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**Mohammed Khan**

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**Sr. Systems/Devops Engineer**

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Summary:

* 7 years of experience in IT industry with strong expertise on System administration, and implementing **Devops** tools like **Chef** and **Puppet** for Continuous Integration and Continuous Deployment with build tools using **Jenkins**, **ANT**, and **Maven** on Cloud Infrastructure using **AWS** and on premise virtualization using **VMWare**.
* Experience installing **Redhat** EL v 4.x, 5.x, 6.x, 7.x, Sun **Solaris** v 8, 9, 10 & 11, **Ubuntu** v 6.10, 9.10 via Kickstart server, **Window** Server 2003, 2008 and 2012.
* Experience in creating and managing user accounts, security, rights, disk space and process monitoring in **Redhat Linux** and **Solaris**.
* Experience in Disk and File system management through Logical Volume Manager (LVM) on HP-UNIX, **LINUX** and **Solaris** Volume Manager (SVM).
* Expertise in **Linux**, AIX, UNIX, **Solaris**, **Window** server’s administration and support.
* Installation and upgrading of Packages and Patches configuration management, version control, service pack & reviewing connectivity issue regarding security problem.
* Installation & troubleshoot Current Version control System server for the multiple migration projects including creating multiple repositories, project specific user permissions, backups etc.
* Experience as a lead **Linux** engineer in developing and testing the system recovery plans.
* Experience in **Installing, upgrading and configuring SUN Solaris 9, 10 & 11** on Sun Servers using **Jumpstart Servers, Flash Archives and Interactive Installation**.
* Manage **deployment, maintenance, support and upgrade of servers, hardware, software, operating systems** in server environment.
* Extensive knowledge of computer server architectures, including peripheral interfaces (SCSI, RAID, Ethernet) and multi-processor designs.
* Experience Installing and Configuring HDLM on **Solaris**, **Window**& AIX servers.
* Developed **Shell, Bash, Perl, Ruby and Python** Scripts for automation purpose.
* Experience in migration at storage level using EMC Replication Manager.
* Extensive experience in installing, integrating, tuning and troubleshooting **Apache Tomcat, Jboss** and **WebSphere** application server and **webservers.** Ability in deploying the developed code in a Web Sphere/Web Logic, Apache Tomcat/**JBOSS**.
* Experience in Writing/ Maintaining & troubleshooting scripts written both in MS PowerShell, XML, script for build & operations environment to develop/test/implement automation tool.
* Experience in **Managing SAN& NAS** environment’s majorly HDS arrays like **HDS, HUS, USP, ASM, VSP & USPV** by using tools like Tuning manager, Device Manager and Performed migration using Hitachi TSM.
* Experience working SAN devices like AMS 1000 and HDS AMS 25000.
* Worked with installation and configuration of **Docker** environment (v1.5.0) including **Docker** registry hub for deployment of applications inside the software containers and managing different **Docker** images.
* Configured Kubernetes Replication controllers to allow multiple pods such as Jenkins master server in multiple minions.
* Involved in using Terraform migrate legacy and monolithic systems to Amazon Web Services.
* Building **Docker** container clusters managed by Kubernetes, Linux, GIT, Docker.
* Utilized **Kubernetes** and **Docker** for the runtime environment of the CI/CD system to build, test deployments.
* Experience with container based deployments using **Docker**, working with **Docker** images, **Docker**Hub and **Docker** registries.
* Expert in **creating and managing tickets using HP Service Manager**.
* Expert in configuring Amazon Web Server (**AWS**) instances. Experience of migrating application to **AWS** and manage applications on cloud.
* Developed Cloud Formation script to automate the EC2 instances with JSON templates.
* Have working knowledge of defect tracking tool **JIRA** as Atlassian Product.
* Having ample amount of experience in DevOps tools like **Chef** and **Puppet** for deployment on multiple platforms.
* Extensively used build utilities like Maven, ANT for building of **jar, war** and **ear** files.
* Ability in managing all aspects of the software configuration management process including code compilation, packaging, deployment, release methodology and application configurations.
* Written and authored **Ansible** playbooks for different automation tasks to fit in to the deployment needs. Implemented several Continuous Delivery Pipelines for different products using **Chef**, **Jenkins**, **Puppet** and **Ansible**.
* Experience in using version control tools like **Subversion (SVN), GIT HUB and GIT**.
* Extensively worked on **Jenkins** and Nexusfor continuous integration and for End-to-End automation for all build and deployments.
* Exposed to all aspects of software development life cycle (SDLC) such as Analysis, Planning, Developing, Testing, implementing and Post-production analysis of the projects.

