

Wael Nasreddine

Father — Entrepreneur — Architect — Engineer

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English, French, Arabic

'Dreams are the blossoms of miracles'

Profile

Passionate, responsible and committed leader, with a get-it-done, on-time spirit, and more than a decade of experience designing, planning and achieving goals. Implementing and adapting technically sophisticated applications using Go, Ruby on Rails, Python, Java, JavaScript and more. Proficient in language standards, functional programming and object-oriented technologies.

Experience

- December 2018 - **Principal Architect**, *KeepTruckin*, San Francisco.
current Lead the Platform team responsible for the core APIs, services and infrastructure.
- July 2016 - **Co-founder, VP Engineering**, *Publica*, Palo Alto.
- November 2018 Kubernetes stack fully managed by Terraform over 4 different regions ; Development workflow with continuous deployment in mind, on a mono-repo backed by Nix and Bazel ; Front-facing routers and ad servers developed in Go ; Loggers and data aggregators using Kafka, EMR, and Pig.
- March 2016 - **Head of Ads — Engineering**, *Dailymotion*, Palo Alto.
- June 2016 Lead the engineering team in the Ads department ; Plan and prioritize upcoming features to the advertisement platform ; Mentor junior engineers in the team.
- March 2015 - **Tech Lead/Senior Full Stack Engineer**, *Dailymotion*, Palo Alto.
- February 2016 Tech Lead — Squad Ads ; Architect our stack ; Build Squad Ads Infrastructure.
- April 2014 - **Site Reliability Engineer**, *Google Inc.*, Mountain View.
- February 2015 Track the corp database library usage on the client side ; Provide SRE support including OnDuty tasks ; Work on the code, fix bugs and improve performance ; Provide SRE support for Corp Infrastructure including OnDuty and OnCall.
- January 2014 - **Release Engineer/Manager**, *Wildfire, a division by Google*, Mountain View.
- March 2014 Supervise and provide support for Wildfire releases ; Integrate with Google internal tools for the release ; Coordinate cross-applications dependency releases.
- November 2012 - **Senior Software Engineer**, *Wildfire, a division by Google*, Mountain View.
- December 2013 Pages — the core application of the Wildfire Suite, written in Ruby on Rails. Responsibilities : architect and implement features requested by the product.
- July 2012 - **Senior Software Engineer**, *Wildfire Interactive Inc.*, Rennes, France.
- October 2012 Bspoke — application designed from the ground up, pluggable in Wildfire Pages. The purpose of this application is to send their data over to their CRM upon submission of the signup form by the end user.
- February 2012 - **Senior Software Engineer**, *Wildfire Interactive Inc.*, Rennes, France.
- June 2012 Architect and implement features for the administration panel of Wildfire (Account Management), used by the customer to setup the suite. Written in Ruby on Rails.
- September 2010 - **Senior Software Engineer / System Administrator**, *Agence Durable*, Rennes, France.
- July 2012 Website development and integration using the Contao CMS, server provisioning and maintenance, as well as development and maintenance of the agency's internal deployment tools based on Capistrano and Chef.
- May 2009 - **Senior Software Engineer / System Administrator**, *Weem*, Rennes, France.
- January 2011 In charge of the architecture and development of Weem's main product, provisioning and maintenance of Weem's production and test server.
- June 2002 - **Software Engineer**, *Telcos EURL*, Lannion, France.
- July 2008 Development of the company's online invoicing system, server provisioning and maintenance.

