

Redaction attributes automatically follow Pluggable Databases (PDB) as they move between multitenant container databases. When moving a PDB that has redaction policies, the policies transfer directly to the new container as part of the PDB. When moving an encrypted PDB, the TDE master keys for that PDB are transferred separately from the encrypted data to maintain proper security separation during transit. Encryption and redaction immediately resume their normal operation after the PDB has been plugged in and configured.

6. Conclusion & Future Scope

As data exposed in applications continues to rapidly expand, enterprises must have strong controls in place to protect data no matter what devices or applications are used. This proposed database helps organizations keep their sensitive information safe in this increasingly complex environment by delivering preventive, detective and administrative controls that enforce data security in the database.

This proposed database system provides two critical preventive controls:

- 1) Transparent Data Encryption encrypts data at rest to stop database bypass attacks from accessing sensitive information in storage.
- 2) Data Redaction reduces exposure of sensitive information in applications by redacting database query results on-the-fly, according to defined policies.
- 3) Together these two controls form the foundation of a multi-layered, defense-in-depth approach. The research further established that this proposed Database will be the world's most advanced database security solution.

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