



Working with Query Objects

Intellicus Web-based Reporting Suite **Version 4.5**



Enterprise
Professional
Smart Developer
Smart Viewer


intellicus
Enterprise Reporting
©Intellicus Technologies
info@intellicus.com
www.intellicus.com

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For details, visit: <http://www.intellicus.com/acknowledgements.htm> .

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Query Objects

Query objects are the queries (which also has some more information in addition to pure queries) that are designed and stored in Intellicus. These query objects are then used to design reports.

To get the Query page

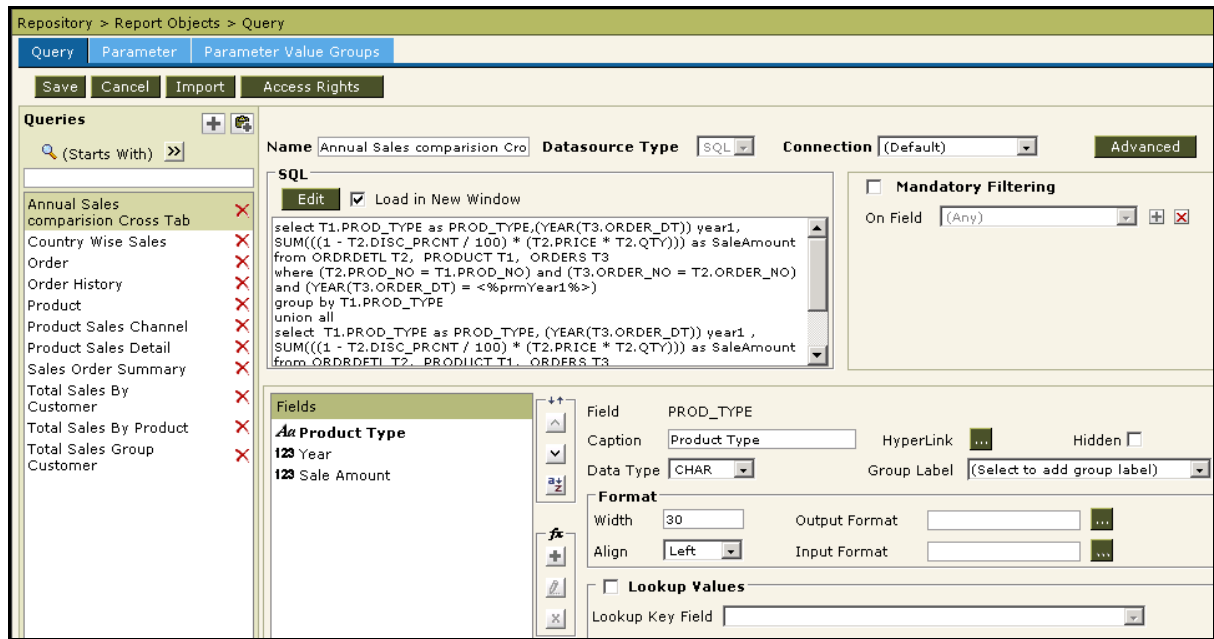


Figure 1: Query Object page

1. On Intellicus Web Portal, click **Repository > Report Objects**.
2. Click **Query** tab. **Query** tab is placed in front.

To get a filtered list of Queries

List of queries can be filtered by:

- Starting character (Starts with)
- Characters that appear anywhere in the query name (Contains)

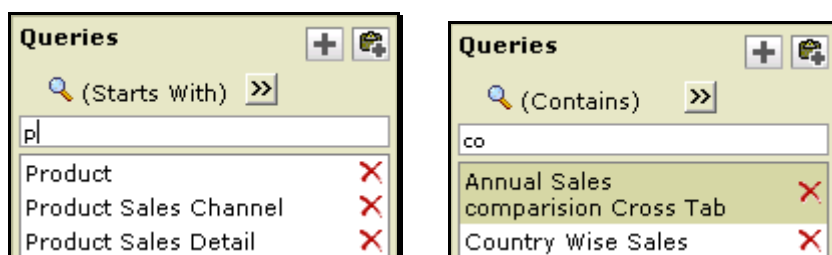


Figure 2: Getting filtered list of queries

1. On **Query** page, check the option on right of 🔍 .
2. To get the right option there, click ➡ and select *Start with* or *Contains*.
3. Specify character(s) in the textbox.

The list will be filtered (not case sensitive) as per the criteria.

General steps of designing a new query object

Mandatory steps

1. Specify name and data source (type and connection) related information.
2. Specify SQL / XML.
3. Save.

Optional activities

- Specify formulas.
- Set Field properties
 - Look and feel / formatting
 - Field Grouping
 - Hyperlinking
 - Lookup values
 - Mandatory filtering

Details of steps / activities is explained below.

To create a copy of an existing query object

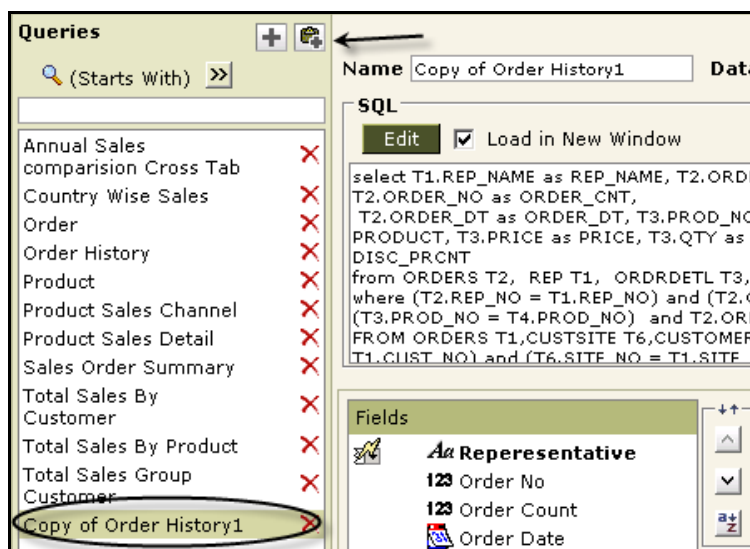



Figure 3: Creating a copy of an existing query

1. On **Query** page, select the query that you want to copy.
2. Click the  button.

A query object will be created having contents same as the one that was copied. This new query object's name is prefixed with "Copy of". You can select this query object and rename it.

