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Moving workflow system or Process Engine isolated regions

Product documentation

Abstract

Use the procedures in this document to move one or more isolated regions to a new workflow system or Process Engine database or schema.

Content

1 Overview

You can move one or more isolated regions to a new workflow system or Process Engine database or schema. You can move the isolated regions to correct IBM Case Manager environments where the isolated region and the Content Platform Engine target object store are not stored in the same database and schema. You can also reorganize existing isolated region data by moving the isolated region to a new database or schema.

Move isolated regions for the following scenarios:

- Before you upgrade to Content Platform Engine 5.2:
 - For IBM Case Manager 5.0 or 5.1 systems that are not in compliance with the common database or schema requirement (that is, the isolated region and the Content Platform Engine target object store are not stored in the same database and schema), move the Process Engine isolated regions into a Content Engine object store before you upgrade to Content Platform Engine 5.2.
 - Content Platform Engine requires that a DB2 database has a 32K page size. If the isolated region is stored in a DB2 database with a smaller page size, move the isolated regions data to a DB2

database with a 32K page size before you upgrade to Content Platform Engine 5.2.

Alternatively, you can increase the page size of the current database. For more information, see [*“How to increase the table space page size or change the character set for a Process Engine database on DB2 for Linux, Unix, and Windows”*](#)

- Move a single isolated region from one workflow system to a new workflow system database and schema.

Restriction: You cannot move an isolated region from the database and schema of one workflow system to an existing workflow system database and schema that already contains an isolated region. If you want to move multiple isolated regions to a new database and schema, you must do so in the same operation in one run.

1.1 Requirements

Before you move isolated regions, ensure that you have met all of the following requirements:

- Both the source and destination database must be the same type and version.

- The destination database and schema must not contain an existing workflow system or Process Engine database.
- Java Runtime Environment version 1.6 or higher must be accessible on the server where you will run the tools.
- The tools must be able to connect to the source and destination database instances by using type 4 JDBC drivers. For example, include `db2jcc4.jar` for the `JDBC_JAR` property for DB2 in the `rmove.bat` or `rde1.bat` script files.
- The workflow system or Process Engine database user permissions must be set for the source and destination database user. For more information, see the appropriate topic:
 - For Process Engine 5.1 and earlier, see [Creating Process Engine database accounts](#).
 - For Content Platform Engine 5.2, see [Creating Content Platform Engine database accounts](#).
- The workflow system installation is at the appropriate release level: IBM Business Process Manager 5.0, IBM Business Process Manager 5.1, or Content Platform Engine 5.2.

1.2 Restrictions

- You cannot move an isolated region from the database and schema of one workflow system to an existing workflow system database and schema that already contains an isolated region. If you want to move multiple isolated regions to a new database and schema, you must do so in the same operation in one run.
- The Region Move tool does not merge isolated regions into an existing workflow system or Process Engine database.
- The isolated regions in the destination database will use the same numbers as the isolated regions in the destination database.

2 Using the tools

The Region Move tool moves the tables for the specified isolated regions into a separate database or schema. The Delete Region tool can be used to remove the isolated regions from the source database when the move task is completed.

The destination database can have existing Content Engine or Content Platform Engine tables but cannot contain Process Engine or workflow system tables. All isolated regions from a database that are to be moved to the same destination database must be specified and moved at the

same time.

2.1 Before you start

- Copy the contents of the CPETools/regmove directory from the Content Platform Engine 5.2 server installation media to a directory on the server where you will run the tool. This directory includes the sample script and properties files that you must modify before you run the tools. The samples are for Windows-based systems. For non-Windows-based systems, see "Sample command scripts for non-Windows environments."
- Back up the source and destination databases before you move any isolated regions.
- Stop the source and destination workflow system or Process Engine software before you move any isolated regions. Ensure that no server software is accessing the database at the time of the move.

Important: Failure to stop all access to the database results in an error. If this error occurs, you must restore the source and destination databases from the backups and restart the move region process. Sample error:

Exception = java.lang.Exception: ERROR: the amount of data moved does not match. The source row count was <src_record_count> but the destination row count was <dst_record_count>.

2.2 Moving isolated regions

You can specify one or more isolated regions to be moved from a source database to a destination. All isolated regions to be moved to the destination database must be specified when the tool is initially run.

