Cameron Ratchford

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**WORK EXPERIENCE**

**Cybera May 2021– Present**

*Systems Administrator Calgary, AB*

On the Security Operations team at Cybera, my duties consist of:

* Designing and planning technical solutions to support our security initiatives.
* Building, developing, managing, monitoring, and maintaining technical infrastructure using automation tools.

(Ansible, Terraform, Git, Sensu, Python, Bash, Make)

* Ensuring all technical infrastructure and related processes are documented.
* Writing reusable, performant, and maintainable code. Resolving technical issues related to infrastructure.

Projects:

* Miridor**:** An Intrusion Detection System as a Service for use by Cybera's member organizations.
	+ Hosted on multiple Ubuntu hosts in 2 regions as LXD containers.
	+ Comprised of:
		- Suricata (IDS)
		- Fluentd (Parsing IDS JSON logs, forwarding them to the DB)
		- Postgres (The DB to store the logs so the backend can access them)
		- Django (The backend)
	+ Deployed with Infrastructure as Code using a series of Ansible plays and roles.
	+ Monitoring automated in Ansible by configuring alerts in Sensu.
	+ Metrics collected by Sensu, stored in Graphite, displayed in Grafana.

**Computer Modelling Group Jul. 2019 – May 2021**

*Technical Support Analyst Calgary, AB*

As Technical Support Analyst, I took care of a multi-domain/multi-forest AD environment, managing ~100 servers in 6 different countries. Of those servers, I was responsible for the vSphere clusters, building access system, and print management servers. In addition, I administered VOIP lines in FreePBX, managed software and OS deployments (WDS, WDK, and SCCM), administered the O365 environment (licensing, Teams, SharePoint Online, Power Platform), Active Directory (Users, Computers, Groups, GPO), and our 2FA server. What I enjoyed most was creating automation tools and scripts with PowerShell and Python.

* + Worked with the senior VMware administrator to deploy, integrate a Hyper-Converged VMware environment.
	+ Planned and developed Disaster Recovery documentation for critical infrastructure, including:
		- Building Access System
		- VMware DHCI Cluster
		- Printer management system

**Devon Energy Aug. 2017 - Jul. 2019**

*End User Support Analyst / Software Support Calgary, AB*

* In my role at Devon, I was responsible for administering [Jackfish Lodge](https://goo.gl/maps/McK9Zq878CbShGaGA)’s Building Access System including a network of 2,000+ IoT devices. As the tier 1/2/3/4 support analyst for the Assa Abloy Visionline software. My duties included IoT network administration, Windows Server 2012r2 administration, HVAC electronics repair, and desktop support.
	+ Collaborated with the Enterprise Safety and Training team to develop interactive training content for facility site operators. This amounted to a set of webpage-based procedure references and SOPs that were more maintainable and substantially more interactive than the physical stack of binders that it replaced.
	+ Planned, tested, and implemented a new IoT network topology that reduced the device connection failure rate by approximately 50%. Providing with more time for documentation, preventative maintenance, and collaboration with other teams.

**Additional Experience**- Desktop Support Analyst at Enbridge in Calgary, AB *(Dec. 2015 - Aug. 2017)*- Field Service Technician at ABM Integrated Solutions in Kenora, ON *(Oct. 2012 – Dec. 2015)*

**EDUCATION**

**Fanshawe College July, 2012**

*Diploma of Information Technology - Virtualization London, ON*

* + VMware ESXi 5.0 Administration
	+ Cisco Routing and Switching
	+ Windows Server 2008r2 Administration

**OTHER SKILLS & INTERESTS**

**Homelab Environment**

* Mikrotik / Aruba Network
	+ Segregated VLAN networking
	+ Inbound / Outbound firewall rules
* LXD Cluster of 3 servers with shared storage via an NFS backed 10 gigabit SAN
	+ Running a mix of Ubuntu container and Windows libvirt VM instances
	(Using custom images made with Packer and Windows ADK)
	+ The instances currently running within the cluster are:
		- Domain Controller, DHCP, DNS server
		- Windows test machine
		- Staging server, where the monorepo lives and Ansible / Terraform are executed from.
		- Nginx reverse proxy. For encrypting the traffic for my other, more insecure servers.
		(So that I only have to keep track of one SSL cert)
		- Nginx file server. For serving files over http.
		- Python application web host / nginx proxy (for static files). Currently hosting a blogsite engine in development.
		- Gitlab. Using it for git, documentation, task tracking, and experimenting with GitlabCI.
		- Netbox. A CMDB / IPAM to experiment with Ansible dynamic inventory.
* Automation
	+ All provisioning and configuration scripts exists as Infrastructure as Code within a monorepo.
	+ Provisioning of LXD instances performed using Terraform. On occasion, OpenStack instances are also provisioned.
	+ Configuration of hosts and instances performed using Ansible.
	+ Windows Automation exists as a library of PowerShell scripts that are managed and executed by Ansible.

**Other Projects**

* Web Development
	+ Django (A blogsite engine)
	+ Flask (A time tracking and bill calculation app for a food delivery company)
	+ FastAPI (A server metrics monitoring client)
	+ JavaScript, Flexbox, Grid (Asynchronous API calls, Color scheme / theme templating)
* Python
	+ Pandas (Calculations for the food delivery app, plus generation of Excel files for reports)
	+ Beautiful Soup (Scraping Indeed, Kijiji, and eBay)
	+ Selenium (Web form automation to enter online contests)

**Things that aren’t IT Related**

* Cooking (Especially pizza)
* Electronics / Arduino tinkering
* Dungeons and Dragons
* Camping
* Drinking Coffee
* PC Games