CA Workload Automation DE

Report Perspective Help

r11.3 SP3

ca technologies

This Documentation, which includes embedded help systems and electronically distributed materials, (hereinafter referred to as the “Documentation”) is for your informational purposes only and is subject to change or withdrawal by CA at any time. This Documentation is proprietary information of CA and may not be copied, transferred, reproduced, disclosed, modified or duplicated, in whole or in part, without the prior written consent of CA.

If you are a licensed user of the software product(s) addressed in the Documentation, you may print or otherwise make available a reasonable number of copies of the Documentation for internal use by you and your employees in connection with that software, provided that all CA copyright notices and legends are affixed to each reproduced copy.

The right to print or otherwise make available copies of the Documentation is limited to the period during which the applicable license for such software remains in full force and effect. Should the license terminate for any reason, it is your responsibility to certify in writing to CA that all copies and partial copies of the Documentation have been returned to CA or destroyed.

TO THE EXTENT PERMITTED BY APPLICABLE LAW, CA PROVIDES THIS DOCUMENTATION “AS IS” WITHOUT WARRANTY OF ANY KIND, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT. IN NO EVENT WILL CA BE LIABLE TO YOU OR ANY THIRD PARTY FOR ANY LOSS OR DAMAGE, DIRECT OR INDIRECT, FROM THE USE OF THIS DOCUMENTATION, INCLUDING WITHOUT LIMITATION, LOST PROFITS, LOST INVESTMENT, BUSINESS INTERRUPTION, GOODWILL, OR LOST DATA, EVEN IF CA IS EXPRESSLY ADVISED IN ADVANCE OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE.

The use of any software product referenced in the Documentation is governed by the applicable license agreement and such license agreement is not modified in any way by the terms of this notice.

The manufacturer of this Documentation is CA.

Provided with “Restricted Rights.” Use, duplication or disclosure by the United States Government is subject to the restrictions set forth in FAR Sections 12.212, 52.227-14, and 52.227-19(c)(1) - (2) and DFARS Section 252.227-7014(b)(3), as applicable, or their successors.

Copyright © 2014 CA. All rights reserved. All trademarks, trade names, service marks, and logos referenced herein belong to their respective companies.

CA Technologies Product References

This document references the following CA Technologies products:

- CA Workload Automation DE
- CA Workload Automation Desktop Client (CA WA Desktop Client)
- CA Workload Automation DE Web Client
- CA Workload Automation High Availability DE (CA WA High Availability)
- CA Workload Automation Web Services (CA WA Web Services)
- CA Workload Automation Agent for UNIX (CA WA Agent for UNIX)
- CA Workload Automation Agent for Linux (CA WA Agent for Linux)
- CA Workload Automation Agent for Windows (CA WA Agent for Windows)
- CA Workload Automation Agent for i5/OS (CA WA Agent for i5/OS)
- CA Workload Automation Agent for z/OS (CA WA Agent for z/OS)
- CA Workload Automation Agent for Application Services (CA WA Agent for Application Services)
- CA Workload Automation Agent for Web Services (CA WA Agent for Web Services)
- CA Workload Automation Agent for Micro Focus (CA WA Agent for Micro Focus)
- CA Workload Automation Agent for Databases (CA WA Agent for Databases)
- CA Workload Automation Agent for SAP (CA WA Agent for SAP)
- CA Workload Automation Agent for PeopleSoft (CA WA Agent for PeopleSoft)
- CA Workload Automation Agent for Oracle E-Business Suite (CA WA Agent for Oracle E-Business Suite)
- CA Workload Automation Restart Option EE (CA WA Restart Option)
- CA Spectrum® Service Assurance (CA Spectrum SA)

Contact CA Technologies

Contact CA Support

For your convenience, CA Technologies provides one site where you can access the information that you need for your Home Office, Small Business, and Enterprise CA Technologies products. At http://ca.com/support, you can access the following resources:

- Online and telephone contact information for technical assistance and customer services
- Information about user communities and forums
- Product and documentation downloads
- CA Support policies and guidelines
- Other helpful resources appropriate for your product

Providing Feedback About Product Documentation

If you have comments or questions about CA Technologies product documentation, you can send a message to techpubs@ca.com.

To provide feedback about CA Technologies product documentation, complete our short customer survey which is available on the CA Support website at http://ca.com/docs.

Documentation Changes

The following documentation updates have been made since the last release of this documentation:

- Reports (see page 9)—Added important note about the read access to Microsoft SQL Server database.
- Create a New Project (see page 14)—Added note about listing the server connections.

Contents

Chapter 1: Introduction to Reporting

This section contains the following topics:

Reports

CA Workload Automation DE stores information regarding job execution in its database. You create and run reports in CA WA Desktop Client. From CA WA Desktop Client, you can run predefined (canned) reports or design custom history reports using Business Intelligence and Reporting Tools (BIRT).

Important! If you are using a Microsoft SQL Server database with Windows authentication, the domain user of the computer that launches CA WA Desktop Client must have read access to the database. Otherwise, you will not be able to run or preview reports from CA WA Desktop Client.

The server has a built-in report repository. After connecting to the server using CA WA Desktop Client, you can view the report repository in the Reports view of the Services perspective and run the reports in the repository. You can schedule predefined and custom reports using Events to save the output of the server for viewing later. When scheduling predefined and custom reports, you can also specify a list of users to notify by email when the report execution is complete. You can also grant permission to a list of users to view the report output.

The Reports view also displays your custom history reports with a different icon. You can delete your custom history reports from the Reports view, but you cannot delete the predefined reports.

The Report perspective lets you design your own history reports by defining the report projects. You can design all the elements of each report including the design files, templates, libraries, and so on. You can create a custom history report, supply the required parameters, and run it. You can save the output in different formats.

Business Intelligence and Reporting Tools (BIRT)

The Report perspective lets you design and run reports using Business Intelligence and Reporting Tools (BIRT), a reporting tool integrated in CA WA Desktop Client. The reports are run using the BIRT Report engine and viewed using the BIRT Viewer. You can design custom reports using the BIRT Designer.

CA WA Desktop Client includes the BIRT Sample database plug-ins to help you run BIRT sample reports and design custom reports.

Note: For more information about BIRT, see http://www.eclipse.org/birt/phoenix/intro/intro02.php.

Chapter 2: Using Custom Reports

This section contains the following topics:

Custom Reports

The custom reports are the reports created and designed by you. The Report perspective of CA WA Desktop Client lets you design custom reports by defining report projects. Only users with administrator privileges can design, upload, and download custom reports.

The Report perspective has the following components:

Report Workspace

Represents the view where you can create projects and reports and view your server connections. It is displayed on the left pane of the Report perspective.

Report Project

Represents a collection of all of the elements needed by a report at run time, for example, design files, libraries, images, Cascading Style Sheet files, and so on. The project is stored on the server as an archive file. Report projects appear in the Report Workspace.

A report project must have one project directory with at least one report design file and a Resources directory with all required resources such as report libraries, images, Cascading Style Sheet files, and JavaScript files.

Data Explorer View

Lets you add data sources and data sets for your report. It is displayed on the left pane of the Report perspective.

Outline Explorer View

Represents a collection of all the items of a report project.

Main report

Represents the report that is run when the report project is run, if the report project contains more than one report design file.

Result Set

Represents a set of rows that display the result of an SQL query that runs against a database.

Any report contains the following files and projects:

Report Design File (.rptdesign)

Represents an XML file that contains the complete description of a report. It describes the structure and organization of the report, the data sources, and data sets. The XML file is displayed on the right pane of the Report perspective.

The XML file can also be viewed in the following views:

Layout

Lets you edit the report properties and add elements and style.

Preview

Lets you view the final output of your report.

Report Template

Lets you create your own custom reports using the basic design templates.

Library View

Represents a collection of reusable and shareable report elements. A library file (.rptlibrary) can contain embedded images, styles, visual report items, and data sources. The library is an XML file that contains reusable and shareable report elements. If a report design file uses a library, the library has to be packaged in the same report project as the report design file. Libraries must be accessible when the report is run.

More Information:

Database Tables (see page 40)

How to Create a Custom Report

Creating a report project involves the following procedures:

1. Create a New Project (see page 14)
2. Create a New Report (see page 15)
3. Connect the Report to a Data Source (see page 16)
4. Create a Data Set (see page 17)
5. Create a Table in Your Report (see page 19)

Create a New Project

You can create a project to organize all your reports or create multiple projects to organize your reports by categories.

Note: For each project that you create, a directory is created in your file system.

Follow these steps:

1. Open the Report perspective.

   A list of server connections is displayed in the Report Workspace view.

   Note: To list the server connections in the Report Workspace view, click the Show Connections icon.

2. Right-click your active server connection, and select New Report Project from the pop-up menu.

   The New Report Project dialog opens.

3. Complete the following fields and click Finish:

   Project name

   Defines the name of the project that you want to create.

   Server name

   Specifies the name of the server that you are connected to.

   The new project is created.

Create a New Report

You can create a new report using a predefined report template or start with a blank report.

Note: For each template, the BIRT Report Designer provides a cheat sheet, which contains step-by-step instructions to help you create the report.

Follow these steps:

1. Open the Report perspective.

   A list of server connections is displayed in the Report Workspace view.

2. Right-click the report project you want to create reports for, and select New, Report from the pop-up menu.

   The New Report dialog opens.

3. Complete the following fields and click Next:

   Enter or select the parent folder

   Specifies the name of the project that the new report would belong to.

   File name

   Specifies the name of the .rptdesignfile.

   The report templates are displayed.

4. Select a template and click Finish.

   Your new report appears in the Report Workspace.

Connect the Report to a Data Source

After you have created a report, you need to connect to a database or other data source type. You can use the database already configured for your server connection.

Note: You must be logged in as administrator user on this server.

Follow these steps:

1. Open the Report perspective.

   A list of all the projects and reports are displayed under your server connection in the Report Workspace view.
2. Select the report from the Report Workspace view.
3. Open the Data Explorer view.
4. Right-click Data Sources, and select New Data Source from the pop menu.

   The New Data Source dialog opens.
5. Select CA WA Server Data Source from the available list.
6. Enter the name of the data source in the Data Source Name field and click Next.
7. Enter the name of the server that you want to connect to in the Server name field and click Finish.
8. Click Test Connections to test the connection of the server to the data source.

   The new data source is created to connect to the selected database.

Create a Data Set

You must create a data set to identify the data to retrieve from the data source. For example, if your report connects to a JDBC data source or CA WA data source, you can use an SQL SELECT statement to identify the data to retrieve.

