

James Blackwell

Senior DevOps Engineer

Remote Worker
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Various online methods

Objective Challenge me! My skills as an experienced senior DevOps engineer cover the full range of services and management to support business ranging in size from medium to enterprise. My usual focus are companies that have collected significant infrastructure tech debt and are ready to do what it takes to make the pain go away.

Skills: SME Level Chef, Graphite, Terraform, Ruby, AWS, Bash, Unix Admin

Core Competencies Bash, Terraform, Systems Management, CICD, Software development, Docker, Network

Functional Competency Kubernetes, Python, C, Jenkins

Old Experience ECS, Rails, PHP, Physical Network Administration

Experience: Senior Devops Engineer August 2022
Crowdstrike Dec 2016

I provide lead SME support for our chef based configuration management and manage 100,000 systems, seven environments, including GovCloud and Europe, with a success rate of 99.9992%. I also provide SME support for chef cookbook development, ensuring that the organization's configuration management maintains a high quality of standard by providing guidance, reviewing cookbooks and working with fellow engineers to write more eloquent recipes. I designed "Chef Librarian", a CICD process for cookbooks. Our users manage their cookbooks with git, allowing us to manage deployments of new cookbooks with simple merge commands. I rewrote most of the companies core cookbooks (36 core cookbooks amongst the 240 or so that we manage) to work both quickly and reliably, increasing the successful chef first run rate from approximately 70% up to well over three nines. Chef runs became far more efficient, reducing in duration of 2nd+ runs from over 20 minutes down to less than 30 seconds.

I provide SME support for AWS, regularly architecting and building out major projects for internal customers within the organization, building out most AWS components for other teams on a daily basis, including VPCS & Subnets, ASGs & LCs, ELBs and ALBs, SGs, RDS and the occasional ECS cluster.

I rely heavily upon Terraform at work to build out most of our infrastructure. I have written somewhere near a dozen highly modularized Terraformed stacks at the company for stacks such as Chef, Graphite, Identity Protection, Lightning, our internal CMS.

I designed and built our Graphite monitoring stack, taking it from a handful of manually provisioned systems to seventeen independent clusters redundantly spread across three development environments and four production environments with a terraform provisioned, chef managed, three tiered redundant architecture that handles over 430 billion data points per day in production alone.

I designed and built “Chef Librarian”, a CICD process for cookbooks. With Chef librarian, git repositories became the authoritative source for cookbooks. The head librarian service builds cookbook artifacts and inventories, which are acted upon a branch librarian in each isolated environment. Approved cookbooks migrate from a git repo branch to the appropriate environment in ten seconds or less.

Lead SRE Engineer
Glympse, INC

Jul 2017
Dec 2016

I lead a team of three to redesign and deploy Glympse's architecture. The classic infrastructure was manually configured set of instances, subnets, security groups, and instances that had evolved into an unsafe, difficult to maintain environment. The rebuild introduced a number of previously absent best practices, including:

- Self-sufficient multi-region support that allows for multiple independent, fully isolated, environments for each region. us-east-1 does not care if eu-central-1 falls over.
- Architected a hub and spoke VPN design that grants the SRE team enterprise wide access to access, while retaining 100% isolation between separate deployments.
- Redesigned the entire infrastructure to be deployed as a revision controlled artifact. New environments and regions can now be fabricated within minutes or hours, respectively. All new AWS infrastructure, including VPCs, subnets, ECS clusters, AWS, R53, standalone instances and standalone instances are now provisioned via Terraform and stored within git branches.
- Rewrote the majority of the companies Ansible roles and playbooks within best practices. All roles are fully idempotent, allowing instances to be kept current without any unnecessary impact to services.
- Wrote an integration tool for terraform and Ansible that automatically exposes Terraform data (outputs, instance tags, etc) to ansible, gluing together system provisioning with configuration management in a seamless way.
- VPN based access controls. Architected a hub and spoke design that grants the SRE team unfettered access to all resources in all regions, while maintaining full isolation between other regions.
- Proper isolation of assets through proper use of subnet and security groups. Public and private assets are now isolated according to best practices. ELBs sit in proper DMZs and cross-service dependencies are enforced on a strict “need to access” basis with security groups.
- Introduction of auto-triggered autoscaling groups for ECS clusters. Adding new instances to adjust to unexpected load no longer requires manual interventio..
- Rebuilt the logging stack. The old logging stack had been designed as many-to-many, hamstringing the ability to manually scale the loggign stack. I redesigned the stack with message queueing (Kafka), allowing services and logging to dynamically scale independently.

Senior Devops Engineer
Disney, ABC Division

Dec 2016
Aug 2015

- Migrated the ABC Freeform Mobile API to AWS. This relied upon VPC, ECS & docker, Mon-goDB, RDS, Jenkins and cloudwatch. Responsibilities included design, development, migration, CI/CD pipeline development.
- Maintenance of thousands machines spread across a half dozen business units for Disney and ABC. The involved maintenance across both AWS and internal data center environments and included ECS retirements, chef cookbook development and maintenance and standard tier three trouble shooting.
- Designed, deployed and documented Sensu across six network segments within in our legacy data center utilizing multiple rabbitmq clusters and Shovel.
- Load testing of several components for Oscars, Dancing with the Stars and ABC Freeform
- Developed an EBS/S3 based solr slave bootstrapping replication strategy for slaves that shortened slave provisioning time by an order of magnitude.
- Redesigned the node synchronization between chef and rundeck, restoring reliability to our key chef and rundeck servers.
- Designed, developed, implemented and documented a continuous deployment pipeline for chef environments and roles, both protecting "ninja" edits of roles and alleviating us form a plague of regressions caused by walkover knife uploads.
- Redesigned the code for our internal deployment portal that is used by our business units to deploy artifacts to both the internal data center and NAP7.
- Managed nearly a dozen Jenkins servers, both with standard and webstart slaves, along with Rundeck in both AWS and the private data center..
- Daytime on-call support and maintenance for our business units.
- Wrote an application used by the team to identify on demand important details for systems such as location, vlan, trust networks and subnets. Being able to understand the context of a system has made troubleshooting network related issues a bit simpler.
- Migrating the ABC + Freeform All Access from standalone wordpress sites to an autoscaling beanstalk driven, s3 backed app.

