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Setting Up Streaming Replication in PostgreSQL on RHEL 9

Oz · Following

2 min read · Jul 10, 2023

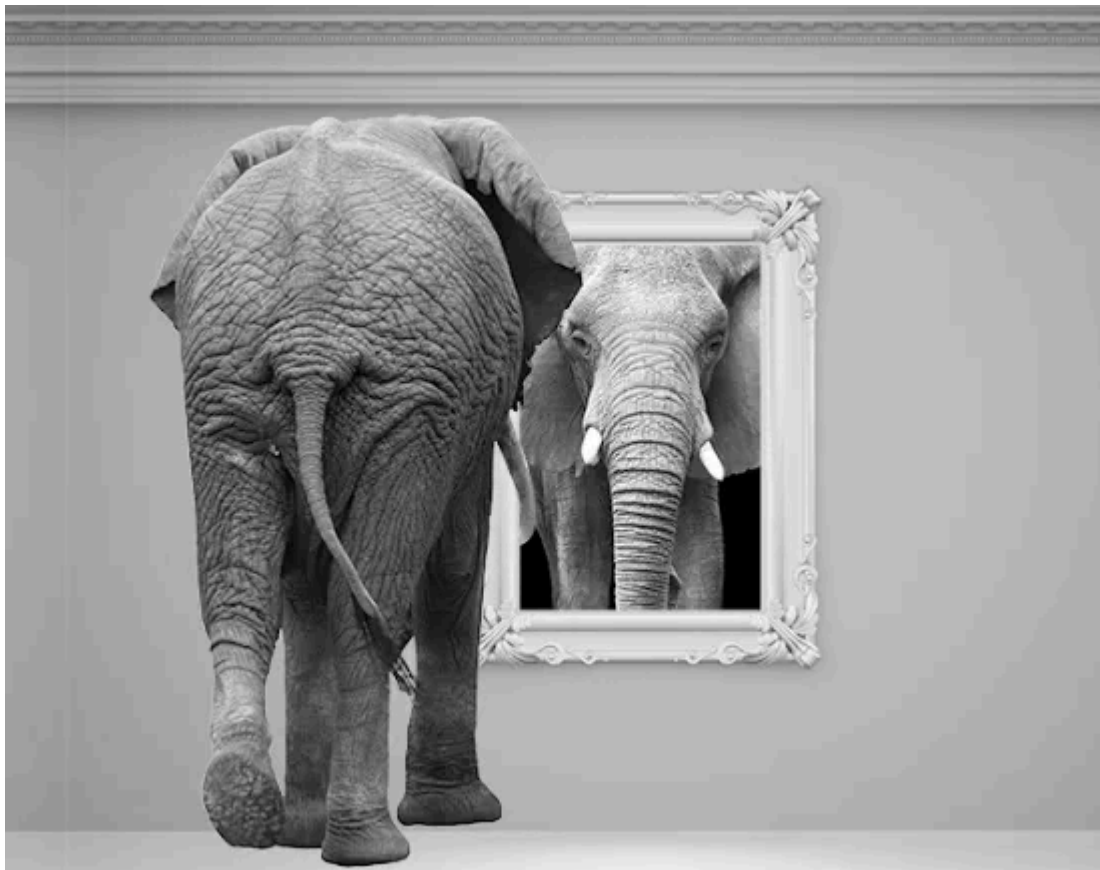▶ Listen   ⬆ Share   ••• More

Streaming replication in PostgreSQL allows you to create one or more standby servers that continuously update their data from a primary (master) server. Here's a step-by-step guide to setting up streaming replication between a primary and standby server on RHEL (Red Hat Enterprise Linux).