Follow these steps:

1. Open the Report perspective.
2. Select the report from the Report Workspace view.
3. Open the Data Explorer view.
4. Right-click Data Sets, and select New Data Set from the pop menu.

   The New Data Set dialog opens.
5. Enter the data set name in the Data Set Name field.
6. Select CA WA Server from the Data Source drop-down list.
7. Select SQL Select Query from the Data Set Type drop-down list and click Next.

   The Query dialog opens.

   Note: For more information about the other data sources and data set types, see the BIRT documentation.
8. Drag column names from the Available Items list to the right pane to write the select and from clauses of the SQL query.

   The following is an example of a query:

   ```
   select ESP_GENERIC_JOB.JOB_NAME,ESP_GENERIC_JOB.JOB_QUALIFIER,
   ESP_GENERIC_JOB.START_DATE_TIME,
   ESP_GENERIC_JOB.END_DATE_TIME,ESP_GENERIC_JOB.STATE,
   ESP_APPLICATION.APPL_NAME
   from ESP_GENERIC_JOB,ESP_APPLICATION
   where ESP_GENERIC_JOB.APPL_ID=ESP_APPLICATION.APPL_ID
   ```

   Note: You can select a schema, filter, and a type and click Apply Filter to filter the items displayed in the Available Items list.
9. Click Finish.

   The new data set is created and the Edit Data Set page opens.
10. Modify the query if required.
11. Click Preview results to view a preview of the query results.
12. Click OK to save the data set.

Create a Joint Data Set

You can create a new data set to join two existing data sets into a joint data set.

Follow these steps:

1. Open the Report perspective.
2. Select the report from the Report Workspace view.
3. Open the Data Explorer view.
4. Right-click Data Source, and select New Data Source from the pop-menu.

   The New Data Source dialog opens.
5. Select a data set from the drop-down list on the left side.

   The columns of the selected data set appear in the panel below the drop-down list.
6. Select another data set for the joint data set from the drop-down list on the right side.

   The columns of the second data set appear in the panel below.
7. Select the columns to join data from both data sets.
8. Select a join type, and click Finish.

   The new joint data set is created.

   Note: You can click Preview Results to see the final output of the columns in the report.

Create a Table in Your Report

You must create a table element to lay out the data in a row and column format, and insert data elements in the table.

Follow these steps:

1. Open the Report perspective.
2. Select the report from the Report Workspace view.
3. Select the > sign next to the Palette.

   The Palette view opens and displays all the elements that you can place in a report.

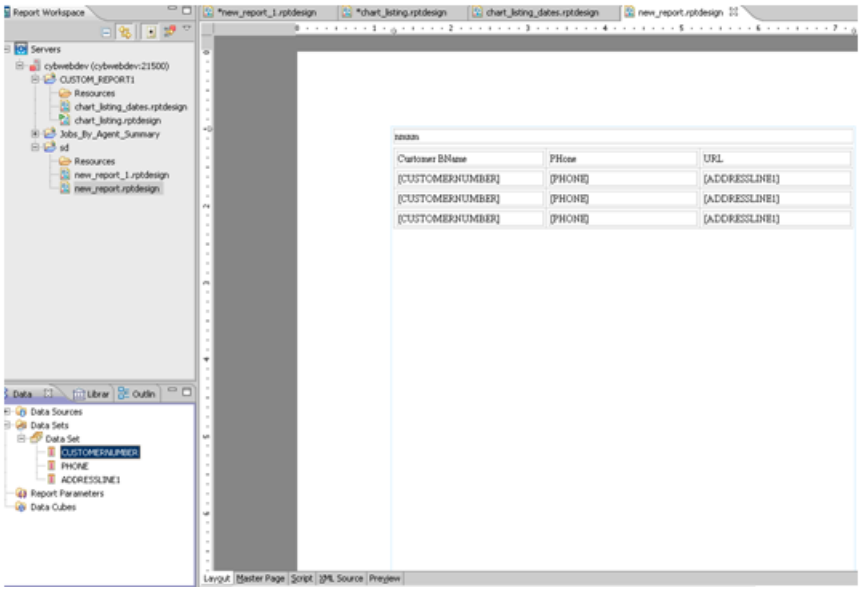
   Note: You can also open the Palette by clicking Window, Show View, Palette from the main menu.
4. Drag a table element from the Palette, and drop it in the report in the layout editor.

   The Insert Table dialog opens and prompts you to specify the number of columns and detail rows to create for the table.
5. Modify the fields as required and click OK.

   A table with the specified number of rows and columns appears in the layout editor.
6. Open the Data Explorer view, and expand the items in the Data Sets

   The columns that you specified in the query appear.

7. Drag an item to and drop it in the required cell as shown in the following illustration:



The detail row displays the main data in the report. In the finished report, the detail row repeats to display all the data rows from the data set.

Note: The first row automatically takes the data from the details rows and serves as the column heading in the finished report.

8. Select the table icon below the existing table to add a row.
9. Right-click a grid next to any left-most cell of the table, and select Insert, Row from the pop-up menu.

   A row is added to the table.
10. Select the Preview tab to view the report.

    The report is displayed in HTML format.

    Note: To view the report in the other formats, select View and then the format you want to view the report in.

Customizing a Report

You can customize a report by using the following procedures:

- Create an Element in Your Report (see page 21)
- Edit the Properties of an Element (see page 21)
- Create and Apply a Style (see page 22)
- Create a Report Title (see page 23)

Create an Element in Your Report

After creating a basic report and connecting it to a data source, you can insert elements in the report page such as chart, image, list and so on, to display the data from the data set that you created previously.

Follow these steps:

1. Open the Report perspective.
2. Select the report from the Report Workspace view.
3. Select the > sign next to the Palette.

   The Palette view opens and displays all the elements that you can place in a report.

   Note: You can also open the Palette by clicking Window, Show View, Palette from the main menu.
4. Drag an element from the Palette, and drop it in the report in the layout editor.

   The element is placed in the blank report. You can edit the properties if required.

Edit the Properties of an Element

You can edit the properties of an element to change properties, for example, font, color, margin, and so on.

Follow these steps:

1. Open the Report perspective.
2. Open the report in the Layout editor.
3. Click Window, Show View, Property Editor from the main menu.

   The Property Editor view opens.
4. Select the cell in the table on the right pane of the page.

   Note: To select the complete table, click the table icon that appears when you hover the mouse pointer at the bottom left of the table.

   The Property Editor displays the properties of the selected element.
5. Make the changes as appropriate.

   The properties of the selected cell or table are edited.

Create and Apply a Style

You can use a custom style for your report or create your own style.

Follow these steps:

1. Open the Report perspective.
2. Open the report in the Layout editor.
3. Right-click an element in the report, and select Style, New Style from the pop-up menu.

   Note: If you just want to create a style and use it at a later time, right-click on a blank area.

   The New Style page opens.
4. Complete the fields as appropriate, and click OK.

   Your new style is applied to the selected element.

   Note: To edit a style, right-click an element, and select Style, Edit Style from the pop-up menu. To apply an existing style, right-click an element, and select Style, Apply Style from the pop-up menu.

Create a Report Title Element

You can use the following elements to create a report title element for your report to provide additional information apart from the report title:

- Label Element—Use for short, static text, such as column headings.
- Data Element—Use for displaying dynamic values from a data set field or a computed field.
- Text Element—Use for multi-line text that contains different formatting or dynamic values.

Follow these steps:

1. Open the Report perspective.
2. Open the report in the Layout editor.
3. Select the > sign next to the Palette.

   The Palette Explorer view opens and displays all the elements that you can place in a report.

   Note: You can also open the Palette by clicking Window, Show View, Palette from the main menu.
4. Drag one of the following elements from the Palette, and drop it above the table.
   - Text
   - Data
   - Label

   The element appears above the table.

   Note: If you have dropped the Text element, the Edit Text item dialog opens. Select Auto and define the HTML tags. The following is an example of the HTML tags:

   ```
   <CENTER><B><span style="font-size: larger">
   Customer List
   </B></span><BR>
   <FONT size="small">For internal use only</FONT><BR><BR>
   Report generated on <VALUE-OF>new Date( )</VALUE-OF>
   </CENTER><BR><BR>
   ```
5. Click OK.

   Note: You can click Preview Results to see the final output of the columns in the report.

Example: Create a Custom Report and Upload It to the Server

You can create a custom report and upload it to the server.

To create a custom report and upload it to the server

1. Create a new project as follows:
   a. Right click the server connection and select New Report Project from the pop-up menu in the Report Workspace view.

      The New Report Project dialog opens.

   b. Enter **SampleCustomReport** in the Project name field and select Finish.

      The SampleCustomReport project is created under the selected server connection.

2. Create a report as follows:
   a. Right click the report project, and select New, Report in the Report Workspace view.

      The New Report dialog opens.

   b. Enter **SampleCustomReport** in the Enter or select the parent folder field and **SampleCustomReport.rptdesign** in the File name field and click Next.

      The Next page opens.

   c. Select Simple listing from the Report template list and click Finish.

      The SampleCustomReport.rptdesign report is created under the selected report project.

3. Connect the report to a data source as follows:
   a. Open the SampleCustomReport.rptdesign file in the report editor.

   b. Open the Data Explorer view.

   c. Right-click Data Sources and select New Data Source from the pop-up menu.

      The New Data Source dialog opens.

   d. Select the Create from a data source type in the following list option button and select CA WA Server Data Source from the list.

   e. Enter **CA WA Server** in the Data Source Name field and click Next.

      The New CA WA Server Data Source profile page opens.

   f. Select the server from the Server name drop-down list and click Test Connections to test the connection.

      Note: You must be logged in as administrator user on this server.

   g. Click Finish.

4. Create the data set as follows:
   a. Open the SampleCustomReport.rptdesign file in the report editor.
   b. Open the Data Explorer view.
   c. Right-click Data Sets and select New Data Set from the pop-up menu.

      The New Data Set dialog opens.
   d. Enter **Samples** in the Data Set Name field.
   e. Select CA WA Server from the Data Source drop-down list.
   f. Select SQL Select Query from the Data Set Type drop-down list and click Next.

      The Query page opens.
   g. Expand the CA WA Server schema and open the ESP_GENERIC_JOB table on the left side of the page. You can drag and drop fields from the table in the SQL query area.

