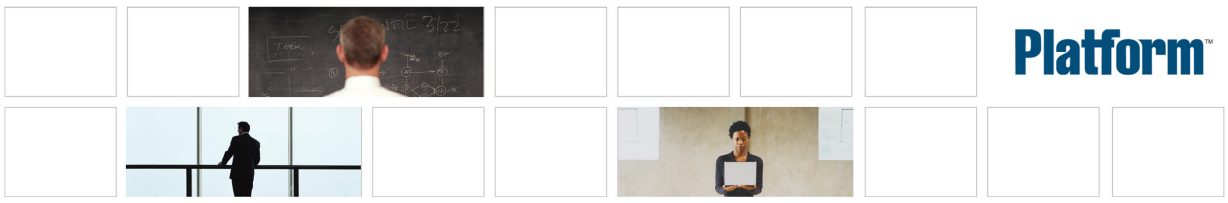
Release Notes for Platform LSF

Platform LSF
Version 7.0 Update 5
Release date: April 2009
Last modified: April 25, 2009



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Comments to: *doc@platform.com*

Support: *support@platform.com*

Upgrade and Compatibility Notes

Platform LSF Version 7 Update 5

For additional information about Platform LSF Version 7 Update 5, visit the Platform Computing Web site:

http://www.platform.com/Products/platform-lsf/features-benefits

Server host compatibility

Important:

To use new features introduced in Platform LSF Version 7 Update 5, you *must* upgrade all hosts in your cluster to LSF 7 Update 5.

LSF 6.*x* and 5.*x* servers are compatible with Platform LSF Version 7 master hosts. All LSF 6.*x* and 5.*x* features are supported by LSF 7 master hosts.

Upgrade from an earlier version of LSF on UNIX and Linux

Follow the steps in *Upgrading Platform LSF on UNIX and Linux* (`lsf_upgrade_unix.pdf`) to run `lsfinstall` to *upgrade* LSF:

- Upgrade a pre-version 7 UNIX or Linux cluster to LSF Version 7 Update 5
- Upgrade an LSF Version 7 Update 2, Update 3, or Update 4 UNIX or Linux cluster to LSF Version 7 Update 5

Important:

DO NOT use the UNIX and Linux upgrade steps to migrate an existing LSF 7 Update 1 cluster to LSF 7 Update 5. Follow the manual steps in the document *Migrating to Platform LSF Version 7 Update 5 on UNIX and Linux* to migrate an existing LSF 7 Update 1 cluster to LSF 7 Update 5 on UNIX and Linux.

Migrate your existing LSF 7 or LSF 7 Update 1 cluster to Update 5 on UNIX and Linux

Follow the steps in *Migrating to Platform LSF Version 7 Update 5 on UNIX and Linux* (`lsf_migrate_unix.pdf`) to migrate an *existing* LSF 7 cluster:

- Migrate an existing LSF Version 7 cluster to LSF 7 Update 5 on UNIX and Linux
- Migrate an existing LSF 7 Update 1 cluster to LSF 7 Update 5 on UNIX and Linux

Note:

DO NOT use these steps to migrate an existing LSF 7 Update 2 or higher cluster to LSF 7 Update 5. Follow the steps in *Upgrading Platform LSF on UNIX and Linux* to upgrade LSF.

Migrate LSF on Windows from an earlier version

To migrate a *pre-version* 7 cluster to a new LSF 7 on Windows cluster, follow the steps in *Migrating Your Windows Cluster to Platform LSF Version 7* (`lsf_migrate_windows.pdf`).

Note:

DO NOT use these steps to migrate an existing LSF 7 cluster to LSF 7 Update 5.

Migrate your existing LSF cluster to Update 5 on Windows

To migrate an *existing* LSF 7 Windows cluster to LSF 7 Update 5 on Windows, follow the steps in *Migrating Platform LSF Version 7 to Update 5 on Windows* (`lsf_migrate_windows_to_update5.pdf`).

Note:

DO NOT use these steps to migrate a pre-version 7 cluster to LSF 7 Update 5.

Update availability

At release, Platform LSF Version 7 Update 5 includes all bug fixes and solutions up to and including February 16 2009. Fixes after that date will be available in the next LSF update.

System requirements

Visit the Platform Computing Web site for information about supported operating systems and system requirements for Platform LSF:

http://www.platform.com/Products/platform-lsf/technical-information

API compatibility

Applications need to be rebuilt if they use APIs that have changed in LSF Version 7 Update 5.

To take full advantage of new Platform LSF Version 7 features, you should recompile your existing LSF applications with LSF Version 7.

New and changed LSF APIs

See the *LSF API Reference* for more information.

The following APIs have changed for LSF Version 7 Update 5:

- `lsb_hostpartinfo()`: Member added to include fairshare adjustment value.
- `lsb_launch()`: Option added to separate `stderr` from `stdout`.
- `lsb_parameterinfo()`:
  - Member added to apply the enforce user group limitation.
  - Member added to enable logging of runtime event exceeded events.

