**Shiva Ramadugu**

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**Sr. MongoDB Administrator**

**PROFESSIONAL SUMMARY**

* Around 7 years of IT experience in database development, design, implementation and administration of **MongoDB** (versions 2.x, 3.0.0, 3.0.5 and 3.2x) and **Oracle.**
* Experience in setup and administration of **MongoDB clusters** on Amazon Web Services EC2 instances.
* Experience in upgrading and **migrating** various versions of Mongo database on different platforms and provide solutions related to the migration of MongoDB.
* Extensive experience in designing MongoDB multi-sharded clusters and replica sets per business needs.
* Good experience on MongoDB **scaling** across data centers and in-depth understanding of MongoDB HA strategies.
* Designed and developed custom **Mongo** **configurations** specific to client’s needs.
* Ensure the continuous availability of mission critical **MongoDB clusters**.
* Creation and administration of **MongoDB clusters** on **Amazon Web Services EC2** instances.
* Automated the creation of **Mongo Shards** on Amazon Web Services EC2 instances using **Cloud Formation and Auto-Scaling.**
* Experience in Backup and Restore of MongoDB utilities such as mongodump, mongorestore and other custom scripts.
* Experience in Disaster recovery **strategies** and regular recoverability test.
* Created **multi-stage** aggregation pipelines for data processing and analysis.
* Experience in Tuning and optimizing access patterns (**queries, query sequences, commands**) for MongoDB.
* Automate routine tasks using **Linux shell** scripts and **Capacity planning, tuning, authentication** and **authorization**.
* Efficient in handling Index rebuilding, maintenance activities on secondary's without impacting business in rolling fashion across the replica sets.
* Used open source tools like **Mongochef**, **Robomongo** for crud operations.
* Install and run MongoDB with **multiple instances** in servers.
* Strong Experience in all facets of Software Development Life Cycle (SDLC) - **Planning, Analysis and Design.**
* Installation of **Packages, Patch Management, and Upgrades.**
* Converted Security protocol from **MongoDB-CR** to **SCRAM-SHA-1**.
* Experience in **upgrading** and **migrating** various versions of Mongo database on different **platforms**.
* Tuned **CRUD** operation by building appropriate indexes, Write Concerns, Read Concerns, Read Preferences.
* Developed enhancements to MongoDB **architecture** to improve performance and scalability.
* Familiar with **MongoDB clusters**, **Python scripting** to load **unstructured data into Sharding environment**.
* Developed Python scripts to monitor health of Mongo databases and perform ad-hoc backups using Mongo dump and Mongo restore.
* Migrated Mongo database from **MMAPV1** storage engine to **Wired Tiger** storage engine
* Experience in handling MongoDB database concepts such as locking, transactions, indexes, Sharding, replication, schema design.
* Excellent experience in Installation and configuration of ORACLE 11g 10g 9i (9.2.0.8), on Operating Systems **UNIX**, **Linux** and Windows platforms.
* Proficiency in setting up and administering 10g RAC and 11g RAC with Automatic Storage Management (**ASM**) and experience with very large scale database environment and mission critical large **OLTP** and **OLAP** systems.
* Experienced in using 10g and 11g features Data pump, Flash-Back Recovery, **AWR**, ASM, **ADDM**, Grid Control Monitoring and Recycle Bin.
* Oracle Database capacity planning, space management, storage allocation and different type of storage structure (SAN/NAS)
* Extensive experience Real application Clusters (RAC), ASM, RMAN, Data Guard and maintain Standby database.
* Excellent knowledge in **SQL**, Partitioning, Data Modeling with utilities like ER/Studio, OLAP, Logical and Physical Database Design, Procedures, Functions, Packages, Database Triggers.
* Expert in implementing development, **testing**, staging, **production** and standby databases for OLTP, DSS and Data Warehousing using customized **Shell Scripts** and stepwise.
* Experience in using Unix/Linux utilities for analyzing logs, and **troubleshooting** the applications with Application servers and Security/Identity management servers.
* Hands-on experience using GitHub, Jenkins.

