Platform LSF
Version 9 Release 1.2

Migrating on UNIX and Linux

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Migrate your IBM Platform LSF cluster to 9.1.2

IBM Platform LSF directory structure

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 9.1.2, 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 IBM Platform LSF on UNIX and Linux.

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

Get ready to migrate

Get the LSF entitlement file for the edition you are installing:
- platform_lsf_std_entitlement.dat for LSF Standard Edition
- platform_lsf_exp_entitlement.dat for LSF Express Edition
- platform_lsf_adv_entitlement.dat for LSF Advanced Edition

Get ready to install

1. Log on to the LSF file server host as root.
2. Select the appropriate LSF installer script package:
   - lsf9.1.2_lsfinstall_linux_x86_64.tar.Z for Linux x86_64 platforms requiring the Linux JRE. Requires approximately 120 MB.
3. Obtain the following files:
   - LSF Knowledge Center: knowledge_center9.1.2.tar.Z
   - LSF distribution tar files for all host types you need.
     Download and read the LSF Version 9.1.2 Release Notes for detailed steps for
     downloading LSF distribution tar files.
4. Put the distribution tar files in the same directory that contains the
5. Uncompress and extract lsf9.1.2_lsfinstall.tar.Z:
   
   # zcat lsf9.1.2_lsfinstall.tar.Z | tar xvf -

   **Important:**

   DO NOT extract the distribution tar files.
6. 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 9.1.2.
   - 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 9.1.2 does not use the parameter EGO_TOP.

---

**Run lsfinstall**

1. Change to lsf9.1.2_lsfinstall/.
2. Read lsf9.1.2_lsfinstall/install.config and decide which installation
   variables you need to set.
3. Edit lsf9.1.2_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 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 IBM 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 9.1.2 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:
   
   ```
   ```

4. Migrate the EGO working files:
   
   ```
   cp -rfp ego_top/kernel/work/venk
   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 9.1.2 cluster:
   - lsfstartup
3. Check to see that the cluster is working properly.

---

### Run hostsetup to set up LSF hosts

Run the LSF 9.1.2 hostsetup command on each host to reset LSF runlevel changes (rc).

1. Follow the steps in lsf9.1.2_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/9.1.2/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 lsf9.1.2_lsfinstall/lsf_quick_admin.html to update your license.
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