## infotips #5

# Auto-charting from infoware

Would you like to produce bar charts, pie charts or other report formats from infoware?

Imagine processing your payroll then producing a summary in a few seconds automatically as follows:



Drop Page Fields Here Sum of †↓ Gross \$12,000.00 \$10,000.00 \$8,000.00 Туре †↓ SU1 ∎ Si1 \$6,000.00 ■ SA1 DPW1 **B**B1 ADM \$4,000.00 \$2,000.00 \$0.00 1 Drop Data Items Here 3 †↓ Award 👻 K () N Chart1 / Sheet1 / Sheet3 / Sheet2 ) Chart2 / Sheet4 / cfs\_runi4query / • NUM

And at the same time produce a breakup of wages by award!



This example is focused on current payroll transactions. However the list of possibilities is wide and varied. You could be analysing by type of revenue, ranking by debtor, analysing current stock holding by supplier, product groups, looking at warehouse movements – the list goes on dependant on your business and imagination!

## **Strategy**

The following steps are required:

- 1. Write i4Query to define the raw data to use
- 2. Use i4Query's Excel plug in to execute the query
- 3. Write some pivot tables & charts in Excel
- 4. Save Excel spreadsheet
- 5. Change Data in infoware then open Excel Spreadsheet and see the results!

## Step 1 - Write i4Query

If you are not already, get familiar with i4Query.

Refer to tutorial:

http://www.satsof.com.au/Support/Hints\_and\_Tips/hints\_and\_tips.html

Select infotips # 1 - i4Query

This example uses an i4Query that extracts all current payroll transactions from the payroll transaction file (pytran). All payroll transactions current status fields are stamped Y when current, N when terminated. This i4Query selects only current transactions.



Field selected are:

.

i4 Query - Columr	n Order	~				
Field Name pycodes- Description	Col. No Total?					
pymast- Surname	2 🗸					
pymast- First Name	3 🗸					
pymast- Status	4 🗸					
pytran- Employee Number	5 🔽 🗆					
pytran- Date	7 🗸	≡				
pytran- Hours	8 🖌 🗆					
pytran- Rate	9 🗸 🗆					
pytran- Gross	10 🔽 🗆					
pytran-Type	11 💌					
pytran-Job	12 💌					
pymast- Award	13 🔽 🗆					
pytran-Branch	14 💌					
pytran- Current Status	Hide 🔽					
Display Totals Only?						
Next Reset Run N	ow!					
		~				
Done Done	🥝 Internet					

Selection Criteria are:

Que	ery	-	Selection Criteria						
nd Or	('s		Field		Rel		Value	)'s	
		*	pytran- Current Status (1,YN)	*	eq	۷	Υ		
And 🔽		*	pytran- Type (3,AU)	*	ne	۷	chq	~	
And 🔽		*	pytran- Type (3,AU)	*	ne	۷	csh	*	
And 🔽		*	pytran- Type (3,AU)	*	ne	۷	tax	*	
knd 🔽		~	pytran- Type (3,AU)	~	ne	~	csu	~	
No. of Selection Lines: 5 Refresh Next Reset Run Now!									

This selects only Current Status transactions and excludes deduction codes listed e.g. tax.

## **Static Queries**

The complete automation of this approach will only work if queries are 'static'. A static query is where the above selection criteria do not change.

With this example it is important to do this process BEFORE you terminate a pay since this query selects only records that are not terminated.

An example of a query that is not static would be to get transactions for 'this month'. Each month you will have to change the query to select either an accounting period or a date range. You can still use this approach for charting - you just have to go into query first via i4Query to edit the Selection Criteria at the beginning of each month.

Save/Run Selection	^
Selection Name: New  And/Or New Name: current pay without adjustments Save/Run Reset	
Back to Fields [ Home ] [ New Query ] [ User Apps ]	

Step 2 - Use i4Query's Excel plug in to execute the query

Each i4Query is given a unique Request ID number. After you have saved the i4Query, re-run the query by:

Select Database (pytran in this example)

i4 Query	^
Select Database Select Database Payroll Allowances (pycodes) Payroll Employee Masterfile (pymast) [ HPayroll Transactions. (pytran) Loading	
	~
🕘 Done 🛛 🔮 Internet	