Prerequisites

- Two RHEL servers: Primary (psql-primary) and Standby (psql-standby)

- PostgreSQL 12 installed on both servers

Primary Server Configuration

Host and IP Configuration

Edit the `/etc/hosts` and `/etc/hostname` files to set the hostname and IP addresses for both servers.

```
cd /etc
vi hosts
vi hostname
```

Add the following entries:

```
Primary server: psql-primary (Host and Hostname) IP Address: 10.6.128.139
Standby server: psql-standby (Host and Hostname) IP Address: 10.6.128.94
```

pg_hba.conf Configuration

Edit the `pg_hba.conf` file to allow replication connections.

```
nano /var/lib/pgsql/12/data/pg_hba.conf
```

Add the following lines:

```
# replication privilege.
local replication all peer
host replication all 10.6.128.94/32 trust
host replication all ::1/128 ident
```

postgresql.conf Configuration

Edit the `postgresql.conf` file to configure replication settings.

```
vi /var/lib/pgsql/12/data/postgresql.conf
```

Add or modify the following settings:

```
# CONNECTIONS AND AUTHENTICATION
listen_addresses = '*'
```

```
# WRITE-AHEAD LOG
wal_level = replica
wal_log_hints = on

# REPLICATION
max_wal_senders = 10
wal_keep_size = 10
wal_receiver_status_interval = 5s
hot_standby_feedback = on
```

Create Replication User

Create a replication user on the primary server.

```
sudo -u postgres createuser -U postgres repuser -P --replication
```

Restart PostgreSQL

```
sudo systemctl restart postgresql-12
```

Standby Server Configuration

Stop PostgreSQL and Remove Data Directory

```
systemctl stop postgresql-12
yes | rm -r /var/lib/pgsql/12/data/
```

Create Data Directory and Set Permissions

```
mkdir /var/lib/pgsql/12/data/
chown postgres:postgres /var/lib/pgsql/12/data/
```

Initialize Standby Server from Primary

```
sudo -H -u postgres bash -c 'pg_basebackup --pgdata=/var/lib/pgsql/12/data/ --f
```

Update postgresql.conf

```
vi /var/lib/pgsql/12/data/postgresql.conf
```

Add or modify the following settings:

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```
primary_conninfo = 'host=10.6.128.139 port=5432 user=repuser password=xxxxxx
primary_slot_name = 'standby1_slot'
```

Restart PostgreSQL

```
sudo systemctl restart postgresql-12
```

Monitoring Replication

On Standby Server

```
su - postgres
psql
\x
select * from pg_stat_wal_receiver;
select * from pg_stat_replication;
```

On Primary Server

