

Mark Maglana

Software Engineer with a Twist of DevOps

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SF Bay Area, CA

CNCF Certified Kubernetes Administrator (Certificate ID: CKA-1700-0020-0100). A Software Engineer practicing DevOps. I contribute my knowledge on sound software development practices to my Ops colleagues and share what I learn from Ops to my Dev colleagues. I enjoy what I do not only because I get to learn new things and apply them everyday but also because I get to impart them to my colleagues on either side.

Accomplishments

- **Increased billing module accuracy and speed by at least 10x** - When a product's billing module was producing inaccurate results and regularly timing out, I offered to inspect the code and find out where the problem lay. After much debugging, I found the problem and provided a fix which resulted in the reports displaying correctly. To improve the speed, however, required re-architecting the module which I led from conception to delivery.
- **Facilitated the timely delivery of software by automating requirements** - We needed to deliver a software agent for a customer that needed their product to work with a 3rd-party vendor's product. I volunteered to study the associated open standards and proprietary protocol to learn about the requirements. I then codified these requirements in a test harness that also doubled as the executable requirements document for the development team. After integrating this into our CI/CD pipeline, the dev team was able to receive timely feedback on requirements compliance and regressions allowing them to deliver on time and within budget!
- **Deployed an HA container orchestration platform to replace CI/CD** - I have been following containerization since the initial Docker days even though it was outside my job description. Because of my skunkworks preparation, I was later able to build an Ansible-based project that provisioned an HA OpenShift/Kubernetes environment as a means to replace our internal CI/CD pipeline as well as an environment to deploy our internal apps.
- **Talked at various meetups and conferences** - I've presented on various topics such as [Baking and Frying Machine Images](#) (jFrog Napa Valley 2017), [How to Write Fully-Tested Ansible Modules](#) (AnsibleFest NY 2016), [Multi-node DevStack with Puppet](#) (OpenStack Summit Atlanta 2014), and [How I Built My Own BDD Framework](#) (Ruby on Rails Meetup, Los Angeles 2013)
- **Reduced a 2-day manual process to 5 seconds** - While building the MIS for a metal fabrication shop, I learned about a manual process that took shop engineers 2 days to complete. After some research, I was able to build a desktop app that reduced the computation time to 5 seconds.
- **Improved requirements gathering through prototyping** - Upon joining a new software consulting firm, I noticed the long feedback loop from requirements gathering to user testing. I encouraged and guided my teammates to adopt prototyping as one of the ways to improve requirements gathering and reduce waste. The results were positive and the engineers along

with the users were very happy with the results.

- **Recipient of academic excellence award for best strategic plan** - I wanted to understand the business of software and decided that focusing on the basics of business management was key. I then applied for our state university's graduate program for management where I was accepted. During the program, I was top of class for Operations Management, Financial Management, and Business Strategy. I then used everything that I learned to create a strategic plan for our family business which resulted in me getting the academic excellence award for best strategic plan.
- **Can solve Rubik's Cube in 1 minute 25 seconds** - Not a record shattering feat but it's one of my best times. I decided to learn to solve the cube because it was interesting. [Video on YouTube](#).

A Few Open Source Projects

- **Open vSwitch Lab** - A Vagrant project which provisions two machines that talk over a simulated Internet. The lab is a companion project for the series of articles I wrote about [VXLAN](#), [OVSD](#), and [the hardware VTEP schema](#). [Source in Github](#).
- **Aviator** - A lightweight Ruby client library for cloud REST APIs. I initially built this for the OpenStack API. My focus was to build a library that reflected, rather than obscured the underlying API. [Homepage](#).
- **Mana Mana** - A proof-of-concept business natural language testing framework that was inspired by Cucumber and the Robot framework. This was borne out of my never-ending search for better ways to write maintainable automated tests. [Source in Github](#).
- **Others** - I also contribute to other open source projects and you will usually find it in my [activity feed on Github](#)

One More Thing

Coding without tests is like driving a Tesla in ludicrous mode **without seatbelts** so I always make sure to cover my code with a reasonable amount of tests. Here's [how I work](#).

Experience

Software/DevOps Engineer (Nov 2016 - present)

Teradata, Santa Clara, CA

Teradata Corporation is a Fortune 1000 provider of data warehouse platforms, software and services. Our team is at the center of the company's thrust to convert Teradata from a hardware to a software company.

Achievements

- Co-maintained internal Kubernetes distribution
- Diagnosed and fixed an issue with flanneld configuration in CoreOS that would render an entire Kubernetes cluster unavailable in case of an update.

- Provided research findings on kops, a Kubernetes distribution.
- Initiated design of CI/CD pipeline

Software/DevOps Engineer (Jan 2014 - Sep 2016)

Dimension Data, Pleasanton, CA

Dimension Data is a leading provider of professional, cloud, consulting and managed services for advanced IT solutions. Our team actively contributed to Ansible, OpenStack, Open vSwitch, and Open DayLight. My official title was QA/Release Engineer but my responsibilities spanned those of a software engineer/architect.

Achievements

- Designed and implemented a non-interactive agent that automatically launched time-bound AWS spot instances as needed for use as auxiliary Jenkins workers that handled non-time-critical builds.
- Wrote Ansible modules to be used for provisioning resources on Dimension Data's cloud service.
- Developed an Ansible-based project that deployed an HA OpenShift platform for use by our team as a replacement for our CI/CD pipeline.
- Designed and implemented the full stack of a web application that was designed to transform data from one format to another. The system used Rails, Postgres, Redis (for job queueing), Resque, and Ceph both for persistent block and object storage.
- Designed and implemented an automated test harness framework used by our testers for our various software products.
- Mentored development teams in new technologies, standards, and even 3rd-party protocols that they needed to incorporate or interface to. This allowed them to hit the ground running and deliver within budget.

