IBM Spectrum LSF for SAS
Version 10 Release 1

Migrating on Windows

IBM
Chapter 1. Migrate LSF on Windows

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Chapter 1. Migrate your IBM Spectrum LSF cluster to version 10.1 Fix Pack 6 on Windows LSF

Migrate a Windows cluster by transferring both workload and configuration from the original cluster after you installed a new LSF.

This document describes how to migrate a Windows cluster to LSF 10.1 Fix Pack 6 from LSF 7, LSF 7 Updates 1-6, LSF 8.0, LSF 8.0.1, LSF 8.3, LSF 9.1, and LSF 10.1.

If you have LSF 6.x, you must first migrate your Windows cluster to LSF version 7.

What is migration?

A direct upgrade of a Windows cluster to LSF 10.1 Fix Pack 6 is not supported. Migrate the Windows cluster to transfer both workload and configuration from the original cluster after you install a new LSF 10.1 Fix Pack 6 cluster.

It is important to follow this procedure exactly, or the new cluster might not work properly afterward. Do not remove or rename any files or directories from the original cluster unless otherwise mentioned.

Migrating your cluster

Before you begin

The original cluster (earlier than LSF 10.1 Fix Pack 6) is working properly.

About this task

Complete the following steps to migrate your cluster.

Procedure

1. Back up existing configuration files and work directories
2. Uninstall the existing cluster
3. Install LSF 10.1 Fix Pack 6
4. Copy and edit LSF configuration and work files
5. Copy enterprise grid orchestrator (EGO) configuration and work files
6. Start the new cluster

Back up existing configuration files and work directories

About this task

You must back up files and directories. The shared directory is indicated by share_dir in the following procedure.

Procedure

1. Does your existing cluster use the share_dir directory to store configuration files and work directories?
   • If no, go to step 2.
   • If yes, back up directories in the share_dir directory.

   For example, your existing directories can have the following structure:
**LSF_ENVDIR** (for LSF 7 Update 2 - 6, LSF 8.0, LSF 8.0.1, LSF 8.3, LSF 9.1, and LSF 10.1):
share_dir\conf

**LSF_ENVDIR** (other versions of LSF): share_dir\lsf\conf

**LSB_CONFDIR** (for LSF 7 Update 2 - 6, LSF 8.0, LSF 8.0.1, LSF 8.3, LSF 9.1, and LSF 10.1):
share_dir\conf\lsbatch

**LSB_CONFDIR** (other versions of LSF): share_dir\lsf\conf\lsbatch

**LSB_SHAREDIR** (for LSF 7 Update 2 - 6, LSF 8.0, LSF 8.0.1, LSF 8.3, LSF 9.1, and LSF 10.1):
share_dir\work

**LSB_SHAREDIR** (other versions of LSF): share_dir\lsf\work\%

**EGO_CONFDIR** (for LSF 7 Update 2 - 6, LSF 8.0, LSF 8.0.1, LSF 8.3, LSF 9.1, and LSF 10.1):
share_dir\conf\ego\cluster_name\kernel

**EGO_CONFDIR** (other versions of LSF): share_dir\kernel\conf

**EGO_WORKDIR** (for LSF 7 Update 2 - 6, LSF 8.0, LSF 8.0.1, LSF 8.3, LSF 9.1, and LSF 10.1):
share_dir\work\cluster_name\ego

**EGO_WORKDIR** (other versions of LSF): share_dir\kernel\work

1. If your existing cluster configuration files are not in the share_dir directory, back up directories from your existing cluster.

2. If your existing cluster configuration files are not in the share_dir directory, back up directories from your existing cluster.

   If you have LSF 7 Update 2, back up whole conf and work directories:
   - C:\LSF_7.0\conf
   - C:\LSF_7.0\work

   If you have another version of LSF 7, back up the following data:
   a) **LSF_ENVDIR**
      - For example, C:\LSF_7.0\conf
   b) **LSB_CONFDIR**
      - For example, C:\LSF_7.0\conf\lsbatch
   c) **LSB_SHAREDIR**
      - For example, C:\LSF_7.0\work
   d) **EGO_CONFDIR**
      - For example, C:\LSF_7.0\ego\kernel\conf
   e) **EGO_WORKDIR**
      - For example, C:\LSF_7.0\ego\kernel\work
   f) **LSF_TOP\ego\gui\conf**
      - For example, C:\\LSF_7.0\ego\gui\conf

**Uninstalling the existing cluster**

**Before you begin**

If your existing cluster does not use the share_dir directory, you must back up existing configuration files and work directories before you uninstall the cluster.