To design a new SQL based query

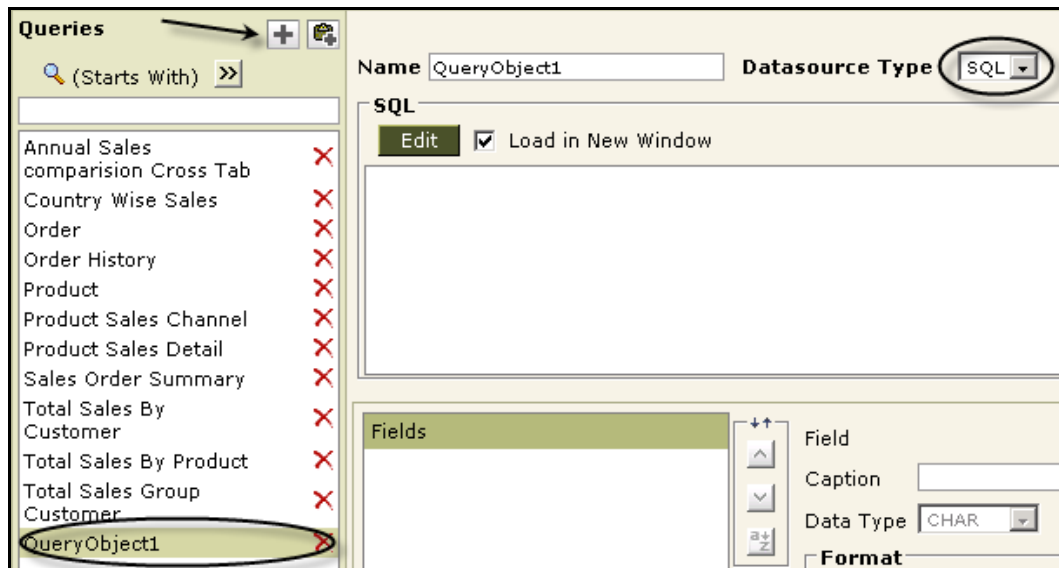



Figure 4: SQL based query object

1. Click  button.
2. In **Name**, specify unique name for this query object.
3. From **Connection**, select database connection.
4. In **Datasource Type**, select *SQL*.
5. Click **Edit** button to design SQL.
6. A click on **OK** will close **SQL Editor** and the SQL will appear in the SQL area. Fields will appear in **Fields** area.
7. Click **Save** button to save the work.



Note: To open **SQL Editor** in a new window, select **Load in New Window** check box. If it is not selected, it will appear in the same window.

To design a new XML based query

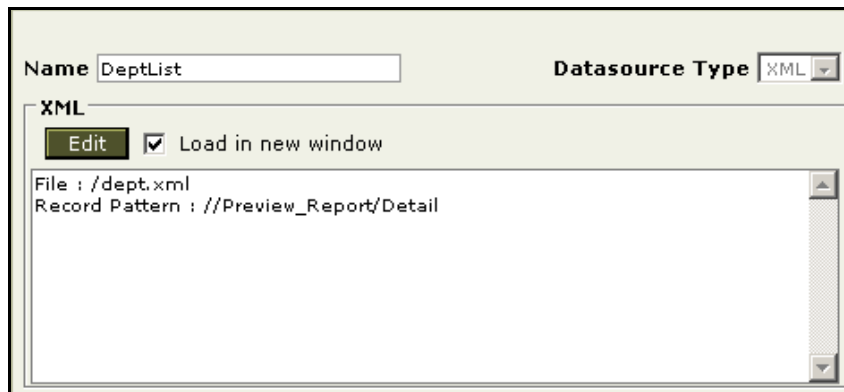



Figure 5: XML Based query object

1. Click  button.
2. In **Name**, specify unique name for this query object.
3. From **Connection**, select database connection.
4. In **Datasource Type**, select *XML*.
5. Click **Edit** button to get **XML Source** dialog box and provide required information to get XML.
6. After you click **OK** on **XML Source** dialog box, fields will appear in **Fields** area.
7. Click **Save** button to save the work.



Note: To open **XML Source** dialog box in a new window, select **Load in New Window** check box. If it is not selected, it will appear in the same window.

Access Rights to use a Query Object

After a query object is setup, it is available to all the users (everyone). You can grant or revoke access rights to use a query object.



Figure 6: Access rights for a query object

To Provide access rights for selected query object,

1. Select the query object and click **Access Rights** button.
2. Select organization name to provide rights to all the users within that organization.
3. Select checkbox to provide rights to respective user / role.
4. Click **Set** button. This will save the changes and close the dialog box.

Advanced Properties

Properties set here will be applicable to all the reports where this query is used.

Figure 7: Advanced Properties on Query page

For description of properties, refer to section **Advanced Properties** in **WorkingWithFoldersAndReports.pdf**.

Fields Attributes (properties)

The screenshot shows a 'Field Attributes' dialog box for a field named 'PRODUCTNAME'. The 'Caption' is 'Product Name'. The 'Data Type' is set to 'CHAR'. The 'Width' is '30' and 'Align' is 'Left'. There are buttons for 'HyperLink', 'Hidden' (checkbox), and 'Group Label' (dropdown). The 'Format' section has 'Input Format' and 'Output Format' buttons.

Figure 8: Field Attributes (properties)

- **Field:** Name of field (as per received from data source).
- **Caption:** The text that will appear as caption when this field is selected for placement on the report.
- **Width:** Number of characters for selected field.
- **Align:** To set the alignment for selected field.
- **Hidden:** To keep the field not available to be placed on report. This field will also not be available for sorting as well as filtering.
- **Data Type:** To set data type for field from *Date*, *Character* or *Number*. This is especially useful when field selected is XML type data source and you need to set it as number or date. Similarly when a field that is character (having numeric value) is supposed to be used in calculation.

