
Title: Db2 Web Query for i Education Series: Module 5 – Query/400 Import

Assumptions: You have installed Db2 Web Query using our “EZ-Install” package

Pre-Reqs: Modules 1-4

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EZ-Install Package

This hands-on lab is based on having installed the latest version of Db2 Web Query with the “EZ-Install” package. This package includes all the Db2 Web Query software and pre-built sample reports and utilities, including:

- Db2 Web Query Auditing reports – for example, see who is running the longest or most reports
- Sample reports for the Systems Administrator – for example, track near real time utilization across multiple LPARs/Servers.
- Ready to run Tutorials – learn how to build reports with the InfoAssist authoring tool.
- Discover information about your current Query/400 environment with the included Query/400 Discovery tool and sample reports built over the output files that the tool creates.

For information on EZ-Install and how to request it, check out this blog post at <http://Ibm.biz/db2wqezinstall-info>. Or you can always send an email to the IBM Db2 Web Query team at QU2@us.ibm.com

1 Importing a Query/400 Report

1.1 Use cases for Importing a Query/400 report

There may be times where you would want to take an existing query report and modernize it. Perhaps it is a query that is run several times a day with different selection criteria into a temp file so someone can download that into Excel. With the import function, it is a quick task to bring that query into Db2 Web Query, edit the generated report to just add filters for the selection criteria, change the output to excel and then let the users run it as they please.

When you import a Query/400 definition and then run it from Webquery you are still calling the query/400 definition through the adapter. In other words, you are now running it via a browser but still have some restrictions. For instance, if you were to edit the report after importing, the only fields available to you in InfoAssist are those that were used in the Query/400. If the Query/400 changes, you would have to re-import it. And, Query/400 has forever been using the older query optimization engine (only recently was it enable to use the new SQL Query Engine).

There are other other elements of the Query/400 environment you may want to consider:

- Redundant queries

We often see customers with large numbers of queries where many of them are doing very close to the same thing. For instance, 50 queries that are all going after data in the same files, with the same join conditions, maybe slightly different selection criteria, and maybe slightly different result fields.

The import function could easily be done to bring all 50 of these into Db2 Web Query. But do you really want 50 very similar webquery reports? Possibly, but as you've seen, there are many powerful ways to minimize the number of redundant reports with a single webquery report that allows the end user flexibility in selection criteria and output options.

- Chained Queries

Often times the limitation in Query/400's ability to deal with more complex reporting requirements meant that you had to build a query, dump the results in a temporary table, and then run another query against the data in the temporary table to get final result. While Db2 Web Query has a concept of a "hold" file that could mimic this same process...this is probably something to avoid if you can. In the next chapter you'll see a Running Totals example which would be a classic "chained query" process if you tried to do that with Query/400. In other words, Db2 Web Query is much more powerful than Query/400 and the concept of chaining can more often than not be avoided.

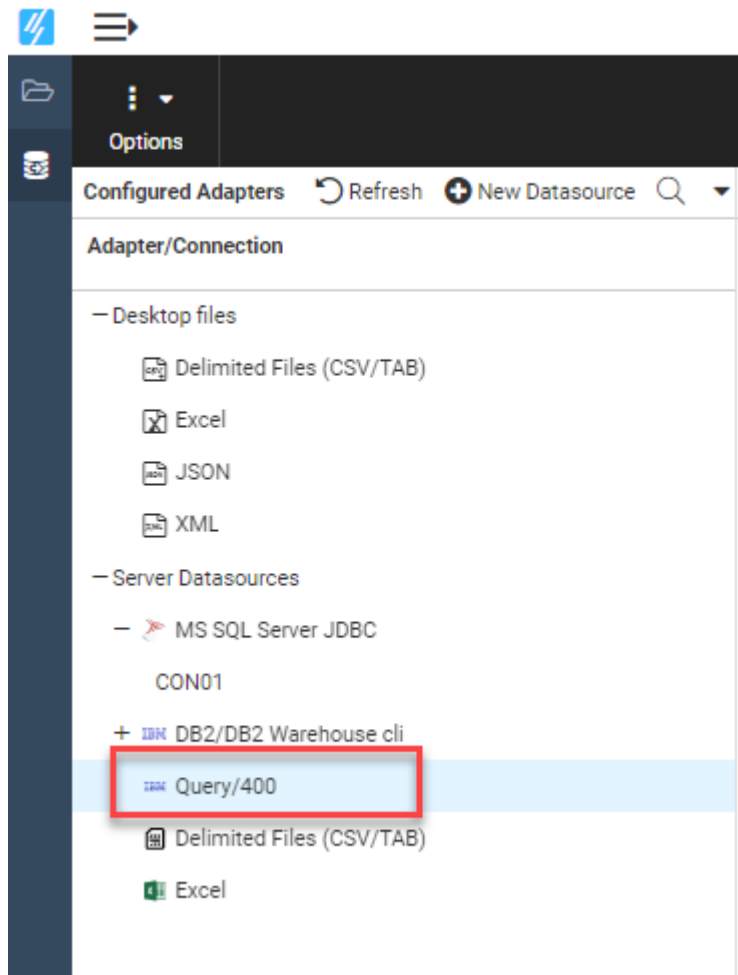
In the EZ-Install package is a Query/400 DISCOVERY tool. You can read more about this tool at <http://ibm.biz/db2wqezinstall>. It is a tool that can read all the query/400 definitions in a library to gather information about your overall query usage. Such things as FIELD usage, FILES being used, OUTPUT fields, OUTPUT type (like file or print), JOINS and more information is gleaned from the definitions and stored in a number of output tables. This can be handy tool to identify the queries you may want to consolidate, and/or build from scratch to get the full benefits of the power of Db2 Web Query.

