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OBJECTIVE

To work in depth with Python, Zope and other technologies to bring flexible solutions to complex knowledge and information services problems.

EXPERIENCE

PRINCIPAL, KOANSYS, LLC ARLINGTON, DC 2008- PRESENT

- Content-oriented web-based applications using Plone, Grok, Zope, Repoze
- Custom Software development in Python
- Systems architecture, analysis, design, implementation, security
- Repeatable deployments, reliable operations, health monitoring

SYSTEMS ENGINEER/DEVELOPER, NASA (INDYNE, INC.) WASHINGTON, DC 2007- PRESENT

- Served as the primary architect and implementor for the [Science Mission Directorate's](#)¹ Collaborative Content Management System
- The application runs a customized version of Plone on four Zope instances connecting to a ZEO Server with Apache doing load balancing and Varnish caching for acceleration
- Open LDAP is integrated to provide authentication and authorization services and Trac is integrated for automated feedback tracking and response management
- Deployment is complex and managed through by a repeatable build systems based on `zc.buildout`.
- Built tools to simplify development branch switching and DB updates for developers
- Served as the technical architect and implementor of a contract wide source repository and issue tracker based on Subversion and XML-RPC enabled Trac with authentication provided by Active Directory and authorization handled by OpenLDAP.
- Developed management scripts to simplify managing projects, users and group membership the system
- Implemented repeatable builds using `zc.buildout` again
- Acting member of the NASA HQ Subversion Governing Board to define and document development best practices for the HQ contract
- Architected and implemented an ACLed SMTP to Trac email gateway so any application could automate issue submission via email as firewalls block direct connections from most production applications.
- Built Mac OXS installer for Subversion client for our development team at NASA HQ.
- Implemented numerous helper applications to automate admin and support tasks.

SYSTEMS ENGINEER/DEVELOPER ALEXANDRIA, VA 2005-2007

- Designed and implemented Zope/Plone hosting servers
- Skinned Plone sites given stubs and images from Graphic Designers
- Extended third party modules to meet client requests
- Built custom Archetypes as necessary to model client data
- Automated Zope/ZEO backups with `repozo` and tested restorations
- Implemented network monitoring and notification for network services
- Designed and implemented an ACLed web service allowing remote updates of specific database tables
- Troubleshot PHP/Perl applications and sites
- Used Python to automate warm and remote backups, iCal `.ics` rewriting for use in Outlook and various other automation, analysis and reporting tasks
- Implementing all aspects of network and systems design, installation, upgrading and administration for small to mid-sized businesses.
- Performed forensic data analysis and recovery on client machines and storage

IT GENERALIST FAIRFAX, VA 2004-2005

- Advised clients in all aspects of hardware and software acquisition
- Recommended and implemented network systems based upon client business needs
- Assisted clients in deploying websites, developing web-applications and installing network services, including developing database driven document retention and management application
- Provided security services for multiple domains on multiple LANs, both wireless and wired Ethernet, for Windows and UNIX environments
- Applied security patches and updates to operating systems and applications
- Managed network services and documentation for multiple domains
- Provided Help Desk support for two office locations supporting Windows XP, W2K MS Office 2000, OpenOffice 1.1, Linux and *BSD
- Developed and streamlined workflows for maximum efficiency and ease of conversion to a paperless environment.
- Implemented and automated backup procedures.
- Implemented indexed SMB storage server with search capabilities in pdf format
- Designed and implemented web interface to file server

NETWORK ADMINISTRATOR AND SECURITY SPECIALIST FAIRFAX, VA 2001-2003

- Advised clients in all aspects of hardware and software acquisition
- Recommended and implemented network systems based upon client business needs
- Assisted clients in deploying websites and installing network services, including migrating database driven websites from test server to production

¹ <http://nasascience.nasa.gov>

environment • Provided security services for individual and multiple domains, including installing, configuring and maintaining Cisco PIX 505 firewall for NAT and IP/port filtering • Applied security patches and updates to operating systems and applications • Managed network services and documentation for multiple domains • Provided Help Desk support for three office locations supporting Windows 98 through Windows XP and MS Office 97 through MS Office 2000

EDUCATION

- Jazkarta's Zope3 for Plone developers, Plone Conference, Italy 2007
Completed Zope3 for Plone Developers Training
- Joel Burton's Plone Bootcamp, American University, DC 2005
Completed Plone Developers Bootcamp
- George Mason University, Fairfax, VA 2003-2004
Pursued Bachelors of Science in Information Technology
- Northern Virginia Community College, Annandale, VA 2001-2003
Network Security Career Studies Certificate Program
- Automation Research Systems Ltd., Inc., Alexandria, VA 1999
Intro to Cisco Router Configuration, Completion Certificate

AFFILIATIONS

- Association for Computing Machinery (ACM), member since April, 2002
- ZPUGDC, member since July, 2004
- FBI Infraguard National Infrastructure Protection Program, MD, member since February, 2003-2004

SKILLS

Languages Python, shell scripting (tcsh, bash), Some Perl and PHP

Technologies Apache2, Plone2, Zope2, ZEO, Zope3, ArchGenXML, Varnish, BIND, DJBDNS, PostgreSQL, MySQL, SQLite, Varnish

Source Management Subversion, Bazaar and some Git

Protocols DNS, TCP/IP, SMTP, FTP, UDP, NTP, HTTP, SCP, SSH, Ipv6, SMB/CIFS, LDAP and AD

Operating Systems FreeBSD, OpenBSD, W2K, W2K3, Windows XP Pro, RHEL5, various Linux, Mac OSX

Mail Transfer Agents Postfix 2.x, qmail, Exchange, Exim

Firewalls Cisco PIX, IPF, PF, IPFW, IPTables

AntiVirus Sophos Enterprise AV, Symantec Enterprise AV

Security Best Practices Security Policy Review, Composition and Implementation, Vulnerability Analysis, Risk Assessment and Mitigation

REFERRALS

Available upon request