      Note: The database structure appears. You can see only CA Workload Automation DE user/schema or all database users.
   h. Enter the following SQL query statement:

      ```
      select ESP_GENERIC_JOB.JOB_NAME,ESP_GENERIC_JOB.JOB_QUALIFIER,
      ESP_GENERIC_JOB.START_DATE_TIME,
      ESP_GENERIC_JOB.END_DATE_TIME,ESP_GENERIC_JOB.STATE,
      ESP_APPLICATION.APPL_NAME
      from ESP_GENERIC_JOB,ESP_APPLICATION
      where ESP_GENERIC_JOB.APPL_ID=ESP_APPLICATION.APPL_ID
      ```
   i. Click Finish.

      The Edit Data Set page opens.
   j. Click Preview Results to test your query.
   k. Click OK.
5. Customize the report layout as follows:
   a. Select the Master Page tab in the Report Editor.
   b. Enter **SampleCustomReport** in the Report Title field.
   c. Select the Layout tab in the Report Editor.
   d. Enter **SampleCustomReport Details** in the Insert Table Title here field.
6. Define the table data as follows:
   a. Open the Data Explorer view and expand your data set.

      All output fields are listed under the data set.
   b. Drag and drop the fields in the Detail row of the table.
   c. Enter the corresponding column headers in the table header row.

7. Delete the Criteria Grid from the layout to delete unused template report items.
8. Select the Preview tab to see the report.

   Note: Only the first 500 data rows are displayed in the preview by default.
9. Right-click the SampleCustomReport.rptdesign file, and select Set as Main Report to run from the pop-up menu.

   The report file is marked as the main report design file.
10. Right-click the SampleCustomReport report project from the Report Workspace view, and select Upload Report Project from the pop-up menu.

    The SampleCustomReport report is created and uploaded to the server.

    Note: To verify that the report was uploaded, open the Reports view in the Services perspective and locate the report. If you do not see the report, right-click a report and select Refresh.

Sample SQL Queries

If you want to query fields other than those in the report templates, you can use the following SQL queries to create reports. These queries are only intended as suggestions for the types of reports you could create. You can query any tables and fields to suit your needs. You may want to query jobs by the following:

- Date and time ranges you specify
- Execution time
- Job State
- Job Name

Note: To use the following queries, substitute the &variables with actual values. The following queries include sample dates in the format YYYY-MM-DD hh:mi:ss. Substitute your own dates. If you want to specify the date in a different format, update the following date format argument:

```
TO_DATE('04-15-2005 1:00:00', 'MM-DD-YYYY hh:mi:ss')
```

Queries by Execution Time

You can query jobs by execution time, as in the following examples:

Example: Jobs Up to the Current Time

The following example queries all jobs that started on a date and time you specify until the current time:

```
SELECT G.JOB_NAME, A.APPL_NAME, G.START_DATE_TIME, G.STATE,
G.COMPLETION_CODE,G.AGENT_NAME
FROM ESP_APPLICATION A, ESP_GENERIC_JOB G
WHERE A.APPL_ID = G.APPL_ID
AND G.START_DATE_TIME BETWEEN
TO_DATE('2005-04-15 5:00:00', 'YYYY-MM-DD hh:mi:ss') and
SYSDATE;
```

Example: Overdue Jobs by Specified Date Range

The following example queries all jobs that started or ended late within a period you specify:

```
SELECT * FROM ESP_GENERIC_JOB
WHERE (OVERDUE_START > 0 OR OVERDUE_END > 0)
AND START_DATE_TIME BETWEEN
TO_DATE('2005-04-15 1:00:00', 'YYYY-MM-DD hh:mi:ss') and
TO_DATE('2005-04-15 5:00:00', 'YYYY-MM-DD hh:mi:ss');
```

Example: Jobs by Specified Date Range and Execution Time

The following example queries all jobs that ran last week and took more than one hour to execute:

```
SELECT * FROM ESP_GENERIC_JOB
WHERE EXTRACT(month FROM START_DATE_TIME) = EXTRACT(month FROM SYSDATE) - 1
AND END_DATE_TIME > START_DATE_TIME + 1/24
ORDER BY (END_DATE_TIME - START_DATE_TIME);
```

Note: The queried jobs are sorted in ascending order by the time they took to execute.

Queries by Job Name

You can query jobs by job name, as in the following examples:

Example: Jobs by Job Name and Specified Date Range

The following example queries all jobs that started within a date range you specify and have job names that start with characters you specify. You can query an entire job name (for example, Payroll), or you can query a few characters (for example, 'Pay' or 'P') to display all job names that start with the characters that are queried. Substitute &character_string with the characters that you want to query.

```
SELECT * FROM ESP_GENERIC_JOB
WHERE SUBSTR(JOB_NAME,1,3) = '&character_string'
AND START_DATE_TIME BETWEEN
TO_DATE('2005-04-15 1:00:00', 'YYYY-MM-DD hh:mi:ss') and
TO_DATE('2005-04-15 5:00:00', 'YYYY-MM-DD hh:mi:ss');
```

Example: Jobs by Job Name or Application

The following example queries all job names that start with specific characters (for example, 'Payroll', 'Pay', or 'P') or jobs that belong to a specific Application. You must substitute &appl_id with the Application ID number that you want to query, and &character_string with the characters you want to query. A job is queried if either of these conditions applies.

```
SELECT * FROM ESP_GENERIC_JOB
WHERE APPL_ID = '&appl_id'
OR SUBSTR(JOB_NAME,1,3) = '&character_string';
```

Queries by Job State

You can query jobs by job state, as in the following example:

Example: Complete Jobs by Application and Specified Date Range

The following examples queries all complete jobs, in all Applications, that started within a date range you specify:

```
SELECT APPL_NAME, COUNT(*) FROM ESP_APPLICATION A,
ESP_GENERIC_JOB G
WHERE G.START_DATE_TIME BETWEEN
TO_DATE('2005-04-15 1:00:00', 'YYYY-MM-DD hh:mi:ss') and
TO_DATE('2005-04-15 5:00:00', 'YYYY-MM-DD hh:mi:ss')
AND G.APPL_ID = A.APPL_ID
AND G.STATE = 'COMPLETE'
GROUP BY A.APPL_NAME;
```

Note: The queried data is sorted alphabetically by Application name.

Queries by Specified Time Ranges

You can query jobs by a date range you specify, as in the following examples:

Example: Jobs that Started Within a Specified Date Range

The following example queries all the jobs that started within a specified date range:

```
SELECT * FROM ESP_GENERIC_JOB
WHERE START_DATE_TIME BETWEEN
TO_DATE('2005-04-15 1:00:00', 'YYYY-MM-DD hh:mi:ss') and
TO_DATE('2005-04-15 5:00:00', 'YYYY-MM-DD hh:mi:ss');
```

Example: Jobs that Ran in a Month

The following example queries all jobs that ran in a month you specify. For the &month value, you must enter a number that corresponds to the month you want to query, for example, 8 = August, 9 = September, and so on.

```
SELECT * FROM ESP_GENERIC_JOB
WHERE EXTRACT(MONTH FROM START_DATE_TIME) = '&month';
```

Chapter 3: Managing Reports and Report Projects

This section contains the following topics:

Set a Report Design File as the Main Report to Run

You can set a report design file as the main report to run in a report project.

Note: If the report project has only one report design file, the report design file will be automatically marked as the main report when you upload the report to the server.

Follow these steps:

1. Open the Report perspective.

   The report projects are displayed under your server connection in the Report Workspace view.

2. Expand a report project.

   The report design files for the report project are displayed.

3. Right-click a report design file from the report project, and select Set as Main Report to run from the pop-up menu.

   The report design file is set as the main report. The report design file is marked with a green arrow.

View a Report

You can view a report and save it on your local computer in different formats.

Follow these steps:

1. Open the Report perspective.

   The report projects are displayed under your server connection in the Report Workspace view.

2. Expand a report project.

   The report design files for the report project are displayed.

3. Right-click a report design file, and select Open With, Report Editor from the pop-up menu.

   The report design file opens in the Report Editor.

4. Select Run, View Report from the main menu, and select one of the following:

   - In Web Viewer
   - As DOC
   - As HTML
   - As PDF
   - As Postscript
   - As PPT
   - As XLS

   The report opens in the specified format. You can save it if required.

Note: We recommended that you always use In Web Viewer because you can run the report once and then export it to any of the other formats.

Copy a Report Design File

You can copy a report design file and save it with a different name to create a new report.

Follow these steps:

1. Open the Report perspective.

   The report projects are displayed under your server connection in the Report Workspace view.

2. Expand a report project.

   The report design files for the report project are displayed.

3. Right-click a report design file from the report project, and select Copy from the pop-up menu.

4. Right-click the report project where you want to copy the report to, and select Paste from the pop-up menu.

   The Name Conflict dialog opens if you have selected the same report project that the report design file belongs to.

5. Enter a new name in the text field, and click OK.

   A copy of the selected report design file with the new name is created in the Report Workspace view.

Copy a Report Project

You can copy an existing report project and save it with a different name to create a new report project.

Follow these steps:

1. Open the Report perspective.

   The report projects are displayed under your server connection in the Report Workspace view.

2. Right-click the report project, and select Copy from the pop-up menu.

3. Right-click in the Report Workspace view, and select Paste from the pop-up menu.

   The Copy Project dialog opens.

4. Enter a new name in the Project name field, and click OK.

   A copy of the selected report project with the new name is created in the Report Workspace view.

Upload a Report Project

You can upload an existing report project to the server.

Before uploading a report project, verify the following:

- You have administrator rights.
- The project name does not match a predefined report name.
- The project contains at least one report design file.
- If the report contains more than one report design file, one report is selected as the main report.
- The report project has only one CA WA Data Source connection. There can be multiple references to the same connection within the project's design files, but there cannot be two distinct connections.

Follow these steps:

1. Open the Report perspective.

   The report projects are displayed under your server connection in the Report Workspace view.

2. Right-click the report project, and select Upload Report Project from the pop-up menu.

   Note: To upload a report project to another server, select Upload Report Project on and select the server connection.

   The report project is uploaded to the server.

Note: For more information about how to design a report, see the BIRT tutorials or references on http://www.eclipse.org/birt/intro.

Download a Report Project

You can download an existing report project from the server.

Follow these steps:

1. Open the Report perspective.

   A list of server connections is displayed in the Report Workspace view.

2. Right-click your active server connection, and select Download from the pop-up menu.

   The Download Reports dialog displays all the report projects on the server.

3. Select a report project and click OK.

   The selected report project is downloaded from the server to your workspace.

Export a Report Project

You can export a report project to an archive file or to the file system.