Software/DevOps Engineer (Jul 2012 - Jan 2014)

Morph, Manhattan Beach, CA

Morph was the first PaaS built on top of AWS and later on pivoted to providing IaaS appliances that its customers can install inside of their data center to use as a springboard for quickly building their own cloud computing environment. My official title was Senior Director of Engineering but my actual roles spanned that of a software engineer/architect.

Achievements

- Designed and developed a billing module for the product.
- Wrote a Ruby client library for the OpenStack API.
- Wrote a Cucumber-based integration test for the QA team.
- Mentored developers on proper software development practices.
- Helped set up the CI tools and process to ensure the main branch always has deployable, stable code.

Software Product Manager (Jan 2008 - Jul 2012)

Exist Global, Manila, Philippines

Exist provides tailored solutions, consulting and full cycle IT services to customers around the globe. At the time, I was assigned to Morph to help produce its cloud computing product.

Responsibilities

- Oversaw the design and implementation of Morph AppSpace, one of the earliest Platform-as-a-Service providers built on top of AWS in the market.
- Managed the product roadmap to ensure that requirements are prioritized properly and that they contain the right information.
- I helped Marketing Communications in their effort to generate product information for various marketing collateral.
- Implemented agile practices in Engineering to ensure timely delivery of stories and an overall coordinated effort of releases.

Systems Analyst/Programmer (Mar 2003 - Dec 2006)

Deco Machine Shop, Davao City, Philippines

Deco Machine Shop, Inc. provides industrial machine fabrication services nationwide. Its major clients include Dole Philippines and San Miguel Corporation. As a systems analyst, my job was to understand the processes of the company and build software tools to automate parts of it. Software tools developed include a gear combination application which reduced a machinist's work from one day to just under 5 seconds while increasing work precision.

In 2007, I took a year off to obtain my second Master's degree.

Systems Analyst/Programmer (Jan 2002 - Jan 2003)

iThink Technologies, Davao City, Philippines

iThink provides business software and training solutions for major companies nationwide. Major clients include the Bangko Sentral ng Pilipinas, Meralco, and Davao Light and Power Company. I was involved as a systems analyst/programmer for the development of purchasing systems, HR systems, and other enterprise applications for iThink's major customers. I also spearheaded the use of the Unified Modeling Language within the company and also provided some in-house training for a number of then upcoming technologies and development platforms.

Web Developer (Jan 2001 - Jan 2002)

Smartweb Philippines, Cebu City, Philippines

Smartweb was a US-based company with its production facility based in Cebu. It was involved in developing websites for small to medium sized businesses in the USA. I was a team leader in this organization. Apart from this, I also developed Smartweb's employee time tracking and billing system, which later helped speed up the invoicing and employee time tracking for the company.

Student Volunteer - Web Developer (Jun 1997 - Oct 2000)

University of San Carlos, Cebu City, Philippines

While attending college I was also a volunteer of the University of San Carlos Web Development Team which was tasked to build and maintain the university's website. I was involved in the

implementation in both the client side and the server side of the website and was later promoted to team leader. The team was, by then, composed of 10 student volunteers.

Education

Master of Management, Technology, Innovation, and Commercialization

Jan 2007 - Dec 2007

The Australian National University
Acton, Canberra ACT 2601, Australia

Master of Management

May 2004 - Apr 2006

University of the Philippines - School of Management
Mintal, Davao City 8022, Philippines

BS Computer Engineering Jun 1995 - Oct 2000

University of San Carlos P. del Rosario Street, Cebu City 6000, Philippines

LinkedIn Recommendations

Mark is an exceptional employee from his personal interactions with his peers, development skills and passion for quality. He has a wide breadth of exposure to different programming languages, configuration management and software design and architecture.

— Mike Outland, DevOps Manager

Mark is an exceptionally capable software architect and developer. When a new technology or language needed to be implemented, Mark was able to obtain a deep level of understanding in a very short amount of time. I have seen him architect and implement everything from full APIs to cloud middleware to full front-ends. Over the years he has gained a wide breadth of knowledge in everything cloud & container. Working with him has been regularly humbling and wonderfully educational. Beyond his technical prowess, Mark is also very fun to work with and mentors people exceptionally well. He uses his great sense of humor to take the stress out of tough challenges and motivate teams to push on. I give Mark my highest recommendation to anything he wants to take on. He will be a rare gift to the next company he works with.

— Aimon Bustardo, Sr. DevOps Engineer

Possibly the best reason I looked forward to go to work everyday at Dimension Data is because of the opportunity to work closely and be mentored by Mark. I see him as a true software craftsman who is passionate about code and cares a lot about code quality, readability and testability. He can lead teams, mentor teammates, commit production code within time and budget while giving a helping hand with whatever is the issue of the day.

— Bert Diwa, Sr. QA Engineer

[Mark] produced solid designs. He was an expert at Python (and apparently Ruby too). He seemed to know about every Open Source project out there. His mastery of all things Git and GitHub were critical support to several of us who had never used Git before. All in all, Mark was an invaluable resource to the project and to the team. He seemed to get his dozen projects done in time while simultaneously providing whatever technical support was being asked of him by the team.

— Jay Riddell, Sr. Software Engineer

Mark was a particularly able and focused student, capable of working independently and evaluating ideas and approaches critically. His particular interest at the time was the role, design and development of business incubators as a tool for regional development.

— Don Scott-Kemmis, Professor

Misc.

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