**TECHNICAL SKILLS**

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| **Operating System** | Windows, Unix, Linux, Mac OS-X |
| **Databases** | Oracle 9i,10g, MongoDB 2.2, 2.4, 2.6 ,3.0 and 3.2 |
| **Programming Languages** | Java, C, SQL, PL/ SQL |
| **Scripting Languages** | Python, java Script, Ruby Scripting, Shell Scripting |
| **Database Tools** | Mongo Utilities, RoboMongo, MMS(cloudManager), Oracle RMAN, Export- Import, SQL PLUS, SQL LOADER, RMAN, OEM, Sql Navigator, SQL\*Loader, ASM, Export/Import, TOAD, Patch Management, Data pump, Data guard, |
| **Application & Web Servers** | Apache Tomcat, Web Logic, IBM HTTP Server and Web Sphere |
| **Development Tools** | PyCharm, Python IDLE, Sublime text |

**PROFESSIONAL EXPERIENCE**

**EarthLink, Rochester,** NY Jan 2016-Present

**Role: Sr. MongoDB Administrator**

**Responsibilities:**

* Responsible for administration, maintenance, Performance analysis, and Capacity planning for Mongodb 2.x, 3, 0.x and 3.2 versions.
* Deployed, managed and administered **MongoDB** clusters.
* Creation and administration of **MongoDB clusters** on **Amazon Web Services EC2** instances.
* Automated the creation of **Mongo Shards** on Amazon Web Services EC2 instances using **Cloud Formation and Auto-Scaling.**
* Implemented and monitored deployments on MongoDB **Cloud Manager** and MongoDB **Atlas.**
* Creation, configuration and monitoring Shards. Analysis of the data to be shared, choosing a **shard key** to distribute data evenly.
* Ensured the **continuous availability** of our mission critical MongoDB clusters.
* Architecture and Capacity planning for MongoDB clusters.
* On-premise **MMS monitoring** and backup solution.
* Worked on **Disaster recovery** strategies and regular recoverability test.
* Configuration and installation of **MongoDB Cloud Manager in Test, QA** and Prod including setup of alerts, authorization and backup processes.
* Used MongoDB third party tools (**ROBO MONGO, MONGOOWL, MONGOVUE**) and Mongo-built in binaries to monitor and analyze the performance of MongoDB.
* Analyze usage of data and work with application teams on implementing collection index strategies, proper use of aggregation/query frameworks, event changes to the document model.
* Installation of MongoDB on physical machines, Virtual machines as well as SSL, **Backup & Recovery**, Database optimization and Security maintenance.
* Ensured System sizing and Tuning with proper Mongodb use of memory, pre-heating data, and proper configuration of storage read ahead, NUMA, and Huge Pages.
* Worked on MongoDB database concepts such as locking, transactions, **indexes, sharding, replication**, schema design.
* Configuring high availability using geographical MongoDB replica sets across multiple **data centers**.
* Analyze Mongodb syslog, OpLog file, MongoStat, Server Status, and MMS/OPS manager, to determine and validate root cause analysis of outages and performance bottlenecks.
* Migrated large amount of data between mongo clusters using mongodump, mongorestore, mongoexport and mongoimport.
* Migrated Mongo database systems from No-SSL authentication to SSL authentication using certificates.
* Migrated Mongo database from **MMAPV1** storage engine to **Wired Tiger** storage engine.
* Managing Mongo databases using MMS monitoring tool.
* Developed Python scripts to monitor health of Mongo databases and perform **ad-hoc** backups using **Mongo dump** and **Mongo restore**.
* Strong experience in analyzing **chunk** migrations, splitting and balancing across the cluster.

