



# Henri Siyapdje

## PostgreSQL Database Administrator

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## **SKILLS**

Certified AWS Solutions Architect with a wealth of experience and unwavering passion for PostgreSQL database administration. Possess extensive expertise in the installation, upgrade, configuration, backup, and recovery of PostgreSQL servers, spanning versions 9.6 to 14 across standard and cluster environments, and ensuring robust performance and reliability. Fluent in French.

- Implemented **High Availability solutions** with **PostgreSQL** like **Streaming Replication with EFM 3.9, 4.0**
- Configured **Logical Replication to Higher Versions**
- Performed **Point in time Recovery**.
- **Install, configure, test, monitor, upgrade, and tune new and existing PostgreSQL databases 9.6, 10, 11,12,13, and 14.**
- Recommends and oversees the implementation of database-level **configuration changes to optimize performance**. Ensures maintenance of the physical integrity of all production databases
- **Develop SQL reports** that meet client expectations for the application (used by the custom application)
- **Tuning autovacuum parameters** to ensure up-to-date table stats and reclaim space consumed by dead tuples.
- Ensure **night cron jobs** for **backups, re-indexing & vacuuming & materialized views** executed properly on **24/7 high availability Postgres production and development databases**.
- **Monitoring tools** such **Datadog with PagerDuty**
- Take backups with **pg\_dump, pg\_dumpall, pg\_basebackup, BART**.
- Contributed to **decreasing the need for downtime** by developing and improving **procedures for automated monitoring and proactive intervention**.
- **Studied and stayed current on the features and functionality of PostgreSQL**.
- Proactive managing **standby replication methodologies like Streaming replication and hot standby for disaster recovery**.
- Scheduling daily **Point in time recovery (PITR)** to the development environment for proper product testing.
- **Skilled in implementing robust backup and recovery solutions for SQL Server**.
- **AWS** (Glue, EMR, EC2, ECS, Lambda, S3, SQS, SNS), **Docker**,
- **Experience with data manipulation** and processing techniques.
- **Hands-on experience using MERN stack open - source technology**
- **(MongoDB, EXPRESS, REACT, and Node.js)**

## **EXPERIENCE**

**LaPerle – Software Engineer**  
**February 2024 – Present**

- **Successfully installed, created and configured PostgreSQL databases on Premise, EC2, RDS and Aurora environments, ensuring optimal performance and reliability.**
- **Implemented security best practices for PostgreSQL databases, including encryption, access controls, and compliance requirements.**
- **Stayed updated with best practices, new features, and services relevant to database administration.**
- **Migrated of more than 200 databases from on prem to EC2 and Aurora using Database Migration Service (DMS), improving scalability and reducing operational complexity.**
- **Implemented partitioning strategies for tables ranging from 12TB to 26TB, enhancing query performance.**
- **Created and maintain database maintenance scripts for tasks such as backup, monitoring, and performance optimization.**
- **Continuously improved operational efficiency through automation of repetitive tasks and processes such as Backup Validation, Database refresh, Capacity Planning etc...**
- **Proactively monitored and tuned databases using Datadog, CloudWatch and**
- **Performance Insight, ensuring optimal resource utilization and preventing outage.**
- **Developed a shell script to stabilize CPU and memory utilization, mitigating the risk of resource-related outages due to poorly written application codes.**
- **Reviewed queries, Tuned and rewriting them for faster response.**
- **Supervised all database releases, ensuring smooth deployments and minimizing downtime.**
- **Collaborated with development teams to tune code for faster response times, enhancing overall system efficiency.**
- **Presented database changes in CAB review for approval before implementation.**
- **Successfully upgraded clusters from PostgreSQL 12 to PostgreSQL 14, staying current with the latest features.**
- **Infrastructure Expansion and Optimization:**
- **Set up logical replication for reporting purposes.**
- **Set up cross-regional streaming replication (1 primary with multiple replicas) for enhanced data redundancy.**
- **Upgraded with pglogical for minimal downtime.**
- **Conducted quarterly DR drills.**