To specify input format for a field

When you specify input format for a field, at run time, the application will accept data in the format specified.

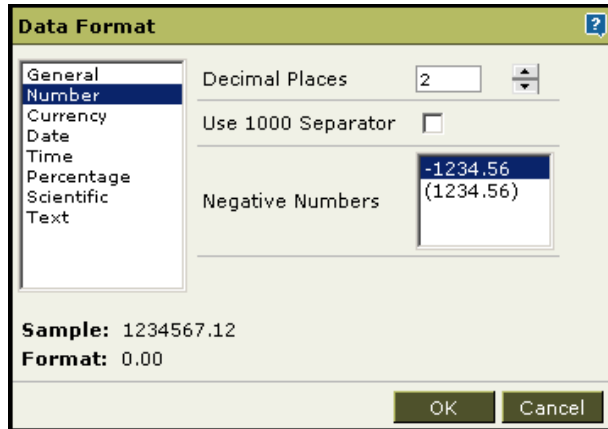


Figure 9: Specifying Data Format for the field.

1. From Fields list, click the field that needs to be accepted in a specific format.
2. Click the ... button on the right of the **Input Format** entry box. A dialog box opens.
3. Select the suitable format and provide necessary values for the selected format.
4. Click **Ok** to accept the changes and close the dialog box. Characters for selected format appears in the **Input Format** entry box.

To specify output format for a field

When you specify output format for a field, values of respective field will appear in that format on report.

1. From **Fields** list, click the field that needs to be accepted in a specific format.
2. Click the ... button on the right of the **Output Format** entry box. A dialog box opens.
3. Select the suitable format and provide necessary values for the selected format.
4. Click **Ok** to accept the changes and close the dialog box. Characters for selected format appears in the **Input Format** entry box.

Fields grouping

When fields in a QO are grouped, they appear within a group header in adhoc report wizard. All the fields of the group can then be selected or removed from report with single click.

After creating groups, fields can be assigned to a group.

To create groups,



Figure 10: Creating groups

1. In **Group Label** dropdown box click *(Select to add group label)* option.
2. Specify group name.
3. Repeat steps 1 and 2 to create more groups.

To assign a group to fields,

1. From **Fields** list, select the field.
2. From **Group Label** dropdown box, select a group.


Selected field will be part of that group.



Formula fields

These are the fields that are not received from database, such as gross salary, or grand total. Formula fields are created and used to handle such need. They are created for report processing. They cease to exist once report is generated.

Formula fields can be created and embedded in a query object. A formula field may have all the fields as well as formulas existing in the QO.

To create a formula,

1. Click  button to get **Formula** dialog box.
2. Set up the formula and click **OK** to save the formula and close the dialog box.
3. Formula will be listed in **Formula** list.

Select a formula and click  or  button to shift selected formula up or down. A formula lower side in the list can use formula on upper side of the list. Opposite should be avoided.

Specifying formula

On **Formula** dialog box,

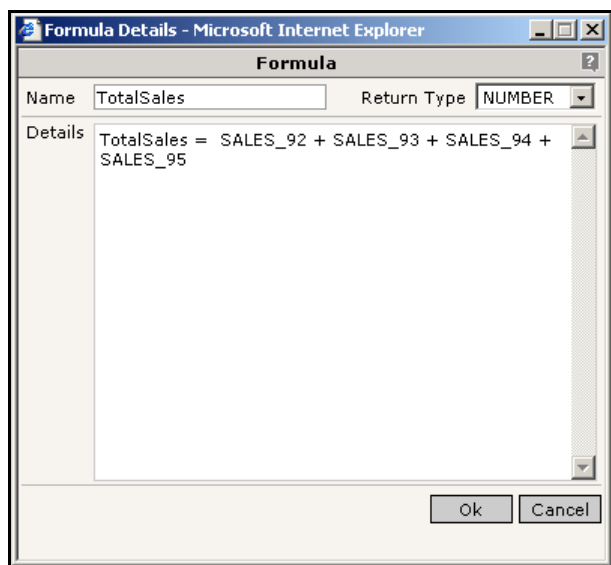


Figure 11: Formula dialog box

1. In **Name** entry box, specify a name to uniquely identify this formula.
2. In **Return Type**, select the type of the value the expression is going to return.
3. In **Details** box, specify the formula. (The details are given after these steps).
4. Click **OK** to save the work and close the dialog box.

The formula is saved and the dialog box is closed.

General syntax for formula is:

FormulaName = formula (where, FormulaName is the same as specified in the **Name** entry box).

Follow JavaScript Syntax to create a formula. To create a formula, you can use field names and define variables. A formula may have 'if' construct as well as 'nested if' construct. You can use logical operators too. If want to add more than one statements in formula, use semicolon ';' as separator between two statements.

Example

- NewForm1 = var a = 5 ; b = 3 ; if (a!=b) { f = a } {NewForm1=f}
- TotalAmount = var total ; if (unitprice < 10) {total = unitprice*quantity} else {total = unitprice} {TotalAmount = total}

Importing field attributes

You can field attributes for a selected field. By importing field attributes for a selected field, you save time spent in manually setting those attributes. This is done on **Import Formatting** dialog box. From one or multiple you can import following attributes:

- Caption
- Width
- Alignment option
- Format option
- Data Type
- Hidden property
- Group label
- Hyperlink
- Lookup Values

You can select field attribute (to be imported) from a field of any of the saved query objects.

Getting Import Formatting dialog box

On **Query Object** page, select the right query object and click **IMPORT** button.

Import Formatting dialog box opens.

