# Installing Platform LSF on Windows

Platform LSF
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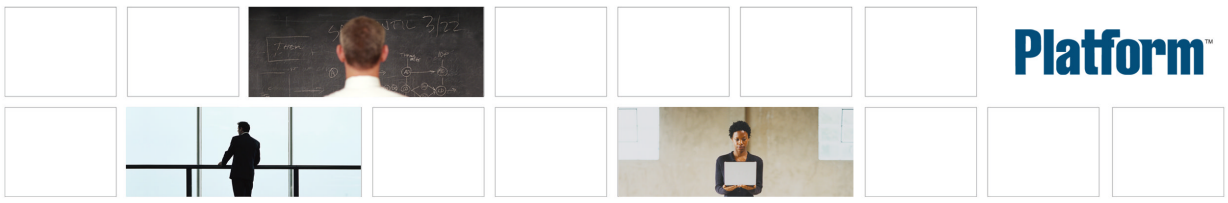

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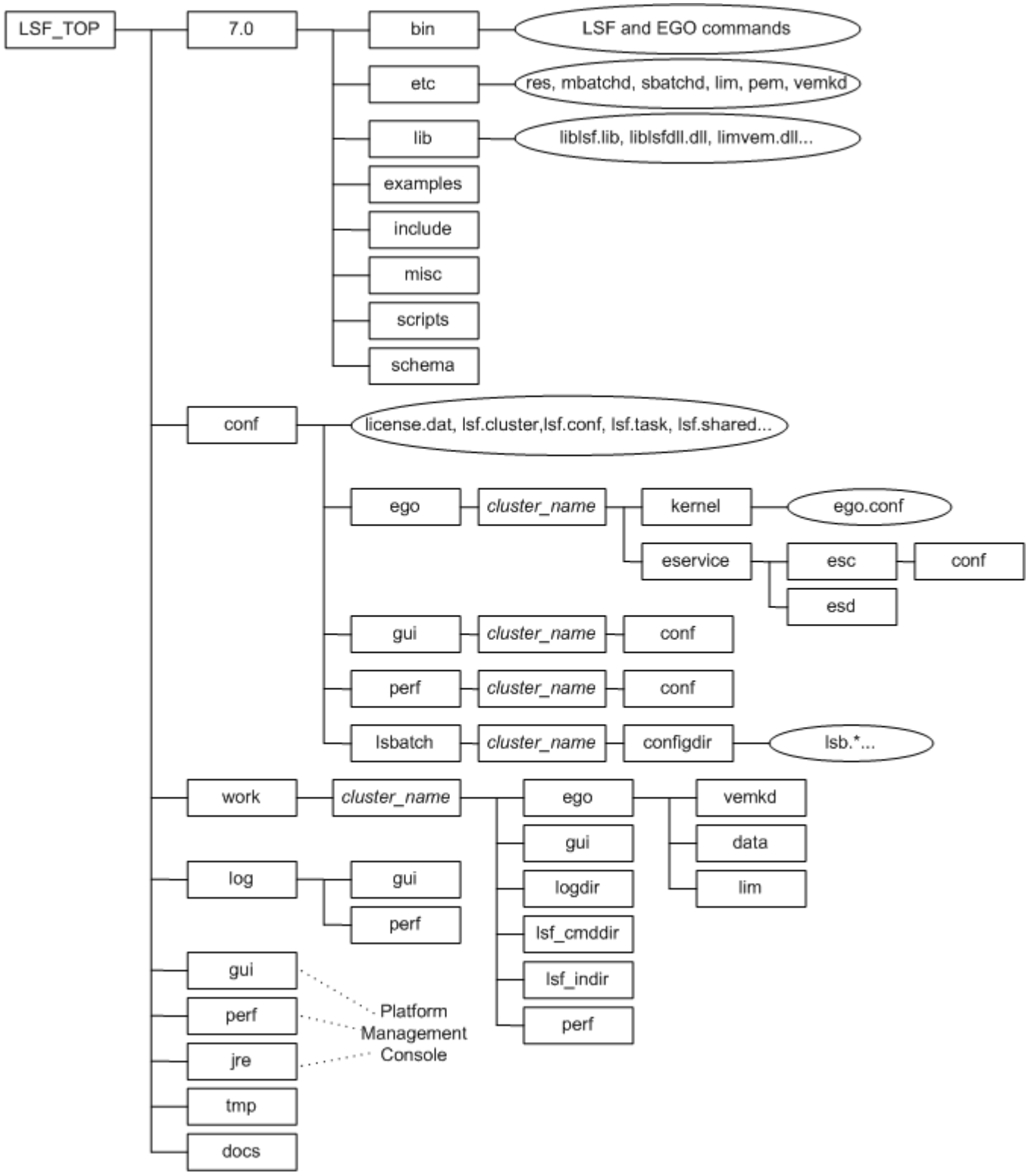
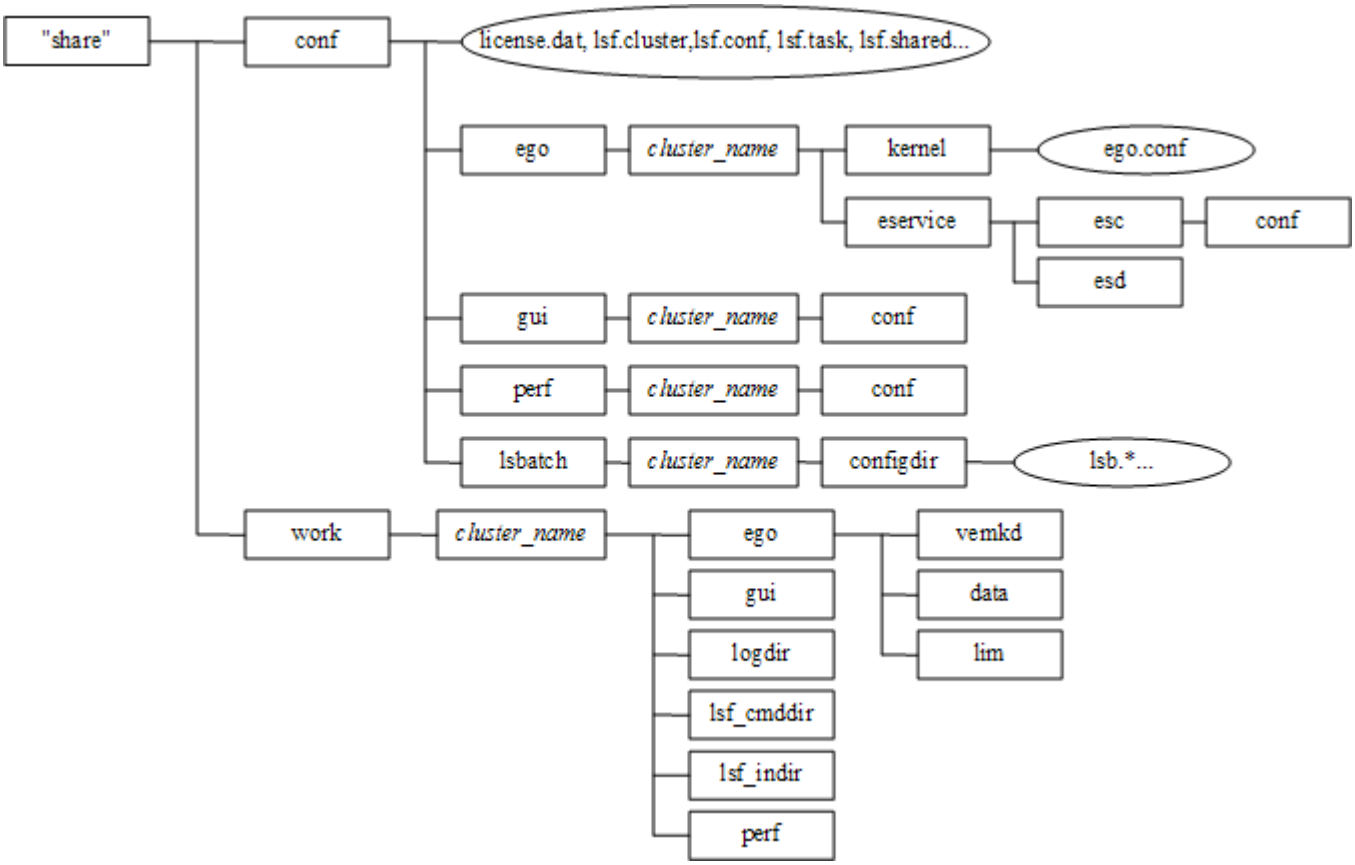
# Example installation directory structures

## Example installation directory structures



## Shared directory

The shared directory is configured if you run egoconfig on a host after installation:



# EGO in the LSF cluster

When EGO is enabled in the cluster, EGO may control services for components such as the Platform Management Console (PMC) or LSF Reports (PERF). This is recommended. It allows failover among multiple management hosts, and allows EGO cluster commands to start, stop, and restart the services.

