

# Michael Lustfield

linkedin.com/in/mikelustfield — resume.lustfield.net

## SUMMARY

### Information Technology, Linux Server Administrator and Systems Developer

Driven IT nerd with a passion for challenging problems; experienced with:

- Enterprise environments including Juniper Networks and Sony Pictures
- Release management; Development (Python, Bash, PHP, Perl, etc.)
- Cloud technologies (GCP, Linode); Automation (Salt, Ansible, Chef)

## CAREER

## HIGHLIGHTS

### Taos Mountain, San Jose, CA

July 2015 – Present

#### Senior Systems Engineer

- Created Ubuntu 20.04 images for Vagrant and OpenNebula
- Wrote patches to upgrade SaltStack and address security issues
- Refactored salt-bootstrap removing many legacy bugs and challenges
- Created documentation detailing OS image creation, deployment, and maintenance
- Updated many scripts to support Python 3 and wrote relevant documentation

### Taos Mountain, San Jose, CA

July 2015 – June 2020

#### Technical Consultant / Senior DevOps Engineer (FTE Consultant)

##### Taos Mountain (Corporate)

- Helped acquire new business through referrals and business relationships
- Managed personal travel arrangements, expenses, and budget

##### Juniper Networks (October 2018 – Present)

- Identified bugs and performance issues in configuration scripts and provided patches
- Assisted building a custom configuration management solution
- Wrote ansible configuration and supporting scripts to deploy system hardening solution
- Followed manual package testing procedures and helped implement automated testing
- Wrote integration tests to verify integrity of package modifications
- Resolved issues encountered during system hardening process
- Assisted internal IT staff and team members with system support

##### Suitable Technologies (July 2016 – August 2018)

- Refactored a patch used to implement a custom user authentication mechanism for Jabberd2
- Built custom Debian package for Jabberd2, providing a solution that supported multiple TLS versions
- Re-factored entire automation stack; improving maintenance burden, security, and execution time
- Constructed new backup solution based on least-access principals
- Identified and provided solutions to often-significant security and performance concerns
- Wrote new utilities to bridge gaps in existing processes

##### Sony Pictures Entertainment (July 2015 – June 2016)

- Primarily specialized in system automation and hardening
- Worked to orchestrate server deployment and hardening processes
- Managed system updates for various server operating systems
- Deployed and maintained a RHEL Satellite server for repository mirroring and license management
- Worked through CIS Security documents and evaluated recommendations
- Wrote Chef recipes to apply selected CIS recommendations and to deploy RHEL Satellite server

### Good Samaritan Society, Sioux Falls, SD

February 2011 – March 2016

#### Senior System Administrator

- Deployed and maintained linux servers across more than 300 remote facilities
- Managed server software and hardware; working with tape, blade, and SAN configurations
- Built server deployment processes, providing fully configured remote servers
- Managed McAfee Web Gateway and Web Reporter infrastructure and configuration
- Introduced TLS/SSL MitM inspection and AD-based authentication for web traffic
- Created a fully automated ESXi deployment system with auto-deployed and encrypted guests
- Took charge in disaster recovery situations; constructed and carried out recovery options
- Created web-based infrastructure maintaining networking, hardware, and support information
- Wrote scripts to scrape and parse legacy MS Office documents for data reuse and web import
- Optimized scripts for efficiency with an execution time improvement of up to 4,000%
- Provided critical support during many migrations, including MS AD, Exchange, XIV, hardware refresh, etc.
- Developed a self-service file-restore application
- Deployed and maintained a 5-node multi-master MySQL/MariaDB Galera cluster
- Wrote patches to resolve security-related issues in financial and healthcare applications

- Provided “last-tier” endpoint/server/application support for end users

**Kalliki Software**, Sioux Falls, SD  
*System Administrator / Website Developer*

**July 2009 – December 2010**

- Mediated interactions between internal and external resources
- Audited security and disaster recovery procedures
- Implemented system for public announcement of security-related events
- Formalized policies regarding system security and management
- Developed Drupal modules, themes, and patches
- Set up and managed company mailing lists
- Worked with clients to develop custom website solutions
- Provided hiring decisions and trained new employees

**Secure Banking Solutions**, Madison, SD  
*Developer*

**April 2007 – February 2008**

- Worked closely with team to build the TRAC suite
- Created USB-based phishing utility used in security audits
- Developed custom mailing list software according to project specifications
- Automated generation of penetration test reports
- Reviewed corporate security models and formalized improvement plans
- Deployed virtual infrastructure to efficiently utilize spare resources

