

Upgrading Mission Critical Oracle RAC Systems

Client Profile

The client provides services to tens of thousands of media professionals and their dependents around the globe.

The client relies on a 3-node Oracle RAC cluster to provide high availability for 16 databases. The applications accessing the databases require 24x7 availability and maintenance windows are short.

Business Challenges

The versions of the Red Hat operating system and Oracle clustering, database and ASM software were rapidly nearing obsolescence. The client understood the importance of upgrading the software to more current versions, but the various applications' uptime requirements presented a significant challenge.

Outdated Software Risks

RadixBay's goal is to act as our clients' technology partner, not just their services provider. Our support specialists educate all of our clients in the risks of using out-of-date software versions. The vendors do not provide 24x7 support, software updates, bug fixes, security alerts and critical patch updates for unsupported software. The platform becomes increasingly susceptible to security threats and availability issues. Businesses are also unable to leverage software improvements and new features available in more current releases.

“We understand how important our services are to our clients. Our goal is to constantly provide a level of support that exceed their expectations.”

Chet West VP, RadixBay Managed Services and Application Development

Minimizing Application Downtime

RadixBay's managed services team understood they needed to design a software upgrade strategy that ensured a trouble-free migration and reduced application downtime to a minimum.

RadixBay Builds an Upgrade Solution

RadixBay OS and database specialists that were managing the client's systems began their investigation. RadixBay senior DBA Troy Ross explained the process they used to build their upgrade strategy:

“A RAC environment is a highly complex system. We began by researching all of the Red Hat and Oracle documentation. We paid close attention to the software compatibility charts and the patches we needed to apply.

We wanted to make sure all of the software versions we were selecting were compatible. The mark of a good support tech is not attempting to know everything, but to know where to look when you don't.”

Implementing Best Practices

The RadixBay team evaluated all facets of the highly available environment to identify additional areas for improvement. The goal was to not only upgrade the software versions but to ensure they were configuring the system using industry-standard best practices.

The team identified that the system was using a combination of Oracle ASM and OS-level file storage. The DBA and OS support specialist agreed that they would convert all databases to use ASM during the upgrade process. Converting all of the databases to ASM would reduce the chance of future administration errors, simplify the environment and allow the client to better leverage ASM's benefits.

Selecting Upgrade Mechanisms

The team analyzed the options and determined that they would use different upgrade mechanisms for the databases. The team used Oracle's export and import utilities to migrate one of the databases to a new server in the cluster and a combination of ASM copy and RMAN duplicate for the remaining DB systems.

Managing the Upgrade Process Lifecycle

RadixBay senior OS specialist Karthik Manne described their upgrade testing process:

"We used a standardized approach to test our upgrade procedures. As we identified upgrade issues in the DEV environment, we updated our procedural documents to prevent them from recurring."

We also evaluated our processes to determine what we could streamline and optimize. Our staging environment upgrades were dry runs for our production deployments."

RadixBay Service Benefits

- Acted as a trusted technical advisor to client personnel
- Developed a customized upgrade strategy for the database systems
- Verified that the new configuration would comply with Oracle licensing requirements
- Analyzed the environment to identify additional areas for improvement
- Adhered to a standardized testing process to minimize problems during production deployments
- Improved the reliability, security and performance of the client's mission critical systems
- Documented the new environment to facilitate ongoing support

About RadixBay

From application development and packaged application support to around-the-clock cloud and on-premise data infrastructure monitoring and administration, RadixBay provides a wide range of enterprise-grade IT solutions.

RadixBay's rural shore model combines the cost benefits of offshore services with the security and simplicity of onshore support.

RadixBay clients are able to leverage the combined skills and experience of an entire company of cloud and on-premise IT experts.

**Focus on Your Business.
Let RadixBay Handle Your IT.**