```
bashCopy code
```

```
su - postgres
psql
\x
select * from pg_stat_replication;
```

Conclusion

You should now have a working streaming replication setup between your primary and standby servers on RHEL. This setup provides high availability and fault tolerance for your PostgreSQL database.

Following

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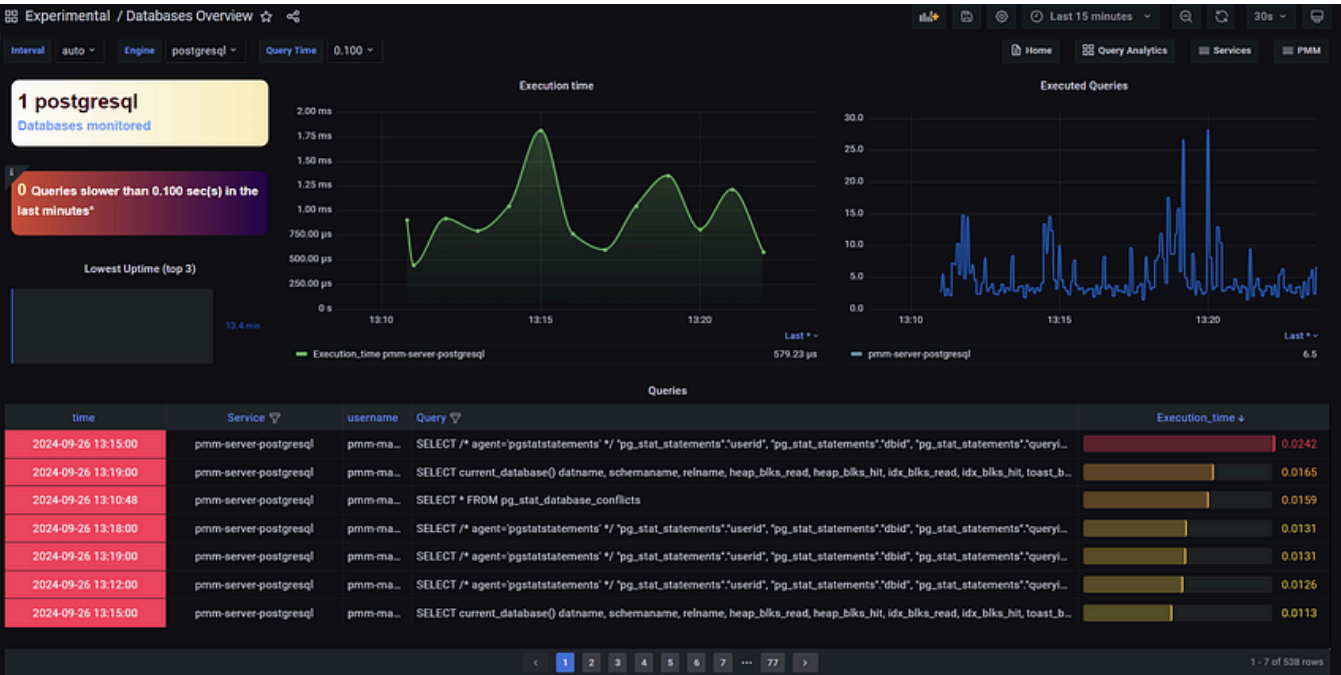
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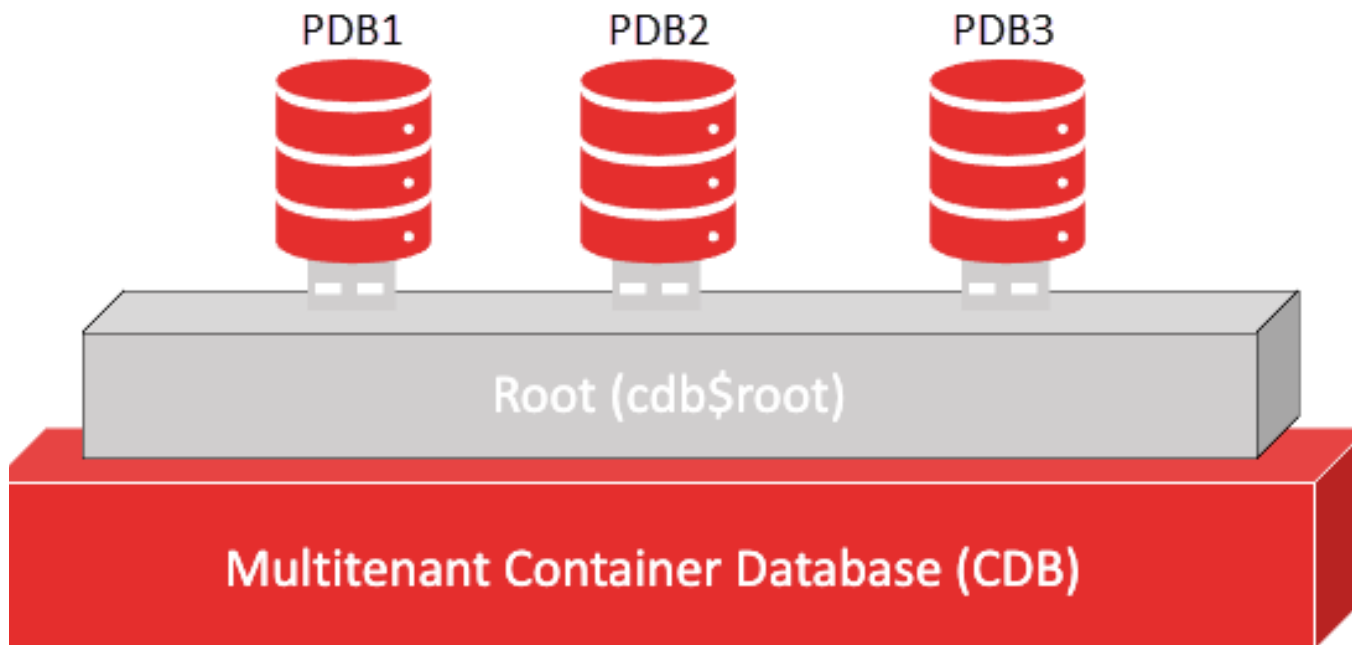
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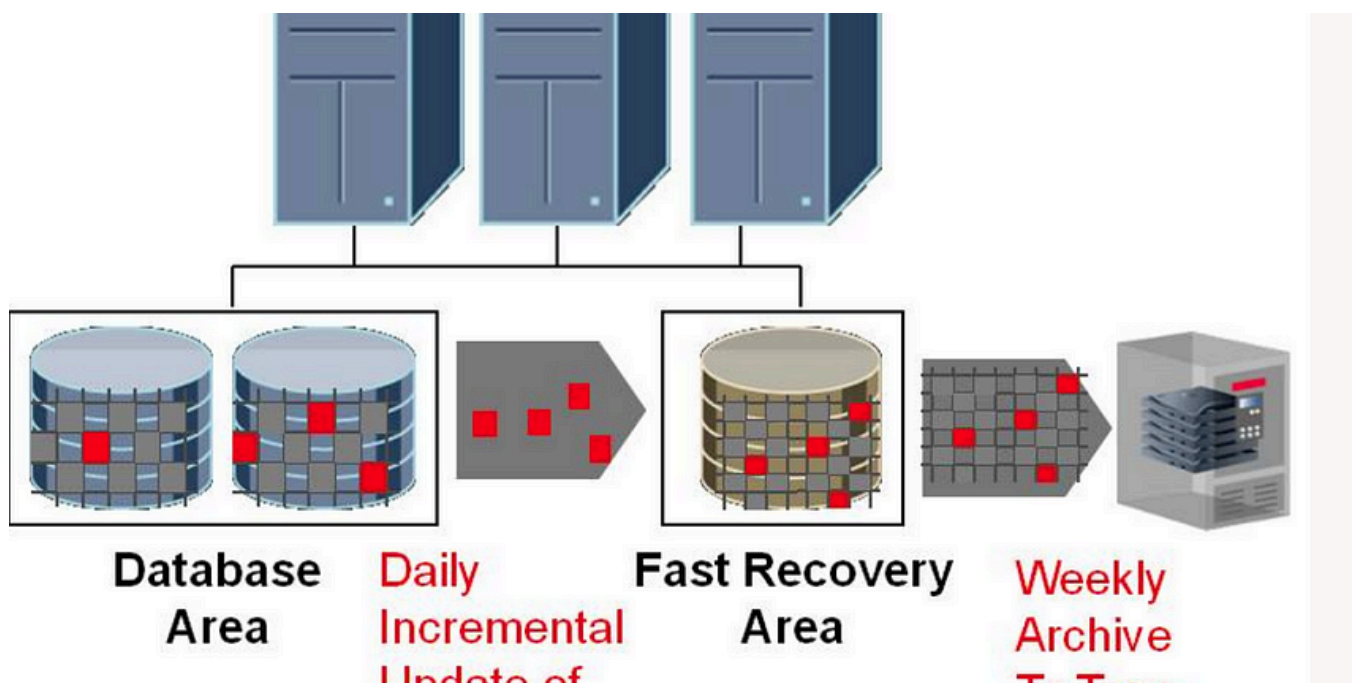————————— -————————————— - create