PostgreSQL DR Server Configuration Recommendations

Scenario Summary

Primary Server: 64 GB RAM
DR Server: 15 GB RAM
Issue: Using the same PostgreSQL configuration on both servers leads to performance and stability issues on the DR server due to limited memory.

What Happens If You Don't Tune PostgreSQL on DR?

1. 1. PostgreSQL May Fail to Start

   - Memory-heavy parameters like shared_buffers may prevent PostgreSQL from starting.

2. 2. OOM (Out of Memory) Kills

   - Linux OOM Killer may terminate PostgreSQL when system memory is exhausted.

3. 3. Swap Usage & Performance Degradation

   - Excessive swapping slows down the system significantly.

Recommended PostgreSQL Memory Parameters for DR Server (15 GB RAM)

Parameter	Primary (64 GB RAM)	Recommended for DR (15 GB RAM)
shared_buffers	16 GB	3–4 GB
work_mem	16 MB	4–8 MB
maintenance_work_mem	2 GB	256–512 MB
effective_cache_size	48 GB	8–10 GB
wal_buffers	-1 (default)	Leave default
max_connections	100+	Lower if not needed

Additional Tips

- Create a DR-specific postgresql.conf file with tuned values.

- Disable unneeded background workers/extensions on the DR server.

- Test configuration using: postgres -D /path/to/data_directory