

▶ James Vautin

Senior Infrastructure and Devops Consultant

James has brought experience in the areas of Cloud Management, Autoscale, Amazon Web Services, OpenStack, Web scale and Optimization, Web Application Development, Continuous Integration and Deployment, and Enterprise Operational Support Systems (OSS) to a variety of types of companies over the past 12 years.

James has worked in the United States, Australia, and Japan, providing solutions for leading web-based startups, datacenters, and Tier 1 telecommunications companies.

Recent assignments and key roles are detailed on the following pages.

Qualifications

- ▶ Bachelor of Science: Worcester Polytechnic Institute, Massachusetts
- ▶ Electrical and Computer Engineering with distinction, with an interest in Network Infrastructure and Security
- ▶ Minor in Computer Science

Summary of Recent Experience

- ▶ Independently designed and developed a HTML5 canvas-driven systems architecture design application in rails, ruby-em, and nodejs to allow customers to deploy bare metal, virtual hosts, network resources, and storage with an OpenvSwitch-powered multi-tenanted software defined networking solutions by drawing on a web-based diagram. (Devops / Advantage24 K.K.)
- ▶ Independently built varnish-based cache frontend solution for Australia's largest Architectural publication. (Freelance / Architecture AU)
- ▶ Designed and Developed an OpenStack Nova based scaling solution in Django for an enterprise virus scanning system which autoscales specific task workers based backlog statistics (Freelance / Narf Industries).
- ▶ Designed and Development of autoscaled Amazon EC2 cloud-based Infrastructure and Deployment Processes for Ruby/nodejs/PHP-based Web backends (playup.com).
- ▶ Development Lead for the initial release of NBNC's IBM Tivoli Netcool-based Service Assurance system (Eirteic / NBNC)
- ▶ Designed and Developed infrastructure and deployment processes for Australia's largest public Ruby on Rails (RoR) implementation at realestate.com.au (REA Group)
- ▶ Datacentre Modernisation including consolidation and migration to blade systems and XenServer based virtualization platform (REA Group)
- ▶ Content Delivery Network (CDN) integration for Dubai-based websites (REA Group)
- ▶ Monitored Configuration, Day to day operations, and on-call work (REA Group)
- ▶ Infrastructure Transformation for Telstra's Network Service Assurance System (Alcatel-Lucent / Telstra)
- ▶ AMS Host Reduction development in C and Java, including porting of a telecommunications database access layer from Fortran and IngresDB to C and Oracle (TUSC / Ericsson)

Detailed History

Infrastructure Automation and Software Engineering - Advantage24 K.K.
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April 2013 – Present

<i>Tokyo, Japan</i>

- ▶ Designed a HTML5 canvas Application using Ruby on Rails, Event-Machine, the GoJS diagramming framework, websockets, nodejs (socket.io backend), ZeroMQ (for distribution of tasks) which allows potential customers to:
 - ▶ Visually allocate and assign both Physical (bare metal) and Virtual (VM) Compute resources to projects, including storage systems and OpenStack-based solutions and Docker containers.
 - ▶ Interface with Compute components via noVNC and ssh web frontends.
 - ▶ Reinstall and image both Physical and Virtual Compute instances.
 - ▶ Internetwork these components as well as manage internet-facing interfaces via connecting components on the GoJS diagram.
 - ▶ Deploy appliance images (such as load balancers) as components within the diagram/network.
 - ▶ Effectively design an entire systems architecture on a multi-user web-based diagram while a working system is provisioned as components are added, configured, and connected in realtime.
- ▶ Assisted customers with deployment and web scaling issues.
- ▶ Set up puppet and git-based configuration management system and processes.
- ▶ Set up deployment solutions for legacy web applications.

Freelance Development and Infrastructure Consultant - Narf Industries

September 2012 – April 2013 (8 months)

Tokyo, Japan

- ▶ Built an autoscaling mechanism for a privately hosted in-house virus scanning system running on OpenStack nova.
 - ▶ Interface with Django and Celery components (Python) to infer load and backlog.
 - ▶ Interface with OpenStack nova (ec2) to spawn and reap instances.
- ▶ Contributed to proposals for DARPA-funded projects.

Contracted Senior Devops Consultant – Playup

February 2012 – August 2012 (7 months)

Melbourne, Australia

- ▶ James designed an auto-scaling Amazon EC2 cloud-based infrastructure for a Ruby-on-Rails, PHP, and nodejs-based Backend system for Mobile Applications which included:
 - ▶ AWS Cloud Formation templating and automation.
 - ▶ Auto-provisioning of MongoDB, redis, and MySQL (AWS RDS) data stores and nginx/passenger.
 - ▶ Auto-scaling Design, including automation of Application Deployment with Capistrano, Puppet and other scripting in Ruby.
 - ▶ Load Testing and Analysis with Soasta CloudTest and New Relic RPM
 - ▶ Site monitoring enhancements, including configuration of Pingdom, Nagios, and PagerDuty Applications
 - ▶ Optimisation of deployment dependencies by creating packages using the open-source Debian Package Management system.