See the LSF administrator documentation for more details on the benefits of enabling EGO and using EGO to control the services.

## Installation choices

When you install the cluster and enable EGO, you can configure the following separately:

- EGO control of `sbatchd` and `res`
- EGO control of PMC (`webgui`)
- EGO control of PERF services (`plc`, `jobdt`, `purger`, and `derbydb`)

For example, you could choose EGO control for PERF services, but not `sbatchd` and `res`, and not PMC.

# Plan and prepare your systems for installation

MSI version 2.0 or later is required.

1. Choose LSF hosts (master host, master candidates, database host, server hosts, and client-only hosts). If EGO does not manage PMC or PERF, you must also choose PMC and PERF hosts, otherwise it is optional.
2. Choose an installation directory that is available on every host.
3. For failover purposes, create and share the shared directory (e.g., \\HostF\EGOshare). Ensure the shared directory is accessible with the same path name from all hosts in the cluster.
4. On master candidates, free the service director port, 53; and the web service gateway port, 9090.
5. On the PMC host, free the web server ports 8080, 8005, and 8009; and the database port, 1527.
6. Review the installation parameter reference, make sure the connection ports and LSF sbatchd, res, and mbatchd ports are available on all host.
7. Choose a primary LSF administrator (owns the LSF and EGO configuration files and log files; e.g., DOMAIN \lsfadmin).

   Create the primary LSF administrator account with these privileges on each host:

   - Act as part of the operating system
   - Debug programs
   - Replace a process level token
   - Log on as a service
   - Adjust memory quotas for a process

   **Note:**

   The account should belong to the Local Administrators group on each host.
8. Obtain the necessary files for installing LSF.

   You need the following files to install LSF:

   - Platform LSF distribution file
   - Platform Management Console distribution file
   - Platform LSF license file (`license.dat`)

   See the LSF Version 7 Release Notes for detailed steps for downloading the distribution files.

# Install a new Platform LSF cluster

1. Install the master host. Log on as the primary LSF administrator (`DOMAIN\lsfadmin`) to the master host (or use an installation account that belongs to the Local Administrators group) and run the installer (`lsf7Update5_win.msi`) to create a new cluster.

   After completing the master host installation, the LSF installer creates a batch file (`install.bat`) that you can use to silently install hosts in this cluster. The batch file sets the installation parameters and runs the installer.

   You must customize this batch file for specific hosts (master candidates, LSF server hosts, and LSF client hosts) in the cluster before installation.
2. Install additional hosts.
   a) Install master candidates.
   b) Install LSF server hosts.
   c) Install LSF client hosts.
3. If you disabled automatic startup of LSF after installation, log on to the master host as `lsfadmin` and run `lsfstartup` to start the cluster.
4. Test your cluster by running some basic LSF commands (e.g., `lsid`, `lshosts`, `bhosts`).

# Install the Platform Management Console (PMC)

1. Install the Platform Management Console (PMC).

   Log on as the primary LSF administrator (`DOMAIN\lsfadmin`) to the master host (or use an installation account that belongs to the Local Administrators group) and run the PMC installer.
2. If PMC is not controlled by EGO, log onto the PMC host and run **pmcadmin start**.

   Optional: enable Automatic Startup of the Windows service so that PMC can restart if the host restarts.
3. If PERF is not controlled by EGO, log onto the PERF host and run **perfadmin start derbydb**.

   perfadmin start all

   Optional: enable Automatic Startup of the Windows service so that PERF can restart if the host restarts.
4. If PERF is not controlled by EGO, and the Derby DB host is not the PERF host, log onto the Derby DB host and run **perfadmin start all**.
5. Test the Platform Management Console. Browse to the web server URL and log in to the PMC using the LSF administrator name and password.

   The web server URL is:

   `http://host_name:8080/platform`

   The host name is the PMC host you specified.

   If PMC is controlled by EGO and you did not specify the PMC host, log on as LSF administrator and run **egosh client view GUIURL_1**.

   The additional information shows the full URL including the host name and port.

# Installation parameter quick reference

Use this reference to learn about the install parameters or dialog windows.

# LSF installation parameters

The installation parameters for LSF are configured automatically by the interactive installer. The related interactive install dialog window name is shown for each parameter.

