PostgreSQL: WAL not removed because of Replication Slot

■ What happened

1   PostgreSQL generates WAL files (write-ahead logs).

2   Logical replication slot became inactive (subscriber not reading).

3   PostgreSQL must keep all WAL since the slot's restart_lsn.

4   Autovacuum runs, but it cannot advance xmin because of the stuck slot.

5   WAL files keep growing until disk becomes full.

■ Important points

1   WAL is blocked by replication slot, not by autovacuum.

2   Autovacuum keeps running but cannot free space.

3   Looks like vacuum failing, but the real blocker is the slot.

■ How to fix

1   Check replication slot status (on publisher): SELECT slot_name, active, restart_lsn FROM pg_replication_slots;

2   Check subscription (on subscriber): SELECT * FROM pg_stat_subscription; ALTER SUBSCRIPTION your_subscription_name ENABLE;

3   If subscriber is dead forever → Drop slot: SELECT pg_drop_replication_slot('slot_name');

4   After fixing → restart_lsn moves → Old WAL removed automatically.

■■ Remember

1   WAL not clearing = Replication slot issue.

2   Vacuum is not the cause → Vacuum is only waiting.

■ In short: Replication slot failed → WAL stuck → Autovacuum blocked → Disk full.