Darling Ingredients

Sustainable ingredient company moves Oracle applications to the cloud

Darling Ingredients, the world's largest producer of sustainable ingredients, was facing aging hardware in a colocation facility hosting key infrastructure. As the contract came up for renewal, Darling's goal was to modernize their solution without increasing costs. They began to explore the possibility of bringing the workloads into their own data centers or moving them to the public cloud.

They had been using Oracle on VMware ESX in their colocation environment, and had tried several cloud providers, but found the reliability and performance lacking. Oracle Cloud Infrastructure (OCI) provided the predictable high-performance infrastructure for Oracle Database and the applications that depend on it.

Moving Oracle E-Business Suite and other business-critical enterprise applications

Darling has moved their enterprise planning, business intelligence, and data integration technology applications from their colocated data center to Oracle Cloud Infrastructure. Oracle E-Business Suite (EBS), Oracle Database, Oracle Hyperion, and related Oracle applications, along with third-party applications such as Informatica, Vertex, and their Laboratory Information Management System (LIMS) are all moving as part of this project.

The deployment includes over 500 compute cores, 50 virtual machines, and databases that total over 60 TB of NVMe storage, along with 70 TB of object storage and 4 TB of block storage. They are utilizing both Microsoft Windows Server 2008 (Service Pack 1) and Oracle Linux operating systems. The deployment consolidated 19 databases from several different applications, including Hyperion, Informatica and Vertex to three Oracle Database Cloud systems running on bare metal servers. The complete deployment includes over 30 database instances, including pluggable databases, across 13 Oracle Database Cloud Service on bare metal systems.

Darling's staff in their Irving, TX headquarters and 113 plant locations across the United States also needed secure, reliable bandwidth to use the EBS and other applications, so a 10 Gbps Oracle FastConnect connection was deployed. Virtual networks were provisioned with Darling's own DNS to meet their needs to use specific RFC1918 IP addresses and server names.

"Darling Ingredients has had an aggressive plan to move all of our key IT applications into the cloud. We have a number of critical Oracle applications, many of which rely on Oracle Database. Oracle Cloud Infrastructure Database on bare metal met our stringent performance requirements. Having predictable, high bandwidth connectivity to our end users is critical, and Oracle FastConnect was a great solution."

- Tom Morgan, Oracle Apps DBA Manager

WHY ORACLE?

- Performance that doubles the previous hosted solution
- Predictable, high-bandwidth connectivity between applications hosted in the cloud and application end users
- Tremendous efficiency gains: deployment included consolidation from 19 to three database systems
- Predictable costs and transparent pricing
- A true hybrid cloud, rooted in bare metal, easing application migration
Darling Ingredients reduces in-house maintenance, and enhances their infrastructure capabilities at the same time

Darling encountered a sudden and prolonged outage of one of their EBS environments while the Oracle Cloud Infrastructure pilot was going on. The performance and reliability during the proof-of-concept enabled them to move that EBS deployment into production on OCI ahead of schedule. The whole process was completed within 48 hours of the decision to do so.

One of Darling's key goals was to avoid increasing their costs with this move. Many costs, such as licensing, remained comparable to their prior solution, however they now benefit from the indirect savings of no longer maintaining their former infrastructure, and reduced personnel costs. An important aspect of maintaining the lower costs was the ability to migrate these Oracle applications from on-premises to Oracle datacenters with minimal disruptions using the tools that Darling engineers were already familiar with. This saved countless hours that would have been wasted moving the application disruptively to some other public cloud.

"Oracle Cloud with Enterprise Manager allows me to replicate the Oracle workloads in a show-back, charge-back model under a single subscription, allowing in turn the accurate determination of what each business unit is using" said Tom Morgan, Oracle Apps DBA Manager.

Performance improvements were an unanticipated benefit. For example, one payroll application which formerly took 6.5 hours now completed in under three hours.

With this deployment the team is able to provision quickly and tear down quickly, speeding time-to-solution and controlling costs. The combination of the technology stack and the simple billing enable Darling to easily track usage, map costs to projects, and cross-charge internally for resource consumption. The next step is to move the rest of their production applications running within their own datacenters to Oracle Cloud Infrastructure, as well.

Oracle EBS on Oracle Cloud Infrastructure

About Darling Ingredients

Darling Ingredients is the world's largest producer of sustainable ingredients. With processing operations in over 200 locations on five continents, they create a wide range of products and customized solutions for customers in the pharmaceutical, food, pet food, feed, fuel, bio-energy, fertilizer and foodservice industries.