

Platform LSF  
Version 9 Release 1.3

*Migrating on UNIX and Linux*





Platform LSF  
Version 9 Release 1.3

*Migrating on UNIX and Linux*



**Note**

Before using this information and the product it supports, read the information in "Notices" on page 5.

**First edition**

This edition applies to version 9, release 1 of IBM Platform LSF (product number 5725G82) and to all subsequent releases and modifications until otherwise indicated in new editions.

Significant changes or additions to the text and illustrations are indicated by a vertical line (|) to the left of the change.

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

In the IBM Knowledge Center, add your comments and feedback to any topic.

You can also send your suggestions, comments and questions to the following email address:

[pccdoc@ca.ibm.com](mailto:pccdoc@ca.ibm.com)

Be sure include the publication title and order number, and, if applicable, the specific location of the information about which you have comments (for example, a page number or a browser URL). When you send information to IBM, you grant IBM a nonexclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

© Copyright IBM Corporation 1992, 2014.

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

---

## Contents

### Migrate your IBM Platform LSF cluster

#### to 9.1.3 . . . . . 1

How to use this document. . . . . 1

Get ready to migrate. . . . . 1

Get ready to install . . . . . 1

Run lsfinstall . . . . . 2

Copy and edit LSF configuration files . . . . . 3

Copy and edit EGO configuration files . . . . . 3

Start the cluster . . . . . 4

Run hostsetup to set up LSF hosts . . . . . 4

### Notices . . . . . 5

Trademarks. . . . . 7

Privacy policy considerations. . . . . 7



---

# Migrate your IBM Platform LSF cluster to 9.1.3

## 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 9.1.3, 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* (Version 9.1.3).

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 and download the appropriate LSF installer script package:
  - lsf9.1.3\_lsfinstall\_linux\_x86\_64.tar.Z for Linux x86\_64 platforms requiring the Linux JRE. Requires approximately 120 MB.

- `lsf9.1.3_lsfinstall.tar.Z` for all other platforms requiring the JRE. Requires approximately 1300 MB.
  - `lsf9.1.3_no_jre_lsfinstall.tar.Z` for all platforms not requiring the JRE. JRE version 1.4 or higher must already be installed on the system. Requires approximately 1 MB.
3. Obtain the following files:
    - LSF Knowledge Center: `knowledge_center9.1.3.tar.Z`
    - LSF distribution tar files for all host types you need.  
Download and read the *Release Notes for IBM Platform LSF (Version 9.1.3)* for detailed steps on downloading LSF distribution tar files.
  4. Put the distribution tar files in the same directory that contains the LSF installer script package.
  5. Extract the LSF installer script package that you selected.  
For example,
    - Linux `x86_64` platforms: `# zcat lsf9.1.3_lsfinstall_linux_x86_64.tar.Z | tar xvf -`
    - Other platforms: `# zcat lsf9.1.3_lsfinstall.tar.Z | tar xvf -`
    - No JRE required: `# zcat lsf9.1.3_no_jre_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 9.1.3.
  - 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 9.1.3 does not use the parameter **EGO\_TOP**.

---

## Run lsfinstall

1. Change to `lsf9.1.3_lsfinstall/`.
2. Read `lsf9.1.3_lsfinstall/install.config` and decide which installation variables you need to set.
3. Edit `lsf9.1.3_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:  
`badadmin 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 9.1.3 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 **cs**h or **tc**sh: % source LSF\_TOP/conf/cshrc.lsf
  - For **sh**, **ksh**, or **ba**sh: \$ . LSF\_TOP/conf/profile.lsf
2. Start the LSF 9.1.3 cluster:  

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

---

## Run hostsetup to set up LSF hosts

Run the LSF 9.1.3 **hostsetup** command on each host to reset LSF runlevel changes (rc).

1. Follow the steps in LSF\_TOP/9.1/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/install
./hostsetup top="/usr/share/lsf/"
```

  
For complete **hostsetup** usage, enter **hostsetup -h**.
2. Set your LSF environment:
  - For **cs**h or **tc**sh: source LSF\_TOP/conf/cshrc.lsf
  - For **sh**, **ksh**, or **ba**sh: . LSF\_TOP/conf/profile.lsf

---

## Notices

This information was developed for products and services offered in the U.S.A.

IBM® may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing  
IBM Corporation  
North Castle Drive  
Armonk, NY 10504-1785  
U.S.A.

For license inquiries regarding double-byte character set (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing  
Legal and Intellectual Property Law  
IBM Japan Ltd.  
19-21, Nihonbashi-Hakozakicho, Chuo-ku  
Tokyo 103-8510, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web

sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation  
Intellectual Property Law  
Mail Station P300  
2455 South Road,  
Poughkeepsie, NY 12601-5400  
USA

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurement may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

#### COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrates programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application

programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. The sample programs are provided "AS IS", without warranty of any kind. IBM shall not be liable for any damages arising out of your use of the sample programs.

Each copy or any portion of these sample programs or any derivative work, must include a copyright notice as follows:

© (your company name) (year). Portions of this code are derived from IBM Corp. Sample Programs. © Copyright IBM Corp. \_enter the year or years\_.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

---

## Trademarks

IBM, the IBM logo, and [ibm.com](http://www.ibm.com)<sup>®</sup> are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at <http://www.ibm.com/legal/copytrade.shtml>.

Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.



Java<sup>™</sup> and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Linux is a trademark of Linus Torvalds in the United States, other countries, or both.

LSF<sup>®</sup>, Platform, and Platform Computing are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Other company, product, or service names may be trademarks or service marks of others.

---

## Privacy policy considerations

IBM Software products, including software as a service solutions, ("Software Offerings") may use cookies or other technologies to collect product usage information, to help improve the end user experience, to tailor interactions with the end user or for other purposes. In many cases no personally identifiable information is collected by the Software Offerings. Some of our Software Offerings can help enable you to collect personally identifiable information. If this Software

Offering uses cookies to collect personally identifiable information, specific information about this offering's use of cookies is set forth below.

This Software Offering does not use cookies or other technologies to collect personally identifiable information.

If the configurations deployed for this Software Offering provide you as customer the ability to collect personally identifiable information from end users via cookies and other technologies, you should seek your own legal advice about any laws applicable to such data collection, including any requirements for notice and consent.

For more information about the use of various technologies, including cookies, for these purposes, See IBM's Privacy Policy at <http://www.ibm.com/privacy> and IBM's Online Privacy Statement at <http://www.ibm.com/privacy/details> the section entitled "Cookies, Web Beacons and Other Technologies" and the "IBM Software Products and Software-as-a-Service Privacy Statement" at <http://www.ibm.com/software/info/product-privacy>.





Printed in USA

SC27-5318-03

