

Kevin Sumner

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Work Experience

Apple Inc. – Cupertino, CA

Senior Site Reliability Engineer, January, 2018 - Present

- Defined and coordinated projects across multiple teams to improve reliability of the hosting platform
- Led the design and implementation of an operating system image build pipeline
- Transitioned time keeping to Apple-wide service
- Designed and implemented standards compliance validation framework
- Implemented base Kubernetes infrastructure configuration
- Provided technical guidance to peer engineers, including within other business organizations

Telemetry Reliability Engineering Manager, November, 2016 - January, 2018

- Led a team of reliability and software engineers building a telemetry and analytics platform
- Defined the reliability and scalability roadmap for the platform
- Performed utilization assessments and developed tooling for capacity projections and planning
- Engaged with teams to better understand their needs and to guide the development of the platform
- Managed a multi-team on-call and support rotation

Operations Engineering Manager, November, 2015 - November, 2016

- Led a team of operations engineers supporting large-scale, customer-facing environments
- Provided guidance for other engineering teams to help them deploy and maintain their applications
- Communicated with users of various, internal platform-as-a-service offerings to fulfill their needs
- Continued small amounts of engineering work, including participating in on-call rotations

Operations Engineer, January 2013 - November, 2015

- Administer internal services supporting large-scale environments
- Design, deploy, and administer identity management services
- Engineer configuration management solutions for OS and application configuration
- Administer continuous integration, source control, and build artifact repository systems
- Administer deployment systems for Linux installs
- Administer storage systems for virtualization, application, and end-user needs
- Deploy and maintain collaboration services, including wiki and chat services
- Handle 24x7 on-call responsibilities

Runtime Systems Engineer, May 2011 - January 2013

- Deployed and administered a large-scale Java application serving millions of customers
- Deployed and maintained multiple large-scale virtualization environments
- Architected, deployed, and administered core infrastructure, including DNS and LDAP
- Engineered configuration management solutions for OS and application configuration
- Administered deployment platform for Enterprise Linux and ESXi OS installs
- Maintained storage systems supporting production virtualization and application services
- Supported continuous integration and source control systems
- Managed technical lab compute, storage, and virtualization resources
- Handled 24x7 on-call responsibilities

UNC Information Technology Services – Chapel Hill, NC

Systems Analyst / Storage Administrator, July 2008 - May 2011

- Administered campus-wide storage and backup services for 150,000 end-users
- Provided backup services for 900 mixed OS systems totaling 1.2 petabytes of data
- Administered network attached storage service
- Administered distributed file system service
- Administered UNIX, Linux, and Windows systems hosting storage and network services
- Analyzed growth trends and plan capacity increases
- Monitored system performance to ensure customer needs were met
- Installed and administered UNIX and Linux systems for use by other systems administrators
- Provided end-user support for storage services
- Designed, developed, and deployed service and system monitoring
- Administered virtualization services hosting 10 virtual servers
- Handled 24x7 on-call responsibilities

UNC Physics and Astronomy – Chapel Hill, NC

Assistant Administrator, September 2005 - July 2008

- Administered UNIX and Linux environment comprised of 50 servers and 50 desktops
- Provided troubleshooting and general support for users and labs
- Planned and executed platform migrations for various network services (HTTP, DNS, DHCP, etc.)
- Designed and implemented automated network OS install system
- Maintained network printers

UNC ITS/ResNET – Chapel Hill, NC

Residential Computing Consultant, November 2004 - May 2006

- Assisted students in network setup and general computer issues, such as email client setup
- Provided user support specially for Linux systems
- Performed malware and virus detection and removal
- Prepared and presented technology-centric information and entertainment events
- Assisted other consultants with organizing and running their events

UNC IT Response Center Walk-in – Chapel Hill, NC

Walk-in Student Technician, July 2005 - November 2005

- Assisted students in network setup
- Troubleshoot operating system and application issues
- Provided backup services, particularly for computers with severely crippled or unbootable operating systems
- Provided initial hardware diagnosis

UNC-Greensboro Student Affairs – Greensboro, NC

Assistant to the Division Web and Technology Coordinator, May 2005 - July 2005

- Developed web-based database interface using object-oriented PHP and Microsoft ODBC
- Designed and maintained Microsoft Access databases
- Assisted other staff members in tailoring web applications to suit their needs

Technologies and Skills

Operating Systems Administration

- Linux: Red Hat Enterprise and derivatives, Fedora, Debian, Ubuntu
- MacOS X
- Solaris
- VMware ESXi
- Windows Server

Service Administration

- backup: rdiff-backup, IBM TSM, BackupPC
- caching: NGINX, Varnish
- configuration management: Puppet
- containerization: Docker
- directory: LDAP (389 Directory Server), Microsoft Active Directory
- database: Hbase
- document management: Confluence, MediaWiki
- load balancer: NGINX, LVS via Keepalived, HAProxy
- logging: Splunk, syslog-ng
- mail: Cyrus IMAP, Postfix
- network: ISC dhcpd, ISC Bind, Infoblox, PowerDNS, dnsmasq, Quagga
- network OS installation: Kickstart, Debian Preseed, Solaris Jumpstart
- remote access: OpenSSH, OpenVPN
- monitoring: Prometheus, Grafana, Graphite, Nagios
- service registry: Zookeeper, etcd with SkyDNS, Consul
- source control: Git, GitHub Enterprise, Subversion
- storage: HDFS, NetApp OnTap, OpenAFS, Windows CIFS/Samba, NFSv3
- virtualization: VMware vSphere, KVM with libvirt
- web server: NGINX, Apache HTTP server

Computer Languages

- scripting: Ruby, Python, Bourne shell and Bash
- data query: SQLite
- data analysis: R

Volunteer Experience

Skynet Robotic Telescope Network – Chapel Hill, NC

IT Consultant and Systems Engineer, July 2008 - May 2011

- Administered Linux servers supporting the automation of worldwide network astronomical observatory systems
- Deployed and administered iSCSI storage array
- Provided IT consultation and training to the network developers and researchers

UNC Intersarsity – Chapel Hill, NC

Live Sound Engineer, August 2006 - December 2007

- Operated sound mixing equipment for live events
- Performed setup and breakdown of sound reinforcement system
- Maintained audio equipment

Hidden Voices – Chapel Hill, NC

Website Administrator, Fall 2006 - Fall 2008

- Maintained hosting account
- Administered login and email accounts
- Provided technical support for staff
- Provided routine updates to website content
- Assisted in migration between hosting services
- Aided in website design

Education

SANS Security Training: SECURITY 506, Securing Linux/UNIX
November 2010

University of North Carolina at Chapel Hill
August 2003 - May 2007

University of North Carolina at Greensboro
June 2005 - July 2005

Rockingham Community College
September 2002 - May 2003