Oracle 10g R2 RAC Database Storage Migration & Oracle GoldenGate Reconfiguration

HP along with Path managed to implement a modified, reliable and faster performing solution and migrate 6 TB oracle database successfully at Global Foundries in less than an hour's database downtime.

Customer:
Global Foundries
Singapore

Industry:
Foundry (Manufacturing)

Technology Used:
Oracle 10g R2 RAC database, Veritas SF CFS RAC, Oracle 10g GoldenGate

"The consultants from Path extended great support for this project. The commitment shown is excellent and the customer is quite pleased with the way the project was delivered. Their technical knowledge displayed during the implementation is worth mentioning. Overall, it was a great experience to work with this team!"

- M. Jayakumar, Project Manager, Hewlett-Packard Singapore

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Global Foundries entered the foundry industry in early 2009 with a simple but ambitious goal to become the world's first truly global foundry. In a short span of time, they have achieved this milestone with manufacturing operations spanning three continents for flexible and secure supply. With more than 150 customers GF is creating a new platform for innovation to drive the current and future generations of semiconductor technology.

Business Challenge

GF's FDC system is using four node Oracle 10g R2 RAC database on OCFS2 and Oracle GoldenGate to replicate the production data to the reporting database. The old SAN storage has high I/O wait, which leads to frequent node reboots during heavy load on the database which was causing unwanted downtime leading to production loss. After root cause analysis of the issue, GF found that they need to change the storage and need to move the file system from OCFS2 to Veritas Cluster file system.

Solution

The solution offered was:
- Change the storage with new high end storage with high capacity and more reliability.
- Move the oracle database from OCFS2 to VERITAS cluster file system.
- Reconfigure the Oracle GoldenGate to make it work with the new setup and file system in both Production and Reporting database.

What was done:

- Path modified the solution with correct and supported components.
- Advise the OS setup, VERITAS Cluster Setup to the respective engineers.
- Created two node RAC (Take out one node from 4 node RAC and One from reporting Database) using VERITAS Cluster File System.
- Used Oracle RMAN database backup as copy for database conversion from OCFS2 to Vxfs and copied all the data files from old setup to new setup while the production database was running.
- Keep on applying archive log on new RAC system and open the database new database as read write mode on final cut off date.
- Reconfigure Oracle GoldenGate

Benefits

Path and HP managed to implement the modified solution successfully which helped in re-building trust between the HP and GF. Customer recognized that PATH has expertise and capabilities in solutioning and implementation services in Oracle Database and FMW (GoldenGate).