

ALLETE

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:
Oracle Database 10g
SOA Suite 10.1.3.3

Endpoints:

Oracle Database, Outage Management System (OMS), Customer Information System (CIS), Geographic Information System (GIS), Automated Meter Reading (AMR), Energy Management System (EMS), Interactive Voice Response (IVR), Maximo

BPEL PM Deployment:
2x 2-CPU AIX 5.3 (HA Setup)

"With the assistance of Zirous and the ESB solution utilizing the Oracle SOA Suite, our business will realize the benefit of reduced costs by the improvement of data accuracy and efficiency resulting in increased market responsiveness and improved customer service."

- Kenneth J. Voss, P.E., Project Leader

Partner Solution for ALLETE

ALLETE generates, transmits, distributes and markets electrical power for retail and wholesale customers in the Upper Midwest. ALLETE also owns significant real estate in Florida, BNI Coal in North Dakota, and nine percent of the American Transmission Company.

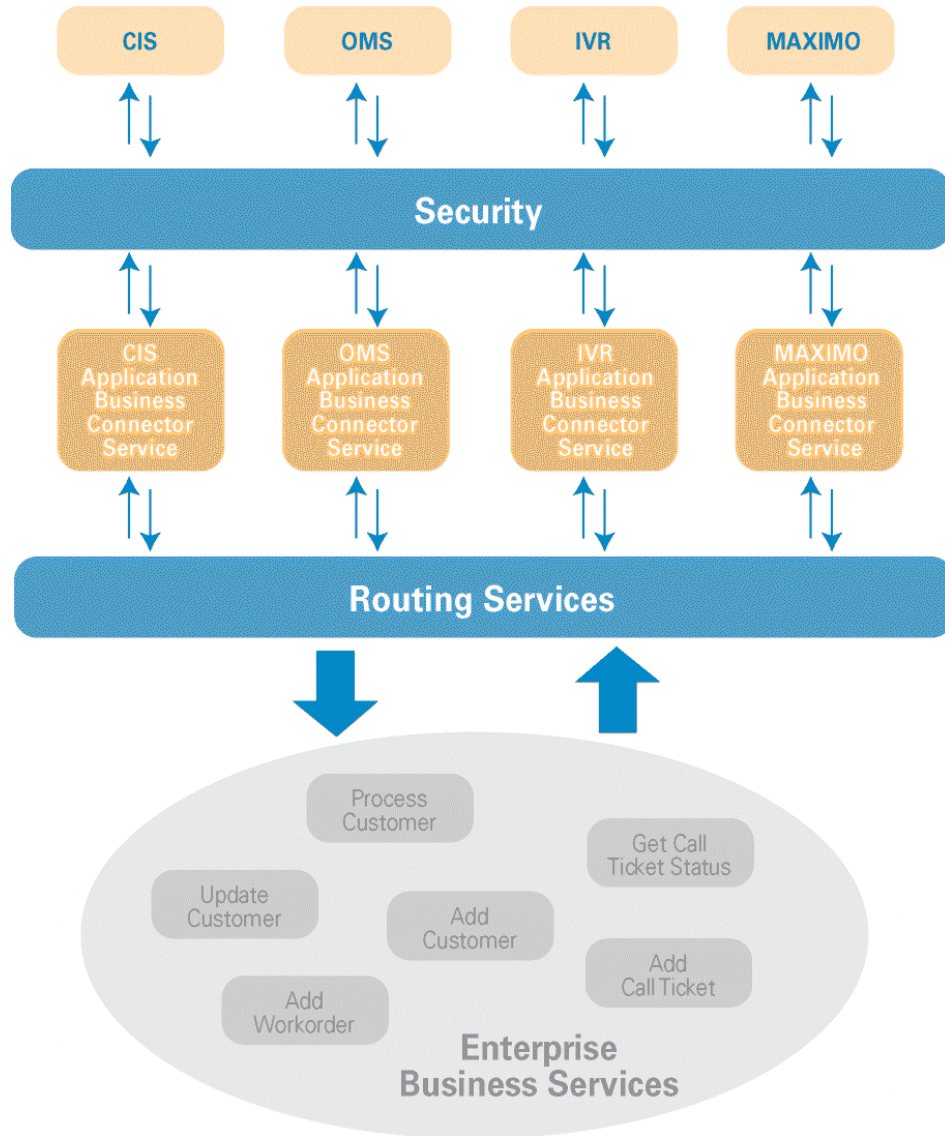
Zirous and ALLETE architected and implemented an enterprise integration strategy for the organization. With the construction of an Enterprise Service Bus (ESB), the integration strategy laid the foundation for a Service Oriented Architecture (SOA) using Oracle Enterprise Service Bus, Oracle BPEL Process Manager, Oracle Web Service Manager and Oracle Database.

Solution Details:

Faced with common integration challenges relating to proprietary and point-to-point interfaces, Minnesota Power, a division of ALLETE, had a desire to move towards standards-based integration using a service bus and Web Services. Minnesota Power was also looking to implement a new Outage Management System (OMS) to better equip them to deliver retail electric service to 135,000 customers and wholesale electric service to 16 municipalities. Knowing the issues they had faced in the past, the goal was to use the OMS project as the first offering with new integration architecture. In the fall of 2005, after an extensive RFP process, ALLETE chose Oracle as the Middleware vendor that would best meet their needs. ALLETE saw how Oracle BPEL process manager and the Oracle SOA Suite would provide the necessary tools and adapters used as building blocks in the architecture. In the spring of 2006, ALLETE contacted Zirous to help architect and develop the integration framework and OMS interfaces.

Zirous created an enterprise architecture using Oracle Enterprise Service Bus (ESB), Oracle BPEL process manager and Oracle Web Services Manager to handle security. With this architecture in place it allowed a transition from task-centric to business-oriented processes and improved flexibility of adding new integrations and/or endpoints.

Zirous's partnership with ALLETE is ongoing, and in late 2008 Zirous enhanced ALLETE's ESB solution to further extend the benefits of the ESB. The enhanced solution is diagrammed and described below.



"The ALLETE project demonstrates the ability of our staff to quickly understand and architect solutions that meet current business needs while positioning the business for future growth and development."

Mike McDermott,
Chief Executive Officer
Zirous

The diagram above shows the architecture of the ESB which consists of several layers. The first layer, built using Oracle Web Services Manager, secures the web services and audits incoming and outbound requests. The second layer, the application business connector services layer, connects the business applications and performs transformations to and from the enterprise service bus canonical model. The final layer consists of routing services and Enterprise Business Services (EBS). The services in the EBS are based on ALLETE's canonical data model and represent the specific business function or task, which include Update Customer, Process Customer, Add Call ticket, etc. The architecture features Oracle Enterprise Service Bus, Oracle BPEL process manager, and Oracle Web Services Manager.