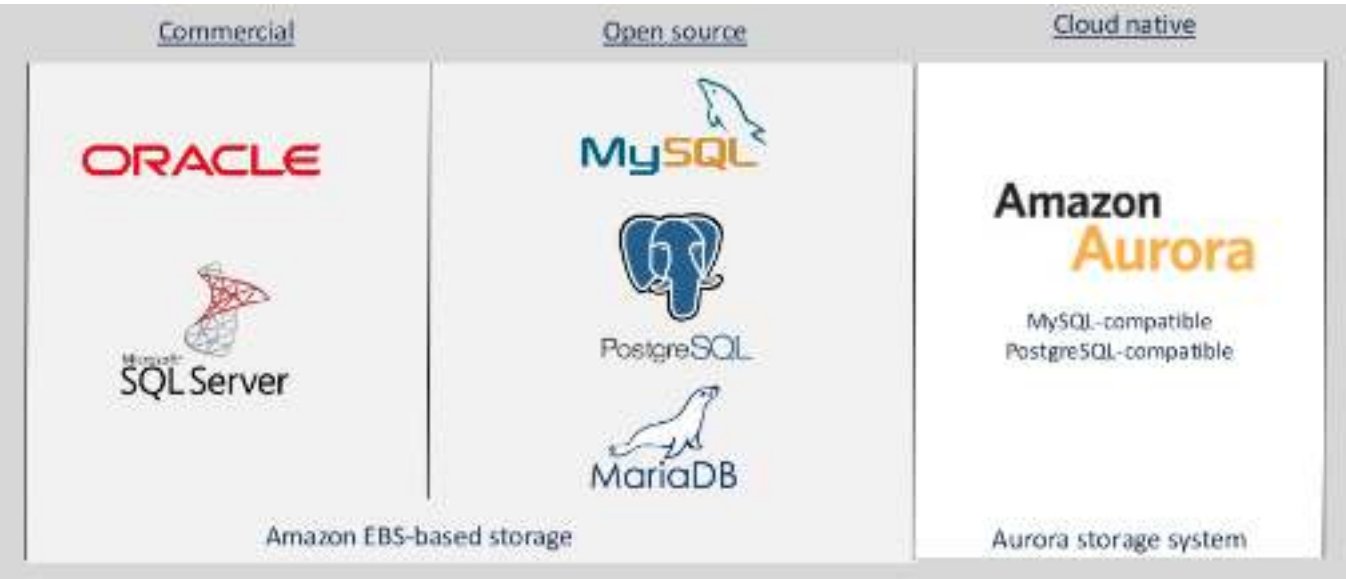
RDS

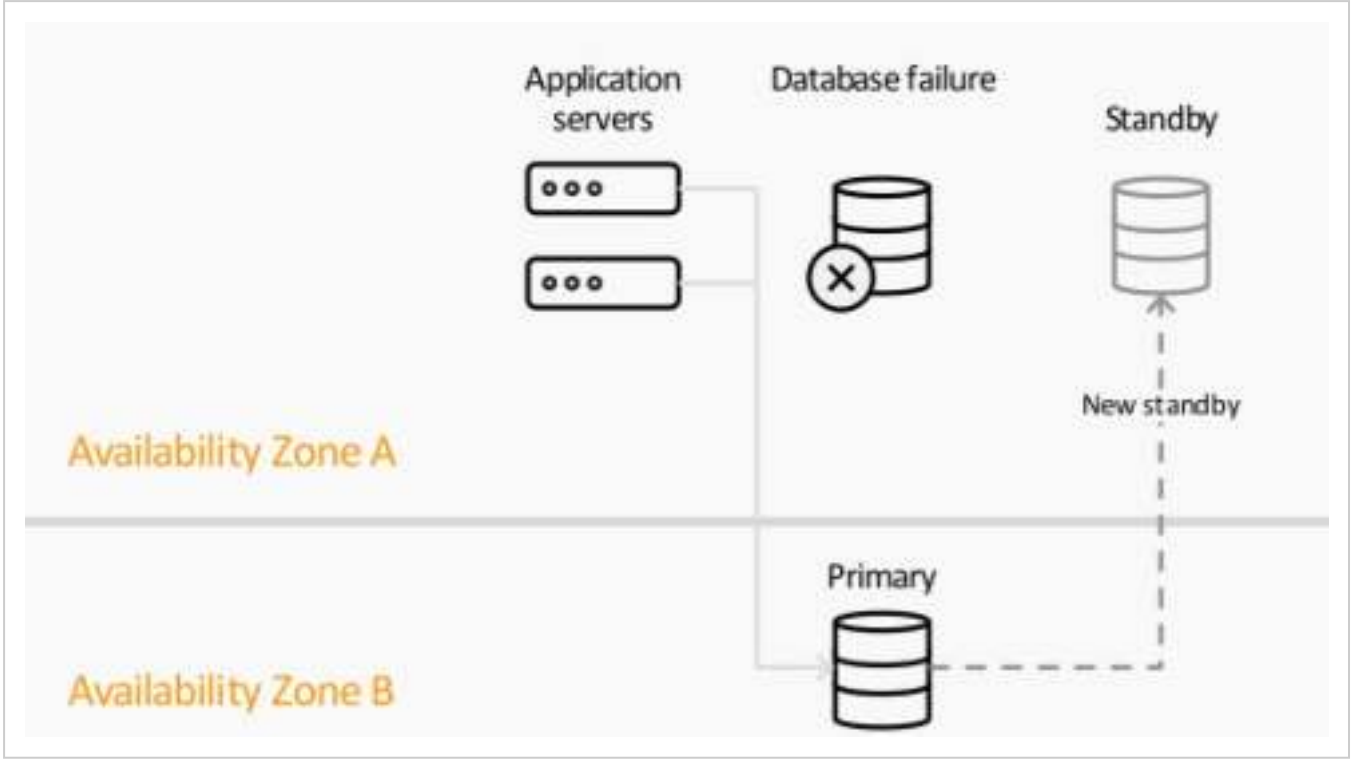
The much-touted AWS RDS ! Learn all about it !

