## SedonaOffice The #1 Financial Software for Security Companies

## 2010 Users Conference

# SQL Server Reporting Services

**Reference Guide** 

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#### **Overview**

The purpose of this guide is to provide the user with an introduction to Microsoft SQL Server Reporting Services and demonstrate how it can be used to extract meaningful data from the SedonaOffice database. This guide will review the many features of Reporting Services and then use a number of examples to illustrate the value of this tool used in conjunction with SedonaOffice.

#### **Definitions & Terms**

#### **Data Mining**

The automatic extraction of useful, often previously unknown information from large databases or data sets.

#### **Data Warehouse**

A system for storing, retrieving and managing large amounts of data without worrying about slowing down day-to-day operations of the production database. This can include sophisticated techniques for fast searches, as well as advanced filtering.

#### **GUI (Graphical User Interface)**

Designed to standardize and simplify the use of computer programs, as by using a mouse to manipulate text and images on a display screen featuring icons, windows, and menus.

#### SSL Encryption (Secure Sockets Layer)

A protocol to provide secure communications over the Internet using asymmetric key encryption. SSL is layered beneath application protocols such as HTTP, SMTP, Telnet, FTP, Gopher and NNTP and is layered above the connection protocol TCP/IP. It is used by the HTTPS access method.

#### **Conventions Used:**

Terms enclosed by "" indicate literal expressions.

Type "test" means to type T E S T, not " T E S T "

A word in **BLUE** indicates a mouse button or selection.

Click New indicates to click on a button labeled New or select New from a drop-down.

#### **Developing and Accessing Business Intelligence**

#### So Much Data

SedonaOffice stores an enormous amount of information about your business. Even though there are hundreds of reports with myriad options and filters each, you only have access to a fraction of that information.

#### **Seeing Things Your Way**

Of those hundreds of reports, do all of them fit your organization? SedonaOffice is installed in hundreds of companies with thousands of users, and cannot be tailored to each company or user. Perhaps the information is spot on, but the formatting is too generic. Maybe you would like to add a calculation or some additional data. You may even want an entirely new report completely tailored to your specific needs. You could commission custom reporting through SedonaOffice's highly trained development team, contract with a third party, or build reports yourself using Reporting Services.

#### **Introducing SQL Server Reporting Services**

You can design and develop your own reports tailored to your needs using Reporting Services. When you buy SQL Server, Microsoft throws in Reporting Services free of charge! Do not let the price fool you. Reporting Services is a fully featured, well developed product that could easily stand on its own.

#### **Reporting Services vs. Crystal Reports**

The web contains numerous comparisons of Reporting Services to Crystal Reports and I would encourage prospective users to visit some of those sites. In general Reporting Services 2005 is considered weaker than Crystal, but Reporting Services 2008 compares favorably and many users/critics prefer it!

#### Easy to Use

Reporting Services is designed to be intuitive and offers report design through a reporting wizard as well as a nuts and bolts approach. Most of the input is through a GUI and you do not need to understand SQL language to design and produce effective reports.

#### Safe

All data access in Reporting Services is "Read-Only" which means you cannot change or corrupt your data. Try any combination of tables and design any report without fear.

#### Secure

Access to the report designer and to the reports themselves is controlled through Windows User Group Security. In addition, all data communications including via web can be secured via SSL encryption.

#### **100% Compatible**

Reporting Services is 100% compatible with both SQL and SedonaOffice. As Reporting Services is native to SQL Server you can be confident that it will always be supported within SQL Server. SedonaOffice is rooted in SQL Server and therefore you can also be confident that Reporting Services will always work with SedonaOffice's database.

#### **Improved Access to Information**

Reporting Services gives you numerous options for making reports available to your users as well as actively distributing reports via email. Once a report is published, you can make it available for access throughout your company to anyone connected to the report server and who has the appropriate authorization. You can attach the report to a Web Page for display or download. Finally, you can configure reports to run automatically and then send the results to any number of people via an email list.

