

David Geary

Cover Letter

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Contact Details

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Location: Slough, SL1

Right to Work: Indefinite Leave to Remain (Settled)

About Me

I am an experienced Linux Engineer with 12 years experience across CentOS and Debian.

I have used Jenkins CI/CD pipelines to build and deploy applications running in Docker containers on Kubernetes in AWS. I have used Puppet, Ansible, and Terraform to provision them. And I have monitored them with Nagios/Icinga and Zabbix. I have managed SSL/TLS certificates both server and client certificates, and have managed certificates provided by a private certificate authority. And I have managed Check Point, VyOS, and pfsense gateways.

I am a team player who is able to take the lead when required and have a keen problem solving ability.

Professional History

Timespan: 2019-03-06 – 2024-07-12

Company: Tribal Worldwide London

Position: Tribal Worldwide London

Tasks:

- Manage Jenkins CI/CD Pipelines to build and deploy Applications running in Docker containers on Kubernetes.
- Manage PFSense Gateway used mainly as VPN hub.
- Manage SSL/TLS Certificates
- Configure servers using Puppet.

- Monitoring with Zabbix.

Timespan: 2018-02-05 – 2019-01-30

Company: ColossusBets

Position: Linux System Administrator

Tasks:

- Configure servers using Ansible.
- Manage VyOS Gateways.
- Manage SSL/TLS Certificates.
- Monitoring with Zabbix.

Timespan: 2011-08-08 – 2017-11

Company: e-Secure

Position: Network Security Engineer

Tasks:

- Manage Check Point Gateways.
- Manage Cisco Intrusion Detection Systems.
- Monitoring with Nagios/Icinga.
- Manage Cisco Switches and Routers.
- Manage Drupal Site.
- Log Collection and Analysis with Elasticsearch and Kibana.

Academic History

Timespan	Institution	Course	URL
2023-09	Radio Society of Great Britain	Foundation Intermediate	https://rsgb.org
2011	Check Point	Check Point Certified Security Administrator	https://training-certifications.checkpoint.com/
2011	College of Law	Graduate Diploma in Legal Practice	https://www.collaw.edu.au/
2006 – 2010	University of New England	Bachelor of Computer Science / Bachelor of Laws	https://www.une.edu.au/
2002 – 2006	Australian Navy Cadets	General Training First Aid Get Into Small Boat Sailing Communications (Signal Flags, Semaphore, Morse Code)	https://www.navycadets.gov.au/
2000 – 2005	Grafton High School	Higher School Certificate	https://grafton-h.schools.nsw.gov.au

Experience

I have experience with the following technologies:

1. Linux – Debian / CentOS
2. SSH – OpenSSH
3. SSL/TLS – OpenSSL / GnuTLS
4. Gateways
 1. IPsec – pfSense, vyOS, CheckPoint, StrongSwan
 2. Firewall / NAT – pfSense, vyOS, CheckPoint, FirewallBuilder, netfilter/iptables
5. Kubernetes (and Docker) – Self-managed, EKS
6. CI/CD – Jenkins
7. AWS – VPC, EC2, S3, Cloudfront, Route 53, EKS, RDS, DocumentDB, EFS
8. Relational Databases - MySQL / MariaDB including dual-master replication, PostgreSQL
9. Document Databases - MongoDB / DocumentDB
10. Web Server / Load Balancers
 1. Web Server – Nginx, Apache 2.4 / 2.6
 2. Load Balancers – Nginx, HAproxy
11. ActiveMQ
12. LDAP – OpenLDAP, Active Directory
13. Configuration Management – Ansible, Puppet
14. Infrastructure as Code – Terraform
15. Source Code Management – Git
16. Monitoring – Nagios/Icinga, Zabbix
17. Wiki – MediaWiki, Confluence
18. Ticket System – Request Tracker, Jira
19. Programming Languages – Bash, Groovy, Python, PHP, Perl, C
20. Email
 1. SMTP – Postfix, Exim
 2. IMAP – Dovecot
21. OpenVPN
22. ACME (LetsEncrypt) – certbot

