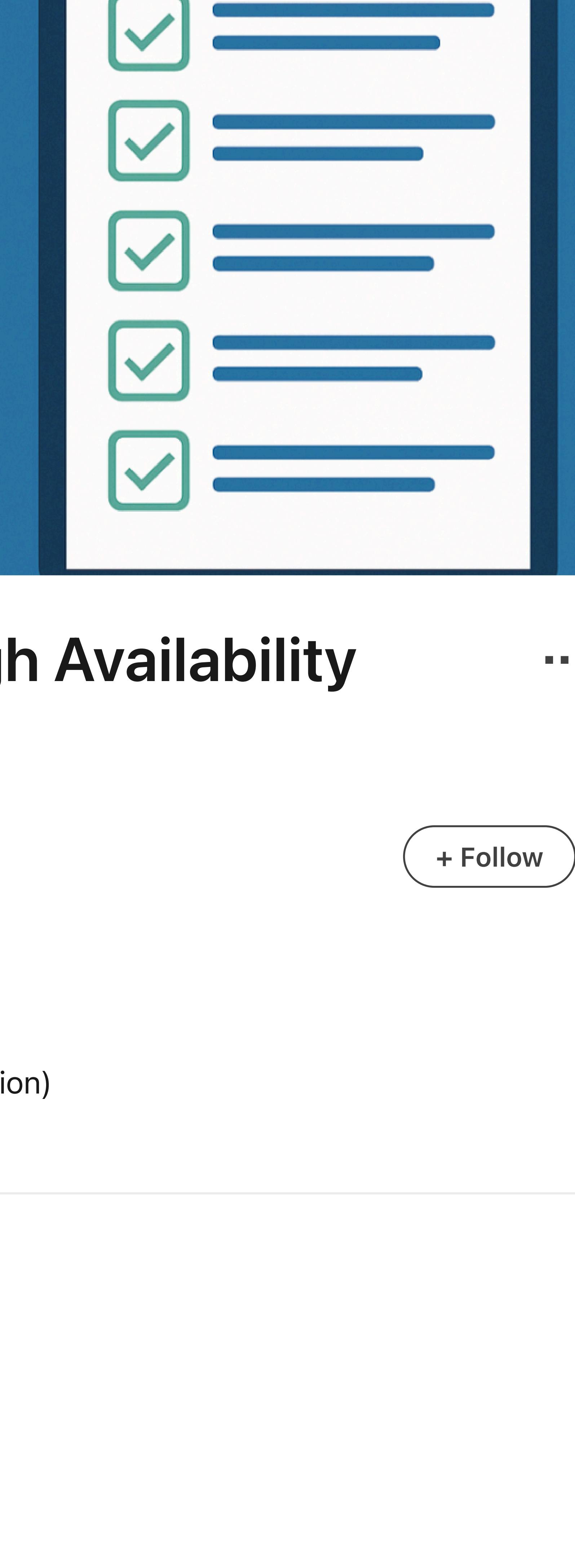




PostgreSQL HIGH AVAILABILITY CHECKLIST



PostgreSQL Replication & High Availability Checklist

...



Wayne C.

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🔧 Core Configuration

- Enable wal_level = replica (or logical for logical replication)
- Set max_wal_senders to a sufficient number
 - [Configure wal_keep_size or wal_keep_segments](#)
- Enable hot_standby = on on standby
- Create a dedicated REPLICATION role
- Update pg_hba.conf to allow replication connections

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🌐 Base Backup (Streaming)

- Use pg_basebackup for initial standby setup
- Use standby.signal (PostgreSQL 12+) in replica
- Validate recovery settings in postgresql.conf or recovery.conf (legacy)

✓ Synchronous Replication (Optional)

- Set synchronous_standby_names
- Set synchronous_commit = remote_apply
- Monitor commit latencies for impact

⌚ Logical Replication (Optional)

- Create publication on source: CREATE PUBLICATION my_pub FOR ALL TABLES;
- Create subscription on target: CREATE SUBSCRIPTION my_sub CONNECTION '...' PUBLICATION my_pub;
- Verify replication lag with pg_stat_replication and pg_stat_subscription

🔒 Security

- Use SSL for replication connections
- Isolate replication traffic from client traffic
- Restrict replication role privileges

⚙️ High Availability Tooling

- Choose one HA orchestrator:
- Test automatic failover and fencing
- Set up virtual IP or HAProxy for endpoint failover

🧠 Monitoring

- Monitor WAL send/receive lag (pg_stat_replication)
- Check replication slot status
- Use Prometheus + Grafana dashboards
- Alert on delay > threshold

🗄️ Backup Strategy

- Use tools like:
- Enable WAL archiving
- Store backups in offsite location (e.g., S3)
- Automate backup verification

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