  - Member added for compute unit type.
  - Member added to include fairshare adjustment value.
- `lsb_queueinfo()`:
  - Member added to include fairshare adjustment value.
  - Two members added to include exclusive compute unit type settings.
- `lsb_submit()`:
  - Option added for -tty mode for interactive jobs.
  - Option added for bulk submit.
  - Option added for client submitted jobs.

The following APIs are new for LSF Version 7 Update 5:

- `lsb_getjobdepinfo()`: Returns values about job dependencies.
- `lsb_fetchjobinfo_ext()`: Returns information from the job information header.

SSH

Since LSF 7 Update 4, Platform LSF supports OpenSSH (SSH-1 and SSH-2).

What's Changed in Platform LSF Version 7 Update 5

New and changed behavior

Compute units

LSF 7 Update 5 added new host management functionality with the introduction of compute units.

Compute units are similar to host groups, with the added feature of granularity allowing the construction of cluster-wide structures that mimic network architecture. Job scheduling using compute unit resource requirements optimizes job placement based on the underlying system architecture, minimizing communications bottlenecks. Compute units are especially useful when running extensive parallel jobs. However, using compute units to optimize job placement means LSF needs more scheduling time. The result is a longer time to allocation.

Resource requirement strings can specify compute units requirements such as running a job exclusively, spreading a job evenly over multiple compute units, setting the number of slots required from each compute unit, and setting the maximum number of compute units used by a job. Compute units then replace hosts as the basic unit of allocation for a job.

Individual hosts configured as compute units apply the new compute unit functionality at the host level.

Some limitations apply to the use of compute units:

- Auto-resizable jobs cannot have compute unit requirements.
- Compute unit exclusive jobs (cu[excl]) cannot preempt other jobs or be preempted by other jobs.
- Compute units were introduced in LSF Version 7 Update 5 and are not compatible with earlier versions of LSF. Affected features:

  - MultiCluster job forwarding to earlier version clusters.
  - MultiCluster leasing from earlier version clusters.
- Hosts from HPC system integrations cannot be allocated to jobs with compute unit requirements. Affected integrations include:
  - Cpusets
  - Cray X1
  - Cray XT3
  - Psets
  - RMS
  - SLURM
  - IBM Blue Gene
- Compute unit requirements cannot be used with compound resource requirement strings.
- Advance reservations will not always be effective for compute unit exclusive jobs running on compute units split by an advance reservation. If hosts outside of the reservation start running a compute unit exclusive job, the hosts inside the advance reservation will also be locked. Ideally all hosts belonging to the same compute unit should be inside or outside an advanced reservation.

Compound resource requirements

Compound resource requirements allow you to specify different requirements for some slots within a job, either at the queue-level, application-level, or job-level. `bmod -R` also accepts compound resource requirement strings for both pending and running jobs.

Special rules take effect when compound resource requirements are merged with resource requirements defined at more than one level. If a compound resource requirement is used at any level (job, application, or queue) the compound multi-level resource requirement merge rules apply.

Some limitations apply to the use of compound resource requirements:

- Compound resource requirements cannot contain cu sections.
- Multiple -R strings and rusage strings containing the or operator (`||`) are not supported by compound resource requirements.
- Resource allocation for parallel jobs using compound resources is done for each compound resource term in the order listed instead of considering all possible combinations. A host rejected for not satisfying one resource requirement term will not be reconsidered for subsequent resource requirement terms.
- Resizable jobs cannot have compound resource requirements.
- Windows Terminal Services jobs cannot have compound resource requirements.
- Optimized preemption for parallel jobs (using the PREEMPT_FOR parameter in `lsb.params`) is not supported.
- Compound resource requirements were introduced in LSF Version 7 Update 5, and are not compatible with earlier versions of LSF. Affected features:
  - MultiCluster job forwarding to earlier version clusters.
  - MultiCluster leasing from earlier version clusters.
- Hosts from HPC system integrations cannot be allocated to compound resource requirement jobs. Affected integrations include:
  - Cpusets

  - Cray X1
  - Cray XT3
  - Psets
  - RMS
  - SLURM
  - IBM Blue Gene
- The following commands do not support compound resource requirements:
  - `bhosts -R`
  - `brsvadd -R`
  - `brsvmod -R`
  - `bslots -R`
  - `lsgrun -R`
  - `lshosts -R`
  - `lsload -R`
  - `lsloadadj -R`
  - `lslogin -R`
  - `lsmon -R`
  - `lsplace -R`
  - `lsrtasks`
  - `lsrun -R`

Dynamic priority adjustment

The dynamic priority formula used to determine user priority in fairshare job scheduling has an added fairshare adjustment term and factor, allowing customization of dynamically calculated user shares. The adjustment term can include memory usage by running jobs, as well as the data already used by the dynamic priority formula.