**Technical Skills:**

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| Server Operating Systems  | **Redhat** EL **v 4.x, 5.x, 6.x,7.x** OEL v5, 6, **SunSolaris** v8, 9, 10/11, **Ubuntu** v 6.10, 9.10, MS **Window** Server (2003/2008/2008 R2/2012) |
| Scripting Language | Scripting in **Shell, PowerShell**, **Bash**, **Perl**, **Ruby and Python** |
| Hardware | **IBM x236, IBM x232, IBM x3650, IBM HS22, HS12, LS22 Blade Center, SunT2000, T5240,T5120, HPC3000, HPC7000, BL460c, BL685c, BL465c, BL620c, BL420c, SparcV880/890, E6500,E4500/E3500, E450/420/250, E220, Netra1405/X1, T1000/2000, T5120/5220, M4000, M5000, T5420, T3-2, T4-4 and T5-2**. |
| Virtualization | Vsphere 5.1, ESX/ESXi server 5.1/5.5 Vsphere Client, VCenter, VMotion, Storage VMotion, VMware Update Manager, VMware Tools, VMware, **Docker**, Converter, Tortoise SVN, GIT and **Solaris** Zones, Domai­­­­ns and LDoM. |
| CI and Build Tools  | **Jenkins, Maven, Nexus, Artifactory** |
| Bug Tracking Tools | **JIRA**, Remedy, HP Quality Center, Itrack. |
| Storage | HDS, USP, USPV, VSP, AMS 1000, AMS 2500, 9585, HDS TrueCopy, HDS Shadow Image, SAN Copy, Raidcom, EMC Clariion, Symmetrix and DMX. |
| Database | Oracle 8i, 9i, 10g, 11g |
| Backups | **VERITAS Net Backup**, Tivoli Storage Manager, EMC Networker |
| Networking  | **Cisco 25xx, 35xx Routers and 35xx Switches**. |
| Firewalls | Checkpoint NG, Sonicwall and Fortigate. |
| Network Protocols | TCP/IP, UDP, DHCP, HTTP, HTTPS, VPN, DNS, NTP, WINS, FTP, SSH and Telnet. |
| Automation Tools | **Puppet**, **Chef**, **Ansible** |
| Web & App Server  | Apache (httpd), **Apache-tomcat, Jboss, Tomcat**. |
| Ticketing Tool | HP Service Manager, BMC Remedy, Infra Enterprise. |
| Cloud Environment | **AWS**, **Azure** |
| Containers | **Docker, Kubernetes** |