1.1.1 Importing a Query/400 Report

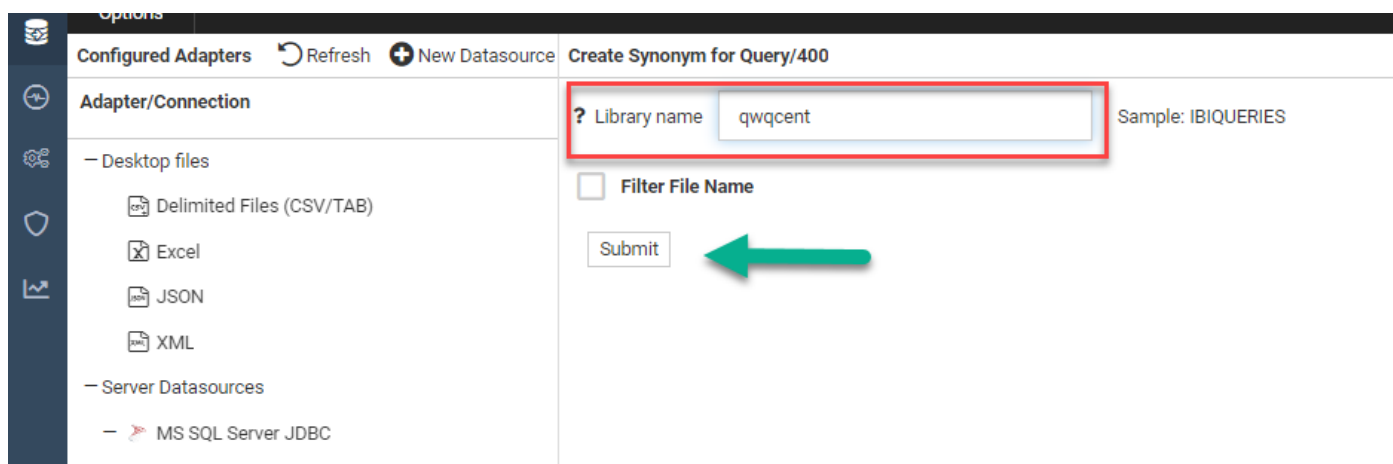
But for now, let's import a Query400 definition and modernize it.

NOTE: Your query/400 output should be set to DISPLAY. If it is not, you should go edit your query before importing.

Right click on your Db2 Web Query Training folder and select **METADATA -> NEW**.
Double Click on the Query/400 Adapter.

