

# REED O'BRIEN

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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](#)<sup>1</sup> 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

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<sup>1</sup> <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