Select Saved query:

i4 Query	<u>^</u>
Payroll Transactions. (pytran)	
160278: PAY - list	CTRL-Clic
Select Saved Query	
160294: PAY - current pay without a	adjustments II Allowances
160278: PAY - list	e Number (2)
Loading	Code (3)
Employee Number (3)	Description (4)
Current Status (4)	Amount (5)
Batch Number (5)	per Code (6) 🛛 🖌 🖌
<	>
ê 🛛 👘 👘	🥑 Internet

In this example, we require query 160294

# Wearenowfinishedwithi4Qery!

## **Security**

Next step will be to login. First a discussion of security. The login name & password to execute i4Query if stored within an Excel spreadsheet are <u>not encrypted</u>. Therefore it is strongly recommended to setup restricted browser users that have access to only i4Query and relevant database tables. It is strongly recommended that there is a different i4 browser user for each of debtors, creditors, payroll etc set of database tables. You should either not store the password in the spreadsheet and the user will be prompted for the password each time the data is refreshed, or password protect the spreadsheet.

If there is a breach of security this would be limited to data tables that this Excel spreadsheet is accessing anyway.

If you are sending results to outside people, we suggest you copy data to another spreadsheet and send it so it does not have the i4Query plug in contained with the spreadsheet.

2.1 **Now select i4Query Plug-in** – ask your system administrator if you do not have access to your site's "runi4Query" excel plug in.



## demo\_runi4query.iqy

Double click on icon.

### 2.2 Request ID

You will be prompted:

Enter Parameter Value	?×
Request	
160294	
Use this value/reference for future refreshes	
Refresh automatically when cell value changes	;
ОК Са	ancel

Enter Request ID - 160294 in this example. Tick the refresh boxes.

#### 2.3 **Browser User Login Name**

Enter Parameter Value
Enter%20User%20ID
payroll
Use this value/reference for <u>f</u> uture refreshes)
OK Cancel

Enter Browser user login name & tick refresh boxes.

#### 2.4 **Browser Password**

Enter Parameter Value		?×
Enter%20Password		
nrl	<u></u>	
🔲 Use this value/reference	for <u>f</u> uture refreshes	
🗖 Refresh automatically	when cell value change	s
	ОКС	ancel

Enter Browser Password.

By **not ticking** the "Use this value/reference for future refreshes" then the user <u>MUST</u> enter a password for future data refreshes. This adds password protection to future refreshes of data from within Excel.

This will then execute i4Query and drop results into excel (a world globe icon will display on the status bar while the i4Query executes). The time to execute query will be the same as if you had run it directly through i4Query.

## Step 3 - Create pivot tables & charts in Excel

Save the spreadsheet and give it a sensible name e.g. payroll transactions 22 April 07.

Now lets define some Pivot Tables & Charts. This is not a full tutorial on Pivot Tables etc in Excel – but enough to whet your appetite and get you started.

### First example – pivot table will be to produce summary (then pie chart) by allowance code.

- 3.1 Highlight worksheet (click in A0 top left cell), or select the whole range of data.
- 3.2 Select: Data; then Pivot Table & Chart

PivotTable and PivotChart	Wizard - Step 1 of 3	?	$\times$
	Where is the data that you want to analyze? Microsoft Excel list or database External data source Multiple <u>c</u> onsolidation ranges Another PivotTable or PivotChart		
	What kind of report do you want to create?		
Q	Cancel < Back Next > Eir	nish	

#### then

PivotTable a	? 🗙					
Where is the data that you want to use?						
<u>R</u> ange: <u>\$A\$2</u> ;	\$M\$65536		<b>1</b>	Bro <u>w</u> se		
2	Cancel	< <u>B</u> ack	Next >	Einish		

#### then

PivotTable and PivotChart Wizard - Step 3 of 3 🛛 🔹 💽				
Where do you want to put the PivotTable?   Where do you want to put the PivotTable?				
Layout         Options         Cancel         < Back         Next >         Finish				

There are 2 options in creating pivot tables – either follow the wizard to the next step or select the *Layout* option – the Layout option may be easier.

PivotTable and Pivot(	Chart Wi	zard - Layout	? 🗙
Son Daux base Eace	•	Notes Prof Rearch	Construct your PivotTable by dragging the field buttons on the right to the diagram on the left.
PAGE			Descriptic 11 Hours Branch 11 Surname 11 Rate
	Row	<u>D</u> ATA	First Nami       [] Gross         5tatus []       Type []         [] Employ       Job []         Date []       [] Award
			Help Cancel

You need to drag and drop the fields to the Row, Column or Data section of table as applicable.