Source Query: Product Sales Channel Source Field: CHANNEL

☐ All

☒ Caption: Channel ☒ Hidden: No ☒ Data Type: CHAR

☒ Group Label:

☒ Hyperlink:

DRILLDOWN:REPORT_ID=4429A042-97C5-1D04-EAFB-980BD542357D;ACTION_CODE=002;MENU_NAME=Product Sales Details by Channel:CATEGORY_ID=4F9245A7-D639-4F99-604D-

Format:

☒ Width: 45 ☒ Output Format:

☒ Align: Left ☐ Input Format:

☒ Lookup Values

☒ Lookup Key Field:

☒ SQL ☒ XML ☒ Predefined

☒ Fetch on Every Use: No

select DISTINCT ORDERS.CHANNEL from ORDERS order by ORDERS.CHANNEL

Display Column: CHANNEL

Value Column: CHANNEL

Target Field: PROD_TYPE

OK Cancel Apply

Figure 12: Import Formatting dialog box

Selecting one or more field attributes

Select field attribute from a field from any of the saved query objects.

1. On **Import Formatting** dialog box, from **Query Object** dropdown box, select a QO.
2. From **Field** dropdown box, select the field. Formats from this field can be copied.
3. Select attributes to import by clicking respective checkboxes.

Applying selected attributes to a target field

1. On **Import Formatting** dialog box, from **Target Field**, select the target field.
2. Click **Apply** button.

To apply selected attributes to another target field, repeat these steps.



Note: Attributes that can be applied to a target field will depend on data type of source field as well as target field. Lookup values can't be imported if data type of target field is Number.



Important: Action of importing attributes can't be revoked. So, make sure you are importing the right attributes before clicking **Apply** button. Click **Cancel** button to abandon selections made after latest click of **Apply** button and close the dialog box. Click **OK** to close the dialog box.

Importing attributes from multiple fields

1. On **Import Formatting** dialog box, from **Target Field**, select a target field.
2. From **Query Object** dropdown box, select a QO.
3. From **Field** dropdown box, select the field. Attributes from this field can be imported.
4. Select attributes to import by clicking respective checkboxes.
5. Click **Apply** button.
6. Repeat steps 2 through 5 until you are finished with copying all the required attributes.
7. Click **OK** to close the dialog box.

Mandatory Filtering

Use this feature in case you want your business users apply one or more filters while creating and running an adhoc report. By doing this, you are saving unnecessary data-transfer that take place from database server.


Mandatory Filtering	
On Field	PROD_TYPE
On Field	PROD_LINE
On Field	Any


Figure 13: Setting up Mandatory Filters in Query Object

Mandatory filtering can be setup in two ways:

- **Mandating filtering on any field.** User can decide the field to filter on, at the time of designing an adhoc report.
- **Mandating filtering on a specific field.** User would have to filter on the fields specified while designing an adhoc report.

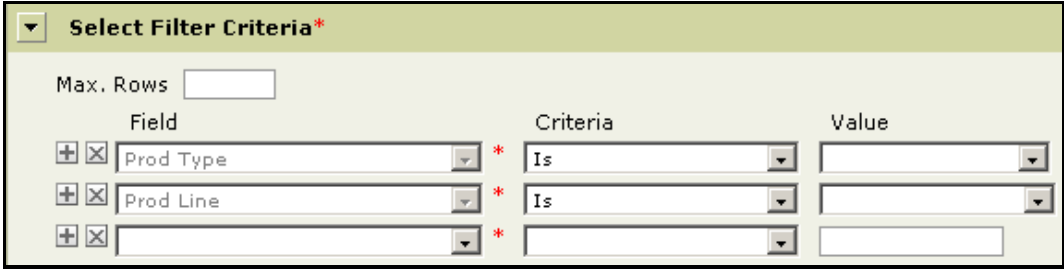
To setup mandatory filtering

1. Select (Check) **Mandatory Filtering** check-box.
2. To specify a field for mandatory filtering, specify it in **On Field** dropdown box. If you do not want to specify a field for mandatory filtering now, leave it as *Any*.
3. Click  button to get another row for mandatory filtering. Repeat step 2.

To remove a mandatory filtering related row, click  button available on the right side of that row.

Effect of Mandatory Filtering on Adhoc Report Wizard

On Adhoc Report Wizard when a user selects a Query Object (Data source) that has Mandatory Filter setup, title of **Select Filter Criteria** also includes a star.



Field	Criteria	Value
Prod Type	Is	
Prod Line	Is	

Figure 14: Effect of Mandatory Filtering on Adhoc Report Wizard

In addition to that, if a field was setup while setting up mandatory filter, there will be one row for each field (mandatory filter) that was setup. Its dropdown box will be disabled and will have a star mark.

For each mandatory field with “Any” as selected value, Field drop down box will be enabled, and will also carry a star mark.

The person working on it has to provide filters for all the rows where star mark is present.

To specify a hyperlink on a field

When you make a field a clickable hyperlink, you can link a URL or a report with that report. You can make "drill-down" reports using hyperlinked field.