#### **Installing Reporting Services**

You already own Reporting Services, but that is not the same as having it installed. As with many Windows components, you had to select to install reporting services during the installation of SQL Server. The installation and configuration of reporting services as well as the set-up of a report server is beyond the scope of this class. However, you can begin the process by determining if Reporting Services is already installed. On your SQL Server Machine, navigate to "Add/Remove Programs" in the Control Panel: [Start  $\rightarrow$  Control Panel  $\rightarrow$  Add or Remove Programs  $\rightarrow$  Microsoft SQL Server 2008  $\rightarrow$ Change/Remove  $\rightarrow$  Add]. You will need to have your SQL Server Installation Disk available.



Install SQL Server 2008				
Feature Selection Select the features to install.				
<ul> <li>System Configuration Check</li> <li>Peature Selection</li> <li>Instance Configuration</li> <li>Server Configuration</li> <li>Database Engine Configuration</li> <li>Analysis Services Configuration</li> <li>Reporting Services Configuration</li> <li>Error and Usage Reporting</li> <li>Ready to Install</li> <li>Installation Progress</li> <li>Complete</li> </ul>	Features:	rices ation		Description:
	Shared component directory:	C.\Program Files\M	crosoft SQL Server\	
			< Back Next >	Cancel Help

## **Practical Applications of Reporting Services**

### **The Service Ticket Listing**

#### **Tables Used**

	SV Resolutior	SV Service Level	
AR_Customer	AR_Customer_Site	SV_Problem	AR_Customer_System
SV_Service_Ticket	SV_Service_Tech	SY_Employee	SV_Service_Company

#### Loading Visual Studio 2008 and Creating a New Project

#### **Start Reporting Services**

- 1) Start
- 2) All Programs
- 3) Microsoft Visual Studio 2008
- 4) File
- 5) New
- 6) Project



- 7) Type Name: Service Ticket Reports I
- 8) Click OK
- 9) Click on Tab for Solution Explorer

🔏 Service Ticket Repo	rts I - Microsoft Visual Studio				<b>7</b> 🗙
File Edit View Projec	t <u>B</u> uild <u>D</u> ebug <u>T</u> ools Te <u>s</u> t <u>W</u> indow <u>H</u> elp				
i 🛅 • 🔛 • 💕 🖬 🕔	🕺 🗈 🏦   🤊 - 🍽 - 💭 - 🖳   🕨 Debug	✓ Default	- 🖄	- 💀 📸 🕸 🏷 🖬 🖸 - 🖕	
🛐 I 🏷 🏇 I 🖻 🗐 I	B. 13 🖭 💀 🖕				
Toolbox 👻 🕂 🗙	Properties Start Page Solution Explorer				▼ X
🖃 General					
There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.	Solution Service Ticket Reports I       Image: Solution Service Ticket Reports I       Image: Solution Service Ticket Reports I       Image: Service Ticket List.rdl				
Output					Ψ×
Show output from:	- 🕅 🖉 🕏 🛒 🖬				_
Ready					

#### **Run the Report Wizard**

- 1) Right Click on "Service Ticket Reports I"
- 2) Select Add
- 3) New Item
- 4) Choose Report Wizard
- 5) At Name: type Service Ticket List

Add New Ite	em - Service Ticket Re	ports l		? 🔀
Categories:		Templates:		
Report P	roject	Visual Studio installed ter	nplates	
		Report Wizard	🔝 Report 📑 GDSReport	
		My Templates		
		i Search Online Templates		
Create a new	v report using Report Wizar	d		
<u>N</u> ame:	Service Ticket List.r	dl		
				Add Cancel

- 6) Click ADD
- 7) Establish the connection to the server. *Note: server and database name are installation dependent, so yours will be different.*

🚨 Report Wizard 📃 🗖 🔀	Connection Properties ? 🔀
Select the Data Source Select a data source from which to obtain data for this report or create a new data source.	Data <u>s</u> ource: Microsoft SQL Server (SqlClient)
○ Shared data source	Server name: DELL6400-2   Eefresh
New data source Name: Test Data Iype: Microsoft SQL Server Connection string: Data Source=DELL6400-2;Initial Catalog=Dev_Test Edit	Log on to the server         Use Windows Authentication         Use SQL Server Authentication         User name:         Password:         Save my password         Connect to a database
Credentials ✓ Make this a shared data source Help < Back Next > Enish >>1 Cancel	Select or enter a database name:   Dev_Test   Attach a database file:

*Key Points:* Be sure "Make this a shared data source" is checked.

