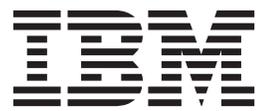Platform Process Manager
Version 9 Release 1 Modification 3

Release Notes

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First edition

This edition applies to version 9, release 1, modification 3 of Platform Process Manager (product number 5725G82) and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

Chapter 1. What's new

New Process Manager Group administrators

Process Manager now recognizes Group administrators defined in LSF under GROUP_ADMIN in the `lsb.users` file when the new parameter `JS_ENABLE_GROUP_ADMIN=true` in `js.conf`.

Group administrators can view flow definitions, flows, and calendars owned by all users, and can control flows and jobs on behalf of users who are members of the same LSF® user group.

New Flow Completion Attributes

Ignore work items in the Waiting state that will never run, or that depend on a file, time, or proxy event

In Flow Editor, in the Flow Completion Attributes dialog(**Action** > **Specify Flow Completion Attributes**), under **All work items complete successfully or any work item fails**, there is a new field **Ignore work items in the Waiting state that will never run, or that depend on a file, time, or proxy event**. This is useful when your flow contains branches that run only when a work item fails or only when a work item succeeds. By default, this checkbox is not selected. If you select the checkbox, Process Manager determines the state of the flow when all work items that have been submitted to run have completed successfully, or any work item that has been submitted to run has failed. If work items are not submitted to run(such as a branch of a flow), they are not considered to determine the state of the flow.

When any work item fails, stop the flow and kill any running work items

In Flow Editor, in the Flow Completion Attributes dialog(**Action** > **Specify Flow Completion Attributes**), under **When any work item fails**, there is a new field **Stop the flow and kill any running work items**. This is useful when you want to automatically kill all running jobs in a flow when a flow is done or exited.

Define dependencies between elements in job arrays

You can now define dependencies between elements with the same index in different job arrays with the new event type **Trigger the element with the same index in the next job array**. For example, job array A2 depends on job array A1. With this new event type, each element in job array A2 can start as soon as the element with the same index in job array A1 is finished. You do not need to wait until all elements of job array A1 are complete to start elements in job array A2.

Trigger a specific version of a flow definition

The new **jtrigger -e** option allows you to specify which version of a flow definition to trigger. You can view all valid versions for a flow definition with the command **jdefs -v**.

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Trigger a flow and pass variables from a variable file

The new option -f in the command jtrigger allows you to use a file to define variables that need to be passed to a flow when triggering it. The variable format is the same as the -v option and you can use both options on the command line.

Define how a user variable with a blank value is interpreted by Process Manager

The new parameter JS_DEFAULT_USER_VARIABLE_VALUE_IS_EMPTY in js.conf allows you to define how Process Manager interprets a blank value in a user variable. When set to false(default value), when a flow runs and a user variable is specified in the flow and its value is not set, Process Manager does not interpret the variable, it considers it as specified. When set to true, when a flow runs and a user variable is specified in the flow and its value is not set, Process Manager interprets the variable value as being set to empty.

Support for double-byte characters

The new parameter JS_UNICODE_ESCAPE_CONVERT in js.conf allows you to enable double-byte character support. When JS_UNICODE_ESCAPE_CONVERT=true, Process Manager supports double-byte character sets. For example, if a job name contains Chinese characters, Process Manager translates it to the Unicode character escape sequence such as \u1234.

Require users to log in to Process Manager

The parameter JS_LOGIN_REQUIRED in the js.conf file on the Process Manager Server now enforces whether a user is required to log in to access Process Manager. When JS_LOGIN_REQUIRED=true, for authentication to work, you must also configure JS_LOGIN_REQUIRED in the js.conf file of all Process Manager clients to the same value. Otherwise,an error is displayed to the user when the value of the JS_LOGIN_REQUIRED parameter on the client does not match that of the server.

Define an LSF command timeout

The new parameter JS_LSF_COMMAND_TIMEOUT in js.conf allows you to define the maximum number of seconds that any LSF command can take to execute before Process Manager terminates it. This is used when Process Manager calls any LSF command. If there are problems with the command execution, Process Manager terminates the processs after the specified timeout value. The default is 300 seconds.

Archive history logs

You can now archive history logs into a directory instead of deleting them by defining an archive log directory with the parameter JS_HISTORY_ARCHIVE_DIR in js.conf.

