

Innovative DevOps / systems engineer seeks interesting problems to overcome and explore.

I am an experienced systems engineer, with extensive skills in Linux/Unix systems, high-availability and scalability planning.

Working closely with developers I have facilitated quicker time to market by optimising build and development processes spearheading a change to development methodologies, source management and QA testing frameworks based around Continuous Integration with Jenkins and Selenium. I have been working in a DevOps capability for about 2 years now, as it seems like the natural progression from systems engineer.

I've been experimenting with single-board computer platforms lately, such as the RaspberryPi, and microprocessors such as the Arduino and mbed platform. I'd love a job where I was using my electronics skills as well as my programming/linux expertise.

I am particularly interested in SAN and Unified Storage platforms, having attained the Hitachi HNAS administrator certification, and gained lots of practical experience in previous jobs.

In my spare time, I am a keen photographer and I upload many of my photos to Flickr. I love travelling, and have visited Spain, Ireland, France, Germany and several destinations within in the USA in recent years. I love driving and have a full clean UK license with no endorsements.

I have been a Linux user since early 2002, initially using Slackware on an old PC to host my own website, and now using Ubuntu as my daily desktop at home and at work. I also have a number of Apple devices, and use these frequently too.

Technical Skills

Like: networking, ubuntu-linux, cisco-networking, virtualization, python, linux, puppet, kvm-virtualization, android, ruby, mongodb, microcontroller

Dislike: php

Experience

Founder – Astound Wireless

June 2012 - Current

Astound Wireless is a startup specialising in wireless and wired connectivity for startups, small & medium enterprises, conferences, events and hackathons.

Recent work and projects include:

- Wireless/wired network + server installation, connectivity consultancy for StackExchange's London office.
- Wireless/wired network rebuild for Innovation Warehouse
- Wireless connectivity for #LondonRealtime, #mmxiihack and #UnlockLondon hackathons.

Systems Administrator – Secret Sales Ltd

October 2012 - January 2013

I was primarily working on logging and monitoring improvements, including a 21+ server deployment of a centralised logging solution using Logstash. I also implemented a full business-logic level alerting service using the hosted monitoring service at ServerDensity.com, and subsequently also worked on adding KPI metric graphing using Statsd and Graphite (using the HostedGraphite.com service).

- Implemented a centralised logging server using Redis, Logstash and Elasticsearch.
- Assisted with continuous deployment and release strategies.
- Coordinated with IT teams to ensure the smooth running of office and datacentre systems.
- Primary point of contact for liason with outsourced IT, hosting and CDN services.

Primarily focussing on the "bigger picture", I've been working on:

- Automated package deployment, continuous integration, streamlined systems building for workstations, rendering hardware and servers.
- Automatic DHCP and DNS management pipeline.
- Virtualisation with Proxmox and VMWare ESXi (vSphere)
- Improvements to the internal network, across 10GB ethernet and 1GB ethernet media.
- Increasing the rendering capability with high-density computing, in the form of Dell Blades.
- Responsible for network and systems security.
- Primarily responsible for Puppet throughout the company.
- Implemented a tape backup solution with CommVault
- Undertook Hitachi HNAS Administrator training.
- Designed and developed an internal software packaging standard for the production of new software packages.

I worked closely with the development team, and with the software architects to ensure that the right decisions were being made when it came to purchasing and procurement of the infrastructure for the solution.

I was also heavily involved with the Agile sprint planning process, when it came to factoring in the time element for systems integration.

I also took on a couple of software projects, one to create a MongoDB/Python template system for generating Nagios configurations, and a management-friendly high level interface to the Amazon EC2 control panel, which shows total month-to-date expenditure on the cloud servers.