Follow these steps:

1. Open the Report perspective.

   The report projects are displayed under your server connection in the Report Workspace view.

2. Right-click the report project, and select Export from the pop-up menu.

   The Select page of the Export dialog opens.

3. Expand the General folder.

4. Do *one* of the following:

   - To export a report project to an archive file, do the following:

   a. Select Archive File from the list and click Next.

      The Archive file page opens.

   b. Modify the details as required and click Finish.

   - To export a report project to a file system, do the following:

   a. Select File system from the list and click Next.

      The File system page opens.

   b. Modify the details as required and click Finish.

   The report project is exported to your local computer.

Import a Report Project

You can create a new report project by importing the resources from an archive file or directory.

Follow these steps:

1. Open the Report perspective.

   The report projects are displayed under your server connection in the Report Workspace view.

2. Right-click the report project, and select Import from the pop-up menu.

   The Select page of the Import dialog opens.

3. Expand the General folder.

4. Do *one* of the following:

   - To import resources from an archive file, do the following:

   a. Select Archive File from the list and click Next.

      The Archive file page opens.

   b. Modify the details as required and click Finish.

   - To import resources from a local file system, do the following:

   a. Select File system from the list and click Next.

      The File system page opens.

   b. Modify the details as required and click Finish.

   - To create new projects from an archive file or directory, do the following:

   a. Select Existing Projects into Workspace from the list and click Next.

      The Import Projects page opens.

   b. Modify the details as required and click Finish.

   The list of projects appears.

5. Select the project and click Finish.

   The report project is imported to your report project. A Local Projects tree entry is created in the Report Workspace view.

6. Right-click the local project, select Attach Report Project To from the pop-up menu and select any existing connection from the drop-down list.

   The project is moved from the Local Projects tree to the selected connection.

Delete a Report from the Server

You can delete an existing report from the server if you no longer need it. The report will still be available on your local computer.

Note: You cannot delete a predefined report.

Follow these steps:

1. Open the Report perspective.

   The report projects are displayed under your server connection in the Report Workspace view.

2. Click Delete from the main menu.

   Note: If you are connected to multiple servers, click the arrow next to Delete to select the required server.

   The Delete Reports dialog displays all the reports on the server.

3. Select the report you want to delete and click OK.

   A confirmation dialog appears.

4. Click Yes.

   The report is deleted permanently from the server.

   Note: The report is not deleted from the local workspace.

Delete a Report Project from the Report Workspace View

You can delete a report project from the Report Workspace view if you no longer need it. The report project will still be available on the server.

Follow these steps:

1. Open the Report perspective.

   The report projects are displayed under your server connection in the Report Workspace view.

2. Right-click the report project you want to delete, and select Delete from the pop-up menu.

   A confirmation dialog appears.

3. Click OK.

   The report project is deleted from the Report Workspace view.

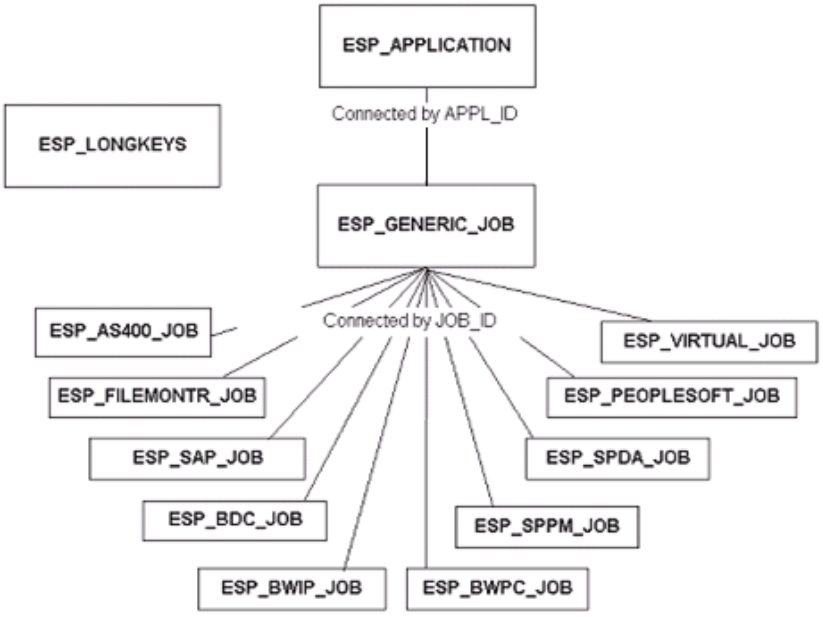
Chapter 4: Database Schema

This section contains the following topics:

Database Tables

If you want to create customized reports, you must understand the relational database tables and the fields you can query.

The following diagram illustrates the connections between the various relational database tables.



Notes:

- The schema of the history tables might change in future releases, so you might have to change any custom reports or SQL-based tools that query the history tables.
- The APPL_ID column is the primary key for the ESP_APPLICATION table, and the JOB_ID column is the primary key of the ESP_GENERIC_JOB table. These columns link the database tables. For example, you can create a report that queries the Completion Code field in the ESP_GENERIC_JOB table and the State field in the ESP_APPLICATION table. In addition to the Completion Code and State fields, you must also query the APPL_ID field because it establishes a relationship between the tables.

ESP_APPLICATION Database Table

The column names in the following table list the data stored for each Application. When you run a particular Application, the information is automatically stored in the ESP_APPLICATION table.

Note: The APPL_ID field is the table's primary key.

Column Name	Description	Character Format	Maximum # of Characters
APPL_ID	The primary key of this table, generated by the server	Numeric	38
APPL_GEN_NO	The Application generation number	Numeric	10
APPL_NAME	The Application name	Alphanumeric	130
END_DATE_TIME	The time the Application ended	Date and time MM/DD/YYYY hh:mi:ss	—
JOB_NAME	The job name of the Application. The server sets the job name automatically by adding ~~ to the APPL_NAME value. For example, in an Application named VERIFY, the job name for this Application is VERIFY~~.	Alphanumeric	130
SCHEDULED_DATE_TIME	The time the Application was scheduled to execute	Date and time MM/DD/YYYY hh:mi:ss	—
START_DATE_TIME	The time the Application was ready to start	Date and time MM/DD/YYYY hh:mi:ss	—
STATE	The state of the Application **Examples:** READY, PROCESSING, COMPLETE	Alphanumeric	64

Column Name	Description	Character Format	Maximum # of Characters
TAG	The tag assigned to an Application as part of the Application details	Alphanumeric	128
COMMENTS	The Application's comments	Alphanumeric (VARCHAR2)	2000

ESP_GENERIC_JOB Database Table

The column names in the following table list the information recorded for each job. All columns in this table are attributes common to all job types.

Note: JOB_ID is the primary key of this table, generated by the server. The column APPL_ID is the foreign key to the ESP_APPLICATION table.

Column Name	Description	Character Format	Maximum # of Characters
JOB_ID	The primary key of this table. It is a foreign link to most of the tables.	Numeric	38
AGENT_NAME	The name of the agent that ran the job	Alphanumeric	50
APPL_ID	The foreign key to the ESP_APPLICATION table	Numeric	19
ARGUMENT	The arguments to pass to the command or script	Alphanumeric	4000
COMMAND	The command to run on the agent	Alphanumeric	1024
COMPLETION_CODE	The completion code returned by the agent	Alphanumeric	10
END_DATE_TIME	The time the job finished executing	Date and time MM/DD/YYYY hh:mi:ss	—
ENVARS	The environment variables to set prior to running the job	Alphanumeric	4000
JOB_NAME	The name of the job	Alphanumeric	130

Column Name	Description	Character Format	Maximum # of Characters
JOB_NO	The job number	Numeric	10
JOB_QUALIFIER	The qualifier of the job	Alphanumeric	64
OVERDUE_END	The elapsed time between when the job was due to complete and the actual time the job completed	Numeric	19
OVERDUE_START	The elapsed time between when the job was due to execute and the actual time the job started	Numeric	19
RESOURCES	A list of resources defined for the job. The format is (Resource Name, Resource Quantity). **Example:** (RES1, 1), (RES2, 3), (RES10, 30)	Alphanumeric	1024
SCRIPT	The script to run on the agent	Alphanumeric	1024
START_DATE_TIME	The time the job started executing	Date and time MM/DD/YYYY hh:mi:ss	—
STATE	The state of the job **Examples:** READY, EXEC	Alphanumeric	64
STATUS	The status of the job sent by the agent or server	Alphanumeric	128
SUBAPPL	The name of the subApplication this job belongs to	Alphanumeric	130
SUBMISSION_INSTANCE	The number of times the job was reset	Numeric	10
TAG	The tag assigned to a job as part of the job details	Alphanumeric	128
USERID	The identity of the user running the job as on the agent system	Alphanumeric	128

Column Name	Description	Character Format	Maximum # of Characters
USER_STATUS	The user status of a job. You can update the user status of a job in Monitor or by sending ESPmgr commands. You can use the user status to notify other users of the reason for an action. For example, if you place a job on hold, you can enter the reason for the hold in the user status field.	Alphanumeric	128
WOB_TYPE	The job type **Examples:** UNIX, NT	Alphanumeric	32

ESP_AS400_JOB Database Table

The column names in the following table list the information recorded for each i5/OS job:

Column Name	Description	Character Format	Maximum # of Characters
JOB_ID	The foreign key to the ESP_GENERIC_JOB table	Numeric	38
A4FILE	The i5/OS file name	Alphanumeric	21
A4JOBID	The i5/OS job identifier associated with the job	Alphanumeric	28
A4JOBNAME	The i5/OS job name associated with the job	Alphanumeric	10
A4OTHERS	Additional parameters to pass to the i5/OS job	Alphanumeric	4000
CCEXIT	The exit program to run when the i5/OS job completes	Alphanumeric	10
CLP_NAME	The i5/OS member name of the control language program	Alphanumeric	10

Column Name	Description	Character Format	Maximum # of Characters
CURRENT_LIBRARY	The name of the current i5/OS library	Alphanumeric	10
JOB_DESCRIPTION	The job description	Alphanumeric	21
JOB_QUEUE	The name of the job queue	Alphanumeric	21
LIBRARY	The i5/OS library name	Alphanumeric	10
LIBRARY_LIST	The list of i5/OS libraries defined	Alphanumeric	275
PARAMS	The parameters to pass to the i5/OS job **Note:** For i5/OS jobs, the argument (in the table ESP_GENERIC_JOB) is null. This column contains the arguments to pass to i5/OS jobs.	Alphanumeric	4000

ESP_FILEMONTR_JOB Database Table

The column names in the following table list the information recorded for each File Monitor job:

Column Name	Description	Character Format	Maximum # of Characters
JOB_ID	The foreign key to the ESP_GENERIC_JOB table	Numeric	38
FILENAME	The name of the file to monitor	Alphanumeric	1024
TRIGGER_CONDITION	The condition to monitor the file	Alphanumeric	10

ESP_SAP_JOB Database Table

The column names in the following table list the information recorded for each SAP-R3 job.

