## **Mohan Balasundaram**

91 Riverbank, Laleham Road Staines, TW18 2QQ mohan@primoitsolutions.com 0789 453 4454

# Senior Linux Administrator / DevOps Consultant (SC Cleared)

#### **Profile**

Ambitious Linux administrator with over 11 years of experience and integrated computer skills to meet the client needs. Professionally certified by Redhat (RHCE), Cisco (CCNA) and other qualifications that include:

- Knowledge and experience in working with a wide variety of technologies and has the passion to work with latest technologies.
- Highly motivated, Quick learner, Analytical, Precise and productive with the demonstrated ability to contribute to the success of the company.

#### **Technical Skills**

Operating Systems

Redhat / Centos, Suse, Fedora, Ubuntu, Debian, Windows 7 / (2003 - 2012) Server

Virtualization / Configuration Management / Automation / CI / CD

Vmware Esxi / Vsphere / Vcloud, Virtualbox / Vagrant, KVM, Amazon AWS, PXE / IPXE Kickstart / Preseed, Packer, Docker, Ansible / Ansible Tower, Salt, Puppet PE, Razor, Hiera, Rspec, Gerrit/Git, Svn, Jenkins, travis-ci, Artifactory, Sonargube, maven

Databases

Cassandra, Kairosdb, MySQL, MySQL Clustering (Master/Master, Master / Slave setup), Postgres with replication, SQL Lite, MongoDB, Basic Oracle.

Storage

LVM, RAID ( hardware / software - mdadm ), SAN (HP MSA's ) & Basic NetApp Filers

• Web /Application Servers / Load Balancers / Mail

Apache, Lighttpd, Nginx, Tomcat, Jboss, ActiveMQ, Liferay, LVS, Ha Proxy, Hardware Load Balancers ( CSS 11501/ BIGIP ), Sendmail, Postfix, Dovecot (POP3 / IMAP)

Network Services

SSH, SFTP, Vsftpd, Proftpd, BIND/PDNS, NFS, Samba, DHCP, TFTP, Squid, DRBD

Programming

Strong Bash / Python / Ruby Scripting & good awk/ sed / expect / perl Knowledge.

Firewall / Security

Good knowledge in Iptables, Pfsense, Smoothwall, tcpdump, tcpwrappers, DenyHosts, Fail2Ban, nmap, Nessus, Wireshark and working knowledge of SELinux

Monitoring

Excellent knowledge in Nagios/Icinga, Zabbix, SNMP, Cacti, Graphite, Munin, MRTG, Webalizer, Awstats, Java Monitoring via JMX, AppDynamics.

Networking

Familiar with Cisco Routing Protocols (RIPv2, EIGRP, OSPF), Cisco Routers, Pix Firewall, VPN's, Catalyst Switches (2500, 3500), vlans.

# **Professional Experience**

# **UKCloud** - Senior Automation Consultant, (Mar 2016 – Current)

Devops Consultant at UKCloud Formerly Skyscape Cloud Services, part of the Infrastructure Automation team where job responsibilities include:

 Writing Puppet Code to build various DC's using Puppet Enterprise/ Hiera / Razor around the Vmware Infrastructure and assisted the build team on automating their requirements.

- Contributed to multiple open source puppet modules, Feature requests / pull requests / Bug fixes for extending features/fixing Issues.
- Wrote puppet-rsyslog module in collaboration to fully support rainers script format and extended it heavily to cover all scenarios, with default data in module concept
- Have built Highly Available Cassandra / Kairosdb 3 node cluster with haproxy frontends from scratch using puppet for collecting Vcloud Director Metrics.
- Wrote ruby code in rake to create travis like sysem to test the puppet modules in Bamboo CI Stack against various puppet versions.
- Created a process to build the first node in a DC with iPXE and without dhcp and boot strap with the Kickstart for Automated Install of VM / Host.
- Wrote python / ruby / bash code to automate various system tasks in assisting with the build of infrastructure.
- Automated windows 2012 builds with razor for various db/app servers requirements.
- UK Ministry of Justice DevOps Consultant, SC Cleared (Mar 2015 Mar 2016)

