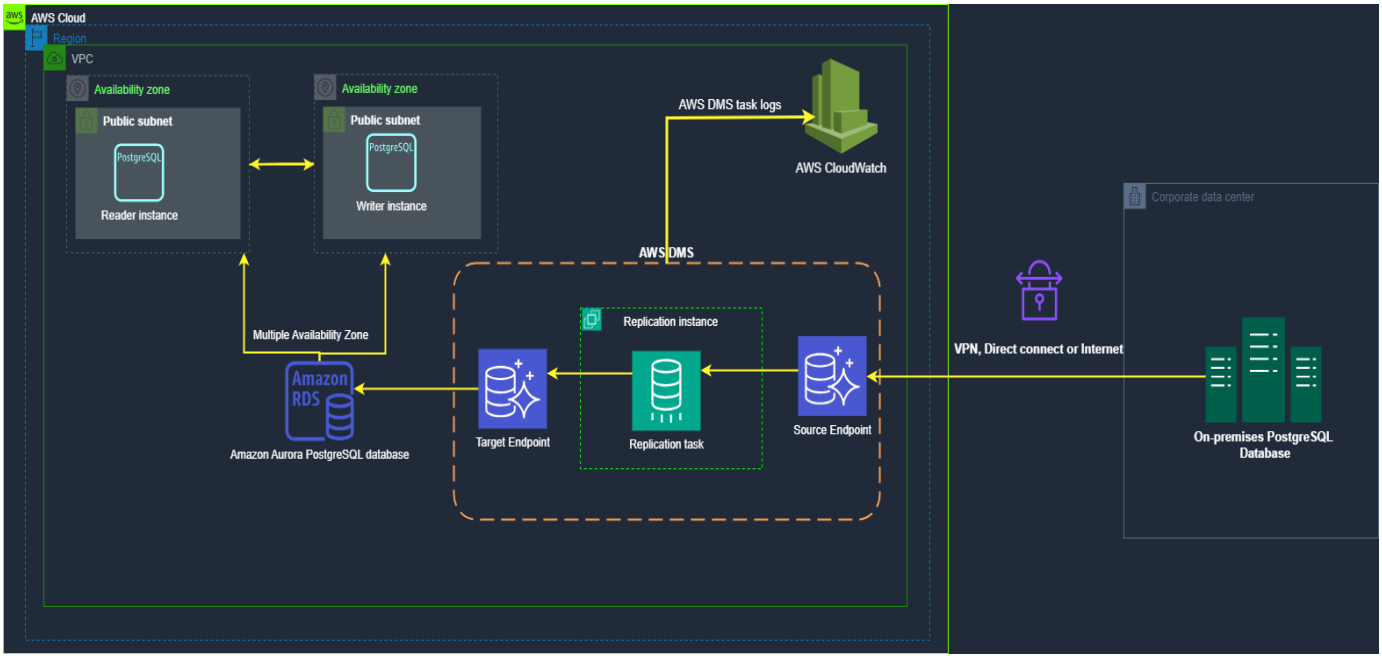
AWS Well-Architected Framework for Seamless Database Migration from PostgreSQL to PostgreSQL Aurora

1. **Operational Excellence:**
    - Maintain comprehensive documentation for the migration process, including the migration plan, test cases, and post-migration procedures
    - Ensure that the database migration strategy is well-designed, taking into account the specific requirements and constraints of PostgreSQL and Aurora.
2. **Security:**
    - Implement strong access controls and authentication mechanisms to protect sensitive data.
    - Encryption of data at rest and in transit during the migration process to maintain the highest level of data security.
    - Enable auditing and logging features to monitor and track any suspicious activities during the migration.
3. **Reliability:**
    - Ensure high availability of both source and target databases during the migration process to minimize downtime.
    - Establish backup and recovery procedures to safeguard data integrity and availability.
4. **Performance Efficiency:**
    - Optimize the database schema, queries, and indexes for better performance on Aurora.
    - Configure the target Aurora instance appropriately to handle the workload efficiently.
5. **Cost Optimization:**
    - Right-size Aurora instance to meet the performance requirements while minimizing costs.
    - Continuously monitor the cost of running the migration and optimize resources as needed to reduce unnecessary expenses