General steps to make a field hyperlink

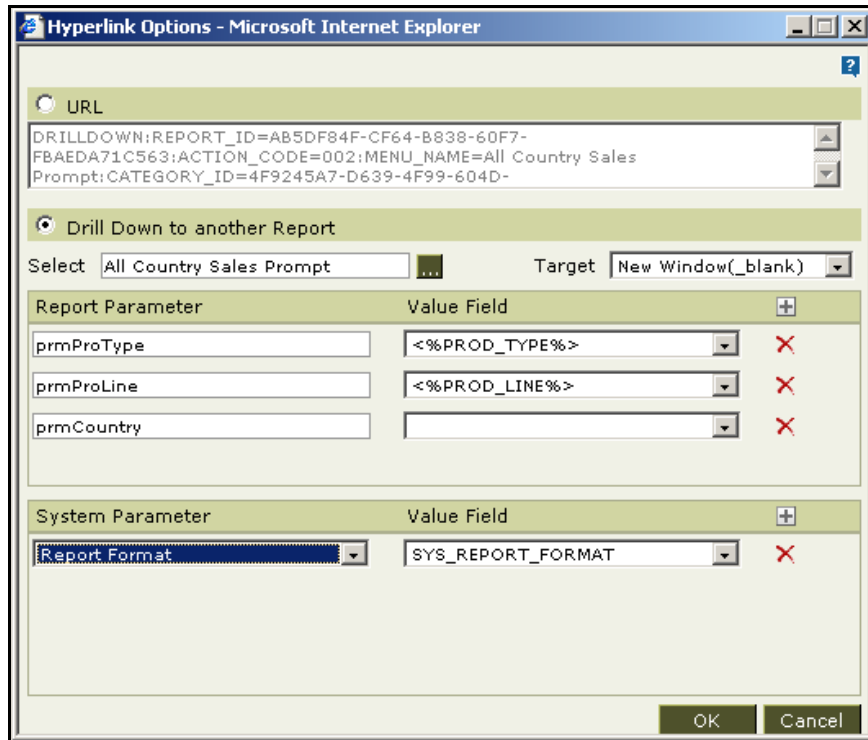



Figure 15: Hyperlink Options dialog box

1. Click  button on the right of **Hyperlink** caption. **Hyperlink Options** dialog box will open.
2. Depending on the type of hyperlink needed, specify values for URL or **Drill Down...**
3. Click **Ok**.

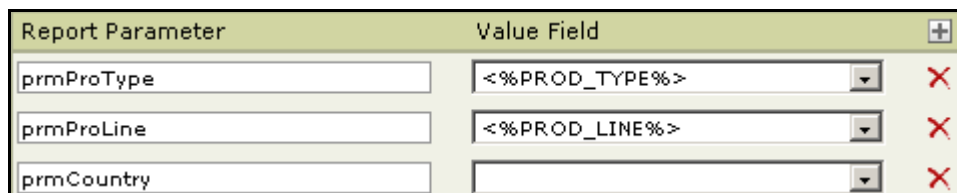
Hyperlink the field to open a specific URL

On **Hyperlink Options** dialog box,

1. Click **URL** option button.
2. In the box provided below **URL** option button, specify the URL.
3. In Target, select the way to open the URL.
4. Click **Ok**.



Hyperlink the field to open a specific report

On **Hyperlink Options** dialog box,





Report Parameter	Value Field	
prmProType	<%PROD_TYPE%>	X
prmProLine	<%PROD_LINE%>	X
prmCountry		X

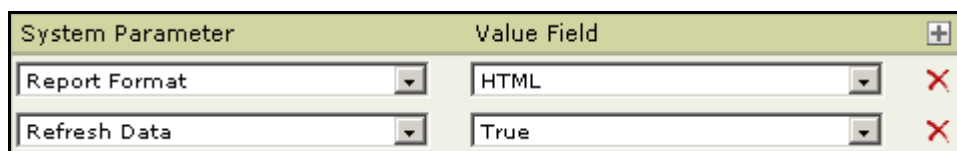
Figure 16: Setting up report parameters in Hyperlink Options dialog box

1. Click Drill down to another report option button.
2. In **Select** entry box, select the report that should open when the hyperlink is clicked.
3. Select the most appropriate option for Target. This is the way report in the hyperlink will open.
4. Specify **Report Parameter** and the value field if the report needs any report parameters to run. **Report Parameter** is the parameter in the report being set as hyperlink. Value field is the field within the report that will have hyperlink. Click  to add a row. Click  to delete respective row.



Note: A report may have mandatory parameters. If value of mandatory parameters are not specified, they may not get executed.

Specify **System Parameter(s)** and their value(s) to be considered for the report being set as hyperlink. Detail is provided below these steps. Click  to add a row. Click  to delete respective row.



System Parameter	Value Field	
Report Format	HTML	X
Refresh Data	True	X

Figure 17: Setting up system parameters in Hyperlink Options dialog box

System parameters and their values

- **Priority:** low, medium, high.
- **Report Format:** SYS_REPORT_FORMAT (to use the format of the report from where hyperlinked report is run), HTML, ACROBAT PDF, JVISTA, COMMA SEPARATED, TEXT, MS EXCEL, XML, INTERACTIVE, MS WORD.
- **Report Connection Name:** Select the database using which the report should be run.
- **Save File Name:** File name to be used if the file is published as implicit operation.

-
- **Implicit Operation:** In addition to view the file, if report needs to be published, select Publish.
 - **Refresh Data:** Select True to run report with latest data. Select False to run report with cached data.
 - **Prefetch Drilldown:** To start generating hyperlinked report even if user has not clicked hyperlink to run the report.
 - **Pagination:** Select the right option as per need to break pages by *Single Page* (increase page width and length to any size), *Multiple Page* (divide in width, divide in length as per need) and *Horizontal Breaks* (divide in length only, increase width to any size).
 - **Show HTMLtoolbar:** When viewed in HTML, set Yes to have HTML Toolbar, set No for not having toolbar and set Multipage to have toolbar only if report is extended to more than one page.

Lookup Values for text field

Lookup values are used to set a filter at report design time as well as run time.

Query objects are generally used in adhoc report wizard, the report design tool for business users. Lookup values are setup for the fields on which user may decide to set filtering at report design time (on adhoc report wizard) or at report run time.

On adhoc report wizard, when user sets up a filter on a field, lookup values for the field are listed in a dropdown box. User can select a value and proceed further with report designing.

Similarly, at run time, a dialog box will appear having the field name and the lookup values listed in a dropdown box. The query will be run with the filter values specified.

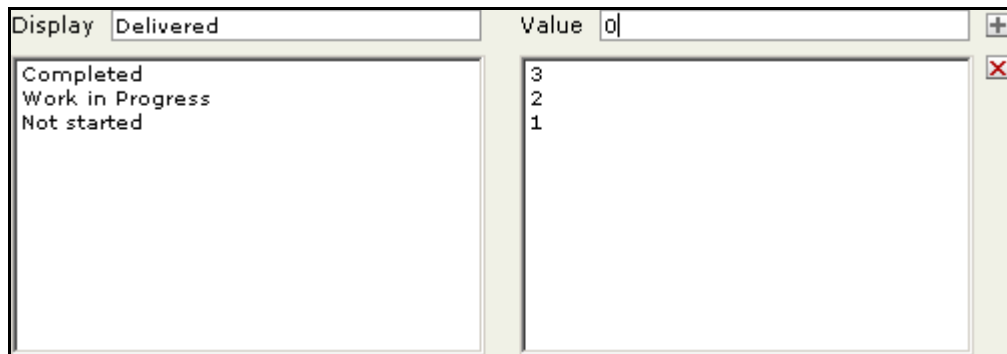
Lookup values can be defined in any of the following ways:

- **Predefined:** To specify static values.
- **XML:** To get values from an xml source.
- **SQL:** To get values from values from database using an SQL (used in the main query or from a query setup exclusively). This way you make sure that user selects valid options.

