


User manual Last updated: 24-08-2007	<b>Pentaho Data Integration</b> <b>Pan 2.5.1</b>	 pentaho™ open source business intelligence™
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**Pan version 2.5.1**

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# 1 PAN

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## What is Pan?

Pan is a program that can execute transformations designed by Spoon in XML or in a database repository. Usually transformations are scheduled in batch mode to be run automatically at regular intervals.

## Installation

The first step is the installation of Sun Microsystems Java Runtime Environment version 1.4 or higher. You can download a JRE for free at <http://www.java.com/>.

After this, you can simply unzip the zip-file: Kettle-2.5.0.zip in a directory of your choice. In the Kettle directory where you unzipped the file, you will find a number of files. Under Unix-like environments (Solaris, Linux, OSX, ...) you will need to make the shell scripts executable. Execute these commands to make all shell scripts in the Kettle directory executable:

```
cd Kettle
chmod +x *.sh
```

## Launching Pan

To launch Pan on the different platforms these are the scripts that are provided:

- ✓ Pan.bat: run Pan on the Windows platform.
- ✓ pan.sh: run Pan on Unix platforms and OSX

Pan can be run on any platform that has a version of the Java Runtime Environment version 1.4 or higher.

## Command line options

These are the command line options that you can use.

### **IMPORTANT NOTES:**

- *On Windows system, the use of the minus ("-") in the options causes problems as well as the equal sign ("="). Because of this, from version 2.2.2 on, you can also use this format or any combination of /,- and ;, =*
- *Fields in italic represent the values that the options use.*
- *It's important that if spaces are present in the option values, you use quotes or double quotes to keep them together. Take a look at the examples below for more info.*

```
/option:value
```

Below are the valid options.

### **1. Display version information**

```
-version
```

This option displays the version of the Kettle core library (kettle.jar).  
The build version number and build date are shown as well.

### **2. Launch XML File**

```
-file=filename
```

This option runs the transformation defined in the XML file. (.ktr : Kettle Transformation)

### **3. Set the logging file**

```
-logfile=Logging Filename
```

Specifies the log file. The default is the standard output.

#### 4. Set the logging level

```
-level=Logging Level
```

The level option sets the log level for the transformation that's being run.  
 These are the possible values:

- ✓ Error: Only show errors
- ✓ Nothing: Don't show any output
- ✓ Minimal: Only use minimal logging
- ✓ Basic: This is the default basic logging level
- ✓ Detailed: Give detailed logging output
- ✓ Debug: For debugging purposes, very detailed output.
- ✓ Rowlevel: Logging at a row level, this can generate a lot of data.

#### 5. Choose a repository

```
-rep=Repository name
```

Connect to the repository with name "*Repository name*".  
 You also need to specify the options `-user`, `-pass` and `-trans`.  
 You can also specify this option in the form of environment variable KETTLE\_REPOSITORY.

#### 6. Set the repository user name

```
-user=Username
```

This is the username with which you want to connect to the repository.  
 You can also specify this option in the form of environment variable KETTLE\_USER.

#### 7. Set the repository password

```
-pass=Password
```

The password to use to connect to the repository  
 You can also specify this option in the form of environment variable KETTLE\_PASSWORD.

#### 8. Select the repository transformation to run

```
-trans=Transformation Name
```

Use this option to select the transformation to run from the repository

## 9. List the directories in the repository

```
-listdir=Y
```

Print a listing of all the sub-directories in the repository directory specified with the option “-dir”.

## 10. Set the repository directory

```
-dir=directory
```

Specifies the directory in the repository to use. Repository directories are specified like this:

The root directory:               /

A subdirectory:                /production/Dimensions/

From version 2.2.2 on, a / (slash) is used to separate directories on all platforms.

## 11. List the repository transformations

```
-listtrans=Y
```

Show a list of all the transformations in the repository directory specified with the option “-dir”.

## 12. List the available repositories

```
-listrep=Y
```

Print a listing of all the defined repositories.

## 13. Export the complete repository

```
-exprep=filename.xml
```

This options exports the complete repository to a single XML file.

To restore this file to a repository, please use the Repository Explorer in Spoon or Chef.

