



Large Food Manufacturer

Overview

Oracle WebLogic Server 11g, the fundamental component of Oracle WebLogic Suite, provides a solid foundation to help businesses develop and deploy enterprise applications in an application grid architecture. It includes essential tools for developing applications and managing SOA environments.

Oracle SOA Suite is a comprehensive, hot-pluggable software suite to build, deploy and manage Service-Oriented Architectures (SOA) and enterprise integration strategies. The components of the suite include consistent tooling, a single deployment and management tool, end-to-end security and unified metadata management. Oracle SOA Suite's hot-pluggable architecture helps businesses lower upfront costs by allowing maximum re-use of existing IT investments and assets, regardless of the environment they run in, or the technology they were built upon.

Despite the tough economic times, manufacturing was an industry that held strong and even grew throughout the now dwindling recession. With the US producing a large portion of the world's manufactured goods, this sector was able to stand strong through these hardships. Seeing consistent growth and revenue, this food manufacturing giant required a flexible, scalable enterprise integration solution that would support their manufacturing needs across multiple plants. The Company had plants in desolate areas of the US and needed a reliable way to communicate with the home office during power outages and other hardships. This upgrade would allow them to stay away from the manual paper reporting process, cut man-hours on IT support queries, allow for automation in production and allow for growth and scalability in the future.

Challenges:

This food and dairy manufacturing company has locations all across the globe. In order to properly run and manage their business, especially during outages, the Company needed a process for integrating their corporate enterprise resource management software (Oracle EBusiness Suite) with their plant manufacturing execution software running at various manufacturing locations across the United States. The Company needed a Highly Available (HA) Service Oriented Architecture (SOA) solution, which required the addition of Oracle WebLogic 11g. High Availability ensures security within the IT environment, protecting the Company from software failures and downtime, which can cost a manufacturer large amounts of money from an IT budget that is either stagnant or diminishing in our 'budget cut' economy. Taking advantage of every minute that would have been spent in downtime could boost the Company's revenue by ensuring that production is continuing during various outages and hardships.

Technology

Stack:

Oracle HTTP Server 11.1.1.6

SOA Suite 11.1.1.6

WebLogic 10.3.6

JRockit Java Release 1.6rXX

Linux Version 5 Release 8

Oracle VM 3.1.1



Zirous worked with the Company to implement SOA, deployed on Oracle WebLogic 11g, as well as an Oracle Virtual Machine (OVM). SOA enabled the Company to integrate the software, while OVM ensured that the Company's SOA licensing costs stayed at a manageable level. WebLogic 11g clustering was used to ensure the Company's environment was highly available. Zirous brought an approach geared on reusability and discipline, allowing the Company to look forward to future improvements within the architecture.

Zirous completed configuration on Oracle WebLogic to connect to the the Company's Active Directory for users to gain access into the SOA environment. Zirous also deployed SOA using clustered managed servers. Clustering was important so that the Company had the option for increased scalability and better security from server failure. The Company needed Zirous to make sure the uptime of the environment was maximized, and in turn, maximizing the manufacturing Company's production.

Solution Details:

The solution architecture is made up of the following components to provide the proper solution for the Company:

- Shared storage for critical resources between servers' virtual IPs to ensure proper failover of resources, load balancing for improved scalability and a web tier to further simplify the presentation of the SOA platform, which all aid in plant to plant communication improvements for the Company.
- The Company had an existing VMWare infrastructure, however, to license Oracle products and enable High Availability, the entire VMWare cluster would need to be licensed. To manage Oracle licenses more effectively, Zirous recommended and implemented OVM to keep those licensing costs as low as possible.
- To ensure easy startup and shutdown, the WebLogic Scripting Tool (WLST) was leveraged for custom startup and shutdown scripts, as well as creating a service process to ensure the NodeManager is always operational. NodeManager is a communication layer that manages resources within WebLogic. This improves efficiencies and enables the Company's resources to focus their time on other activities.
- To simplify and centralize access management, Zirous configured Authentication Providers within WebLogic to Active Directory, which allows all the user accounts and access controls to be managed within the Active Directory environment, making this process much faster for the Company's employees.