**Environment: MongoDB, Replication, Sharding, MMS, Wired Tiger, Python, PyMongo, Robomongo, Mongoowl, JavaScript, Shell Scripting, Mongo Utilities, AWS CloudFormation, AWS Auto Scaling, Amazon EC2.**

# Client: UPS, Paramus, NJ Mar 2014- Jan 2016

**Role: Sr. MongoDB Administrator**

**Responsibilities:**

* Implemented the loading of Monthly Statements to MongoDB. Developer and administrative tasks includes Data Modeling and Schema Design development using testing configuration, installation and deployment to **Dev, QA** and **Prod** aggregate functions.
* Provided **24x7** productions on call support for **MongoDB databases**.
* Used CloudFormation and Auto Scaling for creating Mongo Shards.
* Designed and implemented the **MongoDB schema, Replication** and **Sharding**.
* Creation and administration of **MongoDB clusters** on **Amazon Web Services EC2** instances.
* Performance tuning and indexing strategies and **MMS Monitoring, Alert, Backup** and **Restore**. Sizing of Oplog based on Workloads and to maintain replication properly across all the nodes.
* Knowledge on **Sizing, Tuning, Authentication, Authorization**.
* Implemented multiple **CRUD** operations and familiar with new enhancements in each release.
* Performed day-to-day Database Maintenance tasks including Database **Monitoring, Backups, Space**, and **Resource Utilization**.
* Implemented UNIX shell script to automate password changes, gathering performance statistics, collectionstat, mlogfilter and mtools query performance analyzer.
* Upgraded Mongo systems and involved with creating **shards, replica sets, monitoring**, and **projections** for **Mongo Systems**.
* Potentially long running **index building** operations performed by creating index in background.
* Installation of MongoDB on **Physical machines**, Virtual machines as well as AWS.
* Distributing replica set members across geographically distinct data centers for redundancy and provides **fault tolerance** if one of the data centers is unavailable.
* Converted secondary node to **Arbiter** based on requirement to reuse of storage for different application.
* Sizing of **Oplog** based on Workloads and to maintain replication properly across all the nodes.
* Maintaining **sharded cluster** availability and security across all the nodes.
* Configured **hidden replica member** and it is used for reporting and backups.
* Converted replica set to sharded cluster because of data size growth and better query rate planning.
* Configuring high availability using **geographical MongoDB** replica sets across multiple data centers. Enabled Tag Aware Sharding by tag specific ranges of the shard key and associate those tags with a shard.
* 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.
* Worked on multiple **BSON type** objects and used based on requirement.

**Environment: MongoDB, MMS, Replication, Sharded cluster, BSON, AWS CloudFormation, AWS Auto Scaling, Amazon EC2, OPS, Aggregation, Arbiter, Mongo Utilities, Balancer.**

**Lincoln Financial Group, Fort Wayne, IN** May2013- Feb 2014

**Role: Sr. MongoDB Administrator**

**Responsibilities:**

* Installed and upgraded **MongoDB clusters** on physical and virtual machines including SSL.
* Performed deployment, management, configuration, monitoring of production Replica sets, Shard sets and MongoDB clusters.
* Implemented features of MongoDB to fit the requirements of the client and the data according to the need of consistency, availability, sensitivity, redundancy, scalability, security.
* Improved and optimized **CRUD** operations performance for read and write operations.
* Tuned CRUD operation by building appropriate indexes, write concerns, read concerns, read preferences.
* Created multi-stage aggregation pipelines for data processing and analysis.
* Performance tuning and indexing strategies and **MMS Monitoring, Alert, Backup** and **Restore**.
* Sizing of Oplog based on Workloads and to maintain replication properly across all the nodes.
* Performed day-to-day Database Maintenance tasks including **Database Monitoring, Backups, Space,** and **Resource Utilization**.
* Developed and documented best practices for MongoDB.
* Improved and optimized **CRUD** operations performance for read and write operations.
* Implemented **GridFS** and Mongo files for large **chunks** of data.
* Implemented features of MongoDB to fit the requirements of the clients and the data according to the need of **consistency, availability, sensitivity, redundancy, scalability, security.**
* Configured replication with replica set factors, arbiters, voting, priority, server distribution, **slave delays**.
* Manage and review **MongoDB log files**.
* Work with operations to deploy **MongoDB updates, patches** and **version** upgrades when required.
* Looking after MongoDB cluster **job performance, capacity planning, connectivity** and **security**.
* Developed standard operation Procedure (SOP) document for maintenance and troubleshooting of the MongoDb environment.