Key Field: This is the key field of the table used in main query. Performance is greatly improved if key field is specified.


Predefined Lookup values

To setup predefined lookup values,



Display	Value
Completed	3
Work in Progress	2
Not started	1

Figure 18: Setting up Pre-defined lookup values

1. From **Fields** list, select the field for which lookup values are being setup.
2. If not checked, check (select) **Lookup Values** checkbox.
3. Click **Predefined** link.
4. In **Display** entry box, specify the value that should be presented to the user.
5. In **Value** entry box, specify the value that should be considered for use, when user selects value specified in Display.
6. Click  button to add the value set in list of lookup values.

Repeat the steps 4, 5, 6 to add all the pre-defined lookup values. Click **Save** button.

SQL for lookup values

☒ **Lookup Values**

Lookup Key Field

☒ [SQL](#) ☐ [XML](#) ☐ [Predefined](#)

☒ User Defined SQL [Edit](#) ☐ Fetch on Every Use

select DISTINCT PRODUCT,PRODUCT from PRODUCT order by PRODUCT,PRODUCT

Display Column

Value Column

Values

- 2.5 mm Flashing EarPhone
- AC/DC Car Charger
- Audiovox XV-6600
- Body Glove EarGlove
- Cellboost Disposable Charger
- DG VX6100

Figure 19: Specifying User Defined SQL for getting lookup values

1. From **Fields** list, select the field for which lookup values are being setup.
2. If not checked, check (select) **Lookup Values** check box.
3. Click **SQL** link.
4. Check (select) the **User Defined SQL** checkbox to specify separate SQL for getting lookup values from database. Keeping this check-box unchecked (clear) will get distinct values using the SQL defined for the main query object.
5. Check **Fetch on Every Use** check-box to refresh the list of values at query design time, report design time as well as report running time. Keeping it clear will fetch values at query design time only. Values will be placed in the query object that will be used at report design time and report run time.
6. From **Display Column** dropdown box, select the column to be used to display value to the user (only when SQL is user defined).
7. From **Value Column** dropdown box, select the column that will be used in filter (only when SQL is user defined).
8. Click **Save** button.

XML for lookup values

☒ **Lookup Values**

Lookup Key Field

☐ [SQL](#) ☒ [XML](#) ☐ [Predefined](#)

☒ **User Defined XML** [Edit](#) ☐ **Fetch on every use**

File : /xml-emp.xml
Record Pattern : //Preview_Report/Detail

Display Column

Value Column

Values

- Vice President, Sales
- Sales Representative
- Sales Representative
- Sales Manager

Figure 20: Specifying user defined XML for Lookup values

1. From **Fields** list, select the field for which lookup values are being setup.
2. If not checked, check (select) **Lookup Values** check box.
3. Click **XML** link.
4. Check **User Defined XML** checkbox to specify the XML and select **Record Pattern**.
5. Check **Fetch on Every Use** checkbox to refresh the list of values now (while setting up QO), report design time as well as report running time. Keeping it clear will fetch values now (while setting up QO). Values will be placed in the QO and will be used at report design time and report run time.
6. From **Display Column** dropdown box, select the column to be used to display value to the user (only when XML is user defined).
7. From **Value Column** dropdown box, select the column that will be used in filter (only when XML is user defined).
8. Click **Save** button.



Note: In order to include the look up values, you need to select the respective checkbox (SQL, XML, Predefined). At a time, SQL, XML as well as Predefined can be included in list of lookup values. Lookup values' list appears in Values box after clicking **Save** button.

Modifying a Query Object

On Query page,

1. Select a query object.
2. Details of the selected query object appear.
3. Make changes where required.
4. Click **Save** button to make the changes permanent.

Deleting a Query Object

On Query page,

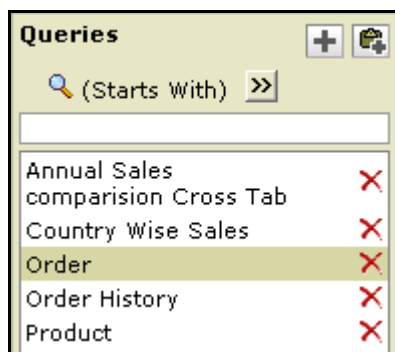



Figure 21: Deleting a Query Object.

1. Select a query object.
2. Click  button in that row. The selected query object is deleted and is removed from the list.
3. Click **Save** button to make the changes permanent.

SQL Editor

SQL Editor is used to create and SQL. This SQL is used in report and Query Object.



Note: Date and time when metadata of the selected entity was refreshed appears on the top of the SQL Editor.

SQL Editor on the left side lists Entities and attributes in the selected entity. The area on the right side is divided into multiple tabs:

- **Design tab:** Use this tab to design relatively simpler queries using drag and drop method.
- **Edit:** SQL designed on Design Tab is represented as an SQL statement on this tab. You can also write or paste and SQL here.
- **Errors:** Errors if any in the SQL statement are displayed on Errors tab.
- **Results:** Rows received as a result of SQL execution are displayed here.
- **Sort:** To specify sorting preferences.
- **Filters:** Set runtime filter criteria on this tab.
- **Procedures:** This tab is brought in front when procedure is selected. Specify procedure related details on this tab.



Note: Use **Sort** tab and **Filter** tab only from **Web Studio**. For SQL used in a Query Object, users will specify Sort and Filter on Adhoc Wizard.

Getting a list of database objects

First line indicates the database connection that will be used to get database objects list.