Senior Devops Engineer
Cascadeo LTD

Aug 2015
July 2014

My role at Cascadeo, metaphorically speaking, is to be air-dropped behind client lines. My responsibility, once there, is quickly identify and assess the customer's state, diagnose weak client's state, diagnose their deployment for architectural, performance and security weakness, propose remedial actions, implement those actions and support the client.

Cascadeo has exposed me to a wide variety of technology due to the company's roots in consulting. We typically have a 2-3 month engagement with each client broken into phases: 1) discovery of current architecture. 2) diagnosis of architectural weak points in the current deployment and definition of any variances from industry best practices; 3) a remediation plan to align and/or migrate the deployment to soothe the client's pain points. 4) follow up and monitoring (via another department) to keep the company on track.

I deal with most aspects of Devops on a daily business. I leverage my Chef skills for some clients and Ansible or Salt for others. Some of my clients just use Rackspace for instances, while other clients use the full AWS stack. I have proven competence with nearly all of the skills over the last year at Cascadeo.

Cloud Engineer / Developer 2014
Redapt Inc 2013

I served in two capacities for Redapt: DevOps engineer and lead developer for Redapt's Merge Center Automation Program.

I was responsible, as a Cloud/Devops engineer, for performing cloud stack deployments and automating system configuration for the company's clients. Frequently performed tasks included migrating customers from manually configured systems to chef managed systems, initial cloudstack deployments and hardware configuration (servers, switches, jbods, idrac configuration, etc). These environment were often heterogeneous, including both Linux and Windows based systems.

I lead development of Redapt's "Merge Center Automation Project", otherwise known as MCAP. MCAP is used by the company to automate the configuration of the BIOS and firmware for systems, entire racks at a time, via chef, before any operating system is installed. This is trickier than it sounds on the service as one has to deal with escrowing chef client.pems, dns, dhcp, pxelinux, logging over multiple reboots as various hardware components are flashed. Upon completion, I refactored MCAP into a SaaS offering, allowing the company to build servers in both Seattle and Santa Clara from a centralized point.

IT Engineer 2014
Register Tapes Unlimited 2006

I designed, built and implemented a fully redundant infrastructure for RTUI during the dark ages of cloud engineering. Technologies included: Asterisk, Xen, DRBD, Apache, LTSP, Samba, Postfix, PostgreSQL,

MySQL, Bind, LDAP. I also designed and wrote a custom hot-desking phone system based upon asterisk that tracked scheduling, employee time management and sales tracking.

Lead Developer & System Admin 2013
Northwest Registered Agent, LLC 2012

I designed and build Bizscanner for NWRA. Bizscanner is a restful multi-threaded screen scraper from 51 different government websites. The information, cached within MongoDB, tracks and reports changes on over 20,000 customers on a daily basis. I often provided a backstop to other on-site engineers, providing solutions to otherwise intractable problems.

DevOps Eng. & Cloud Engineer 2015
Calisto Labs / RoleStar, Inc 2011

I deployed and managed a RightScale managed AWS infrastructure for RoleStar.com. I also migrated RoleStar from Rightscale's proprietary configuration management system to Chef. I also made full stack deployable on vagrant, which greatly eased development by allowing developers to deploy and develop RoleStar on their local workstations.

Services and tools used: Chef, Vagrant, Rightscale, AWS (ec2, cloudfront, s3, etc), New Relic, HAProxy, RabbitMQ, distributed memcache, MySQL in master/slave, ruby, bash and some perl.

Programmer 2005
Canonical Ltd. ("Ubuntu") 2006

Developed on Bazaar. Bazaar was a decentralized revision control system that was a fork of GNU Arch. Bazaar was a fork of Tom Lord's Arch, the first fully decentralized revision control system for which I was one of the primary developers.

Fire Controlman 1990
United States Navy 1996

My role in the Navy varied, as it does with most people in the armed services. I managed a Netware 3.1 server along with a couple hundred clients.

Samples [Song of the Day](#) is a slack bot written in go to provide schedule songs of the days for channels.

[MFA](#) is a proof of concept that shows how to use Fyne widget library to provide google auth totp auth.

[K8s Terraform](#) is a terraform buildout of a five node home lab built circa 2020. Included within the terraform includes self-hosted certificate manager, openvpn and chef (for managing worker nodes, of course)

[Chef Docker K8s](#) is a dockerization of a scalable chef server, where the database and search engine are externalized, allowing the API server to be scaled within k8s.

[OpenVPN K8s](#) dockerizes openvpn in an K8s compatible way, including certificate manager support, allowing for a better security model for external access.

Education: Cuyamaca College, 2002-2003, 3.94 GPA, left due to family obligations
Micro Miniature Board Repair, US Navy
Basic and Advanced Electronics (FC “A” school, US Navy)