Locations:
West Des Moines, IA
Minneapolis, MN
Portland, OR

www.zirous.com

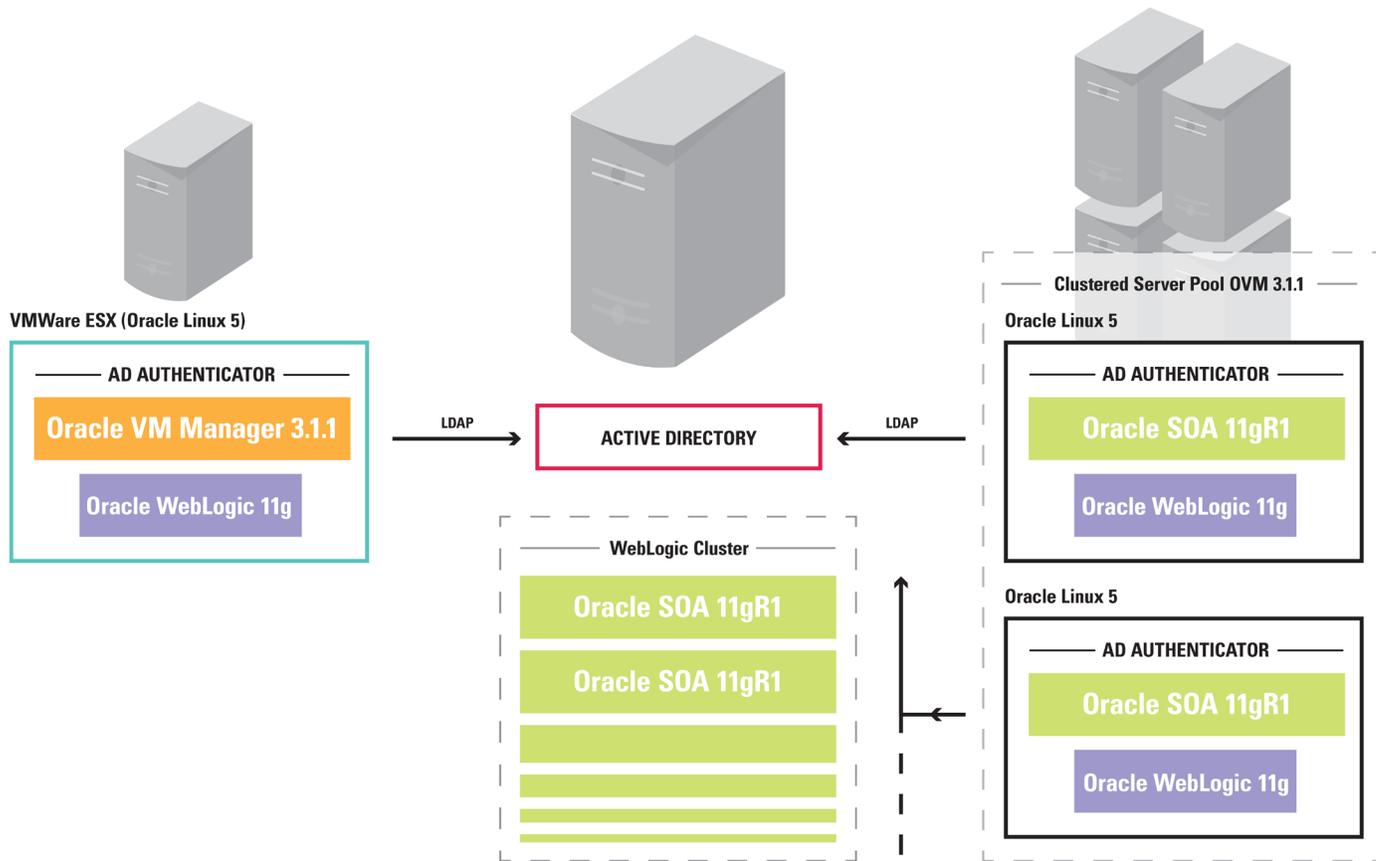
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Figure 1:

Figure 1 shows the architecture Zirous implemented for this Large Food Manufacturer.



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