

---

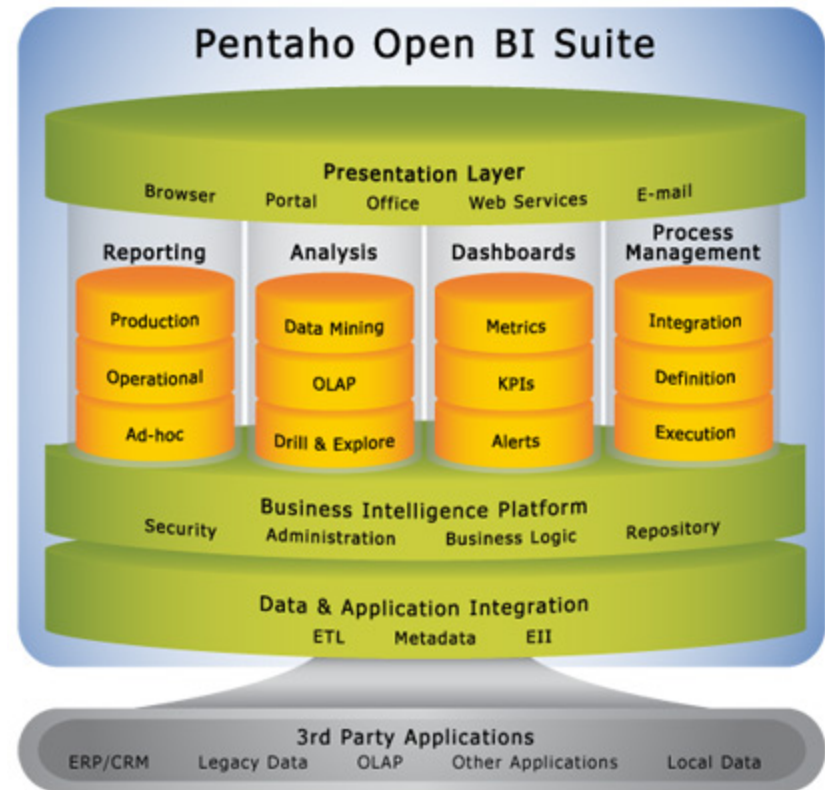
# Open Source BI: Alternative Solutions for Reporting

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Matt Braunschweig  
Wells Landers Group

# Open Source BI: Alternative Solutions for Reporting

- Reporting
  - Ad Hoc (Mondrian)
  - OLAP
  - Static
- ETL
- Portal

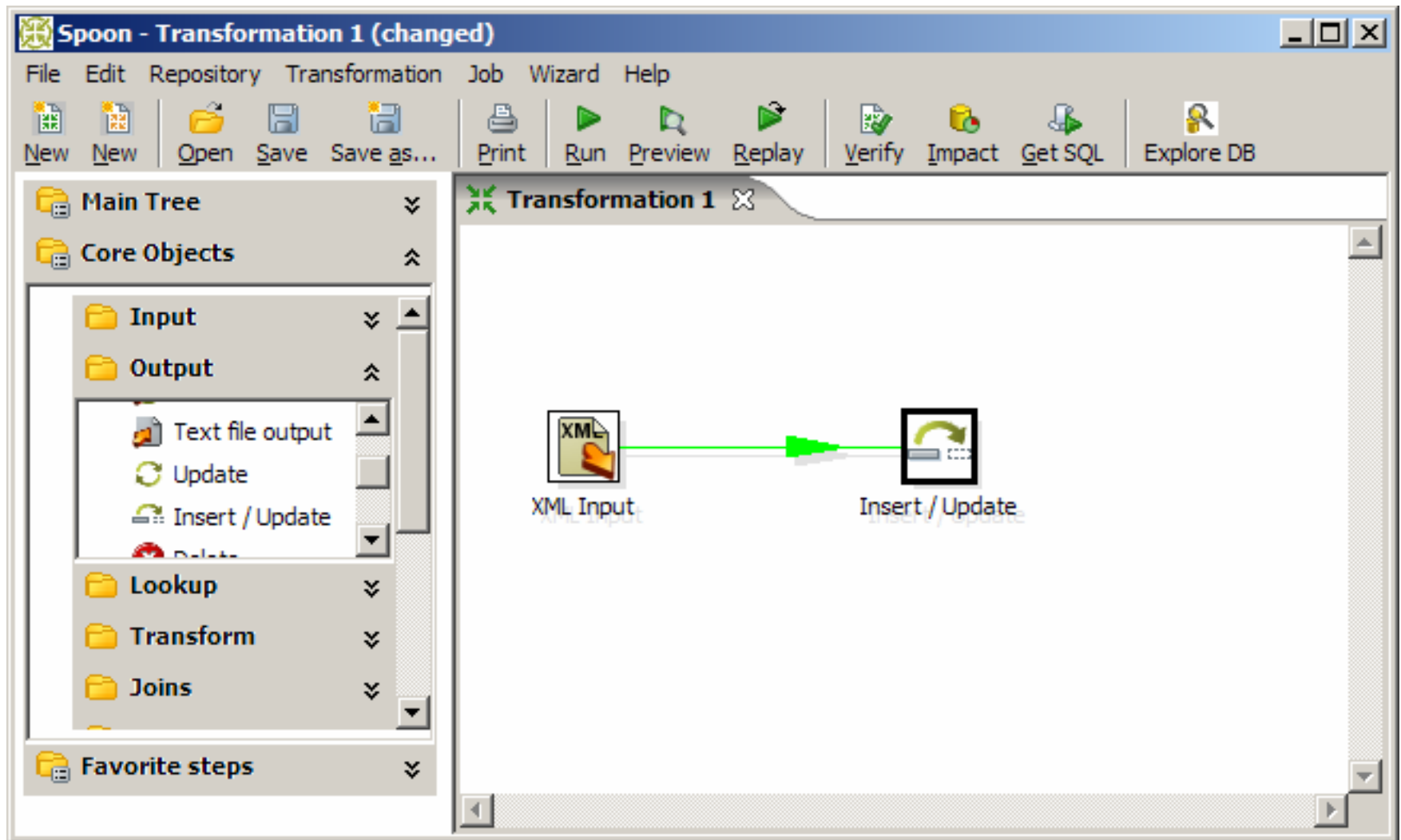


---

# Open Source BI: Alternative Solutions for Reporting

- Open Kettle
  - No Repository at this Time
  - Sourced from XML
  - Target is Oracle
  - Target Configuration Required
-

