

CASE STUDY



Optimizing application infrastructure with high performance Oracle RAC clusters, InfiniBand & scalable cloud computing

ORGANIZATION:

ProvadeVMS is a web-based application used to manage and procure temporary as well as outside contract or contingent labor.

SOLUTION:

Datapipe's high-performance solution with an Oracle RAC cluster, utilizing InfiniBand and reliable datagram sockets

DATAPIPE

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BEST PRACTICE TO OPTIMIZE APPLICATION INFRASTRUCTURE

SNAPSHOT

Founded in 2004 by a team of industry professionals, Provade helps businesses realize significant benefits in their contingent workforce management and services procurement programs with their powerful Vendor Management System (VMS).

How daunting is Provade's challenge? Consider the size of the temporary labor market in the U.S.: Data from the American Staffing Association (ASA) Quarterly Employment and Sales Survey indicates that U.S. staffing companies employ an average of 2.5 billion contingent workers per day. As a result, Provade is managing approximately \$2 billion in worker payments on a bi-monthly basis. To effectively process this data, Provade sought a technology partner that could help implement flexible, cost-effective business operations for their customers as well as help drive growth and profitability and maintain Service Level Agreements (SLAs) to establish market-leading customer service.

THE CHALLENGE

Traditional ERP companies in the 1990s were buying software and installing it behind their firewalls, in addition to procuring multiple servers and hiring additional support staff members. At the same time, companies like Oracle were trying to figure out how to

provide application hosting. Although the combination showed promise, the model was very costly to maintain.

Soon, companies began to spring up that kept the traditional ERP sales model but wanted to eliminate the burden of procuring hardware and running the systems. Provade is one of these innovators who began to set up their own hosting and application on-demand services. Through an agreement with Oracle, Provade became part of Oracle's Business Process Outsourcing (BPO) initiative and developed a go-to-market plan for services procurement (including temporary labor, contractors and administrators) using PeopleSoft Services Procurement.

Provade soon began hosting customized ERP services for their customers, but only two years into their new endeavor, the company realized the traditional ERP model was not scalable. Tom Rumberg, Vice President of Technology for Provade, elaborates: "The model was growing too quickly. We had to hire additional staff, procure new hardware and maintain and service it. We realized Provade needed to change to a Software as a Service (SaaS) or cloud model, making a single offering of one application with one database and one suite of tools that we can provide to all of our customers."

Provade turned to Datapipe to overcome a number of challenges in moving to a single database for their application:

1. Large Oracle RAC clusters with significant memory suffer from latency in the Oracle interconnect. This is due to the limitations of the User Datagram Protocol (UDP) over Ethernet.
2. The cluster interconnect can have a significant performance impact on clustered databases with intensive workloads.
3. Provade's database administrators were often faced with problem reports, indicating delays in the global cache.
4. In the default configuration, a RAC cluster accesses the global cache by UDP over a dedicated interconnect network layer. However, at a certain point, UDP over Gigabit Ethernet does not scale up.

The Datapipe team solved these challenges with a managed, performance-tuned, complex Oracle RAC database that gave Provade a new scalable infrastructure that could handle almost any amount of data processing.

THE SOLUTION

Datapipe engineered a high-performance solution with an Oracle RAC cluster, utilizing InfiniBand and reliable datagram sockets.

InfiniBand is a switched fabric communications link used in high-performance computing and enterprise data centers. Its features include high throughput

with low latency, quality of service and failover. Best of all, it is designed to be scalable. Working with Provade, Datapipe customized the Oracle RAC solution specifically for the cloud to create a truly scalable VMS offering.

The new IT infrastructure called for moving from SUN to HP hardware. "We recreated our infrastructure using Datapipe's recommendations and saw a drastic improvement in the speed of our application. This new infrastructure gave us a big advantage over our competitors," Rumberg said.

The results were instantaneous. "I was able to leverage the Datapipe infrastructure so that I do not have to spend a lot of time tuning the system. Because I have the horsepower behind me, I can focus on functionality and features rather than having to continually retune the system to achieve better performance," Rumberg added. Complementing the database layer, Datapipe implemented a scalable, cloud-based solution for the web servers and business logic layers of the solution. Now Provade can easily increase its performance on demand.

For example, part of Provade's business is to process temporary time sheets. The forms are run on the 15th and 30th of every month, causing a huge spike in the number of Provade customers logging into their system. Purchasing and maintaining dedicated physical servers just for processing short-term, bi-monthly usage spikes was expensive and inefficient. Now, leveraging Datapipe's cloud services, Provade pays for only the

processing power needed to handle the elevated data processing needs.

“If we attempted this on our own, the sheer capital cost would be in the millions of dollars in order to achieve even half of what Datapipe provides us. It would be far too expensive for me to get this type of expertise and security in my Milwaukee office,” Rumberg said.

OPERATIONAL IMPACT

RESULTS & BENEFITS

- Gained a faster, more scalable IT environment by moving from a SUN to an HP platform
- A flexible cloud-based solution providing effectivity and cost saving of 35%
- Enabled Provade to partner with larger staffing companies and add more customers without changing IT architecture

“Leveraging Datapipe’s cloud, HP and Oracle expertise, I was able to get a system that’s exponentially faster with a savings of 35% over our prior solution,” Rumberg noted.

Datapipe is helping Provade effectively process \$2 billion of spend through their cloud-based infrastructure, requiring only three Provade IT staff to manage and run the network. “Datapipe’s expertise in running Oracle databases, networking and security allows us to present an umbrella of services that are running on Datapipe’s solution,” Rumberg added.

The instant IT infrastructure resizing ability has provided Provade with a significant cost savings. In addition, by moving from a SUN to an HP platform for Provade’s cloud infrastructure, the company has gained a faster, more scalable IT environment at a lower cost, compared with the former rigid SUN environment.

Datapipe has also given Provade the flexibility to effectively run their business. Rumberg continues, “We work with Datapipe to dialup our servers on the 14th and dial them down on the 16th, and use the same process for the 27th and the 1st of the month. You can’t do this with dedicated hardware – you can only do this if your backbone is cloud-based.”

The new Datapipe InfiniBand solution also enables Provade to partner with larger staffing companies to handle billing for their associated clients. They can add as many customers as they want without changing their IT architecture.

“If we add a huge customer that doubles the amount of spend and the number of users hitting my system, I don’t have to start over. I can slide in another server and dial it up in the cloud. I’m not afraid to go after the big players because I know that I have scalable resources – it’s a phenomenal model!” Rumberg concluded.

DATAPIPE

A next generation MSP, Datapipe is recognized as the pioneer of managed services for public cloud platforms. Datapipe has unique expertise in architecting, migrating, managing and securing public cloud, private cloud, hybrid IT and traditional IT. The world's most trusted brands partner with Datapipe to optimize mission-critical and day-to-day enterprise IT operations, enabling them to transform, innovate, and scale. Backed by a global team of experienced professionals and world-class interconnected data centers, Datapipe provides comprehensive cloud, compliance, security, governance, automation and DevOps solutions. Gartner named Datapipe a leader in the Magic Quadrant for Cloud-Enabled Managed Hosting.

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