The open source fairshare adjustment code can be altered in the file `libfairshareadjust.*` and is enabled through setting the parameter FAIRSHARE_ADJUSTMENT_FACTOR in `lsb.params` to a positive value.

Job dependency display

The new command `bjdepinfo` allows you to display all or selected job dependencies. You can get a list of other jobs that a job depends on (parent jobs) or jobs that depend on your job (child jobs).

Internal license usage display

The new command `lsadmin lsflic` displays LSF (internal to LSF) license usage. Options include showing all features, specified features, all host class levels in the cluster, and license substitution.

LSF marks new hosts as licensed initially, then confirms license assignments during periodic license management processing. Output from `lsadmin lsflic` before license assignments are confirmed may show additional licenses in use.

PMC

The enhanced PMC now has a Host Dashboard with detailed host information, including options to filter and sort hosts.

The PMC from LSF Version 7 Update 4 can be upgraded to LSF 7 Update 5 alongside the cluster following the steps given in *Upgrading Platform LSF on UNIX and Linux* (`lsf_upgrade_unix.pdf`).

Unique user group limits

Jobs submitted with bsub -G can have the limits of only the specified user group enforced. Enhanced user group limit enforcement is enabled by the parameter ENFORCE_ONE_UG_LIMITS in `lsb.params`. When not enabled the strictest limits (of the user groups that the user is a member of) are applied to the job.

SGI cpuset and MPI support for linux-x86_64

The linux2.6-glibc2.3-x86_64 package now provides cpuset and SGI MPI integrations.

Running parallel jobs on Windows

The command `blaunch` can now be used on Windows 2000 or later hosts to launch parallel job, with some limitations:

- Only the following signals are supported: SIGKILL, SIGSTOP, SIGCONT.
- The -n option is not supported.
- `CMD.EXE /C <user command line>` is used as intermediate command shell when:
  - -no-shell is not specified
- `CMD.EXE /C` is not used when -no-shell is specified.
- Windows Vista User Account Control must be configured correctly to run jobs.

Runtime estimate exceeded job exceptions

Job exception events are now logged to `lsb.events` and `lsb.streams` for jobs in which the runtime estimate is exceeded. The new exception appears in output from `bjobs` and `bhist`.

Enhanced bjobs output

Enhanced bjobs output now includes a summary of Session Scheduler jobs and tasks, a new job exception indicating when a job's runtime estimate has been exceeded, and the Share Attribute Account Path (SAAP) for fairshare scheduling.

License startup enhancement

A configurable parameter in `lsf.conf` (LSF_LICENSE_MAINTENANCE_INTERVAL) allows you to set longer license checking intervals, saving time during cluster startup and restart. By delaying licensing maintenance until after startup mlim communicates with hosts efficiently and new hosts are added quickly.

License Scheduler preemption time checking

Both taskman and LSF batch jobs using licenses managed by License Scheduler now have a maximum preemption times setting. Jobs preempted the specified maximum number of times cannot be preempted again.

Hosts: condensed notation and intersection

LSF 7 Update 5 added new functionality that makes it easier to specify a large number of hosts at one time (condensed notation) or to allow a job to run on an intersection of available hosts between a queue, advance reservation, and `bsub -m`.

Character limit increase for user group names

Character limits have been increased to 511 characters for user group names in all configuration files and batch commands.

OS version detection

An external static LIM script enables LSF to automatically detect the operating systems types and versions and display them when running `lshosts -l` or `lshosts -s`. You can then specify those types reported in any -R resource requirement string. For example, **bsub -R "select [ostype=RHEL4.6]"**.

Use the external static LIM to automatically detect the operating system type and version of hosts as follows:

1. In `lsf.shared`, remove the comment from the indices you want detected.
2. In `$LSF_SERVERDIR`, rename `tmp.eslim.<extension>` to `eslim.extension`.
3. Set EGO_ESLIM_TIMEOUT in `lsf.conf` or `ego.conf`.
4. Restart the lim on all hosts.

Enhanced PIM

An enhanced PIM now returns the exact memory usage of processes using shared memory on Linux operating systems instead of counting memory shared between jobs multiple times.

Windows Vista jobs

All LSF jobs running on Windows Vista hosts now run in interactive mode.

New and changed configuration parameters and environment variables

The following configuration parameters and environment variables are new or changed for LSF Version 7 Update 5:

lsb.params

- COMPUTE_UNIT_TYPES: Defines valid compute unit types for use in `lsb.hosts` and the compute unit resource requirement string (cu[]).
- ENABLE_HOST_INTERSECTION: Allows a job to run on an intersection of available hosts between a queue, advance reservation, and `bsub -m`.
- ENFORCE_ONE_UG_LIMITS: When enabled and the job submitted with -G option specifying a user group, enforces the limits for that one user group only even if the user belongs to more than one user group. If not enabled, the strictest limits (of the user groups that the user is a member of) are applied to the job.
- FAIRSHARE_ADJUSTMENT_FACTOR: Weighting factor for the fairshare adjustment plugin `libfairshareadjust.*`. If not defined or set to a value of 0 or less, the fairshare

adjustment has no impact on the dynamic priority formula used to calculate user priority for fairshare job scheduling.

