

# MARK Z. KUMLER

## TECHNICAL PROBLEM SOLVER

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## SENIOR SOFTWARE ENGINEER | TECHNICAL TEAM LEAD

WINDOWS EXPERT • DEVELOPER • PROGRAMMER • NETWORKING • SECURITY

FULL SDLC • AGILE AND WATERFALL METHODOLOGY • UNIX/LINUX • C/C++

Tenacious | Analytical and Resourceful | Thoughtful Leader | Creative | Seasoned | Versatile | Fast

- Identify, diagnose and fix complex technical issues as efficiently and strategically as possible. Understand the gestalt of complex systems. Get problematic systems shippable quickly. Solve problems through solid research and good design.
- Find core issues, debug, design workable interim fixes, then target root cause to create stable, robust long-term solutions.
- Leverage expansive variety of software, platforms, languages and technical internet expertise. Computer Science education with the ability to implement next-generation technology for customer-critical situations.
- Creative thinker and team player. Work hard to fix things and make customers happy.

### PRINCIPAL | PENNYWORTH SYSTEMS | 1/15–present and 2/11-10/11

Pennyworth is my consulting company with a partner, creating commercial software and helping clients sort out technical issues.

Produced a fitness application for android (Java) and IOS (swift). Product is available in 7 languages (English, German, Arabic, Hebrew, Japanese and Chinese) and is fully accessibly compliant on IOS.

### TEAM LEAD | OPSWAT | 10/11-12/14

OPSWAT provides network security solutions to secure and manage IT infrastructure, protect devices, and help secure data flow for SMB, enterprise and OEM customers with 100M endpoints worldwide. Grew from 20 people to a \$10M company with 50+ staff.

Worked in five different roles over the years. First completely rewrote a custom “URL filtering” product for a customer to capture all HTTP/HTTPS traffic from a windows computer to the internet. Created a massively technical product in an easy-to-use package; the end product later became a standard offering and component.

Next, OPSWAT acquired Napera for their GEARS product and custom embedded version for a major router manufacturer, but found the products were all written in Ruby on Rails under Linux on Amazon Cloud server. I volunteered to 1) learn RoR, 2) port the 6-year-old code to a modern version, 3) enhance it for new functionality, and 4) update the clients that ran under Windows, OSX and on the customer’s hardware.

After that new product acquired its first major customer, moved on to OESIS Framework, a cross-platform SDK running under Windows, Linux and OSX. Found myself the solo team member with only two weeks of knowledge transfer. For a year, added features, fixed issues, added a feature where all binaries were scanned with our Metascan virus scanning product, and reduced daily builds from 6 hours to 18 minutes.

OESIS grew and became a new group, and I moved to a project working with a new network vendor customer for whom we were designing a custom web-based system. Spent 20 hours a week meeting with vendors and participants from Thailand, India, San Jose and San Francisco, and worked with code from multiple countries and vendors.

Then moved to the Metascan Group as a developer (C++/COM/etc.) working on new features of the Windows-based server and planning and leading the team for five major Windows systems to Linux (four distributions including OSX) with full graphic support. Solved complex Windows issues about network printing from MetaDefender.

### WEB DEVELOPER / IT | TREASURE ISLAND MEDIA | 5/09-2/11

TIM owns multiple adult sites with complex technology that allows online video streaming under a membership model.

Recruited by my partner and persuaded to manage IT and web programming in a very busy and chaotic office. Got 10 base 10 working for all workstations, set up an offsite backup system for assets, set up two new high speed internet connections with fail-over and load balancing, secured computers against intrusion and viruses, and set up membership-based control system to handle multiple membership sites. Managed PCI compliance for credit card data security.

### SENIOR SOFTWARE ENGINEER/ESCALATION ENGINEER | CENTRIFY | 2/08-2/09

Centrify provided software to allow login and access control on Microsoft’s Active Directory for users of OSX and Linux.

Handled real-time escalated customer support issues, analyzing if it was customer error or our software, in which case we fixed it. Solved a problem with an international bank whose nightly updates were taking 24 hours. Identified the issue, created a temporary compromise for fast critical updates, and then worked with the client’s engineers to change software and hardware configurations so it took less than an hour a day. Set up Windows server with VMWARE to pinpoint bottlenecks. Solved issues with Windows signature verifications, code and customer web service operations.