**Professional Experience:**

**Client: eLan Technologies INC, TX (Blue Cross Blue Shield, Chicago, IL) Aug 2017 – Mar 2020**

**Role: DevOps Engineer**

**Responsibilities**:

* Involved in Configuration Automation and Centralized Management with **Ansible** and also Implemented **Ansible** to manage all existing servers and automate the build/configuration of new servers. All servers types where fully defined in **Ansible**, so that newly built server could be up and ready for production within 30 minutes OS installation.
* Involved in writing various Custom **Ansible** Playbooks for deployment orchestration and also developed **Ansible** Playbooks to simplify and automate day-to-day server administration tasks.
* Expertise in Configuration of **Ansible Tower,** which provides a dashboard and role, based access control, so that it's easier to allow individual teams access to use **Ansible** for their deployments.
* Involved in support and upgrade of **Ansible** from 1.x into the 2.x version on servers.
* Automated monitoring, security, agentless and anti-virus tools via **Ansible** on both Linux and Windows platform.
* Worked with **Ansible** for deployment of Security tools, **Nagios** agents, **Nagios** Servers, applications in different environments.
* Extensive skills in installing, integrating, tuning and troubleshooting IBM Middleware applications, Microsoft Internet Information Service (IIS), Symantec antivirus and deploy the code on the application.
* Monitor **Ansible** software 24\*7 using nimsoft for alerts and Moongsoft for creating priority incident to ensure proper functioning of application.
* Experience in Infrastructure as Code using **Terraform** modules and **Ansible**.
* requirement & run standard **Ansible** playbooks through startup script.
* Experience in working on **DevOps/Agile** operations process and tools area (Unit test automation, **Build & Release** automation, Environment, Service, Incident and Change Management).
* Responsible for upgrades to **Redhat** Linux with Software packages, patches and maintained them in accordance with established PCI policies, procedures and service level agreements.
* Performed daily administration of **Redhat** Satellite servers to prevent outage and plans for optimized system resource utilization.
* Responsible for Designing, Building, installation, configuration, tuning, security, backup, recovery and upgrades of **Redhat** Linux.
* Manage **RedHat** Linux Operating System processes to resolve problems across diverse operating systems & cloud providers, optimized the performance in a fast-paced demanding enterprise environment.
* Customized Win 2008/20012R2 servers in terms of Registry, Audit/Account/Security policy, patching to sustain Company Standard Operating Environment.
* Troubleshooting problems pertaining to Windows 2008, 2008 R2, 2012 and 2012 R2.
* Installing and configuring webservers (IIS), Tomcat on DEV, TEST, PROD boxes and managing it.
* Deploying new code of web services for DEV/TEST/PROD servers.
* Monitoring of VM's & ESXi server components (CPU, Memory, Disk, Network Utilization) and security hardening for Security Compliance.
* System administration including user, system & group management, system updates, performance monitoring, backup/recovery, disk & storage management.
* Design the environment workflow and prepare reports of correspondence concerning project specifications, activities to explain the architecture of environment using Microsoft Visio.

**Environment**: **Jira**, **Window** XP/2010 **Redhat** 6.x/7.x, NAS, SAN, ISCSI, VMware, VRO& VRA, **Ansible**, **Azure**, Python, **Dynatrace**, Tufin, AYS, Moongsoft, MS visio, Github, Jira, Maven.