Volunteer Experience

- 2018 - present **Maintainer**, *NixOS*.
NixOS is Linux distribution entirely configured with the Nix purely functional programming language. The idea is to maintain a system under a congruent state at all times. I'm currently maintaining about 50 packages. As part of the core team, I review pull requests, comment on design documents and participate in RFCs guiding the roadmap.
- 2011 - present **Maintainer**, *Janus*, *Vim distribution*.
Janus is Vim distribution that provides a comfortable environment for people wishing to learn Vim, as well as those looking to leverage a community-maintained Vim capable of editing in many languages.
- 2011 - 2017 **Creator and Maintainer**, *Transmuter*.
Transmuter is a command line tool to convert Markdown and Textile files into HTML or PDF, or HTML files to PDF. The tool is written in Ruby.
- 2006 - 2009 **Chief Development Officer**, *SabayonLinux*, Rennes, France.
Sabayon is a binary distribution based on Gentoo. I've joined the core team, and have abandoned Phoenix in favor of Sabayon. I was in charge of the boot process, the kernel and kernel modules and about 60 different packages to maintain.
- 2005 - 2006 **Created the linux distribution**, *PhoenixLinux*, Rennes, France.
The distribution was based on Gentoo and the objective was to provide a binary distribution since Gentoo is a source-only distribution.
- 2004 - 2006 **Package maintainer and Forum moderator**, *Ubuntu*, Rennes, France.
I was maintaining about 30 packages ranging between libraries and binaries.
- 2003 - 2007 **Project creator**, *SMO Ajax Shoutbox*, Rennes, France.
This project was initially created for Siemens-mobiles.org, providing an online chat right from the homepage. It featured a real-time chat box and a sound alert powered by Flash for alerting the user when their name is mentioned. The chat box became quite popular and have extracted and published it as a Joomla extension.
- 2002 - 2007 **Founder**, *Siemens-Mobiles.org*, Rennes, France.
Hobby website hosted on my server at home. Server provisioned with Debian, The website was running Joomla, served by Apache with the PHP module. The site offered news about Siemens phones, as well as firmware hacks for a variety of features developed by the SMO community. I also wrote a custom Joomla extension for generating firmware patches based on the phone model, firmware version and the desired features. The site had 10,000 monthly unique visitors.

Computer skills

Infrastructure	Linux, NixOS, Kubernetes, Docker, Terraform	Servers	NginX, Apache, Varnish
Interpreted languages	Ruby, Python, Nix, PHP, Perl, Lua, Shell (sh, zsh, bash), Pig	Compiled languages	Go, C, Rust, Java, C++
Databases	PostgreSQL, MySQL, Memcached, Aerospike, SQLite 3	Data structure	Protocol Buffers, JSON, BSON, XML, SOAP, XHTML, YAML
Network	BIND, DHCPD, OpenVPN, iptables	Virtualization	Docker, NixOS containers, Xen, KVM, QEMU, Virtualbox, VMWare, FreeBSD Jails

Annex : Experience in details

- July 2016 - **Co-founder, VP Engineering, Publica, Palo Alto.**
November 2018 I co-founded Publica alongside Dailymotion ex-CEO and two other partners.
I started by designing the infrastructure. To make full use of the cloud, I've decided to manage it with Terraform and orchestrate the applications using Kubernetes. My choice for the infrastructure and application monitoring was DataDog.
I've chosen the Go language for our backend servers, as it scales very well across many requests in parallel. The ad server communicates with four different micro-services, such as the Geo-location service, using gRPC and Protocol Buffers.
The advertisement data — such as requests, impressions and clicks — was captured by another service, behind the ad server. Sending the logs to the queue managed by Kafka and consumed by yet another service, also written in Go, to enrich the logs and saves them as bundles upstream in S3.
At the top of every hour, a cronjob kicks in to start an EMR cluster and uses Pig to aggregate the data stored in S3, and load them in MySQL for the consumption of our UI and the billing systems.
From the early days, our product was divided into many repositories: some libraries, others binaries. However, this has quickly proved hard to scale, so I lead the effort to move to a mono-repo. I've chosen Bazel as the build manager and Nix for managing the host OS dependencies required to develop on the platform.
- March 2016 - **Head of Ads — Engineering, Dailymotion, Palo Alto.**
June 2016 Recently promoted to lead the Ads team. Alongside the work I've been doing in my previous position, I've been meeting on a weekly basis with our CRO and head of the Sales Department to plan and prioritize the upcoming features.
- Stories are then given points and put into future sprints following the scrum framework.
 - Generate reports on the team's progress. Reports are then shared across teams and with EVP and CRO.
 - Schedule regular meetings (planning, standup, retrospectives) with the team.
 - Work in close collaboration with my direct reports on daily basis.
 - Schedule bi-weekly one-on-one meetings with my direct reports to address any concerns they might be having.
 - Interview candidates for open positions on the team.
- March 2015 - **Tech Lead/Senior Full Stack Engineer, Dailymotion, Palo Alto.**
February 2016 The Ads Manager is the platform for managing and enforcing the advertisement rules, such as show or doesn't show ads. It provides a simple UI for the sales and the content team but allows them a broad range of customization for the advertisement experience.
- Integrate Python-Eve as the REST layer on top of Mongo, the permanent storage database of choice for this project.
Project code name : dmx-eve.
 - Build an API for communicating with Liverail in Go. You can find this library open source at <https://github.com/dailymotion/go-liverail>.
 - Build the coordinating API between our stack and Liverail. The API also takes care of deploying of the advertisement rules.
Project codename : dmx-api.
 - Create an HTTP Server bound to the loopback device, used on every web server by the player to drive the ad decision of every play request.
Project codename : dmx-bridge.
 - Mentor junior engineers on the team. Detailed code reviews.
- Languages used : Go, Python, PHP, Bash.