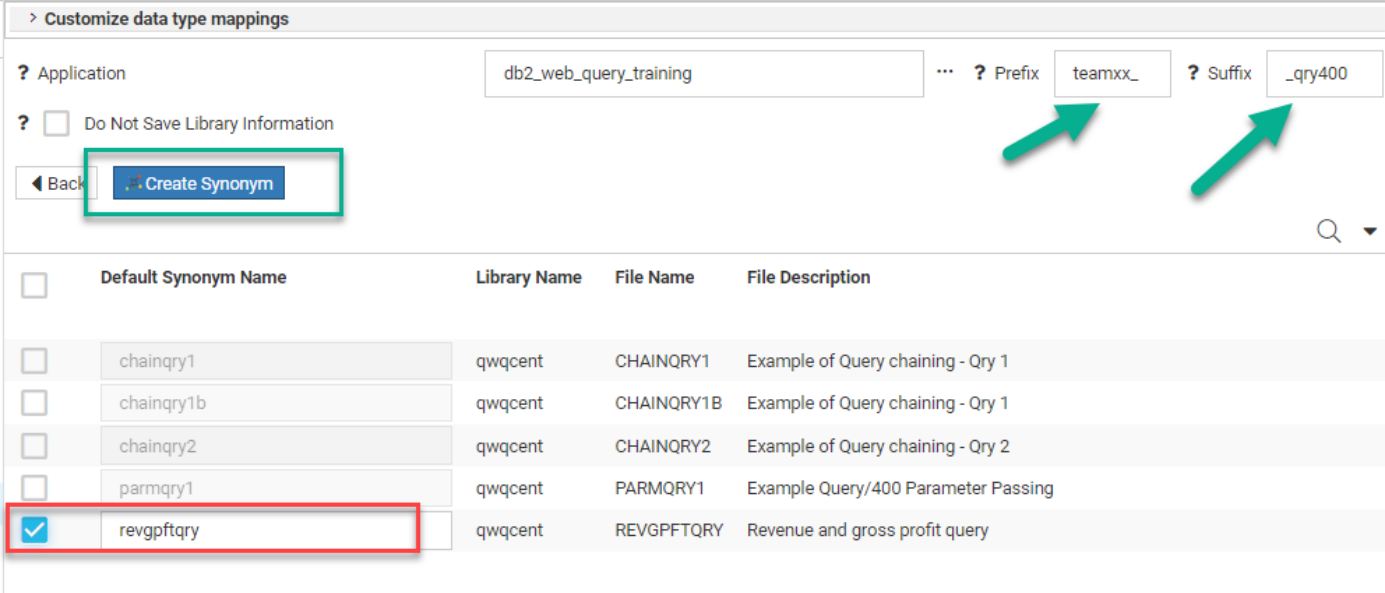


Enter **QWQCENT** for the library and **click on SUBMIT**.



We are creating a synonym over a Query/400 definition. As note in the previous chapter, it is sometimes nice to add a suffix to a synonym name to identify its source. In the suffix text box,

enter “_qry400”. Enter your team number as a prefix and make sure the REVGPTQRY is selected. **Click on CREATE SYNONYM.**



> Customize data type mappings

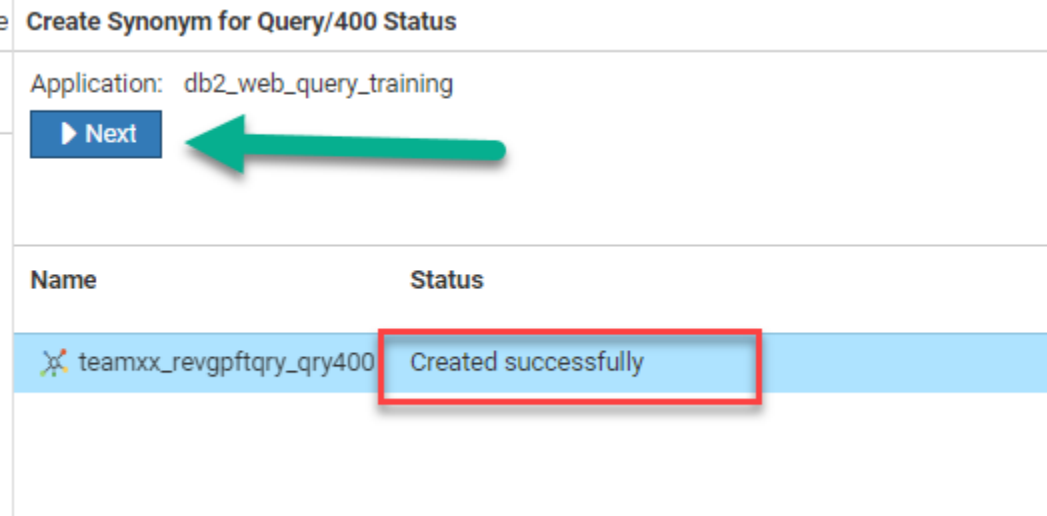
? Application ... ? Prefix ? Suffix

? ☐ Do Not Save Library Information

◀ Back **Create Synonym**

☐	Default Synonym Name	Library Name	File Name	File Description
☐	chainqry1	qwqcent	CHAINQRY1	Example of Query chaining - Qry 1
☐	chainqry1b	qwqcent	CHAINQRY1B	Example of Query chaining - Qry 1
☐	chainqry2	qwqcent	CHAINQRY2	Example of Query chaining - Qry 2
☐	parmqry1	qwqcent	PARMQRY1	Example Query/400 Parameter Passing
☒	revgpftqry	qwqcent	REVGPTQRY	Revenue and gross profit query

A new synonym is created. **Click on the NEXT Button.**



≡ Create Synonym for Query/400 Status

Application:

Next

Name	Status
 teamxx_revgpftqry_qry400	Created successfully

Now that we have a synonym, Db2 Web Query will automatically generate a report as well.