See the documentation of Spoon or Chef for more information.

## 14. Don't log in to the repository

```
-norep=Y
```

If you have set environment variables KETTLE\_REPOSITORY, KETTLE\_USER, KETTLE\_PASSWORD, you can prevent Pan from logging into the repository. For example if you want to launch a transformation from an XML file.

## Path

Please make sure that you are positioned in the Kettle directory before running the samples below. If you put these scripts into a batch file or shell script, simply do a change directory to the installation directory:

If Kettle was installed on windows on the D:\ drive

```
D:  
cd \Kettle
```

If Kettle was installed in the /product directory on a Unix system:

```
cd /product/Kettle/
```

## Run a transformation from file

This example runs a transformation from file on a windows platform:

```
pan.bat /file:"D:\Transformations\Customer Dimension.ktr" /level:Basic
```

This example runs a transformation from file on a Linux box:

```
pan.sh -file="/PRD/Customer Dimension.ktr" -level=Minimal
```

## Run a transformation from Repository

This example runs a transformation from the repository on a windows platform:  
 (Enter on a single line without returns...)

```
pan.bat /rep:"Production Repository"
        /trans:"update Customer Dimension"
        /dir:/Dimensions/
        /user:matt
        /pass:somepassword123
        /level:Basic
```

## Redirecting output

If you don't want the output of the file to appear on the screen but rather be put into a log file, you can use redirection.

This example adds the Pan output to an ever-growing log file:

```
pan.sh -file="/PRD/trans.ktr" -level=Minimal >> /LOG/trans.log
```

This example writes the Pan output to a file that gets overwritten every time:

```
pan.bat /file:C:\PRD\trans.ktr /level:Basic > C:\LOG\trans.log
```

## Return codes

Pan returns an error code based on how the execution went:

0	The transformation ran without a problem.
1	Errors occurred during processing
2	An unexpected error occurred during loading / running of the transformation
3	Unable to prepare and initialize this transformation
7	The transformation couldn't be loaded from XML or the Repository
8	Error loading steps or plugins (error in loading one of the plugins mostly)
9	Command line usage printing



## 2 SCHEDULING

### Schedule a transformation on windows

The best way to go at it is to test the command first at the dos prompt. Then you can use the windows scheduler to launch this command. Windows versions since Windows 2000 have a GUI for doing this accessible through the control panel. However it's also possible to use the command line to do this:

```
at 23:30 /every:Monday,Wednesday,Friday "D:\update_dimensions.bat"
```

To see a list of the scheduled commands simply type:

```
at
```

### Schedule a transformation on Unix

First create a shell script that runs all the transformations you need. Then you can schedule this script to run.

On Unix like systems the easiest way to schedule a command is by using the "cron table". You can do this by entering the following command:

```
crontab -e
```

Then you can enter the time at which the command needs to be run as well as the command on a single line in the text file that is presented.

The first options are:

- ✓ Minute:            The minute of the hour, 0-59
- ✓ Hour:             The hour of the day, 0-23
- ✓ Month day:        The day of the month, 1-31
- ✓ Month:            The month of the year, 1-12
- ✓ Weekday:          The day of the week, 0-6, 0=Sunday

You can specify more than 1 number for each of these values by separating 2 number with a hyphen (-). This means an inclusive number range. If you separate the number by commas (,), it means distinct values. If you use \* instead of a number, it means: every possible hour, minute, day, month or weekday.

So, if you want to update the dimensions every hour, at 15 and 45 minutes past the hour during the weekdays, you might enter these lines in a crontab:

```
#  
# Launches the update of the dimensions in the warehouse  
#  
15,45 * * * 1-5 /PROD/update_dimensions.sh  
#
```

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#### How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>
```

```
This library is free software; you can redistribute it and/or
modify it under the terms of the GNU Lesser General Public
License as published by the Free Software Foundation; either
version 2.1 of the License, or (at your option) any later version.
```

```
This library is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
Lesser General Public License for more details.
```

```
You should have received a copy of the GNU Lesser General Public
License along with this library; if not, write to the Free Software
Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
```

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the
library `Frob' (a library for tweaking knobs) written by James Random Hacker.
```

```
<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice
```

That's all there is to it!