

Oregon Secretary of State



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.

Technology

Stack:
Application Server
Oracle Database 10g
Oracle Internet Directory (OID) 10g
Oracle Portal 10g
OC4J 10g
HA configuration for all components
f5 Big IP Load Balancers
Solaris

Partner Solution for Oregon Secretary of State

The State of Oregon Secretary of State provides state services to the citizens of Oregon for archiving, audits, corporations, elections, and executive leadership.

Zirous and the Oregon Secretary of State (SOS) implemented a high availability solution for their Oracle Application Server environment to increase availability, performance, and security.

Zirous architects worked with Oregon SOS systems specialists to define and refine requirements to create an optimal solution to ensure the best performance.

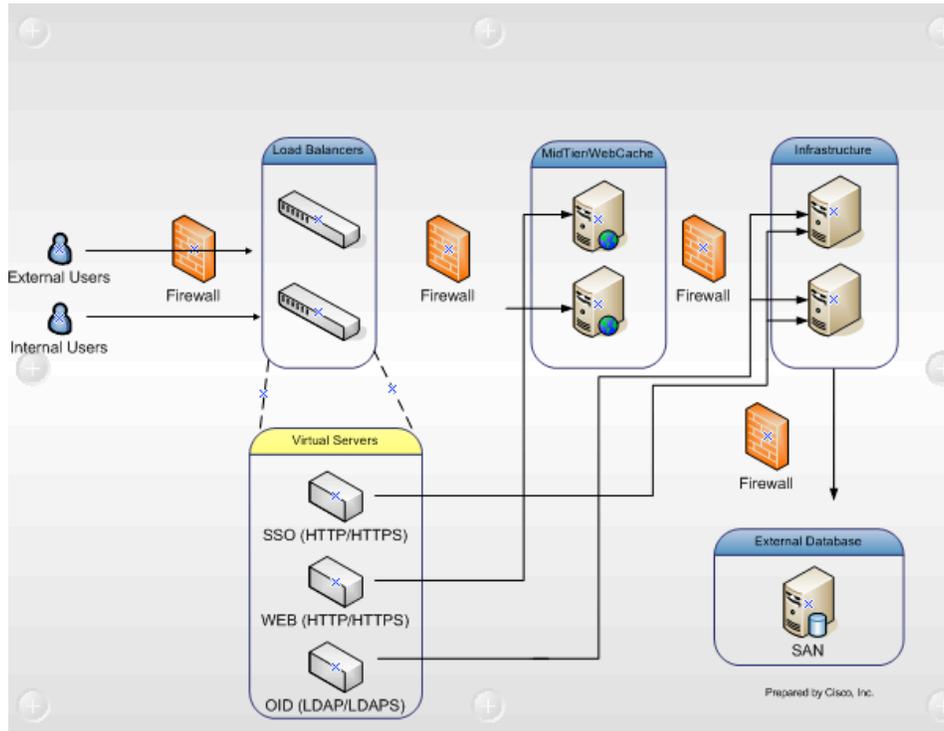
Solution Details

Oregon SOS was looking to make their non-clustered development, QA, and production environments highly available to increase the performance, scalability, and uptime of business functions running on their Oracle Application Servers. Oregon SOS looked to Zirous to architect and implement the following high availability (HA) solution.

The Oracle Application Server midtier servers were made redundant using an active-active configuration by clustering and load balancing the installations. A midtier cluster is a set of instances configured to act in active-active configuration to deliver greater scalability and availability than a single instance. Clustering the midtier removes the single point of failure that can bring an application down if there is a failure. A cluster can span multiple machines, distributing application execution over a greater number of CPUs. A single midtier instance is vulnerable to the failure of its hardware and operating system, but a cluster continues to function despite the loss of an operating system or a host, hiding any such failure from clients.

Similarly, the Oracle Application Server infrastructure and identity management installations were made redundant using an active-active configuration by clustering and load balancing. To achieve an active-active topology, the Oracle Identity Management components on all nodes are connected to the same infrastructure database. For a truly highly-available environment, this database should be housed in an Oracle Real Applications Cluster (RAC) database. A RAC database is itself composed of multiple co-operating servers, providing for fault-tolerance. Although Oregon SOS chose not to go with RAC at this time, Zirous helped Oregon SOS install the infrastructure database so they can easily move to RAC at a future date.

Architecture of Oregon Secretary of State Oracle Implementation



"Zirous has partnered with Oracle Corporation since 1992 to help clients solve business problems. As Zirous and Oregon Secretary of State worked to implement increased performance, scalability, redundancy, and centralized user management for the web architecture, it became clear that the Oracle Application Server was the critical technology for the success of the project."

Mike McDermott
Chief Executive Officer
Zirous.