23. ELK (Elasticsearch / Logstash / Kibana)
24. DHCP – ISC DHCP
25. DNS – BIND, PowerDNS, Microsoft DNS
26. RADIUS – FreeRADIUS
27. BGP – pfSense with FRR plugin, Cisco IOS
28. OSPF – Cisco IOS
29. VLAN – Cisco IOS, Dell PowerEdge, Linux
30. PABX and IP Telephony – Asterisk
31. CMS – Drupal 7, Drupal 9
32. Virtualization
 1. Hypervisors – Proxmox, VMWare ESXi, Xen
 2. Containers – OpenVZ, LXC, Docker
33. SELinux

Experience (Detailed)

1. I have 12 years experience with Linux systems administration, 6 years with CentOS at e-Secure, 5 years with CentOS at Tribal, and 1 year with Debian at ColossusBets. I have also used Debian-based systems at home since 2011.
2. I have extensive experience with OpenSSH including SSH key-based authentication, forward and reverse port forwarding, forced commands, controlmaster (SSH connection sharing), ProxyCommand, and more, having used all of these in my 6 years at e-Secure, 1 year at ColossusBets, and 5 years at Tribal.
3. I have experience with client certificates which we installed in the key store for some of our Java apps at Tribal. I have extensive experience with SSL/TLS including verifying certificate chain validity against trust store as well as checking enabled cipher suites using SSLyze at e-Secure.
4. I have some experience managing pfsense gateway at Tribal where I used the FRR package to configure BGP failover for route-based IPsec VPN tunnels to AWS. I have 6 years experience managing Check Point gateways at e-Secure, and 1 year experience managing VyOS gateways at ColossusBets. At home I have used FirewallBuilder to manage iptables-based firewall policy. I can also write iptables rules manually.
5. I have 5 years experience managing Kubernetes at Tribal, 3 years with a self-managed cluster on Rackspace VMs and 2 years with AWS EKS including on EC2 and on Fargate.
6. I have 5 years experience at Tribal managing CI/CD pipelines with Jenkins building Java Spring Boot app Docker containers and deploying to Kubernetes. These were written in Groovy (for Jenkins pipeline syntax) and were stored in Jenkinsfile in Git.
7. At Tribal, I gained 2 years experience managing AWS environments. In particular with Jenkins deploying apps on EKS with RDS (MariaDB) and DocumentDB databases and EFS for file storage.

8. At Tribal I managed galera-clustered MariaDB database, at e-Secure I managed MySQL dual-master replicated database, and at ColossusBets I managed MySQL dual-master replicated database with MariaDB Galera-clustered slaves. This included troubleshooting replication issues. I have had less experience with Postgres (I only use it at home), but am able to perform basic database administration functions with it.
9. At Tribal, I have experience administering MongoDB and DocumentDB databases which are used by many of our Java apps.
10. At e-Secure and at Tribal, I managed Apache2 web servers. At ColossusBets and at Tribal I managed Nginx web servers using PHP-FPM with FastCGI to host PHP applications. I also managed Nginx and Haproxy reverse proxies / load balancers at Tribal. And at e-Secure I managed F5 BigIP load balancer including writing and maintaining iRules.
11. At Tribal, I managed ActiveMQ instances for a set of applications which we called RCH. It took stock data and enriched it from other sources for consumption via an API by a showroom iPad application. The ActiveMQ was used for communications between the different components of RCH so that they could run asynchronously.
12. At Tribal I managed Active Directory. At e-Secure, I managed a very simple OpenLDAP directory. Both were used for user authentication.
13. At Tribal I managed our Puppet configuration (this was used as the current configuration for our blue-green environment). At ColossusBets, I managed our Ansible configuration, which contained the current configuration for the entire fleet of servers. These configurations were stored in a Git repo. At e-Secure, I managed our Puppet configuration (which was used as a baseline configuration for new server builds).
14. At Tribal, I was part of a team that created a generic Terraform configuration that was used to provision AWS environments for multiple clients.
15. At Tribal all of the Java applications the developers created were stored in Git, as well as the Jenkins pipelines to build and deploy those applications. At ColossusBets we used Git to store Ansible configuration. Any changes I made would go into a branch in the relevant Git repository, and when the change was ready, would be merged into the main branch.
16. At Tribal and ColossusBets, I managed Zabbix monitoring systems including writing custom Zabbix discovery and monitoring plugins. At e-Secure, I managed Nagios/Icinga monitoring system, including writing plugins for monitoring various things. I was also part of the on-call roster which responded to alerts from this system.
17. I have experience in writing documentation in a corporate wiki at Tribal, where we used Confluence, and at e-Secure, where we used MediaWiki. Examples of documentation include processes, system descriptions, and change documents.
18. At Tribal, we used Jira to log tickets to track in-progress work and we would review, triage, prioritise, and work on those tickets daily in priority order until no further progress can be made (the ticket becomes blocked on something) before moving on to the next ticket. At e-Secure, we used Request Tracker in a similar way.
19. I am most comfortable programming in Bourne Shell, Bash, Python, PHP (in the context of Drupal), and C, though I have used Perl, Ruby, and Groovy (in the context of Jenkins pipelines) and are comfortable with those as well. I have used all of these languages professionally over the years.