Click on the NEXT button:



Create Synonym for Query/400 File: Save Reports

Next



☐ Overwrite all existing reports

Overwrite	Report Name	Synonym Name	
☐	teamxx_revgpftqry_qry400	teamxx_revgpftqry_qry400	

Almost done...note the "created successfully" message. **Click on FINISH.**



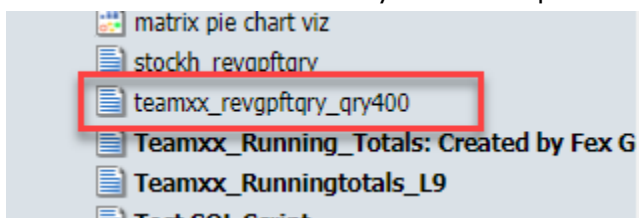
Create Synonym for Query/400 File: Save Reports Status

Finish



Report Name	Synonym Name	
teamxx_revgpftqry_qry400	teamxx_revgpftqry_qry400	Created successfully

Now go back to your BI Portal Tab. You may need to right click on the Db2 Web Query Training and select REFRESH to see your new report.



Note that this is under the top-level folder Db2 Web Query training. You can ONLY do the import of a query/400 in a top-level folder, it will not work if you right clicked on a subfolder. You may want to drag your report up into your own subfolder.

Double click on that report to run it.

Product Category	Product Type	Revenue	Gross Profit
Amplifiers/PreAmps/Tuners	Audio	42,374,428.00	16,634,858.00
Audio Systems	Audio	122,345,680.00	40,062,860.00
CD Players and Recorders	Audio	53,847,459.00	16,008,999.00
Digital Cameras	Cameras	184,103,667.00	50,774,837.00
Digital8 Camcorders	Camcorders	13,614,953.00	7,102,353.00
DVD	Video	329,872,045.00	81,103,145.00
DVD Camcorders	Camcorders	379,376,637.00	79,003,287.00
Handheld and PDA	Office	18,533,190.00	4,465,770.00
MiniDV Camcorders	Camcorders	51,539,451.00	17,411,091.00
MP3	Audio	43,491,588.00	17,052,928.00
Organizers	Office	11,712,495.00	6,755,190.00
Receivers	Audio	35,907,113.00	12,909,113.00
Speakers	Audio	84,717,053.00	60,036,063.00
TV	Video	168,799,539.00	18,027,839.00
VCR	Video	21,688,621.00	5,417,671.00

We now have a BLUE screen web-based report instead of a green screen report!

1.1.2 Editing the Auto Created Report

Depending on what you wanted as the end result, it might be good to now right click on that report and **select EDIT**.

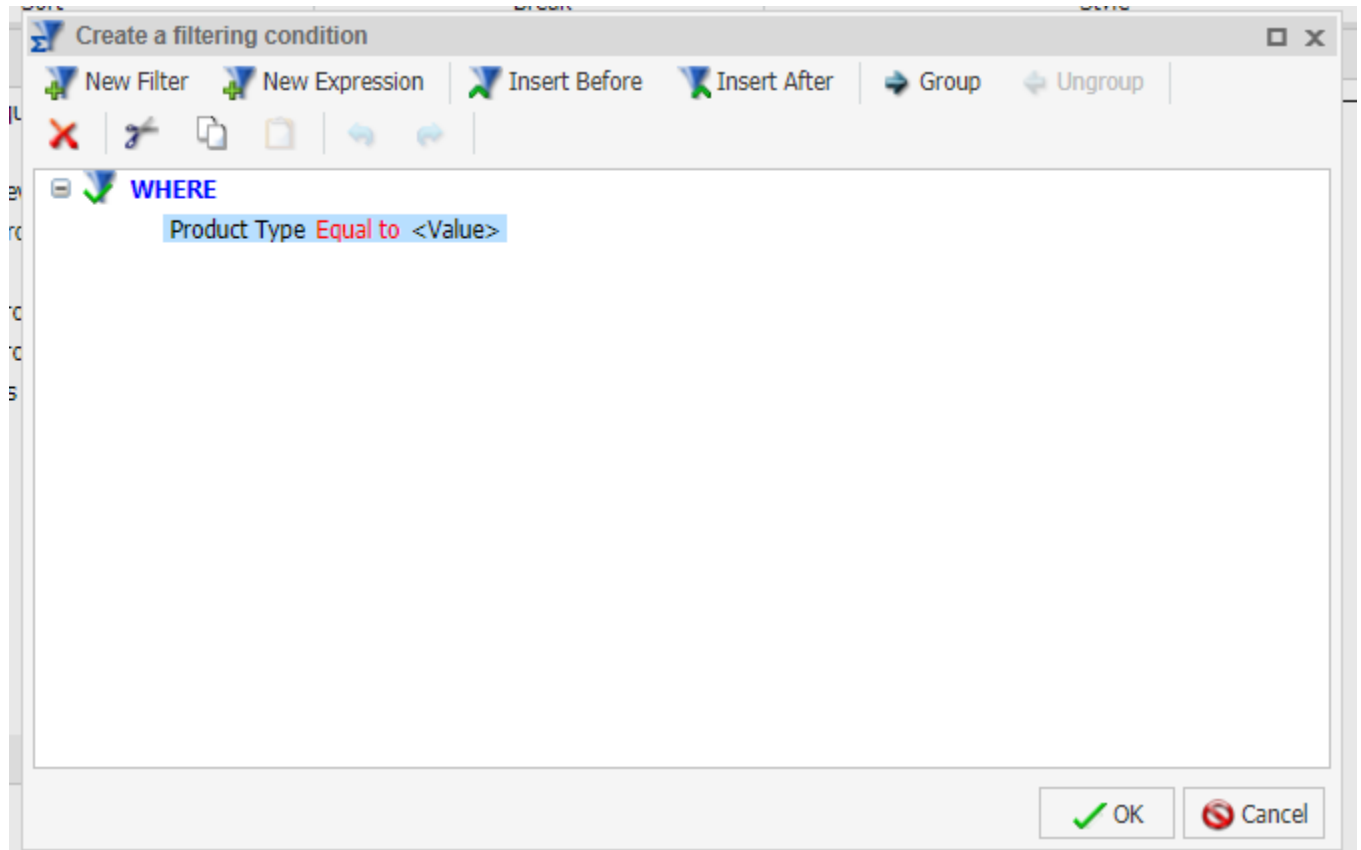
In the next tutorial, the InfoAssist+ tutorial, you'll learn a lot more about InfoAssist. For now, let's make some changes to this.