**Client: eLan Technologies INC, Irving, TX (Wells Fargo, Charlotte, NC) Sept 2016 – Aug 2017**

**Role: Sr. Systems Engineer(DevOps)**

**Responsibilities**:

* Responsible for managing **Redhat Linux**, and some handful of **Solaris** Operating Systems in a fast-paced demanding environment.
* Our Line Of Business consists of 4 Ansible towers. We have main playbook, Yaml for maintaining roles, inventory files and groups variables.
* Wrote **Ansible Playbooks** with Python SSH as the Wrapper to Manage Configurations of AWS Nodes and Test Playbooks on **AWS** instances using Python. Run **Ansible** Scripts to provision Dev servers.
* Experience in working with GIT to store the code and integrated it to **Ansible Tower** to deploy the
* playbooks.
* Experience in creating inventory, job templates and scheduling jobs using **Ansible Tower**.
* Experience in Writing Python modules for **Ansible** customizations, creating inventory, job templates and scheduling jobs using **Ansible Tower**.
* Maintained high availability clustered and standalone server environments and refined automation components with scripting and configuration management (**Ansible**).
* Used **KickStart** Server to initiate installation of **RedhatLinux** on several machines at once.
* Handled various **storage devices, Disk Management, Logical Volume Management (LVM) and Logical Partitioning**.
* Worked on **Group/User Administration**, Startup and Shutdown Scripts, **Crontabs**, **FileSystem** maintenance and backup **scripting & automation**.
* Written various **Shell** scripts using **Ksh**, **Bash**, **Python** for process automation of databases, applications, backup and scheduling.
* Setting up **SSH, SCP, SFTP** connectivity between **Linux** hosts. Troubleshooting **Linux** network, security related issues, capturing packets using tools such as TCP wrappers.
* Using **Puppet** and **AWS** allowed me to reduce costs for the department and eliminate unwarranted resources.
* Performing configuration management tasks on servers with the aid of **Puppet Master Server** and involved in writing **Puppet manifests** for customized configuration management.
* Created **Puppet manifests** using **Ruby code** for Configuration Management to manage Web Applications.
* Worked with installation/configuration of **GIT server** setup for Software development for R&D.
* Development teams for version controlling and integrated **Puppet** with SVN for version controlling for different environments. Worked with **Puppet** Mcollective client and agent configurations for the orchestration of parallel job executions on **Puppet** clients with ActiveMQ.
* Worked with **Agile** practices using **CI/CD** pipelines, with **Jenkins**(Continuous Integration), Nexus for **Maven** Repository, **Maven** Builds, Artifactory, Junit testing, **Puppet** module tests and deployments using multiple **Jenkins** plug-ins. Deployed **Puppet**, **Puppet** Dashboard and **Puppet**DB for configuration management to existing infrastructure.
* Used to write an install script in Ruby using all the extra helper functions from **Chef**.
* Designed **Chef Cookbooks** to manage configurations and automate installation process.
* Handling cloud during maintenance/Website deployment on Production servers through **Chef**.
* Managed **LDAP Server**, replications, sudoers and **LDAP Client configuration** (nslcd) using **Chef** for different environments.
* Worked with Vulnerabilities using Mcafee and address the vulnerability issues like SSL Poodle, **BashShell** Shock using **Puppet** and **Chef**.
* Installing, configuring and administering **Jenkins** **(CI tool)** on **Linux** machines.
* Authored and modified **Chef** Cookbooks for configuration management of different applications using **Chef** Ruby. Writing **Chef** Recipes for Deployment on build on internal Data Centre Servers. Also, re-used and modified same **Chef** Recipes to create a Deployment directly into **Amazon EC2 instances**.
* Rolled out **Chef** to all servers in testing environment, and used the **Chef**Node database to drive host configuration, DNS zones, monitoring, backups, and VM allocation and configuration. Worked with Chef for deployment of **Openstack** components like Glance, Nova, Swift.
* Worked with Ubuntu MAAS to provision the Physical machines for the **Openstack** KVM infrastructure. MAAS manages the DHCP, PXE, TFTP required for the provisioning.
* Worked extensively with HA and cluster based solutions like Pacemaker and Corosync for different **Openstack** services like Heat, HAproxy and Neutron Services.
* Worked with **Nagios** for Monitoring **Openstack** and Non-**Openstack** Services and written plugins for monitoring services.
* Imported and managed multiple corporate applications into **GitHub** code management repo.
* Used **Jenkins** for Continuous Integration and deployment into Tomcat Application Server.
* Installing, configuring monitoring rules for the server environment using **Nagios**. Administration of monitoring infrastructure consisting of **Nagios** server with Centreon as web interface for configuration and display of performance data.
* Monthly security patching of Windows servers via WSUS.
* Provide Level 1 & 2 support for windows server issues during migrations.
* Monitoring of VM's & ESXi server components (CPU, Memory, Disk, Network Utilization) and security hardening for Security Compliance.
* Hands on with **vCenter** Server **5.0/5.1/5.5** managing with multiple **ESXi** Servers, Build and troubleshooting experience with ESX Servers and **ESXi** Servers, **vSphere** and **vCenter** manager.
* Extensively worked with **Remedy ticketing system** and provided 24/7 on call support for production.
* Helping other teammates to configure and troubleshoot system and network issues.