- LOG_RUNTIME_EST_EXCEEDED: Undocumented parameter enabling logging of the new job exception runtime_est_exceeded. Default value is Y. Not displayed in the `bparams` output.
- MAX_JOB_PREEMPT: Now applies to LSF batch jobs using licenses managed by License Scheduler when enabled by LS_ENABLE_MAX_PREEMPT in `lsf.licensescheduler`.

lsf.conf

- EGO_ESLIM_TIMEOUT: Controls how long the LIM waits for any external static LIM scripts to run.
- LSB_LOGON_INTERACTIVE: LSF parameter automatically set to **Y** on Windows Vista platforms; allow the correct users to submit jobs from Windows Vista hosts. This parameter is not documented.
- LSF_ASPLUGIN: Specifies a path to the SGI Array Services library libarray.so. The parameter only takes effect on 64-bit x-86 Linux 2.6, glibc 2.3. The default path is `/usr/lib64/libarray.so`.
- LSF_BMPLUGIN: Specifies a path to the bitmask library `libbitmask.so`. The parameter only takes effect on 64-bit x-86 Linux 2.6, glibc 2.3. The default path is `/usr/lib64/libbitmask.so`.
- LSF_CPUSETLIB: Specifies a path to the SGI cpuset library `libcpuset.so`. The parameter only takes effect on 64-bit x-86 Linux 2.6, glibc 2.3. The default path is `/usr/lib64/libcpuset.so`.
- LSF_LICENSE_MAINTENANCE_INTERVAL: Allows you to control how often LSF checks for licenses upon cluster start up or restart. By setting the number higher than the default of 5 (in seconds), you can significantly increase the speed at which the cluster starts up.
- LSF_MONITOR_LICENSE_TOOL: Enables data collection by lim for the command option `lsadmin lsflic`.
- LSF_VPLUGIN: On SGI Linux (64-bit x-86 Linux 2.6, glibc 2.3.) an example path:

```
LSF_VPLUGIN=/usr/lib32/libxmpi.so:/usr/lib/libxmpi.so:/usr/lib64/
libxmpi.so.
```

lsf.shared

The following new fields were added to the Resource section:

- ostype: The operating systems and versions detected in your cluster.
- limversion: The version of the LIM binary.
- lmhostid: The ID of the host running FLEXLM.

lsb.applications

- MAX_JOB_PREEMPT: Now applies to LSF batch jobs using licenses managed by License Scheduler when enabled by LS_ENABLE_MAX_PREEMPT in `lsf.licensescheduler`.
- RES_REQ
  - Accepts compute unit resource strings cu[].
  - Accepts compound resource requirement strings.

lsb.hosts

- Allows the configuration of compute units using the new ComputeUnit section:
  - NAME: Compute unit name.
  - MEMBER: Host, host group, or compute unit members of the compute unit.
  - TYPE: Compute unit type (as defined by COMPUTE_UNIT_TYPES in `lsb.params`).
  - CONDENSE: Optionally displays output for the compute unit in condensed notation, including the slot totals for each compute unit.
  - ADMIN: Optionally specifies compute unit administrator.

lsb.queues

- EXCLUSIVE: Now accepts the values `CU`, `CU[]`, `CU[`*cu_type*`]` as well as `y`, `Y`, `n`, `N`.
- MAX_JOB_PREEMPT: Now applies to LSF batch jobs using licenses managed by License Scheduler when enabled by LS_ENABLE_MAX_PREEMPT in `lsf.licensescheduler`.
- RES_REQ:
  - Accepts compute unit resource strings (cu[]).
  - Accepts compound resource requirement strings.
- HOSTS: now accepts compute units.

lsf.licensescheduler

LS_ENABLE_MAX_PREEMPT: Enables checking preemption times for taskman job based on the value of parameter LS_MAX_TASKMAN_PREEMPT in lsf.licensescheduler and MAX_JOB_PREEMPT in `lsb.queues`, `lsb.applications`, or `lsb.params`.

LS_MAX_TASKMAN_PREEMPT: Defines the maximum number of times taskman jobs can be preempted.

New commands

The following new commands have been added to LSF Version 7 Update 5:

bjdepinfo

This new command displays job dependency relationships.

Changed commands, options, and output

The following command options and output are new or changed for LSF Version 7 Update 5:

bacct

The option -l output now displays the new job exception runtime_est_exceeded under the heading `EXCEPTION STATUS`, when applicable.

badmin

- hopen now accepts compute units.
- hclose now accepts compute units.
- hghostadd now accepts compute units.

