

CORY COMER

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ARCHITECT | DEVOPS | TEAM LEAD

SUMMARY

Developer, architect, team lead, and manager with years of experience building product-oriented services, applications, and solutions to scale. Passionate about technology, leadership, remote work, standards, best practices, autonomy, machine learning, teaching, big data, integration, aggregation and analysis; a technologist with a love for blending information with art, culture, and business.

EXPERTISE

Languages	PHP, Java, Ruby, Bash, JavaScript
Frameworks	Zend, Silex, Apigility, Spring, Drools, Akka, Angular, Ember, Bootstrap
Dev Tools	PHPUnit, JUnit, Behat, Mockery, Rspec, Composer, Maven, jQuery, Less, npm, bower, Yeoman, Bundler, nodejs, Jetty, Tomcat, Redis, MySQL, Postgresql, Sqlite, MongoDB, Cassandra, Neo4j, Titan, Gearman, RabbitMQ, Elasticsearch, Hadoop
Ops Tools	Chef, Test Kitchen, Chefspec, Serverspec, Berkshelf, Vagrant, Vmware, Virtualbox, Docker, Packer, Nagios, Munin, Cacti, Zabbix, OSSEC, Logstash, Kibana, Nginx, Apache, Varnish, Haproxy, Squid, Graphite, Statsd, Jenkins, Supervisor, Runit, Bind, Powerdns, Pingdom, Pagerduty, NewRelic, Google Analytics, Comscore
Project Mgmt	Continuous Integration, Jira, Confluence, Agile, Scrum, Kanban
Vendors	Rackspace, Firehost, SoftLayer, AWS, Atlassian, Github, Travis, Runscope, ObjectRocket, NewRelic, Akamai, CloudFlare

EXPERIENCE

ZAM NETWORK

Architect (2012 - Present)

"The largest collection of massively multi-player online gaming information on the web." – <http://www.zam.com>

Responsibilities included training and coaching the development team, leading the development of a new centralized application platform, refactoring and automating existing infrastructure, and working with adops to improve ad revenue. Standardized the existing frontend technology stack on PHP using Zend Framework, Doctrine, Bootstrap, LessCSS, jQuery, and Angular. Lead remote training sessions on enterprise design patterns, domain driven development, data warehousing, integration, enterprise ETL, as well as product management and other best practices to ensure our team was comfortable working with these technologies.

Worked with project leads to transition our most active projects to a continuous integration workflow with our sights set on continuous deployment as we implemented Jenkins, Travis, Capistrano, Runscope, and New Relic. Most projects were able to achieve 100% code coverage for unit testing, and had respectable behavioral and integration testing in place within 6 months. All teams also successfully transitioned to exclusively using Vagrant and VMware for development reducing infrastructure costs.

Lead an internal team of senior developers to tackle comprehensive refactoring projects including our ETL and data integration process to establish a standard set of re-usable tools. Consolidating segmented functionality into a modular SOA platform after researching and analyzing the scaling factors and costs of our projects. The platform consisted of common components (e.g., News, Media, Forums, Comments, Articles) and exposed via REST API. Setup configuration management for infrastructure. Initially the configuration management was built using Puppet, PuppetDb, and Marionette on Rackspace, but we made the decision to switch to using Chef and AWS OpsWorks to manage the same instances at Rackspace which drastically cut the delivery time of that project.

One project with considerable technical debt had a single monolithic MySQL database that did several thousand operations per second that started approaching I/O limits for the hardware it was on. Queries were relatively split between reads and writes as the data was being used in both OLTP and OLAP fashion. After experimenting with several solutions including partitioning across better backend storage, replication schemes, sharding, read/write segregation, and modifications to the application, we

decided to look into alternative solutions and we eventually moved 80% of the data operations to MongoDB resulting in considerable cost reduction and less overhead.

By reducing page load times using several caching methods with Varnish, memcache, and Redis, and by decoupling many synchronous tasks through the use of Gearman, RabbitMQ, and workers written in PHP, Java, Nodejs, and Go, we achieved a greater an increase in ad revenue.

