User Guide
Java Splitter
Package Splitting and Table Splitting for Java Tables

Target Audience

- System administrators
- Technology consultants

INTERNAL
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Document History

The following table provides an overview of the most important document changes.

Version	Date	Description
1.0	6/17/2009	Initial version

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1 Introduction

The Java Splitter offers the following possibilities:

- Splitting the default packages `EXPORT.XML` and `IMPORT.XML` into several smaller and equal sized packages
- Extracting large tables into packages of their own
- Splitting large tables into several smaller and equal sized packages (table splitting)

The tool provides the corresponding split packages for export and import. Package splitting and table splitting can be used combined or separately.

Tool

The tool archive consists of the following:

- User Guide
  - `JSplitterUserGuide.pdf`
  - Located: `/usr/sap/<SAPSID>/SYS/global/sltools`
- Scripts for starting the tool standalone
  - `jsplitter.sh`, `jsplitter.bat`
  - Located: `/usr/sap/<SAPSID>/SYS/global/sltools`
- jar archive
  - `sdt_jcopy_jpkgctl.jar`
  - Located: `/usr/sap/<SAPSID>/SYS/global/sltools/sharedlib`

Prerequisites

- The JRE version must be at least 1.5.0_15.
- `JAVA_HOME` environment variable must point to the JRE directory.

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2 Configuration

Help

With the following command line option, the tool displays all parameters available:

- `-help`

The options can be provided via the property file or via command line. Command line parameters take precedence over parameters specified in the property file.

General Options

General Splitting Options

Option	Description	Comment
`help`	Prints help options for the parameters and their usage	none
`sec`	List of SAPSID and data source `name[,SecureStore property file, SecureStore key file][,SecureStore key phrase]`	Separator on Windows and UNIX: “,”
`dataDir`	Output data directory	If this option is missing, the split rules are taken from the command line arguments.
`log`	Log file with program output messages and errors	Default log file name is `JPkgClt.console.log`. The log file is created in the current working directory. In addition, the `JPkgCtl.trc` trace file with detailed process descriptions, errors, and messages is generated.

Mandatory General Options

The following splitting options are mandatory for both package and table splitting:

`sec`, `dataDir`

Package Splitting Options

Package Splitting Options

Option	Description	Comment
`split`	Size of the split packages	Size can be specified without unit (bytes assumed), as kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T), for example, 1048576, 200M, 8G, and so on.

Additional Mandatory Option for Package Splitting

Splitting option: `split`

Table Splitting Options

Table Splitting Options

Option	Description	Comment

`splitrulesfile`	Files that describe, which tables shall be split and how	Syntax:
		`<TABLE_NAME>:<NUMBER_OF_PACKAGES_FOR_SPLITTING>:<[COLUMN_TO_BE_USED_FOR_SPLITTING]>`
		
		Example
		`J2EE_CONFIG:2:`
		`J2EE_CONFIGENTRY:4:CID`

`tablesplit`	Parameter for specifying rules for table splitting on the command line	Syntax: `<TABLE_NAME>:<NUMBER_OF_PACKAGES_FOR_SPLITTING>:<[COLUMN_TO_BE_USED_FOR_SPLITTING]>`
`checksplitrules`	Checks the following: ■ Syntax of `splitrulesfile` ■ If the database tables specified in the `splitrulesfile` exist ■ If all database tables specified in the `splitrulesfile` without `COLUMN_TO_BE_USED_FOR_SPLITTING` have a primary key It expects a file as an argument.	Syntax: `<TABLE_NAME>:<NUMBER_OF_PACKAGES_FOR_SPLITTING>:<[COLUMN_TO_BE_USED_FOR_SPLITTING]>`

Caution

When configuring table splitting for a table without primary key (such as `J2EE_CONFIGENTRY`), you have to provide a value for parameter `<COLUMN_TO_BE_USED_FOR_SPLITTING>`. If the table to be split has a primary key, this parameter is optional.