To move isolated regions:

1. From the directory where you copied the `regmove` contents, rename the `rmove.bat.sample` and `region_move.properties.sample` files to `rmove.bat` and `region_move.properties`.
2. Edit the `rmove.bat` script to specify variables including the location and file name of the tool (`REG_MOVE_JAR`), the location and file names of the type 4 JDBC driver JAR file (`JDBC_JAR`), and the full path including the location and file name of the `region_move.properties` file (`PROPERTIES_FILE`).
3. Edit the `region_move.properties` file to specify source

information like the location and isolated regions to be moved, the destination information of the new isolated regions, and the logging information from the tool. For more information, see the following source, destination, and output information sections.

4. Run the tool by entering the following command at the command prompt:
`rmove`

Source information:

- **REGION_NUMBER**
The numbers of the isolated regions to be moved. You can specify multiple isolated region numbers in a comma-separated list, for example, 1, 2, 4.
- **JDBC_BATCH_SIZE**
The number of rows to include in a batch for insertion into the destination database. A default of 20000 is specified.
- **SOURCE_JDBC_CONNECTION_STRING**
The JDBC connection string to connect to the source database.
 - **MSSQL:** `jdbc:sqlserver://host:port;DatabaseName=database_name`

A typical port for MSSQL is 1433.

- DB2 format: `jdbc:db2://host:port/database_name`

A typical port for DB2 is 50000.

- ORACLE format:

`jdbc:oracle:thin:@host:port:database_name`

A typical port for ORACLE is 1521.

- SOURCE_DB_USERNAME

The source database user name. If you do not enter a value here, the tool prompts you for a value at run time.

- SOURCE_DB_PASSWORD

The source database password. If you do not enter a value here, the tool prompts you for a value at run time.

- SOURCE_SCHEMA

The source database schema. If the database schema is not specified, the user's default database schema is used.

Destination information:

- DESTINATION_JDBC_CONNECTION_STRING

The JDBC connection string to connect to the destination database.

- MSSQL: `jdbc:sqlserver://host:port;DatabaseName=database_name`

A typical port for MSSQL is 1433.

- DB2 format: `jdbc:db2://host:port/database_name`

A typical port for DB2 is 50000.

- ORACLE format:

`jdbc:oracle:thin:@host:port:database_name`

A typical port for ORACLE is 1521.

- DESTINATION_DB_USERNAME

The destination database user name. If you do not enter a value here, the tool prompts you for a value at run time.

- DESTINATION_DB_PASSWORD

The destination database password. If you do not enter a value here, the tool prompts you for a value at run time.

- DESTINATION_SCHEMA

The destination database schema. If the database schema is not specified, the user's default database schema is used.

- DESTINATION_PE_DATA

- For MSSQL, this value is the file group that is specified for the

workflow system or Process Engine data.

- For DB2 or ORACLE, this value is the table space that is specified for the workflow system or Process Engine data.
- DESTINATION_PE_INDEX
For DB2 or ORACLE, this value is the table space that is specified for the workflow system or Process Engine index.
- DESTINATION_PE_BLOB
FOR DB2, this value is the table space that is specified for the workflow system or Process Engine blob data. The table space must be of type LARGE table space.

Output information:

- LOG_LEVEL
Options of logging are NONE, SOME, and FULL. The default is SOME. In most cases, SOME is sufficient to monitor the progress of the tools.
- LOG_FILENAME
The tool automatically logs output to the screen; you can optionally specify an output log file.

Sample output

The date and command are listed at the beginning of the output run. The summary of issues is presented at the end of the output for the isolated region.

Region Move Tool version: 1.0

Start Time: 2013/02/05 16:33:37

Source database : PEDB

Destination database : TARGETDB

Log Level : FULL

Log Filename : E:\regmove\log2.txt

Region Number : 1

Batch Size : 20000

Source JDBC String :

jdbc:db2://pedbhost:50000/PEDB

Source Database Type : 2

Source Database Username : peuser

Source Database name : PEDB

Source schema : PEUSER

Destination JDBC String :

jdbc:db2://osdbhost:50000/TARGETDB

Destination Database Type : 2

Destination Database Username : p8local

Destination Database name : TARGETDB

Destination schema : NEWUSER

Destination Database Default Data Filegroup or
Tablespace : PEDATA_TS

Destination Database Default Index Tablespace :
PEINDEX_TS

Destination Database Default Blob Tablespace :
PEBLOB_TS

Confirm that the above information is correct.

