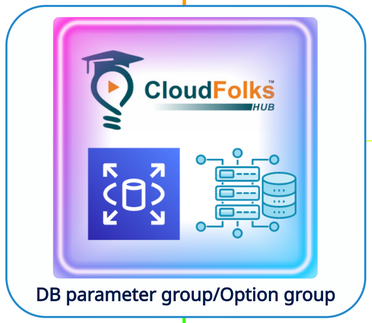


DB parameter group/Option group

1. DB parameter group
   1. Purpose: Parameter groups control the settings within the database engine itself, like how it handles memory, connections, and performance tuning
   2. Examples of Parameters
      1. max_connections: Controls how many users/applications can connect at once
      2. query_cache_size: Stores query results to avoid re-running the same query
   3. Use Case: You would adjust a parameter group if you need to change how the database engine behaves, such as allowing more connections or optimizing memory usage
2. Option group
   1. Purpose
      1. Option groups are used to add extra features or extensions to the RDS instance that aren't part of the core database engine.
      2. These could include things like backups, data encryption, or specific plugins.
   2. Examples of Options
      1. Oracle's OEM (Oracle Enterprise Manager) plugin: Provides a web-based interface for database monitoring and management
      2. SQL Server's Transparent Data Encryption (TDE): Encrypts database files to secure data at rest (e.g., on disk)
      3. MySQL's MEMCACHED: Caches frequently accessed data in memory for faster retrieval
   3. Use Case: You would use an option group if you need to enable a specific feature or add functionality that is not configured through typical parameters
3. Example Scenario
   1. Suppose you have a MySQL database in RDS.
   2. You might use a parameter group to increase max_connections if you expect heavy traffic,
   3. while an option group might be used to enable MEMCACHED to enhance caching capabilities
   4. In summary
      1. Parameter Groups: Adjust internal database behavior
      2. Option group: Enable optional features or extensions