

Apollo Clark

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I've been working as a Security and DevOps engineer since July 2015. I have managed a fleet of 25,000 servers, deployed a 2TB MongoDB cluster, and a 4TB Elastic Search cluster across 500+ servers, onto AWS using Ansible, with stress testing, monitoring, automatic fail over and auto-scaling, integrating open source security tools, using Jenkins on Ubuntu servers. I started as a LAMP stack developer in 2001.

Strengths

- Security Pentester (5 years)
- Devops Engineer (5 years)
- QA Engineer (5 years)
- Python Developer (4 years)
- PHP Developer (16 years)
- Linux sysadmin (16 years)

Skills

Technology Stacks

LAMP Stack (Linux, Apache, MySQL, PHP), Amazon AWS, Ubuntu, Debian, Kali Linux, Backtrack, Redhat / Fedora / CentOS

Languages

Python, PHP, Postgres, MySQL, ElasticSearch, MongoDB, Java, C / C++, Perl, Fortran

Frameworks

Flask, Zend Framework, Wordpress, Code Igniter, AngularJS, D3, jQuery

Online API

ArcGIS, Facebook, Twitter, Paypal, Constant Contact, Vertical Response, Exact Target, Google Analytics

Software

Aptana, Zend Studio, VirtualBox, VMWare Fusion, Burp Suite, Gauntlt, JMeter, Selenium, Jenkins, Vagrant, Ansible, Puppet, Terraform, ELK (elasticsearch, logstash, kibana)

Experience

Open Source Projects

Security roles – (developer) <https://galaxy.ansible.com/apolloclark/>

Gauntlt – (developer), automating security scans using Behavior Driven Development

Diamonds – (creator), deploy Kali Linux to Amazon AWS

vagrant-jenkins-pipeline – (creator) demo of the Jenkins Pipeline plugin, for Python

PyJenkinsCI – (creator), Jenkins-based Continuous Integration server build for Python

Boston Kali Linux User's Group

Founder, Presenter

April 2015 – Now

<https://www.meetup.com/Boston-Kali-Linux-Users/>

I've run my meetup group to teach free hacking workshops to the public using Kali Linux. The workshops have explored a wide range of topics, including: Software Defined Radio (monitoring restricted frequencies), Webapp Pentesting w/ Gruyere, Recon (whois, dig, traceroute, dnsrecon, mitmproxy, wireshark, nmap), Buffer Overflow Attacks (python, gdb, Bash), Automating Pentesting with Behavior Driven Design (BDD), Metasploit and Metasploitable, Breaking SSL Encryption, Webapp Pentesting w/ Railsgoat.

Consulting

DevOps + Security Engineer
July 2015 – Now (2+ years)
Boston, MA

Acquia

Sr. Security Engineer

Acquia offers hosted Drupal blog hosting on AWS. I worked between the Infosec Team Security Analysts, Cloud Engineering Team Developers, and Operations Team. I advised them on security hardening of the core products hosted in Amazon AWS, incident response, and threat remediation. I offered product development advice to the Product Team to guide future roadmaps for Enterprise offerings. I would occasionally respond to client security questions, often related to the latest Ubuntu vulnerabilities, kernel vulnerabilities, and any errant findings during their 3rd party quarterly PCI-compliance pentests.

Subatomic Studios

AWS Architect

Subatomic Studios is the creator of the mobile game “Fieldrunners Attack!”. I helped them scale their backend systems after they had a massive spike on popularity, being featured on the Top 10 Apple Store Games list. I diagnosed performance issues with their MySQL servers, inefficient SQL queries, Python code execution bottlenecks, and memory queue scaling issues.

Disruptor Beam

DevOps Engineer

Disruptor Beam is the creator of the mobile game “Star Trek – Timelines.” I helped automate their Jenkins, Maven, and Ant build pipeline to efficiently deploy their Docker Containers to the AWS Container Service. I worked with the Sr. Operations Engineer and Sr. Developer to upgrade their Jenkins cluster, use the latest Jenkins Pipeline, and parallelize their build and deployment pipeline.

Black Hills Information Security

NoSQL Architect

Black Hills Information Security offers Penetration Testing services to various Fortune 100 companies. I worked with their Sr. Machine Learning Engineer to improve performance on their in-house Threat Hunting Tool. Initially the project was built using Elasticsearch, but after analyzing their usage, I suggested and helped design their MongoDB implementation, which gave 12x better performance. The project was eventually open-sourced, here:

<https://github.com/ocmdev/rita>

Security Weekly

Security Developer

Security Weekly is a weekly security podcast. They have developed an in-house podcast distribution systems. I helped automate the build and deployment of their system, added robust metrics and logging, and security hardening after reviewing their Python code.

Applied Minds

Sr. Web Developer, full-time

June 2013 – July 2015 (25 months)

Boston, MA

Applied Minds does experimental technology development, for private corporate clients and military, with a focus on hardware and software. The Boston office focuses on consumer web systems, with a specialization on mobile web apps. My responsibilities:

- Front-end web development
- Back-end web development
- Dev Ops setup
- Security Testing

I worked on a 12-person development team creating three websites. The first was a nitrogen simulation tool that allows farmers in Iowa to simulate the effects of fertilizers on their future crop yield. It was an Amazon EC2 hosted system, using Python on Flask, PostgreSQL, and a proprietary machine-learning based simulator, compatible with desktops and tablets. The second app was a farmer note taking app, allowing them to record crop conditions. The third system is a data repository for data scientists to find and analyze farming data per geospatial, time ranges, and data outliers. As these systems matured, the team ran into maintainability issues. Starting June 2014, I implemented a DevOps solution using: Jenkins, Python Nosedests, Unit Tests, JMeter, Selenium, Node.JS (Grunt task runner), Protractor, and Gauntlet scanners within Kali Linux.