- hghostdel now accepts compute units.

bapp

Now displays compound resource requirements, when applicable.

bhist

- Now displays the type of job exception when a job exception occurs.
- Now displays compound resource requirements, when applicable.

bhpart

When using fairshare scheduling the option -r now displays the fairshare adjustment plugin contribution to user dynamic priority under the heading `ADJUST`.

bhosts

- Now accepts compute units.
- A new host state closed_cu_excl appears in the STATE column for hosts belonging to a compute unit where a compute unit exclusive job is running.

bjobs

- A new option (-ss) lists summary information on Session Scheduler jobs and tasks.
- The -l option has been expanded to show when a job's runtime estimate has been exceeded.
- The -l option also now displays the Share Attribute Account Path (SAAP) for fairshare scheduling.
- Now displays compound resource requirements, when applicable.
- The option -m now accepts compute units.

blaunch

The command `blaunch` can now be used on Windows hosts to launch parallel job, although it has some limitations.

bmgroup

- Now displays compute units when used without any options.
- A new option -cu displays only compute unit information.

bmod

- The option -R accepts compute unit resource strings (cu[]), with the exception of cu [balance] and cu[excl] for running jobs.
- The option -R accepts compound resource requirements.
- The option -m accepts compute units.

bqueues

- When using fairshare scheduling the -l and-r options now display the fairshare adjustment plugin contribution to user dynamic priority under the heading `ADJUST`.
- Now displays compound resource requirements, when applicable.

bsub

- A new option (-tty) displays results to your console when you have specified an interactive job as well as an output or error file.
- The option -R accepts compute unit resource strings cu[] and the following compute unit section keywords:
  - balance
  - excl
  - maxcus
  - pref
  - type
  - usablecuslots
- The option -R accepts compound resource requirements.
- The option -m accepts compute units.

bswitch

Now accepts compute units.

lsadmin

A new option (-lsflic) displays LSF (internal) license usage.

New configuration files

No configuration files are new for LSF Version 7 Update 5

New and changed accounting and job event fields

lsb.acct

JOB_FINISH field now accepts compound resource requirements.

lsb.events

The following fields now accept compound resource requirements.

- JOB_NEW
- JOB_MODIFY2

The new job exception runtime_est_exceeded has been added.

Bugs fixed since September 2008 (LSF 7 Update 4)

Bugs fixed in the March 2009 update (LSF 7 Update 5) since the September 2008 update (LSF 7 Update 4) are listed in the document *Fixed Bugs for Platform LSF 7 Update 5*.

Known Issues

Platform LSF Version 7 Update 5

Platform LSF

- The LSF 6.x `passwd.lsfuser` password file is not compatible with LSF 7. In LSF 6.x, if a domain name is defined with LSF_USER_DOMAIN in `lsf.conf`, LSF only

saves the user name to the password entry in the `passwd.lsfuser` password file. In LSF 7, the user name part of the password entry in the `passwd.lsfuser` file is a fully qualified user name (domain_name\user_name,), even if LSF_USER_DOMAIN is defined in `lsf.conf`.

Workaround: If your cluster defines LSF_USER_DOMAIN in `lsf.conf`, you must upgrade the entire 6.x cluster to LSF 7, and have all users run lspasswd to reenter their password.

Without this workaround, LSF 7 daemons cannot find the 6.x password entry and 6.x daemons cannot see the password saved on LSF 7 servers.

If you must keep a mixed LSF 7 and LSF 6.x environment:

- You cannot define LSF_USER_DOMAIN in `lsf.conf`.
- Users must run lspasswd on both the 6.x and LSF 7 server hosts.

This problem affects all LSF versions before Version 7, LSF 6.0, 6.1, and 6.2.

- If you want to use LSF Version 7 Update 5 on SUSE 11 with x86-64 processors, contact Platform Support for a patch.
- Backfill jobs can overlap exclusive compute unit reservations. Free slots within an exclusive compute unit reservation appear available when using bslots to schedule backfill jobs. Job slots used by the exclusive compute unit job do not appear available beyond the reservation start time.
- When specifying a domain name in any LSF configuration file, use all uppercase characters. For example: LSF/lsfadmin instead of lsf/lsfadmin. Configuration settings will not be applied if the domain is in lowercase characters.
- Jobs submitted with CPUSET_TYPE=none are still considered CPUSET jobs, and do not support compound resource requirements. For example, the following job submission will not run:

```
bsub -n4 -R"2*{type=local}+2*{type=local}" -ext"CPUSET[CPUSET_TYPE=none]"
```