# Open Source BI: Alternative Solutions for Reporting

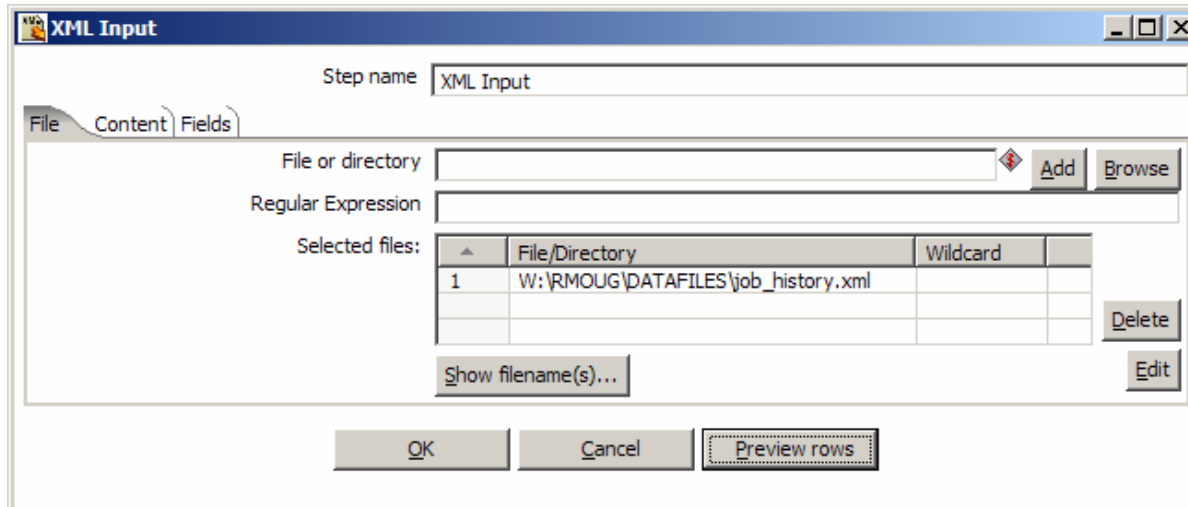


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# Open Source BI: Alternative Solutions for Reporting

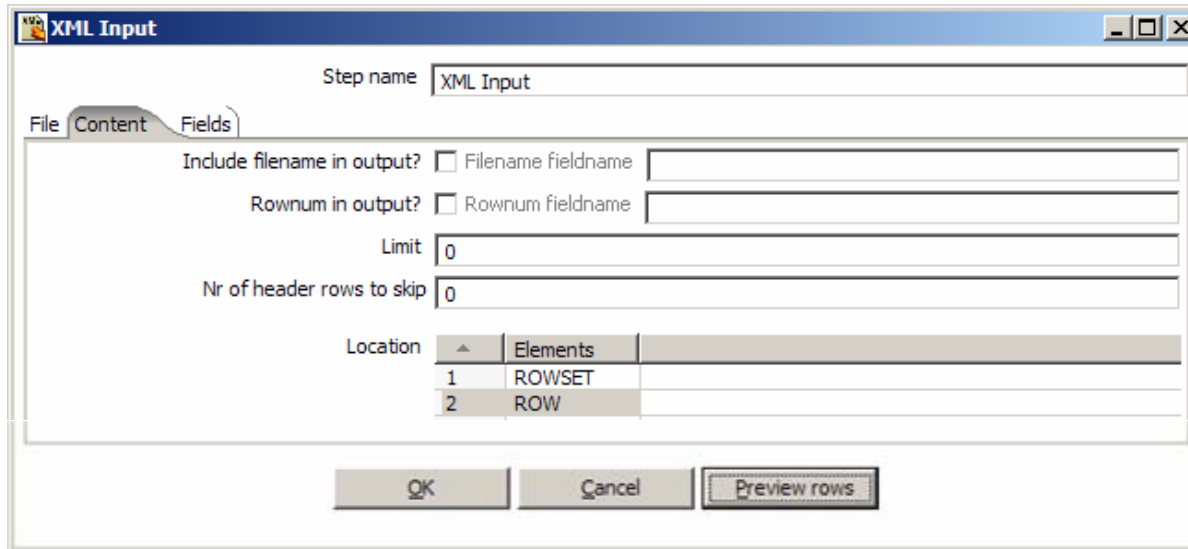
- Main Tree
    - Components
  - Core Objects
    - All the moving parts
    - Very Robust
  - Favorite Steps
    - The stuff you use most
  - Save and Edit XML
-

# Open Source BI: Alternative Solutions for Reporting



XML Input dialog box, File tab. Step name: XML Input. File or directory: [empty] Add Browse. Regular Expression: [empty]. Selected files table: 1 | W:\RMOUG\DATAFILES\job\_history.xml. Buttons: Show filename(s)... Delete Edit OK Cancel Preview rows.

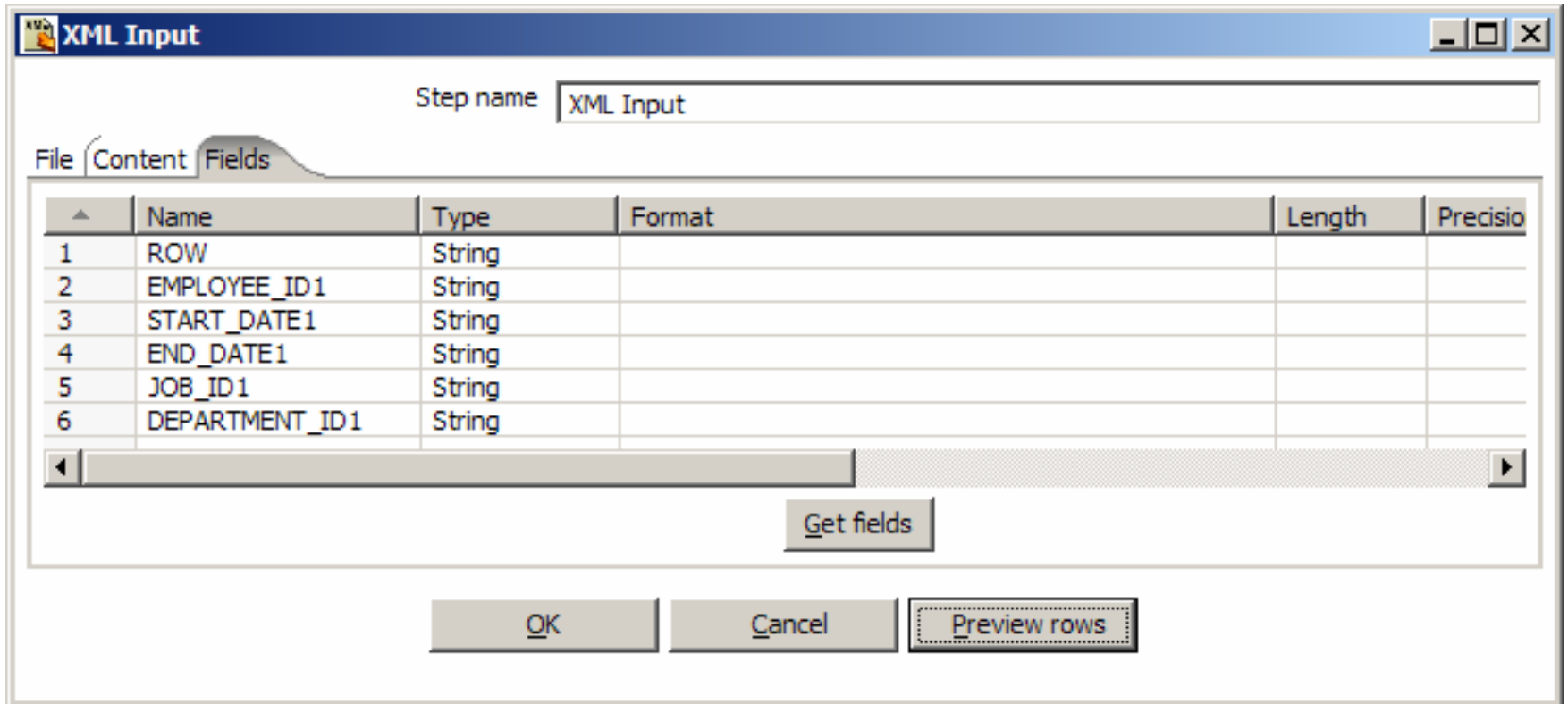
	File/Directory	Wildcard
1	W:\RMOUG\DATAFILES\job_history.xml	