You can use "Test Connection" to make sure your settings are correct.

- 8) Click Next
- 9) Select Query Builder

#### Generate the base query for the Service Ticket List:

Be sure that "Edit as Text" is not highlighted.

Query Designer	
🔂 Edit As Text 😂 Import 😨 🏢 🕺 📰 🚦 🚱 🤶 🖓 🖓 🖓 🕼 🍲	
	<u>^</u>

#### Adding Tables:

1) Select Add Table

Query Designer	
🔂 Edit As Text 😂 Import 🛛 😨 🏢 🕺 📰 ! 😵 🖓 🏹 🏭 🎦	
	~

Query Designer	
👽 Edit As Text 🛛 🔐 Import 🛛 😨 🏢 💷 💷 ! 😼 🖉 🖓 🏹 🎼 😭	
Add Table     ? X       Tables     Yews       SV, Resultion     SV, Resultion       SV, Resultion     SV, Service_Company       SV_Service_Company     SV_Service_Tech       SV_Service_Tech     SV_Service_Ticket       SV_Service_Ticket_Dispatch     SV_Service_Ticket_Notes       SV_Service_Ticket_Notes     SV_Service_Ticket_Notes	Or Or O
14 4 0 of 0   ▶ ▶] ▶≡ 0	
Нер	OK Cancel

- From the list that appears, select: SV\_Service\_Ticket, AR\_Customer, AR\_Customer\_System, AR\_Customer\_Site, SV\_Problem, SV\_Resolution, SV\_Service\_Level, SV\_Service\_Company, SV\_Service\_Tech, SY\_Employee
- 3) Click Close
- 4) Click and drag the tables to match the following diagram



5) Join (connect) the tables by clicking on a column in one table and dragging that column to match a column in another table as follows:

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Table	Column match to	Table 2	Column					
SV_Se	rvice_Ticket							
	Customer_System_ID Problem_ID Resolution_ID Service_Company_ID Service_Level_ID Last_Service_Tech_ID	AR_Customer_System SV_Problem SV_Resolution SV_Service_Company SV_Service_Level SV_Service_Tech	Customer_System_ID Problem_ID Resolution_ID Service_Company_ID Service_Level_ID Service_Tech_ID					
AR_Cu	AR_Customer_System							
	Customer_ID Customer_Site_ID	AR_Customer AR_Customer_Site	Customer_ID Customer_Site_ID					
SV_Se	SV_Service_Tech							
	Employee_ID	SY_Employee	Employee_ID					

6) The table connections should look as follows:



- 7) Select columns to display by going into each table and clicking the box next to the column name as follows:
  - SV\_Service\_Ticket: Ticket\_Number, Ticket\_Status, Creation\_Date, ClosedDate AR\_Customer: Customer\_Number, Customer\_Name
  - AR\_Customer\_Site: Business\_Name
  - AR\_Customer\_System: Alarm\_Account
  - SV\_Resolution: Resolution\_Code
  - SV\_Problem: Problem\_Code

SV\_Service\_Level: Description

SV\_Service\_Company: Description

- SY\_Employee: Employee\_Code
- 8) In the column listing (middle section of window), fill out the Alias columns as indicated below.
- 9) Select sort type "Ascending" from the drop down in the column "Sort Order".
- 10) In the "Filter" column for Ticket\_Number, type "> 1".
- 11) After steps 8, 9 and 10 the middle section should look as follows:

	Column	Alias	Table	Output	Sort Type	Sort Order	Filter	Or
	Ticket_Number	[Ticket Number]	SV_Service_Ticket	<b>~</b>	Ascending	1	>1	
•	Ticket_Status	Status	SV_Service_Ticket	<b>~</b>				
	Customer_Nu	[Customer Number]	AR_Customer	<b>~</b>				
	Customer_Name	[Customer Name]	AR_Customer	<b>~</b>				
	Employee_Code	Employee	SY_Employee	<b>~</b>				
	Description	[Service Company]	SV_Service_Company	<b>~</b>				
	Description	[Service Level]	SV_Service_Level	<b>~</b>				
	Alarm_Account	System	AR_Customer_System	<b>~</b>				
	Business_Name	[Site Name]	AR_Customer_Site	<b>~</b>				
	Creation_Date	Opened	SV_Service_Ticket	<b>~</b>				
	Resolution_Code	Resolution	SV_Resolution	<b>~</b>				
	Problem_Code	Problem	SV_Problem	<b>~</b>				
	ClosedDate	Closed	SV_Service_Ticket	<b>~</b>				

