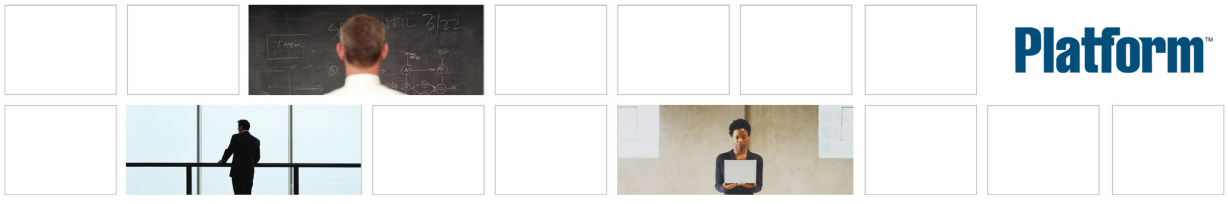
Installation Guide for UNIX

Platform LSF Process Manager
Version 7
March 2008



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C H A P T E R

1

Introduction

This document describes how to install the software required to run the Platform LSF Process Manager™ software ("Process Manager") on UNIX hosts. The Process Manager software includes the Process Manager™ Server and Client. Both of these components is required to run jobs using the Process Manager.

The Process Manager Server controls the submission of jobs to LSF, managing any dependencies between the jobs.

LSF dispatches all jobs submitted to it by the Process Manager Server, and returns the status of each jobs to the Process Manager Server. LSF also manages any resource requirements and performs load balancing within the compute cluster.

The Process Manager Client allows you to monitor your workload as it runs.

You can install all of the components on a single host, or you can install the Process Manager Server and LSF on separate hosts. This document describes how to install all components on a single host.

For an overview of the Process Manager components, see the introductory chapter in Administering Process Manager.

Assumptions

The following instructions assume that:

- You have installed LSF.
- The Process Manager Server and Client will be installed on a single UNIX host. This host will act as the central point of control for a cluster of LSF hosts that actually run the jobs.
- You are creating an LSF cluster composed of only UNIX hosts. There will be no Windows hosts in your cluster.

Supported versions and requirements

The Process Manager software must be installed on an LSF server host, but it is recommended that it not be an LSF master host.

J2RE (Java Runtime Environment) 1.4 is installed with the Process Manager.

The Process Manager Server requires:

- Approximately 135 MB free disk space for installation, and an additional 2 KB per job to handle jobs running simultaneously
- 256 MB RAM for processing purposes

Installation directories

The Process Manager installation produces the following directory structure:

- Machine-independent files are independent of the host type, and are shared by all host types (man pages, configuration files, include files, examples, etc.)
- JS_TOP is the directory in which the Process Manager Server and Client files are installed. For example:

  ```
  /usr/local/ppm
  ```

Pre-installation requirements

- License file for Platform LSF Process Manager.
- A shared file system for the hosts. The shared file system needs to be writable by root during the installation.
- The installation must be performed as root. This includes the distribution installation as well as the host setup steps. The root account must be able to write into the file system mounted at LSF_TOP.

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Before you install

The following instructions assume you are installing both LSF and Process Manager together on the same UNIX host.

Caution:

Do not install Process Manager and LSF to the same directory.

Copy the license file contents into a file Process Manager can access the license information. For example, create a file called license.dat.

Prepare distribution files

1. Log in as root to one of the hosts that will be running LSF jobs.
2. Get the distribution tar files for all host types you need. For example, for AIX, you need the following files:
   - ppm7_server_aix5-64.tar.Z
   - ppm7_client_flowmanager_aix5-64.tar.Z
   - ppm7_client_editors_aix5-64.tar.Z

   Do not extract the distribution tar files.

   Get the installation script tar file and extract it:

   zcat ppm7_pinstall.tar.Z|tar xvf -

   This creates a directory called `ppm7_pinstall`, containing the following:

   a) `install.config`—the configuration file where you define your installation prior to installing
   b) `jsinstall`—the install script for installing both Process Manager Server and Client

Edit install.config

1. Change to the ppm7_pinstall directory:

   cd ppm7_pinstall
2. As an administrator, edit ppm7_pinstall/install.config to define your configuration.

   Remove the comment symbol (#) and set values for the following parameters:

   a) JS_TOP

      Specify the full path to the Process Manager directory. For example:

      ```
      JS_TOP=/usr/share/js
      ```

   b) JS_HOST

      Specify the fully-qualified host name of the Process Manager Server host. For example:

      ```
      JS_HOST=hostB.platform.com
      ```

   c) JS_PORT=1966

      Use the default port number, 1966.

      Ensure that you change this value if another process is already using the port. For example:

      ```
      JS_PORT=1234
      ```

   d) JS_ADMINS

      Specify the user name of the primary LSF administrator. For example:

      ```
      JS_ADMINS=lsfadmin
      ```

   e) JS_LICENSE

      Specify the full path and name of the license file. For example:

      ```
      JS_LICENSE=/usr/share/license.dat
      ```

   f) LSF_ENVDIR

      Specifies the directory where the LSF configuration files are stored. For example: `LSF_ENVDIR=/usr/share/lsf/conf`.
3. Save `install.config`.

Using 64-bit hardware in 32-bit Kernel mode on an AIX5 platform

If a host has 64-bit hardware but runs in 32-bit kernel mode, you must install and enable the bos.64bit fileset.

Install library patch upgrade for Solaris 2.7 64-bit machine

If you are running Process Manager on a Solaris 2.7 64-bit machine, you need to ensure that you have the latest shared library patch for C++ from Sun Microsystems.

1. Navigate to Sun Microsystem's patch access.
2. Search for patch 106327-23 and download it. (This patch is dependent on 106950-13 or greater.)
3. Unzip files to a temporary directory and apply the patch.

CHAPTER

3

Run the install script

1. As root, run the install script as follows:

   ./jsinstall -f install.config

   This installs Process Manager. A directory is created and an `Install.log` file is created. All the events of the installation are logged here.
2. Review the license agreement.
3. Accept the terms and conditions of the agreement by specifying **y**.
4. When prompted, select the Process Manager Server and Clients for the current operating system, and press Enter. A message tells you when installation is successful.

Run the install script

CHAPTER 4

Start the Process Manager Server

1. After the installation is complete, set the Process Manager environment:
   - On csh or tcsh:

     source JS_TOP/conf/cshrc.js
   - On sh, ksh or bash:

     . JS_TOP/conf/profile.js

   where JS_TOP is the top-level Process Manager installation directory, the value specified in the `install.config` file.
2. Run jadmin start to start the Process Manager Server:

   jadmin start
3. To start the daemon on the Server host at boot time, run bootsetup on the Server host.

Set the client environment

1. Set the Process Manager environment on each client:

   - On csh or tcsh:

     source JS_TOP/conf/cshrc.js
   - On sh, ksh or bash:

     . JS_TOP/conf/profile.js

   where JS_TOP is the top-level Process Manager installation directory, the value specified in the `install.config` file.
2. After the Process Manager Server has started, run the client applications to verify the success of the installation:
   a) Run floweditor
   b) Run flowmanager
   c) Run caleditor

   Both the Calendar Editor and the Flow Manager require a connection to the Server to be able to start. If you are unable to start either application, there is an error in the configuration, or the Server is not started.