, Inc., 900 West Valley Road, Wayne, PA 19087

October 2000 to March 2001

Senior Systems Engineer

Developed a number of monitoring and logging tools written completely in Java. One was a "PingEventBroker" class, which determined round-trip times for a publish/subscribe event server. Another utilized JDBC to read event data from the OLTP database and generate a Vector object which would then be passed into another class which would create an HTML table from it. This utility was originally a standalone Java program, but then was extended to work from a JSP.

Became familiar with EJB concepts, since we were using the J2EE-compliant iPlanet application server, and we were utilizing its EJB capabilities.

Attended a number of in-service lectures on various Java-related topics, including Jini, and JMS.

Configured iMedium's instance of RightNowWeb, a hosted Customer Service utility. This required knowledge of PHP.

Worked with the development team to debug a Perl-based utility that was used to analyze and import SMIL documents into the Oracle database.

Performed system administration work for the development group as needed. This included configuring NIS+ and automounter to implement a shared home directory schema across the Solaris development servers.

Chaitime.com, 100 North 17th St, Philadelphia, PA 19103

May 2000 to October 2000

Programmer

Developed the authentication and access-control pages for a Content Management tool using JSPs.

Developed a number of backend Java classes which were called from the JSPs to update the Content Tool users in the database. These classes also set various session-state variables which were used by the other parts of the tool.

Senior Systems Engineer

Evaluated, ordered, installed, and customized new software solutions. These included the Apache webserver, Raven SSL Plug-in, PHP4, MySQL, and Oracle database server on the Sun Solaris 7 platform.

Installed and configured BEA's WebLogic Application Server on both Solaris and Windows NT, with connection pooling using both the OCI8 and thin drivers to an Oracle8i database.

HealthAxis.com., 2500 DeKalb Pike, Norristown, PA 19401

May 1999 to May 2000

Senior Systems Integrator, member of the "Platforms and Tools" group.

Evaluated, ordered, installed, and customized new software solutions. These included Razor source control management (SCM) software, Checkpoint Firewall-1 and VPN gateway, Aventail remote access solution, Stronghold Secure Web server, and SecurityDynamics SecurID authentication system.

Developed Perl-based "glue" applications to automate a number of internally-developed programs. These programs were used to move insurance applications and application status data to and from a number of insurance carriers. The Perl code was used, in combination with Gnu Privacy Guard, to encrypt and decrypt insurance application data and to invoke Java programs which import and export data from the Oracle database.

Worked closely with the System Administration staff in order to move software into production, and to ensure that it was adequately documented.

PLATINUM *technology, inc*., Three Valley Square, 512 Township Line Road, Suite 300, Blue Bell, PA 19422

January 1999 to May 1999

Product Developer for POEMS (PLATINUM Open Enterprise Management System)

POEMS was a common services component of PLATINUM's ProVision line of system management products.

Developed Perl-based product installation code for the POEMS components. These installation scripts used the PLATINUM Software Distribution Manager (SDM) API to install the POEMS components in a distributed environment. The SDM API was written in C and used a platform-independent, layered architecture to hide many portability issues, reducing the platform-specific logic in the Perl installation scripts. Some portability issues remained, but the architecture permits those details to be handled cleanly within the Perl logic.

Additional duties included programming in C, and using and maintaining numerous "makefile" tools to build PLATINUM's software on various platforms.

PLATINUM's tools ran on a variety of platforms, including Sun's Solaris, Microsoft's Windows NT, IBM's AIX, Hewlett-Packard's HP/UX, and Digital's OSF. Writing and maintaining installation software required a working familiarity with all of these software environments.

The POEMS development group was distributed, with developers in almost every mainland U.S. timezone. Working in a large distributed organization posed special development coordination challenges. I learned to use powerful tools, such as the freeware CVS source code management tool, to help coordinate development in this environment. I also mastered many of the interpersonal skills necessary to operate efficiently with developers in labs across the country.

Platinum is now owned by Computer Associates.

N2K, 435 Devon Park Drive, Suite 600, Wayne, PA

October 1996 to January 1999

Senior Systems Administrator with a specialization in security administration.

N2K operated a music-related, e-commerce web site called 'Music Boulevard' using a mixture of Unix systems, including: BSDI, FreeBSD, and Solaris, along with Microsoft NT servers.

Developed security policies in collaboration with management, and also to enforce those policies at a technical level.

Configured Cisco routers; installed and secured vendor and freeware products, such as Checkpoint Firewall-1, Datafellows SSH server, and both the Apache and Stronghold web servers.