If you do not use the interactive installer, specify command-line installation options as needed. The syntax is shown for each parameter.

For silent install with msiexec, the msiexec syntax is:

**msiexec /i** *package_file* [*parameter_value ...*] **/quiet**

For example, to install a server host and specify the installation directory:

```
msiexec /i \\hostB\download\lsf7.0.4_win32.msi SERVERHOSTS=hostM HOSTTYPE=Server INSTALLDIR=C:
\LSF /quiet
```

For silent uninstall, the msiexec syntax is:

**msiexec /x** *package_file* **/quiet**

## Parameter reference

The installer may require the following parameters.

## LICENSEFILE (License File window)

## Description

Full path to the LSF license file (`license.dat`). You must have a valid license file to install LSF.

## Syntax

LICENSEFILE="\path\license_file"

e.g. LICENSEFILE="C:\license.dat"

*master host only

## Default

None—required variable

## SHAREDIR (Shared Directory window)

## Description

Full path to the shared directory. The shared directory contains shared configuration files and is used for master host failover. This is recommended for production clusters.

**Note:**

You only specify a shared directory when both your master and all master candidate hosts are Windows hosts. You cannot have mixed Windows and UNIX master and master candidate hosts.

## Syntax

```
SHAREDIR="\\fileserver\path"
```

For example: `SHAREDIR="\\HostF\EGOshare"`

## Default

no shared directory

# HOSTTYPE (Installation Options window)

## Description

The type of host you wish to install: LSF master host (new cluster), master candidate, server, or client host.

## Syntax

HOSTTYPE= Master| Candidate| Server| Client

e.g. HOSTTYPE=Server

## Default

LSF master host (new cluster)

*master host always gets full package

# SERVICETYPE (SBD and RES Control window)

## Description

Set the value to "EGO" if you want EGO Service Controller to start LSF res and sbatchd, and restart if they fail.

## Syntax

SERVICETYPE=EGO| LSF

e.g. SERVICETYPE=EGO

## Default

LSF—res and sbatchd are managed as Windows services

# CLUSTERNAME (Cluster Name window)

## Description

Name of the LSF cluster. Do not use the same name as any LSF host, user or user group.

## Syntax

CLUSTERNAME=cluster_name

e.g. CLUSTERNAME=Research

## Default

Cluster1

# INSTALLDIR (Installation Directory window)

## Description

Full path to the top-level LSF installation directory.

## Syntax

INSTALLDIR=path

e.g. INSTALLDIR=C:\PlatformLSF7

## Default

C:\LSF_7.0

# CLUSTERID (Cluster ID window)

## Description

This parameter is not required for normal installation of a new cluster. Specify the unique Cluster ID of your cluster.

Cluster ID is used to identify different clusters when one host belongs to multiple clusters. It is appended to Windows service names, for example, if your cluster ID is "service", the lim service serving your cluster is named "Platform LIM service" instead of "Platform LIM".

## Syntax

CLUSTERID=cluster_id

e.g. CLUSTERID=research

## Default

undefined

# CLUSTERADMIN (Cluster Administrator window)

## Description

Cluster administrator (lsfadmin).

## Syntax

CLUSTERADMIN="domain\user_name"

or

CLUSTERADMIN=".\user_name"

e.g. CLUSTERADMIN="DOMAIN\lsfadmin"

## Default

installation account is the default cluster administrator

# ADMINPASSWD (Cluster Administrator window)

## Description

Actual password of the cluster administrator account (lsfadmin).

## Syntax

ADMINPASSWD="password"

e.g. ADMINPASSWD="mypasswd"

* master host only

## Default

None - required

# Configuration Options window

## Description

Default (quick install) or custom configuration. Select default configuration to use default values for all remaining installation options. This dialog window has no corresponding installation parameter.

## Default

Default configuration (quick install)

# SERVICEUSERNAME (Windows Service Account window)

## Description

Name of the system services execution user OS account. This account is used to run LSF system services.

## Syntax

SERVICEUSERNAME="domain\user_name"

or

SERVICEUSERNAME=".\user_name"

e.g. SERVICEUSERNAME="DOMAIN\lsfadmin"

## Default

the Local System account

## SERVICEPASSWORD (Windows Service Account window)

### Description

Actual password of the system services execution user OS account.