Column Name	Description	Character Format	Maximum # of Characters
JOB_ID	The foreign key to the corresponding column in the ESP_GENERIC_JOB table	Numeric	38
CLIENT	The client name	Numeric	10
LANGUAGE	The language used	Alphanumeric	2
LSTATUS	The extended job status	Alphanumeric	1024
RFCDEST	The destination	Alphanumeric	20
SPJOBNAME	The SAP job name	Alphanumeric	32
SPUSER	The SAP user name	Alphanumeric	32
START_MODE	The job's start-up mode	Alphanumeric	1
TARGET_SYSTEM	The target system's name	Alphanumeric	32

ESP_BDC_JOB Database Table

The column names in the following table list the information recorded for each SAP-Batch Input Session job:

Column Name	Description	Character Format	Maximum # of Characters
JOB_ID	The foreign key to the corresponding column in the ESP_GENERIC_JOB table	Numeric	38
BDCNAME	The name of the Batch Input Session	Alphanumeric	32

Column Name	Description	Character Format	Maximum # of Characters
CLIENT	The three-digit numeric number that identifies the SAP system **Example:** 850	Numeric	10
DESTINATION	The short description (identifier) of the SAP system	Alphanumeric	20
ERROR_RATE	The acceptable maximum error rate percentage	Numeric	3
EXTENDED_LOG	Indicates whether there is detailed logging of the batch input session's execution (advanced logging)	Alphanumeric	1
LANGUAGE	The language used to log on to the SAP system **Example:** EN = English	Alphanumeric	2
LSTATUS	The extended job status	Alphanumeric	1024
PROCESSED_RATE	The minimum required percentage of processed transactions	Numeric	3
QUEUEID	The queue ID of the Batch Input Session	Alphanumeric	32
RFCDEST	The destination value for the Remote Function Call (RFC) connection	Alphanumeric	20
SPJOBNAME	The name of the SAP job	Alphanumeric	32
SPUSER	The name of the user on an SAP system under whose authorization the job runs.	Alphanumeric	32
TARGET_SYSTEM	The name of the SAP system where the job runs.	Alphanumeric	32

ESP_BWIP_JOB Database Table

The column names in the following table list the information recorded for each SAP-BW InfoPackage job:

Column Name	Description	Character Format	Maximum # of Characters
JOB_ID	The foreign key to the corresponding column in the ESP_GENERIC_JOB table	Numeric	38
CLIENT	The three-digit numeric client number that identifies the client in the SAP system **Example:** 850	Numeric	10
INFOPACK	The name of a Business Warehouse Info Package	Alphanumeric	40
JOBNAME	The name of the Business Warehouse Info Package job	Alphanumeric	32
LANGUAGE	The language used to log on to the SAP system **Example:** EN = English	Alphanumeric	2
LOCATION	Current processing step	Alphanumeric	32
QUALINFO	Descriptive informational messages for manually set jobs, pertaining to QUALSTATUS	Alphanumeric	80
QUALSTATUS	The manually set status of this Info Package run. The possible values are: G—green (Completed) Y—yellow (Running) R—red (Failed)	Alphanumeric	32
REQUESTID	The Request ID of the Info Package	Alphanumeric	40

Column Name	Description	Character Format	Maximum # of Characters
RFCDEST	The destination value for the RFC connection	Alphanumeric	20
SPUSER	The name of the user on an SAP system under whose authorization the job runs	Alphanumeric	32
TARGET_SYSTEM	The name of the SAP system where the job runs	Alphanumeric	32
TECHINFO	Informational messages pertaining to the TECHSTATUS	Alphanumeric	80
TECHSTATUS	Technical status of this Info Package run. The possible values are: G—green (Completed) Y—yellow (Running) R—red (Failed)	Alphanumeric	32

ESP_BWPC_JOB Database Table

The column names in the following table list the information recorded for each SAP-BW Process Chain job:

Column Name	Description	Character Format	Maximum # of Characters
JOB_ID	The foreign key to the corresponding column in the ESP_GENERIC_JOB table	Numeric	38
CHAINID	The name of a Business Warehouse Process Chain	Alphanumeric	40

Column Name	Description	Character Format	Maximum # of Characters
CLIENT	The three-digit numeric client number that identifies the client in the SAP system **Example:** 850	Numeric	10
LANGUAGE	The language used to log on to the SAP system **Example:** EN = English	Alphanumeric	2
LOGID	The log ID	Alphanumeric	32
LSTATUS	The extended job status	Alphanumeric	1024
RFCDEST	The destination value for the RFC connection	Alphanumeric	20
SPUSER	The name of the user on an SAP system under whose authorization the job runs **Example:** user14	Alphanumeric	32
TARGET_SYSTEM	The name of the SAP system where the job runs	Alphanumeric	32

ESP_SPPM_JOB Database Table

The column names in the following table list the information recorded for each SAP-Process Monitor job:

Column Name	Description	Character Format	Maximum # of Characters
JOB_ID	The foreign key to the corresponding column in the ESP_GENERIC_JOB table	Numeric	38
ABAP_NAME	Valid ABAP name for the process	Alphanumeric	32

Column Name	Description	Character Format	Maximum # of Characters
CLIENT	The three-digit numeric client number that identifies the client in the SAP system **Example:** 850	Numeric	10
LANGUAGE	The language used to log on to the SAP system **Example:** EN = English	Alphanumeric	2
LSTATUS	The extended job status	Alphanumeric	1024
PROCESS_CLIENT	The client number that identifies the process	Alphanumeric	32
PROCESS_STATUS	The SAP process status to monitor. The possible values are: W—Waiting R—Running S—Stopped	Alphanumeric	4
PROCESS_TYPE	The SAP business process type to monitor **Example:** BGD	Alphanumeric	4
PROCESS_USER	This value is always CYBERMATION	Alphanumeric	32
RFCDEST	The destination value for the RFC connection	Alphanumeric	20
SPUSER	The name of the user on an SAP system under whose authorization the job runs **Example:** user14	Alphanumeric	32
TARGET_SYSTEM	The name of the SAP system where the job runs	Alphanumeric	32

ESP_SPDA_JOB Database Table

The column names in the following table list the information recorded for each SAP-Data Archiving job:

Column Name	Description	Character Format	Maximum # of Characters
JOB_ID	The foreign key to the corresponding column in the ESP_GENERIC_JOB table	Numeric	38
CLIENT	The three-digit numeric client number that identifies the client in the SAP system **Example:** 850	Numeric	10
JOBNAME	The name of the SAP job	Alphanumeric	32
LANGUAGE	The language used to log on SAP system **Example:** EN = English	Alphanumeric	2
LSTATUS	The extended job status	Alphanumeric	1024
OBJECT_NAME	The name of the archiving object	Alphanumeric	32
OBJECT_VARIANT	The name of the archiving object variant	Alphanumeric	32
RFCDEST	The destination value for the RFC connection	Alphanumeric	20
SPUSER	The name of the user on an SAP system under whose authorization the job runs	Alphanumeric	32
TARGET_SYSTEM	The name of the SAP system where the job runs	Alphanumeric	32

ESP_VIRTUAL_JOB Database Table

The column names in the following table list the information recorded for each virtual job:

Column Name	Description	Character Format	Maximum # of Characters
JOB_ID	The foreign key to the corresponding column in the ESP_GENERIC_JOB table	Numeric	38
HOST_T	The address of the target host	Alphanumeric	100

ESP_PEOPLESOFT_JOB Database Table

The column names in the following table list the information recorded for each PeopleSoft job:

Column Name	Description	Character Format	Maximum # of Characters
JOB_ID	The foreign key to the corresponding column in the ESP_GENERIC_JOB table.	Numeric	38
DISABLE_RESTART	Indicates whether or not to disable the restart feature for previously failed jobs from the point where the job failed	Alphanumeric	3
DISTRLIST_ROLES	The distribution list of roles for the output PeopleSoft report	Alphanumeric	256
DISTRLIST_USERS	The distribution list of operator IDs for an output PeopleSoft report	Alphanumeric	256

Column Name	Description	Character Format	Maximum # of Characters
EMAIL_ADDR	The email addresses for recipients of the PeopleSoft output report	Alphanumeric	256
EMAIL_LOG	Indicates whether a log file is emailed	Alphanumeric	3
EMAIL_SUBJECT	The subject field for an email	Alphanumeric	256
EMAIL_TEXT	The body text of the email message sent to a recipient on the email list	Alphanumeric	1024
EMAIL_WEB_REPORT	Indicates whether a Web report is emailed	Alphanumeric	3
OUT_DEST_FORMAT	The output destination format	Alphanumeric	8
OUT_DEST_PATH	The destination path for the output	Alphanumeric	127
OUT_DEST_TYPE	The destination type for the output (File, Printer, Email, Web)		8
PROCESS_NAME	The name of the PeopleSoft report to run	Alphanumeric	12
PROCESS_TYPE	The type of the PeopleSoft report to run	Alphanumeric	30
PS_OPERID	The PeopleSoft operator ID under whose authority the reports are run	Alphanumeric	30
PS_OPERID_TYPE	The PeopleSoft operator ID type. The possible values are USER or ROLE.	Alphanumeric	5
PSJOBNAME	The name of the PeopleSoft job	Alphanumeric	9

Column Name	Description	Character Format	Maximum # of Characters
PSRF_FOLDER_NAME	The Distribution Detail Folder Name in the PeopleSoft user interface	Alphanumeric	18
RUN_CONTROL_ID	The set of PeopleSoft run parameters for a given PeopleSoft process	Alphanumeric	30
SERVER_NAME	The name of the target server executing the PeopleSoft job	Alphanumeric	8
SKIP_PARM_UPDATES	Indicates whether or not the job arguments in the PS_PRCSDEFN table are ignored	Alphanumeric	3
TIMEZONE	The time zone for the report run	Alphanumeric	9

ESP_LONGKEYS Database Table

This table stores the next available key ID for the corresponding table listed in the NAME field.