XML Input dialog box, Content tab. Step name: XML Input. Include filename in output?  Filename fieldname: [empty]. Rownum in output?  Rownum fieldname: [empty]. Limit: 0. Nr of header rows to skip: 0. Location table: 1 | ROWSET, 2 | ROW. Buttons: OK Cancel Preview rows.

	Elements
1	ROWSET
2	ROW

# Open Source BI: Alternative Solutions for Reporting



# Open Source BI: Alternative Solutions for Reporting

The image shows a 'Connection information' dialog box with the following fields and options:

- Connection name:** RMOUG\_LOAD
- Connection type:** A list box with 'Oracle' selected. Other options include MySQL, AS/400, MS Access, MS SQL Server, IBM DB2, PostgreSQL, Intersystems Cache, and Informix.
- Method of access:** A list box with 'Native (JDBC)' selected. Other options include ODBC, OCI, and JNDI.
- Server host name:** localhost
- Database name:** XE
- Port number:** 1521
- Username:** hr
- Password:** \*\*

At the bottom of the dialog, there are five buttons: OK, Test (highlighted with a dotted border), Explore, Feature List, and Cancel.

# Open Source BI: Alternative Solutions for Reporting

Step name: Insert / Update

Connection: RMOUG\_DATABASE [Edit...] [New...]

Target schema: [ ]

Target table: JOB\_HISTORY [Browse...]

Commit size: 100

Don't perform any updates:

The key(s) to look up the value(s):

^	Table field	Comparator	Stream field1	Stream field2	
1	EMPLOYEE_ID	=	EMPLOYEE_ID		
2	JOB_ID	=	JOB_ID		
3	DEPARTMENT_ID	=	DEPARTMENT_ID		
4					

Get fields

Update fields:

^	Table field	Stream field	Update	
1	EMPLOYEE_ID	EMPLOYEE_ID	Y	
2	START_DATE	START_DATE	Y	
3	END_DATE	END_DATE	Y	
4	JOB_ID	JOB_ID	Y	
5	DEPARTMENT_ID	DEPARTMENT_ID	Y	

Get update fields

[OK] [Cancel] [SQL]

# Open Source BI: Alternative Solutions for Reporting

Welcome! **T** LD\_JOB\_HISTORY Log (T): LD\_JOB\_HISTORY ✕

Stepname	Copynr	Read	Written	Input	Output	Updated	Rejected	Errors	Active
1 XML Input	0	0	10	10	0	0	0	0	Finished
2 Insert / Update	0	10	0	10	10	0	0	0	Finished

2008/01/15 22:25:13 - Insert / Update.0 - Values set for lookup: [EMPLOYEE\_ID=176, JOB\_ID=SA\_REP, DEPARTMENT\_ID=80]  
2008/01/15 22:25:13 - Insert / Update.0 - Insert row: ![ROW=  
, EMPLOYEE\_ID=176, START\_DATE=1998/03/24 00:00:00.000, END\_DATE=1998/12/31 00:00:00.000, JOB\_ID=SA\_REP, DEPARTMENT\_ID=80]

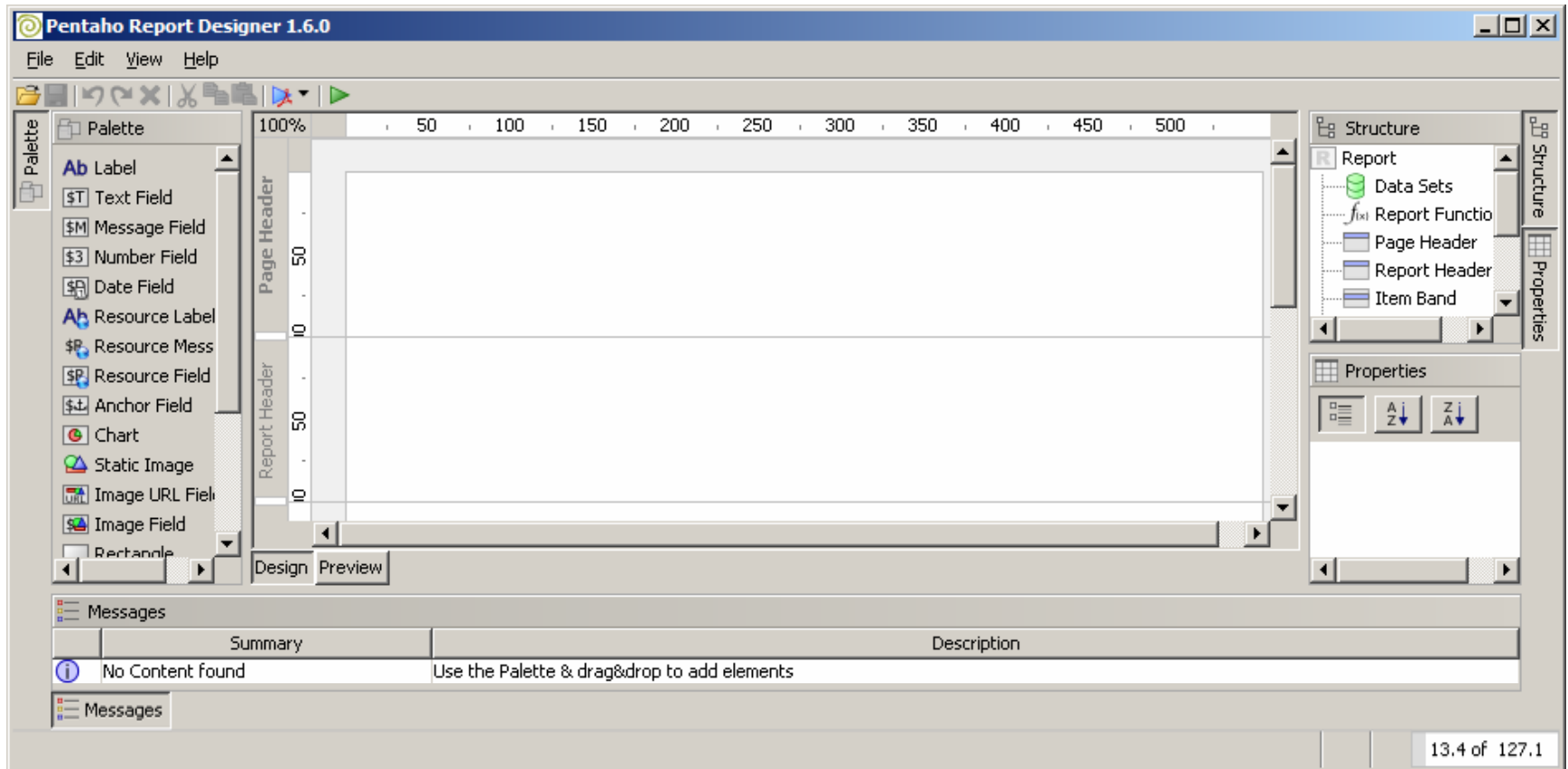
Start transformation Stop transformation Preview Show error lines Clear log Log settings  Hide inactive  Safe mod

