Florida Elections Organization Saves Operating Costs and Enhances System Performance with SharePlex® for Oracle

The Florida Division of Elections provides statewide coordination and direction for the interpretation and enforcement of election laws. The Orange County Supervisor of Elections is one of 67 counties within the division. It is responsible for ensuring the integrity of the election process, including registering voters, hiring poll workers and administering county, state and federal elections for Orange County.

To ensure the performance and availability of its critical systems, improving its disaster recovery strategy, as well as help with a planned upgrade from Oracle 10g to 11g, the Orange County Supervisor of Elections decided to implement a database replication solution, and turned to Quest for help.

The Challenge

During election seasons, the database systems at the Orange County Supervisor of Elections experience increased workloads, which were creating performance issues. Because these systems are critical to the integrity of the election process, the organization decided to implement database replication, which would allow it to offload less critical application tasks to a database replica, reducing stress on the main Oracle database.

"We wanted to isolate our critical systems from our non-critical systems during election time so that our critical systems are always functioning," explained Dr. Rama Tata, applications systems analyst for the Orange County Supervisor of Elections. "We needed a second database that would always be in synch with our main database."

The organization realized that implementing a database replication solution would also enhance its disaster recovery capabilities and support its planned transition from Oracle 10g to 11g. To add the second database quickly and efficiently, the Orange County Supervisor of Elections needed a solution that could support multi-master replication. And because of the limited size of the organization's IT staff, the solutions had to be easy to administer.

The Quest Solution

The Orange County Supervisor of Elections began researching database replication solutions. Many products were rejected immediately because they did not support multi-master replication. The IT staff also considered Oracle RAC, but found that it required too much administration, which would add resources and costs. "Oracle RAC was new for our staff, who do not have a lot of background in storage area networks or network administration for those kinds of systems," said Dr. Tata. "We simply did not have the resources to manage it." They also reviewed Oracle Streams, but dismissed it because replication of LOB datatypes was very difficult using this solution.

Instead, the Orange County Supervisor of Elections selected SharePlex® for Oracle. SharePlex supports high availability, disaster recovery, reporting, platform upgrades and migrations, and application integration, with zero-to-minimal impact on Oracle OLTP systems. Quest did an on-site visit and within one day SharePlex was installed and running on a test system.

"The database maintenance process took about four hours, and if there was a problem during business hours, we were usually down for about one or two hours. Now, with SharePlex, we can apply all our patches and updates on one database while we are running on the other. We now have zero downtime."

— Dr. Rama Tata
 Application Systems Analyst,
 Orange County Supervisor of Elections

OVERVIEW

Headquarters

Orlando, Florida

Critical Needs

Database replication to support easier migration to Oracle 11g, and load balancing across critical systems to improve network performance and disaster recovery capabilities

Solution

SharePlex for Oracle

Results

- Saved operating costs by avoiding an upgrade to Oracle Enterprise Edition

- Reduced downtime required for planned maintenance from four hours to zero

- Improved system performance with load balancing of critical systems to allow for quick disaster recovery

- Enabled easy migration to Oracle 11g

"We were surprised during the proof of concept how easily SharePlex replicated," commented Dr. Tata. "And the solution provides a single point of administration, so I was confident that I could take over its administration along with my other responsibilities."

Moreover, by choosing SharePlex, the Orange County Supervisor of Elections avoided the costs and complexities of upgrading from Oracle Standard Edition to Enterprise Edition. "If we had chosen some of the other replication solutions, we would have had to upgrade, even though Standard Edition is sufficient for our needs," explained Dr. Tata. "It was much more cost effective for us to go with SharePlex."

The Bottom Line

With Shareplex for Oracle in place, the Orange County Supervisor of Elections is now able to ensure the consistent performance and availability of its mission-critical election systems. Secondary applications now access the replica database, which is constantly and reliably kept in synch with the primary database. This reduces stress on the primary database. "With SharePlex, we now have two databases that are replicating each other," stated Dr. Tata. "We've had no problems."

Implementing SharePlex also enabled the organization to eliminate downtime for planned maintenance changes. Before SharePlex was introduced, the database had to be brought down for any change, maintenance or patches to applications. While this was usually taken care of at night, the process required downtime—which sometimes extended into business hours. "The database maintenance process took about four hours, and if there was a problem during business hours, we were usually down for about one or two hours," said Dr. Tata. "Now, with SharePlex, we can apply all our patches and updates on one database while we are running on the other. We now have zero downtime."

In addition to eliminating downtime, SharePlex replication saves valuable IT staff time. While three staffers were previously required for the maintenance process, now just one of them can apply the patches and perform all the other maintenance. Moreover, maintenance can occur whenever necessary, since one database can be brought down without impacting the availability of applications.

Implementing SharePlex also enabled the Orange County Supervisor of Elections to migrate smoothly to Oracle 11g. "We expected some kind of bumps along the way with our transition from 10g to 11g, but everything worked as planned," said Dr. Tata. "SharePlex is functioning well."

Overall, the Orange County Supervisor of Elections is extremely pleased with SharePlex's performance. "SharePlex is simple software that can do a lot of things," said Dr. Tata. "It's easy to use."

About Orange County Supervisor of Elections

Florida Division of Elections provides statewide coordination and direction for the interpretation and enforcement of election laws. The Orange County Supervisor of Elections is one of 67 counties within the division. It is dedicated to ensuring the integrity of the electoral process, and enhance public confidence and encourage citizen participation in the voting process.

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