Maximum Availability Architecture with 12c At Oracle OpenWorld

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About LinkedIn

LinkedIn operates the world’s largest professional network on the Internet with more than 380 million members in over 200 countries and territories.

Mission

Connect the world's professionals to make them more productive and successful.

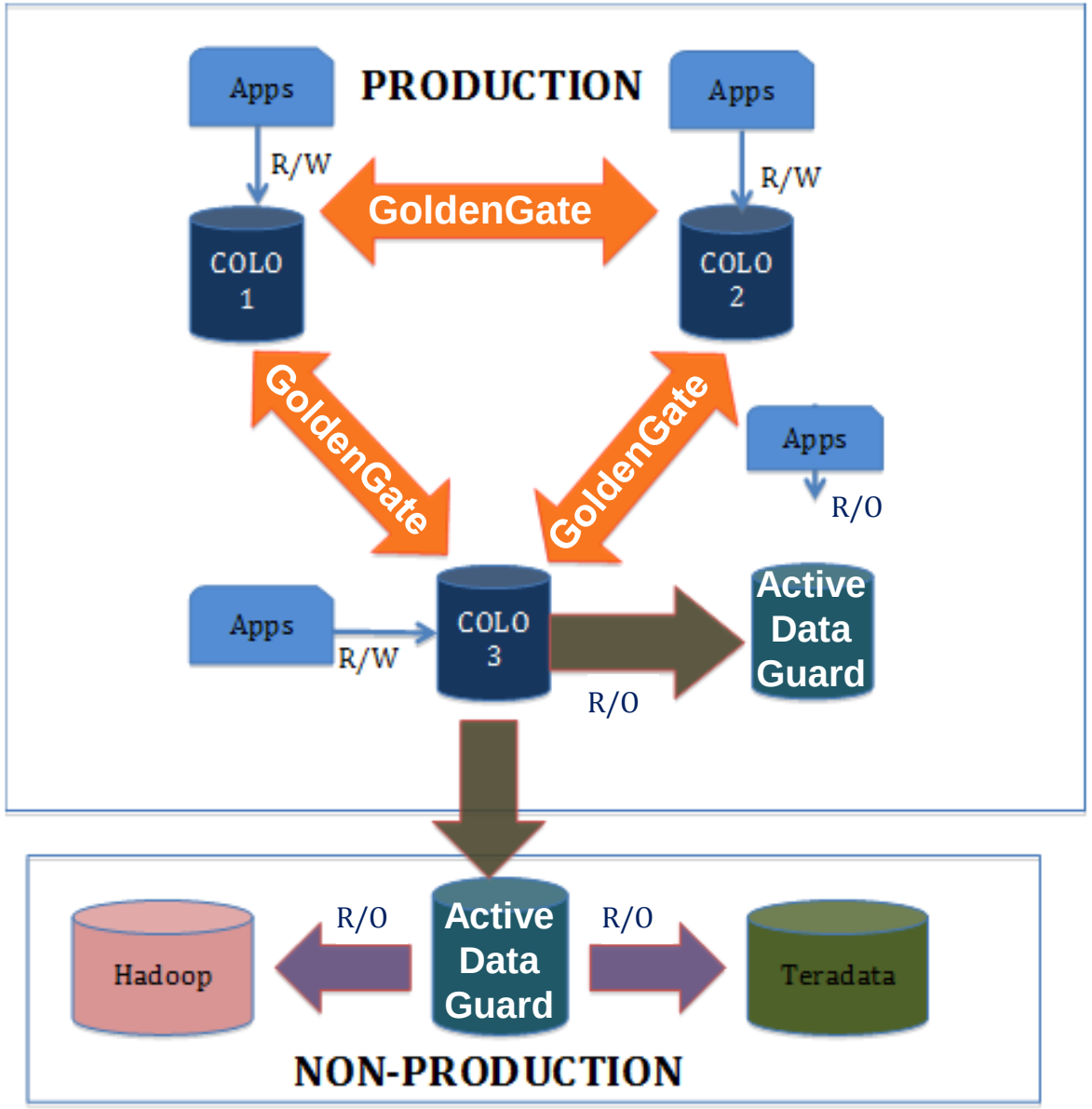
Primary Use Case

- High availability of LinkedIn data, with multiple sites serving Read/Write traffic.

Why Oracle MAA?

- Successful off-the-shelf Replication Products.
- Easy to adapt.

MAA Architecture: LinkedIn



MAA with Golden Gate

- N-way Active-Active.
- Timestamp and priority -based CDR.
  - Added columns to handle CDR.
  - GG columns updated by triggers, independent of Application.
- Non-overlapping primary keys/unique columns, across colos.
- Parallelism for scaling.
- Soft Deletes to avoid rebirth scenarios.

MAA with Active Data Guard

- Disaster Recovery
- RMAN Backups
- For Read Only Traffic
  - Boot strapping cache.
  - Allowing QA/developers to access production data.
- Sending data to down stream such as Hadoop, Teradata, etc for data analytics and reporting.

12c Features at Use

- Encrypting data with the Master Key and Wallet Method

  Encrypts GG trail file while its being transmitted over TCP/IP.

- Storage Snapshot Optimization

  Allows Third Party Snapshot technologies to take storage snapshots without putting the database or associated data files in BACKUP mode.

- Recovering tables and table partitions

  Very useful in logical corruption scenarios, no need to restore entire database or tablespace.

What Next?

- More active colos
- Upgrading all the existing databases to 12c to leverage new features.
- Performance improvements, improved manageability Using Integrated Extract/Replicat.
- Easy to implement Conflict Resolution using Auto CDR.
- Auto Sharding using Goldengate and Data Guard