

Customer Success Story

Platform Cluster Manager

Platform Cluster Manager supports more efficient design of plant and process



Customer

Top 5 Global Energy Company

Industry

Oil and Gas

Challenges

- Must cut manufacturing and capital costs
- Require a simple cluster management solution that is easy to use and administer without a dedicated IT admin resource

Solution

- Platform Cluster Manager

Business results

- Reduced capital and manufacturing costs with the ability to run more design simulations before building new plants or deploying new production processes
- Able to manage entire cluster without additional system administrator headcount

Efficiency in manufacturing operations

The customer is one of the world's largest energy companies, providing its customers with fuel for transportation, energy for heat and light, retail services and petrochemicals products for everyday items. The company uses Platform Cluster Manager to manage a cluster based in the Chicago-area that runs software to model designs for petrochemical plants and production processes.

"We're doing research into how we can make products more efficiently and cost-effectively," says the Design Engineer in charge of managing the cluster. He is a member of a small team that is focused on improving the efficiencies of the company's operations involved in producing various petrochemical-based products. Though he is not a systems administrator, part of his role in the department is to ensure

that the cluster is running smoothly. "Our mission isn't to develop new chemical compounds, it's to improve our operations in order to cut manufacturing costs," he adds.

"Petrochemical plants are usually very capital intensive," he says. This means that much planning goes into any decisions regarding where, what and how to build long before the first shovel hits the ground. "For example, if we are planning to put a new plant somewhere, we have to do our research to see if there is any new equipment or technology out there that we can use that would help lower capital costs."

Platform Cluster Manager provides optimal performance and uptime

The 25-node Dell XEON cluster with two- and four-core processors, running Red Hat Linux 4, is provisioned and managed with Platform Cluster Manager (formerly Platform OCS). Platform Cluster Manager is a complete, certified solution that includes all the tools required to quickly deploy, run and manage HPC clusters with unprecedented ease. The product is built for optimal performance and uptime, while offering management, support and update benefits that are not available with less advanced cluster management solutions.

"Overall I think it's a very good solution for companies or departments that don't have headcount available for a system administrator. You just get something that runs robustly and, if you have the support contract you can call Platform if there is any problem."

Design Engineer

The majority of the workload performed on the cluster comes from commercially available CFD applications such as Fluent. The workload varies depending on what software is being used and fluctuates throughout the day and week. Workload can consist of large batches of quick-running short jobs, longer jobs that can run for three or four days, or a mixture of short and long jobs. Platform Cluster Manager must be able to smoothly schedule all of these jobs to ensure that all are completed on time.

The actual scheduling is handled by the workload management component included in Platform Cluster Manager, which is based on Platform Computing's industry-leading workload management software Platform LSF. "The workload management component runs very smoothly," says the Design Engineer, "I actually don't have to do much in terms of hands-on management of job scheduling. It does all the scheduling." Users log onto the cluster, submit their jobs and then the workload manager checks for CPU availability and automatically starts the job as soon as the appropriate resources are free.

Jobs are assigned to pre-set queues according to user, group, project and application priorities that the design engineer set up when Platform Cluster Manager was deployed. "Once I set those priorities I don't really have to worry about it until there's a need to change them, and it's automatic, the workload manager determines what to send to which queue." This level of dependability and stability allows him to focus on his core job ensuring that design teams have the appropriate resources.

"So far we've only experienced one problem where the cluster wouldn't take any jobs, but that was quickly resolved with a call to Platform Computing. The support person was able to quickly walk me through a resolution," he says. In fact, there is not even a need to employ an on-site system administrator due to the problem free operation of the cluster.

"We get a lot more out of this cluster than we spend"

Design Engineer

The design engineer recommends Platform Cluster Manager for other organizations that operate similar-sized departmental clusters that may be small, but still very mission-critical to the organization. "Overall I think it's a very good solution for companies or departments that don't have headcount available for a system administrator. You just get something that runs robustly and, if you have the support contract you can call Platform Computing if there is any problem."



Platform Computing is the leader in cluster, grid and cloud management software - serving more than 2,000 of the world's most demanding organizations for over 18 years. Our workload and resource management solutions deliver IT responsiveness and lower costs for enterprise and HPC applications. Platform has strategic relationships with Cray, Dell™, HP, IBM®, Intel®, Microsoft®, Red Hat®, and SAS®. Visit www.platform.com.

World Headquarters

Platform Computing Corporation
3760 14th Avenue
Markham, Ontario
Canada L3R 3T7
Tel: +1 905 948 8448
Fax: +1 905 948 9975
Toll-free Tel: 1 877 528 3676
info@platform.com

Sales - Headquarters

Toll-free Tel: 1 877 710 4477
Tel: +1 905 948 8448

North America

New York: +1 646 290 5070
San Jose: +1 408 392 4900

Europe

Bramley: +44 (0) 1256 883756
London: +44 (0) 20 3206 1470
Paris: +33 (0) 1 41 10 09 20
Düsseldorf: +49 2102 61039 0
info-europe@platform.com

Asia-Pacific

Beijing: +86 10 82276000
Xi'an: +86 029 87607400
asia@platform.com
Tokyo: +81(0)3 6302 2901
info-japan@platform.com
Singapore: +65 6307 6590
wliaw@platform.com