

Platform™

The Power of Sharing

"With Platform Analytics, we have a detailed, enterprise-wide view of IT resource utilization as it relates to individual projects, and therefore corporate objectives... providing the vital information necessary to add new resources and maintain maximum efficiency and throughput within acceptable cost limits."

Ibrahim Chadirichi
IT Manager (Engineering)
ARM

ARM improves capacity planning with Platform Analytics

Customer
ARM

Industry
Electronics

Challenges

- ARM needed to relate hardware and software resource utilization to individual projects to make effective IT planning decisions
- ARM needed visibility into the performance and financial value of its enterprise-wide IT systems
- ARM required business-specific, decision-ready data that demonstrated the actual use and value of its IT investments so that it could improve IT planning and budgeting

Solution

Platform LSF
Platform Analytics
Platform LSF License Scheduler

Results

- With Platform Analytics, ARM is now able to align its existing IT resources with corporate and business objectives through effective capacity planning, provisioning and resource allocation
- ARM's compute infrastructure supports more than 25 design centers around the globe
- ARM conservatively expects to reduce its annual capital expenditure on hardware and software licenses by 20%, while also improving revenue generation and profitability

Optimizing performance of IT infrastructure

ARM designs the technology that lies at the heart of advanced digital products, from wireless, networking and consumer entertainment solutions to imaging, automotive, security and storage devices. The process of designing new microprocessors is computationally intensive and requires the use of very sophisticated and expensive EDA tool licenses. To make effective IT planning decisions, ARM needs to relate hardware and software resource utilization to individual projects and gain visibility into the performance and financial value of enterprise-wide IT systems. Finance requires these results to represent the total cost of the project, not just the number of staff working on the projects.

To optimize the performance of its IT infrastructure, ARM initially deployed Platform Analytics, Platform LSF, and Platform LSF License Scheduler across 1,200 CPUs, and integrated existing Sun Solaris systems and newer Linux systems into an enterprise grid. Over the years, ARM's compute infrastructure has evolved into a private cloud of sorts. "We're like a little utility grid for the company," says Ibrahim Chadirichi, IT Manager (Engineering), ARM, referring to the four major clusters of 1,000 CPUs each and several smaller systems that more than 25 design centers around the globe submit their work.

"Our workload is very diverse. Every version of every OS you can imagine is needed. We have an enormous number of applications, maybe 400 are running on our clusters at any one time. That's quite unusual. Platform LSF has done a good job in the main," says Chadirichi about Platform LSF's ability to manage this staggering workload.





Ensuring effective capacity planning

In the past, when ARM engineers worked together in small groups, everybody could talk to each other and make the right decisions quickly on use of the cluster. However, as ARM expanded, different agendas and projects delayed decisions, making it critical to have firm data. By correlating information about the inter-relationships between users, processes, hardware performance and application usage, ARM can identify how much projects cost to execute, and make informed planning decisions about future business priorities and technology investments.

ARM required business specific, decision-ready data that demonstrated the actual use and value of its IT investments and adopted a more flexible strategy to ensure efficient IT service delivery and effective capacity planning, provisioning and resource allocation. In doing so, it expected to deliver better products to market faster and at less operational cost than the competition.

To maximize enterprise resources across several global design centres, run hundreds of ongoing projects and manage a huge workload without unsustainable IT infrastructure expenditure, ARM selected Platform Analytics and Platform LSF License Scheduler. Platform LSF License Scheduler, which along with Platform Analytics is a product in the Platform Accelerate suite, optimizes application software license utilization across Platform LSF clusters based on the organization's established distribution policy. Platform Analytics is the most comprehensive and robust analysis tool for Platform LSF environments.

Enterprise-wide view of resources

"With Platform Analytics, we have a detailed, enterprise-wide view of IT resource utilization as it relates to individual projects, and therefore corporate objectives," says Ibrahim Chadirichi, IT Manager (Engineering) at ARM. "Information technology is a critical part of our business and a major proportion of our

costs, therefore, we need to make informed decisions and optimize our IT resources to consistently finish on time and on budget to maintain our market leadership. Knowing how our infrastructure is performing over time will provide the vital information necessary to add new resources for new projects and maintain maximum efficiency and throughput within acceptable cost limits."

ARM engaged Platform Professional Services to support the deployment across its enterprise and to manage ongoing cluster enhancements. Platform Analytics' multi-dimensional OLAP data cubes allow the company to analyze the performance of their clusters from different perspectives. For instance, jobs can be analyzed based on the machines they ran on, the software they used, the project they were associated with, or how well the cluster was performing. If a project requires more capacity, Platform LSF will reschedule it to ensure existing resources are being utilized better.

Allocating license costs to projects

The solution enables ARM make more informed decisions on the purchase of new software and hardware, measure the return on investment from IT purchases against business objectives, and reduce ongoing expenditures for hardware and software licenses.

By correlating data on license usage directly to users or projects the solution allows ARM to allocate the cost of EDA tool licenses directly to projects to determine the cost to the organization. Platform Analytics enables ARM to evaluate projects in advance to determine how much should be invested to improve profitability. ARM conservatively estimates that this helps to reduce its annual capital expenditure on hardware and software licenses by 20%, while improving revenue generation and profitability.

Platform™

Platform Computing is the leader in grid and cloud computing software that dynamically connects IT resources to workload demand according to business policies. Over 2,000 of the world's largest organizations rely on our solutions to improve IT productivity and reduce data center costs. Platform has strategic relationships with Cray, Dell®, HP, IBM®, Intel®, Microsoft®, Red Hat®, and SAS®. Building on 16 years of market leadership, Platform continues to help data centers be more efficient, responsive and dynamic. Visit www.platform.com.

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