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## Ruby Developer / Infrastructure Expert

### Overview

- Over 10 years of professional experience, including more than 5 years as primary infrastructure architect, implementor, and maintainer for high-availability environments under strict service level agreements.
- Broad work experience across software development, systems administration, and leadership roles. Projects have covered the range from low-budget and no-budget startups using existing equipment and Open Source software, to large deployments with multi-million dollar budgets and complex enterprise software.
- More than 9 years of mobile industry expertise, including launched projects with Verizon, AT&T, Sprint, and Alltel, as well as multiple international carriers.
- A true “full-stack” understanding of Internet and Unix technology, allowing rapid debugging of problems anywhere from the Physical network layer to the Application. In-depth understanding of hardware and operating systems, broad familiarity with Internet standards, and extensive experience with relational databases mean efficient design and development, avoiding dead-ends and long-term scalability issues.

### Work Experience

#### *VOCEL, Inc.*

##### “Principal Architect” (May 2007 - Present)

Supervisor: Tyler Jensen, COO

Engineering lead for new products, including primary responsibility for development of VOCEL’s mobile messaging products and all production IT infrastructure. Worked with every product, often through the entire product life cycle from requirements to prototype, development, deployment, and maintenance.

- Brought development and hosting in-house, reducing hosting costs by 85% and improving project response time.
- Designed and built internal and customer environments using Cisco ASA firewalls, Red Hat Linux, Apache HTTPd, Ruby on Rails and JBOSS application environments, and MySQL databases.
- Designed and lead the development of a new modular product architecture, based on Ruby and open web standards.
- Changed the primary development language from Java to Ruby, and implemented Agile development and project management practices, shortening the new product development time from 9 months to 3.
- Consolidated legacy, development, and testing environments using VMware ESXi and Xen virtualization.
- Improved per-request performance of a product by more than 8x over a 6 month period using techniques such as Relational Algebra and profiling tools including New Relic RPM, ruby-prof, and kcachegrind.

## *Sixth Column Consulting*

### “Co-founder / Infrastructure Expert” (August 2005 - May 2007)

- Worked with clients to diagnose and eliminate performance and availability issues in live environments.
- Provided research and training to clients to keep development teams up to date on language, high-availability, security, and mobile technologies.
- Served as an advisor for early stage startups on topics including bootstrapping demo environments, data architecture, and working with the mobile phone industry.

## *Motricity, Inc.* (previously *Pinpoint Networks*, previously *Intertect Networks*)

### “Principal Systems Engineer” (September 1999 - July 2005)

Supervisor: Jeff Kramer, VP of Engineering

- Designed, purchased, built, integrated, and maintained hosted service environment for Cingular Wireless MEDIA Mall site, which served over 5M page views per day, with network usage over 55Mbps at peak hours.
  - Maintained a 99.99% service level agreement
  - Scaled environment to accommodate 10x increase in users during first 6 weeks of operation
- Introduced performance monitoring of network components and servers in all production environments and used performance data to diagnose and eliminate tuning problems.
- Expanded the office infrastructure as the company grew from startup to 200+ employees.
  - Centralized office file storage with a single NAS appliance for NFS, CIFS, and iSCSI
  - Integrated stand-alone spam filtering component to mail system (28k messages blocked per day)
- Designed, purchased, built, integrated, and maintained hosted service environments for carrier customers: O2 (British Telecom), Verizon - MSN, Verizon - Infospace.
  - Three tier architecture with Apache on Linux, BEA WebLogic on Solaris, and Oracle on Solaris
  - Fail-over stateful firewalls with VPN to customer systems and multiple internal security zones
  - Redundant “active-active” Layer 3 based load balancers and switches
  - Database storage via NFS to redundant active-active NetApp Filers

## Previous Work Experience

### *Frankfurt Balkind Partners* “Network Security Contractor” (July 1999)

Supervisor: Paul Cuthbertson, CIO

### *Labyrinth Solutions, Inc.* “Independent Subcontractor” (May 1999 - June 1999)

Supervisor: Chris Christopher, CEO

### *WVU Department of Computer Science and Electrical Engineering* “Unix Systems Administrator” (May 1998 - August 1999)

Supervisor: David Krovich, Manager of Information Systems

### *National Radio Astronomy Observatory* “Junior Engineer” (January 1998 - May 1998)

Supervisor: John Ford, Head of Monitor and Control Group for the Green Bank Telescope

### *Labyrinth Solutions, Inc.* “Independent Subcontractor” (August 1996 - November 1997)

Supervisor: Chris Christopher, CEO

### *WVU Department of Statistics & Computer Science* “Systems Staff” (March 1995 - May 1997)

Supervisor: Jack Callahan, Associate Professor of Computer Science

## Other Experience

### Presentations

- “Building a Hosting Environment, Correctly” - Talk given at SD Ruby on January 7th, 2010  
<http://nicbenders.com/hosting>

### Short Articles

- “Using New Relic `add_method_tracer` with Class methods”  
[http://blarg.slackworks.com/posts/add\\_method\\_tracer-with-class-methods](http://blarg.slackworks.com/posts/add_method_tracer-with-class-methods)
- “Estimating Key Collisions (Birthday Problem)”  
<http://blarg.slackworks.com/posts/estimating-key-collisions>
- “Wildcard DNS and Rails”  
<http://blarg.slackworks.com/posts/wildcard-dns-and-rails>

### Open Source Projects

- `apns_provider`: An example Ruby provider for the Apple Push Notification service.  
[http://github.com/benders/apns\\_provider/](http://github.com/benders/apns_provider/)
- `blarg`: A blogging engine in Ruby, demonstrating Ruby 1.9 and CouchDB support in Rails.  
<http://github.com/gnarg/blarg/>
- `ruby-smpp`: Contributed bug fixes and improved support for SMPP v3.4  
<http://github.com/benders/ruby-smpp>

### Education

#### West Virginia University (1995 - 1999)

- Bachelor of Science in Computer Science

### References

References for any supervisor, and for co-workers or team-members are available on request.