When JS_HISTORY_ARCHIVE_DIR is defined, any history log files older than the time period specified by JS_HISTORY_CLEAN_PERIOD are moved to the directory specified by JS_HISTORY_ARCHIVE_DIR.

When JS_HISTORY_ARCHIVE_DIR is not defined(default), any history log files older than the time period specified by JS_HISTORY_CLEAN_PERIOD are deleted by Process Manager.

Define how quotes are interpreted in the job command

With the new parameter JS_ENABLE_DOUBLE_QUOTE in `js.conf`, you can configures whether LSF job commands are to be quoted with single quotation marks or double quotation marks by Process Manager.

When this parameter is set to false(default value), the LSF **bsub** job command is always quoted with single quotation marks.

When this parameter is set to true: if the LSF bsub job command does not contain single quotation marks, the job command is quoted with single quotation marks. If the LSF **bsub** job command contains single quotation marks, it is quoted with double quotation marks.

Important: If you have applied Fix 219626 or later, the default behavior is JS_ENABLE_DOUBLE_QUOTE=true. When you upgrade to Process Manager version 9.1.3, you will need to set JS_ENABLE_DOUBLE_QUOTE=true in `js.conf`.

Change in behavior for job array submission

If you submit large job arrays in Process Manager, you will need to check the value of the LSF MAX_JOB_ARRAY_SIZE parameter in the LSF configuration file `lsb.params` so ensure your job arrays do not fail to submit. This is due to a change in behavior in how Process Manager handles job array submission.

In previous releases, when a job array contained more than 1000 jobs, Process Manager split the job array submission into several job arrays with 1000 jobs each. This could overload Process Manager and LSF if a user accidentally specified a very large index for a job array in a flow.

In this version of Process Manager, the maximum number of jobs in a job array is now defined with the LSF MAX_JOB_ARRAY_SIZE parameter in the LSF configuration file `lsb.params`. When a job array index is larger than the value defined by MAX_JOB_ARRAY_SIZE in `lsb.params`, the job array submission is rejected.

Kerberos Integration

Process Manager can now integrate with Kerberos on Linux/UNIX and generate and renew user TGTs to run LSF jobs, job arrays, job submission scripts, and job submission script arrays in flows.

You can enable the Kerberos integration by setting the LSF parameter `LSB_KRB_TGT_FWD=Y` in the LSF configuration file `lsf.conf`. The integration also uses the following LSF parameters from the `lsf.conf` file: LSB_KRB_LIB_PATH, LSB_KRB_RENEW_MARGIN, LSB_KRB_CHECK_INTERVAL.

The new parameters JS_KRB_USE_KEYTAB and JS_KRB_KEYTAB_FILE in `js.conf` allow you to use a keytab file with Process Manager to automatically generate and renew user TGTs.

The integration requires LSF 9.1.1.1 or higher to be installed and running, and all user TGTs must be renewable and forwardable.

Chapter 2. Process Manager Files

Documentation	File Name
System Requirements	`sys_requirements.html`
Installing Platform Process Manager (UNIX)	`pm_install_unix.pdf`
Installing Platform Process Manager (Windows)	`pm_install_windows.pdf`
Administering Platform Process Manager	`pm_admin.pdf`
Using Platform Process Manager	`pm_using.pdf`
Guide to Using Templates	`pm_using_templates.pdf`

Chapter 3. Installation Options

Default installation

For a default installation on either Windows or UNIX, follow the applicable installation instructions in the following guides:

Book	File
Installing Platform Process Manager (Windows)	pm_install_windows.pdf
Installing Platform Process Manager (UNIX)	pm_install_unix.pdf

Control the JFD

- To start JFD:
  - UNIX: **jadmin start**
  - Windows:
    1. From the Windows Control Panel, select **Administrative Tools** > **Services**.
    2. Right-click **Platform Process Manager** and select **Start**.
- To stop JFD, run **jadmin stop**. Do not manually kill the jfd process.

Chapter 4. Known Issues

Process Manager 9.1.3.0 has the following known issues:

- Template jobs are not displayed in Platform Application Center.
- The work directory cannot be copied from Windows to Linux, or from Linux to Windows. This can cause JFD to not work properly.
- When using Flow Editor with X-Windows, when you change a subflow name, the subflow name becomes garbled and is not displayed properly on the Flow Editor canvas.
- On Linux, jfd requires the `libstdc++.so.5` library. If this is not found on your system, install `libstdc++` or the `compat-libstdc++` RPM containing the `libstdc++.so.5` library that is appropriate to your system.
- **bhist** and **bacct** do not work on Windows hosts running ina UNIX cluster.