- Responsible for providing support to the software engineers
- Maintaining a network of Debian servers inside a private cloud.
- Configuring a VPN to connect the office and Amazon EC2's Virtual Private Cloud
- Managing an infrastructure of Puppet manifests for deploying software and updates.
- Continuous integration and testing in collaboration with a team of developers.
- Providing feasibility studies on expansion of the network and computation power, covering Windows, Linux and low-latency networking

I was responsible for the entire company's IT infrastructure, servers and desktops, Linux and Windows, as well as all of the procurement of new hardware and software.

Working closely with network engineers from suppliers and providers, I was able to integrate their data feeds into the existing platform with use of an IPSEC VPN.

I tested new architecture designs with extensive use of KVM virtualisation, and later implemented them on a combination of dedicated servers, and Amazon EC2 cloud instances.

I also refactored a number of security procedures, and revolutionised the way that servers were backed up, so that restoration could be performed quickly and easily.

I was also able to call on my previous experience of Java and C++ to help the developers improve their code execution time by assisting the rewriting into a higher performance language. This enabled a considerably higher throughput of data, which was essential to the growth of the platform.

- Utilised KVM virtualization on my workstation to aid the design of a new server infrastructure for the web application platform.
- Implemented an emergency server system on the Amazon EC2 cloud, to allow greater scalability.
- Migrated all services from a single underpowered VPS, to a much more powerful cluster of Dedicated Servers.
- Leveraged the scalability and flexibility of Amazon EC2 cloud to achieve instant performance increases.
- Reinforced existing backup procedures with a dual-site offsite backup schedule.
- Designed and implemented an online recruitment site for the company, and a new public-facing corporate website.
- Integrated a wiki (Mediawiki) and forum (vBulletin) into the intranet.
- Incorporated a number of supplier data feeds into the company application server infrastructure.
- Architected the growth of the office network, from a few PCs to nearly 50 workstations, and dual load-balanced ADSL lines.
- Set up a RADIUS authenticated Cisco remote-access VPN to the office.
- Responsible for all IT purchasing and procurement.

- Implemented a Hudson Continuous Integration server to help improve unit-testing and code quality, including front-end testing with Selenium.
- Responsible for maintaining a number of servers using Puppet.
- Conducted extensive R&D work for implementing a virtualized infrastructure using a variety of technologies including KVM, VMware ESX and XenServer.
- Improved existing backup routines by adding a tape backup service.
- Managed the office network, and improvements including organising the installation of a Leased Line.
- Worked to improve general stability and reliability by expanding the service presence into a second data center.
- Planned and implemented a high-availability MySQL cluster using Continuent Tungsten replication technologies.
- Specified configurations and planned for a number of new hardware servers, including negotiation with suppliers.

Systems Administrator – DB Education Services Ltd

July 2008 - July 2009

- Deployed various J2SE and J2EE applications using a variety of deployment mechanisms, including DEB packages and Maven.
- Responsible for DNS and nameserver management for both internal and external clients.
- Responsible for first and second line software support, and hardware troubleshooting and replacement.
 - Used Puppet to manage a large cluster of LAMP and Tomcat servers.
- Designed various plugins for both Nagios and Munin to monitor a number of services across the network of over 100 servers.
- Developed the corporate website with MODx open source CMS.
- Migrated the office software licensing model to a volume license key.
- Carried out hardware and software management and repairs to a variety of server platforms and office computers.
- Migrated the corporate wiki from Twiki to Mediawiki.
- Responsible for the security and updates of the office and london networks.
- Conducted the migration of MX records between providers for the E2BN primary school network.
- Coordinated the replacement of the office air-conditioning system, from research to budget approval, to final replacement.
- Built and installed many hardware servers.

Web Developer – ebxp.com

March 2008 - July 2008

- Produced live websites using the open-source CMS MODx.
- Wrote MODx Plugins to utilise open-source APIs such as GoogleMaps, and mootools javascript framework.
- Implemented a bug tracking and prioritisation framework.
- I was responsible for developing a few small non-CMS PHP/MySQL Applications and maintaining existing PHP/Postgres web applications.

Web Developer – sequeladvision

March 2008 - July 2008

Web Developer working in PHP/MySQL using MODx CMS.

