Ahmed Thabet

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Building the largest decentralized P2P cloud infrastructure in the world for the last 8 years.

Experience

- *Codescalers*: Software Development Team Lead (2020 - Now) Leading the development of the largest P2P cloud infrastructure in the world. The Jumpscale cloud framework, 3Bot virtual system administrator, and the virtual data center (VDC)
- *Codescalers*: Software Engineer (April 2016 - 2020) Development of new cloud tools that is used to manage infrastructure, virtual machines and containers.
- *Otlob.com*: Data analyst (Freelance) Extracting audio fingerprints from huge video datasets for marketing campaign evaluation.
- *Orascom Telecom*: Web developer (Freelance) PHP/CodeIgniter project to manage their internal servers conditioning information moving away from Excel sheets

Work

Codescalers

I'm leading the development of the largest P2P cloud and the tooling around it

- *JS-NG*: Led the development of the cloud automation/configuration framework (python, gevent, docker)
- *JS-SDK*: Led the development of threefold grid software toolkit and the threebot application server. (python, gevent, docker)
- *VDC*: Led the development of Virtual Data Center (kubernetes cluster, S3, monitoring prometheus/grafana, management dashboard) on the Threefold grid, giving customers their own virtual data centers, the stack is (python, gevent, stellar blockchain, kubernetes, ansible, grafana)
- *VDC Marketplace*: Led the development of Virtual Data Center Marketplace (1-click applications deployments on the virtual data center)
- *Threefold Marketplace*: Led the development of Threefold marketplace, based on the js-sdk framework, to have 1-click applications running on threefold grid
- *Terraform/OpenTofu Plugin* Led the development of the terraform plugin for threefold grid (golang)
- *Golang SDK*: Led the development of the golang sdk, that was crucial to deliver many projects for threefold grid
- *TFRobot*: Led the development of tfrobot, a mass deployer of VM fleets on the threefold grid

- *Gridify*: Led the development of gridify, allowing to deploy projects on the threefold grid with minimal effort, similar to heroku based projects.
- *Farmerbot*: Led the development of farmerbot allowing the farmers to efficiently power manage their nodes.
- *Typescript SDK*:Led the development of the typescript sdk to enable web developers to integrate with threefold grid, using familiar javascript libraries
- *Weblets*: Svelte based project to create reusable web components to quickly build applications on threefold grid
- *Go farmer*: GUI application to provide farmers with an easy, cross-platform tool to manage their farms (go, fyne)
- *publishingtools*: Led the development of web publishing framework for hosting wikis, blogs and websites mainly for threefold and its grid services. (crystal, kemal, svelte)
- *CRM*: Led the development of a generic CRM system for threefoldtoken foundation (python, flask, uwsgi, sqlalchemy, flask-admin, postgres, graphql, docker, bash, oauth2)
- *0-Disk*: Developed a network block device (NBD) server with multiple backends for storage. The project was later replaced with 0-db (tarantool, fio, lua)
- *AYS*: Agentless orchestration infrastructure as code and built on top of Jumpscale framework. It's used to provision virtual machines, deploy containers, services and it handles the orchestration and dependencies for the applications. Developed the Events system, background task, service templates for owncloud, s3, php, nginx
- *OpenVCloud*: cloud platform based on libvirt and Python. Developed new tools for it to improve monitoring and alerting system, and multiple health checks hardware components (e.g IP watcher, dead routeros, fans, power supplies, temperature)
- More: OAuth provider for *Gogs*, *DMIDecode parser*, *rtinfo* integration, internal development flow automation project (ays_dev_process), github-gogs synchronizer, documentation generators for Jumpscale7 and Jumpscale8

Open Source Projects

- pygundb GUN.js database server and client (python, flask, gevent, asyncio)
- tcprouter TCP router with SNI routing (go)
- tfgateway Threefold Gateways, based on tcprouter and coredns-redis plugin
- nim-servy Nim webframework
- vscode-capnp Capnproto plugin for vscode
- coredns-redis CoreDNS redis plugin
- flask_itsyouonline Itsyou.online OAuth2 Middleware for flask
- python-pcre PCRE for python using ctypes

- raqeeb PID-1 replacement, advanced alternative to foreman
- pyparsec Parser combinator library for Python
- helloED Pluggable fast PyGTK text editor
- stellargui lightweight stellar blockchain wallet application.
- Pida IDE contributed RegexToolkit and pastebin plugins
- python-sonic-client Python client for sonic search backend
- nim-assets bundle your assets into a single nim binary
- nim-redisclient Redis parser and client for Nim
- nim-parsec Parser combinator library for Nim
- raml2spore Generate SPORE clients from RAML specifications

Publications/Translations

- Nim Days: Practical applications/libraries in Nim language
- Python: Extensive Guide
- Introduction to Ruby
- Translations PyQT4, PyGTK, MonoIronPython, Cairo tutorials to Arabic

Buzzwords

- Languages: Python, Go, Ruby, Rust, Java, PHP, Nim, Typescript, Crystal, C, Bash, Scheme, Haskell, Scala, Ocaml
- Databases: MySQL, PostgreSQL, MongoDB, Redis, InfluxDB
- APIs: REST, Swagger, RAML, GraphQL, gRPC, CapnProto
- Web Frameworks: Flask, Flask-admin, Sanic, Django, FastAPI, Bottle, CodeIgniter, Laravel, CakePHP, Yii, Rails, Sinatra, Gin, Gorilla, Echo
- Frontend frameworks: Svelte, Sapper, Vue, React
- Infrastructure: Linux, Vagrant, Docker, Docker-Compose, Docker Swarm, Kubernetes, K3S, Helm, Terraform, Ansible, Prometheus, Grafana, CoreDNS, Nginx, Caddy, Traefik

Education/Languages

- BS in Electrical Engineering, Helwan University, Cairo, Egypt
- English: Business Level (speaking, reading, writing)
- German: Limited working proficiency (B1.1)