## EDB POSTGRES FAILOVER MANAGER

## FAULT-TOLERANT POSTGRES NODES FOR HIGH AVAILABILITY

A few minutes of database downtime can cost your business significant revenue. Many organizations avoid downtime by implementing redundancy with a master database server and one or more standby servers. Open source PostgreSQL is incredibly stable; however, database failures do occur. PostgreSQL does not natively identify a failure or automatically switch traffic to the standby, both of which are needed to maintain high availability.



The answer is to this challenge is EDB Postgres Failover Manager - a tool that monitors your Postgres service to identify database failures quickly. Once a failure is confirmed, the tool automatically promotes the most up to date standby, reconfigures other standbys to point to the new master, and can update the virtual IP address or load balancer being used by applications.

EDB Postgres Failover Manager plays a critical role in maintaining high availability of Postgres nodes configured with physical streaming replication by eliminating single points of failure. Integrations with its Pgpool and EDB Postgres Enterprise Manager enable load balancing, connection pooling and an intuitive GUI for simplified configuration. EDB Postgres Failover Manager is the only failover tool that can be used across multiple deployment options; on-premise, cloud, and Kubernetes.

EBB Postgres Failover Manager is a component of the EDB Postgres Platform, which includes database server options and tools for disaster recovery, migration, integration and 24x7 expert support. The EDB Postgres Platform reduces the administrative burden on database administrators and enables developers to get revenue generating capabilities to market faster.





Features	Benefits		
Continuously monitor the health of physical replication nodes and send email alerts based on events or execute custom scripts.	• Detect failure and take the necessary actions to maintain SLAs.		
Automatically failover to the most current standby and reconfigure other standbys to point to new master.	Minimize unplanned downtime for your applications and maintain HA.		
Switchover on demand to move the master database server role to a standby.	Upgrade/patch database software or operating system with minimal downtime for maintenance.		
Integrations with EDB Postgres Enterprise Manager (GUI management tool), Pgpool (load balancer), and other load balancers (example F5 Networks).	<ul> <li>Intuitive GUI simplifies setup and management.</li> <li>Ensure efficient use of database server resources with connection pooling.</li> <li>Avoid the need to rewrite applications for load balancing.</li> <li>Leverage existing/preferred load balancer infrastructure.</li> </ul>		
User-configurable wait times on failover and script hooks.	<ul> <li>Avoid false negatives and time lost from triggering unnecessary failovers.</li> <li>Perform administrative tasks before/after promoting a node.</li> </ul>		
Utilize witness node, in a two-node Postgres service to confirm assertions of either the master or standby in a failover scenario.	<ul> <li>Avoid a split-brain scenario, where both nodes think they are the master, which leads to confusion and data loss.</li> </ul>		
Use Virtual IP Address (VIP) or fencing scripts to reconfigure a load balancer on failover.	Applications do not need to manage database connections.		
Exclude a node entirely from the possibility of becoming the new master.	• Keep a disaster recovery replica node from becoming a master.		
Prevent failed master from being restarted (isolate master).	Avoid split brain scenario where two nodes accept writes.		
Detect status changes such as when standby node is down by receiving alerts.	Know when you have lost high availability.		

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