#### 12) The query in the bottom section should look like this:

SELECT	SV_Service_Ticket.Ticket_Number AS [Ticket Number], SV_Service_Ticket.Ticket_Status AS Status,
	AR_Customer.Customer_Number AS [Customer Number], AR_Customer.Customer_Name AS [Customer Name],
	SY_Employee.Employee_Code AS Employee, SV_Service_Company.Description AS [Service Company],
	SV_Service_Level.Description AS [Service Level], AR_Customer_System.Alarm_Account AS System,
	AR_Customer_Site.Business_Name AS [Site Name], SV_Service_Ticket.Creation_Date AS Opened, SV_Resolution.Resolution_Code AS Resolution,
	SV_Problem.Problem_Code AS Problem, SV_Service_Ticket.ClosedDate AS Closed
FROM	SV_Service_Level INNER JOIN
	SV_Service_Ticket INNER JOIN
	AR_Customer_System ON SV_Service_Ticket.Customer_System_Id = AR_Customer_System.Customer_System_Id INNER JOIN
	AR_Customer ON AR_Customer_System.Customer_Id = AR_Customer.Customer_Id INNER JOIN
	AR_Customer_Site ON AR_Customer_System.Customer_Site_Id = AR_Customer_Site.Customer_Site_Id INNER JOIN
	SV_Problem ON SV_Service_Ticket.Problem_Id = SV_Problem.Problem_Id INNER JOIN
	SV_Service_Tech ON SV_Service_Ticket.Last_Service_Tech_Id = SV_Service_Tech.Service_Tech_Id INNER JOIN
	SV_Resolution ON SV_Service_Ticket.Resolution_Id = SV_Resolution.Resolution_Id INNER JOIN
	SV_Service_Company ON SV_Service_Ticket.Service_Company_Id = SV_Service_Company.Service_Company_Id ON
	SV_Service_Level.Service_Level_Id = SV_Service_Ticket.Service_Level_Id INNER JOIN
	SY_Employee ON SV_Service_Tech.Employee_Id = SY_Employee.Employee_Id
WHERE	(SV_Service_Ticket.Ticket_Number > 1)
ORDER B	Y [Ticket Number]

- 13) You can test the results of your query by clicking the at the top of the screen.
- 14) Click OK
- 15) Click Next

#### **Format the Report**

- 1) Select a "Tabular Report"
- 2) Click Next
- 3) Move Service Company and Service Level to the Page Category
- 4) Move Employee and Ticket Number to the group category
- 5) Move the remaining fields to the Details Category in order as indicated below.

🗟 Report Wizard			
<b>Design the Tabl</b> Choose how to gr	${f e}$ oup the data in the table	э.	
<u>A</u> vailable fields:		Displayed fields:	
	Page>	Service_Company Service_Level	
	<u>G</u> roup>	Employee_Code Ticket_Number	
	etails> < R <u>e</u> move	Customer_Number Customer_Name Site_Name System Date_Opened Status Problem Resolution Date_Closed	
	< <u>B</u> ack	<u>N</u> ext >	Einish >>  Cancel

Note: the order of the fields in this step will determine the initial order for the report, but you can easily change that order later if needed!

- 6) Click Next
- 7) At Table Layout, choose stepped
- 8) Click Next
- 9) Choose Corporate for Style
- 10) Click Next
- 11) Name the report "Service Ticket List"
- 12) Click Finish

#### **Review and Adjust the Report:**

Service Ticket List										
[Service Company]										
Service Leve										
Emplovee C	Ticket Num	Customer N	Customer N	Site Name	Svstem	Date Opene	Status	Problem	Resolution	Date Closed
[Employee Code										
	[Ticket_Number									
		[Customer_Num	[Customer_Nam	[Site_Name]	[System]	[Date_Opened]	[Status]	[Problem]	[Resolution]	[Date_Closed]

