State Government Agency – Criminal Justice

Overview

Oracle SOA Governance Suite components provide the visibility, control and analytics to make Service-Oriented Architecture (SOA) initiatives successful in every stage of the SOA lifecycle and at all levels of SOA maturity. Oracle provides end-to-end capabilities to fully support SOA and Business Process infrastructure. The suite automates essential SOA governance processes allowing organizations to realize the agility benefits of SOA while managing the complexity of today's SOA environments.

Oracle Enterprise Repository (OER) serves as the core element to the Oracle SOA Governance solution. An industry-leading metadata repository, OER provides a solid foundation for delivering governance throughout the SOA lifecycle by acting as the single source of truth for information surrounding SOA assets and their dependencies. OER provides the visibility, feedback, controls, and analytics to keep SOA on track to deliver business value. The intense focus on automation helps to overcome barriers to SOA adoption and streamline governance throughout the lifecycle.

This State Government Agency is an information services hub for other state agencies involved in public safety, law enforcement and criminal justice. This agency responds to requests from state and local law enforcement agencies for assistance in investigations by providing access to state and federal criminal justice information systems. SOA Governance was needed to establish oversight and exercise control over a diverse IT environment and to influence the agency's people and processes.

Zirous initially architected a set of common integration services using the Enterprise Service Bus (ESB) in Oracle SOA Suite 11g. These services provide a method for consumers, agencies, and applications to access business data and invoke transactions. The architecture has evolved from exposing services directly to consumers and applications to exposing entry points for all the state agency's integration services. The agency developed an integration gateway that is responsible for high level validation, security, transaction archiving, and routing of requests to enterprise business services. Enterprise business services are business services or data services that facilitate a specific transaction request including security, validations, error handling, and transformations.

The agency engaged Zirous again as SOA moved beyond its initial stages and became a key element of their software development efforts. Zirous then architected a SOA Governance solution for the agency as they experienced a need for greater visibility into, and oversight of, the relationships and interdependencies that connect services to other elements of SOA across their organization. SOA Governance encompasses people, process, and technology to effectively manage and optimize your organization's investment in SOA and improve decision-making. The agency wanted to

Technology Stack:
Oracle SOA Suite 11g
Oracle Enterprise Repository 11g
Oracle BPM Suite 11g
Oracle Weblogic 11g

ensure that they were getting the greatest return on investment on their efforts to deploy SOA enterprise-wide. Zirous delivered a complete strategy and roadmap to assist the agency with realizing their goals.
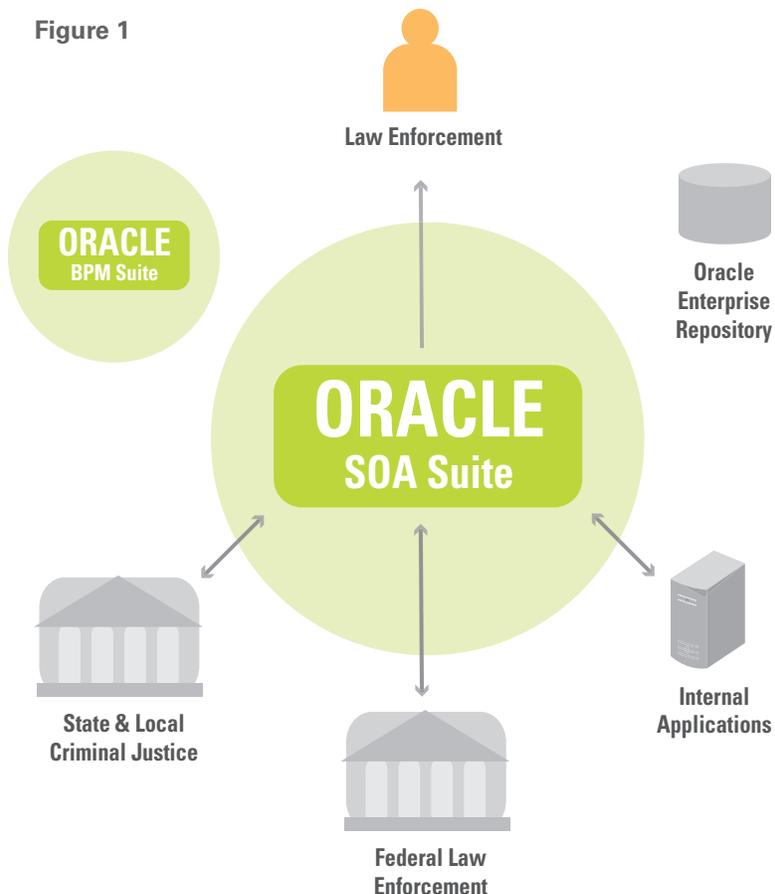
Challenges
Governing access to criminal justice information throughout the state posed several challenges to the agency including:

- Improvement of the structure and automation of the SOA lifecycle
- Ensuring performance and capacity of shared Services by external consumers
- Oversight of run-time policies such as security, access, logging and error handling
- Maturation of SOA related design-time compliance policies and processes
- Enforcing architectural standards compliance at design-time
- Operational dependency tracking and impact analysis of Services

Solution Details
Zirous architected a solution strategy leveraging the key features of Oracle products including SOA Suite 11g, Enterprise Repository 11g and Business Process Management (BPM) Suite 11g to address the agency's most demanding pain points (see figure 1). These tools provide end-to-end SOA Lifecycle Governance from design-time through run-time.

Figure 1

Law Enforcement

ORACLE BPM Suite

Oracle Enterprise Repository

ORACLE SOA Suite

State & Local Criminal Justice

Federal Law Enforcement

Internal Applications

ORACLE Gold Partner

The strategy included leveraging SOA Suite 11g to develop Utility Services which provide application-level facilities for logging, monitoring, diagnostics and error handling. These Utility Services would facilitate the agency's desire to accurately gauge the health of its Services and to gather pertinent metrics to support those findings. These Services would make use of the Oracle Complex Event Processor to analyze and correlate event-ing of this log. Further, the Oracle Business Rules Engine could be leveraged to evaluate the criterion for changing application severities and alert destinations.

BPM Suite 11g contains a complete set of tools enabling collaboration between agency organizations to create, automate, execute and optimize SOA Governance processes. Oracle offers a comprehensive SOA solution through a suite of SOA products. Oracle Fusion Middleware products cover the needs of the SOA infrastructure end-to-end. It represents a more powerful set of capabilities than the human workflow functionality in SOA Suite 11g.

OER 11g contains a complete set of tools to provide visibility into the agency's SOA assets, minimizes redundancy, optimizes service reuse, and improves ROI. The end-to-end oversight throughout the lifecycle automates an asset's lifecycle progression, reflects the policies applied to assets, and monitors compliance to standards. It allowed the agency to strike the balance between the management oversight with employee and consumer empowerment.

Oracle's SOA Governance solution eases the transition of an organization to SOA by providing a means to reduce risk, maintain agency alignment, and show the business value of SOA investments. Together these tools represented a holistic solution to help the agency realize the full potential of their investment in Service Oriented Architecture.