

Shared Storage

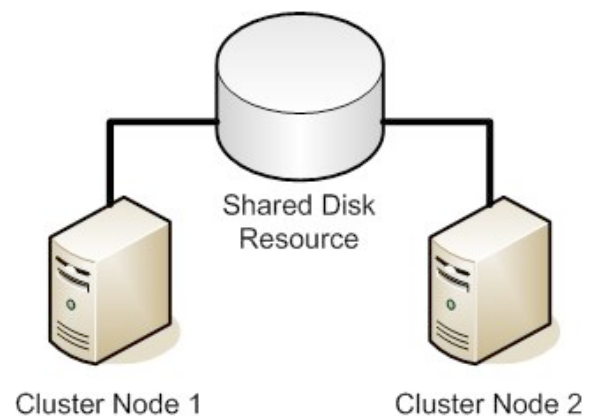
1. What is it?

Shared Disk refers to a SAN (Storage Area Network) or a NAS (Network Attached Storage) with a shared storage disk file system to provide direct disk access from multiple computers at block level.

The shared disk can be connected to the servers using a fibre channel to ensure adequate I/O performance.

The main features are:

- No data loss (used in combination of sync every commit on disk)
- Only one logical copy of the data
- Automatic failover (used in combination with pacemaker).



2. How does it work?

The shared disk can use a standard file system like ext3. In this case only one server at a time can access it, so the architecture will be active-standby. A cluster manager like pacemaker can be installed to provide automatic failover. In case of failure of the active node, pacemaker mounts the file-system on the standby node and starts the MySQL daemon.



The database will start in recovery mode, so it will take some time (depending on the database size and the write workload) to become available.

3. When to use it?

- When you have already a SAN or a NAS and you want to consolidate the storage
- If you need 99.9% uptime
- To keep only one copy of the data to avoid the management of multiple database instances
- To avoid replication lag during heavy bulk loads or updates

4. Resources

Pacemaker website: clusterlabs.org