  Devops Consultant at UK MOJ for the Common Platform Programme (CPP), part of the DevOps / Infrastructure team (IaaS), where job responsibilities include:
- Built the infrastructure across various VDC's including secure environments in skyscape cloud services provided vcloud.
- Configuring networks(firewalls, DNAT/SNAT, routes), Built vpnserver & proxy with antivirus / url blocklists(pfsense) & built hardened bastion hosts( which passed pentesting ).
- Have built golden images / bastions which became vm templates, very good understanding of tools like PXE / kickstart / Post install / Packer
- Built / Maintain the Continous Integeration (CI) stack with Gerrit / Multi node Jenkins /
   Artifactory Pro and establish a process to release / push the built artifacts to other DC's
- Packaged open source applications as rpms using rpmspec / maven and distributed the artifacts via artifactory / yumrepo
- Played an important role in the UK Magistrates ROTA Project going live, responsible for maintaining ansible code for deployments of the artifacts via SDLC environments.
- Built / Supported various enterprise applications (Tomcat / wildfly / openam / opendj etc..)
- Built ELK stack cluster with redis / logstash / eleastic search / kibana for the whole program with ansible, and also have written generic ansible role for logstash client.
- Good understanding of maven based java development process and working with tools like Sonarqube, Jenkins and Artifactory Pro.
- Worked along side developers for various (Agile/Scrum) projects in the program, setup standards / process and documented them for the new members to follow it
- Scripted various routine tasks in bash / python and monitored infrastructure via Zabbix
- Excellent networking / linux troubleshooting skills and had an active role in every major issue.
- Excellent understanding of working with various proxies / ssh tunnels (chained ssh config) and set standards in working with hosts in complex secure environments easily.

#### Worldline e-payment Services - Devops Analyst (Aug 2013 - Feb 2015)

Devops Analyst at worldline e-payment services (ATOS UK), part of the DevOps / infrastructure support team where job responsibilities include:

- Manage the existing Linux Infrastructure & Provisioning new vm's in vmware vcenter,
   build/configure the linux host according to the bespoke client requirements standards with
   PXE/ Redhat Kickstart / post\_install scripts / puppet.
- Build/Manage linux based Application Servers (Tomcat/Jboss with mod\_jk and mod\_proxy) in the three tier architecture Model with bespoke setup running proprietary applications.
- Managed / Configured Complex Multi Instance / Shared environment setup used by various well known UK Merchant Services and have a very good understanding of the following enterprise application deployments (Jboss, Jboss Fuse, Maven, ActiveMQ, Tomcat, Liferay)
- Manage Multi Instance MySQL Server with GTID replication configured in HA Environment
- Deployed various monitoring solutions for Monitoring (Icinga nagios fork with graphs / JON
   Server for Jboss Monitoring / Mysql Enterprise Monitor for Mysql / Replication)
- Deployed / configured pfsense firewall with HA Proxy VIP's for the various services
- Worked alongside with Developers to understand the system requirements, Provided Infrastructure support in a very busy environment prioritizing tasks, responding to incidents & troubleshooting complex issues end to end
- Worked with Cisco 2811 ISR Router and Luna SA HSM for a PCI Compliant Solution

# Research In Motion – Service Engineering Specialist (Nov 2010 – Aug 2013) Senior Linux System Admin in Blackberry UK, responsible for maintaining Blackberry Email Infrastructure services where other job responsibilities include:

- Manage the current Multi region Linux Server farm setup & Respond to Incidents
- Worked on various Data center Deployments (IBM HS22V Blades) from ground up using PXE
   / Kickstart and bootstrapped with puppet for automated provisioning of machines
- Written puppet content with multiple environments setup to suit the DC's changing needs and deployed various applications (ex: Suse linux / Apache / Cacti / Mysql / Tomcat / proprietary c++ and Java apps ) and maintained it using git.
- Worked with encrypted data setup using encfs for proprietary content in unsecured DC's
- Worked on multiple large scale Code upgrade releases / migrations across DC's and managed to find improved methods in reducing the downtime.
- Worked on deployment of barebone kvms / openebula based cloud services and configured / supported various production services in the cloud setup
- Automated several tasks using scripts written in bash / expect / perl / ruby
- Adding new carriers to the blackberry network and troubleshooting system issues in the network and issues related to mail delivery in handhelds.