The query returned product category ahead of product type but your business suggests that product type is a higher level than category. In the Query panel, **drag and drop product type above product category**:

The screenshot shows the IBM InfoAssist+ Query Editor interface. The interface is divided into four main panels: Filter, Query, Break, and Style. The Filter panel (far left) contains a search field and a list of dimensions: Product Category, Product Type, QWQCENT_ORDERS, and QWQCENT_INVENTORY. The Query panel (middle) shows a query named 'AdhocRequest (teamxx_revqpftr)' with a sum of Revenue and Gross Profit, grouped by Product Type and Product Category. A green arrow points to the 'Product Type' field in the 'By' section, indicating it is being dragged. The Break panel (right) shows a 'Live Preview (500 Records)' table with columns: Product Type, Product Category, Revenue, and Gross Profit. The table contains one row of data: Audio, Amplifiers/PreAmps/Tuners, 9,743,555.00, and 2,653,255.00.

In fact, let's make Product Type a parameter (filter). Drag and drop Product Type from the DATA panel (far left panel) into the Filter panel.

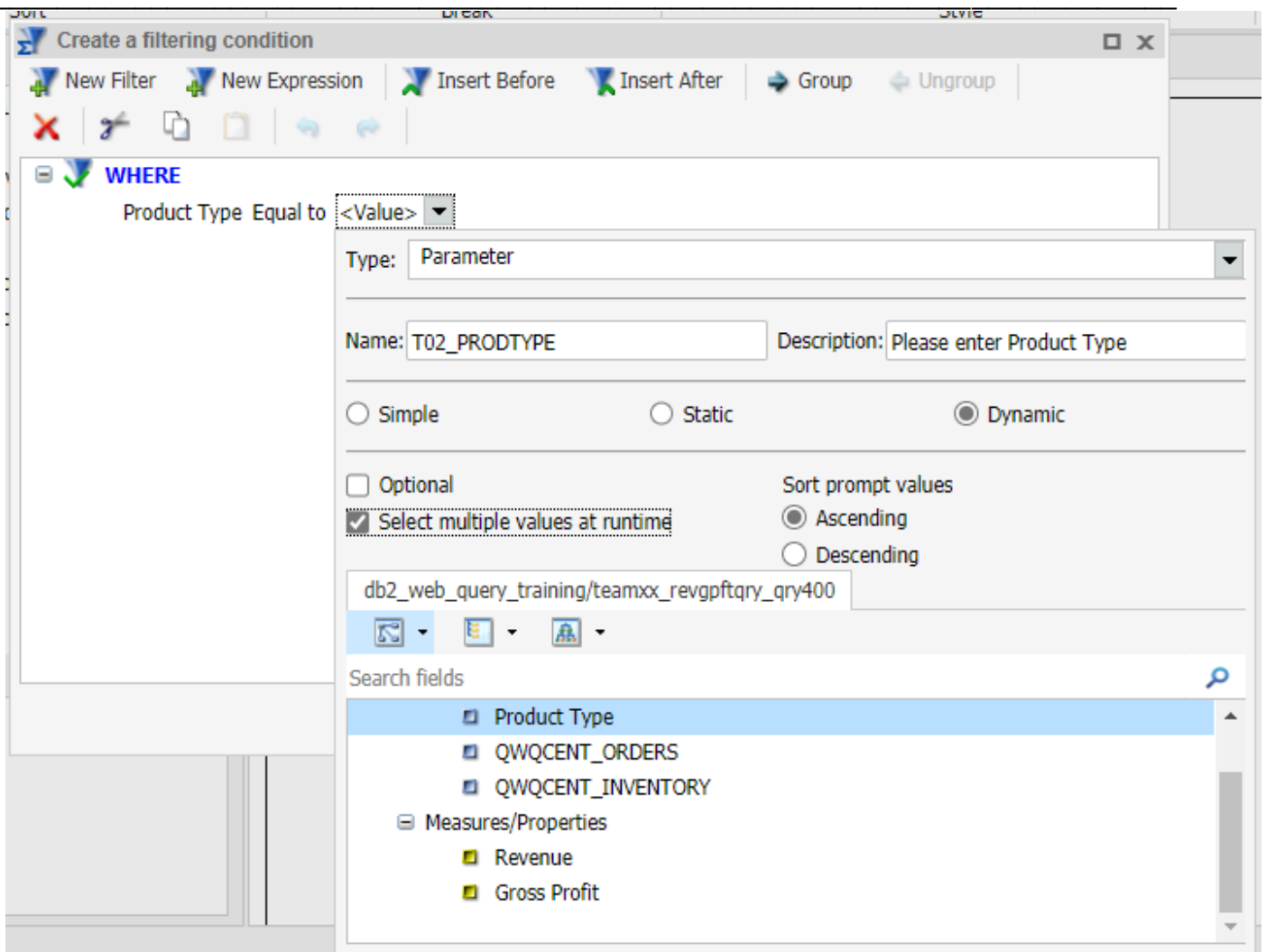
You should be presented with the filter edition screen:



