



Platform LSF[®] 7 Update 4

New features for HPC administrators

Highlights:

- Delegation of administrative rights
- Support for dynamically resizable jobs
- Adjustment of run-time estimates for active jobs
- New security features
- Enhanced Platform Management Console
- Easier to manage and support

Benefits:

- Empower users and reduce the burden on administrators
- Achieve results faster with improved throughput
- Improve productivity
- Align resource usage to corporate priorities
- Reduce costs

Ideal for customers who:

- Require better controls over distributed and parallel jobs
- Want to provide more control to group level managers or departments
- Need shorter wait-times and higher throughput
- Want to simplify interfaces for end-users

Platform LSF is software for managing and accelerating workload processing for compute-and data intensive applications. With Platform LSF, you can intelligently schedule and guarantee completion of workloads across a distributed, virtualized IT environment regardless of operating system, including desktops and servers.

The latest update of Platform LSF 7 is loaded with features for High Performance Computing (HPC) users. It offers a variety of new capabilities while ensuring full compatibility with previous Platform LSF versions for a trouble free upgrade. This update delivers support for dynamically re-sizable jobs, delegation of administrative rights, improved parallel job controls, support for estimate run-times and dozens of other important new capabilities.

Also included in Platform LSF 7 Update 4 are new security features, allowing administrators to employ the secure-shell (SSH) protocol for features such as login, interactive jobs, and interactive X-Windows based jobs. These new features improve controls and manageability in large environments and allow organizations to enjoy the benefits of resources sharing without compromising their security. A range of new advanced features allow organizations to maximally exploit the capabilities of modern multi-core processors with sophisticated placement controls that maximize the use of cache memory and take into account the relative interconnect speeds and latency between different processing elements.

Platform LSF 7 features a completely re-designed, intuitive web-based interface for cluster users and administrators alike. Reporting, batch workload management and a new application-centric job submission interface are now integrated in a single comprehensive tool. With this new web-interface, cluster administrators can provide simple,





Further collapse your design cycles with resizable, dynamic jobs. Platform LSF 7 Update 4 now allows the allocation of resources to a job to be dynamically resized, thus a design-of-experiment or verification test harness can start as soon as possible with a small number of processors, and automatically acquire additional processors as the run progresses. Similarly, long running applications can release slots no longer needed, helping avoid classic "long-tail" problems that can result in underutilized clusters. By reducing pending-times, and allowing jobs to immediately use resources as they become available, not only to jobs start sooner, but they can execute in less time as well delivering dramatic improvements in throughput and efficiency.

application specific interfaces, or choose from a number of pre-defined interfaces for popular applications. Application-centric submission interfaces help reduce learning curves and submission errors by allowing users to interact with applications on their own terms, while allowing administrators the flexibility to retain full control of the scheduling policies taking place behind the scenes.

Platform LSF 7 Update 4 Highlights

Reduce administrative burdens through delegation of rights

By delegating administrative rights to group-level administrators, individual departments can be more responsive to their teams, performing routine tasks that might otherwise require intervention from the Platform LSF administrator. Not only does this reduce administrator workload and democratize access, it makes departments more likely to share their assets knowing that they can retain control – and that's good for everyone!

Avoid indefinite job pends with generalized resource reservations

Platform LSF 7 Update 4 introduces a new means of reserving resources for pending jobs helping ensure that resources are allocated to pending jobs in job priority order. With this new resource reservation approach, we avoid the potential of having jobs with complex resource requirements pend indefinitely while other jobs individually consume needed, scarce resources.

Maximize multi-core CPU usage with more efficient job placement

Platform LSF 7 Update 4 extends the capabilities in prior Platform LSF releases to take maximum advantage of multi-core, multi-threaded CPUs. Parallel workloads can now take advantage of five new binding options allowing administrators and engineers to precisely control how job elements are distributed among physical processors and cores.

Schedule workloads more intelligently with estimated run-times

By providing estimated run-times, users can help the scheduler optimally manage complex workloads. Run-time estimates play a particularly important role in the case of parallel jobs and back-fill scheduling. With Platform LSF 7 Update 4, estimated run-times can now be adjusted in real-time, and are normalized to the performance levels of various processing elements. This allows the scheduler to incorporate new run-time estimates immediately so that it can adjust workloads to maximize efficiency while still meeting higher level scheduling objectives.

New time savers for Administrators

An enhancement that allows job names to be referenced with wildcards across numerous Platform LSF commands makes it much easier and more efficient for administrators to extract information about related jobs. This and other new features such as Mixed OS Path Support (allowing jobs to run on Windows or Linux/UNIX environments transparently) continue to make the administration of Platform LSF clusters easier and more efficient with each new release.

SSH support and improved security

Customers now have the option of using SSH as an underlying mechanism for Platform LSF features such as Islogin, interactive jobs and interactive X-Windows jobs. Secure X-Windows connections can be made between a submission host and an execution host without users needing to compromise their security by being overly permissive about what clients can access their X-Windows server.

An intuitive new graphical interface

Platform LSF 7 Update 4 features a completely re-designed web-based GUI with a significantly improved management interface for Platform LSF jobs. Users and administrators alike can have instantly visibility to jobs, queues and hosts and perform routine operations like suspending, resuming, modifying or terminating pending or running jobs.

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Platform Computing is a pioneer and the global leader in High Performance Computing (HPC) management software. The company delivers integrated software solutions that enable organizations to improve time-to-results and reduce computing costs. Many of the world's largest companies rely on Platform to accelerate compute or data intensive applications and manage cluster and grid systems. Platform has over 2,000 global customers and strategic relationships with Dell™, HP, IBM®, Intel®, Microsoft®, Red Hat® and SAS®, along with the industry's broadest support for HPC applications. Building on 16 years of market leadership, Platform continues to define the HPC market. Visit www.platform.com.

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