- Conducted **monthly backup checks** to ensure data recovery readiness.
  - . Performed **trend analysis on monthly basis to optimize system performance**.
- Performed **quarterly Capacity planning** for proper server provisioning.
- **Troubleshoot and redesigned event triggers** for proper functioning, ensuring reliable event-driven operations.
- **Identified and resolved performance bottlenecks through query optimization, indexing strategies, and database schema design enhancements.**
- **Utilized monitoring tools and metrics to proactively identify and address performance issues.**
- **Redesigned database views for improved response times**, enhancing overall user experience.
- **Rewrote queries for better performance.**
- **Created detailed documentation for SOP**
- Utilized **AWS storage options such as Amazon S3** to optimize storage costs.
- Implemented **data lifecycle policies to automatically move less frequently access data to lower-cost storage tiers, such as S3 Glacier or Glacier Deep Archive.**
- Utilized **AWS Cost Explorer** to identify opportunities for Reserved Instance or Savings Plan purchases based on historical usage data.

**Acess Global Service Corporation — PostgreSQL Database Administrator**  
**December 2021 – November 2023**

- **Installing and Configuring PostgreSQL** from source or packages on Linux machines.
- Experience **designing database structures, indexes, views, and partitioning.** Implementing backup and recovery.
- **Install, configure, test, monitor, upgrade, and tune** new and existing **PostgreSQL databases 9.6, 10, 11, and 12,14.**
- **Monitored projects like streaming Replication, Logical Replication,**
- **Performed Point In Time Recovery**
- **Conducted a lot of capacity planning.**
- Experienced in **PostgreSQL Enterprise Edition version 9.6** and also in **PostgreSQL Community Edition open source 10, 11, 12, 13, 14, CPU patches**, database Upgrades, Migration, Backup, Recovery, troubleshooting, security, Streaming Replication, Logical Replication.
- **Plans and coordinates the administration of PostgreSQL databases** to ensure accurate, appropriate, and effective use of data, including database definition, structure, documentation, long-range requirements, and operational guidelines.
- **Managed and Administer PostgreSQL on AWS services such EC2, RDS and S3 bucket.**
- **importing data into PostgreSQL on Amazon**
- Used **Python** to create and connect to a database, **create tables, insert and update data.**

- Implemented **automation for Unix and Linux environments using Python and Shell scripts.**
- **Aided with application implementations using primarily Linux platform on AWS.**
- Refreshed the **Development, test, and UAT** environments with **production data.**
- Setup and maintenance of **Postgres master-slave clusters utilizing streaming replication with EFM for automatic failover**
- **Cross-datacenter disaster recovery and backup architecture**
- Performing **schema management, database sizing, and maintaining privileges.**
- **Planning, deploying RDBMS Upgrades/Patches, and performing other weekend maintenance activities as a part of On Call support.**
- Establish and maintain **security and integrity** controls.
- Perform **quality control audits** to ensure **accuracy, completeness, and proper usage of data in tables** and various **support tools, such as database dictionaries.**
- **Fixing the memory issues and suggesting the best practices.**
- Responsible for **monitoring environments using monitoring tools such as Datadog with PagerDuty**
- **Performance monitoring and optimization.**
- Experienced in **migrating from on-premises PostgreSQL to Amazon Aurora RDS database.**
- Installing and configuring **Object level replication (Logical Replication).**  
Installing and configuring **connection pooling tools like PgBouncer and pgpool etc.**
- Configuring **log analysis** tools like **pgbadger**
- **Scheduled maintenance activities to vacuum and analyze to improve the query response time.**
- Maintaining **custom vacuum strategies at table and DB level, Query optimization, and troubleshooting.**
- **Troubleshoots problems regarding the databases.**
- Close collaboration with **engineering on schema additions and updates.**

## **BANK OF AMERICA - DETROIT, MI**

**June 2017 – August 2021**

### **PostgreSQL/ Database Administrator**

- **Provided comprehensive database administration for PostgreSQL databases,** ensuring optimal performance and data integrity.
- **Designed and optimized database structures, indexes, views, and partitioning** for efficient data retrieval.
- **Implemented robust backup and recovery strategies to ensure data availability** in case of disasters.
- **Monitored database performance and proactively identified and resolved performance bottlenecks.**
- **Maintained security and access controls to safeguard sensitive data.**
- **Collaborated with development teams to ensure smooth database integration with applications.**