- Established and lead DevOps group of ~10, defined SDLC, automated config management using Chef, reduced infrastructure cost by standardizing tech and adding caching strategies
- Standardized PHP and Java dev technology stacks around team competency with Zend Framework and Spring, setup Continuous Integration/Deployment, consolidated APIs, built central microservice platform to expose common app components including News, Comments, Media, Articles
- Migrated 25m+ users to SSO, setup DDoS mitigation using CloudFlare, Prolexic, AlertLogic, and Akamai, removed monolithic database bottlenecks
- Increased revenue by improving load times, added caching strategies using Varnish, Redis, Memcache, and CDN services
- R&D using graph dbs for real-time analytics, data stream analysis using Spark and Hadoop, applied machine learning to competitive E-Sports data sets (League of Legends, Dota2, Starcraft, Hearthstone, Heroes of the Storm, TF2, and CS:GO)

PAGELY

Technology Officer (2011 - 2013)

"Page.ly is a managed hosting system for the popular open source software WordPress." – <http://page.ly>

Brought on with Pagely to handle all aspects of the company's technology. First initiatives included expanding and re-factoring the existing infrastructure and application stack as well as writing an emulation library for the Plesk SOAP API to remove Plesk as a platform dependency. Worked extensively with our managed hosting provider Firehost to move existing web, application, and database servers to a new cloud based environment to provide better scaling and redundancy. Implemented LDAP for client authentication via SFTP as well as Kerberos for ticket based service authentication and single sign on.

Improved page load times by greater than 50% by implementing Varnish to offload the majority of pageviews on our web tier, and setup memcache and Redis for Wordpress object caching. Infrastructure node types were standardized based on their role including web, application, database, and caching nodes to simplify management using Puppet. Tested several traffic shaping schemes using the Zeus brand load balancers in order to shard and segment the infrastructure and segregate individual clusters of customer services.

After new infrastructure roll out we started work re-writing the existing four-year-old installation and management application migrating away from Code Igniter to the Zend Framework.

- Improved page load times by ~50% through object and page caching, used traffic shaping on load balancers to segregate users based on resource usage
- Reduced tech debt by automating installations and configuration, replaced Plesk SOAP API with PHP emulation library
- Migrated physical infrastructure to cloud and setup LDAP and Kerberos for SSO
- Automated security updates, minimized resource usage by creating a shared Wordpress architecture for thousands of sites

UNIVISION INTERACTIVE MEDIA

Application Architect (2010 - 2011)

"Univision is a Spanish-language television network in the United States consistently ranking amongst the top five networks." – <http://www.univision.com>

Primary project was to design and implement a centralized content management platform to replace legacy technology. The platform was developed using PHP, Java, and technology from OpenText. Additional responsibilities included Agile training, improving page load times, reducing infrastructure overhead, re-factoring legacy code, capacity review and planning, performance monitoring and reporting, and improving fault tolerance. Assisted web and product development and infrastructure teams locally and remotely with implementing a new development life cycle focused on continuous integration, unit testing, and improved regression testing.

Assisted with several major architectural overhauls including the implementation of Squid, memcache, and ActiveMQ for application scaling. Worked with an internal R&D group to begin testing the potential for a NoSql solution for object caching on the front end to further improve platform performance and reduce reliance on caching services such as Akamai.

- Launched 72 local radio and television sites within 3 months, turned over 800 WordPress blogs into new revenue stream
- Improved page load times by 400%, replaced legacy CMS

- Automated deployment and database migrations, defined coding standards, lead developer and manager training, held code review sessions

HEARST DIGITAL NEWS

Development Lead (2009 - 2010)

"Hearst Corporation is one of the nation's largest diversified media companies. Its major interests include magazine, newspaper and business publishing, cable networks, television and radio broadcasting, internet businesses, TV production and distribution, newspaper features distribution and real estate." – <http://www.hearst.com>

Fulfilled several roles in addition to development lead including architect, administrator, and project manager. Introduced Agile methodologies, lead training, and implementation for the development and business teams. Developed intermediary tools for deployment before a continuous integration environment could be put in place. The teams were spread out across the United States from San Francisco to Connecticut; so a large emphasis was placed on remote management and communication. Refactored the 9 month waterfall project plan from Microsoft Project into a back log of prioritized user stories, identified stakeholders and product owners, and lead estimation and planning initiatives.

Primary project was focused on centralized an existing network of localized content, semantic processing, and building an exhaustive and user-friendly management and deployment solution. The platform was based on existing technology from OpenText and enhanced using PHP and C#.NET additions. Semantic meta-data was used to create profiles for non-structured XML content and was made searchable through the content management platform as well as the front-end application using Solr. The platform was component based and dynamically driven allowing publishers to create content and share it across the enterprise.

