**MONICA PALTERU**

**NOSQL DBA Administrator**

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**PROFESSIONAL SUMMARY:**

* **7** years of experience in Designing, Planning, Administration, Installation, Configuring, Troubleshooting, performance monitoring and Fine-tuning of **Cassandra**, **MongoDB, Oracle** in multi-sharded cluster on various **Operating Systems UNIX**, **Linux** and **Windows platforms**.
* Experience in upgrading and migrating various versions of **Cassandra**, **MongoDB, Oracle** databases on different platforms.
* Focused on architecting NoSQL databases like **Mongo**, **Cassandra** and Cache database.
* Proficiency in multiple databases like **MongoDB**, **Cassandra**, **MySQL**, **ORACLE** and **MS SQL Server**.
* Good at Configuring backup, alerts, repairs and monitoring of **Cassandra**, **MongoDB, Oracle** clusters with Ops center and custom scripts.
* Expert in implementing **development, testing, staging, production** and **standby databases** for **OLTP**, **DSS** and **Data Warehousing** using customized **shell scripts** and stepwise.
* Excellent knowledge on the complete architecture with in detail understanding of read, write and delete processes for **Cassandra**, **MongoDB, Oracle RDBMS and SQL Server**.
* Experience in managing various database (**Cassandra**, **MongoDB, and Oracle RDBMS)** environments from availability, performance and scalability perspectives.
* A breadth of experience in setting up multi-datacenter cluster, developing, managing Internet infrastructure implementation, deployments, upgrades as well as maintenance across multiple platforms with automated scripts.
* Experience in applying latest versions or releases of all databases (**Cassandra**, **MongoDB and Oracle)** patches to minimize the bug issues which caused by the previous versions of patches.
* **Proficiency in standby database** (Data guard) installation, configuration, maintenance, and administration.
* Experienced in provisioning and managing multi-datacenter Cassandra cluster on public cloud environment Amazon Web Services (**AWS**) - EC2.
* Extensive knowledge on **MongoDB** database concepts such as locking, transactions, indexes, Sharding, replication, schema design.
* Good knowledge on **Cassandra** internals like Gossip communication, Peer-Peer architecture, Incremental Repairs, Replication & Compaction strategies.
* Experienced in using **Oracle 10g** and **11g** features **Data pump**, **Flash-Back Recovery**, **AWR**, **ASM**, **ADDM**, **Grid Control Monitoring** and **Recycle Bin**.
* Experience in Data Modeling and working with Cassandra Query Language (**CQL**).
* **Proficiency in Golden Gate Unidirectional** and **Bidirectional** replication.
* Experienced in Optimizing, monitoring, performance tuning and understanding of **MongoDB**.
* Strong experience in analyzing chunk migrations, splitting and balancing across the cluster.
* **11g/10g** **Real Application Clusters (RAC) installation and maintenance.**
* Experience in using **Jconsole** for monitoring Heap memory usage & CPU usage.
* Experience in choosing the required **Replication factors** for Key spaces.
* Expert in SQL\* Loader, **export/import** and **data pump** to load data in to tables.
* Experience in **Creation, configuration and administration** of **WebLogic** domains and managed servers for internal and external clients**, JDBC and multi data-source** connections with Oracle 11g database.
* Experience in commissioning and decommissioning nodes along with monitoring of **Cassandra** Cluster.
* Expert in benchmarking and load testing a **Cassandra** cluster using a Java-based stress testing utility called Cassandra-stress tool.
* Oracle Database capacity planning, **space management**, **storage allocation** and different type of storage structure **(SAN/NAS)**.
* Expert in performing daily monitoring of Oracle instances using **Oracle Enterprise Manager(OEM)**, **TOAD**, users, tablespaces, memory structures, rollback segments, logs, and alerts.
* Testing the application and the cluster with different consistency levels to check for the writes and reads performance with respective to Consistency Level.
* Good experience in changing logging levels & Analyzing the log files to determine the flow of the application as well as for resolving issues.
* Experience in creating column Family's bootstrapping, decommissioning, removing, replacing, and repairing nodes.
* Effective communication, interpersonal, analytical skills with proficiency at grasping new concepts quickly and utilizing the same in a productive manner.