## EDUCATION

**Dakota State University**, Madison, SD

**September 2006 – December 2010**

B.S. in Business and Computer Information Systems  
 Specialization: Systems Development  
 Minors: Networking; Network Security

## PROFESSIONAL CERTIFICATIONS DEVELOPMENT

- **SSCE** (SaltStack Certified Engineer) [2015]
- **GCP - Professional Cloud Architect** (Google Cloud Platform) [2019 – 2021]
- **CITI - Cancer GCP** (Good Clinical Practice) [2019 – 2022]
- **CITI - Investigators HSR** (Investigator Health Science Research) [2019 – 2022]
- **CITI - IRB HSR** (Institutional Review Board HSR) [2019 – 2022]
- **CITI - Cancer HSR** (Cancer Health Science Research) [2019 – 2022]

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## Presentations

- **“From Chaos to Order” at SaltConf15**  
 Discussed bringing chaotically managed systems into order using SaltStack

## Personal Network

- VLAN/Subnet management using pfSense and Cisco iOS
- Extended network to VPS providers (hybrid cloud) using OpenVPN and SaltStack
- Engineered long-term encrypted off-site backup solution
- Out-of-band management using Raspberry Pi and Verizon Mifi
- Deployed and managed using salt and git; updates triggered by git push
- Secured access to VLANs using bastion hosts with ssh key + password + 2FA
- Enforced industry best practices throughout entire network using salt

## Technical Competencies

- **Automation** (Strong): SaltStack; (Familiar): Chef, Ansible
- **Cloud** (Strong): Salt-Cloud, Linode/DO, Glacier; (Familiar): GCP, Route53
- **Frameworks** (Strong): Bottle/Flask, Pelican, Drupal 6-8; (Familiar): Django, Wordpress
- **Languages** (Strong): Python, Bash, PHP; (Familiar): Perl, COBOL, SQL, VB/C#.Net, Golang
- **Networking** (Strong): LACP, IPv4/v6, Unifi, Unbound, Ferm; (Familiar): VRRP, Cisco iOS
- **Operating Systems** (Strong): Debian, Ubuntu, RHEL/CentOS; (Familiar): BSD, AIX, Mac, Windows
- **Software** (Strong): MySQL, LUKS, OpenVPN, Jabberd2; (Familiar): MS SQL, PostgreSQL, ELK
- **Version Control** (Strong): Git, Mercurial; (Familiar): Bazaar, SVN, CVS
- **Virtualization** (Strong): LXC, Proxmox, KVM, ESXi; (Familiar): OpenVZ, VBox
- **Web Software** (Strong): Nginx, uWSGI, PHP-FPM, Acmetool/LE; (Familiar): Apache, IIS

- Served as non-scientific/unaffiliated patient-representative
- Reviewed patient consent forms for completeness, accuracy, and clarity
- Reviewed studies to ensure human subjects were properly protected (Belmont Report)
- Became familiar with industry standards and regulations (FDA, OHRP, HIPAA, etc.)

### **Debian Linux**

**December 2009 – Present**

- Obtained 'Debian Developer, uploading' status in 2015
- Maintained packages in Debian repositories (nginx, tdc, gitea, etc.)
- Became 'FTP Masters' member (Mar 2019–Present), reviewing packages for inclusion in main archive
- Reviewed and sponsored packages on behalf of prospective Debian Developers
- Resolved bugs reported in bug tracking system
- Wrote, reviewed, and committed patches to packages
- Uploaded new packages to Debian build system, including backports, and (coordinated) security updates
- Helped verify OpenPGP identities for inclusion in the Debian Keyring

### **Ubuntu Linux**

**October 2005 – February 2019**

- Obtained 'Ubuntu Member' status in 2009
- Supported users through IRC support channels and mailing lists
- Assisted in development of infrastructure for Local Community groups
- Worked with Canonical to introduce differentiation between official and community projects
- Developed tools for community-based projects, including Drupal theme and modules
- Contributed content and reviews for the Ubuntu News and Website teams

### **SaltStack**

**August 2011 – Present**

- Provided support via IRC channels
- Worked with developers to resolve security and performance issues
- Refactored Debian networking modules and templates
- Wrote first version of the "debconf" execution/state modules
- Provided patches to fix issues with Proxmox, documentation, etc.

### **Nginx Web Server**

**February 2009 – Present**

- Built, packaged, and distributed the Nginx web server packages for Debian
- Deployed and managed servers and software for the Nginx Wiki and Planet
- Built community projects, support system, and documentation repository
- Served as Group Contact for all Nginx IRC channels on Freenode
- Provided features/patches now included in Nginx source
- Served as a community point of contact