**Environment**: **MongoDB, MMS, GridFS, Shell Scripting, JSON, SSL, Linux Red Hat, Ubuntu**

**Cpg , NYC, NY** Nov 2012-May 2013

**Role: Oracle DBA**

**Responsibilities:**

* Installed and Configured high availability environment Oracle 10g Real Application Cluster (**RAC**) Instances with stand by database (**data-guard**).
* Provided 24x7 production support Managing Oracle 10g RAC with oracle cluster ware and non-RAC databases using Oracle Enterprise Manager (OEM) **Grid Control**.
* Used **Automatic Storage Management** (ASM) for multiple instances of Oracle 10g.
* Frequently tested and updated development databases to production as well as used **database cloning**.
* Monitored and managed **redo log**, **archive log**, and control file multiplexed destinations.
* Implemented **privacy, security**, and **auditing**.
* Managing **schemas, users, resource plans, logical/physical storage structures, memory, partitioning, replication, upgrades, patches** etc.
* Monitored the databases using **Automatic Workload Repository** (AWR), and **Automatic Database Diagnostic Monitor** (ADDM).
* Solved storage-related problems on many occasions.
* Performed and maintained database backups using **Enterprise Manager** or **RMAN** as well as OS utilities.
* Deleted obsolete/outdated backups for easy management and efficient storage utilization.
* Implemented test to switch any standby database / **Oracle Data Guard** to the production role for minimizing the downtime associated with outage and preventing any data loss.
* Configured and utilized **Recovery Manager Catalog**.
* Used **Oracle Scheduler, UNIX shell scripting /CRON** jobs for automating various tasks.
* Extensively used dynamic performance views, data dictionary, as well as Enterprise Manager to monitor the database and perform tuning activities.
* Tuned the database using **EXPLAIN PLAN, Auto Trace, SQL Trace**, (advanced version of UTLBSTAT and UTLESTAT).
* Proactively monitored alert log and various trace files to look for potential as well as intervened in order to resolve problems.
* Participated in the configuration of the databases for minimal/no data loss and speedy recovery in case of critical failures.
* Consulted frequently and participated with the database design team and adhered to the business rules and maintained documentations and standards.
* Partitioned appropriate tables to optimize performance and simplified maintenance work. Created and executed various database queries. Administered database using Oracle Enterprise Manager/TOAD. **Performed RMAN** and user managed backup also **hot /cold backups**.
* Monitored and managed databases to maintain high level of performance and availability as well as performed other routine **DBA** tasks.

**Environment: Oracle 12c,11gR2, Red hat Linux 5.X, Oracle 11gRAC, Toad, SQL-navigator, PL/SQL, Oracle Exadata EX2, SQL\*Loader, ODBC, OEM, ASM, OLTP, 11g Grid Control, Oracle RAC Grid Control, and Data guard.**