Web Developer – twinhelix.org

January 2006 - February 2008

Freelance web developer specialising in low budget small-build sites

Junior Software Developer – University of Birmingham

May 2005 - September 2005

Producing a research oriented C++ model of biological cell movement, completed in a later project in early 2008.

Junior Network Technician – University of Birmingham Hallsnet

September 2004 - July 2005

- Controlled network access at switch level, utilising IOS commands on Cisco hardware.
- Analysed network traffic across multiple networks using wireshark, to locate bottlenecks and malicious IP traffic.
- Implemented a secure, firewalled office network, and CentOS database servers to keep records of users' bandwidth quotas.

Hitachi HNAS Administrator

March 2012 - Current

Cisco CCNA

November 2010

Education**Bioinformatics (Computational Biology) DipHE** – The University of Birmingham

2004 - 2008

2005: LGBT Association - Head of IT

2004: Studentship in Synthetic Biology

Certifications**Hitachi HNAS Administrator**

2012

Cisco CCNA

2009

GitHub - puppet – <https://github.com/tomoconnor/puppet>
puppet

February 2011 - February 2013

Puppet Configs for Blogpost related stuff

A very basic overview of example puppet config for this blogpost: <http://tomoconnor.eu/blogish/dedicated-dedicated/>

GitHub - almighty-bridget – <https://github.com/tomoconnor/almighty-bridget>
ruby

January 2013

A simple ruby script to make posts to a Campfire room alerting about PagerDuty incidents.

Wrote the thing in its entirety, using a few gems that I found for Pagerduty API and one for the Campfire API.

GitHub - logstash_cleanout – https://github.com/tomoconnor/logstash_cleanout
logstash, python

November 2012

Designed to be run on a nightly cron-job, this will delete old logstash indexes to free up disk space

Wrote this to fix a problem where we were generating >500GB of logs a week, and ran out of disk space in a few days!

GitHub - captive-backend – <https://github.com/tomoconnor/captive-backend>
ruby, raspberry-pi

November 2012

CharityWifi: Integrating a charitable donation into wireless hotspot captive portal.

I wrote the backend code to do the network manipulation.

GitHub - wrapperbuild – <https://github.com/tomoconnor/wrapperbuild>
shell

September 2012

Something I wrote to simplify packaging stuff with fpm.

I wrote this in its entirety to simplify the process of packaging many hundreds of applications for internal deployment. It basically creates a standardised filesystem hierarchy that makes it far easier for automated build tools to use.

GitHub - baas – <https://github.com/tomoconnor/baas>
python

August 2012

bcrypt as a service

Wrote this in an afternoon as the response to a tweet asking why more people don't use bcrypt. It's effectively a useless service for external deployment, but serves as an example of how one might wrap bcrypt with an API.

GitHub - Wordrank – <https://github.com/tomoconnor/Wordrank>
python, mongodb

September 2011

<http://wordrank.twinhelix.org>

Very first foray into MongoDB programming with Python

GitHub - PromGuide – <https://github.com/tomoconnor/PromGuide>
android, java, json, screen-scraping

June 2011 - July 2011

My first real foray into writing Android Apps. Unceremoniously scrapes the BBC website and displays the data as an Android app. Really needs a refresh.

I wrote it... Not entirely pleased with the way it turned out, but as a first app, certainly not bad.

#PDFTribute list of documents – <http://pdftribute.net/>
python, php, mongodb

A searchable archive of tweets linking to research that were made available after the untimely death of Aaron Swartz.

Primarily backend developer and release engineer, although I did also design the CSS with the help of Divshot

Is _ disconnected? – <http://isdisconnected.info/>
python, postgresql, django

Displays an indicator of whether various servers inside a given country are accessible from outside that country.

It's kinda out of date now, but was very popular around the time of the Arab Spring movement, when Libya was disconnected from the internet by their government.

Wrote the backend code / maintained the server + database.