

Tasdik Rahman

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WORK
EXPERIENCE

Gojek, Bangalore: *Product Engineer, Systems team* December, 2018 - Present

- Implemented end to end IPsec VPN, x509 cert automation by building and open sourcing [kingsly](#) for dev VPN's which took care of our cert expiration problems. [Release blog post](#).
- [Contributing](#) to [proctor](#), our automation orchestrator to be run inside the CI, enabling devs to contribute to Infrastructure as Code, among other features and bug fixes.
- Helping automate running terraform in CI, removing problems like state lock and parallel runs.

Razorpay (YC W15), Bangalore: *Infrastructure Engineer I* July, 2017 - December, 2018

- Enabling scale @ Razorpay (Y Combinator Winter 2015 Batch) as part of the SRE team, handling day to day operations, managing logging/monitoring and existing infra on kubernetes as well as the legacy ones, handling upgrades, adding newer services, rolling hotfixes for security vulns., RnD for our newer kubernetes infrastructure, mentoring team members, participating in on-call rotations to maintain uptime of our systems.
- Migration of our main API along with other microservices which powers all the payments going through our systems, from the legacy infrastructure which with traditional Autoscaling groups to kubernetes workload, which helped reduced deploy time, improving it's reliability and reducing costs in the infrastructure side.
- Setting up alerting and monitoring of our infrastructure using Prometheus and grafana.
- Migration of our centralised logging infrastructure from splunk to sumologic for our main API as well as other microservices.
- Architected and implemented a layering approach for the container images being used by all the prod/stage applications by separating each layer with a specific purpose enabling separation of concerns, increasing re-usability.
- Implemented the switch from kube2iam to kiam, used for providing different AWS IAM roles for pods running on Prod/Stage/QA Kubernetes environments with zero downtime, hence effectively decreasing the total outbound network calls to AWS for IAM API calls.
- Implemented the switch from calico/flannel and kube-proxy to kube-router for pod-networking, service-proxy and enabling network policies to secure pod to pod communication in our Prod/Stage/QA Kubernetes environments, reducing the number of moving parts in cluster.
- Setting up Automation for automated RDS instance backups, deletion of unused virtualised instances and resources like old AMI's, backups in stage/prod/qa environments on AWS for cost cutting using lambda jobs.

CISCO, Bangalore: *Software Engg. Intern, Security Business Group* Jan, 2017 - June, 2017

- Rewrote an internal service previously a monolith to a micro-services based architecture (RabbitMQ, federation, AMQP protocol, docker, distributed systems)
- Implemented a POC to integrate ELK Stack to an existing appliance framework for real time log aggregation, analysis and querying (Elasticsearch, Logstash, Kibana)

Wingify, New Delhi: *Software Engg. Intern, VWO Team* June, 2016 - August, 2016

- Integration of StatsD and Graphite for visualization of real time data consumption from RabbitMQ Work queues by an internal service on an array of production servers.
- Improved performance by *23.6%* for an internal *flask* powered REST API used for report generation by the VWO app, by refactoring existing codebase and rewriting current implementation.

OPEN SOURCE	Google Summer of Code: <i>oVirt Org under RedHat</i>	Summer 2017
	<ul style="list-style-type: none"> • Wrote additional Ansible playbooks from scratch along with their test cases for enabling remote machine engine renames with zero downtime & for interaction of the main control engine with remote resources (Database, Data Warehouse) & other oVirt-utilities which would help in <i>Easier testing, Automated Re-deployment & Reduced manual errors while deploying.</i> 	
EDUCATION	B.Tech in Information Technology, SRM University, India	2013 - 2017
	<ul style="list-style-type: none"> • CGPA of 9.133/10 	
TECHNICAL SKILLS	Languages - Ruby, Python, Go, Shell Script Tools/Frameworks - Ansible, Packer, Terraform, Docker, Ruby on Rails, Flask, Git, systemd Databases - MySQL, PostgreSQL, Elasticsearch, etcd, consul Logging/Monitoring - prometheus, grafana, fluentd, splunk, sumologic OS - Unix/Linux, CoreOS(SELinux) Container Orchestration - Kubernetes CI/CD - gitlab, drone Cloud Providers - AWS, DigitalOcean, GCP, Linode	
NOTEWORTHY PROJECTS	All projects are available on Github : github.com/tasdikrahman	
	<ul style="list-style-type: none"> • SRM Search Engine: <i>SysAdmin & Backend developer</i> A General Purpose Search Engine, funded by "National Internet Exchange of India". Oversaw migration to <i>Flask</i> based app from a legacy CGI service. Helped write RESTful API's for various smart modules for our search service. Wrote scripts to automate the maintenance of our server. Crawlers to extract & index millions of pages, using NLP techniques to clear irrelevant data. Helped design & set up a 15 node, master-slave architecture Hadoop cluster. • Plino plino.herokuapp.com/ Conceived plino, a high accuracy spam filtering system built on top of a custom <i>Naive Bayes Classifier</i>, trained against 33,000 emails. Designed & developed RESTful APIs using Flask. Implemented Caching for server load reduction. <i>Achieved over 3000+ users</i> in our 1st version. • easyrbac github.com/tasdikrahman/easyrbac/ A <i>pip module</i>, which allows you add <i>Role Based Access Control</i> to your application using which you can include fine grained rules specifying which role has access to what kind of resources. An implementation of Prof. Sandhu's paper • tnote github.com/tasdikrahman/tnote/ A cross platform, command line note taking app built using python. Ability to add/remove tags & timestamp in notes. Supports Full text search based on content and tags & highlights the match if found. Encrypted the Database using AES-256 in CBC mode. Peewee used as ORM. 	
ACHIEVEMENTS & AWARDS	<ul style="list-style-type: none"> • Special mention at the annual Engineering Hackathon at CISCO, competing among 24 teams for our project on making a centralized logging infrastructure, which I led. • SRM Search Engine got covered thrice in <i>Times Of India</i>, & by <i>Vasanth TV</i>. • Plino got featured on <i>Product Hunt</i> in tech genre. • tnote got featured by <i>Import Python</i> & <i>Python Weekly</i>. • Got sponsored by PyCon Taiwan, 2017 to speak at the conference. • Got sponsored by Linux Foundation to attend KubeCon North America held at Austin, 2017. 	

TECHNICAL
TALKS GIVEN

- [“Kingsly - The Cert Manager”](#), DevConf India, 2019
- [“Enabling Canary deployments in k8s”](#), DevopsDays India, 2019 (Lightening talk)
- [“Kuberception: Self hosting kubernetes”](#), DevOpsDays India, 2018
- [“Diving deep on how imports work in Python”](#), PyCon Taiwan June 2017
- [“Introduction to Ansible”](#), Bangalore Python User group April'17 Meetup
- [“Demystifying how imports work in Python”](#), ChennaiPy October'16 Meetup