For the example of a summary by Allowance code then set layout to following:

PivotTable and PivotC	hart Wi	zard - Layout			? 🗙
For Fundamental States	}	Const Const Const diagra	ruct your PivotTab eld buttons on the r am on the left.	le by dragging right to the	
PAGE	Type †1 <u>R</u> OW	<u>Count of 11 Gross</u>	De: Sur Fir: 5ta Da	scriptio 11 Hours rname 11 Rate st Nam 11 Gross tus 11 Type 11 Employ Job 11 ite 11 11 Award	Branch † J
			<u>H</u> elp	OK	Cancel

Note Excel defaults the value of the data field to a count of that field. In the above example we do not want to count the payroll transactions but sum the gross value.

Double Click on Count of Gross field

PivotTable Field	? 🗙
Source field:	ок
Name: Sum of †1 Gross	
	Cancel
Summarize by:	184-
Sum	
Average	Number
Max	
Min	Options >>
Count Nums	

Select Sum from "Summarise by:" list.

Also select the format as a number field. Click on *Number* option:

You may wish to print in a different format:

Format Cells	? 🛛
Number <u>Category:</u> General Number Currency Accounting Date Time Percentage Fraction Scientific Text Special Custom	Sample <u>Iype:</u> \$#,##0.00;[Red]-\$#,##0.00 \$#,##0;[Red]-\$#,##0 \$#,##0;[Red]-\$#,##0 \$#,##0.00;[Red]-\$#,##0.00 0% 0.00[Red]-\$#,##0.00 • s#,##0.00;[Red]-\$#,##0.00 • • • • • • • • • • • • •
	OK Cancel

## then click OK twice

PivotTable and PivotChart Wizard - Step 3 of 3	? 🗙
Where do you want to put the PivotTable?	
Layout         Options         Cancel         < Back         Next >         E	nish

Now click *Finish* and you have your pivot table!

You will have a result that looks like:

Sum of ?? Gross	
Type ??	Total
ADM	\$2,100.00
B1	\$13,944.13
L1	\$14,884.57
PW1	\$368.08
SA1	\$1,866.95
SI1	\$71.00
SU1	\$2,459.13
(blank)	
Grand Total	\$35,693.86

The (blank) is because we highlighted the whole spreadsheet previously. To remove blank, click on the Type cell drop down arrow and untick blank.

Now lets present this as a Pie Chart (pick another format if you want to be different!)

First make sure all the spreadsheet is highlighted (click on A0 so work area is blue).



Select The Chart Wizard (the one with all the colours)

Chart Wizard - Step 1 of 4 -	Chart Type 🛛 🛛 🔀
Standard Types Custom Type:	s
Chart type:	Chart sub-type:
Column  Bar Cine Pie	
XY (Scatter) Area Doughnut	
Surface Bubble Stock	
	Pie. Displays the contribution of each value to a total.
	Press and Hold to <u>Vi</u> ew Sample
Cancel	< Back Next > <u>Fi</u> nish

Select Pie Chart Type, click Next.

Chart Wiza	Chart Wizard - Step 4 of 4 - Chart Location								
Place chart: -									
	C As new <u>s</u> heet:	Chart1							
	• As object in:	Sheet1	<b>•</b>						
2	Cancel	<back next=""></back>	Einish						

This option keeps the chart in current sheet

You may wish to show percentages on pie chart. Double click on the *Pie Chart*, and then select *Data Labels*.

Format Da	ita Serie	5			? 🛛
Patterns Data labe C None C Show C Show C Show C Show C Show Show le	Axis yalue percent label and p bubble size gend key r ader lines	Data Labels	Options		
				ОК	Cancel

Select Show Label and Percent.



# *Handy Hint:* We recommendy cusave your spreadsheet now so if you make a mistake you can return to this pirt!

Now lets do another pivot table summarizing Employees by Award and charting this.

Return to the i4Query Sheet.

Data

Make sure the complete worksheet is still highlighted.