Various RDS Options



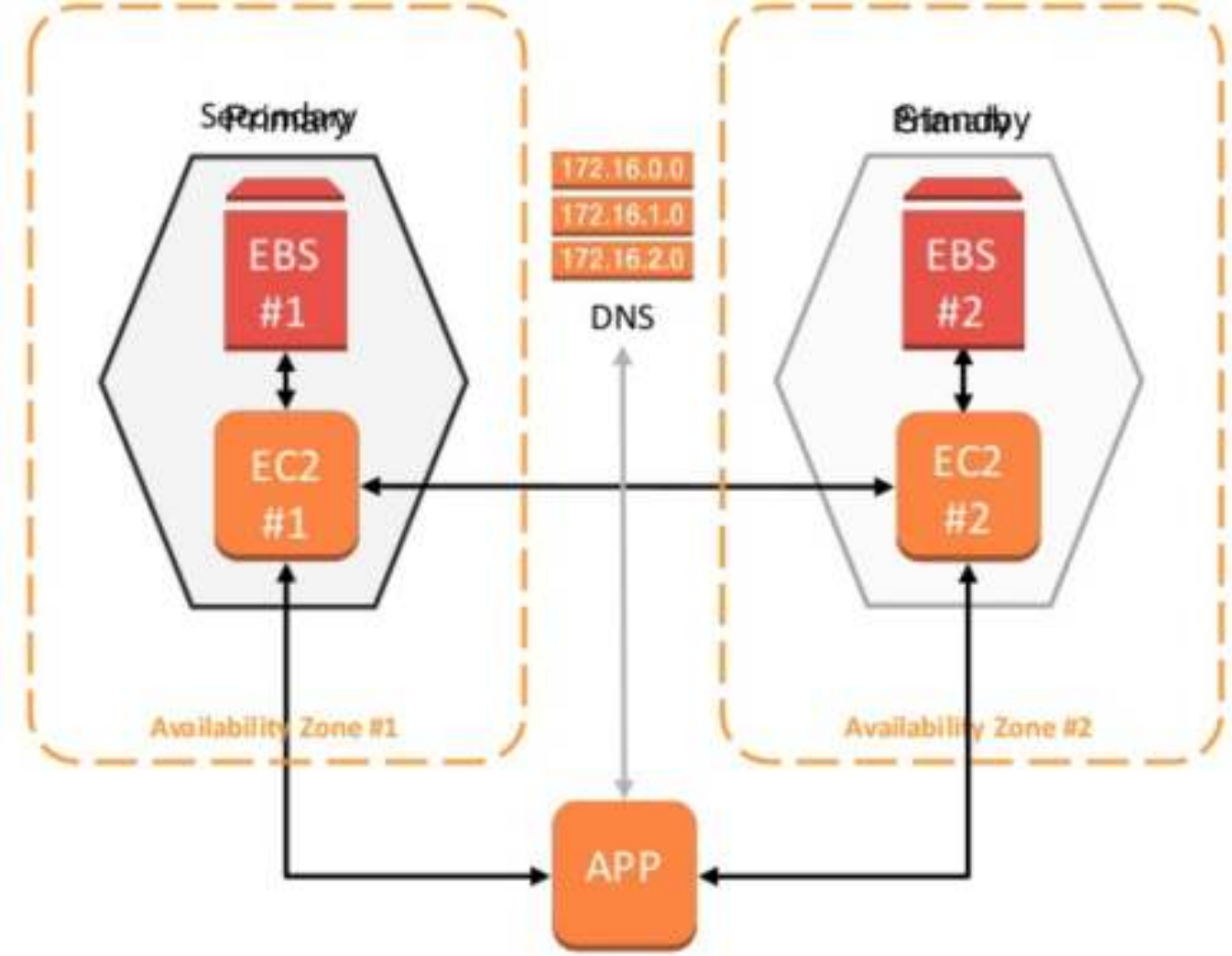
How to Ensure High Availability of your Database ?

