BIRT Viewer User's Guide

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Note: the following contents are based on BIRT 2.3, earlier or later version compatibility is not guaranteed.

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1 Servlets

Currently the BIRT Viewer supports the following servlets:

1.1 frameset

This servlet is used to preview a report. It uses the Ajax framework to display a user interface, containing a toolbar, navigator bar and a table of contents pane. It allows the user to do additional operations like export data, export report, print, etc. This mode uses the Report Engine's ”Run” task, followed by a ”Render” task to generate the output. A report document will be generated first.

1.2 run

This servlet is used to preview a report. It uses the Ajax framework, and the display only contains the generated report content. This mode uses the Report Engine's “RunAndRender” task to generate the output. No report document is generated.

1.3 preview

This servlet is used to preview a report. It does not use the Ajax framework and directly uses the Engine API to generate the report content. This mode also calls the Report Engine's “RunAndRender” task to generate the output. No report document is generated.

1.4 document

This servlet is used to generate a report document from a report design. The generated document can be either saved on the server side through configuration or downloaded on the client side. This mode uses the Report Engine's “Run” task only.

1.5 output

This servlet is similar to “frameset”. It generates the report document first and renders it. The difference is that this mode does not use Ajax, but just output the report content directly to the browser.

1.6 parameter

This servlet is used to bring up the Parameter Dialog. Normally this should not be used directly. Instead the user can use the ”parameterPage” JSP tag to integrate the parameter UI into their own JSP pages.

1.7 download

This servlet is used to extract CSV data from a report document. This is now deprecated, the “extract” servlet must be used instead.

1.8 extract

This servlet is used to extract data from a report document. The user can specify the data format or extraction extension name for different output.

2 The “web.xml” file

Currently, the web.xml file from the BIRT viewer supports the following context parameters:

2.1 Basic settings

2.1.1 BIRT_VIEWER_LOCALE

Sets the default locale for the viewer application. The Viewer will search the locale setting using the following order:

1. Locale in URL parameter (“__locale”).
2. Locale in HTTP request from the client side browser setting.
3. Locale in web.xml.

2.1.2 BIRT_VIEWER_WORKING_FOLDER

Sets the default working folder for the viewer application. The user can put report design files or report document files under this folder. Then it will be possible to use a relative path in the URL to access these reports. The default setting is the current web application root folder.

This setting supports three formats:

1. **Relative Path**
   The folder path is relative to current web application root folder.
2. **Absolute Path**
   The folder path is absolute on the local file system.
3. **Java System Property**
   A Java system property like for example “${myworkingfolder}”. It is possible to define its value by passing the following argument to the JVM: “-Dmyworkingfolder=D:/reports”.

2.1.3 BIRT_VIEWER_DOCUMENT_FOLDER

Sets the default folder path to where the generated report document files will be saved. The default value is “documents”. Please refer to BIRT_VIEWER_WORKING_FOLDER setting for the detailed path syntax.

2.1.4 WORKING_FOLDER_ACCESS_ONLY

Sets whether the viewer application can only access report files under the working folder. If this is set to “true”, all report files outside the working folder cannot be accessed by the viewer. The default value is “false”.

2.1.5 BIRT_VIEWER_IMAGE_DIR

Sets the folder path where the temporary image files will be stored. The

default value is “report/images”. Please refer to the BIRT_VIEWER_WORKING_FOLDER setting for detailed path syntax.

2.1.6 BIRT_VIEWER_SCRIPTLIB_DIR

Sets the path for the user Java library files (normally used for Java event handlers). The default value for this setting is “scriptlib”. Please refer to the BIRT_VIEWER_WORKING_FOLDER setting for the detailed path syntax.

2.1.7 BIRT_VIEWER_CONFIG_FILE

Sets the path to the “viewer.properties” file. Normally this setting should not be changed by the user. Please refer to the viewer.properties section for more details.

2.1.8 BIRT_RESOURCE_PATH

Sets the folder path for the user resources. A resource can be a report library, an image and a css file. The default value is the web application root folder. Please refer to the BIRT_VIEWER_WORKING_FOLDER setting for the detailed path syntax.

2.2 Features and behavior

2.2.1 BIRT_OVERWRITE_DOCUMENT

Sets whether the temporary report documents must be overwritten, even if they are already available, in “frameset” or ”output” mode. If this setting is “true”, each time when a repot is rendered, it will regenerate the report document. Otherwise, it will reuse the existing report document.

2.2.2 BIRT_VIEWER_PRINT_SERVERSIDE

Sets whether the server printing feature must be enabled in frameset mode. The value can be “ON” or “OFF”. The default value is “ON”.