**Environment**: **RHEL5**.x, **6**.x, **Puppet**, **Chef, AWS**, **Shell**/**Perl** Scripts, Ruby, Python, MYSQL, GIT, **Jenkins**, Tomcat, **Maven**, **Nagios**, **Veritas** Cluster Server, **ITrack, Docker, Vcenter, Vsphere.**

**Client: eLan Technologies INC, Irving, TX (Southwest Airlines, Dallas, TX) Jun 2015 – Aug 2016**

**Role: System/Cloud Admin**

**Responsibilities**:

* Administration of over 4500 servers which includes **installation, testing, tuning, upgrading and loading patches, troubleshooting both physical and virtual servers**.
* Managing and maintaining **Centos** servers 4.5.Worked on building **Linux** and **Solaris** servers using **Kickstart, Jumpstart** and experience using VMware templates on **ESX** servers.
* Strong knowledge and experience on **AWS**, specifically in **Lambda, IAM, API Gateway, DynamoDB, Cognito, S3, CloudFront, VPC** and **EC2**.Hands on experience in setting up **database** in **AWS** using **RDS**, storage using **S3 bucket** and configuring instance backups to **S3 bucket** to ensure fault tolerance and high availability.
* Creation of **EC2 roles**, policy document in **AWS** using **AWS** Identity and Access Management.
* Participation from **scratch** for new server’s deployment and installing **ESX** in the servers and making it configured over Intranet.
* Built servers and install applications as per the company standards and requirement.
* Used **Window** 2003 Standard Edition. Upgrade the Firmware of the servers. Participated in mounting, racking and cabling of the servers.
* Monitoring and troubleshooting the server issues. Resolved the user issues related to Users and Groups.
* Creating and mirroring preconfigured Operating system like **Window**/**Linux** and configuring **Oracle/SQL**, Web sphere services in the OS.
* Installing and configuring the software packages based on project requirement.
* Creating and Administrating File systems on **Redhat Linux**.
* Build Servers using kickstart, **Redhat Satellite server** and Jumpstart, implemented upgrade of servers using **Redhat Satellite server**, performed daily administration of **Redhat Satellite servers** to prevent outage and plans for optimized system.
* Monitoring cloud for any issue and **remediate**.
* Involved in developing custom scripts using **Python**, **Perl** & **Shell** (**Bash** ksh) to automate jobs.
* Set up Master **Puppet** on primary server and used **Puppet** agent for deployment, path verification, files permission and automated restarts.
* Worked on installation and configuration of **DevOps** Automation Tool **Puppet.**
* Designed **Puppet** Modules to manage configurations and automate installation process.
* Handling cloud during maintenance/Website deployment on Prod servers through **Puppet**.
* Worked with **Jenkins** to integrate multiple components like deployment notifications, **Puppet** and **Chef** plugins to make the environments dynamic.
* Handling **RHEL**5 for OS issues like space, memory, logging and other configuration changes.
* Have also used and **PUPPET** 3.x automation tool for configuration management in **Linux** systems.
* Creating multiple servers using Virtualization and Linux containers with KVM and **Docker**.
* Installed and configured **Docker** Environments in the UAT to setup and isolate application environments as a Independent software containers, which runs above a single **Linux** Instance.
* Created **Docker** images using a **Docker**file, Worked on **Docker** container snapshots, removing images and managing **Docker** volumes. Experienced with **Docker** container service.
* Worked on creation of **Docker** containers and **Docker** consoles for managing the application life cycle.
* Worked with Document databases (JSON) like **MongoDB(NoSQL)** with replicaset in **Docker** containers.
* Worked with **Puppet** dashboards, Mcollective for parallel orchestration of **Puppet** agents in the infrastructure. Deployed **Puppet**, **Puppet** Dashboard for Configuration management to existing infrastructure.
* Providing Load balancing capability for the virtual infrastructure.
* Performed weekly and on-call deployments of application codes onto different environments like DEV, QA, UAT and PROD.
* Used **Atlassian Product** such as **JIRA** to track issues and Change Management.
* Analyzing software and hardware constraints to plan for new user requirements (capacity planning).
* Performing diagnostics on system operations to identify problems and treads and verify network performance.
* Developing standard operating procedures and documentations for the virtualization environment.
* Providing day-to-day onsite support for networked systems, hardware and related infrastructure.
* Creating a **backup job** and also initiating backup of data center on daily, weekly and monthly basis.