Enter 'y' to continue: y

*** Copying Process Engine system tables to
destination region

Copying table VWServer

Copying region specific rows from table VWIsolReg

to VWIsolReg

Copying region specific rows from table VWNotify
to VWNotify

Copying region specific rows from table
VWPAEventState to VWPAEventState

Copying region specific rows from table VWPending
to VWPending

Copying region specific rows from table
VWWebTimeOut to VWWebTimeOut

Copying table VWAttached1

Copying table VWEvent1

Copying table VWInject1

Copying table VWRole1

Copying table VWWCStats1

Copying table VWWPStats1

*** Copying Queue, Roster and Log data to destination
region

Creating Table NEWUSER.VWQUEUE1_101

Creating Table NEWUSER.VWQUEUE1_102

Creating Table NEWUSER.VWQUEUE1_103

```
Creating Table NEWUSER.VWQUEUE1_121
Creating Table NEWUSER.VWQUEUE1_122
Creating Table NEWUSER.VWQUEUE1_123
Creating Table NEWUSER.VWQUEUE1_124
Creating Table NEWUSER.VWQUEUE1_125
Creating Table NEWUSER.VWQUEUE1_126
Creating Table NEWUSER.VWQUEUE1_127
Creating Table NEWUSER.VWROSTER1_112
Creating Table NEWUSER.VWROSTER1_118
Creating Table NEWUSER.VWLOG1_113
Creating Table NEWUSER.VWLOG1_119
Creating Table NEWUSER.VWLOG1_140
*** Creating indices in destination region
*** Copying View Definitions
Creating View: NEWUSER.VWVL1_AJ1_MyCase
Creating View: NEWUSER.VWVL1_DefaultEventLog
Creating View: NEWUSER.VWVL1_FVT51_FVTBPMTesterCase1
Creating View: NEWUSER.VWVQ1_CE_Operations
Creating View: NEWUSER.VWVQ1_Conductor
Creating View: NEWUSER.VWVQ1_Delay
```

Creating View: NEWUSER.VWVQ1_FVT51_FVTEventTester
Creating View: NEWUSER.VWVQ1_Inbox
Creating View: NEWUSER.VWVQ1_InstructionSheetInterpr
Creating View: NEWUSER.VWVQ1_MFFF_FF_Role_Strings
Creating View: NEWUSER.VWVQ1_MFFF_FilterRole
Creating View: NEWUSER.VWVQ1_MFFF_FloatRole
Creating View: NEWUSER.VWVQ1_MFFF_Integer_Role
Creating View: NEWUSER.VWVQ1_Tracker
Creating View: NEWUSER.VWVQ1_WSRequest
Creating View: NEWUSER.VWVR1_DefaultRoster
Creating View: NEWUSER.VWVR1_FVT_Roster

*** Creating the Sequences

Creating Sequence: NEWUSER.VWLOG1_113SEQ
Creating Sequence: NEWUSER.VWLOG1_119SEQ
Creating Sequence: NEWUSER.VWLOG1_140SEQ
Creating Sequence: NEWUSER.VWOBJECTID1SEQ
Creating Sequence: NEWUSER.VWOBJECTIDSEQ
Creating Sequence: NEWUSER.VWPENDINGSEQ
Creating Sequence: NEWUSER.VWUNIQUEID1SEQ
Creating Sequence: NEWUSER.VWUSERSEQ


```
*** Region Move Tool exited, Time to copy 2344 rows  
of data 53392 ms, batch size is 20000
```

2.3 Deleting the source isolated regions

The Region Delete tool deletes one or more isolated regions from a specified source database. Isolated region tables are removed along with any references to the isolated region in the remaining tables. The tool automatically logs output to the screen, or you can optionally specify a log file in the properties file.

To delete the source isolated regions:

1. From the directory where you copied the regmove contents, rename the `rdel.bat.sample` and `region_delete.properties.sample` files to `rdel.bat` and `region_delete.properties`.
2. Edit the `rdel.bat` file to specify environment including the location and file name of the tool (`REG_MOVE_JAR`), the location and file names of the type 4 JDBC driver JAR file (`JDBC_JAR`), and the full path including location and file name of the `region_delete.properties` file (`PROPERTIES_FILE`).

3. Edit the `region_delete.properties` file to specify information like the location and isolated regions to be deleted and the logging information from the tool. For more information, see the following source information section.
4. Run the tool by entering the following command at the command prompt:
`rdel`

Source information:

- REGION_NUMBER

The numbers of the isolated regions to be moved. You can specify multiple isolated region numbers in a comma-separated list, for example, 1, 2, 4.

