

# Baburaj Kallarakkal

Senior Devops Engineer/Lead



248-229-3794



[https://www.linkedin.com](https://www.linkedin.com/in/baburajkallarakkal/)



[raj.anju@gmail.com](mailto:raj.anju@gmail.com)

[/in/baburajkallarakkal/](https://www.linkedin.com/in/baburajkallarakkal/)

**Senior Devops Engineer** at Apple, responsible for the leadership of a portfolio of Devops(CI/CD) tooling infrastructure for Corporate Systems with an overall experience of 19+ years in **Information Technology**.

Extremely passionate, enabling the enablers by designing, scripting (**Python**) and implementing **creative** and **scalable** solutions on **globally distributed technologies**, made a real impact resulting in cost savings (96k+ annual) and brought **quantitative efficiency** by driving and bringing down production deployment run times from **hours to under minutes**.

Impulse to seek and explore emerging technologies, made a career progression from **Java Programmer to Database Administrator** and as a **System Administrator (Linux) to SRE (Edge/Networking )** with Oracle **Cloud** and finally landing into **DevOps**.

Always inquisitive about Networking(Internet Routing/BGP/ASN), Cloud, Linux and Python.



## Work History

2019-01 - Current



### Senior Devops Engineer/Team Lead[AWS Certified]

*Apple Inc, Austin,Texas*

- Automated **Elastic Search re-indexing using Python** bringing substantial improvement in development cycles.
- Automated Life Cycle Management of Certificates using Python.
- Re-engineered systems to bring 72.2% improvement (reduced execution time from 8.2 hours to 1.2 hours)
- Engineered and automated systems for seamless migration of all Employee Systems VIPs from Legacy **DNS** to **GSLB**.
- Researched and build tools to bring multiple data sources to under one dashboard **ES/Kibana** using **Python/JSON** and **REST** APIs.
- Working closely with **Shield Team** to help find gaps and address them in (WAF) Web Application Firewall Rules.
- Deep dive to identify the gaps in vulnerability scans and engaging AIS to address the high critical CVE's.
- Actively running project to move legacy application to **Kubernetes**.
- Worked in Terraform and familiarity on AWS and GCP.
- Re-engineered systems to reduce execution times from 186mins to under 10mins (Production release).

2015-10 - 2018-12



### Senior SRE (Edge/DNS) [Redhat Certified Engineer]

*Oracle Cloud Computing, Austin, TX*

2014-01 - 2015-09

- Engineered and designed plan to migrate DNS zones to **Dyn/Akamai** from Legacy IPC systems backed by Ultra DNS.
- Part of rapid response team to triage **edge cases** involving DNS latencies(\*wildcards), MTU, Jumbo frames, certificate expirations, Gateway/Routing errors on Overlay Networks, BGP flapping, Firewall issues and **Database Overloads**.
- Designed automations to lock down **Cloud Regions** before GA.
- Wrote several ansible playbooks to automate GRE,NTP, SIEM, PBRUN, LDAP on Cloud Regions.
- Participated in several fire-fights, triaging DNS/Nginx issues to stabilize several Oracle Public Cloud (LBaaS) regions.

## System Administrator (Platform Engineering)

*Oracle Cloud Computing, Austin, TX*

- Worked in **Platform Engineering Team** responsible for the IaaS code infrastructure for **Oracle Cloud Compute (Chef)**.
- Responsible for writing **Chef cookbooks** for bootstrapping the instances across regions and providing support to the same.
- Developed **Python FAB/screen distributed** tooling for patching/automation of compute infrastructure.
- **SME for L2 escalations** for Cloud Services (Messaging, Developer and Data Cloud Services ) ran in Oracle Public Cloud.
- **Discovered critical security bug** on Cloud Compute platform due to **duplicate IP address on OVS/Exalogic and ZFS servers**.
- Active contribution in troubleshooting and rolling out fixes using "**ebtables**" (**MAC address layer**) for Dom-U isolation with XEN (vif-\*) scripts to prevent ARP Spoofing and **NFS hacking**.
- Triaging edge-cases across Cloud Regions involving complex networking issues using **tcpdumps (MTU/Jumbo Frames)**

2012-09 - 2013-12

## Cloud SRE [Oracle Database Cloud]

*Oracle Cloud Computing, Austin, TX*

- Developed SOP's via automation using **Python**(FAB,Chef & Ansible) for L1 support teams.
- Automated patching framework using MCollective/Ruby for entire Java Cloud Service.
- Automated Dataguard Installations using **bash/perl scripts** for faster Exadata Database Cloud Service region setup.
- Part of team in building the entire region for Oracle Public Cloud.