**Environment**: ESX 2.5/3.0, **Window** 2000/2003,**Jira**, **Window** XP, **Redhat** 5/6, NAS, SAN, ISCSI, web sphere 6.0/6.1, oracle 8/9i, NAS, SAN, ISCSI, **Docker**, **Cloudwatch**, VMware DRS Clusters, **Puppet**, **Aws**, Python, Remedy.

**Client: Nextgen IT Solutions, Hyderabad, India Jan 2013 – Dec 2014**

**Role: System Administrator**

**Responsibilities:**

* Setup company’s servers, network and workstations in **Window** and **Ubuntu**. As an Enterprise Server administrator was responsible for remote monitoring of Production, Staging and Beta Environment Boxes for network connectivity and application failures, based on customized monitoring methods.
* Exposed to **cluster environment** in increasing hardware in clusters to perform critical applications on search engines deployment for better performance, involving **roll-over** and **roll-back strategies.**
* Applied patches every quarter regularly to meet audit requirements using Oracle OPS Center, **Redhat Satellite server**, **Up2Date, YUM and RPM tools**.
* Installation of systems using Jumpstart for **Sun Servers** and **Kickstart** for **RHEL** on HP HW.
* Extensive worked on **LVM, RAID** on **RedhatLinux** and **Veritas** volume manager on **Solaris**.
* Resolved configuration issues and problems related to **OS, NFS & SMB mounts, NTP, ISCSI, SMPTP(Postfix), LDAP** user ids **DNS** and **issues**.
* Problem Management conduit between **server engineering, database engineering, data center operations** and several other entities within the Operations Group.
* **Service Monitoring** and **Control leveraging** on availability management (business impact analysis) and capacity management (monitoring & measurement).
* Release/Change Management interface through the staging phase, during and after full implementation of system software up-gradation including database and website applications.
* Service Continuity Management providing planning for preventive maintenance issues, short-term power failures, a single node or component failures and other forms of outages.
* Support of Applications like **Apache Tomcat** and **Java** based applications running on **Linux machines** for multiple clients.
* Regularly applying patches for **Redhat Linux**, **Sun** and **HP** systems.
* Develop **Bashscripts**, **Shell**, **Python** and **Perl scripts** for regular and periodic jobs and also for system administrator jobs.
* Involved in maintenance of systems including patching, setting up Print Servers, Configuring File systems, using **LVM/Veritas** on HPUX/Linux/Sun Solaris OS, involving **SAN** environment.
* Documenting cases, troubleshooting steps and resolution to case management software.

**Environment**: **Redhat Satellite server**, SVN, WebSphere, WebLogic, JBoss EAP 5.2/6.4, **Apache Tomcat 6.x,7.x,8.x** and HTTP (2.0,2.2), **RHEL 4.x/5.x**, OEL, **Solaris**, IBM-AIX, **VMware, LVM, RAID,** Clusters, **Rest API,** TSM,**SAN, NAS, HP Rack servers**.

**Certification and Training:**

* **Redhat Certified Systems Administrator (CERTIFICATE NUMBER: 170-081-053)**
* **Amazon Web Services Certified Developer – Associate (Validation Number FTJJBLEK2JB41CCH)**

**Education:**

* **Master of Science, Texas A & M University, Texas, Usa.**
* **Bachelor of Engineering, Osmania University, India.**