- When using ProPacks in a cluster with mixed host types, you must also specify "same[type]" in the resource requirement string or use `%a` to run applications on appropriate host types. Only setting the ProPack version number is not sufficient to identify the possible host types a job can run on.
- If there are no PSET hosts in your cluster, the PSET plug in is not supported and should not be configured in `lsb.modules`.
- When installing a cluster with ENABLE_HPC_CONFIG=Y, if you restart the sbatchd on a Linux 2.6-glibc2.3-x86_64 host without a CPUSET package, the following error message is logged: Cannot find CPUSET library in `LSF_ASPLUGIN=/usr/lib64/libarray.so`, using the default value `/usr/lib64/libarray.so`. This message means that you do not have a CPUSET package installed on that host.
- When compiling an application with a Version 7 Update 5 library, specify the option -ldl.
- If you enable ENFORCE_ONE_UG_LIMITS and you have a user group with the keyword all, the limits are enforced on all user groups, not just the one specified. A patch will be available soon. Contact Platform Support.

Platform LSF Session Scheduler

A Session Scheduler job suspended with `bstop` enters USSUP state and the job cannot be killed with `bkill`. The out-of-box TERMINATE_CONTROL=SIGINT configuration in Session Scheduler causes only SIGINT to be sent to the job from `bkill`. To be terminated, the job must receive the required SIGCONT, SIGINT, SIGTERM, and SIGKILL signals. You must run `bresume` to cause the job to receive the correct `bkill` signals.

Platform LSF License Scheduler

When installing License Scheduler standalone, the installer removes EGO environment variables from `cshrc.lsf` and `profile.lsf`. Specify a different LSF_TOP from the LSF installation to install standalone License Scheduler.

Platform LSF on EGO

In the resource plan, if you specify reclamation with a grace period, the grace period is ignored by LSF. All resources are reclaimed immediately.

Platform Management Console

LSF admin cannot start the PMC in EGO-decoupled mode. Since the PMC has already been started by `root`, the log files are owned by `root`. When the PMC is restarted by the LSF cluster administrator, `admin` does not own the existing log files resulting in the JAVA (tomcat) process stalling.

LDAP support

Integrating LDAP with LSF has some additional requirements:

To install LSF in an LDAP environment:

- LSF admin must be a defined user in LDAP.
- The OS must be configured to use LDAP for authentication.
- LDAP admin must grant privileges to the LSF installer user (usually root) to retrieve the user list from the LDAP server.

To allow LDAP users GUI logon access:

- The OS must be configured to use LDAP for authentication.
- LDAP admin must grant privileges to the GUI process startup user (usually root) to retrieve the password list from the LDAP server.

PERF/Reports

If you did not set DERBY_DB_HOST in `install.config`, you can still enable the Derby database host after installation. See procedure that follows.

Enabling the Derby database host after installation

You installed the Platform Management Console (PMC).

1. Edit the `derby_service.xml` file.

   The `derby_service.xml` file is located in the EGO service directory:

   - UNIX: `$PERF_TOP/<cluster_name>/eservice/esc/conf/services`

- Windows: `%PERF_TOP%\ego\<cluster_name>\eservice\esc\conf\services`

2. Specify the database host name in the `<ego:ResourceRequirement>` tag.

   Replace *hostname* in the following with the name of your database host:`<ego:ResourceRequirement>select(`*hostname*`)`
3. Launch the database configuration tool.
   - In UNIX, run `$PERF_TOP/common/bin/dbconfig.sh`
   - In Windows, run `%PERF_TOP%\common\bin\dbconfig`
4. Specify the details for your data source and database host.
5. Restart the Derby service (derbydb).

Download the Platform LSF Version 7 Distribution Packages

Download the LSF distribution packages two ways:

- Through FTP at `ftp.platform.com`
- Through the World Wide Web at `my.platform.com`

Download LSF through FTP

Access to the Platform FTP site is controlled by login name and password. If you cannot access the distribution files for download, send email to *support@platform.com*.

1. Log on to the LSF file server.
2. Change to the directory where you want to download the LSF distribution files. Make sure that you have write access to the directory. For example:

   ```
   # cd /usr/share/lsf/tarfiles
   ```
3. FTP to the Platform FTP site:

   ```
   # ftp ftp.platform.com
   ```
4. Provide the login user ID and password provided by Platform.
5. Change to the directory for the LSF Version 7 release:

   ```
   ftp> cd /distrib/7.0
   ```
6. Set file transfer mode to binary:

   ```
   ftp> binary
   ```
7. For LSF on UNIX and Linux, get the installation distribution file.

   ```
   ftp> get platform_lsf_update5/lsf7Update5_lsfinstall.tar.Z
   ```

   Tip:

   Before installing LSF on your UNIX and Linux hosts, you must uncompress and extract lsf7Update5_lsfinstall.tar.Z to the same directory where you download the LSF product distribution tar files.
8. Get the distribution packages for the products you want to install on the supported platforms you need. For example:

- For the Solaris 7 64-bit version of LSF Version 7:

```
ftp> get platform_lsf_update5/lsf7Update5_sparc-sol7-64.tar.Z
```

Tip:

Put the LSF distribution files in the same directory as the installation tar files. *Do not* uncompress and extract the distribution files.