2.2.3 HTML_ENABLE_AGENTSTYLE_ENGINE

Sets whether the user agent style processing must be used. This setting will be passed to the report engine and is used to control the CSS processing. If this setting is “true”, the generated CSS-code will be optimized for the user's browser. Else, generic CSS that works in all the browsers will be used. The default value is “true”.

2.2.4 BIRT_FILENAME_GENERATOR_CLASS

Sets the full-qualified Java class name that handles the naming logic for the output files. The given class should implement the Java interface “org.eclipse.birt.report.utility.filename.IFilenameGenerator”. If this setting is not specified, the default file naming logic will be used. The default value is empty.

2.3 Logging

2.3.1 BIRT_VIEWER_LOG_DIR

Sets the path where the log files will be stored. The default value is “logs”. Please refer to the BIRT_VIEWER_WORKING_FOLDER setting for detailed path syntax.

2.3.2 BIRT_VIEWER_LOG_LEVEL

Sets the logging level. The possible values are the following:
“ALL”, “SEVERE”, “WARNING”, “INFO”, “CONFIG”, “FINE”, “FINER”, “FINEST”, “OFF”

2.4 Limitations

2.4.1 BIRT_VIEWER_MAX_ROWS

Sets the maximum number of rows that can be retrieved from one dataset. This parameter is normally used at design time to avoid inadvertent memory issues. The default value is empty, which means no limit.

2.4.2 BIRT_VIEWER_MAX_CUBE_ROWLEVELS

Sets the maximum number of row levels that can be retrieved from one cube. The default value is empty, which means no limit.

2.4.3 BIRT_VIEWER_MAX_CUBE_COLUMNLEVELS

Sets the maximum number of column levels that can be retrieved from one cube. The default value is empty, which means no limit.

2.4.4 BIRT_VIEWER_CUBE_MEMORY_SIZE

Sets the maximum memory size used during cube generation. If the cube size exceeds this setting, it will be written to disk. This setting allows the user to do some performance tweaking.

3 The “viewer.properties” file

The “viewer.properties” file contains some advanced configuration settings for the BIRT viewer.

3.1 Base URL setting

The following section is used to configure the base URL for the viewer output. If the web application is behind a Proxy, the URL from the request may contain an unexpected address. The user can change this setting to configure the custom base URL.

```
# configurable variable for JSP base href. Please uncomment the below line.
#base_url=http://127.0.0.1:8080
```

3.2 Export extensions settings

The following section is used to configure the file extensions for each format used in the “export report” feature in the “frameset” mode:

```
# [EXTENSION SETTING]
viewer.extension.html=html
viewer.extension.pdf=pdf
viewer.extension.postscript=ps
viewer.extension.doc=doc
viewer.extension.xls=xls
viewer.extension.ppt=ppt
```

The following section is used to configure the display name for each format used in the “export report” feature in the “frameset” mode.

```
# [OUTPUT FORMAT LABEL NAME]
viewer.label.html=HTML
viewer.label.pdf=PDF
viewer.label.postscript=PostScript
viewer.label.doc=Word
viewer.label.xls=Excel
viewer.label.ppt=PowerPoint
```

3.3 CSV separators settings

The following section is used to configure the separators for the CSV data extraction. The user can add additional separators (one character only, not string), but the JSP files and the “messages.properties” files must be modified as well.

```
# [CSV SEPARATOR]
viewer.sep.0=,
viewer.sep.1=;
viewer.sep.2=:
viewer.sep.3=|
viewer.sep.4=\t
```

The following section is used to configure the loggers for the different BIRT components. The format must be “logger.<component name>”. Each component should already have defined their relevant loggers. The log level can be configured separately for each logger. If no level is specified or the value “DEFAULT”, the setting from web.xml will be used.

```
# [LOGGERS]
# "logger."+class=level
# if no level is specified or the text "DEFAULT",
# then the default level from the web.xml will be used
logger.org.eclipse.datatools.connectivity.oda=DEFAULT
logger.org.eclipse.datatools.enablement.oda=DEFAULT
```

4 URL Parameters

Currently, the BIRT viewer supports the following URL parameters:

4.1 Report output settings

To be able to display a report, one of __report or __document must be specified in the URL.

4.1.1 __report

Specifies the path of the report design file to run or preview. The path can be either relative or absolute. The relative path is relative to the working folder defined in the web.xml file.

4.1.2 __document

Specifies the path of the report document file to be previewed. The path can be relative or absolute. The relative path is related to the working folder that is defined in web.xml.

You can also specify "__report" and "__document" at the same time in the URL. The viewer will first check for the existence of specified report document, if it does not exist, it will generate the document file from report design. Otherwise, the found report document will be used directly.

4.1.3 __locale

Specifies the locale to use for the report output and for the viewer user interface, if applicable. The locale value must be in the regular format as: <language>_<country>. For example "en_US".

