

# Andy Smith

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## ~/about-me.txt

I am an endlessly curious, passionate, security-focused Systems Engineer (with networking and development experience!) who is always learning and looking for the next challenge. I'm highly skilled across multiple operating systems and architectures with 20 years experience in a range of industries. Whether it's at the top or the bottom of the OSI layer - or at the front or the back end of an environment - I've designed, built and supported it.

## ~/technology.txt

<b>Operating Systems</b>	<b>Linux</b> (Red Hat/CentOS, Debian/Ubuntu, Amazon Linux) • <b>Windows</b> (Server 2008-2016) • <b>Solaris</b> (6-10)
<b>Networking</b>	<b>Routing</b> (OSPF & BGP) • <b>Cisco switches/routers</b> (IOS & CatOS) • <b>Juniper switches/routers</b> (JunOS) • <b>Load balancing</b> (F5 BIG-IP, & Cisco ACE) • <b>Linux networking</b> (iproute2) • <b>IPv6</b>
<b>Security</b>	<b>Cisco firewalls</b> (ASA, PIX and FWSM) • <b>Linux firewalling</b> (netfilter/iptables) • <b>Juniper firewalls</b> • <b>Checkpoint</b> (FW-1 & Provider-1)
<b>AWS</b>	<b>Compute</b> (EC2, Lambda, ECS) • <b>Networking</b> (ELB, VPC, Direct Connect & Route 53) • <b>Security</b> (IAM & ACM) • <b>Infrastructure</b> (CloudFormation, OpsWorks and CDK) • <b>Monitoring</b> (CloudWatch) • <b>CDK</b>
<b>Services &amp; Tools</b>	<b>Virtualization</b> (Docker, KVM/QEMU & VMware) • <b>Web</b> (Apache, NginX & Squid) • <b>DNS</b> (Bind & dnsmasq) • <b>Database</b> (PostgreSQL, MySQL, MongoDB & Redis) • <b>Logging</b> (syslog-ng, rsyslog, Splunk & ELK) • <b>Configuration</b> (Chef, Ansible & Puppet) • <b>Monitoring</b> (Nagios, Cacti, Graphite & Munin) • <b>Mail</b> (Exim & qmail) • <b>Version control</b> (Git & Subversion) • <b>Build &amp; Deploy</b> (Dokku, Jenkins & Gitlab CE) • <b>Packaging</b> (RPM & dpkg) • <b>Troubleshooting</b> (tcpdump, Wireshark & strace)
<b>Languages</b>	<b>Python</b> (2 & 3, Django & Flask) • <b>Bash</b> • <b>Perl</b> • <b>Ruby</b> • <b>PHP</b> • <b>JavaScript/TypeScript</b>

## ~/roles.txt

**[Systems Development Engineer @ AbeBooks (Amazon)]~\$**  
↳ Victoria, BC & Calgary, AB, Canada • July 2012 - Present

My current role involves working as part of AbeBooks' Site Operations team, as part of which I am responsible for:-

- ❑ **Design, implementation and maintenance** of the geographically and technologically diverse infrastructure that underpins AbeBooks' business, both in **physical data centres and in AWS**
- ❑ Developing **tooling in Python to automate and simplify processes** for internal teams
- ❑ Driving the adoption of Amazon tooling and processes both within the team and across the wider organisation
- ❑ Providing backup **network engineering** support
- ❑ 24/7 upkeep of critical infrastructure by providing **out-of-hours on-call cover**
- ❑ Providing **technical expertise** to engineers and projects outside of my functional area

Being part of a small team of systems engineers, I am constantly required to push myself to meet the demands of a fast-moving organisation. My achievements in this role include:-

- ❑ Planning and migrating the **move of systems from legacy data centres to AWS**
- ❑ Designing and building an **internet-facing proxy cluster in AWS**, handling millions of requests per day
- ❑ Using **AWS** load balancing technologies (**ELB**) to replace legacy hardware load balancing equipment
- ❑ Design and implementation of **centralised logging and multi-factor authentication** across multiple environments
- ❑ Introducing **Chef** to provide a consistent way to build and support production systems across disparate platforms

## [Hosting Management Systems Engineer @ Cable & Wireless Worldwide]~\$

Leeds, United Kingdom • October 2007 - July 2012

My role at C&W was project-oriented and involved working in a small team of people, with my primary roles and responsibilities being:-

- ❑ Maintenance and development of the **management infrastructure for commercial, government and internal** network and security devices. My work on government-related platforms required me to obtain and maintain clearance to an SC level.
- ❑ Development of **applications and services in Perl, PHP and C#** for both security engineers and external customers
- ❑ 24/7 upkeep of critical infrastructure by providing out-of-hours on-call cover
- ❑ Liaising with third-party suppliers and organizations as required
- ❑ Providing technical expertise to engineers and projects outside of my functional area.

During my time in this role, my achievements included:-

- ❑ Being instrumental in the **design, planning and migration of the core management platforms to a VMware environment**
- ❑ Designing, implementing and managing a completely new **Checkpoint Provider-1 platform, supporting over 500 devices**
- ❑ Vastly reducing administration overhead of the management platforms by **designing and implementing centralized user management** across the entire Linux and UNIX estate, and simplifying access for engineers at the same time
- ❑ Development and roll-out of an **integrated configuration management database**
- ❑ Taking on maintenance and defining processes and procedures for the ongoing support of an existing large **Sophos Enterprise** platform
- ❑ Implementation and ongoing management of a code management system
- ❑ Providing **temporary team leader cover** during a managerial reorganisation

## [Security Support Engineer @ Cable & Wireless / Energis Communications Ltd]~\$

Leeds, United Kingdom • January 2007 - October 2007

- ❑ Troubleshot problems across a wide range of security and network devices such Cisco PIX/ASA, Cisco switches and routers, Checkpoint FW-1 devices and Aladdin eSafes
- ❑ Recognized as an extremely competent engineer and seconded to a more senior technical position researching and developing new products for the business
- ❑ Developed applications for use within the team and elsewhere in the business.

## [UNIX Support Engineer @ Energis Communications Ltd]~\$

Leeds, United Kingdom • March 2005 - January 2007

- ❑ Supported and maintained a large UNIX estate, consisting of Solaris, Linux and F5 BIG-IP devices for multiple large multi-national companies by troubleshooting high-impact customer faults and keeping systems patched and up to date
- ❑ Planned and implemented change requests for customers and internal systems.

## [Technical Operations Engineer @ Energis Communications Ltd]~\$

Leeds, United Kingdom • October 2003 - March 2005

- ❑ Provided first-line support and troubleshooting of a wide-range of customer issues
- ❑ Provided technical training to other members of the team

## [Systems Administrator @ Legend Internet]~\$

Bradford, United Kingdom • August 2001 - October 2003

- ❑ Building, maintaining and supporting the infrastructure for a small business-orientated ISP
- ❑ Provided out-of-hours on-call cover for core systems and network infrastructure
- ❑ Developed services and management systems both for customers and internal use