Then repeat the process

Select:

**Pivot Table & Pivot Chart** 

*Next Next Yes* to prompt to be base on an existing report

PivotTable and PivotChart Wizard - Step 2 of 3	? 🔀									
Which PivotTable contains the data you want to use?										
[payroll transactions 24 April 07.xls]Sheet1!PivotTable1										
	_1									
	<u> </u>									
Cancel < <u>B</u> ack Next >	<u>Fi</u> nish									

Select Next

Select *Layout* when on Step 3 of Pivot table Wizard and make changes as follows:

PivotTable and Pivot(	Chart Wizard - Layout	? 🔀
Son Burn Son	Notes Read Manager	Construct your PivotTable by dragging the field buttons on the right to the diagram on the left.
<u>P</u> AGE	I Award     COLUMN       First Name     Sum of 11 Gross       ROW     DATA	Descriptio       11 Hours       Branch 11         Surname       11 Rate         First Name       11 Gross         Status 11       Type 11         11 Employ       Job 11         Date 11       11 Award
		Help Cancel

The Gross field has been changed to sum of (from count of).

Select Ok Finish

You will then get a result formatted as follows:

Sum of ?? Gross	?? Award				
First Name ??	1	2	3	4	Grand Total
June		\$1,667.80			\$1,667.80
Agnes	\$369.20				\$369.20
Akira	\$671.66				\$671.66
Alex			\$94.88		\$94.88
Bill	\$676.63				\$676.63
Brent				\$607.60	\$607.60
Brian	\$293.94				\$293.94
Camilla	\$653.20				\$653.20
Carol	\$930.81				\$930.81
Cheryl	\$1,071.04				\$1,071.04
Chris	\$173.95				\$173.95
David	\$1,389.65				\$1,389.65
Deborah	\$440.91				\$440.91
Deepak		\$875.00			\$875.00
Donna	\$1,916.29				\$1,916.29
Hayden	\$426.00				\$426.00
Heather			\$251.63		\$251.63
Ivan				\$392.00	\$392.00



Select the report Format wizard (immediate left of charting icon). Choose your favourite. This example uses table 10.

Now you have a more presentable report:

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3 1	L Gross	†1 Award 📼													
4 F	inst Name 🖬 📼	1	2	3	4	Grand Total									
6 J	une		\$1,667.BD			\$1,667.80									
6 A	gnes	\$369.20				\$369.20									
7 A	kira	\$671.66				\$671.66									
8 A	lex .			\$94.68		\$94.88									
9 B	(II	\$676.63				\$676.63									
10 B	rent				\$607.60	\$607.60									
11 B	rian	\$293.94				\$293.94									
12 C	amila	\$653.20				\$653.20									
13 0	arol	8930.81				\$930.81									
14 0	heryl	\$1,071.04				\$1,071.04									
15 C	hris	\$173.95				\$173.95									
16 D	avid	\$1,389.65				\$1,389.65									
17 D	eborah	8440.91				\$440.91									8
18 D	eepak		\$875.00			\$675.00									- 9
19 D	onna	\$1,916.29				\$1,916.29									
20 H	leyden	\$426.00				\$426.00									- 9
21 H	eather			\$251.63		\$251.63									8
22 b	an				\$392.00	\$392.00									- 0
23 J	ane			\$756.00		\$756.00									- 8
24 J;	ason				\$314.28	\$314.28									- 1
25 J	panne	\$1,164.76				\$1,184.78									- 8
28 J	ohn			\$663.66		\$583.88									- 0
27 J	udy	\$122.4B				\$122.48									- 8
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Reach	f												NUM		

Now select the Chart Wizard



Continue making more pivot tables and charts if you wish.

## Step 4 - Save & Close Excel Spreadsheet

Save & Close Excel Spreadsheet when you are finished.

## Step 5 - Change data in infoware and auto refresh spreadsheet

5.1 Change data in infoware (or wait and run for next week's pay run).

5.2 Now open the spreadsheet.

It will have the same result as previously.

Refresh the results to new data. This will re-execute the saved i4Query and load in the new data automatically. Select *Data*, then *Refresh Data* options to refresh the results to new data.