# Nixxie Ltd, London - Linux System Adminstrator ( Feb 2008 – Nov 2010 )

Linux System Administrator for Nixxie Ltd a small Contextual Advertising Company where job responsibilities include:

- Maintaining the High Availability of Delivery / Hosting Servers and related services.
- Building (RHEL/Centos) Servers for the Delivery / Hosting infrastructure according to the bespoke requirements (LAPP/LAMP - Postgresgl/MySQL).

- Building MySQL Cluster (Master / Master) Setup for the hosting Infrastructure.
- Building / Managing Application server (Tomcat) with Postgresql server.
- Monitoring the infrastructure with nagios / cacti 24x7 to provide maximum uptime.
- Managing Sendmail server with Message labs/ POP3 Mail server for proper mail delivery.
- Backing up delivery / hosting servers ( DB / WWW / Logs ) remotely using rsync / tar
- Automating the backups and other routine tasks / generating reports with Bash / Perl.
- Built / Managing the SVN based auto deployment system on Perl which pushes the updates to the corresponding web folder whenever a commit is made.
- Setup / Managing windows2003 server shares mirror between Mauritius and London.

#### Freelance / Contract Work

#### Symba Limited, London - Systems Support Engineer (Oct 2007 - Nov 2007)

Worked as Systems / Network Support Engineer in a **NHS** project at Enfield Town for building Oracle infrastructure, where job responsibilities include:

- Installing & configuring Redhat Linux in HP DL360 & DL380 Servers
- Configuring Fiber port HBA's to Work with HP Storage works SAN (MSA 1500) via HP Storage Works 4/8 SAN Switch
- Configuring VERITAS Net Backup with HP MSL 2024 Tape Library via HP Storage Router N1200-320, Configuring Sendmail As Smart Host, MRTG Monitoring.
- Configuring the CSS11501 switch for load balancing and Assisting the DBA in building Oracle Cluster & with other Linux administration skills.

# Freelance Technician (Nov 2006 - Oct 2007)

Worked as a Freelance Network / Systems Support Technician in many different places (Ex: Symba, Advanced Telecom Networks Ltd, Glenmore Commercial Ltd etc.. )

- Building SOHO networks from the scratch Cabling, Assembling Computers, OS installation, troubleshooting, File & Printer sharing for the network.
- Configured wired /wireless routers to share the public IP, Port Forwarding for specific services, Remote Access using RDP, VNC or using VPN (Virtual Private Network) with Dynamic DNS, Web/Mail Hosting, network troubleshooting etc.

#### Symba Limited, London - Cisco Engineer, (Nov 2006)

Worked as Cisco Network Engineer for **NHS** project at Enfield Town in a small contract job (one week). Where job responsibilities include:

 Configure CSS 11501 Content Switch with virtual IP to work and to load balance across 2 node Oracle Application server Clusters to operate with 2 node Oracle Database Servers on a different subnet and Configured Layer 3 & Layer 4 rules for specific services as requested

#### Switchware Limited, London. Systems Engineer. (Nov 2005 – June 2006)

Worked as Systems Engineer in a fastest growing pan European prepaid Telecom Company (Lycatel). Where job responsibilities include:

- Monitoring various servers and switches, testing the existing carrier routes for call quality
- Assembling of PC's, LAN Maintenance in the patch panel, switches and PBX management and troubleshooting systems. Also worked in Telecity /Telehouse for the network migration.

#### Qualifications

2005 - 2007 Masters in Information Security and Computer Forensics,
University of East London, London, UK

**2000 - 2004** Bachelor of Engineering, Electronics & Communication, Madras University, Chennai, India.

# **Professional Certifications**

2010 - ITIL V3 Foundation

2008 - RedHat Certified Engineer

2006 - Cisco Certified Network Associate

2006 - Microsoft Certified Systems Engineer (2003)

2005 - Microsoft Certified Professional

# **Trainings Attended**

2014 - Safenet Luna Sa - HSM Training

2012 - Cloudera Hadoop Administration

2011 - Vmware Vsphere 4 (Installation / Troubleshooting)

2010 - Puppet Master Curriculum

#### References

References are available upon request.