Developed a static content deployment system. The system was designed to push "static content" files, usually graphics and sound, to a webserver farm from a staging system via a queueing mechanism which was developed using Perl.

> Any FTP client running on the internal network could be used to push files to the internal staging server. Authorization was done via standard FTP password authentication. This even included FTP clients running on a Macintosh.

> The FTP server (WU-FTPD) source code was modified so that it would run a program to place requests on a queue each time a write operation was done to a defined set of directories. These directories on the staging server mapped to directories in a document tree on the webservers. Another program, called 'pusher', would perform the file transfer to each machine in the server farm. When the operation completed successfully on each machine, the queue entry was removed. This ensured that even if a machine in the server farm was down, the files would be updated once it came up.

> Since the code which manipulated the queue was encapsulated in a separate Perl script and not hard-coded in the FTP server, it would have been fairly easy to modify a samba (smb) daemon to perform similar queuing operations, but that was never really a requirement.

Participated in a number of security-related code walkthroughs during which we looked for exploitable buffer overrun errors, and data-validation related issues.

Developed an exploit for a coding error which allowed arbitrary commands to be executed from a webpage.

> Demonstrated to management that the error could be used maliciously to allow any user to gain information about our internal network and could ultimately result in sensitive customer data being mailed to anyone on the Internet.

Programming in C and Perl was often necessary to meet the requirements of the position.

N2K is now owned by CDNOW.

BHC; One Commerce Plaza, Philadelphia, PA

May 1996 to October 1996

AIX Unix system administrator for a banking brokerage company.

Worked with a middleware product called "Netweave," which transported data between a Tandem computer and a number of remote and local AIX systems. An in-house queuing and replication product was developed, using the middleware to keep the various distributed databases reliably synchronized.

BHC is now owned by Fiserv.

[EDS](EDS), Plano, TX *(Local office in Camp Hill, PA and worked in Kings Bay, GA*

June 1994 to May 1996

Unix system administrator who performed on-site, long-term, IT consulting services for a naval submarine base refit organization.

Responsible for operating systems administration for a token-ring network of [IBM RS/6000's running AIX](IBM) at OS release level 3.2.5. The major application was the management of the refit of Trident Nuclear Missile submarines.

The application systems were ported from IBM's MVS operating system environment to run on an AIX system using Sybase as a database. I set up a simple batch environment with timing and job dependencies to replace the MVS batch environment, which they were formerly using. Programming in C and various shells was often necessary to meet our requirements.

[Computer Associates](Computer), Islandia, NY *(worked from Mt. Laurel and Princeton, NJ offices)*

June 1989 to April 1994

Field technician for a major multi-platform software vendor.

Installed and configured CA software at numerous customer sites and performed pre-sales demos at customer sites for the sales staff.

Provided field support for CA's suite of systems management software which ran on the IBM mainframe [VM and VSE](VM) operating systems, the VMS operating system, and several flavors of Unix including HP/UX and AIX.

[Mobil Corporation](Mobil), Pennington, NJ

November 1985 to June 1989

System administrator responsible for the management of the VM operating systems running under the IBM 370 and 370/XA architectures.

Worked with a variety of vendors and users to maintain a large national data center.

Became more familiar with the issues relevant to large operating systems management.

Performed data backup and recovery using the VMBackup product and job scheduling using the VMSchedule product.

Responsible for implementing access-rule-based security, using the CA-ACF2 product.

[City of Philadelphia, Department of Information Management](#), Philadelphia, PA

May 1983 to November 1985

> *System administrator responsible for the management of VM and VSE operating systems on IBM mainframe computers.*

These duties were very similar to ones at Mobil Corporation.

Education

Castiron; Atlanta, GA
>   Castiron configuration, 2008

Oracle; Boston, MA
>   Oracle9iAS Portal - Build Portlets with Java for Partners, 2002

Protocol Interface, San Francisco, CA
>   Introduction to Cisco Router Configuration, 1996

Temple University, Philadelphia, PA
>   Bachelor of Arts, Major in Computer and Information Sciences, 1983

Professional Organizations

- Association for Computing Machinery (ACM)
- Usenix and Sage
- Philadelphia Area Scala Enthusiasts (PHASE)

Conferences

- 1996 and 1997 Usenix Technical Conferences
- 1998 SANS and SANS/NT conference in Monterey, CA
- 1995 /AIXtra POWER Technical Conference in Chicago, IL