- SOURCE_JDBC_CONNECTION_STRING

The JDBC connection string to connect to the destination database.

- MSSQL: `jdbc:sqlserver://host:port;DatabaseName=database_name`

A typical port for MSSQL is 1433.

- DB2 format: `jdbc:db2://host:port/database_name`

A typical port for DB2 is 50000.

- ORACLE format:

`jdbc:oracle:thin:@host:port:database_name`

A typical port for ORACLE is 1521.

- SOURCE_DB_USERNAME

The source database user name. If you do not enter a value here, the tool prompts you for a value at run time.

- SOURCE_DB_PASSWORD

The source database password. If you do not enter a value here, the tool prompts you for a value at run time.

- SOURCE_SCHEMA

The source database schema. If the database schema is not specified, the user's default database schema is used.

Sample output

The date and command are listed at the beginning of output run. The summary of issues is presented at the end of the output for the isolated region.

Region Delete Tool version: 1.0

Start Time: 2013/02/05 16:36:38

Source database : VWDB

WARNING: Once the region data has been deleted, it cannot be recovered.

Back up your database before continuing.

Log Level : FULL

Log Filename : E:\regmove\del.log

Region Number : 1

Source Database Username : peuser

Source JDBC String :

jdbc:db2://pedbhost1:50000/VWDB

Source Database Name : VWDB

Source Schema name : PEUSER

Confirm that the above information is correct.

Enter 'y' to continue: y

*** Deleting region 1 from Process Engine tables

Deleted 1 rows from table PEUSER.VWIsolReg

Deleted 10 rows from table PEUSER.VWNotify

Deleted 0 rows from table PEUSER.VWPAEventState

Deleted 0 rows from table PEUSER.VWPending

Deleted 0 rows from table PEUSER.VWwobTimeOut

Dropping Table PEUSER.VWAttached1

Dropping Table PEUSER.VWEvent1

Dropping Table PEUSER.VWInject1

Dropping Table PEUSER.VWObject1

Dropping Table PEUSER.VWRole1

Dropping Table PEUSER.VWWCStats1

Dropping Table PEUSER.VWWPStats1

Dropping Table PEUSER.VWQUEUE1_101

Dropping Table PEUSER.VWQUEUE1_102

Dropping Table PEUSER.VWQUEUE1_103

Dropping Table PEUSER.VWQUEUE1_121

Dropping Table PEUSER.VWQUEUE1_122

Dropping Table PEUSER.VWQUEUE1_123
Dropping Table PEUSER.VWQUEUE1_124
Dropping Table PEUSER.VWQUEUE1_125
Dropping Table PEUSER.VWQUEUE1_126
Dropping Table PEUSER.VWQUEUE1_127
Dropping Table PEUSER.VWQUEUE1_146
Dropping Table PEUSER.VWQUEUE1_147
Dropping Table PEUSER.VWQUEUE1_148
Dropping Table PEUSER.VWROSTER1_112
Dropping Table PEUSER.VWROSTER1_118
Dropping Table PEUSER.VWLOG1_113
Dropping Table PEUSER.VWLOG1_119
Dropping Table PEUSER.VWLOG1_140

*** Deleting region views from source database

*** Deleting region and system sequences from source database

Dropping Sequence: DROP SEQUENCE PEUSER.VWLOG1_113SEQ

Dropping Sequence: DROP SEQUENCE PEUSER.VWLOG1_119SEQ

Dropping Sequence: DROP SEQUENCE PEUSER.VWLOG1_140SEQ

Dropping Sequence: DROP SEQUENCE

PEUSER.VWOBJECTID1SEQ

Dropping Sequence: DROP SEQUENCE PEUSER.VWOBJECTIDSEQ

Dropping Sequence: DROP SEQUENCE PEUSER.VWPENDINGSEQ

Dropping Sequence: DROP SEQUENCE

PEUSER.VWUNIQUEID1SEQ

Dropping Sequence: DROP SEQUENCE PEUSER.VWUSERSEQ

*** Deleting system tables from source database

.