- April 2014 - **Site Reliability Engineer**, *Google Inc.*, Mountain View.
 February 2015 The corporate database is the centralized repository for Google's IT / Operations data. Currently, it stores information about user accounts, groups, and infrastructure.
- Track the corporate database library usage on the client side.
 While backend logs can report the time taken to process each backend request, they do not include network latency to the end user; also, a single command invocation may require multiple backend requests to finish. The goal of this project is to implement a server that receives metrics (as proto-buffers) and makes them available to query and analyze. The server is written using Go, the client written using Python, collect and send the metrics with no added latency to the user.
 - Provide SRE support for the corporate database.
 As an SRE my responsibilities were :
 1. Address all of the bugs opened against the database.
 2. Turn up a new cell in Europe.
 - Work on the code, fix bugs and improve performance.
 Languages used : Go, Python.
- Alongside my duties on the corporate database project, I also had responsibilities on the infrastructure team responsible for the enterprise services (DNS, DHCP, IRC and so forth), my responsibilities were :
1. To address all of the weekly OnDuty tasks from bugs and tickets.
 2. To be OnCall and respond to pages.
- January 2014 - **Release Engineer/Manager**, *Wildfire, a division by Google*, Mountain View.
 March 2014
- Coordinate bi-weekly releases.
 We have 11 applications in the Wildfire suite. The release is on a bi-weekly schedule, and each team is responsible for releasing their product.
 As a Release Manager, my role is to supervise the release and coordinate cross-team and cross-product dependencies.
 - Improving Wildfire release process.
 This project is all about designing the tools and process to release our ruby-on-rails based applications to production while taking advantage of Google internal tools.
 - Cross-applications updates.
 As a release manager, my responsibilities include cross-applications updates. Here are a few examples :
 1. Feature gating release.
 Our engineering team in London implemented 'feature gating' functionality, which allows us to switch on/off features instantly via a web interface. Enabling this feature required coordination between our teams to perform several applications and infrastructure updates over a two months period. My role was to track, supervise and provide support for our engineering team.
 2. UI-Toolkit coordinated release.
 Our applications use a standard UI library, called UI-Toolkit. A recent release included a security issue; my role was to coordinate an ASAP release of all of our top applications and provide support wherever it was needed.
- November 2012 - **Senior Software Engineer**, *Wildfire, a division by Google*, Mountain View.
 December 2013 Wildfire Pages is the most used application of the Wildfire suite. It allows customers to create pages on their Facebook brand page with social authentication without any Web Developing knowledge by simply using pre-made templates (or ordering a custom template). The page's content can be Gallery with votes, sweepstakes, signup forms, and many other possibilities. I was a part of the team working solely on Pages and the libraries/small applications that it was using. We worked on designing, implementing, testing, supporting and releasing the applications.
- July 2012 - **Senior Software Engineer**, *Wildfire Interactive Inc.*, Rennes, France.
 October 2012 Wildfire Bspoke is a pluggable application into Wildfire Pages. It is designed to transmit the data submitted by the end user to the signup form to our customers' proprietary CRM. I single handily designed the application from the ground up with HMAC-secured connection between Pages and Bspoke (for fraud prevention). It has built-in support for multiple CRM platforms : Salesforce, MailChimp, CheetahMail, ExactTarget and basically any CRM accepting FORM POST, JSON or SOAP encapsulated data. It sends the data to the CRM in a background job decoupled from the initial HTTP request. The project was later on-boarded along with me to the Pages team, who are currently maintaining the project.
- February 2012 - **Senior Software Engineer**, *Wildfire Interactive Inc.*, Rennes, France.
 June 2012 Wildfire Account Management is the administration panel of Wildfire. It allows companies to create accounts for their employees, create teams, define permissions and link or configure their attached Facebook accounts. I was a part of the team working solely on Account Management alongside the client library 'Accounts Client', which is used by all the other applications to make specific accounts or permission queries to Account Management. We worked on designing, implementing, testing, supporting and releasing the application.