Lab architecture reference



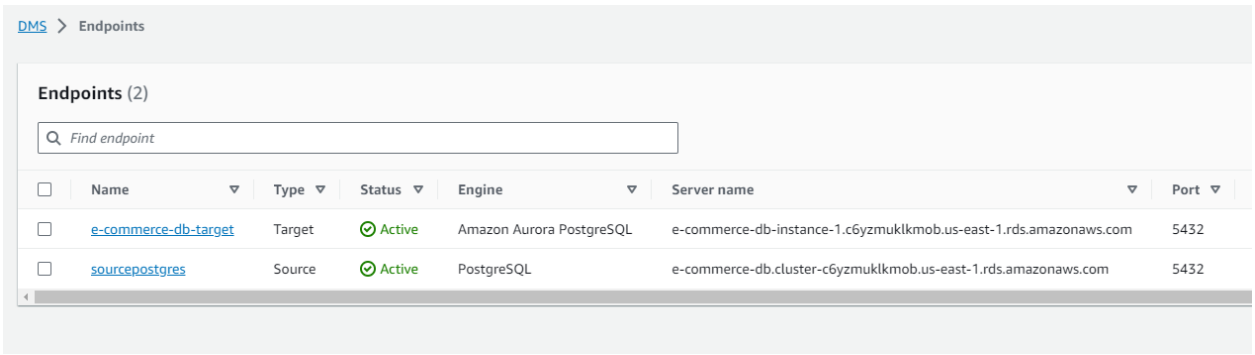
Database:

PostgreSQL database --> Aurora PostgreSQL

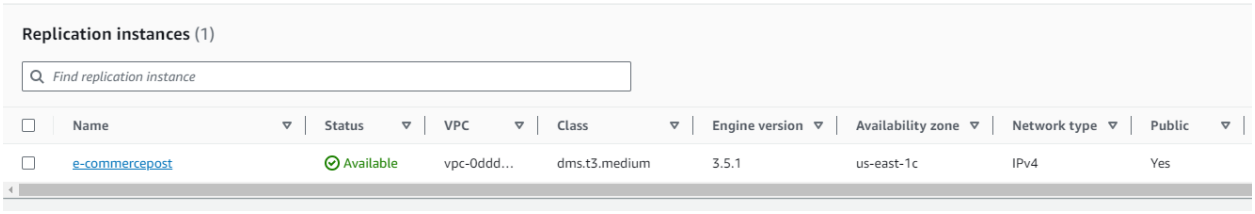
Configure DMS

- Replication Network
- Launch replication instance
- Endpoint for source & target

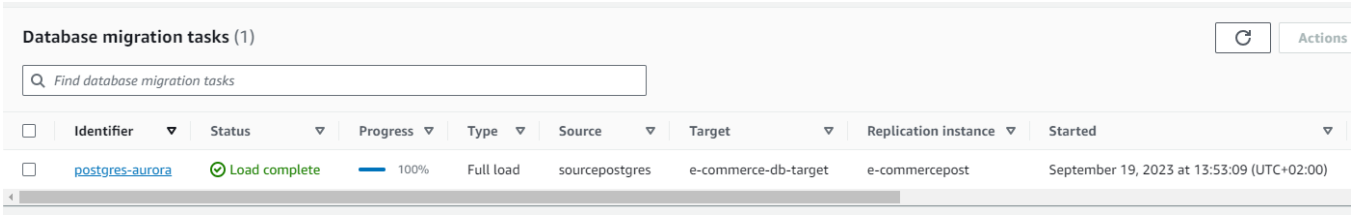
Create target and Source endpoint database



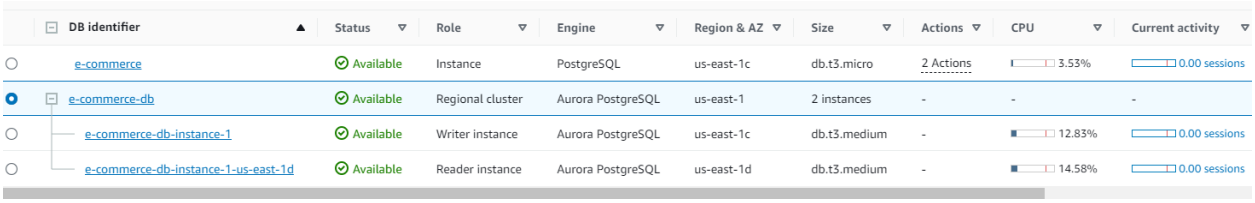
Create replication network



Launch replication network



Aurora PostgreSQL instance



Connect to Aurora database using pgadmin