- For32-bit LSF Version 7 on Windows:

```
ftp> get platform_lsf_update5/lsf7Update5_win32.msi
```

9. Download the Platform LSF Version 7 documentation from `/distrib/7.0/docs/`.

```
ftp> get docs/lsf7Update5_documentation.zip
```

```
ftp> get docs/lsf7Update5_documentation.tar.Z
```

Tip:

After installing LSF, you should extract the Platform LSF Version 7 documentation files to LSF_TOP/docs/lsf. Browse LSF_TOP/docs/lsf/index.html to access the LSF 7 Knowledge Center. If you install the Platform Management Console, the LSF 7 Knowledge Center is installed automatically to LSF_TOP/docs/lsf.

10. Download the Platform EGO Version 1.2.3 documentation from `/distrib/7.0/docs/`.

```
ftp> get docs/ego1.2.3_documentation.zip
```

```
ftp> get docs/ego1.2.3_documentation.tar.Z
```

Tip:

After installing LSF, you should extract the EGO documentation files to LSF_TOP/docs/ego. Browse LSF_TOP/docs/ego/index.html to access the EGO Knowledge Center. If you install the Platform Management Console, the EGO Knowledge Center is installed automatically to LSF_TOP/docs/ego.

11. Optional. Download the Platform Management Console (PMC) distribution package from `/distrib/7.0/platform_lsf_update5/`.

```
ftp> get platform_lsf_update5/lsf7Update5_pmc_linux-x86.tar.Z
```

OR

```
ftp> get platform_lsf_update5/lsf7Update5_pmc_linux-x86_64.tar.Z
```

Note:

To take advantage of the Platform LSF reporting feature, you *must* download and install the Platform Management Console. The reporting feature is only supported on the same platforms as the Platform Management Console: 32-bit and 64-bit x86 Windows and Linux operating systems.

12. Exit FTP.

```
ftp> quit
```

Download LSF from my.platform.com

You must provide your Customer Support Number and register a user name and password on `my.platform.com` to download LSF.

To register at `my.platform.com`, click **New User?** and complete the registration form. If you do not know your Customer Support Number or cannot log in to `my.platform.com`, send email to *support@platform.com*.

1. Navigate to *http://my.platform.com*.
2. Choose **Products** > **Platform LSF Family** > **LSF 7 Update 5**.
3. Under **Download**, choose **Product Packages**.
4. Select the Updates, Packages, and Documentation you wish to download.
5. Log out of `my.platform.com`.

Archive location of previous update releases

Directories containing release notes and distribution files for previous LSF Version 7 update releases are located on the Platform FTP site under `/distrib/7.0/archive`. Archive directories are named relative to the current update release:

- LSF Version 7 Update 1: `/distrib/7.0/archive/update1`
- LSF Version 7 Update 2: `/distrib/7.0/archive/update2`
- LSF Version 7 Update 3: `/distrib/7.0/archive/update3`
- LSF Version 7 Update 4: `/distrib/7.0/archive/update4`

Install Platform LSF Version 7

Installing Platform LSF involves the following steps:

1. Get a DEMO license (`license.dat` fie).
2. Run the installation programs.

Get a Platform LSF demo license

Before installing Platform LSF Version 7, you must get a demo license key.

Contact *license@platform.com* to get a demo license.

Put the demo license file `license.dat` in the same directory where you downloaded the Platform LSF product distribution tar files.

Run the UNIX and Linux installation

Use the `lsfinstall` installation program to install a new LSF Version 7 cluster, or upgrade from and earlier LSF version.

See *Installing Platform LSF on UNIX and Linux* for new cluster installation steps.

See the *Platform LSF Command Reference* for detailed information about `lsfinstall` and its options.

Important:

DO NOT use the UNIX and Linux upgrade steps to migrate an existing LSF 7 cluster or LSF 7 Update 1 cluster to LSF 7 Update 5. Follow the manual steps in the document *Migrating to Platform LSF Version 7 Update 5 on UNIX and Linux* to migrate an existing LSF 7 Update 1 cluster to LSF 7 Update 5 on UNIX and Linux.

Run the Windows installation

Platform LSF on Windows 2000, Windows 2003, and Windows XP is distributed in the following packages:

- `lsf7Update5_win32.msi`
- `lsf7Update5_win-x64.msi`
- `lsf7Update5_win-ia64.msi`

See *Installing Platform LSF on Windows* for new cluster installation steps.

To migrate your existing LSF Version 7 cluster on Windows to LSF 7 Update 5, you must follow the manual steps in the document *Migrating Platform LSF Version 7 to Update 5 on Windows* (`lsf_migrate_windows_to_update5.pdf`).

Install Platform LSF License Scheduler

See *Using Platform LSF License Scheduler* for installation and configuration steps.