2008-01 - 2012-06

## Oracle Systems DBA [Oracle Certified Professional]

*Ford Motor Credit, Dearborn, MI*

- Resolution of numerous production issues involving sub second response times using **AWR, ADDM** and advanced monitoring.
- Systems DBA for Oracle with **24 x 7 support of 200+ databases** with financial critical data.
- Uncovered critical bugs (character set issues) due to UTF8/Unicode conversion as part of Asian/European Data Center Consolidation.
- Used Oracle's SCN technology to implement a Teradata Standby Database (open sourced article in the blog).

2002-09 - 2007-12

- Involved in performance tuning/debugging in all levels - System, SQL, Linux, Database, and Network for application issues.workload.
- Developed multithreaded Java Program for performing Load Tests and obtain performance statistics for internal DBA Analysis.

### Teradata DBA [ Teradata Certified DBA]

*Ford Motor Credit, Dearborn, MI*

- Created a home grown Standby DB simulating Oracle's SCN technology
- Uncovered critical bugs (character set issues) due to UTF8/Unicode conversion as part of Asian/European Data Center Consolidation
- Developed as scalable solution to simulate load tests via Threads, Users, Dynamic SQL's via command line that goes against heterogeneous DB's

2000-05 - 2002-07

### Datawarehouse Developer[Teradata Certified SQL ]

*Metiom, Merck Medco, The Limited, Kalki, New York, NY*

- Worked on multi terabyte systems involving data migrations, data mining, SQL/PLSQL coding and several migration projects involving terabyte of warehouse data at Medco, The Limited and Intellisys.

1999-11 - 2000-05

### Java Programmer [ Sun Certified ]

*Kalki Communication Technologies, Bangalore, India*

- Worked in B2B and PLC projects utilizing **Java Networking**, Servlets and Core Java Packages.
- Implemented Chat Server solutions with **Java Sockets**.



## Skills

- Databases - Elastic Search, Oracle, Teradata, MySQL
- Programming - Java, Python, Bash, Terraform
- Containers - Docker, Kubernetes
- Monitoring - Splunk
- Routing Layer - Apache, Nginx
- CI/CD - Docker, GIT, Ansible
- Cloud - Oracle Cloud, AWS (VPC/Networking Topology), EC2, S3
- Networking - DNS,LBR,TCP/IP, BGP, Routing, SSL/TLS
- Familiarity - GCP, AWS, Kafka Streaming, MongoDB, Kibana
- Linux - Redhat, Oracle



## Education

2006-01 - 2009-12

### Master of Science: Management Information Systems

*Eastern Michigan University - Ypsilanti, MI*

1995-12 - 1999-12

### Bachelor of Technology

*Government Engineering College - India*

2020-02

2018-07

2017-12

2007-08

2003-07

1999-10



## Certifications

- AWS Certified Solutions Architect
- Red Hat Certified Engineer
- Red Hat Certified System Administrator
- Oracle Certified Professional
- Teradata Certified Administrator
- Sun Certified Java Programmer



## Accomplishments

- - Innovated and implemented an automation solution resulting in substantial reduction of resources (144+ scripts deduced to 8) with a recurring savings of 120,000USD
  - Discovered critical bug in Oracle Cloud Service involving duplicate IP addressing.
  - Innovated and implemented system improvements to bring in 72% to up to 90% improvements in production deployments (Eg. Run times reduced from 186mins to under 10mins and 8.2hrs to 1.2hrs).
  - Innovated and contributed an open source solution for Oracle Backups, rolled same internally to achieve 96,000+ storage costs.



## Open Source Contributions

- <https://sourceforge.net/projects/oraclerman/>  
( Slide Deck -> <http://padmavyuha.blogspot.com/2010/11/oracle-rman-backup-solution-open-source.html> )



## Blog/Github

- <http://intercloudzone.com>  
<https://github.com/baburajk>