GridWay gains EDA efficiencies with OpenLava

Leveraging open-source software to boost productivity and reduce cost

Overview

The need

Accelerate EDA simulations and make more efficient use of tools and infrastructure for multiple managed clusters.

The solution

Open-source OpenLava™, an IBM® Platform LSF® compatible workload scheduler freely available at OpenLava.org

The benefits

By selecting OpenLava instead of commercial solutions, GridWay has been able to reduce workload management costs, passing savings on to their clients while maintaining functionality and high service levels

Headquartered near Ottawa, Canada, GridWay (www.gridway.net) has been providing high-value cloud computing solutions for over fifteen years. From their state-of-the-art data centre, GridWay provides hosting, co-location and managed services. A significant portion of GridWay's success has come from their expertise working with the semiconductor design companies where the GridWay team has assisted in the design, management and support of numerous Electronic Design Automation (EDA) environments. GridWay hosts or manages EDA clusters for half a dozen clients and is experienced in the deployment and management of many software tools including Synopsys®, Cadence®, Mentor Graphics®.

Managing EDA environments efficiently is a tricky business and thorough device simulation is key to ensuring success during the critical tape out phase of any project. In design environments, the cost of software tools dwarfs the cost of infrastructure, so providing easy access to fast, clustered systems with efficient workload management software is essential to ensuring that deadlines are met.

By using OpenLava, GridWay has been able to provide our clients with the high levels of support they need while simultaneously reducing license costs for workload management. We're excited about Teraproc's roadmap for pre-emption and license aware scheduling and look forward to working with them for the benefit of our customers.

Chris Kramer, CEO and co-founder, GridWay

Reducing cost with OpenLava

By using OpenLava, GridWay has been able to replace the functionality of IBM Platform LSF on selected clusters while benefiting from significant cost savings. They've also reduced time spent on vendor management allowing them to focus more effort optimizing their EDA environment. GridWay can now add or remove nodes from client clusters as their needs change without worrying about compliance, audits, or the need to acquire new licenses.

Enabling predictable growth

Just a few years ago, Gridway's EDA clients were typically deploying dual-socket nodes with four to six cores per socket. With modern systems based on the Intel® Haswell processor family, simulation tools like Synopsys VCS® can now run efficiently on systems with ten to twelve cores per socket. With increased core counts per physical server, workload management costs (licensed by the core) had been growing faster than hardware costs. By migrating to OpenLava, GridWay has avoided this cost entirely helping them plan capacity more efficiently for the benefit of their clients.

Easy to implement

OpenLava provides a straightforward migration path for sites running IBM Platform LSF. Clients can often use the same cluster and queue configuration files with little or no modification. OpenLava can be deployed in parallel on an existing cluster, allowing customers to test functionality before making a decision to cut-over to the new environment. In the event of an issue, clients can easily "fall back" making migration straightforward and essentially risk free.

An Open Solution

Because OpenLava is open-source, and development is community driven against an open roadmap, GridWay and their clients avoid the risk of vendor lock-in and benefit from additional flexibility.

Advanced features

Teraproc are investing significantly in OpenLava. With version 3.0 new features including Fairshare scheduling and job pre-emption are ready for production deployments supporting multiple users and projects. Docker™ support, and auto-scaling features for clouds or virtualized environments are also included in OpenLava 3.0. OpenLava users for the first time have access to a roadmap on **http://openlava.org** to help them plan their deployments.

For more information

To learn more about OpenLava, Teraproc, and commercial OpenLava support and implementation services, visit **http://teraproc.com**