Notable Accomplishments:

- Setup deployment servers on Amazon EC2, with Vagrant
- Setup QA testing environment, using Selenium, JMeter, Node.JS, Grunt, Protractor
- Security scans using Kali Linux, automated with Gauntlet
- Mobile optimized sites
- Developed cross-device responsive design interfaces

BCC Research

UX Developer, full-time

November 2011 – February 2013 (16 months)

Boston, MA

BCC Research does market research, industry analysis and custom research. My responsibilities:

- Gathering project requirements
- Developing personas
- Usage flowcharts
- Wireframes and Mockups
- Database / code architecture
- Project management

I worked with a 6-person team based in India including a Senior Web Developer, 4 Web Developers, a UI Developer, and the CTO. Each quarter I would gather high-level requirements from department managers, do usability studies and research, working closely with the Senior Developer and UI Developer to do project planning, system architecture, interface design, and then hands-on implementation (often more back-end). My time was split to 25% usability, 25% project management, 50% back-end programming. The platform was PHP Zend Framework based, MySQL, and jQuery.

Notable Accomplishments:

- Consolidated Marketing lead capture system, improved leads by 30% in 2 months; added ability to cross reference data points for precise lists.
- Increased custom CMS performance by a minimum of 200%, up to 1200% by revising the database schema to be more efficient.
- Rebuilt the Advanced Search page, increased usability and performance.
- Ensured PCI Compliance

Fantourage

Sr. Web Developer, full-time contract
 March 2011 – October 2011 (8 months)
 Boston, MA

Fantourage is a social media marketing website. It integrates with the Facebook API and Twitter API, to give users points for interacting with each other, in the context of partnered businesses.

My responsibilities:

- Usability reviews
- Back-end programming
- System Architecture
- SEO
- Email marketing
- Mentoring Jr. Web Developers

I worked with a Sr. Web Developer, Web Development Intern, Marketing Director, Marketing Associate, Sales Associate, and the Company Founder. My position was very cross-functional, but with a heavy emphasis on back-end programming. The technology stack was PHP Code Igniter framework, MySQL, jQuery.

Notable accomplishments:

- Helped implement a cross-posting system using Facebook API and Twitter API.
- Added real-time user statistics, with load balancing
- Implemented server load balancing using Memcache in PHP.

Fullbridge

Web Developer, Product Specialist,
 Full-time contract
 October 2010 – January 2011 (4 months)
 Boston, MA

Fullbridge is an online MBA program.

My responsibilities:

- Evaluating vendors
- Back-end development
- Front-end development
- Mockups
- Online marketing
- SEO

I worked with a Sr. Developer, Jr. Developer, Graphics Designer, Marketing Director, and the CTO. My role was cross-functional, with an emphasis on technology and evaluating vendors. The platform was in its initial design phase when I came aboard.

BioMediaLab

Sr. Web Developer, part-time
August 2006 – March 2008 (20 months)
Orono, ME

The BioMediaLab was a web design studio, working for various academic departments at UMaine. My responsibilities:

- Mentoring Jr. Web Developers
- Back-end web development
- Front-end web development
- Mockups
- Project Management

The BioMediaLab was very cross-discipline. I worked with 4 Jr. Developers, 2 Sr. Developers, a Graphics Designer, a 3D artist, 2 User Help Associates, and the Technical Manager. I would often work on the high-profile projects, collaborate closely with the graphics designer to create webpage mockups, and mentor the Jr. Web Developers.

Notable accomplishments:

- Created user profiles for faculty and staff; including a page for listing academic citations and works.
- Custom CMS, with page versioning, roll-back, analytics. Similar to Wordpress before it existed.

Freelance

Web Development, Graphics Design, Photography
Part-time
2001 – Present
Various locations

I began my career in high school creating websites for local area small business. I continued web development in college, working part-time at the BioMediaLab, and afterward returned to freelance. My academic study was New Media, which was a cross-discipline major combining Computer Science and Studio Art. I continue to do freelance work occasionally in my spare time.

Online Portfolios

Meetup <https://www.meetup.com/Boston-Kali-Linux-Users/>
Github <https://github.com/apolloclark?tab=repositories>
LinkedIn <http://www.linkedin.com/in/apolloclark>
Stackoverflow <http://stackoverflow.com/users/1100769/apollo-clark>
Flickr <http://www.flickr.com/photos/apolloclark/sets/72157631576937823/>

Education

University of Maine
New Media (Computer Science / Studio Art)
Orono, ME
2006 – 2010

North Atlanta High school
Atlanta, GA

Whitney M. Young High school
Chicago, IL

Interests

International Student Association
Graphics Design – business cards, event flyers, t-shirts (10 years)
Photography – fashion, food, events (7 years)
Dance – Salsa, Merengue, Cumbia, Bachata (7 years)
Wine Tastings (6 years)

References

Available Upon Request