Advisor role to a focus group challenged with rapid application development of new products. Introduced a standard for new product development centered on the Zend Framework, jQuery, and Blueprint CSS framework to promote highly testable, decoupled, and reusable components. Simplified DDD (domain driven design) was used to create a library of base entities and establish a ubiquitous language for new products.

- Launched 18 local news sites, reduced technical debt of 13+ month project by using Agile/Scrum, eliminated recurring bugs
- Developed framework for rapid product development, simplified workflow, reduced time to market for new projects by weeks
- Reduced technology costs by replacing legacy data integration processes, centralized data access, expanded integration options

WHITEFENCE

Manager of Web Applications (2007-2009)

"WhiteFence is a free service that helps people who are moving or looking to find the best deals on phone, Internet, television, electricity, natural gas and other home services." – <http://www.whitefence.com>

Responsible for developing an abstraction layer in PHP for an existing WebObjects and Java based offering engine using REST services and existing JSON/SOAP based web services. Implemented an intelligent caching system based on Lucene to provide full-text search capabilities for all affiliate content to the front-end. Consulted on cross team project planning sessions introducing industry standard methods for requirement gathering and management. The department was responsible for developing and maintaining several hundred highly localized affiliate-marketing sites.

- Replaced several hundred static marketing sites, lead development team to build API layer over Java/WebObjects platform
- Improved revenue through simple UX/UI changes, setup configurable multivariate testing platform
- Established coding standard, integrated design team into dev workflow, worked with management on communicating requirements which eliminated most meetings

INTERNET REIT

Senior Web Developer (2005 - 2007)

"Internet REIT (iREIT) is a next-generation Internet media company that owns and manages high-quality domain names." – <http://www.ireit.com>

Fulfilled several key roles including administrator, architect, database administrator, and designer. Existing technology was scrapped and we were given the task to complete an asset and content management platform with accounting details and reporting functions within a very aggressive schedule. We implemented a scalable platform that would support several thousands of page views per second without using any CDN or third party content caching services. I was responsible for architecting the infrastructure, application, and database schemas as well as implementation. The platform itself was developed using PHP and several smaller aggregation and data mining tools were developed using Java.

The company's domain portfolio contained roughly 450,000 domain names spread across several hundreds of domain registrars. I was solely responsible with implementing the functionality of managing these domains through the registrar's API using the EPP protocol and integrating this management functionality into the platform.

Setup and managed a small lab team to test new technology such as Pentaho business intelligence suite and in house developed OLAP solutions for our reporting system. Tested and implemented Jasper reports for our business analysts as well as a web based report builder.

- Developed CMS to manage domain portfolios, helped acquire 450k domain names, built scalable fault tolerant frontend delivering five 9s service (99.999% uptime)
- Streamlined domain purchase process by creating valuation models and reporting tools
- Automated ad arbitrage workflow increasing monthly revenue

PERSONAL PROJECTS

PECUNIA

(2013 - 2015)

Scalable PHP and Java based ad retargeting, publishing, and delivery platform with support for RTB. SSP features include multiple vendors, vendor weighting, categorization, intelligent tracking, throttling, fine tuned limiting, and comprehensive statistics. Approximately 45k monthly active users generated 13m pageviews each day resulting in 1TB of analytics and reporting data each week.

501 INTERACTIVE

(2011 - 2013)

Consulting firm with a primary focus on designing scalable data integration solutions. Aggregated real estate listings from multiple MLS services across the country and published them using a normalized API. Included media management, storage options, reporting, monitoring and alerting for Realtors, call center integration, and geographical analytics.

REGISTRARFORGE

(2007 - 2008)

Web based PHP application for managing an accredited domain registrar. Built around an extensible REST API using the EPP protocol that allows single and bulk transactions, reseller access, or direct sales. Scheduler for maintenance tasks, scalable worker applications for consuming queued requests, and aggregated statistics. Supported ~20k transactions a minute, used by 7 registrars.

VELLOCINET

(1999 - 2001)

Developer oriented VPS hosting and reseller services. Reached 10k monthly paying users. Managed ~30 physical servers using Bash, Perl, and PHP. An intelligent failover policy was used to migrate user content to available servers during service interruption.