Column Name	Description	Character Format	Maximum # of Characters
MAXKEY	The next available key ID.	Numeric	19
NAME	The primary key of this table. The table name.	Alphanumeric	100

Stage Tables

Over time, the history information in your database tables can become huge. You can move some of the history data to stage tables to save disk space and make querying the tables faster, improving server performance. For example, if you run twenty thousand jobs per day, the ESP_GENERIC_JOB table will have almost seven million rows in a year. You may want to keep only one month's history data in the database tables and move data older than a month to the stage tables. You can save the stage tables to a file or a tape as a backup or delete them as required. Each database table has a corresponding stage table that you can move information to:

- H_APPLICATION
- H_GENERIC_JOB
- H_AS400_JOB
- H_FILEMONTR_JOB
- H_SAP_JOB
- H_BDC_JOB
- H_BWIP_JOB
- H_BWPC_JOB
- H_SPDA_JOB
- H_VIRTUAL_JOB
- H_PEOPLESOFT_JOB
- H_LONGKEYS

Notes:

- External jobs depend on data in the history tables. Before moving data from history tables, verify that the external jobs do not depend on a job in the home Application that was scheduled to run outside the time window of retained history. Otherwise, the server will not post the external job complete in the distant Application. For more information about external jobs, see the *Define Perspective Help*.
- For more information about moving history data to stage tables, see the *CLI Perspective Help*.

View Tables

If you want to view data from both the database and stage tables, you can create a report using view tables. For example, you can use the following query to create the V_GENERIC_JOB view table:

```
CREATE VIEW V_GENERIC_JOB AS
   SELECT * FROM ESP_GENERIC_JOB
   UNION ALL
   SELECT * FROM H_GENERIC_JOB;
```

The V_GENERIC_JOB view table combines the data from the ESP_GENERIC_JOB database table and the H_GENERIC_JOB stage table.

Each database table and the corresponding stage table let you create a corresponding view table that you can use to display information from both tables:

- V_APPLICATION
- V_GENERIC_JOB
- V_AS400_JOB
- V_FILEMONTR_JOB
- V_SAP_JOB
- V_BDC_JOB
- V_BWIP_JOB
- V_BWPC_JOB
- V_SPDA_JOB
- V_VIRTUAL_JOB
- V_PEOPLESOFT_JOB
- V_LONGKEYS

Appendix A: Using Styles for Reporting

This section contains the following topics:

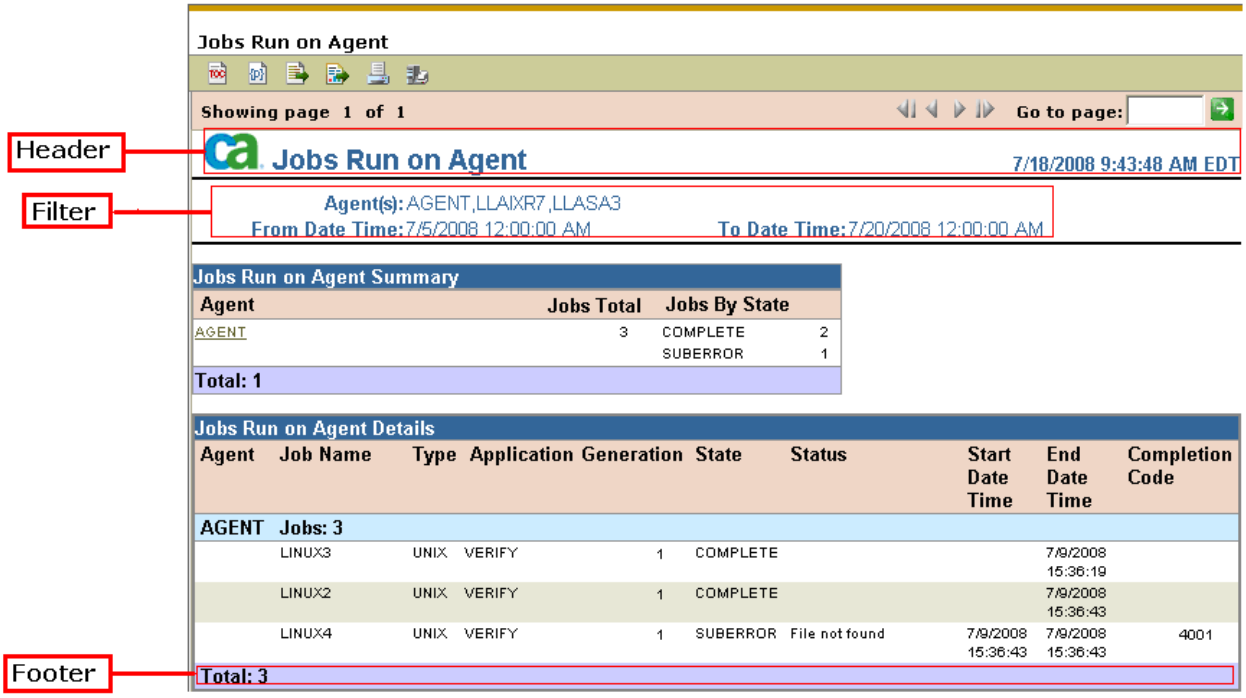
Report Layout and Style

This section covers information on basic formatting of a history report, such as font size, font style, spacing, and color. These styles are defined to achieve a common look and feel for all of the history reports.

Each history report contains the following sections:

- Report header
- Filter section
- Instruction text section (optional)
- Category header (optional)
- Chart section
- Table section
- Report footer

Here is how a history report should look:



The general history report format is as follows:

- Font—Arial
- Top, right, left, and bottom margins—0.5 inches

Report Header

The report header appears at the top of each page of all the history reports. It is a part of the CA WA report master page presented in the history report templates and the CA WA Report library.

The header includes the following:

- Product/company logo
- Report title
- Date and time when the report was generated
- Horizontal rule (black line) at the bottom of the header

The general format of the header is as follows:

- Header width—Equal to the width of the report section
- Header height—0.5 inches

The header is justified so that the right and left sides align with the history report content; the history report title appears on the left side and the date and time on the right side.

The history report title format is as follows:

- Font—Arial, 14 pt. bold
- Text color—51.102.153, #336699
- Alignment—Left

The date and time format is as follows:

- Font—Arial, 10 pt. bold
- Text color—51.102.153, #336699
- Align—Right
- Format—MM/DD/YYYY hh:mm:ss a zz

  Example: 11/26/2008 10:13:42 PM EST

Filter Section

The filter section displays the additional filter parameters that you define at history report run time. The filter section appears below the history report header and above the first section of the history report.

The filter section format is as follows:

- Font—Arial, 10 pt. (smaller) bold
- Text color—51.102.153
- Alignment—Left

There is a black horizontal line under the filter section.

Instruction Text Section

An instruction text section can be placed at the top of the history report, below the header, to provide instructions or an informational summary of the history report.

Category Header

A category header can be used to further organize data in a history report.

- The category header can appear directly below the report header or below an instruction text section.
- A black horizontal line appears below the category header.

Chart Section

The chart section contains history report summary data. It appears above the history report tables.

The chart header format is as follows:

- Background color—#336699 (51.102.153)
- Font color—White
- Alignment—Left

The chart body format is as follows:

- Border—Gray
- Body—White
- Background—White

The axis labels format is as follows:

- Both X and Y axes must have labels.
- Font—Arial, 10 pt. regular
- The X axis label is centered horizontally.
- The Y axis label is centered vertically and is read from bottom to top.

  For example, the word 'Alignment' starts with the letter 'A' at the bottom and ends with the letter 't' at the top.

The data title (the labels for grid lines and chart data) format is as follows:

- Font—Arial, 9 pt.
- Alignment of Y axis—Right
- Alignment of X axis—Center
- Individual chart items can use data titles when necessary.

The legend must be placed to the right of or below the chart. Legend key boxes are square and have a black outline.

Notes:

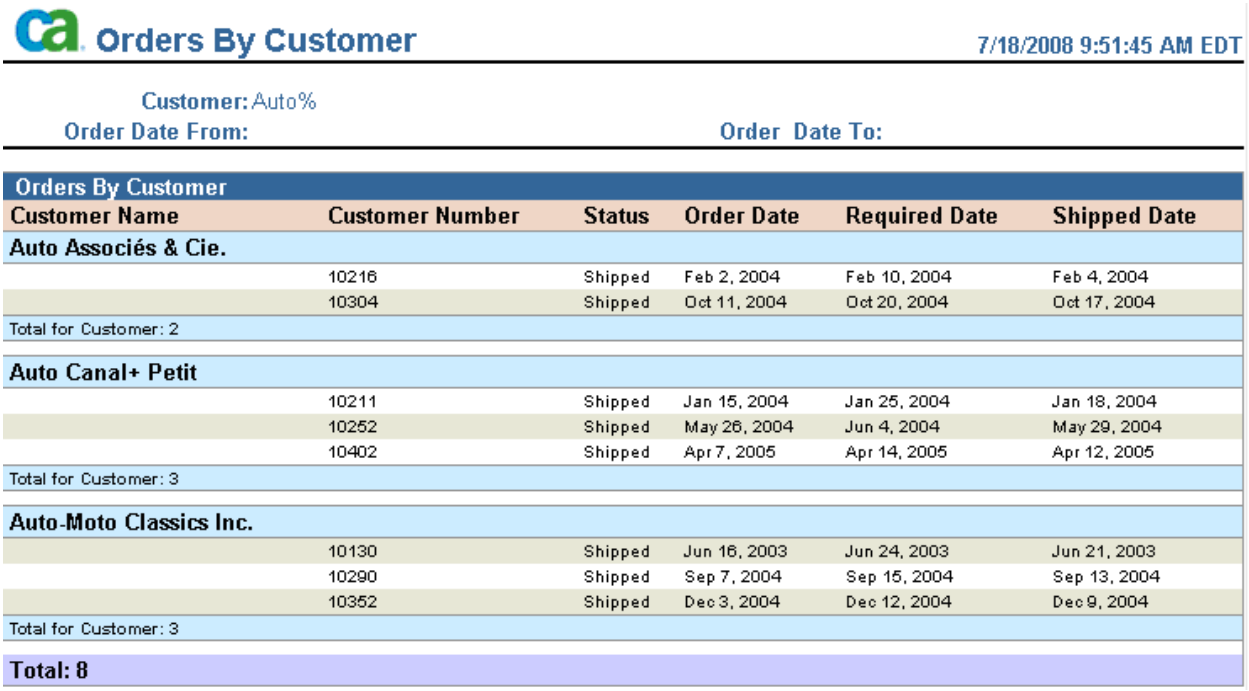
- If only one data point (column) is used, you do not need a legend.
- A legend title is not recommended.
- Do not use a border around the legend.