---

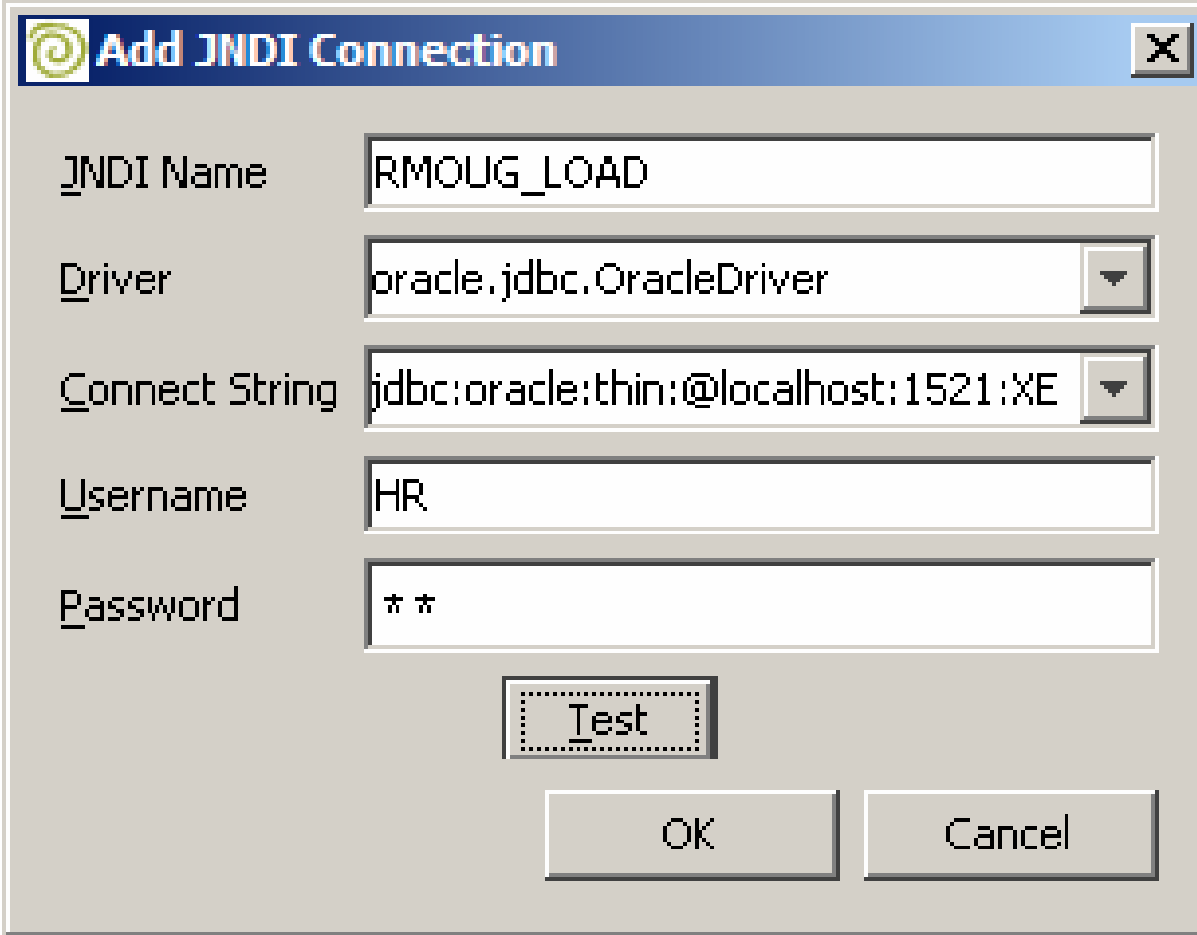
# Open Source BI: Alternative Solutions for Reporting

- Based On SQL
  - Need to Configure Source
  - GUI Driven
  - 5 Parts
    - Palette
    - Structure
    - Properties
    - WYSIWIG (center)
    - Messages
-