**Client: Air India, India**  Jan 2011-Oct 2012

**Role: Oracle DBA**

**Responsibilities:**

* Responsible for Installation, administration and upgrade of **Oracle RAC 9i/10g&Oracle 9i/10g production and development databases**.
* Provided technical support for **Oracle Server** to customers for **Production Database**.
* Supported customers including international customer to install the developed application on different operating system e.g**. windows**, **UNIX** of all flavors on **Oracle Database** (9i, 10gR1).
* Also provided support to customers to manage their operational data ranging from GB to TB in Oracle database, solving of space problem, data loading problem Experience with building, installation, upgrade, and patching of Oracle.
* Worked on in house **installation of Oracle** on different platforms, loaded user data to reproduce the problem, applied new **Oracle patch**, managed database backup using **RMAN**, upgraded Oracle database, prepared Oracle database environment for the application analyst.
* **Analyzed SQL queries** causing performance problems.
* Supported **Oracle DB backups** (online/offline), logical backups and **UNIX scripts**, created clone databases, configured standby database, performed DBA day-to-day activities.
* Involved in design and enforcing of standards in place to ensure that all application design and code is produced with proper integrity, security and performance.
* Responsible for **network configuration** and involved in a **Client –Server environment** using **TNS, LISTNER, Net Configuration Assistant** and other configuration files.
* Refreshed schema using **Export/Import**. Created the **database, tablespace, tables, indexes, set privileges** and **user logins**.
* Monitored and performed database sizing, tablespace management and undo tablespace management, transaction management and security administration.
* Provided **OS (RAM, I/O, CPU) tuning** for **Oracle Database**.
* Created and Managed **Standby Database**, Installed and configured **Data Guard**.
* Performed migration of database with **Export, Import, Datapump** and **SQL\*Loader** jobs.
* Created and enhanced **DB utilities** needed for automation of system and unit tests and investigation of production issues, troubleshooting.
* Performed SQL query optimization by gathering statistics and by using explain plan, STATSPACK, TKPROF and SQL Trace.
* Worked on Unix Shell scripting in csh, ksh for automating startup/shutdown of databases, getting system alerts etc.
* Applied patches both Server side and Client side.
* Supported the Upgradation from Oracle Server 8i and then to 9i/10g.
* Cloned databases using scripts as well as RMAN. Installation, setup and configuration of Data guard.
* Supported Security User Management, Privileges, Roles, Auditing, Profiling, Authentication.
* Used Oracle Advanced replication feature to set up multi-master replication, dealt with conflict resolution and performance issues.

**Environment:** Red Hat, Oracle 9i/10gR2, Oracle Enterprise Manager, SQL\*Plus, PL/SQL, SQL\*Loader, Toad 9.

**Client: Novartis, INDIA**  Aug 2009-Dec 2010

Role: Oracle DBA

**Responsibilities:**

* Responsible for managing **production**, development & test databases and applications.
* Oracle database **upgrade** from 9i to oracle10g
* Designing and creating schema objects like **Database tables, indexes, views, synonyms**, and all **schema objects** in Oracle.
* Responsible for writing database programming to Store/Retrieve the information from the database using SQL.
* Wrote Stored Procedures according to specs and control files for input to **SQL\*Loader** utilities for loading data from external files into the Oracle database.
* Creating databases, objects, roles and privileges.
* Partitioned large tables to increase the performance.
* Database migration from Windows to Linux using exp/imp and **Datapump**.
* Configured scripts to monitor activity with database.
* Implement **Hot, Cold** and **RMAN** Logical backup plans.
* Involved in the project implementing and configuring Real Application Clusters (RAC) 2 nodes on Oracle 10g with Automatic Storage Management (ASM).
* Used Oracle **UTL file** features to create flat files and Procedures for Data Extraction.
* Oracle Configuration. Oracle Tuning. Oracle Patch Administration.
* Creation **of Table space, Data files, Indexes** and monitoring them.
* Creation of **Users** and Granting them **privileges** and **roles**.
* Performed Database Tuning. Performed Database Security and Integrity. .
* Wrote extensive Sub Queries, **PL/SQL procedures**, functions, database triggers and packages.
* Writing **shell scripts** to automate the **data loading**.
* Monitoring the data loading jobs and tuning the Sql queries.

**Environment**: Oracle 9i/10g, SQL Server 2005, IBM AIX UNIX, TOAD, SQL\*PLUS, Explain Plan, UNIX Shell Scripting, Quest software tools, PL/SQL navigator.