1. Automatic Failover
2. Synchronous Replication
3. Enabled with one Click



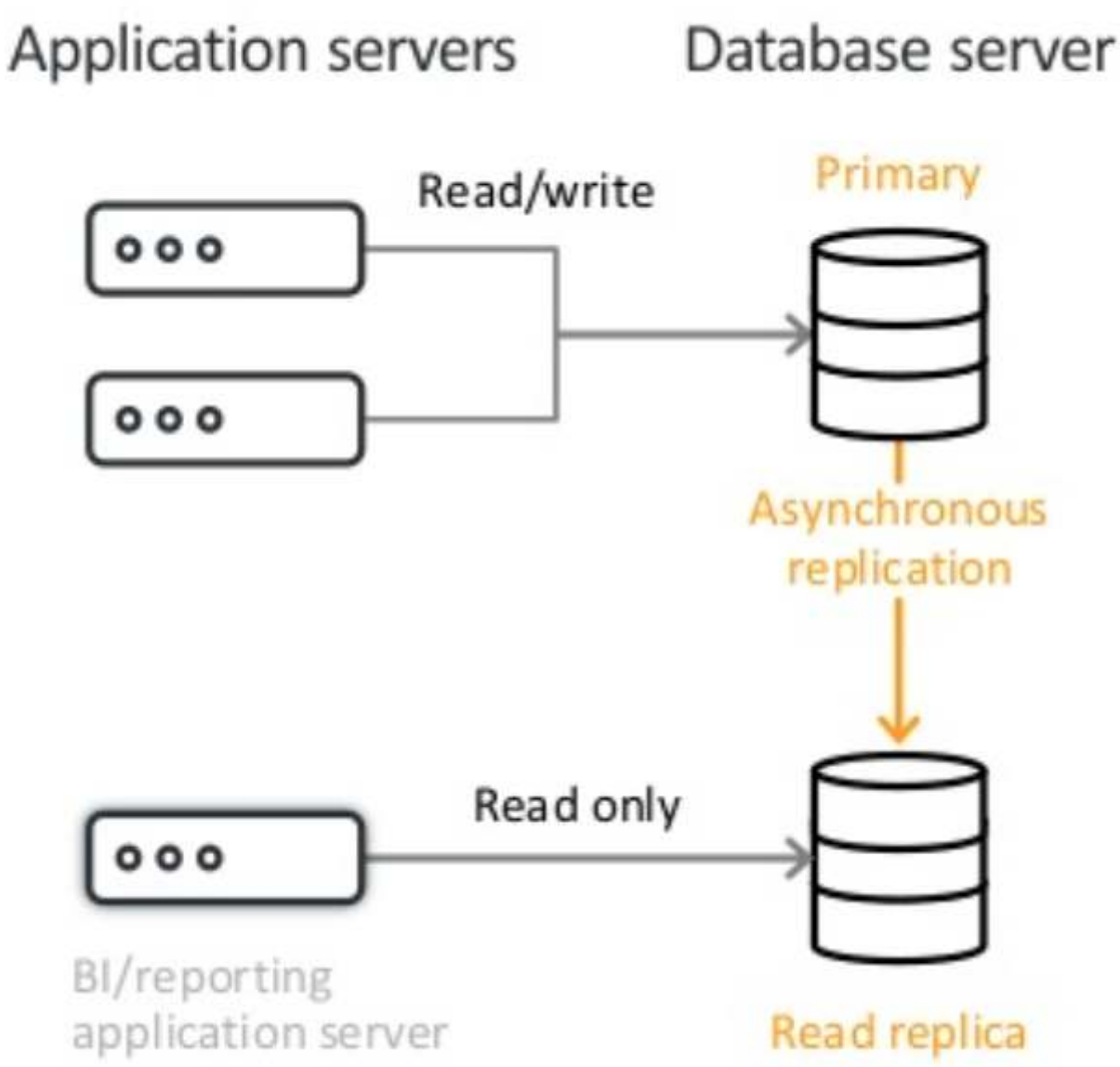
What Happens when a Multi-AZ Failover ?

1. Each host manages set of Amazon EBS volumes with a full copy of the data.
2. Instances are monitored by an external observer to maintain consensus over quorum.
3. Failover initiated by automation or through the Amazon RDS API.
4. Redirection to the new primary instance is provided through DNS.



Why use read replicas ?

1. Asynchronous replication BI/reporting application server Read only Read/write Primary Read replica
2. Relieve pressure on your source database with additional read capacity
3. Bring data close to your applications in different regions
4. Promote a Read Replica to a master for faster recovery in the event of a disaster
5. Upgrade a Read Replica to a new engine version
6. Supported for MySQL, MariaDB, and PostgreSQL



When should I use Multi-AZ as opposed to Read Replicas?

Multi-AZ

- Synchronous replication—highly durable
- Only primary instance is active at any point in time
- Backups can be taken from secondary
- Always in two Availability Zones within a Region
- Database engine version upgrades happen on primary
- Automatic failover when a problem is detected

Read Replicas

- Asynchronous replication—highly scalable
- All replicas are active and can be used for read scaling
- No backups configured by default
- Can be within an Availability Zone, cross-AZ, or cross-region
- Database engine version upgrades independently from source instance
- Can be manually promoted to a standalone database