Judicial Branch of the State of Iowa

zirous

Type: System Integrator/Oracle Technology Specialist
Founded: 1982
Locations: West Des Moines, IA; Minneapolis, MN; Portland, OR
Public/Private: Privately held
Geography: North America
URL: www.zirous.com

Zirous is a privately held company specializing in Oracle sales, development, implementation and integration. Zirous has extensive experience with private companies and public organizations throughout the country.

"We are very pleased with Zirous's work on ICIS2. They have been very responsive and timely in meeting our needs. With a staff of 90 employees, most of the comments have been very favorable concerning the new applications; the new design is definitely more user friendly."
- Lois Leary, Polk County Clerk of Court

Partner Solution for Judicial Branch of the State of Iowa
The Judicial Branch of the State of Iowa issued a request for proposal to unify its court system and streamline the administrative organization to provide a more uniform justice system for its citizens. The original system, known as ICIS, was written in the mid-1980s and had been modified extensively. As technology advanced and the benefits of browser-based applications became legitimate, the evidence no longer supported the high cost of maintaining the legacy client/server system.

Zirous has completely re-architected the Iowa Court Information System (ICIS) relying heavily on the components of Oracle 10g Application Server. The new system, known as ICIS2, was developed using J2EE technologies and utilized Oracle TopLink to increase developer productivity and application performance. ICIS2 is deployed in a cached and clustered environment making Portal, OC4J and Reports highly available to all 2,500 users.

The project took about 3.5 years to complete and was delivered to the client in stages.

Solution Details
The Judicial Branch of the State of Iowa's existing system, known as ICIS, was a character based Oracle Forms application. This system was distributed statewide to 100 courthouses and connected to 26 database servers. The code was originally written in the mid 1980s and had been modified on many occasions. The business logic was imbedded in Forms, PL/SQL and as data in tables.

The Judicial Branch wanted the new system to be browser based. Zirous established the necessary parameters for the successful re-engineering effort, which included:
- Architecting the Oracle 10gAS environment for high availability and failover.
- Caching and load balancing to improve application performance.
- Application development guidelines to ensure the most effective use of process, procedure and development tools.

Technology
Stack:
Clustered Oracle 10g R2 Webcache servers
Clustered Oracle 10g R2 Middle Tier Application Servers
Oracle 10gR2 Infrastructure Server
Oracle Database 10g
Oracle Internet Directory (OID) 10g R2
Oracle Portal 10.1.4
Red Hat 4.0

Monitoring: Grid Control

The ICIS2 application was implemented in stages, delivering one or more modules at a time. As the new specifications for each module emerged, Senior System Analysts reviewed the requirements and worked to implement a solution that would grow with the Judicial Branch. Modules included in the application are: Quick Case Initiation, Case Processing, Traffic Ticket processing, Financial, Juvenile Administration, Reporting, Scheduling, Tickling, Property, and Noticing. All of the modules are developed as J2EE components using Jakarta Struts and Oracle Toplink.

The following diagram depicts a high-level view of the architecture in place for ICIS2:
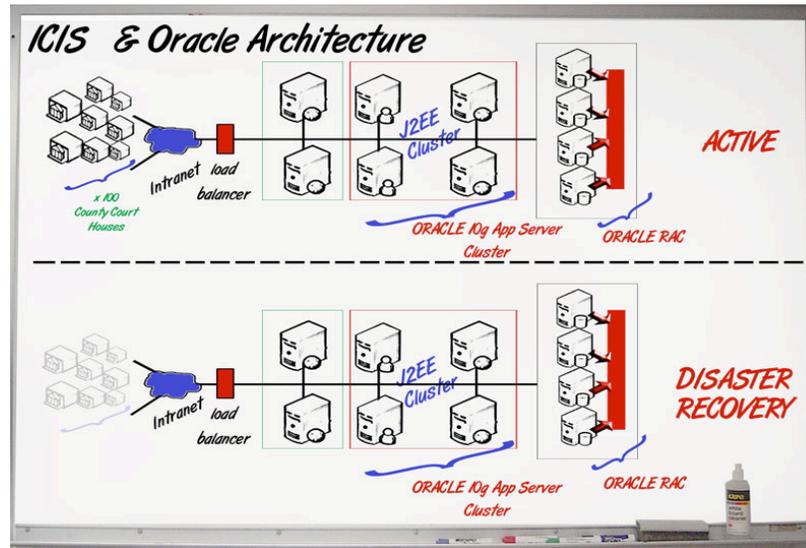
1. The users reside in 100+ locations and connect to ICIS2 via their intranet.
2. When the user logs into Oracle Portal, the Oracle Internet Directory (OID) is used for authentication.
3. A load balancer distributes the requests to one of the Oracle Web Cache servers in the cluster. If one of the web cache servers is not available, all requests will go through the other web cache server.
4. The web cache server sends the request to the J2EE cluster.
5. One of the Oracle Application Servers in the J2EE cluster will process the request, connecting to the Oracle RAC database as needed to either query or update the database.
6. An Oracle Report server also resides on each of the Web Cache servers. Requests for report printing are sent from the J2EE cluster to the Oracle Report servers to process.
7. A similar architecture is in place at a remote site that is primarily used for Quality Assurance testing and for training. In the case of a disaster at the primary site, the production data will be restored from a backup to the remote site's servers. The remote site will then be used for production until service is restored to the primary site.

ORACLE Gold Partner

"Zirous has partnered with Oracle Corporation since 1992 to help clients solve business problems. As the market leader of database technology and a pioneer in producing products designed to deliver browser-based applications, Oracle Corporation was a logical choice as a technology platform for the re-engineered ICIS2."

Mike McDermott
Chief Executive Officer
Zirous