  This occurs because Windows hosts cannot read the shared directory on UNIX. To work around this issue, run **bhist** or **bacct** from a UNIX host in the cluster.
- If you installed YouDao (translation software), dialog windows in the Calendar Editor may disappear when you double-click or drag the window, or drag a scroll bar in the window. This problem occurs with every item in the Calendar Editor except **Calendar** > **New Calendar** > **Combine calendars**.

  For example, when in the **Owners** > **Sys** directory tree, if you double-click **Daily**, the **Daily@Sys** window displays in the main window. If you then double-click or drag this window, it will disappear. If this window has a scroll bar, the window will also disappear if you drag the scroll bar.

  This is a problem with the YouDao software. To work around this issue, shut down YouDao.
- When a user variable is used in a job definition's Name field, the value of the variable must be set when the flow is triggered. Otherwise the flow will fail to be triggered. For example, in Flow Manager, you may choose "Trigger" => "With Variables", or on command line use "jtrigger -v variable_list ...".
- Applies to Linux hosts when JS_TIME_ZONE is set to "client", the default. During Daylight Savings Time (in the March-November time period), some time events may trigger an hour early. This occurs when Java™ gets the wrong timezone information from the client machine. Solution: On the (Linux) client, edit the file `/etc/sysconfig/clock` and replace TIMEZONE=*zone* with ZONE=*zone*. For example, ZONE="US/Eastern".
- On Linux Redhat 7.0, due to a known java problem, scripts that run Process Manager commands and then monitor for exit code will never see an exit code 1 when it occurs—they see an exit code of 0.
- A Misschedule exception is not propagated through two consecutive link events in a flow.
- When using the Flow Editor or Flow Manager, and viewing or changing a job or job array definition, the entire job or job array definition dialog cannot be viewed if you are using a screen resolution lower than 1024 x 768. We recommend you set your resolution to 1024 x 768 or higher when using the Process Manager graphical user interface.
- When launching the graphical interfaces (Flow Editor, Calendar Editor and Flow Manager) on some UNIX systems, the user receives font not found warnings. The Java™ Virtual Machine user interface manager automatically determines

which fonts are used on each machine. If the fonts are not available on the machine, the warning is issued. These warning messages do not affect the operation of the client.

- Process Manager does not validate the end date of a calendar expression. Consequently, if you define an end date prior to the start date, you receive no error message, but the calendar cannot be used in a time event to successfully trigger a flow or job.

- In the Flow Editor, on the Job Definition tabs, the **Reset** button only resets data on the current tab—it does not affect the hidden tabs. Values specified in the following fields do not reset at all when you click the **Reset** button:
  – Submit to queue/partition(s)—General tab
  – User name—General tab
  – Host requirements fields—Processing tab

- Some days of the week are not completely shown in the Calendar Editor for some platforms:
  – On Solaris: Mon, Wed, Thu are shown as M..., W..., T...
  – On HP: Mon, Wed are shown as M..., W...

- Some historical information is not logged correctly in the following circumstances:
  – If a job or other activity has a rerun exception handler that is triggered, no information about the exit code of the job is logged.
  – When user variables are used for file transfer names, the resolved name of the file is not logged.

- When using the **jsub -r** command to submit and replace a flow definition, if the jsub command fails, the replacement does not occur, but the replaced flow definition is already deleted and cannot be restored.

- In the Flow Manager, it is possible for the user to have two different flows selected in the tree view and the right-hand pane. If the user selects an option in the **Action** menu, such as Kill, it is the flow selected in the tree view that is killed, not the one in the right-hand pane. This may not be the behavior the user expects.

- Process Manager does not support duplicate event logging in LSF. The lsb.events file must be in a shared location where the Process Manager server can locate job information.

- If a job using a rerun exception handler has a rerun delay specified, and the Process Manager restarts during the delay period (prior to rerunning the job), the job is never rerun.

- If a user tries to open the job dependency definition on the arrow coming out of the job with the variable in the job name field, the user sees an empty message dialog, prior to seeing the dependency definition. The user can click **OK**, to see the definition. However, the job name field is blank.

- If a job command (command itself, not parameters) contains space and if the job is submitted to a queue with a job starter, the command doesn't work.

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