# Open Source BI: Alternative Solutions for Reporting



# Open Source BI: Alternative Solutions for Reporting



**Add JNDI Connection**

JNDI Name: RMOUG\_LOAD

Driver: oracle.jdbc.OracleDriver

Connect String: jdbc:oracle:thin:@localhost:1521:XE

Username: HR

Password: \*\*

Test

OK Cancel

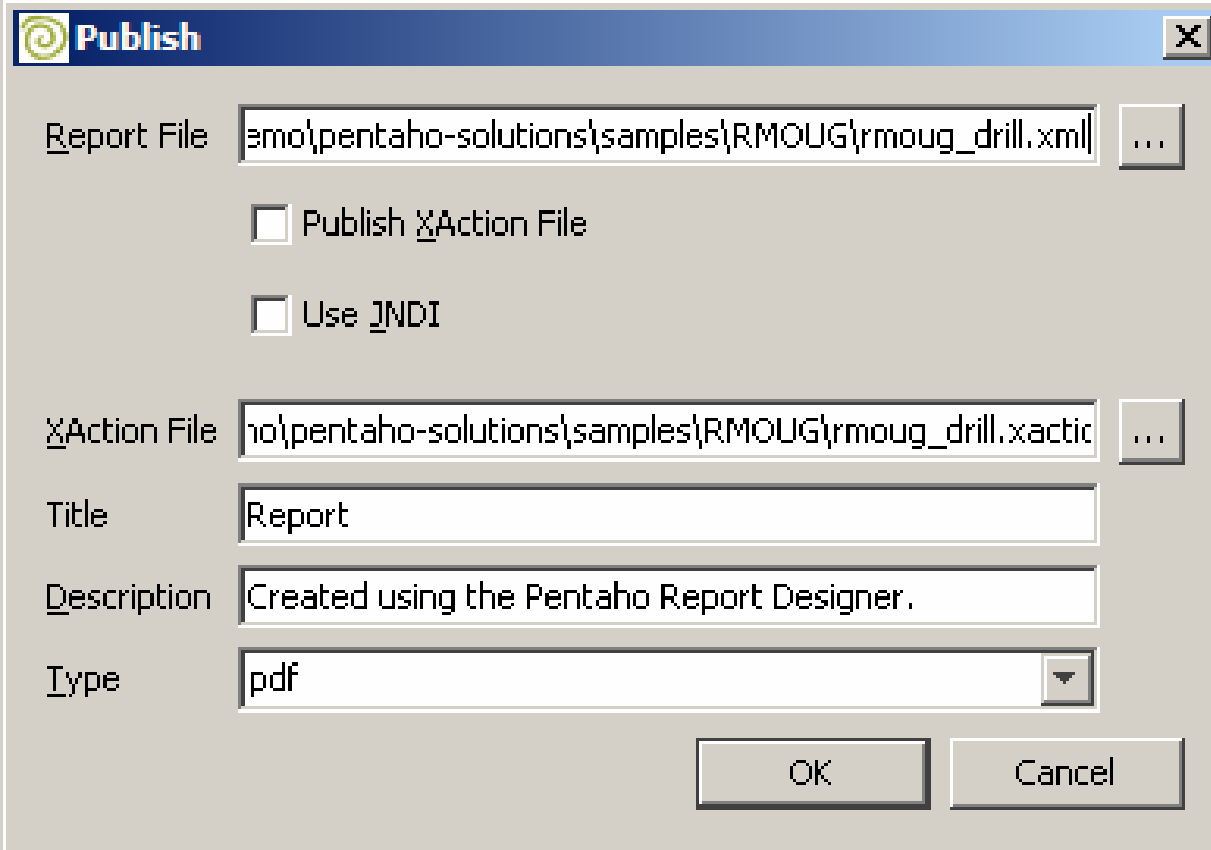
# Open Source BI: Alternative Solutions for Reporting

The screenshot displays the Pentaho Report Designer 1.6.0 interface. The main workspace shows a report design with the RMOUG logo (Rocky Mountain Oracle Users Group) at the top. Below the logo, the report title "Open Source BI: Drillthrough Report" is displayed. Underneath the title, there is a table with three columns: "Job Title", "Min Salary", and "Max Salary". The table content shows "JOB\_TITLE", "MIN\_SALARY", and "MAX\_SALARY".

The interface includes a Palette on the left with various report components like Label, Text Field, Message Field, Number Field, Date Field, Resource Label, Resource Mess, Resource Field, Anchor Field, Chart, and Static Image. The Structure pane on the right shows the report's hierarchy: Static Image, Label Open Source BI: Dr, Report Header, Label Job Title, Label Min Salary, and Label Max Salary. The Properties pane on the right shows the ID, Name (Element@15408...), and Appearance of the selected element.

At the bottom of the interface, there is a Messages section with a table with columns "Summary" and "Description". The status bar at the bottom right indicates "23.4 of 127.1".

# Open Source BI: Alternative Solutions for Reporting



The image shows a 'Publish' dialog box with the following fields and options:

- Report File:** A text field containing the path `emo\pentaho-solutions\samples\RMOUG\rmoug_drill.xml` and a browse button (...).
- Publish Action File**
- Use JNDI**
- Action File:** A text field containing the path `no\pentaho-solutions\samples\RMOUG\rmoug_drill.xactic` and a browse button (...).
- Title:** A text field containing the text `Report`.
- Description:** A text field containing the text `Created using the Pentaho Report Designer.`
- Type:** A dropdown menu currently set to `pdf`.

At the bottom of the dialog are two buttons: **OK** and **Cancel**.

---

# Open Source BI: Alternative Solutions for Reporting

- Presentation
  - Configure JBoss
  - Data Source
    - `<*-ds.xml`
    - `web.xml`
    - `jboss-web.xml`



# Open Source BI: Alternative Solutions for Reporting

- jboss-web.xml

```
<resource-ref>
```

```
  <res-ref-name>jdbc/RMOUG_LOAD</res-ref-name>
```

```
  <res-type>javax.sql.DataSource</res-type>
```

```
  <jndi-name>java:/RMOUG_LOAD</jndi-name>
```

```
</resource-ref>
```

- web.xml

```
<resource-ref>
```

```
  <description>RMOUG_LOAD</description>
```

```
  <res-ref-name>jdbc/RMOUG_LOAD</res-ref-name>
```

```
  <res-type>javax.sql.DataSource</res-type>
```

```
  <res-auth>Container</res-auth>
```

```
</resource-ref>
```