Double click on <VALUE> **and then on the drop down** arrow next to VALUE to open up the filter edit screen.

Make the following selections in the filter edit panel.

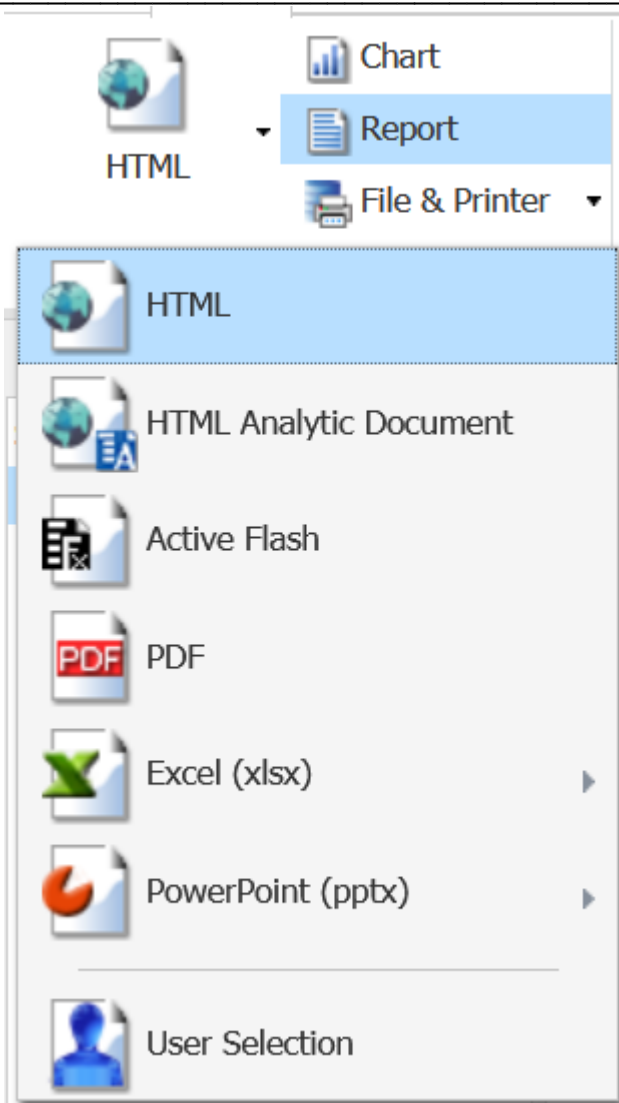
- Change the type of filter to PARAMETER.
- Change the description to "Please enter Product Type"
- Make sure Dynamic Parameter is selected
- Check the "Select multiple values at runtime" option
- Note you can change the sort order of the PROMPT, but leave at as Ascending
 - For a prompt on something like YEAR, it's a good idea to set that as Descending