pluggable database pdb1 admin user root identified by test123; alter pluggable database…

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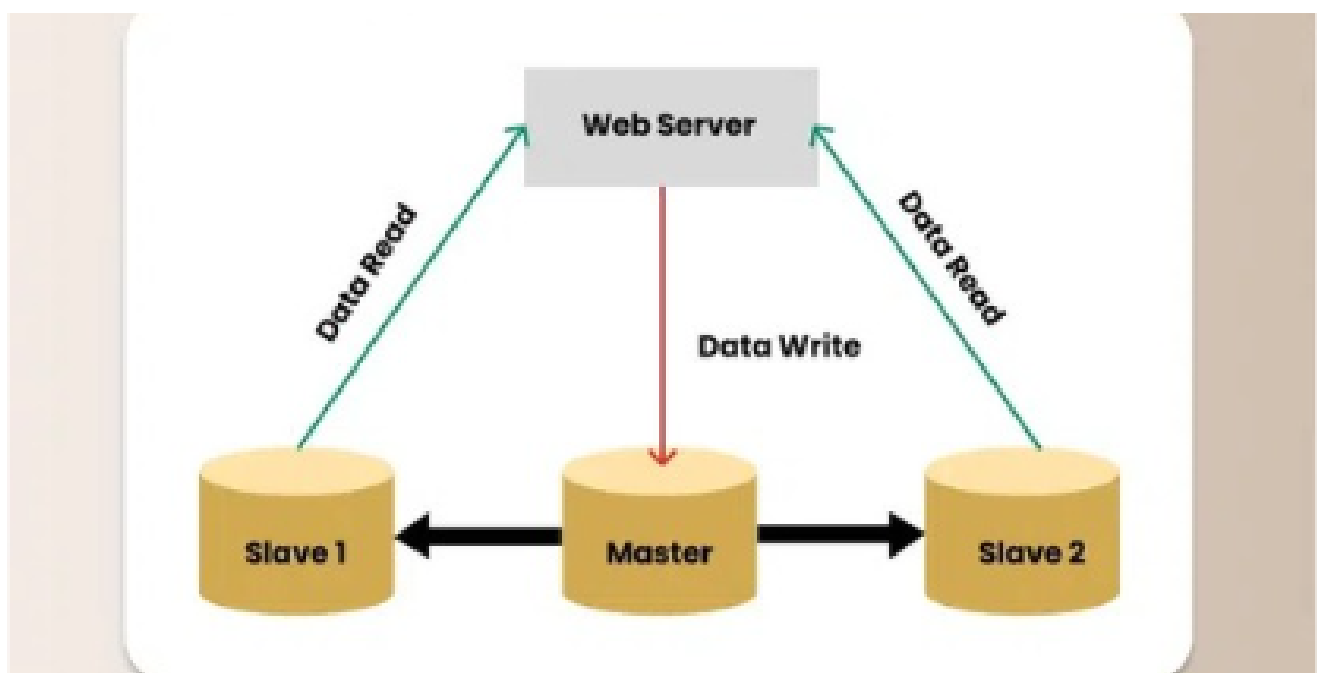
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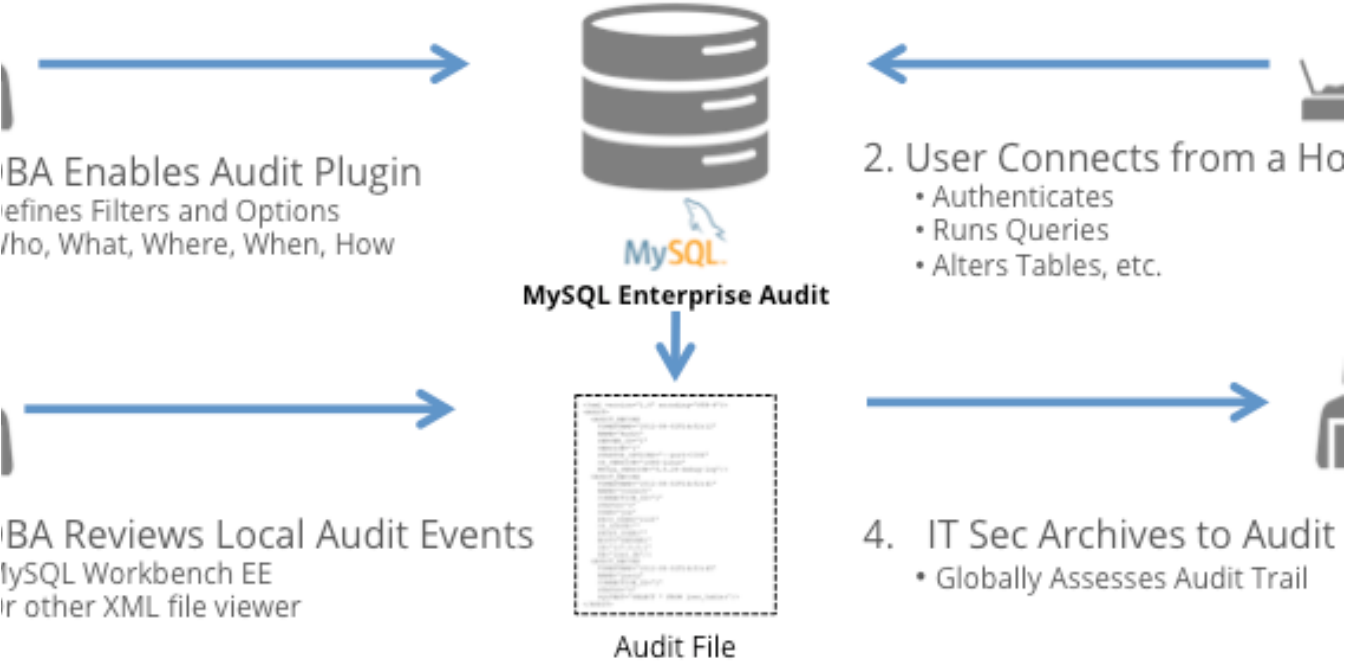