### Syntax

SERVICEPASSWORD="password"

e.g. SERVICEPASSWORD="mypasswd"

* local server host only

### Default

None - the default systems service execution user OS account is the Local System account, which does not require a password

## BASEPORT (LSF Ports window)

### Description

Base connection port. LSF uses 4 consecutive ports starting from the base port, e.g., 7869-7872.

### Syntax

BASEPORT=port_number

e.g. BASEPORT=7869

### Default

7869

* indicates ports 7869-7872

## RESPORT (LSF Ports window)

### Description

LSF res port.

### Syntax

RESPORT=port_number

e.g. RESPORT=6878

### Default

6878

## SBDPORT (LSF Ports window)

### Description

LSF sbatchd port.

## Syntax

SBDPORT=port_number

e.g. SBDPORT=6882

## Default

6882

# MBDPORT (LSF Ports window)

## Description

LSF mbatchd port.

## Syntax

MBDPORT=port_number

e.g. MBDPORT=6881

## Default

6881

# DYNAMICHOST (Dynamic Hosts window)

## Description

Set the value to Yes to enable dynamic hosts in LSF. After installation, configure security for dynamic hosts.

## Syntax

DYNAMICHOST=Yes | No

e.g. DYNAMICHOST=Yes

## Default

No—hosts cannot join the cluster dynamically

# STARTUP (Startup window)

## Description

Set the value to "No" to disable automatic startup of LSF after installation.

## Syntax

STARTUP=Yes | No

e.g. STARTUP=Yes

*for master candidates and shared server hosts, specify No

## Default

Yes—start LSF automatically

## ENABLEEGO (Enable EGO window)

## Description

Set the value to "Yes" if you want to enable advanced EGO features.

## Syntax

ENABLEEGO=Yes | No

e.g. ENABLEEGO=Yes

## Default

Yes—Enable advanced EGO features

## SERVERHOSTS (Server Hosts window)

## Description

Define LSF server hosts that this host can contact.

## Syntax

SERVERHOSTS=host_name ...

e.g. SERVERHOSTS=HostM HostW

## Default

None—Optional on master host, required on slave for interactive installation

# PMC installation parameters

The installation parameters for the Platform Management Console (PMC) are configured automatically by the interactive installer. The related interactive install dialog window name is shown for each parameter.

If you do not use the interactive installer, specify command-line installation options as needed. The syntax is shown for each parameter.

For silent install with msiexec, the msiexec syntax is:

**msiexec /i** *package_file* [*parameter_value ...*] **/quiet**

For silent uninstall, the msiexec syntax is:

**msiexec /x** *package_file* **/quiet**

## Parameter reference

The installer may require the following parameters.

# EGOPMCCONTROL (PMC Control window)

## Description

Set the value to "Yes" if you want the EGO Service Controller to start the PMC service, and restart it if it fails.

## Syntax

EGOPMCCONTROL=Yes | No

e.g. EGOPMCCONTROL=Yes

## Default

Yes—Enable EGO control for PMC

# EGOPERFCONTROL (PERF Control window)

## Description

Set the value to "Yes" if you want the EGO Service Controller to start PERF services, and restart them if they fail.

## Syntax

EGOPERFCONTROL=Yes | No

e.g. EGOPERFCONTROL=Yes

## Default

Yes—Enable EGO control for PERF

# ENABLEDB (Derby Database Host window)

## Description

Set the value to "Yes" if you want to enable the Derby database, which is only appropriate for demo clusters. For a production cluster, you must use a supported commercial database. The database host does not need to be part of the cluster.

## Syntax

ENABLEDB=Yes | No

e.g. ENABLEdb=Yes

## Default

Yes—Enable the Derby database

# ADMINPASSWD (Cluster Administrator window)

## Description

Password of the LSF cluster administrator account.

## Syntax

ADMINPASSWD="password"

e.g. ADMINPASSWD="mypasswd"

## Default

None

# PMCSTARTUP (Startup window)

## Description

Set the value to "Yes" if you want the installer to start up the PMC service after the installation is complete.

## Syntax

PMCSTARTUP=Yes | No

e.g. PMCSTARTUP=Yes

## Default

Yes—The installer starts up the PMC service after the installation is complete.

# PERFSTARTUP (Startup window)

## Description

Set the value to "Yes" if you want the installer to start up the PERF services after the installation is complete.

## Syntax

PERFSTARTUP=Yes | No

e.g. PERFSTARTUP=Yes

## Default

Yes—The installer starts up the PERF services after the installation is complete.