---

---

# Open Source BI: Alternative Solutions for Reporting

- rmoug-load-ds.xml

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<datasources>
```

```
  <local-tx-datasource>
```

```
    <jndi-name>RMUG_LOAD</jndi-name>
```

```
    <connection-url>
```

```
      jdbc:oracle:thin:@localhost:1521:XE
```

```
    </connection-url>
```

```
    <driver-class>oracle.jdbc.driver.OracleDriver</driver-class>
```

```
    <user-name>hr</user-name>
```

```
    <password>hr</password>
```

```
  </local-tx-datasource>
```

```
</datasources>
```

---

---

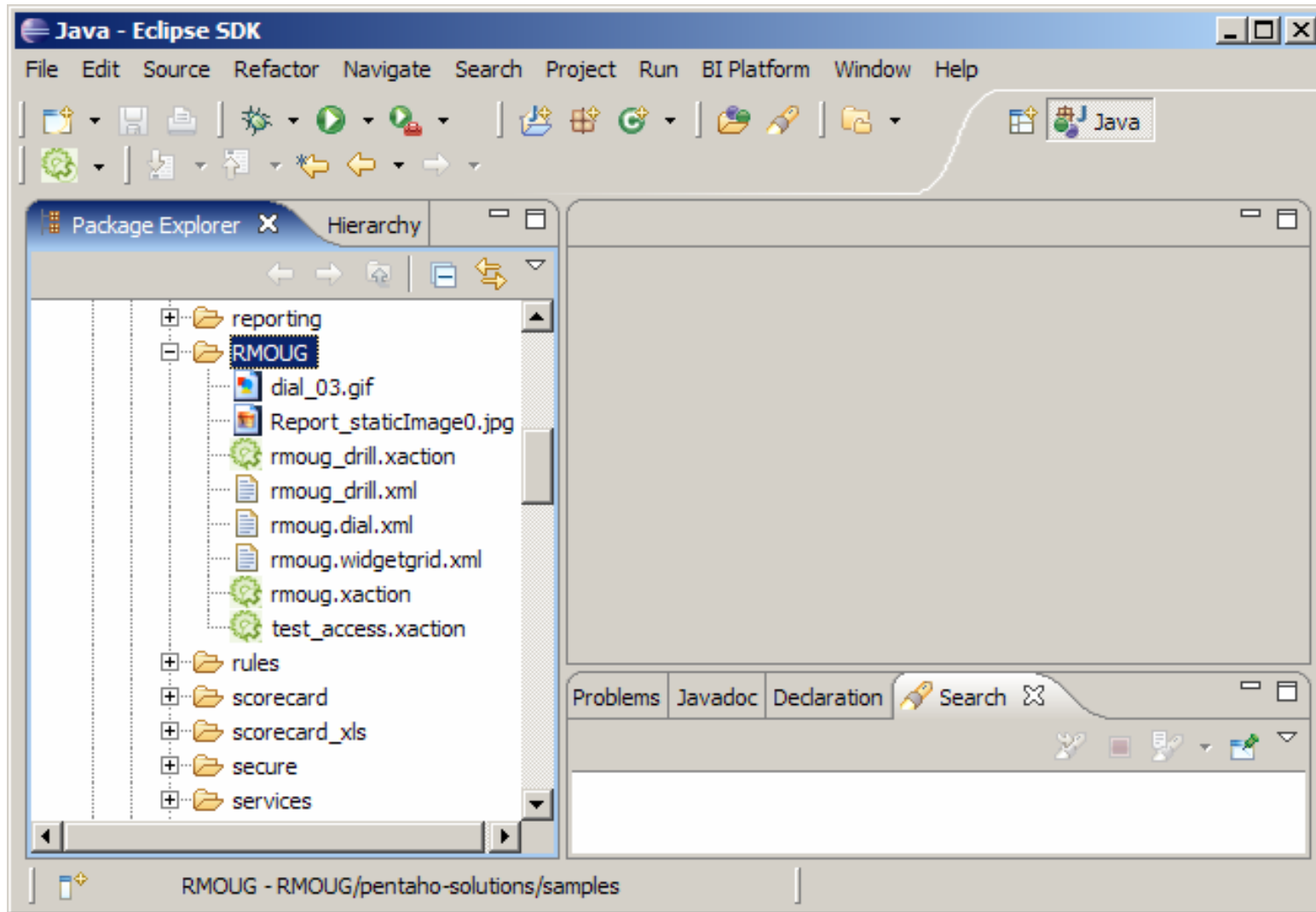
# Open Source BI: Alternative Solutions for Reporting

## ■ Presentation

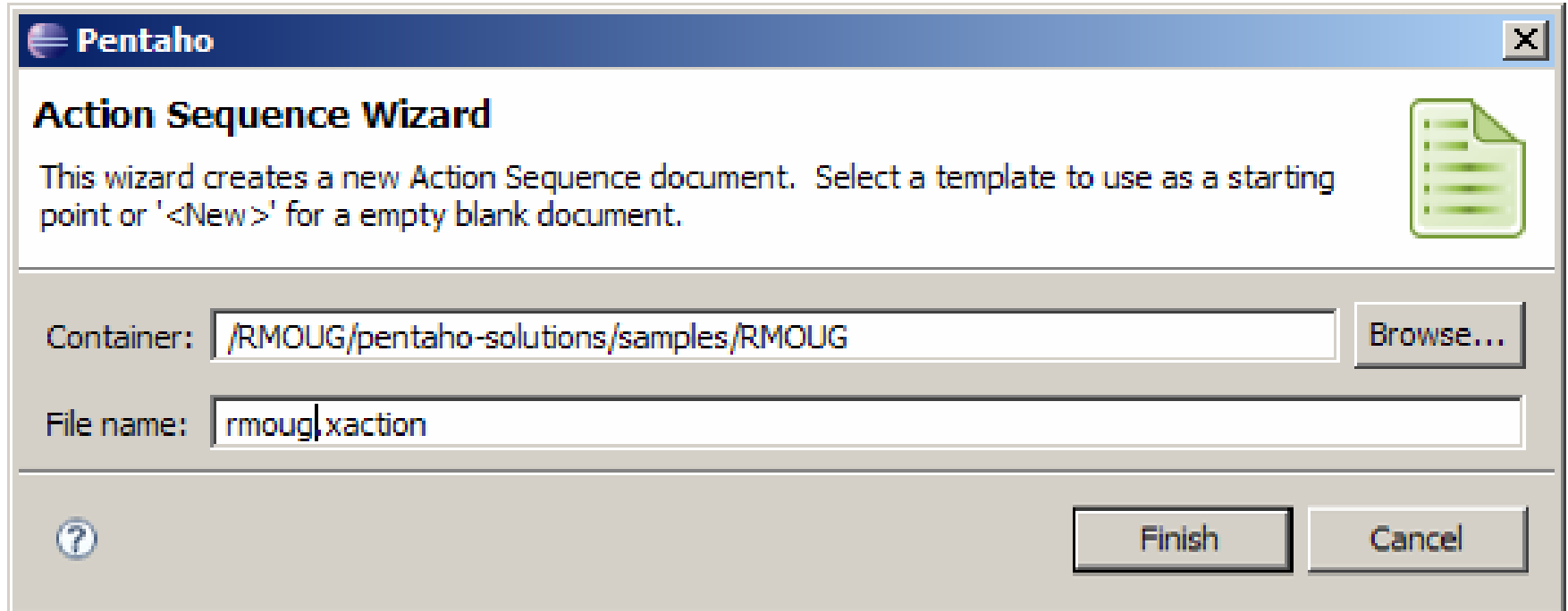
### □ Build a Dial

- DIAL Background
  - XAction File
  - 2 XML Descriptors
-

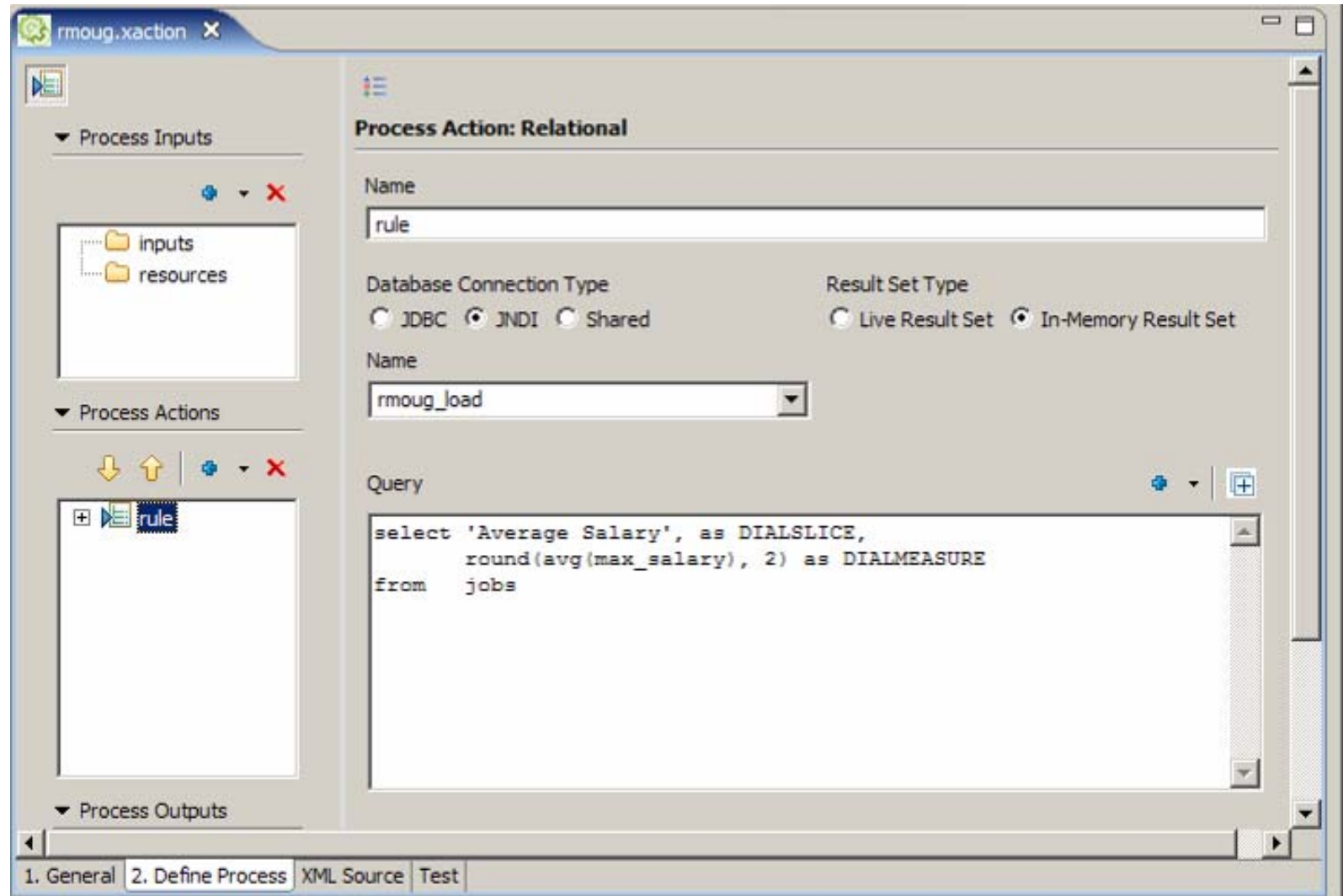
# Open Source BI: Alternative Solutions for Reporting



# Open Source BI: Alternative Solutions for Reporting



# Open Source BI: Alternative Solutions for Reporting



# Open Source BI: Alternative Solutions for Reporting

