Migrating to Platform LSF Version 8 on UNIX and Linux

Platform LSF
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Migrate your Platform LSF cluster to LSF 8

Platform LSF directory structure change

The installed directory structure changed in LSF Version 7 Update 2. The LSF directory structure differs from the directory structure of previous releases of LSF Version 7. The LSF directories have been consolidated to resemble the LSF 6.*x* directory structure, where configuration, work, and logging directories for EGO and reporting components are located under the standard LSF directories `LSF_TOP/conf`, `LSF_TOP/work`, and `LSF_TOP/log` for easier administration and upgrade.

These directories can be located on their own file systems and have the following access permissions:

- `LSF_TOP/conf` is writable by the LSF administrator, master host, and master candidate hosts
- `LSF_TOP/log` is writable by all hosts in the cluster
- `LSF_TOP/work` is writable by the master host and master candidate hosts, and is accessible to slave hosts

How to use this document

To update your existing LSF Version 7 or LSF Version 7 Update 1 cluster to LSF 8 , you must follow the steps in this document to manually copy some of your existing configuration files to other directories.

Note:

These upgrade steps only apply to LSF Version 7 and LSF Version 7 Update 1. For LSF versions prior to Version 7 or later than LSF Version 7 Update 1, you can upgrade your cluster by following the steps in *Upgrading Platform LSF on UNIX and Linux*.

The Platform Application Center (previously called the Platform Management Console) is now installed separately from LSF.

Get ready to migrate

1. Get an LSF Version 8 license and create a license file (`license.dat`).

Get ready to install

1. Log on to the LSF file server host as `root`.
2. FTP to `ftp.platform.com` and get the following files from the `/distrib/8.0/platform_lsf/` directory on `ftp.platform.com`:
   - LSF installation script tar file: `lsf8.0_lsfinstall.tar.Z`
   - LSF Knowledge Center: `knowledge_center8.0.tar.Z`
   - LSF distribution tar files for all host types you need.

Download and read the LSF Version 8 Release Notes for detailed steps for downloading LSF distribution tar files.

3. Put the distribution tar files in the same directory that contains the `lsf8.0_lsfinstall.tar.Z` file.
4. Uncompress and extract `lsf8.0_lsfinstall.tar.Z`:

   # zcat lsf8.0_lsfinstall.tar.Z | tar xvf -

   Important:

   DO NOT extract the distribution tar files.
5. Define the required installation parameters in `install.config`. You should specify the same values as those defined for your existing cluster.

   - For LSF_TOP, specify a different directory than the one used for your existing cluster. This prevents your existing configuration files from being overwritten when you install LSF Version 8.
   - EGO is disabled by default in `install.config`. Your existing LSF Version 7 cluster may use EGO functionality for daemon control and reporting. To maintain the functionality of your existing cluster, set the parameter ENABLE_EGO to match your existing cluster.
   - LSF Version 8 does not use the parameter EGO_TOP.

Run lsfinstall

1. Change to `lsf8.0_lsfinstall/`.
2. Read `lsf8.0_lsfinstall/install.config` and decide which installation variables you need to set.
3. Edit `lsf8.0_lsfinstall/install.config` to set the installation variables you need.
4. Follow the instructions in `lsf_unix_install.pdf` to run:

   ./lsfinstall -f install.config

   Important:

   You must run `lsfinstall` as `root`.

Copy and edit Platform LSF configuration files

In the following procedure, the phrase *lsf_top_old* refers to the LSF_TOP directory for the original cluster, and the phrase *lsf_top_new* refers to the LSF_TOP directory for the newer cluster.