Table

The table section contains the following:

- Table header
- Table instruction text (optional)
- Group headers (optional)
- Column headers
- Cell content
- Group totals (optional)
- Table footer row (optional)

The table should have 1 px. gray border. An example of the table is as follows:



Orders By Customer 7/18/2008 9:51:45 AM EDT

Customer: Auto%
Order Date From: Order Date To:

Orders By Customer					
Customer Name	**Customer Number**	**Status**	**Order Date**	**Required Date**	**Shipped Date**
Auto Associés & Cie.					
	10216	Shipped	Feb 2, 2004	Feb 10, 2004	Feb 4, 2004
	10304	Shipped	Oct 11, 2004	Oct 20, 2004	Oct 17, 2004
Total for Customer: 2					
Auto Canal+ Petit					
	10211	Shipped	Jan 15, 2004	Jan 25, 2004	Jan 18, 2004
	10252	Shipped	May 26, 2004	Jun 4, 2004	May 29, 2004
	10402	Shipped	Apr 7, 2005	Apr 14, 2005	Apr 12, 2005
Total for Customer: 3					
Auto-Moto Classics Inc.					
	10130	Shipped	Jun 16, 2003	Jun 24, 2003	Jun 21, 2003
	10290	Shipped	Sep 7, 2004	Sep 15, 2004	Sep 13, 2004
	10352	Shipped	Dec 3, 2004	Dec 12, 2004	Dec 9, 2004
Total for Customer: 3					
Total: 8					

Table Header

All tables must have a header with a table title.

The table header format is as follows:

- Font—Arial, 10 pt. (smaller) bold
- Text color—White
- Alignment—Left
- Background—#336699, 51.102.153
- Table header title alignment—left with 5 px. padding on the left

Table Instruction Text

The tables can have an instruction text, if needed. The instruction text describes the information in, or usage and interaction of, the table and its contents.

The table instruction text format is as follows:

- Font—Arial, 9 pt. (smaller) regular
- Text color—Black
- Align—Left
- Background color—197.223.249

Table Column Header

Each column must have a column header.

The table column header format is as follows:

- Font—Arial, 9 pt. (smaller) bold
- Text color—Black
- Align—Left or right
- Background—241.225.193

Data Cell

The data in table cells format is as follows:

- Font—Arial, 8 pt. (x-small) regular
- Text color—Black
- Alignment—Left or right
- Background—White

Row Banding (Highlights)

If you want to use highlights in your table, then the table row borders format is as follows:

- Background color—#F7F1D7 (247.241.215)

Table Footer

You can use the table footer to display summary data for the table such as the number of listed items, dollar amounts, and so on.

The table footer format is as follows:

- Font—Arial, smaller, bold
- Text color—Black
- Align—Left
- Background—#94B7DB

Grouped Tables

You can organize the data in some history reports in groups or sections. CA WA Desktop Client lets you group data in tables by table column. Each group must have a header and also footer, if required.

Group Headers

You can use up to three group headers for a table. Each header can have a different background color. The following table is an example of group headers:

Customer Orders			
Customer Name	**Order Date**		**Order Amount**
BC			
December 2003			
Bikes for Tykes	12/11/2003		296.62
Bikes for Tykes	12/26/2003		1,530.42
		Total for December	**1,827.04**
March 2004			
Bikes for Tykes	3/17/2004		3,982.59
Bikes for Tykes	3/21/2004		989.55
Bikes for Tykes	3/28/2004		659.70
		Total for March	**5,631.84**

The grouped table header format is as follows:

- Font—Arial, 8 pt. (smaller) bold
- Text color—Black
- Alignment—Left
- Border at the bottom—Gray
- Width—1 px.

Note: Alternatively, group headers can have double border lines at the bottom.

The grouped table header 1 format is as follows:

- Background—197.223.249, #C5DFF9

The grouped table header 2 format is as follows:

- Background—239.246.255

Group Footers

The group footer lets you track values in your table such as total number of items in the table, dollar amounts, or other measurable data.

You can use up to three group footers in a table, for example, the totals for city, region, and country.

If the group footer is immediately above the same color group header, you must add an empty row in between the rows. If the adjacent rows are different colors, an empty row is not needed. When used, the empty row background color should be white.

The grouped table footer format is as follows:

- Font—Arial, smaller, bold
- Text color—Black
- Alignment—Left

Note: The table group footer color must match the corresponding table group header color.

Report Footer

A page count located at the bottom of the history report can serve as the report footer. It must be right aligned with the report header. The page count is displayed as *m* of *n* for example, *5* of *35*.

You can specify the page count for PDF documents when printed.

Styling Resources

To create history reports, you can use the following resources:

- Cascading style sheets (CSS)
- Templates
- Business Intelligence and Reporting Tool (BIRT) report libraries
- Sample reports
- Images
- JavaScript files

These resources are stored in the CA WA Desktop Client installation directory under the Reports and Resources folder.

You can import the resources into the report design file or reference the resources from the history report design file by placing the resources in your history report project in the Resources folder.

Cascading Style Sheets

You can use Business Intelligence and Reporting Tool (BIRT) Cascading Style Sheets (CSS) to define and apply styles for history report items. BIRT also lets you define properties in a style sheet. You can create a style once and use it multiple times.

You can integrate styles defined in a CSS file with a history report. You can also reference the CSS file from a history report by placing it in the history report project.

The ca_blue_yellow.css file defines styles, such as the styles for table header, table details, and table grouping, that are used in the CA WA reports. If possible, predefined styles are also used.

Templates

The CA WA Desktop Client templates contain predefined elements to standardize history report layout structures and history report items. You do not have to include these templates in the history report project because they are integrated with CA WA Desktop Client.

BIRT Report Libraries

Business Intelligence and Reporting Tool (BIRT) report libraries contain common functions and history report items. They can be imported into any BIRT report design and template for reuse. This significantly reduces design time.

All the history reports that reference a library are automatically updated if changes are made to that library.

You must include history report libraries in the CA WA Desktop Client report project.

CA WA Templates

The CA WA templates are integrated with CA WA Desktop Client. You can find a copy of all the templates at the following location:
org.eclipse.birt.resources_2.2.1.r22x_v20070828.

A CA WA template has the following structure:

Report Header

Contains the CA WA logo, report title, and the date and time the report was generated. The report header appears in the master page of the template.

Report Filter

Contains parameter names and parameter values that are used to generate the report. The report filter appears in the Layout page of the template.

Note: You can remove the template parameters or add new parameters.

Report Data

Contains the data of the report. The report data appears below the filter area. If the report has a chart and a table, the chart appears before the table. The report table has a header area.

The types of CA WA templates are as follows:

CA WA Simple Listing

Provides a report header area, with report filter, and a table for the report data. The table has a table footer that displays the total number of items listed in the table.

CA WA Simple Listing with Date Range

Provides a report header area, with a report filter, and a table for the report data similar to the CA WA Simple Listing template. It also provides additional date range report parameters and shows the date parameter values in the filter area.

CA WA Grouped Listing

Provides a report header area with a report filter and grouped tables. The grouped table shows repeated values only once. You can also create subtotals for each table.

CA WA Grouped Listing with Date Range

Provides a report header area with a report filter and grouped table. The grouped table shows repeated values only once. You can create subtotals for each group. It also provides date range report parameters and the date parameter values in the filter area.

CA WA Chart & Grouped Listing

Provides a report header area with report filter, chart, and grouped table.

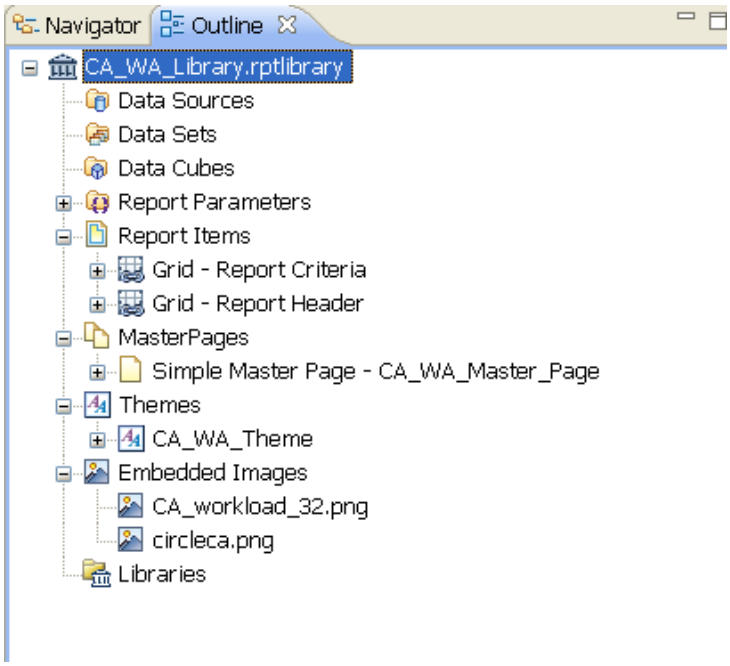
CA WA Chart & Grouped Listing With Date Range

Provides a report header area with report filter, chart, grouped tables, and the date range parameters.

CA WA Library

The CA WA Library contains all the common components the CA WA reports use. It contains report parameters, master page, report items, and styles.

You can see the library contents in the Library Explorer view as shown in the following illustration:



A CA WA library has the following structure:

CA_WA_Master_Page

Contains the report header with a title, date, and page margin settings.

Report Parameters

Contains the new parameters that you have created. You can use the following parameters to filter the history reports by date range (mostly used for the ESP_GENERIC_JOB.START_DATE_TIME):

- start_date_time
- end_date_time

CA WA Theme

Contains all the recommended formatting styles. It uses the BIRT predefined styles for tables and the custom defined styles for the report header and filter area.

Report Items

Contains the following reusable report items:

Grid Report Header

Contains the report logo, title, and date. It is used in the report master page.

Grid Report Criteria

Contains the report image, title, and the date. It is used in the report master page.

Embedded Images

Contains the images the templates use, such as logos and status icons.

Scripts

Contains the JavaScript scripts the report templates use and samples. These scripts contain reusable functions that any report can use.

Sample Reports

CA WA sample history reports are located in the following folder:

`CA_WA_Desktop_Client_installation_folder/Reports/SampleReports`

These sample history reports use the BIRT sample database. The database contains sample business data such as customers, orders, products, and so on. The sample database is provided under the terms of the Eclipse Software User Agreement.