Dropping Table PEUSER.VWUser

Dropping Table PEUSER.VWIsolReg

Dropping Table PEUSER.VWSysNums

Dropping Table PEUSER.VWServer

Dropping Table PEUSER.VWObject

Dropping Table PEUSER.VWRDBObject

Dropping Table PEUSER.VWNotify

Dropping Table PEUSER.VWPAEventState

Dropping Table PEUSER.VWPending

Dropping Table PEUSER.VWWebTimeOut

```
*** Region Delete Tool exited, Time to delete 1161  
rows of data 27727 ms
```

3 Reconnecting your environment

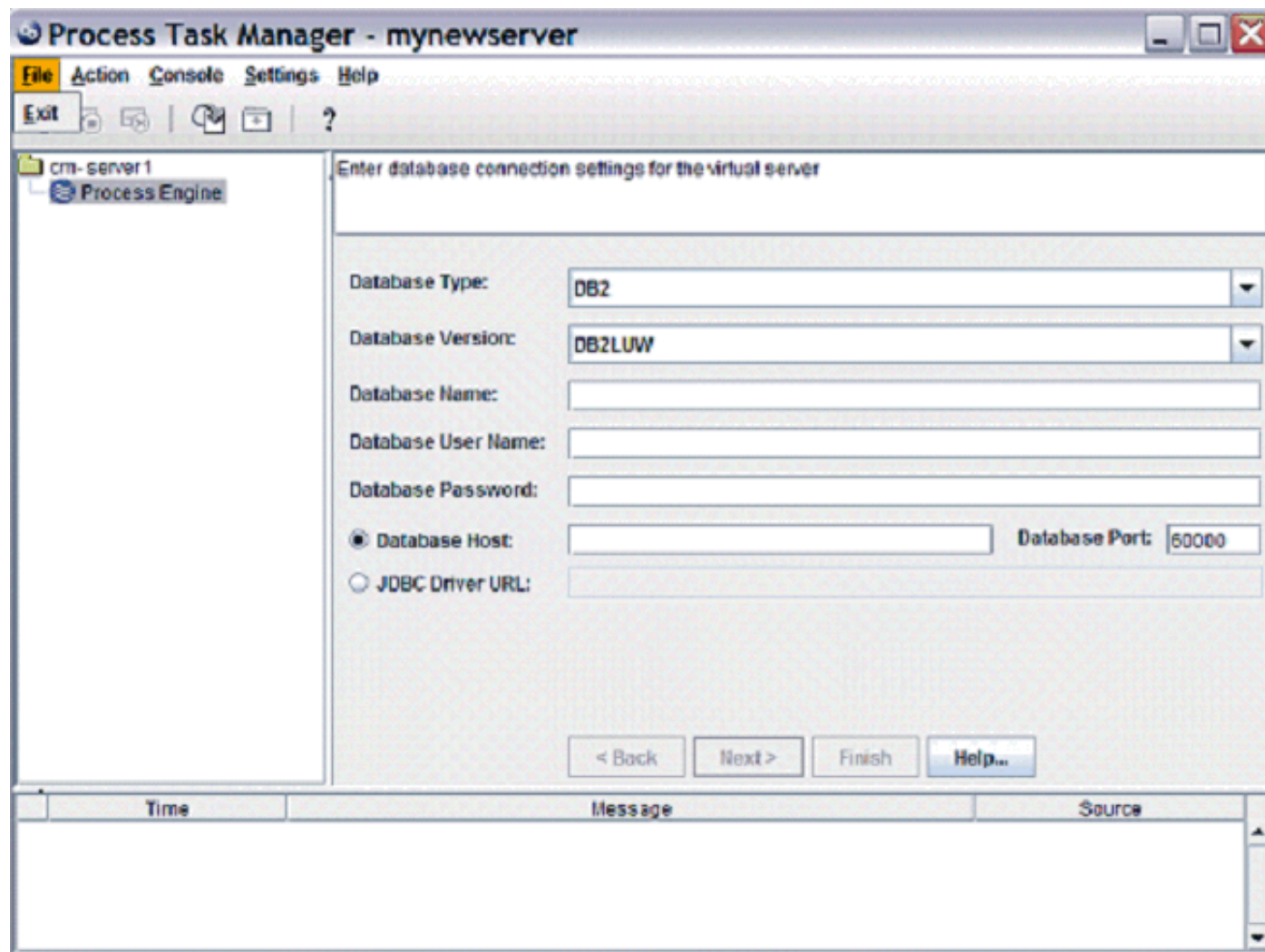
After the database is moved and old regions are deleted, it is important to setup the database for the Process Engine or Workflow system. Corresponding Isolated Regions and Connection points also need to be created or modified in the P8 Domain to make the system functional after the move.