- 1) Preview the report by clicking on the Preview Tab
- 2) Return to the design page
- 3) Repeat the following until you are satisfied
  - a. Adjust date format
  - b. Adjust column size and headers
  - c. Adjust text color, font, weight and alignment
- 4) View the finished Report

#### Service Ticket List

Alarm Co - Detroit

Monroe Com Non Contract

Emp	Tkt #	Cust #	Customer Name	Site Name	System	Date Opened	O/C	Problem	Resolution	Date Closed
Alex										
	2290									
		1001687	BLAZE SCHOOLS	BLAZE SCHOOLS Site	LS200379	6/3/2009	CL	A ADJUSTPRGRM	Re Programmed System	6/12/2009 11:47 AM
	3146									
		4013340	PORT YACHT CLUB	PORT YACHT CLUB Site	LS200294	6/24/2009	CL	TV CAMERA	Needs Additional Service	7/6/2009 4:51 PM
	3174									
		8000624	HUDSON, TOM	HUDSON, TOM Site	LS200388	6/24/2009	CL	A ARM	Fixed Trouble	7/1/2009 12:25 PM
	3960									
		4002606	PDQ CORPORATION	PDQ CORPORATION Site	720280	7/13/2009	CL	SH MISC	Needs Additional Service	8/3/2009 9:33 AM
	4716									
		8000780	ATLANTIC PL 474	ATLANTIC PLAZA Site	P24409	7/28/2009	CL	SH MISC	Fixed Trouble	8/2/2009 3:23 PM

5) Save

#### **Service Ticket Costing Report**

#### **Tables Used**

SV\_Service\_TicketSV\_Service\_TechSY\_EmployeeSV\_Service\_CompanyAR\_Customer\_SystemSV\_ResolutionSV\_Service\_LevelSV\_Service\_Ticket\_DispatchIN\_JournalSV\_Service\_Ticket\_PartsIN\_ReceiptAP\_InvoiceAP\_CreditGL\_RegisterGL\_AccountAR\_InvoiceAR\_Credit

#### **Create the Costing Report**

- 1) Right Click "Reports"
- 2) Select Add  $\rightarrow$  New Item
- 3) Change the name to "Service Ticket Costing"
- 4) Select "Report"

#### Note: Do not select "Report Wizard"!

- 5) Click Add
- 6) Expand the work area by dragging out the boundaries

Service Ticketing.rdl [Design] Solution Explors I' (1 project)
😒 Design 🔝 Preview
To aud an item to the report: drag an item from the Toolbox to the design surface, and then drag dataset helds to the item.

- 7) Click once on "Matrix" to highlight
- 8) Start in the upper left hand corner of the work area and drag the cursor to the lower right and release to create a "Matrix Shell"
- 9) Select "Use Shared Data Source" from the window that appears

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	<ul> <li>Use shared data source reference         TestData         Edit         New         Use single transaction when processing the queries</li> </ul>
Help	Next > Cancel

10) Click Next

#### **Create the Costing Query**

1) Be sure that "Edit as Text" is highlighted

Query Designer	- 🗆 🛛
🔂 Edit As Text 🖉 Import Command type: Text 💌	
	~
•	

- 2) Type (or copy and paste) the query titled "Service Ticket Costing Query" into the text window. You will find it in the appendix.
- 3) Click the to confirm that the query was typed in correctly. The query should run without error.
- 4) Click Finish

#### **Creating the Report**



- 1) Insert six columns using:
  - a. Right Click Data Column

- b. Insert Column
- c. Inside Group Right
- 2) Resize the original data column to match the new columns
- 3) Starting from the left most column:
  - a. Left click the column
  - b. Click on the small drop down box in the corner
  - c. Fill the eight columns in this order:

Ticket Number, *Leave Blank*, Direct Revenue, *Leave Blank*, Labor Cost, *Leave Blank*, Leave Blank, Journal Entries