4.1.4 __resourceFolder

Please refer to BIRT_RESOURCE_PATH in the web.xml section.

4.1.5 __svg

Specifies whether the charts can be output in the SVG format in the report output. If this parameter is not specified, in frameset and run mode, the viewer will detect whether the client browser supports the SVG format.
Possible values: **true | false**

4.2 Viewer layout

4.2.1 __showtitle

Specifies whether the title section must be shown in the "frameset" mode. The title itself can be modified using the **__title** parameter.

Possible values: **true | false**

4.2.2 __title

Specifies the custom title to display instead of "BIRT Report viewer" in "frameset" mode. This value also affects the browser's title bar.

4.2.3 __toolbar

Specifies whether the toolbar must be shown in "frameset" mode.
Possible values: **true | false**

4.2.4 __navigationbar

Specifies whether the navigation bar must be displayed in "frameset" mode.
Possible values: **true | false**

4.2.5 __rtl

Specifies whether the viewer's user interface must be displayed using the right-to-left direction. The default value is "false" (left to right). Please note that this only affects the viewer UI itself, not the report content. The direction of the content can be defined in the report design itself.
Possible values: **true | false**

4.3 Pages, bookmarks and reportlets

4.3.1 __page

Specifies the page number from the report to display.

4.3.2 __bookmark

Specifies the bookmark to jump to within the report.

4.3.3 __istoc

Specifies whether the given bookmark specified in "__bookmark" is a table of contents (TOC) name or a bookmark name. If this parameter is **true**, the viewer will jump to the relevant TOC location using the given name.
Possible values: **true | false**

4.3.4 __isreportlet

Sepecifies whether the current output is in reportlet mode.
Possible values: **true | false**

To output a reportlet, BIRT currently provides two ways:

1. Using a bookmark: Define a bookmark "myBookmark" on a specific report item, then use following URL syntax to specify the reportlet to output: http://localhost:8080/birt/frameset?

__report=test.rptdesign&__bookmark=myBookmark&__isreportlet=true

2. Using an instance id: the instance id is only available at runtime. It is possible to find it out from the HTML code ("iid" attributes). The following URL syntax uses an instanceId for the reporlet:

   http://localhost:8080/birt/output?
   __report=test.rptdesign&__instanceid=iid&__isreportlet=true

Note: the reportlet feature only works for report documents. To be able to output reportlets for a report design, the "frameset" or "output" modes must be used to automatically generate the report document first.

4.4 Export to format

4.4.1 __asattachment

Specifies whether the client browser must consider the previewed report as an attachment. If set to "true", the user will get a download dialog box to download the report content. Otherwise, the report content will be displayed in the browser window. This parameter is mainly used for the PDF or other non-html formats.
Possible values: **true | false**

4.4.2 __format

Specifies the output format for the report preview. The default value is "html". BIRT has built-in support for PDF, DOC, XLS, PostScript and PPT. The user may add additional formats through the report engine extensions. Please note that multiple extensions can output the same format. In this case, the first matching extension will be used. The user can use "__emitterid" to select a specific extension.

4.4.3 __pageoverflow

Specifies the page overflow behavior for PDF and PostScript output.
Possible values:

0 Output to multiple pages
1 Enlarge page size
2 Fit to page

4.5 Data Extraction Related

4.5.1 __exportdatatype

Specifies whether the data type of the columns must be exported along with the data. This is normally only used by CSV exporting.

Possible values: **true | false**

4.5.2 __exportEncoding

Specifies the encoding name for the data extraction. Example values: ”UTF-8”, ”ISO-8859-1”, ”GBK”, ”GB2312”.

4.5.3 __extractformat

Specifies the format for the data extraction. For example: ”CSV”, ”XML”.

4.5.4 __localeneutral

Specifies whether the extracted data must be exported in a locale-independent format. This is valid for date, time, datetime values and also numbers.
Possible values: **true | false**

4.5.5 __resultSetName

Specifies the name of the result set from which to extract the data.

4.5.6 __selectedColumn

Specifies the column name to be exported. The syntax is: __selectedColumn<columnIndex>=<columnName>. For example: __selectedColumn0=column1&__selectedColumn1=column2.

4.5.7 __selectedColumnNumber

Specifies the total number of columns specified using the __selectedColumn parameters.

4.5.8 __sep

Specifies the separator for the CSV data extraction. The syntax is: __sep=<sepIndex>. The separator indexes are defined in the “viewer.properties” file. Please refer to the “viewer.properties” section for more details.

Default values are:

0 Comma “,”
1 Semicolon “;”
2 Colon “:”
3 Pipe “|”
4 Tab “\t”