Platform™
The Power of Sharing

Platform LSF® 7 Update 5

New features for HPC administrators and users

Highlights:

- Cluster Topology Awareness
- Support for Compound Resource Requirements
- Job Dependency Tracking
- Memory Aware Fairshare
- 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
- Need to manipulate complex job dependencies
- Need to track and schedule work against inventory/asset information
- Want to simplify interfaces for end-users

The solution of choice for 2,000+ customers

Platform LSF is software for managing and accelerating workload processing for compute- or 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.

This latest update of Platform LSF 7 builds on the previous updates, and is packed 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 cluster topology, compound resource requirements, display of job dependencies and support for tracking of static cluster asset information.

Platform LSF 7 Update 5 Highlights

Improve performance of parallel applications through cluster topology awareness

By extending familiar concepts, Administrators can now describe the topology of their compute infrastructure in terms of blade enclosures, racks, computer rooms or in any arbitrary manner they choose. Work can then be efficiently scheduled to minimize the communication between these "compute units" and to maximize the performance of the application.

Optimize complex jobs with compound resource reservations

Platform LSF 7 Update 5 now allows a complex job to have multiple different resource requirements, allowing the optimal resources to be selected for each component of the overall job. This new approach helps the user to avoid wasting resources by requesting a sub-optimal homogeneous resource allocation.

Manage job dependencies more effectively

New functionality allows the user to visualize the predecessor and successor jobs within complex work flows, allowing the user to better understand why a job cannot run due to its predecessors not completing, and to understand the impact to successor jobs when a job is terminated.

Track and utilize static asset information

Platform LSF provides powerful methods for tracking and collecting dynamic metrics across the whole compute infrastructure. This has been extended to allow the efficient collection of static attributes from the infrastructure for both scheduling and inventory purposes. The more complete the view of a node is, the more optimally it can be utilized by Platform LSF.

Treat memory hungry applications fairly

While most compute resources are now multi-core, many applications are still single threaded and cannot utilize all the cores. However many can utilize all the available memory on a node leaving the other cores unavailable. The fairshare scheduling algorithm has been enhanced to account for applications that are using memory unfairly, thus leading to a much fairer overall utilization of the cluster.

Simpler user interface

The CLI has been reshaped to improve output handling for interactive jobs. The display of Platform LSF Session Scheduler workload has been adjusted to present the information in a form users are more familiar with.

Improved manageability of user scripts

The biggest single challenge that many Platform LSF Administrators face is how to make changes to the infrastructure without negatively impacting the user base. One of the most common issues is with user scripts explicitly referencing certain hosts, or making an assumption about which queue a host belongs to. Thus any change the Administrator makes to the host configuration can potentially break many user scripts. New functionality allows these 'orphaned' host references to be silently ignored (as long as there are still other valid hosts for the job) thus avoiding end-user impact and simplifying the Administrator's role.

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