September 2010 - **Senior Software Engineer / System Administrator**, *Agence Durable*, Rennes, France.
July 2012 - *Agence Durable* is a Web Development agency, a startup based in Rennes, France.

My responsibilities :

- Web Development.
In charge of the website development and integration using Contao CMS. The designer provides a PSD file and using Adobe Photoshop™ website images and colors are extracted off of the PSD. Building the template using pure HTML/CSS, animate the website using CSS3/Javascript. Using Compass to manage CSS across browsers and create sprites for all the images on the site. Contao CMS and the custom modules built per customer are written in PHP.
- Asset Library.
Contao has an integrated web interface for CSS and Javascript development. It's very time-consuming and error-prone. So we replaced it with an in-house support for SASS and CoffeeScript, compiled by a custom Ruby library based on the Rails asset pipeline.
- System administrator.
Their servers were previously manually provisioned and maintained with zero monitoring. My role was to integrate Chef for automatic server provisioning and use Monit for monitoring, implementing a simple escalation system. I was on-call for the duration of my employment.
- Release Engineer.
Previously, the deployment was accomplished by manually uploading a ZIP file to the server, creating the corresponding Apache configuration file. Unzipping the code and restarting the web server — all of which was manual. The process was time-consuming and error-prone. I designed, using Chef and Capistrano, a deployment system that was able to :
 1. Provision the new server (only during the first deploy).
 2. Create the corresponding DNS entry in their DNS server.
 3. Replace Apache Web Server with NginX web server.
 4. Setup the MySQL database server and create a database for the project.
 5. Deploy the code.Their new deployment system was full-proof, taking less than 10 minutes to release any website.
- IT support.
I was also, as part of my job, providing IT support for their Sales and Marketing employees as well as their internal network.

Languages used : PHP, Python, Ruby, Bash.

May 2009 - **Senior Software Engineer / System Administrator**, *Weem*, Rennes, France.
January 2011 - *Weem* is a social suite designed mainly for employees. A place where they can chat, buy and sell their stuff. The suite is written in PHP and Zend Framework and is running on a dedicated web and database server. The company had only two people, the founder mainly worked on the marketing side, and I handled the product and the servers.

My Responsibilities :

- Software Engineer.
As the only engineer of the company, I was designing the features, writing the code, writing the tests and debugging for any backend or customer-facing issues.
- System administrator.
I was in charge of the provisions, monitoring, and maintenance of their servers. The servers were also automatically monitored by Monit, configured by me.
- Release Engineer.
Previously, ZIP files, accompanied by BAT scripts were used to deploy the application. My role was to design a new deployment system fit their use case. I designed a complete deployment system using simple Git hooks written in bash. By pushing the code to the **production branch**, the application is deployed to the server (similar to how we deploy code to Heroku).

Languages used : C, PHP, Bash.

June 2002 - **Software Engineer / System Administrator**, *Telcos EURL*, Lannion, France.
July 2008 - *Telcos* was a telecommunication consulting company offering support and training for Telecommunication companies like Alcatel. Their website hosts the resources for their training sessions, generates bills and provides online pavement. They also offer a self-hosted gallery for their events.

My Responsibilities :

- Software Engineer.
As the only engineer of the company I was designing the features, writing the code, writing the tests and debugging for any backend or customer-facing issues.
- System administrator.
I was in charge of the provisions, monitoring, and maintenance of their servers ; the servers were also automatically monitored by Monit, configured by me.

Languages used : C, Java, PHP, Bash.