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B1 - Sumam	Biter	,	-								
A	Subtotals		E	F	G	н		J	K	L	M
1 Description 11	Vajidation		ee Number	Date 11	1 Hours	†i Rate	ti Gross	Type 11	Job #1	1 Award	Branch 1
2 Late Rate Including Shit Penalty			1	1 24/04/2007	.40	15.33	653.2	2L1		1,1	
3 Building Services Grade 1	Text to Columns		1	4 24/04/2007	7B.6	14.2	1114.7	B1		1	
4 Saturday Rate Level 1	DivotTable and Divotribart Benort		1	4 24/04/2007	1	21.3	21.3	SAL		1	
5 Sunday Rate	BC Bentratie and Protoci and Report		1	4 24/04/2007	1	24.85	24.8E	5501		1	
5 Late Rate Including Shit Penalty	Get External Data		• 5	9 24/04/2007	67	16.33	930.B1	L1		1	
7 Cleaner Grade 1 Day	1 Refree	h Data	12	2 24/04/2007	16	15.25	244	B1		3	3
8 Cleaner Grade 1 Weekend		*	13	3 24/04/2007	20	19.25	365	SAL		7	2
9 Building Services Grade 1	CIUD8		15	9 24/04/2007	12	17.46	209.52	B1		4	1
1D Late Rate Including Shit Penalty	Deborah	P	20	24,04/2007	27	16.33	440.91	L1		1	
11 Building Services Grade 1	Chervi	P	21	1 24/04/2007	30	14.2	426	B1		1	01
12 Saturday Rate Level 1	Chervi	P	21	1 24/04/2007	6	21.3	127.8	SA1		1	
13 Late Rate Including Shit Penalty	Carol	P	24	4 24/04/2007	57	16.33	930.B1	L1		1	
14 Building Services Grade 1	Sonia	P	25	5 24.04/2007	20	14.2	284	B1		1	
15 Saturday Rate Level 1	Sonia	P	25	5 24.04/2007	4	21.3	85.2	SA1		1	8
16 Sunday Rate	Sonia	P	25	5 24,04/2007	4	24.85	99.4	801		1	
17 Building Services Grade 1	Jason	C	26	8 24,04/2007	18	17.46	314.28	B1		4	
1B Cleaner Grade 1 Night	Alex	P	25	9 24/04/2007	5.5	17.25	94.68	3 L1		3	
19 Late Rate Including Shift Penalty	Brent	C	30	0 24/04/2007	31	19.6	607.6	i L1		4	
20 Building Services Grade 1	Lily	P	31	1 24/04/2007	30	14.2	426	B1		1	
21 Cleaner Grade 1 Day	Kevin	P	33	3 24/04/2007	76	15.5	1178	B1		2	2
22 Building Services Grade 1	Bill	P	37	7 24/04/2007	9	14.2	127.8	81		1	<u>9</u>
23 Late Rate Including Shift Penalty	Bill	P	37	7 24/04/2007	31	16.33	506.23	3 L1		1	8
24 Saturday Rate Level 1	Bill	P	37	7 24.04/2007	2	21.3	42.6	SA1		1	1 (H
25 Saturday Rate Level 1	Rabyn	P	39	9 24.04/2007	6	21.3	127.8	SA1		1	8
26 Building Services Grade 1	Rabyn	P	39	9 24.04/2007		14.2	710	B1		1	1 (H
27 Sick Pay	Rabyn	P	39	9 24.04/2007	5	14.2	71	SH		1	8
28 Building Services Grade 1	Hayden	P	41	1 24,04/2007	30	14.2	428	61		1	
29 Late Rate Including Shift Penalty	Parn	P	43	2 24,04/2007	5	16.33	81.65	5 L1		1	
3D Building Services Grade 1	Agnes	P	44	4 24,04/2007	26	14.2	369.2	2 B1		1	1 <u>8</u> 1
31 Cleaner Grade 1 Night	Trevor	P	45	5 24,04/2007	17.5	17.25	301.68	3 L1		2	3 8
32 Building Services Grade 1	David	P	50	0 24,04/2007	28	14.2	397.8	B1		1	1 <b>N</b>
33 Late Rate Including Shift Penalty	David	P	50	0 24,04/2007	80.75	18.33	992.05	5 L1		1	•
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Ready										NUM	

Then go to the first pivot table sheet created and do the same (select data, refresh).

You now have the latest data and the latest pivot tables.

# Handy Hint:

are automatically copiedinto Excel, you cannot automatically use Rivot Table wizard This is because the file is in CSV format. Save file as an Excel spreadsheet (rather than CSV) then you can continue with Rivot Table wizard

# *Next Handy Hint will review more advanced examples!*

- milti fields indata
- satingannılti fields
- formulas applied to data on import

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