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2. User Connects from a Ho
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• Runs Queries
• Alters Tables, etc.

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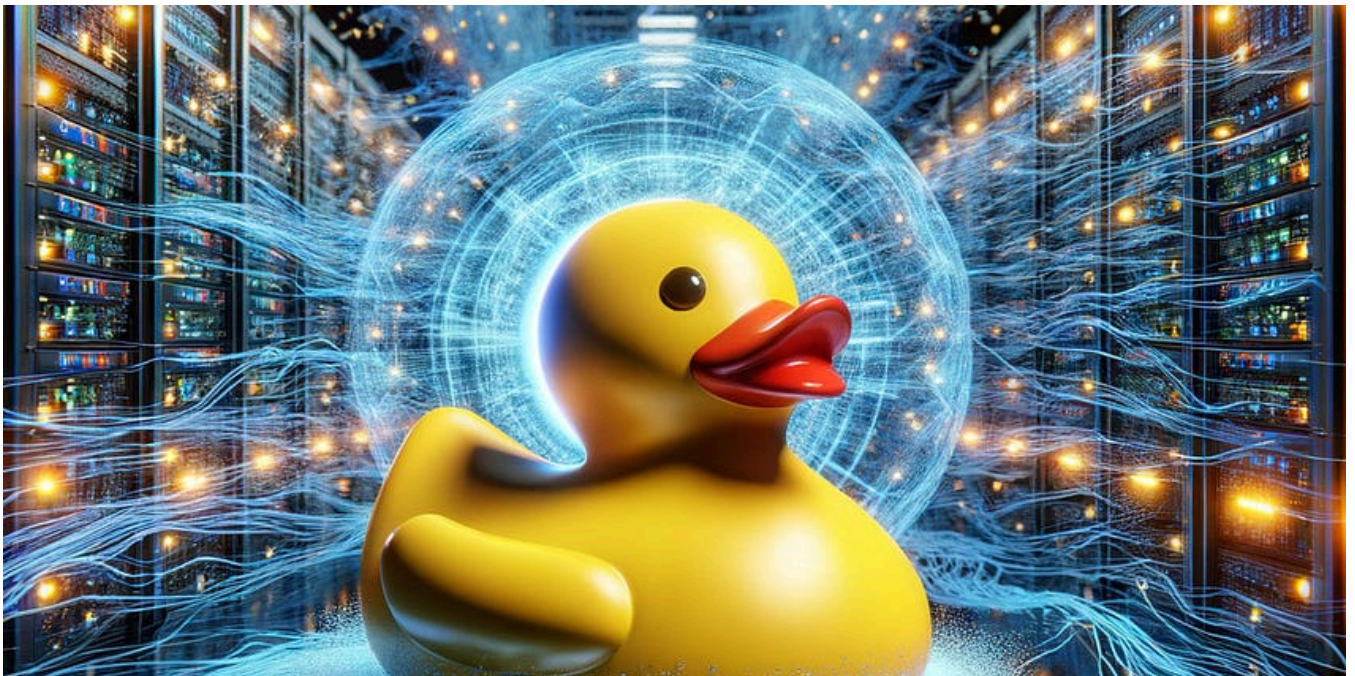
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