```
<widget> <dial>
  <name>Gauge 1</name>
  <units></units>
  <plot-background type="texture">
    <texture-image>pentaho-solutions/samples/RMOUG</texture-image>
  </plot-background>
  <tick-interval>1</tick-interval>
  <value-color>#9999bb</value-color>
  <tick-color>#808080</tick-color>
  <needle-color>#808080</needle-color>
  <chart-background type="texture">
    <texture-image>pentaho-solutions/samples/RMOUG</texture-image>
  </chart-background>
  <interval> <label>under</label>
    <minimum>0</minimum>
    <maximum>10000</maximum>
    <color>#ffffff</color>
    <text-color>#bb4040</text-color>
    <stroke-width>10</stroke-width>
  </interval>
  <interval> <label>under</label>
    <minimum>10001</minimum>
    <maximum>50000</maximum>
    <color>#ffffff</color>
    <text-color>#ffff00</text-color>
    <stroke-width>10</stroke-width>
  </interval>
  <interval> <label>over</label>
    <minimum>50001</minimum>
    <maximum>100000</maximum>
    <color>#ffffff</color>
    <text-color>#40bb40</text-color>
    <stroke-width>10</stroke-width>
  </interval>
</dial> </widget>
```

# Open Source BI: Alternative Solutions for Reporting

```
<portlet>
  <portlet-name>RmougPortlet</portlet-name>
  <display-name>RMOUG Salary Average</display-name>
  <portlet-class>org.pentaho.ui.portlet.WidgetGridPortlet</portlet-class>
  <supports><mime-type>text/html</mime-type><portlet-mode>VIEW</portlet-mode>
    </supports>
  <portlet-info>
    <title>RMOUG Demo</title>
  </portlet-info>
  <portlet-preferences>
    <preference>
      <name>widget</name>
      <value>samples/rmoug/rmoug.dial.xml</value>
    </preference>
    <preference>
      <name>widget-grid</name>
      <value>samples/rmoug/rmoug.widgetgrid.xml</value>
    </preference>
    <preference>
      <name>drill-url</name>
      <value>/pentaho/ViewAction?&solution=samples&path=RMOUG&action=rmoug_drill.xaction</value>
    </preference>
  </portlet-preferences>
</portlet>
```

---

# Open Source BI: Alternative Solutions for Reporting

```
<widgetgrid>  
  <width>105</width>  
  <height>105</height>  
  <columns>6</columns>  
  <style>height:150px;overflow:auto</style>  
  <data>  
    <data-solution>samples</data-solution>  
    <data-path>rmoug</data-path>  
    <data-action>rmoug.xaction</data-action>  
    <data-output>rule-result</data-output>  
    <data-name>DIALSLICE</data-name>  
    <data-value>DIALMEASURE</data-value>  
  </data>  
</widgetgrid>
```

---

---

# Open Source BI: Alternative Solutions for Reporting

## ■ Presentation

### □ Add to Portal

- portlet.xml
- portlet-instances.xml
- pentaho-portal-object.xml

### □ Using Pentaho Demo

- Could make own WAR for deployment
  - Full of examples
-

# Open Source BI: Alternative Solutions for Reporting

```
<portlet>
  <portlet-name>RmougPortlet</portlet-name>
  <display-name>RMOUG Salary Average</display-name>
  <portlet-class>org.pentaho.ui.portlet.WidgetGridPortlet</portlet-class>
  <supports><mime-type>text/html</mime-type><portlet-mode>VIEW</portlet-mode>
    </supports>
  <portlet-info>
    <title>RMOUG Demo</title>
  </portlet-info>
  <portlet-preferences>
  <preference>
    <name>widget</name>
    <value>samples/RMOUG/rmoug.dial.xml</value>
  </preference>
  <preference>
    <name>widget-grid</name>
    <value>samples/RMOUG/rmoug.widgetgrid.xml</value>
  </preference>
  <preference>
    <name>drill-uri</name>
    <value>/
    pentaho/ViewAction?&amp;solution=samples&amp;path=RMOUG&amp;action=rmoug_drill.xaction
  </value>
  </preference>
  </portlet-preferences>
</portlet>
```

---

# Open Source BI: Alternative Solutions for Reporting

```
<deployment>  
  <if-exists>keep</if-exists>  
  <instance>  
    <instance-id>RmougInstance</instance-id>  
    <portlet-ref>RmougPortlet</portlet-ref>  
    <security-constraint>  
      <policy-permission>  
        <action-name>view</action-name>  
        <role-name>Authenticated</role-name>  
      </policy-permission>  
    </security-constraint>  
  </instance>  
</deployment>
```

---

# Open Source BI: Alternative Solutions for Reporting