20. At Tribal I managed Exim mail relay which was configured to use Socks proxy for outbound connectivity. That proxy was the only way out of the environment and it had a whitelist of allowed domains to connect to. At e-Secure and at home, I managed a Postfix/Dovecot email system.
21. At ColossusBets, I maintained an OpenVPN remote access VPN on VyOS gateways. I have also used OpenVPN as remote access VPN at home.
22. At ColossusBets, I managed such a large number of Let's Encrypt certificates that we were running into daily limits. This was before Let's Encrypt offered wildcard certificates. I also use certbot with Let's Encrypt at home.
23. At e-Secure, I managed an ELK stack. We took a log feed from our customer, parsed it with logstash grok filters, and stored it in Elasticsearch database. We used Kibana frontend to perform queries and display pretty graphs.
24. At e-Secure, I managed ISC DHCP server including network boot configuration for installation of CentOS, and also for configuration of VoIP telephone handsets.
25. At e-Secure, I managed BIND DNS server, including hidden master configuration, and also including configuration to return addresses for nearby servers in preference to servers with the same role further away on the network. At ColossusBets, I managed PowerDNS DNS server.
26. At e-Secure, I managed FreeRADIUS service as part of a TOTP token code service.
27. At e-Secure, I configured BGP on Cisco routers including AS path prepending to express preference for ingress at a particular point in the network.
28. At e-Secure, I configured OSPF on Cisco routers to provide a meshed internal network resilient to outages from individual links.
29. At e-Secure, I configured VLAN access and trunk ports on Cisco and Dell switches.
30. At e-Secure, I managed our Asterisk-based PABX in each of our offices including call routing of UK-based telephone numbers to egress from our UK office PABX and Australia-based telephone numbers to egress from our Melbourne PABX no matter which office handset placed the call.
31. At e-Secure, I performed an upgrade of our Drupal CMS from Drupal 5 to Drupal 6 including porting a handful of bespoke modules. I have the most experience with Drupal 7, having built and maintained a personal shop website using it at <https://shop.activeneutral.org>
32. At e-Secure I was part of a team that performed a datacentre architecture migration from OpenVZ containers and VMWare VMs on CentOS using local storage to LXC containers and QEMU/KVM VMs on Proxmox using SAN storage (NFS and iSCSI on ZFS on JBOD). SAN solution was NexentaStor, which is a Solaris-based High Availability SAN solution. We also used VMWare ESXi hypervisors for our office infrastructure.
33. At e-Secure I wrote SELinux policy module to allow a network traffic flow which was not considered in the default CentOS SELinux policy at the time.

Further experiences available upon request.

Hobbies

- Off-Grid Solar Power
 - See Arduino load controller code at https://github.com/biancauranus/load_controller
- Amateur Radio
 - Callsigns M7YFB (Foundation), 2E0YFB (Intermediate)
 - Rig is iCom 720A with 15m (21MHz) / 20m (14MHz) fan dipole
- Raspberry Pi
- Esperanto

Referees

Name	Role	Timespan	Contact Details
Nigel Trigger	Head of DevOps, Tribal Worldwide London	2021-10 – 2023-06	+447723730630
Mark Sweatman	Chief Technology Officer, Tribal Worldwide London	2021 - 2023	Available upon request
Szabolcs Gyurko	Head of DevOps, Tribal Worldwide London	2019 – 2021	+447976525905