Additional Mandatory Options for Table Splitting

Splitting options: `splitrulefile`, `tablesplit`

Example

JSplitter_cmd.properties :

```
#
# Table Splitting options
#
# Common options
#
# List of SAPSID, data source name[,SecureStore property file, SecureStore key file][,SecureStore key phrase]
-sec=CE1, jdbc/pool/CE1,D:/usr/sap/CE1/SYS/global/security/data/SecStore.properties,D:/usr/sap/CE1/SYS/global/security/data/SecStore.key
# Size of the split package with tables
-split=200M
# Output data directory
-dataDir=C:/jsplitter_export_dir
# File that contains key fields for each table with the following syntax:
<TABLE_NAME>:<NUMBER_OF_PACKAGES_FOR_SPLITTING>:<[TABLE_KEY_FOR_SPLITTING]>
-splitrulesfile=C:/jsplitter_export_dir/splitrulesfile.txt
# Log file with program output messages and errors
-log=
# Check splitrulesfile syntax
-checksplitrules=C:/jsplitter_export_dir/splitrulesfile.txt
```

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3 Starting the Table Splitter

Start the table splitter as user `<sapsid>adm` as follows:

- With the UNIX shell script `jsplitter.sh`
- With the Windows batch file `jsplitter.bat`

Note

We recommend to create a certain directory for splitting and start the tools from there, because the splitter produces log and trace files in the current working directory.

The application allows you to specify options in the command line or in the application property file. The name of the property file is `JSplitter_cmd.properties`.
Any options specified in the command line take precedence over the corresponding options in the application property file. Options are case-sensitive; any options that are not recognized are ignored.
To specify an option, proceed in one of the following ways:

- Command line:
  Specify the option in the format **`-optionName optionValue`**.
- Property file:
  Add an option as a new line in the format **`optionName=optionValue`**

In case you use an invalid option or you enter `-help`, the available options for starting the tool are displayed.

Prerequisites

Before you run the table splitter, set the following environment variables:

- `JSPLITTER_JAR_HOME`
  Set this variable to the following directories:
  - `<Drive>:\usr\sap\<SAPSID>\SYS\global\security\lib\tools`
  - `<Drive>:\usr\sap\<SAPSID>\SYS\global\sltools\sharedlib`
  - `<Drive>:\usr\sap\<SAPSID>\J<instance_number>\j2ee\j2eeclient`
- `OFFLINE_TOOL_JAR`
  Set this variable to the directory, which contains the following file:
  `sap.com~tc~bl~offline_launcher~impl.jar`
  The default directory is `<Drive>:\usr\sap\<SAPSID>\SYS\global\sltools\sharedlib`.
- `JSPLITTER_DB_DRIVER`
  Set this variable to the directory, which contains the database driver.

Example

For MaxDB: `<Drive>:\sapdb\programs\runtime\jar\sapdbc.jar`

Procedure

Start the table splitter as described above.

Note

To check the splitting processing state, use the `splitter *.trc` and `*.console.log` files.

Example

Only valid for: Windows

Command line for Windows cmd.exe

```
jsplitter.bat -tablesplit BC_COMPVERS:2 -tablesplit J2EE_CONFIG:4:CID;PATHHASH
-tablesplit J2EE_CONFIGENTRY:4:CID
```

End of: Windows

Only valid for: UNIX

Command line for a UNIX terminal

```
./jsplitter.sh -tablesplit BC_COMPVERS:2 -tablesplit J2EE_CONFIG:4:CID;PATHHASH
-tablesplit J2EE_CONFIGENTRY:4:CID
```

End of: UNIX

4 Output Files

- `JPkgCtl.console.log`
  Default log file of splitter tool
- `JPkgCtl.trc`
  Trace file with additional and more detailed information
- `IMPORT_<PKG_NUMBER>.XML`
  Resulting xml files for import after package splitting
- `EXPORT_<PKG_NUMBER>.XML`
  Resulting xml files for export after package splitting
- `IMPORT_PKG_METADATA.XML`
  Metadata for tables
- `EXPORT_PKG_METADATA.XML`
  Metadata for tables
- `sizes.xml`
  File with list of the biggest tables with their expected package size in bytes

Typographic Conventions

Example	Description
<Example>	Angle brackets indicate that you replace these words or characters with appropriate entries to make entries in the system, for example, “Enter your **<User Name>**”.
Example → *Example*	Arrows separating the parts of a navigation path, for example, menu options
Example	Emphasized words or expressions
Example	Words or characters that you enter in the system exactly as they appear in the documentation
http://www.sap.com	Textual cross-references to an internet address
/example	Quicklinks added to the internet address of a homepage to enable quick access to specific content on the Web
123456	Hyperlink to an SAP Note, for example, SAP Note 123456
Example	■ Words or characters quoted from the screen. These include field labels, screen titles, pushbutton labels, menu names, and menu options. ■ Cross-references to other documentation or published works
Example	■ Output on the screen following a user action, for example, messages ■ Source code or syntax quoted directly from a program ■ File and directory names and their paths, names of variables and parameters, and names of installation, upgrade, and database tools
EXAMPLE	Technical names of system objects. These include report names, program names, transaction codes, database table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE
EXAMPLE	Keys on the keyboard

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