```
<deployment>
  <parent-ref>pentaho</parent-ref>
  <if-exists>keep</if-exists>
  <page>
    <page-name>RMOUG</page-name>
    <properties>
      <property> <name>order</name>
        <value>10</value>
      </property>
      <property> <name>resourceKey</name>
        <value>RMOUG</value>
      </property>
    </properties>
    <window>
      <window-name>PentahoPortalNavigationWindow</window-name>
      <instance-ref>PentahoPortalNavigationInstance</instance-ref>
      <region>pnavigation</region>
      <height>0</height>
      <properties>
        <property> <name>theme.windowRendererId</name>
          <value>emptyRenderer</value>
        </property>
        <property> <name>theme.decorationRendererId</name>
          <value>emptyRenderer</value>
        </property>
        <property> <name>theme.portletRendererId</name>
          <value>emptyRenderer</value>
        </property>
      </properties>
    </window>
    <window> <window-name>RmougWindow</window-name>
      <instance-ref>RmougInstance</instance-ref>
      <region>left</region>
      <height>1</height>
    </window>
  </page>
</deployment>
```

# Open Source BI: Alternative Solutions for Reporting



## Pentaho Business Intelligence Platform Portal Demo

Home | Getting Started | Reporting | Business Rules | Printing | Bursting | Dashboard | [



# Open Source BI: Alternative Solutions for Reporting

## Report

Choose Report Output Format.

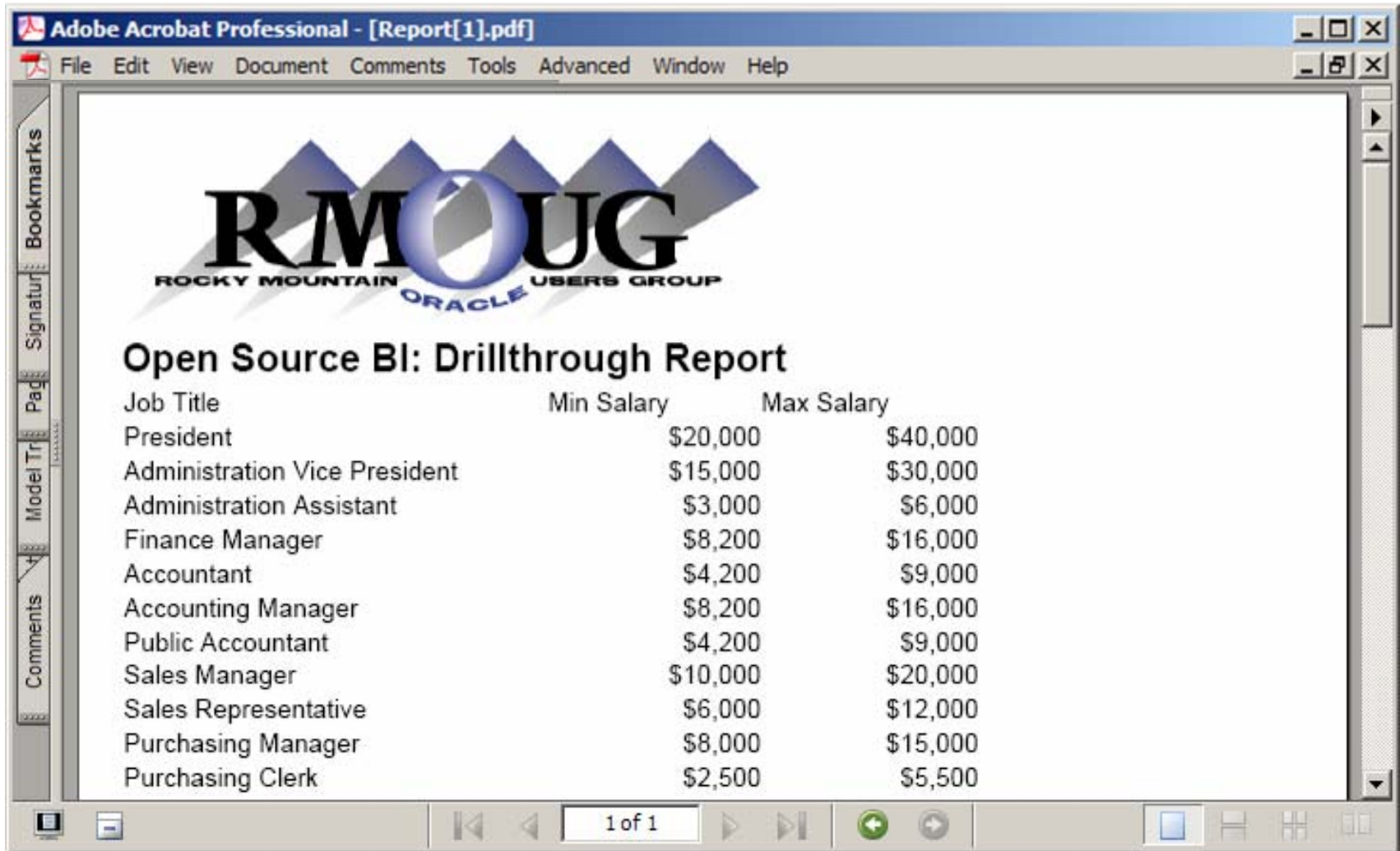
Choose Report Format

PDF  Excel  Word  Web Page  Comma Separated Value

Run Report

Run in Background

# Open Source BI: Alternative Solutions for Reporting



The screenshot shows a PDF document titled "Open Source BI: Drillthrough Report" displayed in Adobe Acrobat Professional. The document features the logo for the Rocky Mountain Oracle Users Group (RMOUG) at the top. Below the logo, the report title is followed by a table listing various job titles and their corresponding minimum and maximum salaries.

Job Title	Min Salary	Max Salary
President	\$20,000	\$40,000
Administration Vice President	\$15,000	\$30,000
Administration Assistant	\$3,000	\$6,000
Finance Manager	\$8,200	\$16,000
Accountant	\$4,200	\$9,000
Accounting Manager	\$8,200	\$16,000
Public Accountant	\$4,200	\$9,000
Sales Manager	\$10,000	\$20,000
Sales Representative	\$6,000	\$12,000
Purchasing Manager	\$8,000	\$15,000
Purchasing Clerk	\$2,500	\$5,500

---

# Open Source BI: Alternative Solutions for Reporting

## ■ Build Order

- ❑ Source Data – Kettle
  - ❑ SQL – You
  - ❑ Build Report – Pentaho Report Builder
  - ❑ Build XAction – Pentaho Design Editor
  - ❑ Configure JBoss Data Source
  - ❑ Configure Portal
-

---

## Open Source BI: Alternative Solutions for Reporting

- Break into parts during development
  - Small steps make debugging much easier
  - Use the Pentaho Forums
  - Lots of examples
  - Use your database – repeat this mantra
  - New installer can install JBoss/embedded database as services
-