Nolan Brubaker

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Education

Bachelor of Science in Informatics and Computer Science, December 2010. Indiana University

Positions Held

2022: Software Engineer, Speedscale. Developed Speedscale cloud service.

- Created initial Data Loss Prevention code for redacting data within HTTP requests, allowing more secure usage of the Speedscale service.
- Implemented auto-detection for Istio workloads, reducing customer friction when using Speedscale in complex environments.

2021-2022: Senior Member of Technical Staff, VMware. Developed and maintained Tanzu Community Edition

- Coordinated with broader Tanzu team to improve plugin development experience with Tanzu Community Edition and tanzu-framework
- Integrated Sonobuoy diagnostics tool into Tanzu Community Edition tooling to ease troubleshooting and verifying conformance of Kubernetes clusters

2020-2021: Senior Member of Technical Staff, VMware. Technical lead for Velero

- Led development team's delivery of milestones
- Set technical design and vision for evolving Velero's Kubernetes data protection capabilities from only Kubernetes resources and volumes to any data source
- Coordinated with internal teams and business units to identify opportunities for integrating with the VMware product and open source ecosystems
- Mentored developers on the team via code/design review and direct one-on-one meetings
- Collaborated with community members to deliver new technical designs and code in Velero and associated plugins
- Granted US Patent 11341000, “Capturing and restoring persistent state of complex applications”. Granted May 24, 2022. Inventors: Dave Smith-Uchida, Somenath Bandyopadhyay, Jaswanth Gummadi, Lintong Jiang, Deepak Kinni, Revathy Shunmugam, Xinyan Wu, Nolan Brubaker, Derek Uluski, Xiao Liu

2017-2020: System Engineer, Heptio (acquired by VMware Dec 2019). Developed tools for managing Kubernetes clusters

- Integrated Kubernetes Container Storage Interface (CSI) for Velero (formerly Ark) to enable generic volume support, expanding the platforms protected and options for users
- Implemented end-to-end testing for Velero on live Amazon Web Services Kubernetes clusters
- Designed Velero conflict handler plugin system when restoring resources that already exist into a Kubernetes cluster

2014-2017: Software Developer, Rackspace, Inc. Wrote Ansible playbooks and roles for installing OpenStack.

- Led project for upgrading openstack-ansible/rpc-openstack code bases between Juno to Kilo and Kilo to Liberty codebases.
- Implemented Ansible playbooks and roles for the openstack-ansible project and rpc-openstack product.
- Implemented unit and integration testing for existing Python dynamic inventory production code
- Wrote initial developer documentation for openstack-ansible.
- Collaborated with community members and internal coworkers to write new feature specifications, online and in person.

2014: Automation Engineer, Cox Media Group. Improved and maintained tools for a large (40+) developer team.

- Implemented self-service jobs in Hudson/Jenkins for developers to start git repositories and caching PyPI packages.
- Maintained custom bash and Python tools for wrapping applications, simplifying usage.

2013-2014: Software Developer, Cox Media Group. Improved and maintained a large scale Django CMS (10 million page views per day).

- Implemented retargeting pixel system to help serve unique ads to site visitors
- Added methods for advertisement traffickers to manage Google Doubleclick for Publishers ads from within our custom CMS.
- Wrote custom tools for managing our development environment
- Documented existing Google ads integration library

2012-2013: Web Developer, Six Feet Up, Inc.. Implemented and maintained client Plone and Pyramid web sites and apps.

- Implemented PubSubHubBub 'hub' and 'client' servers in Pyramid and Plone for syndicating content between various intranets.
- Wrote and designed a Pyramid- and SQLAlchemy-based OpenID server
- Implemented and maintained Pyramid package templates to make starting projects more efficient.

2011-2012: Freelancer, specializing in Python and Django. Clients included: Eldarion, Red Post, Carbon Black

- Implemented a JavaScript bus route tracking component for Red Post digital signs.
- Extended a Rails- and MongoDB-based money transfer kiosk application.
- Contributed re-usable Django apps to the Pinax project.

2010-2011: Research Programmer - Center for Research Computing, University of Notre Dame. Helped faculty and students utilize web technologies in their research.

- Developed an HTTP-based peer-to-peer protocol and chat system in Python (using Flask) and JavaScript that supports several thousand simultaneous clients, along with a testing framework.
- Began a framework based on Django and Celery for launching, managing, and reporting on jobs based on open source command line tools for monitoring environmental change. Originally prototyped in Erlang
- Implemented a Django app to generate dynamic data for a Flash application meant to use static XML files.
- Created web crawler that searched for words within poems on the web, and provided information on the pages it found for use with visualizations by an arts professor.

2006-2010: Network Administrator - MapleTronics Computers. Managed internal network, as well as installing and managing networks, servers, and software for clients.

- Automating processes through custom VBScript and PowerShell scripts.

Presentations

- ZODB (Zope Object Database) at PyOhio 2012
- CSI Volume Snapshots at KubeCon NA 2019, presented Container Storage Interface volume snapshot support and its uses
- DevOps and Docker Live Show stream, talked about Kubernetes backup and recovery in April 2020
- TBS podcast episode on Kubernetes backup and recovery in May 2020