1. Select any of the objects among **Table**, **View**, **Procedure** and **Synonym**.
2. Entities available on selected connection are listed. At a time, the list displays a pre-set number of entities. If the entity you are looking for is not available in the list, use the drop-down box options to view another set of entities. To get next list, click **Next** link. To get previous list, click **Prev** link.

Design Tab

Simple SQL Queries can be designed using Design Tab.

1. Select the source of entities among **Table**, **View**, **Procedure** and **Synonym**. Entities available are listed in **Entities**.
2. Click the entity from the **Entity** list to get list of attributes of that entity.
3. Click and drag the attributes to the box under Select. Value automatically appears in **From** clause.

Repeat the steps 1 through 3 to select attributes from different entities.



Note: You can select attributes from multiple entities.

Where

To get a row at the top

Click the '+' in the leftmost cell of column header. This inserts a row at the top.

To get a row below current row

Click '+' in the row below which you want to add a row for condition. A row will be inserted in the row below the respective row.

To remove a condition

Click 'x' button in respective condition row.

To specify a where clause

- Form a condition by selecting **Operand1**, **Operand2** and **Operator**.
- To join conditions, form two conditions and select a relation in rightmost column of the first condition (of the two being joined).
- To group conditions specify opening brace and closing brace in the right row.

Group By

In the Group By clause you can provide grouping criteria for the SQL statement. To place an entity in Group By, click the entity in the Entity List and drag it in the box below Group By.

Having

The procedure to complete Having clause is the same as that of Where clause.



Note: Do include appropriate summary function in select clause so that it can be used in **Having** clause.

Order By

In the Order By clause you can provide sorting (ascending/ descending) criteria for the SQL statement. For a report with grouping, the order by clause must have the columns in the same order as of the respective sections in the Layout Editor.

Edit tab

On Edit tab, you can view and write complex SQL statements that cannot be defined using the Design tab. From Design tab, when you come to Edit tab, the SQL in the Design tab is constructed and displayed as a complete SQL statement.

You can also write dynamic SQL Queries on Edit tab.

The SQL statement in the Edit tab will be used as the final SQL for compilation.

From Edit tab, if you switch over to Design tab, make changes and get back to Edit tab, you will be prompted with a dialog. This is to prevent a complex query (defined in the Edit tab) from being over written when from Edit tab you switch over to the Design tab, make some changes, and return to Edit tab.

On that dialog, select Yes to reconstruct SQL designed on Design tab and replace existing SQL on Edit tab. Select No to retain the SQL on Edit tab and use it as the final SQL.

Dynamic SQL Queries

Using parameters

To include a parameter in the SQL Query, specify a parameter enclosed within <% and %>.

Example: To dynamically decide where clause:

```
SELECT * FROM EmpTbl WHERE <%PrmWhrCls%>
```

Using javascript code block

Use javascript code block enclosed by <@% and %@> to create a dynamic SQL Query. After execution, the code block should return a string that will be replaced in the SQL query.

You can use following in the code block:

- if else
- Parameter value and parameter data type

Syntax of Code block

```
<@% >
[Executable block, which returns a string]
<%@>
```

Syntax to use parameter in code block

```
params("parameterName").getAttribute()
```

Attributes: "Value" to get value of the parameter and "DataType" to get data type of the parameter.

Examples

Example 1. Check if parameter "prmEmpNo" exists. If it does and its value is not blank, return the value, else return nothing.

```
Select * from emp where 1=1
<@%
if(params("prmEmpNo") != null &&
params("prmEmpNo").getValue() != "")
{
return " AND empno in <%prmEmpNo%>";
}
else
{
return "";
}
%@>
```

Example 2. Check if parameter "prmSelectTable" exists. If it doesn't, return table name as "emp" else (if it exists) value of the parameter to be used as table name.

```
Select * from
<@%
if(params("prmSelectTable") == null)
{
return "emp";
}
else
return params("prmSelectTable").getValue();
}
%@>
```

Example 3. Construct WHERE clause dynamically (for LOCATIONTYPEID and REGNID fields).

```
select      LOCTIONID,      LOCTIONNAME,LOCTYPEID,REGNID      from
LOCATIONMASTER where 1=1
<@%
var v_Str;
v_Str = '';
var v_Str1;
var v_Str2;
var v_Str1='';
var v_Str2='';

if(params("prmloctype") != null &&
params("prmloctype").getValue() != "")
{

v_Str1 = " AND LOCATIONTYPEID in (<%prmloctype%>)";
}
else
{
v_Str1 = "";
}

if(params("prmRegion") != null &&
params("prmRegion").getValue() != "")
{
v_Str2 = " AND REGNID = <%prmRegion%> ";
}
else
{
v_Str2 = "";
}

v_Str = v_Str1 +v_Str2;
return v_Str;
%@>
```

Result

When you select the **Result** tab, the defined SQL statement will be compiled. Record-set will be displayed in case of successful completion. If there was any error, same tab will display the error. This would help you in finding the exact location of error(s), and rectify them.

Sort

This tab is used to specify levels of sort at run time.

- **Prompt:** Select this check box to get sort dialog box at report-run time. User will be able to provide sorting options on the dialog box.
- **Qualifier:** When SQL is typed in **Edit** tab, fields may not be prefixed with table name and so, Available Fields list also don't have table names prefixed. Select a field and specify table name to associate it with a table. This is especially useful when you get the same field name from two tables and wish to differentiate one from another.
- **Count:** Select the number of sort levels to be made available to user. For example you want user to be able to provide three sort choices at run time (e.g. by Country, State and county), select 3.
- **Disable Forced Sorting:** If due to any reason, result-set received from data-source is not sorted as per need (like grouping), Intellicus server will sort the data. Check this checkbox to stop Intellicus from doing so.



Important: Data sorting performed by Intellicus becomes significantly time-intensive process when a record-set has large volume of records. In that case, we recommend not to **Prompt** and check **Disable Forced Sorting**. This will make sure Intellicus uses data as it is received from data-source.

The fields listed in **Available Fields** are the fields that will come from database. The fields listed in **Selected Fields** will be available for sorting at run time.