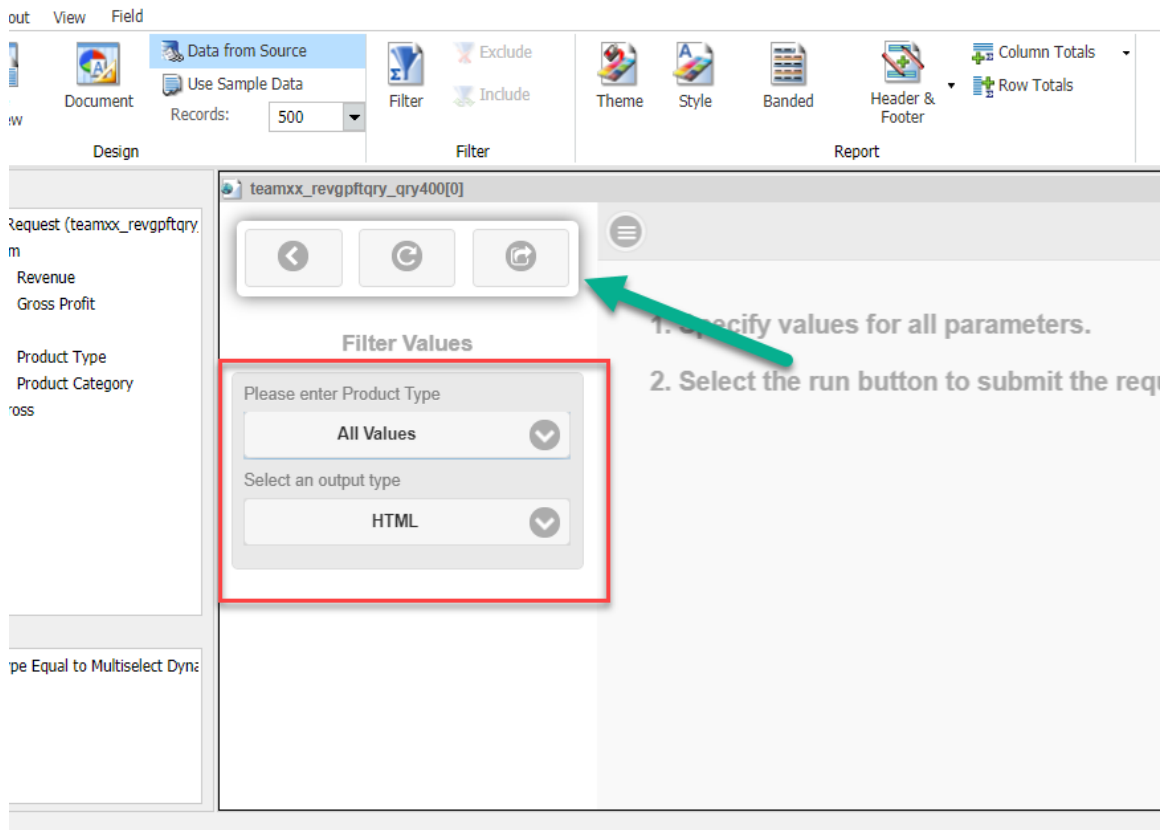
Hit OK twice to get back to your IA main screen.

Let's do one more thing (again, in the InfoAssist tutorial you'll learn a whole lot more about how to enhance this report).