1. Deactivate all queues to make sure that no new jobs are dispatched during the update:

   badmin qinact all
2. Back up your existing LSF_CONFDIR, LSB_CONFDIR, and LSB_SHAREDIR according to the procedures at your site.
3. Shut down the older version of the LSF Version 7 cluster:

   lsfshutdown
4. Migrate the LSF lsbatch files directory:

   cp -rfp $LSB_CONFDIR_old/* *$LSB_CONFDIR_new/*

5. Migrate the LSF work directory:

   cp -rfp *lsf_top_old*/work *lsf_top_new*

6. Does your existing cluster use default values for all parameters defined in `lsf.conf`?
   - If *yes*, you do not have to edit `lsf.conf`. Go to step 7.
   - If *no*, you must edit `lsf.conf` and change the values of the parameters to match those defined for your existing cluster. Go to step 6.
7. You can update `lsf.conf` in one of two ways:
   - Copy the old `lsf.conf` file from *lsf_top_old*`/conf` to *lsf_top_new*`/conf` and add the parameters LSF_ENABLE_EGO and EGO_WORKDIR. For a description of LSF_ENABLE_EGO, see the *Platform LSF Configuration Reference*. For a description of EGO_WORKDIR, see the *EGO Reference*.
   - Edit the new `lsf.conf` file in *lsf_top_new*`/conf` to match the values defined in your old `lsf.conf` file.

   Note:

   All required LIM parameters are now defined *only* in `lsf.conf`. Corresponding LIM parameters no longer appear in `ego.conf`.

8. If you want to change any parameter values in the cluster file, edit the file `lsf.cluster.`*`cluster_name`*. LSF Version 8 no longer uses `ego.cluster.`*`cluster_name`*.

Copy and edit EGO configuration files

In the following procedure, the phrase *ego_top* refers to the EGO_TOP directory for the existing cluster, the phrase *lsf_top_new* refers to the LSF_TOP directory for the new cluster, and the phrase *lsf_cluster_name* refers to the name of your cluster.

1. Migrate the user file:

   cp -rfp *ego_top*/kernel/conf/users.xml

   ***lsf_top_new*/conf/ego/*lsf_cluster_name*/kernel/users.xml**

2. Migrate the consumer trees file:

   cp -rfp *ego_top*/kernel/conf/ConsumerTrees.xml

   ***lsf_top_new*/conf/ego/*lsf_cluster_name*/kernel/ConsumerTrees.xml**

3. Migrate the resource groups file:

   cp -rfp *ego_top*/kernel/conf/ResourceGroups.xml

   ***lsf_top_new*/conf/ego/*lsf_cluster_name*/kernel/ResourceGroups.xml**

4. Migrate the EGO working files:

   cp -rfp *ego_top*/kernel/work/vemkd

   ***lsf_top_new*/work/*lsf_cluster_name*/ego/**

   cp -rfp *ego_top*/kernel/work/data

   ***lsf_top_new*/work/*lsf_cluster_name*/ego/**

5. If you have enabled the dynamic host feature for your cluster, migrate the host cache files:

   cp -rfp *ego_top*/kernel/work/lim

***lsf_top_new*/work/*lsf_cluster_name*/ego**

Start the cluster

1. Log on to the LSF master host as `root` and set your LSF environment:
   - For `csh` or `tcsh`:
     ```
     % source LSF_TOP/conf/cshrc.lsf
     ```
   - For `sh`, `ksh`, or `bash`:
     ```
     $ . LSF_TOP/conf/profile.lsf
     ```
2. Start the LSF Version 8 cluster:

   lsfstartup
3. Check to see that the cluster is working properly.

Run hostsetup to set up Platform LSF hosts

Run the LSF Version 8 `hostsetup` command on each host to reset LSF runlevel changes (`rc`).

1. Follow the steps in `lsf8.0_lsfinstall/lsf_getting_started.html` to set up your LSF hosts (`hostsetup`).
   a) Log on to each LSF server host as `root`. Start with the LSF master host.
   b) Run `hostsetup` on each LSF server host.

      For example:

      cd /usr/share/lsf/8.0/install

      ./hostsetup --top="/usr/share/lsf/"

      For complete `hostsetup` usage, enter `hostsetup -h`.
2. Set your LSF environment:
   - For `csh` or `tcsh`: **source LSF_TOP/conf/cshrc.lsf**
   - For `sh`, `ksh`, or `bash`:**. LSF_TOP/conf/profile.lsf**
3. Follow the steps in `lsf8.0_lsfinstall/lsf_quick_admin.html` to update your license.