Team Lead Operational Assurance Systems - Eirteic / IBM / NBNC

November 2010 - February 2012 (1 year, 4 months)

Melbourne, Australia

- ▶ James performed the role of Assurance Release 1 Lead and played a key role in other releases, including:
 - Initial Design and Proof of Concept of NBN's Tivoli Netcool-based Assurance Solution
 - Integration of IBM Tivoli Netcool Probes with Alcatel-Lucent Network Element Management Systems for seamless monitoring of network incidents on the Alcatel-Lucent-based GPON network.
 - Development of custom Web-based tools in Perl and JQuery-UI to fulfil Operations requirements for event management.
 - Netcool/Impact policies to perform root cause analysis on cable-cut and power loss events to assist operations in diagnosing incidents.

Devops, System Engineering, Modernization - REA Group (realestate.com.au / casa.it)

June 2008 - November 2010 (2 years, 6 months)

Melbourne, Australia

- ▶ James worked with REA Group on several projects during a period of heavy transformation. He applied new ITIL processes to existing business scenarios and defined new processes for new systems.
- ▶ James independently designed and delivered infrastructure and deployment processes for Australia's largest public-facing Ruby on Rails (RoR) implementation at the time, taking into account extremely high scalability requirements.

- ▶ James also assisted in interstate data-center migration with a new high availability and disaster recovery architecture, as well as hands-on re-development of many core components to suit the migration and modernization of this environment. Development systems were also migrated to a new Citrix XenServer-based virtualization platform.
- ▶ To address performance issues with REA's Dubai property site, James independently designed and integrated a Level-3-based Content Delivery Network (CDN) with an existing code base.
- ▶ James also provided 24x7 support via pager on a rotating basis where it was necessitated for projects undertaken.

Operational Support Systems Infrastructure – Alcatel-Lucent Telstra Corporation

October 2005 – June 2008 (2 years, 9 months)

Melbourne, Australia

- ▶ As part of its IT Transformation program, Telstra initiated a project to integrate and standardize network operational support systems for all of its existing network technologies.
- ▶ James was tasked with managing project scope, designing an enterprise network and server specification to meet the project requirements, including a load balanced application switch, and development of several web-based alarm management utilities on Apache/JBoss and perl/catalyst stacks.

AMS Host Reduction and Tivoli Netcool Projects – TUSC / Telstra Corporation

June 2004 – October 2005 (1 year, 5 months)

Melbourne, Australia

- ▶ James contributed to many aspects of the AMS (Alarm Monitoring System) re-work project at Telstra, which was effectively a re-write of an HP-UX Fortran implementation to C on Linux. James focused primarily in development of two areas of the project – the Oracle database access layer, written in C, and the struts-based Web interface, written in Java. The web interface included interaction with customers to determine suitability. James also built a continuous integration environment using virtual machines, to allow for constant build testing for the purpose of immediate defect recognition.
- ▶ In addition to this work James independently designed, developed and deployed a custom solution to back up configurations from VOIP and switching network elements for Ericsson's Commander VOIP deployment in Sydney.

Other Relevant Expertise

- ▶ Content delivery networks (CDN's)
- ▶ Caching systems (Varnish, Squid, nosql caching, etc.)
- ▶ VOIP (Asterisk, IAX, SIP, H.323)
- ▶ Ruby, Javascript, C, C++, Python, Java
- ▶ Configuration Management: Ansible, Puppet, Chef
- ▶ Application Stacks (Django/Rails/Sinatra/Passenger/Nginx/Apache/etc)
- ▶ Cisco Networking Products and Cisco IOS and SNMP
- ▶ VxLAN, GRE Tunneling, VLANS, Spanning Tree Protocol
- ▶ Collaboration/PM Systems Including Jira, Confluence, TRAC
- ▶ IBM Tivoli Netcool (Webtop, OMNibus, probes, mttrapd, tools)
- ▶ TCP/IP Security and Load Balancing Appliances (Cisco, Nortel, F5)
- ▶ DBMS (MySQL, Sybase, DB2, Oracle)
- ▶ Unix (Linux, FreeBSD, OpenBSD, Solaris, HP-UX, Darwin)
- ▶ Version control systems including Git, Mercurial, Subversion, CVS, ClearCase