

# James W. Brinkerhoff IV

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**Location:** New York, US

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## Summary

UNIX Systems Administrator and Software Developer with over two decades of experience and a strong background in providing API driven network and compute provisioning. Interested in leveraging his years of internet infrastructure experience to help organizations enable future technologies.

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## Technical Skills

- **Operating Systems:** Linux, Solaris, FreeBSD
  - **Programming Languages:** Python, Bash, Go, Ruby, JavaScript, Perl, PHP, C
  - **DevOps Tools:** Docker, Ansible, Chef, Kubernetes (Helm, ArgoCD), Buildkite/Github Actions (CI), Terraform
  - **Databases:** MySQL, PostgreSQL
  - **Storage:** ZFS, NFS, object storage (S3), iSCSI
  - **Networking:** IPv4, IPv6, BGP, LACP
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## Professional Experience

### Staff Software Engineer

**Equinix, New York, NY**

*Mar 2020 – Present*

- Launched an open-source project 'tinkerbelle' to investigate a new model of provisioning bare metal which has seen third party adoption and continued development.
- Managed an expansion of the provisioning system to what ultimately encompassed well over 100 facilities globally with thousands of pieces of provisionable hardware.
- Converted the provisioning software stack for deployment under Kubernetes utilizing a set of helm charts, with continuous deployment automated via

ArgoCD.

- Documented and automated the provisioning of a new facility from a site services point of view.
- Engaged in many cross-team incident responses, producing and presenting detailed "Reasons for Outage" to other teams and upper management.
- Produced services and tools, building on opensource projects (ironlib, bmclib), that automate the information gathering, configuration and firmware management aspects of maintaining bare metal infrastructure.

## **Principal Systems Architect**

### **PacketHost, Inc., New York, NY**

*Dec 2016 – Mar 2020 (Acquired by Equinix)*

- Responsible for the development and operation of the software integral to provisioning bare metal, the primary product.
- Deployed and maintained a global collection of clusters supporting the provisioning platform on Hashicorp's Consul/Nomad/Vault.
- Analyzed hardware problems to confirm firmware bugs and engaged with vendors for resolution as necessary.
- Produced tooling (in ruby) to manage and automate cross-vendor (Dell, Supermicro, etc.) hardware configuration and firmware.
- Developed a data model and tooling (python) to gather hardware component level configuration and health data at deprovision time for use by our other systems.
- Maintained custom "top of rack" network device configuration automation systems for JunOS.
- Improved average provision times to under 60s from what was, in some cases, many minutes prior to the initiative.
- Responsible for all DNS and other supporting infrastructure services.

## **Platform Architect**

### **Internap, Atlanta, GA**

*2012 – 2016*

- Continued to maintain the existing Voxel stack while working with an expanded team on a greenfield Openstack deployment.
- Worked with my counterparts to integrate further acquisitions of Internap, namely iWeb and their ongoing Openstack work.
- Responsible for designing and producing next-generation cloud based upon open standards (OpenStack) to replace legacy Voxel physical and virtual provisioning systems.

- Worked with development teams to design lab infrastructure and insure consistent testing environments.

## **Project Manager for Cloud Engineering**

### **Voxel dot Net, Inc. New York, NY**

*2006 – 2011 (Acquired by Internap)*

- Managed a two person team responsible for all the development and operations around the core bare metal and virtualized provisioning automation.
- Provided managed systems administration services to various clients which generally involved cluster design, LAMP stack configuration and optimization, clustering and failover, email delivery and overall security.
- Managed the company's entire VoIP/PBX offering which was used internally and also sold to external clients.
  - This included developing billing systems and negotiating rates with providers.
- Worked in all aspects of service delivery from the physical data center to the software that automates provisioning.
- Engaged in a large amount of network troubleshooting on Arista, Juniper and Cisco devices.
- Maintained a large cluster of DNS servers and BGP peers that enabled our global CDN product.
- Provided support and documentation during Internap's due-diligence process and during the post-acquisition transition period.
- Primarily responsible for all Sun/Solaris hardware (X4500 "Thumper", ZFS)
- Worked with a number of proprietary third party block storage products, as well as an in-house solution leveraging open source software such as IET and open-iscsi.

## **Manager of Systems Engineering**

### **IntelliSpace, Inc., New York, NY**

*2000 - 2005*

- Managed a small team of systems engineers responsible for all UNIX systems administration tasks across the company.
- Designed and implemented a hosted email solution for in-building (enterprise) customers built on open source software with a frontend/backend written in Ruby.
- Responsible for deployment and troubleshooting of a wide array of both 'core' and 'edge' network devices, with a primary focus on IP based

services.

- Worked with Marketing Department to develop corporate web site providing both company information and customer support functions, reducing call volume to customer helpdesk.
- Configured and Maintained Cisco and Riverstone Networking Equipment
- Configured and Maintained Sun UltraSparc Servers running Solaris (2.7,2.8) and A1000 Drive Arrays
- Designed Highly Available Systems utilizing Veritas Cluster Server (VCS) and Veritas Volume Manager (VxVM) under Solaris and Linux-HA
- Developed Interim OSS System to Aid in expansion to 26 Cities across the US and Europe.
- Gave training seminars relating to the company's various systems and services to both Sales and Technical Operations staff.
- Managed and Enhanced Global Network Management System (Spectrum)

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## References

Available upon request.