Note: The database shipped with CA WA Desktop Client is based on the Apache Derby server database.

SampleGroupedTableWithDateRange

This sample history report lets you group the data in tables and to use the date range parameters. The history report displays the orders placed by customers for a given period of time. You can filter the history report data by date range and customer name. This history report is based on the CA WA Grouped Listing template. This history report sample also displays group and table totals.

When querying the database, you can specify a date range to limit the data returned.

An example of the query for filtering the data by date range using the data set parameters is as follows:

```
select ORDERS.*, CUSTOMERS.CUSTOMERNAME
from ORDERS,CUSTOMERS
where ORDERS.CUSTOMERNUMBER = CUSTOMERS.CUSTOMERNUMBER
and CUSTOMERS.CUSTOMERNAME LIKE 'A%' and
ORDERS.ORDERDATE between '10/Jan/2001' and 'Jul/15/2006'
```

You can also filter the data after it is retrieved from the database by using data set filters or by using dynamic data set parameters.

You can include input parameters into the SQL SELECT statements. The SQL can be bound to the report parameters and can be passed the report parameter value into the query. They are marked using the SQL "?" symbol in the query.

An example of the SQL query is as follows:

```
select ORDERS.*, CUSTOMERS.CUSTOMERNAME
from ORDERS,CUSTOMERS
where ORDERS.CUSTOMERNUMBER = CUSTOMERS.CUSTOMERNUMBER
and CUSTOMERS.CUSTOMERNAME LIKE ? and
ORDERS.ORDERDATE between ? and ?
```

All '?' markers are replaced with the values from data set parameters.

There are two report parameters in the sample history report: From Date and To Date. You can define both as a Data Type parameter. Both of these parameters are optional; you can specify them or select Null Value if you do not want to filter by the date. The null value is replaced with a date in the past for the From Date and the current date is selected for the To Date.

To use the report parameters in the SQL query, define the corresponding data set parameters in the selected data set for From Date and To Date.

The dates are generated by expression in the default value. When you specify the Null Value in the Report parameters dialog, the null value is passed in the SQL query. The query returns only the records with NULL dates. To build a proper date range query, you must convert the null date values to dates in the past for From Date and date in the future for To Date.

Example: View the Conversion for From Date

The sample history report uses JavaScript in the data set parameter definitions to convert the report parameter dates. The JavaScript code is defined in the Default Value in the data set parameter definition.

To view the conversion for From Date

1. Select the ORDERS data set.
2. Click the Parameters tab.
3. Select the start_date parameter and click Edit.
4. Click the fx button.

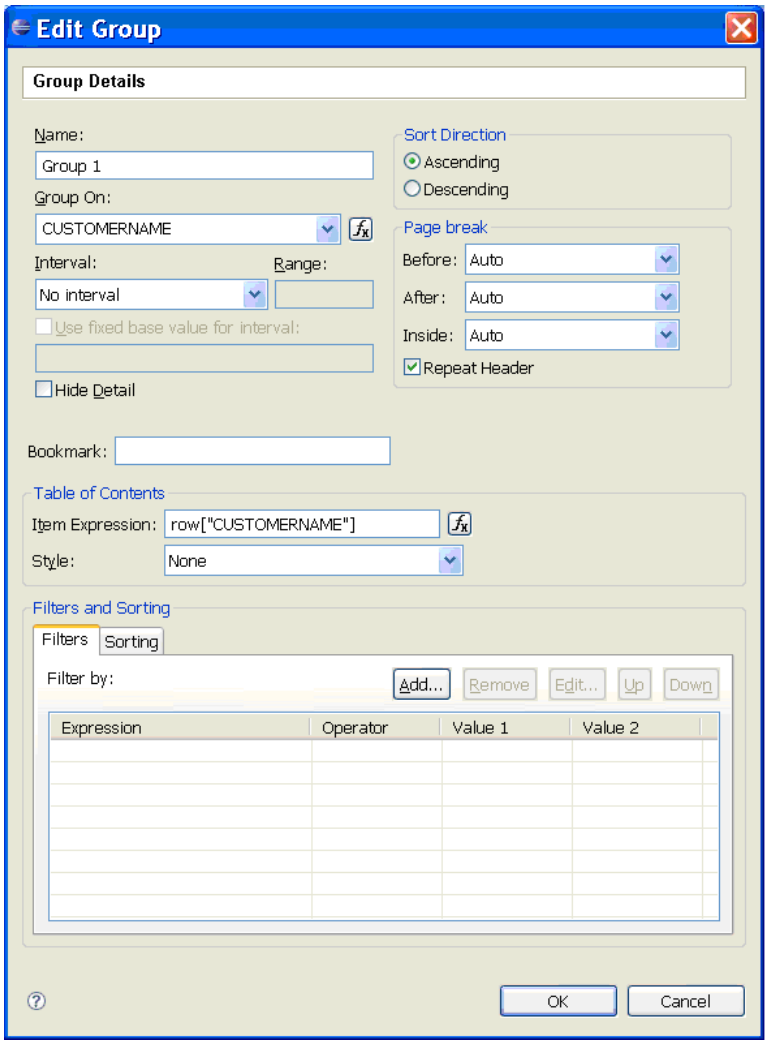
   The following JavaScript code is defined:

```
if(params["start_date"].value != null)
    params["start_date"];
}
Else
{
  new Date(1);
}
```

Example: Group by Data Field

You can group the data in the sample history report on the CUSTOMERNAME.

Define a new group named Group1 in the table with the following parameters:



The table footer row contains a total number of orders. The group footer contains the number of orders for each customer. The dynamic text elements for Total use the Total.count() built-in BIRT JavaScript function. The dynamic text elements for Total for Customer use the Aggregation data element from the table.

SampleChart

This sample history report presents the data in a bar chart and shows how to use the multi-select list report parameter. You can filter the history report data by a product line. The history report is based on the CA WA Chart Listing template.

Example: To Filter the Report Data by Product Lines

You can filter the history report data by the product lines Classic cars, Planes, and Ships.

To get all the orders for a set of product lines, use the SQL IN operator in the SQL SELECT:

```
select PRODUCTS.PRODUCTCODE, PRODUCTS.PRODUCTNAME,
PRODUCTS.PRODUCTLINE, PRODUCTS.PRODUCTVENDOR,
PRODUCTS.BUYPRICE,PRODUCTS.MSRP,
ORDERDETAILS.QUANTITYORDERED
from ORDERDETAILS, PRODUCTS
where ORDERDETAILS.PRODUCTCODE=PRODUCTS.PRODUCTCODE
and PRODUCTS.PRODUCTLINE IN ('Classic cars', 'Planes', 'Ships')
```

A dynamic list parameter "Product Line" is displayed that lists all of the product lines.

You can select one or more product lines from the list to filter the report results. You can double-click the Product Line parameter to see how it is defined. The SQL query is dynamically modified to include the values selected from the Product Line parameter list.

You cannot use data set parameters because the Product Line parameter value is an array of strings and it is not properly passed in the SQL query.

```
select PRODUCTS.*,ORDERDETAILS.QUANTITYORDERED
from ORDERDETAILS, PRODUCTS
where ORDERDETAILS.PRODUCTCODE=PRODUCTS.PRODUCTCODE
and PRODUCTS.PRODUCTLINE IN (?)
```

The above SQL will not work with multi selection list. We can use the JavaScript Array join() function to format the Product Line parameter value. The value used in the SQL IN() operator is generated by the following code:

```
params["Product Line"].value.join("','")
```

You can modify the query using *one* of the following methods:

- Set the Property Binding in the Dataset Editor. The data set SQL query is dynamically replaced with the generated value in the Property Binding data set.

  After you double-click the PRODUCTLINE data set, the Edit Data Set dialog opens. The Property Binding option field has a dynamic query dependent on the Product Line parameter value as follows:

  ```
  "select PRODUCTS.*, ORDERDETAILS.QUANTITYORDERED "+
  "from ORDERDETAILS,PRODUCTS "+
  "where PRODUCTS.PRODUCTCODE=ORDERDETAILS.PRODUCTCODE AND "+
  "PRODUCTS.PRODUCTLINE IN ('" + params["Product Line"].value.join("','")+"')"
  ```

  To select “All” product lines, enter the query in the Property Binding data set as follows:

  ```
  "select PRODUCTS.*, ORDERDETAILS.QUANTITYORDERED "+
  "from ORDERDETAILS,PRODUCTS "+
  "where PRODUCTS.PRODUCTCODE=ORDERDETAILS.PRODUCTCODE AND ('"+
  params["Product Line"].value[0]+"'='All' OR "+
  "PRODUCTS.PRODUCTLINE IN ('" + params["Product Line"].value.join("','")+"') )"
  ```

- Write the SQL query generically and add the Product line filter in the beforeOpen() data set method.

  The data set query is as follows:

  ```
  select PRODUCTS.*,ORDERDETAILS.QUANTITYORDERED
  from ORDERDETAILS, PRODUCTS
  where ORDERDETAILS.PRODUCTCODE=PRODUCTS.PRODUCTCODE
  ```

  In the beforeOpen() method of the data set, add the following query:

  ```
  if(params["Product Line"].value[0] != "All")
  {
      queryText = queryText + " AND PRODUCTS.PRODUCTLINE IN('" + params["Product
  Line"].value.join("','") +"')";
  }
  ```

Example: Define a Link to the PRODUCTLINE Bookmark for the Chart

You can click on the bar-chart bar to see the list of product lines in the report details table. For example, if you click on the Planes bar, the Planes group in the table is displayed.

There is a bookmark in the Order by Product Details table defined for the PRODUCTLINE data field with the following value:

```
row["PRODUCTLINE"].
```

This bookmark definition dynamically creates bookmarks for all PRODUCTLINE values in the table. There is a hyperlink in the chart that points to the PRODUCTLINE bookmark.

To define a link to the PRODUCTLINE bookmark for the chart

1. Double-click on the chart and open the chart editor.
2. Select the Format Chart tab.
3. Select the Value(Y) Series.
4. Click Interactivity.

   The Next dialog opens.
5. Select Mouse Double Click from the Event drop-down list and Hyperlink from the Action drop-down list.
6. Click Edit Base URL.

   The Hyperlink Options dialog opens.
7. Select the Internal Bookmark option button from the Select Hyperlink Type option and row[“PRODUCTLINE”] from the *Bookmark drop-down list.

   The link is defined.

Index

S

V