- Experience with AWS transit Gateways, direct connect, peering, VPC, VPC Flow logs, Insights, RT53
- Migrated from On-Premises PostgreSQL to Amazon RDS database.
- Managed and Administer PostgreSQL on AWS RDS
- Using SSL with PostgreSQL DB Instance.
- Managing upgrades of PostgreSQL database version from 9.6,10 to 11.
- Installed and configured SQL Server
- importing data into PostgreSQL on Amazon
- Used **Python** to create and connect to a database, **create tables**, insert and update data.
- Implemented **automation for Unix and Linux environments using Python and Shell scripts.**
- Refreshed the **Development, test, and UAT** environments with **production data.**
- Active participant in discussions related to **Backup Strategy, and DR architecture.**
- **Patch, Upgrade and keep the PostgreSQL DBs current.**
- Develop and enhance **scripts to automate and execute various DBA tasks.**
- **Planning, deploying RDBMS Upgrades/Patches, and performing** other weekend maintenance activities as a part of **On Call support.**
- Perform **quality control audits** to ensure **accuracy, completeness, and proper usage of data in tables** and various **support tools, such as database dictionaries.**
- Establish and maintain **security and integrity** controls.

## **CVS - GREENSBORO, NC**

**Jan 2011 – May 2017**

### **PostgreSQL/Oracle Database Administrator**

- **Installing and Configuring PostgreSQL** from source or packages on Linux machines.
- Experience **designing database structures, indexes, views, and partitioning.** Implementing backup and recovery.
- Install and configure and troubleshoot **Ansible.**
- **Experienced in administering and maintaining medium enterprise database servers on Linux servers.**
- Responsible for **issue resolutions and participates in meetings and presentations.**
- Participating in daily meetings to discuss about the **new database design, modeling, and creation.**
- Controlling **migrations of the Schema, database** through the development life cycle.
- Setup and maintenance of **Postgres master-slave clusters utilizing streaming replication with EFM for automatic failover.**
- **Cross-datacenter disaster recovery and backup architecture**
- Performing **schema management, database sizing, and maintaining privileges.**
- Extensive experience with hot Standby (**PostgreSQL 9.6, 11, and 12).**

- **Fixing the memory issues and suggesting the best practices.**
- **Responsible for monitoring environments using monitoring tools PEM, Nagios, Check**
- **Performance monitoring and optimization.**
- **Experienced in migrating from Oracle to PostgreSQL with MTK.**
- **Experienced in migrating from on-premises PostgreSQL to Amazon Aurora RDS database.**

## **TECHNICAL SKILLS**

### ❖ **Operating Systems**

HP-UX, Sun Solaris OS (5.1, 5.2, 5.3, 5.9, 5,10, 6.1), Red Hat Enterprise Linux, CentOS 7, 8, Oracle Enterprise Linux, and Windows 2008 and 2012 R2

### ❖ **Tools**

TKPROF, EXPLAIN PLAN, STATSPACK, AWR, and ADDM. Toad, Putty, NX client, WinSCP, Remote Desktop Connection, VNC, Team Viewer, Git, Kubernetes, Jenkins, Docker Software, Ansible Software, Maven

### ❖ **POSTGRESQL**

pg\_pool, pg\_dump, pg\_dumpall, pg\_basebackup, pg\_restore, pg\_bouncer, pg\_pool, BART, pgadmin, PEM, pg\_badger, EFM, MTK

## **CERTIFICATIONS:**

- **Software Engineer**
- **AWS Solutions Architect-Associates**
- **EDB 13 Associate Certification**

## **EDUCATION**

**Per Scholas**, Pittsburg, PA

May 2024

**Software Engineering hand-on training**

Western Governors University

May 2023 – April 2024

**BS in Data Analytics**

University of Yaoundé, Cameroon.

**2006 - 2009**

**BS in Computer Sciences**