#### TECHNICAL TOOLBOX

##### MICROSOFT

Microsoft Windows (3 to 8.1), Server (3.5 to 2012.R2) • Windows Internals/Debugging Kernel • Windows Device Drivers: SVGA, PostScript, Midi Mapper, iButton • GDI Graphics • Windows SDK and Win32 API • Winsock Networking • COM • .NET • Active Directory

##### UNIX/LINUX

Redhat, CentOS, Ubuntu • 3 Level Server: apache/php, server via tcp/ip, services via Secure Information Transport • GUI (HTML 5 Websocket, Javascript) • X Windows • Device Drivers: (SVGA, com driver, x10 under Kodak’s Coherent Unix)

##### LANGUAGES / DEVELOPMENT TOOLS

C# • C++/C (Visual C++, Borland, Watcom, IBM, Linux-multiple distros) • Multi-threaded, multi-process, multi-CPU • MFC, COM, ATL, STL • Active X (OLE) • PostScript Levels 1, 1.5 and 2 • Assembler (80x86, Alpha AXP, PowerPC, Custom ASIC, IBM 390) • Softice® (Windows 95/98, NT and DOS) • Bounds Checker® • Database (SQL, DB-Vista, Btrieve, DB2, ADABAS, IMS, IDMS, CICS) • VB Script, Visual Basic, VB.NET • MS CryptoAPI • Cobol • Rexx • Java, JavaScript, JNI • Lua, Swift

##### NETWORKING

Winsock session & message • Novel IPX and SPX • Netbios stream and datagram • SNA LU0/SPI • TCP/IP and UDP

##### WEB CENTRIC SKILLS

ASP programming, Web services, SOAP • ISAPI • HTML • MS IIS debugging • XML, DTD, XST, Schemas • Java, JavaScript, JScript, J++, JDBC • Ruby on Rails • Web Sockets • REST • JSON • PHP • Linux server development harness setup (Debian) • Webservices provider and consumer side code

##### ANDROID

Android native app application in development

##### AUTOCAD

Autodesk Certified, all levels • Internals • Device Drivers (PostScript) • ARX

##### PALM PILOT

Metrowerks CodeWarrior

##### VENDOR SPECIFIC APIS

EMC – Celerra, Centera • NetApp – TAPI • Amazon – AWS, S3, ECB, auto-scaling, etc.

## SENIOR ENGINEER | ARKIVIO SOFTWARE | 5/07-1/08

Arkivio was a 10-person company with software for Microsoft Windows to move files transparently to secondary storage systems, which was sold by hardware vendors via white label. Acquired by Rocket.

Fixed customer bugs, expanded the system with new features, and found and fixed bottlenecks in existing code. Wrote system to work with Microsoft's fail-over cluster system. Added support for internationalization of UI and file systems, optimized code, rewrote file transfers to provide much faster parallel transfers, and did remote install and support for Mexican national oil company.

## SENIOR ENGINEER | E-NET CORPORATION | 8/00-4/06

E-Net provided software to replicate mainframe databases in near-real-time for remote systems.

Maintained the REMOTE-VAULT product for Windows and added support for all additional database types. Determined the product was losing 5 of every 500K transactions and got it fixed and shipped in two weeks. Created and maintained a regression testing system for their new mainframe product, EDR, which let us catch issues before customers saw them. Wrote QA portion of regression code in COBOL so QA could understand and modify it. Handled customer SNA and installation issues. Wrote communications layer for the new product. Ensured daily internal web-based report with charts and alerts was produced.

## PROJECT/TEAM LEAD FOR PRINTING SERVICES | E-STAMP CORPORATION | 3/-99-8/00

E-Stamp created a hardware dongle and software to allow customers to print legal postage directly onto envelopes with their printer.

Managing four programmers, worked on writing and debugging the Windows software and later the online server code for our Shiva product, both critical core systems for the company. Debugged, rewrote and maintained Windows code, debugged issues with the dongle and printing. Led team to write internet server code, browser plug-ins, and deal with IBM cryptographic card interactions.

## PROGRAMMER ANALYST AUTODESK / ITHACA SOFTWARE | 1/91-2/99

Ithaca Software was a small 3D graphics software company and was acquired by Autodesk in 1993.

Hired into Ithaca when there were 10 people as the sole Windows developer. Repaired and optimized all Windows issues, fixed the main graphics code, and was mentored by experts in 3D graphics. After the Autodesk acquisition, was on a team of 30 and became the go-to person for complex Windows problems. Completely rewrote the PostScript printer logic for AutoCAD 2000.

### SCHEDULING AND WORK FLOW

SCRUM • Agile • Waterfall • Resource Allocation • International team issues

### CRYPTOGRAPHIC

RSA • HTTPS • DES • Dictionary Based

### COMPRESSION

Dictionary Based • RLE • Huffman

### PATENTS

"PostScript Image printing using a downloaded handler"

6,401,141 Accurate and reliable page size selection in a postscript output device

6,370,602 Control B protocol for Postscript.TM. devices

### EDUCATION

Northern Kentucky University  
3 years of Computer Science

Thomas More College  
2 years Physics

Certifications: Novell, Autodesk

Self-taught on just about everything else. When I need a new tool for a solution, I pick up a book or find online resource and learn it.

### VOLUNTEER WORK

Webmaster for [www.SFMensa.org](http://www.SFMensa.org) 2013 and 2014