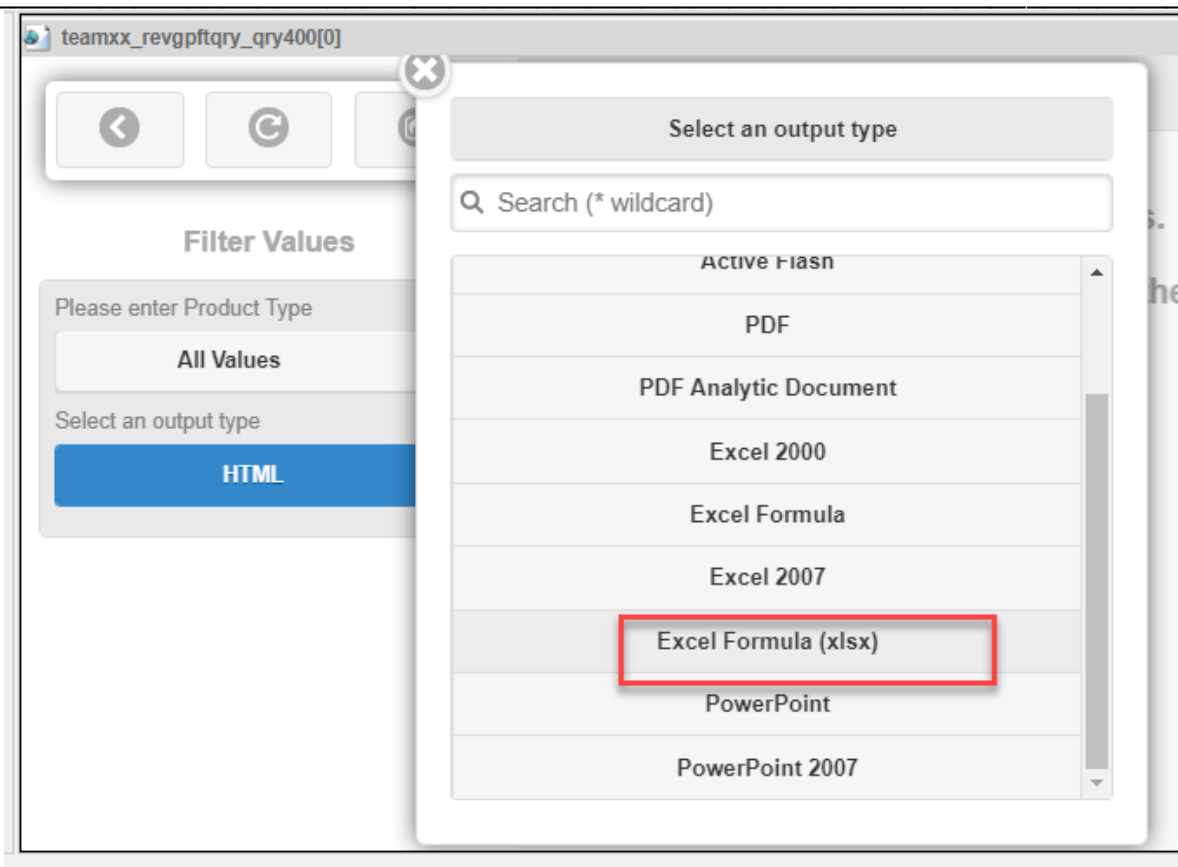
Click on the HOME tab. Select the down arrow next to the HTML button on the ribbon bar. From that, **select the USER** option that will build a prompt for the end user to select the output option at run time.



Now RUN your report by clicking on the RUN button at the top of the window.



You now have a drop-down option to select Product Type AND output type. Feel free to check out the options on both prompts. When ready, select the output type and specify EXCEL FORMULA (XLSX) option then run your report.



Its up to you if you wanted to allow the end user to select output type or “hard code” the output type in the report. You should now have an excel file like the following:

	A	B	C	D	E
1	Product Type	Product Category	Revenue	Gross Profit	
2	Audio	Amplifiers/PreAmps/Tuners	42,374,428.00	16,634,858.00	
3		Audio Systems	122,345,680.00	40,062,860.00	
4		CD Players and Recorders	53,847,459.00	16,008,999.00	
5		MP3	43,491,588.00	17,052,928.00	
6		Receivers	35,907,113.00	12,909,113.00	
7		Speakers	84,717,053.00	60,036,063.00	
8	Camcorders	Digital8 Camcorders	13,614,953.00	7,102,353.00	
9		DVD Camcorders	379,376,637.00	79,003,287.00	
10		MiniDV Camcorders	51,539,451.00	17,411,091.00	
11	Cameras	Digital Cameras	184,103,667.00	50,774,837.00	
12	Office	Handheld and PDA	18,533,190.00	4,465,770.00	
13		Organizers	11,712,495.00	6,755,190.00	
14	Video	DVD	329,872,045.00	81,103,145.00	
15		TV	168,799,539.00	18,027,839.00	
16		VCR	21,688,621.00	5,417,671.00	
17					
18					
19					
20					

Save your report as teamxx_imported_query.

1.1.3 Other Reasons to use Import

This is just a simple example using a fairly simple query, but for that query that people run 10 times a day to get data into Excel, this might be a good candidate to import and allow the end user to run this on demand. Other advantages of importing an existing query into Db2 Web Query could be:

- The ability to schedule this in the background and send out via email or by placing on a network drive
- Use the auditing/monitoring reports to see which reports are taking the longest to run or who is running the longest query/400 reports (now in db2 web query).
- Go to town on enhancing it in many other ways. Perhaps you could let the user select the option to dump the data into a PIVOT table in Excel, or....choose an HTML Analytical Document ("active" report) to manipulate the views of the data (with an additional option to export to Excel from there).
- Learn more about the Excel plug-in that would allow you to embed this imported query into the spreadsheet itself.

2 Additional Information: Links

Ibm.biz/db2webqueryi - main website

Ibm.co/db2wqwiki - technical wiki

Db2webqueryi.blogspot.com - Doug Mack's blog

Ibm.biz/db2wqezinstall - EZ-install getting started page

Contact the Db2 Web Query Team at QU2@us.ibm.com