Install Platform LSF Session Scheduler

See *Installing and Running Platform LSF Session Scheduler* for installation and configuration steps.

Install Platform LSF Desktop Support

See the *Platform LSF Desktop Support Administrator's Guide* for installation and configuration steps.

Special installation steps for the Platform Management Console on Linux IA64

To install the Platform Management Console on Linux IA64 hosts, you must download and install the Linux IA64 version of BEA Jrockit 5.0 JRE.

1. Download the Linux IA64 version of BEA Jrockit 5.0 JRE.
   a) Open the BEA download page:

      http://www.oracle.com/appserver/jrockit/index.html
   b) Save the download file to your local disk.

      For JRockit 5.0 R27.1 JRE Linux (Intel Itanium - 64-bit), save the file named `jrockit-R27.1.0-jre1.5.0_08-linux-ipf.bin`.
   c) Make sure that the `.bin` file is executable:

      chmod +x jrockit-R27.1.0-jre1.5.0_08-linux-ipf.bin
2. Install the JRE on the Linux IA64 host.
   a) Change to a shared directory where you want to install BEA Jrockit.
   b) Run the installer in console mode:

      jrockit-R27.1.0-jre1.5.0_08-linux-ipf.bin -mode=console

   The installation creates a new directory: `jrockit-R27.1.0-jre1.5.0_08`

3. Follow the steps in Installing Platform LSF on UNIX and Linux to run `lsfinstall` to install Platform LSF and the Platform Management Console.
4. Make a symbolic link to the JRE.

   For example, if you installed the JRE under `/opt/jre`:

   cd $EGO_TOP/jre

   ln -s /opt/jre/jrockit-R27.1.0-jre1.5.0_08-linux-ipf linux-ia64
5. Check the symbolic link to the JRE.

   If the symbolic link is correct, you should see the contents of the linux-ia64 directory:

   cd $EGO_TOP/jre/linux-ia64

   ls

   ```
   bin/ lib/ LICENSE license.bea README.TXT
   ```

Learn About Platform LSF Version 7

Information about Platform LSF is available from the following sources:

- World Wide Web and FTP
- Platform LSF documentation
- Platform EGO documentation
- Platform training

World Wide Web and FTP

Information about Platform LSF Version 7 is available in the LSF area of the Platform FTP site (`ftp.platform.com/distrib/7.0/`).

The latest information about all supported releases of Platform LSF is available on the Platform Web site at *www.platform.com*.

If you have problems accessing the Platform web site or the Platform FTP site, send email to *support@platform.com*.

my.platform.com

`my.platform.com`—Your one-stop-shop for information, forums, e-support, documentation and release information. `my.platform.com` provides a single source of information and access to new products and releases from Platform Computing.

On the Platform LSF Family product page of `my.platform.com`, you can download software, patches, updates and documentation. See what's new in Platform LSF Version 7, check the system requirements for Platform LSF, or browse and search the latest documentation updates through the Platform LSF Knowledge Center.

Platform LSF documentation

The Platform LSF Knowledge Center is your entry point for all LSF documentation. If you have installed the Platform Management Console, access and search the Platform LSF documentation through the link to the Platform Knowledge Center.

Get the latest LSF documentation from `my.platform.com`. Extract the LSF documentation distribution file to the directory `LSF_TOP/docs/lsf`.

Platform EGO documentation

The Platform EGO Knowledge Center is your entry point for Platform EGO documentation. It is installed when you install LSF. To access and search the EGO documentation, browse the file `LSF_TOP/docs/ego/1.2.3/index.html`.

If you have installed the Platform Management Console, access the EGO documentation through the link to the Platform Knowledge Center.

Platform training

Platform's Professional Services training courses can help you gain the skills necessary to effectively install, configure and manage your Platform products. Courses are available for both new and experienced users and administrators at our corporate headquarters and Platform locations worldwide.

Customized on-site course delivery is also available.

Find out more about Platform Training at *www.platform.com/services/training*, or contact *Training@platform.com* for details.

Get Technical Support

Contact Platform

Contact Platform Computing or your LSF vendor for technical support. Use one of the following to contact Platform technical support:

Email

support@platform.com

World Wide Web

www.platform.com

Mail

Platform Support
Platform Computing Inc.
3760 14th Avenue Markham
Ontario Canada L3R 3T7

When contacting Platform, please include the full name of your company.

See the Platform Web site at *www.platform.com/company/contact-us* for other contact information.

Get patch updates and other notifications

To get periodic patch update information, critical bug notification, and general support notification from Platform Support, contact *supportnotice-request@platform.com* with the subject line containing the word "subscribe".

To get security related issue notification from Platform Support, contact *securenotice-request@platform.com* with the subject line containing the word "subscribe".

We'd like to hear from you

If you find an error in any Platform documentation, or you have a suggestion for improving it, please let us know:

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