Empowering your data sharing architecture for continuous availability

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Agenda

- Data sharing challenges
- Benefits of data distribution and consolidation using replication
- Change Data Capture
- Architecture
- Use cases
- Q&A
Business challenge

- Ever increasing amounts of data
- Multiple groups need access to current, up-to-the-minute data
- Access critical data faster (local)
- Database resources maxed out – too much processing
- Instance can’t be tuned for purpose – reporting vs OLTP
- Too much data available (proprietary)
- Need to consolidate data from remote locations
- Query versus write capability
Solution

• Database replication
• Maintain a near real time copy of the database
Benefits of data distribution & consolidation using replication

- Local access to data
- Real-time data for up-to-the-minute reporting
- Source and Target Independence
- Instance tuned optimally for performance
- Offload report processing from main OLTP instance
- Only the required data is made available
  - Minimizes bandwidth requirements
  - Eliminates access to proprietary data
- No impact to performance or productivity on users and/or customers
- Real-time instance for high availability
Database Replication - Product architecture
Local, Remote or in-the-Cloud

Source

Export Queue

Export

Import

Post Queue

SQL

Post

Target

Redo/Archive logs

Capture
Consolidation: Operational BI data stores

Oracle Financials
SAP Manufacturing
PeopleSoft HR
Siebel CRM

Data Warehouse

Reporting
Analysis
Dashboards
Consolidation: Multiple stores/locations to central database
Distribution: Reporting, high availability/disaster recovery, archiving, change tracking, cascading
High availability and disaster recovery (Uni-directional)

- Increased availability.
- Provides an alternate copy of production data for failover in the event of maintenance or unplanned downtime.
- Better than Oracle standby database—near ZeroIMPACT failover/failback.
Data archiving (Uni-directional)

- Ability to filter data propagation at transaction level or user level.
- Purge jobs run on the source database
  - Can be selectively prevented from replicating over to the target database, thereby maintaining the copy of the purged data on-line.
Live reporting (Bi-directional: active-active/passive)

- Better Performance, reduces contention, data footprint
- Live reporting: ad hoc querying, reporting, data warehousing or Business Intelligence can be run from a secondary copy of the instance (all or a subset).
- Can be placed on Standard Edition database or in-the-cloud
Change tracking

- For auditing and discovery purposes
- Keep track of changes made to a defined set of tables
- Records all changes including user id, timestamp, SCN, source row id, key values, transaction id, operation type
- Store the change tracking data on the primary server or a secondary server
Cascading to intermediary systems

- Provides regional distribution then allows for district and store distribution of data.
- Replicate data between long distances and to targets not directly connected.
- No Oracle software is required on this node if it will only be acting to store and forward.
- Cascading or Fanning the data allows for different data to reach desired targets without sending all the network packets forward to every target location.
- Move data past firewall thru secure servers without the need of Oracle licensing on transporting servers.
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Key points to consider when choosing a replication solution

• Application availability
• Read/Write access
• Platform environment combinations
• Time saving features: Compare & Repair, Migration fail-back and data integrity
• 24/7 expert support
• Cost (affordable, flexible pricing) – comprehensive all in one packaged solution (no need to purchase add-ons)
Supporting documents

• Technical Brief:
  – Data Consolidation and Distribution

• White Paper:
  – Taming the Data Beast – Using Changed Data Capture in Place of Extract, Transform and Load to Improve Data Integration

• SharePlex Data Sheet:
Questions
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