**SKILL SET:**

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| **Operating System:** | Windows, Unix, Linux, Mac OS-X |
| **Databases:** | Oracle 11g/10g, MongoDB 2.2, 2.4, 2.6 ,3.0 and 3.2, Cassandra(NOSQL) 2.1, 3.0.0, PostgreSQL, SQL Server 2003/2005/2008 |
| **Programming Languages:** | Java, C, MY SQL, SQL, PL/SQL |
| **Scripting Languages:** | Java Scripting, UNIX Shell Scripting, Perl Scripting |
| **Database Tools:** | Management Studio, Mongo Utilities, SQL\*Developer, TOAD, Export- Import, SQL Loader, TOAD, MS Visio, ASM, RAC, MongoDB |
| **Application& Web Servers:** | Apache Tomcat, Web Logic, IBM http Sphere and Java Web Sphere |

**EXPERIENCE:**

**Zurich Insurance | Plantation, FL May 16 - Present**

**NOSQL/Cassandra Administrator**

**Contributions:**

* Installed, configured and administered various Cassandra 2.x/3.x. platforms in various clustered environments.
* Followed benchmarking standards on setting Cassandra configuration for high throughput and productive

**Write-Heavy** applications.

* Upgraded **Cassandra 2.x platforms to 3.2** and data backed up and moved to different platforms.
* Implemented Cassandra **Security for Apache Cassandra** as well as Datastax Cassandra.
* Deployed applications into **multi cluster production** platforms and verified **environment** **readiness** and **application functionality.**
* Administered Cassandra Cluster using **node tool, JConsole, Opscenter** and used custom proprietary tools.
* Involved in building high performance Cassandra clusters according to best practices, **bootstrapping/**

**Decommissioning/removing** of nodes.

* Involved in capacity planning and requirements gathering for multi datacenter Cassandra cluster.
* Moved data from production to the test environment using **sstableloader.**
* Involved in the process of data mover for disaster recovery platforms **Backup** and **recovery.**
* Scheduling **SQL Server jobs** to monitor **disk space**, **CPU activity** and **Index fragmentation**
* Create and Manage users, roles, security at object level, data encryption
* Performing Database **Installations**, **Upgrades** and **Configurations.**
* Monitoring Databases and troubleshooting **SQL Server** performance issues using **SQL Server Profiler, Trace,** **DTA** and **Index tuning wizard.**
* Used **UNIX shell scripts** to automate the monitoring and **administration process**.
* Worked with NoSQL Platforms and Extensive understanding on relational databases versus No-SQL platforms.
* Used **Cloud Formation Templates (CFT**) on AWS to build a cluster or even a datacenter and joined them into an existing datacenter.
* Used **Zabbix** as a monitoring tool for Cassandra.
* Used **GitHub** repository to save all the scripts being deployed across various environments.
* Used Snapshot & incremental backups to take backup and restore on other node.
* Good experience in **changing logging levels & analyzing the log files** to determine the flow of the application and to solve issues.
* Tuned the **Cassandra.yaml** and **Cassandra-env.sh file** to enhance and improve the performance.
* Responsible for setting up alerts for monitoring and capacity analysis.
* Applied software patches and upgrades to server software for Cassandra Database to stay in compliance with security standards and performance.
* Bulk-loaded the data into Cassandra using sstableloader tool and read the data using sstable2json tool.

**Environmen**t: Cassandra 2.1, 3.0.0 Versions, AWS, Tera Data, Datastax 5.0, Dev Center, Cqlsh, Ops Center, Shell Scripting, SQL Server.