- To move a field from **Available Fields** list to **Selected Fields** list, select a field from **Available Fields** list and click > .
- Click >> to move all the fields to **Selected Fields** list.
- To move a field from **Selected Fields** list to **Available Fields** list, select a field from **Selected Fields** list and click < .
- Click << to remove all the fields from **Selected Fields** list.

Based on the number selected in **Count** check box, that many dropdown boxes will appear on an input form at the run time. You can select fields that should appear by default along with default order (ascending or descending).

In Default Fields select the field, and the sort order. Click 'x' button to delete that row. Pressing enter key in last row will append a row at the bottom. Select a row and Use Up or Down arrow button to modify the sequence of field-appearance.

Filters tab

At report run time, a user may wish to receive the data that makes sense to him/her at that time. On this tab, you can set filters so that user can provide filter values at report run time.

To add filters

Select a field by clicking it (Press and hold Ctrl key and click fields to select multiple fields) to from Available Fields. Click > button to move the fields to Selected Fields list. At report run time, Adhoc tab of Input Parameter Form will have 3 rows having all of the selected fields as as dropdown. Use >> to move all the fields to Selected Fields list.

To un-select a field, click the field from Selected Fields list and click < button. Click << button to empty Selected Fields list.

- **Qualifier:** When SQL is typed in Edit tab, fields may not be prefixed with table name and so, Available Fields list also don't have table names prefixed. Select a field and specify table name to associate it with a table. This is especially useful when you get the same field name from two tables and wish to differentiate one from another.
- **Max Rows:** The maximum number of records to be fetched from the database. Number specified here would appear by default on input parameter form at run time. User can change it if required at run time.
- **Suppress Duplicates:** Check this checkbox to get only one record if record has multiple records having completely duplicate values.

Field Name	Type	Data Type	Parameter	Fetch Data	Criteria	Value1	Value2	Mandato
PRODUCT.PROD_TYPE	Adhoc	CHAR		<input type="checkbox"/>	Is	Mobile Dev		<input type="checkbox"/>
PRODUCT.PROD_LINE	Adhoc	CHAR		<input type="checkbox"/>	Is	EarPhone		<input type="checkbox"/>

Figure 22: Filters tab on SQL Editor

To setup default value for filter

To get a row at the top

Click the '+' in the leftmost cell of column header. This inserts a row at the top.

To get a row below current row

Click '+' in the row below which you want to add a row for condition. A row will be inserted in the row below the respective row.

To remove a condition

Click 'x' button in respective condition row.

To setup the value

1. Select the field name from the table.
 2. Specify / select values the selected field from other columns. Details are provided after these steps.
- **FieldName:** The field name for which default value(s) is being set.
 - **Type:** Select Adhoc to use the fieldName for accepting the value. Select UserParameter get value using a pre-set user parameter.
 - **Data Type:** Specify data type of the filter parameter.
 - **Parameter:** If Type is UserParameter, specify the parameter name.
 - **FetchData:** Select this check box for the field if filter type is Adhoc and you want data should be fetched from the database. In this case value box for this field will appear as a drop-down box.
 - **Criteria:** Select criteria for the field.
 - **Value1, Value2:** Based on selected criteria, specify value1 or value1 and Value2. For example, for "Between" as criteria, you need to provide two values.
 - **Mandatory:** Select this checkbox if it is mandatory for user to provide value for this field at runtime.

Procedure

To set procedure and provide value of parameters if any

1. Click **Procedure** tab to bring it in front.
2. Click **Procedure** from the box listing database object types. Procedures are listed in Entities list.
3. Double-click an entity (procedure) to select it. **Procedure Name** appears in **Procedure Name** area. Parameters in that procedure appear in **Proc Parameter** list.
4. For each entry (parameter) in **Proc Parameter** specify a constant value or parameter name.

XML Data Source dialog box

Intellicus can get XML data from:

- XML file placed on report server
- XML File stored on a URL
- XML column of a database

To setup XML Data source,

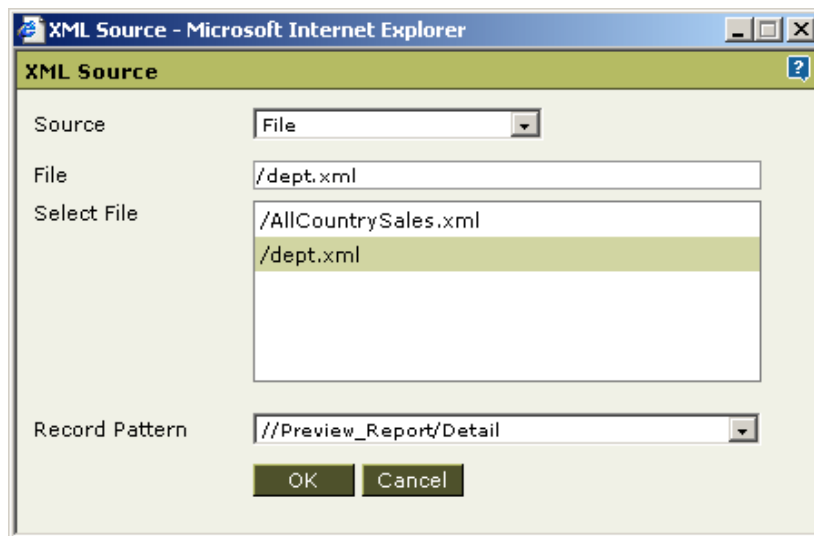


Figure 23: XML Source dialog box

1. From **Source** drop-down box, select the source to get XML data.
2. Depending on option selected for Source, specify required information. Details are provided after these steps.
3. In **Record Pattern**, select the right option that will get XML fields and data for report.
4. Click **OK**.

Source details

File

Available XML files are listed in Select File box. Double-click a file to select it. Name of selected file appears in File box. File name can also be typed in File box.

URL

Specify the URL where XML file is available.

Database

1. From **Connection**, select connection.
2. In SQL, specify SQL query to get fields. Click **Verify** button to verify SQL and get record-set.
3. Specify the column where XML data will be available.