3.1 P8 BPM 5.0 and 5.1 Environment

3.1.1 Process Engine Server Configuration

Use the Process Task Manager to configure a new Process Engine server or virtual server to connect to the moved database. Enter the Database information. See [Configure database](#) properties section in the info center. Run `vwtaskman virtual_server_name` to start Process Task Manager. After entering the database information, select next and enter any changes for the Process Engine Naming Service port or Process Engine Broker Port if defaults are not desired.

Note: Process Engine virtual servers will require a unique set of Naming service and Broker ports if running on the same machine. If configuring an additional virtual server on the same machine, see [Configuring a Process Engine virtual server and database interactively](#).



3.1.2 Setting Up Isolated Regions and Connection Points

Using the FileNet Enterprise Manager Administration Tool, create new isolated region(s) in the P8 domain for the newly moved region(s). Enter the Naming Service Port that corresponds to the newly created virtual

server in the region creation wizard. Next, update the existing Process Engine Connection Points using the new isolated regions or create new Connection Points for the new regions. See [Configure a Process Engine Isolated Region](#).

On the Process Engine server, update the region key using Process Task Manager. See [Updating Process Engine region keys with Process Task Manager](#).

Delete unused Connection Points or Isolated Region objects.

3.2 Content Platform Engine 5.2 Environment

3.2.1 Workflow System Configuration

If the region(s) has been moved to a database defined for an existing Content Engine Object Store, the database connection is already defined in the application server.

3.2.2 Setting Up Isolated Regions and Connection Points

Use the IBM Administration Console for Content Platform Engine tool to define a new Workflow system under the Object Store. See [Creating a](#)

[workflow system](#). During the Workflow System creation wizard specify a connection point and the region information for one of the regions moved. Create additional connection points and isolated regions for all the remaining regions that were moved. See [Creating additional connection points and isolated regions](#). To clean up delete any unused Connection Points.

After creating the new connection points, if the user wants to keep the same connection point name, they can rename it to the old name once the old connection point has been deleted. Note that a server restart may be necessary to clear out any cached information related to the old connection point.

4 Sample command scripts for non-Windows environments

The command scripts **rmove.bat.sample** and **rdel.bat.sample** are on the disk in the **regmove** folder. The sample scripts are in the Windows DOS bat format. The following sample shell scripts can be used to run the tools on Linux, HP, Solaris, or AIX.

The script requires the user to specify the following variables:

- REG_MOVE_JAR

The file name and location of the Region Move tool.

- JDBC_JAR

The file name and location of the type 4 JDBC driver JAR file.

- PROPERTIES_FILE

The full path, including the location and file name, of the `region_move.properties` file.

4.1 Sample Region Move script

This shell script sample sets up the environment and runs the Region Move tool. It moves one or more isolated regions from a source database to a destination database as specified in the `region_move.properties` file that is specified in the `rmove` script.

```
#!/bin/sh
#rmove.sh
# @ECHO OFF
# sample batch file to run the Region Move tool
# Directory location of the regmove.jar
REG_MOVE_JAR=/home/fnsw/regmove/regmove.jar
```

```
# Directory location of the JDBC jar file
JDBC_JAR=/opt/jars/ojdbc6.jar

# Full path of the Region Move property file
(region_move.properties)
PROPERTIES_FILE=/home/fnsr/regmove/region_move.properties

java -cp $REG_MOVE_JAR:$JDBC_JAR -Xms512m -Xmx1024m
-DPROFILE=$PROPERTIES_FILE
filenet.vw.regmove.RegionMoveMain
```

4.2 Sample Region Delete script

This shell script sample sets up the environment and runs the Delete Region tool. It deletes one or more isolated regions from a source database as specified in the `region_delete.properties` file that is specified in the `rdel` script.

```
#!/bin/sh
#rdel.sh
```

```
# @ECHO OFF

# sample batch file to run the region delete tool

# Directory location of the regmove.jar
REG_MOVE_JAR=/home/fns/regmove/regmove.jar

# Directory location of the JDBC jar file
JDBC_JAR=/opt/jars/ojdbc6.jar

# Full path of the region delete property file
(region_delete.properties)
PROPERTIES_FILE=/home/fns/regmove/region_delete.properties

java -cp $REG_MOVE_JAR:$JDBC_JAR -Xms512m -Xmx1024m
-DPROPFILE=$PROPERTIES_FILE
filenet.vw.regmove.RegionDeleteMain
```

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Process

Engine

Software

version: 5.0,
5.1.0, 5.2

**Operating
system(s):**

AIX, HP-UX,
Linux, Solaris,
Windows

Software

edition: All
Editions

Reference #:

7036552

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