**Progressive Insurance | Cleveland, OH**  **Jan 15 - Apr 16**

**Sr NOSQL/RDBMS Administrator**

**Contributions:**

* Worked as a dedicated performance Admin for few projects and Used **Jmeter** to load and Performance test and helped the App team to come up with apps that best perform.
* Installed, Configured, **Tested** **Datastax** Enterprise Cassandra **multi-node cluster** which has **4 Datacenters** and **5 nodes each.**
* Migrating oracle data model to Cassandra to achieve and reduce the **SLA** from 10 minutes to 2 seconds and also improve user experience by using **kafka** and **cassandra**.
* Analyzed the performance of Cassandra cluster using **nodetool TP stats** and **CFstats** for thread analysis and latency analysis.
* Built Cassandra Cluster on both the **physical machines** and on **AWS**.
* Automated the process of installation and configuration of the nodes using **Puppet**.
* Upgrading DSE search with **Solr** and **DSE Cassandra** cluster from **4.6 to 4.8.8**.
* Proficiency in **Unix/Linux** shell commands.
* Worked closely with Data architect and the Linux admin team to **set up, configure, initialize** and **troubleshoot** an experimental cluster and **patching** Linux systems.
* Developed stored procedures, triggers in **MY SQL** for lowering traffic between servers & clients.
* Ability to carry out security tasks at network level such as block/unblock TCP/IP ports through firewall on both Linux and windows and **block/unblock** remote access to **MY SQL Server.**
* Performed regular maintenance activities like **Patching, User Maintenance, Database Refresh and Disaster Recovery** tasks in **Oracle 10g** as of when required.
* Designed and implemented dual datacenter setup for all Cassandra clusters.
* Implemented spark solution to **enable real time reports** from **Cassandra data**.
* Monitored **Thread** **pool,** **Cache settings** using administrative tools.
* Implemented **backing map** to evict data from coherence solutions to Cassandra layer.
* Involved in **capacity planning** and requirements gathering for multi datacenter Cassandra cluster
* Involved in **NoSQL** **database design, integration** and **implementation**.
* Good at using **sqoop** **to load data** to and from Cassandra cluster.
* Involved in upgrading Cassandra cluster and doing patches.
* Scheduled **repair** and **cleanup process** in production environment during off peak times
* Involved in the process of data mover for disaster recovery platforms Backup and recovery.
* Performed Cassandra health checks for several key components like Data Model Review, Operations Review (**Disk Configuration, JVM Heap Size, Memory, Network Throughput**), Application/Development Review (**Concurrency**, **Consistency Levels for Reads/Writes, Security**).
* Applied best practice guidelines for designing, deploying and managing Datastax Enterprise (DSE) database

clusters.

* Tuned Cassandra for efficient operation using multiple views into **system metrics,** including **OS stats, GC**

**logs, JMX, Opscenter,** and **cassandra-stress**.

* Acquaintance with hardware, including RAID, multi-processor architecture, networking and how it relates to

Cassandra database operations and connectivity.

**Environment:** Datastax 4.7, Cassandra 2.1, DevCenter, Cqlsh, OpsCenter, Shell Scripting, Eclipse, MY SQL, Windows7, AWS.

**Geisinger Insurance (GHP) | Danville, PA Dec 13 - Dec 14**

**MONGO DB DataBase Administrator**

**Contributions:**

* Upgraded Mongo systems to 2.2.3 and soon 2.4 and involved with **creating shards, replica sets, monitoring,** and **projections** for Mongo Systems.
* Involved working with teams to find performance related activity with the Application as well as with the database side.
* Administered multiple environments (up to 25TB), automating backups and **checks, restore, validation/integrity checks**, growth modeling and predictions, and system expansion; assisted with upgrade efforts with MongoDB.
* Used MongoDB third party tools (**ROBO MONGO, MONGOOWL, MONGOVUE**) and mongo-built in binaries to monitor and analyze the performance of MongoDB.
* Installation of MongoDB on physical machines, **Virtual machines** as well as **AWS Backup** & **Recovery**, Database optimization and Security maintenance.
* Configuring high availability using geographical **MongoDB replica** sets across multiple data centers.
* Architecture and Capacity planning for MongoDB/ Cassandra clusters.
* Implementing on-premise **MMS monitoring** and backup solution.
* Responsible for developing and maintaining a scalable reports and analytical platform using Jasper Sever, graylog dashboards, ElasticSearch with a **MongoDB/MySQL** backend.
* Worked on MongoDB database concepts such as locking, transactions, **indexes, Sharding, replication, schema design.**
* Installed MongoDB, created setup replica sets, data scaling and clusters. Installed MMS and setup

monitoring agents. **Configured alerts for relevant mongo metrics**.