**Procedure**

1. Uninstall the current cluster (LSF 7 or LSF 7 Update 1 - 6, LSF 8.0, LSF 8.0.1, LSF 8.3, LSF 9.1, and LSF 10.1).

2 IBM Spectrum LSF for SAS: Migrating IBM Spectrum LSF Version 7 to IBM Spectrum LSF Version 10.1 on Windows
2. Restart the master hosts.
3. Remove the old installation directories within LSF_TOP.

## Installing LSF 10.1 Fix Pack 6

### Procedure

Download and install LSF 10.1 Fix Pack 6 with the same cluster name and cluster administrator that you have for your existing cluster.

### Copying and editing LSF configuration and work files

#### About this task

**Note:**

LSF 7 Updates 3 and higher and LSF 10.1 no longer use the ego.cluster and ego.shared files. Therefore, if you are updating from LSF Update 3 or higher, you do not need to do the following steps for the ego.cluster and ego.shared files.

In this procedure, _old refers to configuration file paths for the existing cluster, and _new refers to configuration file paths for the new cluster.

#### Procedure

1. If you are upgrading from anything earlier than LSF 7 Update 3, migrate the old ego.cluster file to the new lsf.cluster file.
   
   a) Open the old ego.cluster file from EGO_CONFDIR_old\ 
   
   b) Open the new lsf.cluster file from LSF_ENVDIR_new\ 
   
   c) Migrate the following sections from the old ego.cluster file to the new lsf.cluster file:
      
      • Hosts section
      • Parameters section
      • Resource Map

2. Migrate values from the old lsf.conf file to the new lsf.conf file:
   
   a) Open the old lsf.conf file from LSF_ENVDIR_old\ 
   
   b) Open the new lsf.conf file from LSF_ENVDIR_new\ 
   
   c) Migrate the values from the old file to the new one.
      
      **Remember:** The new lsf.conf file contains the correct configuration path values for the LSF 10.1 Fix Pack 6 directory structure changes.

3. If you are upgrading from anything older than Update 3, copy the old ego.shared file as lsf.shared to the new cluster.
   
   Copy EGO_CONFDIR_old\ego.shared to LSF_ENVDIR_new\lsf.shared

4. Copy the old passwd.lsfuser file to the new cluster.
   
   Copy LSF_ENVDIR_old\passwd.lsfuser to LSF_ENVDIR_new\passwd.lsfuser

5. Copy all old LSF batch configuration files to the new cluster.
   
   Copy LSB_CONFDIR_old\cluster_name\configdir\* to LSB_CONFDIR_new\cluster_name\configdir\

6. Copy all old LSF batch work files to the new cluster.
   
   Copy LSB_SHAREDIR_old\cluster_name\* to LSB_SHAREDIR_new\cluster_name\
Copying EGO configuration and work files

Procedure
1. Does your existing cluster define an EGO consumer tree, an EGO resource group, or EGO users?
   • If no, go to step 2.
   • If yes, copy all old EGO XML configuration files to the new cluster, and then go to step 2.
     Copy EGO_CONFDIR_old/*.xml to EGO_CONFDIR_new
2. Copy the old EGO password file to the new cluster:
   Copy EGO_CONFDIR_old\passwd.ego to EGO_CONFDIR_new\passwd.ego
3. Copy the old EGO work directory to the new cluster:
   Copy EGO_WORKDIR_old\* to EGO_WORKDIR_new

Starting the new cluster

Procedure
1. Start the new LSF 10.1 Fix Pack 6 cluster.
   lsfstartup
2. Activate all queues to start jobs that are remaining from the original cluster.
   To activate all LSF queues, run:
   badmin qact all
3. Submit all new work to the new cluster.