* Migrated Mongo database systems from **No-SSL authentication to SSL authentication** using certificates.
* Managing Mongo databases using MMS monitoring tool.
* Involved in the process of Conceptual and Physical Data Modeling techniques.
* Involved in Hardware installation and capacity planning for cluster setup.
* Involved in the hardware decisions like **CPU, RAM** and disk types and quantities.
* Worked closely with developers in choosing **compaction strategy** and **consistency levels.**

**Environment:** MongoDB, MMS, OPS manager, mongo stat, mongo files, Linux/Unix, LVM Snapshots, Backup scheduler, Data guard, Pearl, PyMongo.

**Aftech Systems Pvt Ltd | India Jun 11 - Nov 13**

**DATABASE ADMINISTRATOR**

**Contributions:**

* 24x7 on-call production database support
* Architecting, Installation, Configuration, Maintenance of **Oracle 11g, 10g databases.**
* Installed Oracle 10g RAC, **Standby Databases for high availability** and **disaster recovery/reporting purpose**.
* Review of Database logical and **Physical design, implementation** and **maintenance**.
* Worked on **AWS disk groups** and **raw devices.**
* Configuring the Physical standby database to the **production database** using **Data Guard**.
* Install, upgrade and maintain **Oracle 11g, 10g databases.**
* Worked on multi-tier application high availability infrastructure
* Database monitoring and performance tuning using using **Statspack, AWR, TKPROF /AWR/ADDM.**
* Created **triggers, packages**, procedures and functions in **PL/SQL**.
* Application Tuning by tuning queries, identifying problematic code, creation of **indexes, re-writing queries** using an **optimized path,** Creation of Materialized Views and gathering necessary statistics on objects etc.
* Implementing Database **Security, Management** of **role-based security**
* Performed **backups** and **recoveries**
* Applying Patches.
* Performing day-to-day database administration tasks like monitoring tablespace usage, **checking alert log, trace files,** monitoring disk usage, Table/index analyze jobs, database backup logs etc.
* Write and modify **UNIX shell scripts** to manage Oracle environment.
* Logical and physical **database design**
* Cloning databases using scripts as well as **RMAN**. Installation, setup and configuration of Data guard.
* Used **PL/SQL, SQL Loader** as part of **ETL process** to populate the operational data store.
* Migrated databases from Windows to Linux
* Security User Management, Privileges, Roles, Auditing, Profiling, Authentication.

**Environment:** Oracle 11g/10g RAC, RMAN, RedHat LINUX, Sun Solaris, AIX, Golden Gate, SQL, PL/SQL, TOAD, SQL\* Loader, Data pump, Data guard, OEM (Grid Control).

**British Petroleum | India Jun 10 - May 11**

**ORACLE DBA**

**Contributions:**

* **Support & Maintenance** of **Development Databases** on various servers.
* **Logical** and **Physical** Data Modeling.
* Coordinate Changes to Computer databases.
* Installation, **configuration** and **administration** of oracle database.
* **Capacity Planning, Storage Allocation** and **Space Management**.
* Creating **users, tables, views, roles, database links**, Performing **Exports/Imports.**
* Planning **Backup/Restore Strategy, Planning** and scheduling **hot/cold Backups**.
* Developed **PL/SQL Packages,** Procedures and Functions
* Analyzing, Sizing the database for future growth.
* Moving data between **schemas,** databases using export/import utility
* Automating the **process/Scheduling Jobs** using DBMS\_JOB.
* Writing scripts for monitoring the database, **Configuring SQL\* Net.**
* Integrating multiple application databases with multiple corporate **entities, receiving business data feeds.**
* Writing PL/SQL Stored procedures, **packages & triggers** to support e-commerce application.
* Supporting the **Development team**, supporting **production Environment**

**Environment:** Oracle 10g IBM AIX, Sun Solaris, RedHat Linux, Exports/Imports, SQL, PL/SQL, SQL\* Loader, SQL\* Net.

**EDUCATION:**

**Bachelors of Technology,** Computer Science and Engineering, **Andhra University**.