#### Note: A number of Columns will add "sum" to the entry. Ignore that while selecting.

- 4) Edit the entries with *sum*. Remove "Sum(" and ")". For example: "[Sum(Direct\_Revenue)]" → "[Direct\_Revenue]"
- 5) Right click on the blank column to the right of "Labor\_Cost"
- 6) Select "Expression"
- 7) Left click on "Fields"
- 8) Select "Parts\_Cost\_Issued" add a "+" and then select "Parts\_Cost\_DE"
- 9) Click OK
- 10) Right click on the column next to the previous and repeat steps 6..9, substituting:

"Expense" - "Credits\_to\_Expense"

11) Repeat this same procedure on the column to the right of "Direct\_Revenue" using:

"Labor\_Cost" + "Parts\_Cost\_Issued" + "Parts\_Cost\_DE" + "Expense" -

"Credits\_to\_Expense" + "Journal Entries"

#### Note: This is the total cost for the service ticket.

- 12) Before exiting the window, select and copy the entry you just made
- 13) Repeat the procedure again for the remaining blank column except
  - a. Select "Direct\_Revenue"
  - b. Type "- ()"
  - c. Position the cursor between the parenthesis and paste

#### Note: This is the Net profit of the service ticket!

14) Click "Preview". Notice that only one column has a header and the format and spacing are large and unimpressive

	1	😒 Design 🔝 Preview							
	1	i 📰 📲 i 🕴 🔹 1 of 2? 🕨 🔰 🗍 🖨 🚺	🕽 💭 🛃 • 🕴 1	00% -	Find   N	lext			
		Ticket Number							
			1 10 0000	107.0000	15 0000	45,0000	0.0000	0.0000	0.0000
5		1014	142.0000	187.0000	45.0000	45.0000	0.0000	0.0000	0.0000
		1133	-367.5000	0.0000	367.5000	367.5000	0.0000	0.0000	0.0000

#### **Improving the Format**

- 15) Return to the Design Section
- 16) Shrink the row height (click the lower left corner and drag up)
- 17) Double click each column and fill in the "Label" field accordingly. You can also change the alignment, font, and other characteristics of the column!
- 18) You can add column headers to the data by right clicking the open box and selecting Split Cells
- 19) You can add a header and footer to the page using the icons in the upper left hand corner
- 20) Preview the final version

Service Ticket Costing Report									
Service Ticket Number	Net Profit	Gross Profit	Total Cost	Labor	Parts	Expenses	JE		
1014	\$142.00	\$187.00	\$45.00	\$45.00	\$0.00	\$0.00	\$0.00		
1133	(\$367.50)	\$0.00	\$367.50	\$367.50	\$0.00	\$0.00	\$0.00		
1138	(\$78.75)	\$0.00	\$78.75	\$78.75	\$0.00	\$0.00	\$0.00		
1179	\$102.50	\$155.00	\$52.50	\$52.50	\$0.00	\$0.00	\$0.00		
1180	(\$182.05)	\$132.95	\$315.00	\$315.00	\$0.00	\$0.00	\$0.00		
1207	(\$290.50)	\$94.50	\$385.00	\$385.00	\$0.00	\$0.00	\$0.00		
1225	(\$265.00)	\$120.00	\$385.00	\$385.00	\$0.00	\$0.00	\$0.00		
1244	\$0.00	\$140.00	\$140.00	\$140.00	\$0.00	\$0.00	\$0.00		
1258	(\$180.49)	\$144.50	\$324.99	\$315.00	\$9.99	\$0.00	\$0.00		
	(*******	#050.00	#E40.0E	CEAC OF	#0.00	#0.00	#0.00		

#### **Adding Service Company and Service Level**

- 1) Return to the Design Section
- 2) Right click on the Section for "Ticket Number"
  - a. Add Group
    - b. Parent Group
    - c. At "Group By" select "Service Level" from the drop down
    - d. Check "Add Group Header"
    - e. Check "Add Group Footer
    - f. Click OK
- 3) Right click in the new data column ("Service Level")
  - a. Add Group
  - b. Parent Group
  - c. At "Group By" select "Service Company" from the drop down
  - d. Check "Add Group Header"
  - e. Check "Add Group Footer
  - f. Click OK
- 4) Click on the Preview tab. You now have the Service Tickets grouped by Service Company and Service Level
- 5) Return to the Design Section
- 6) Format the New Columns including the fonts, labels and headers
- 7) Right Click on "Service Company"
- 8) Select "Add Total"  $\rightarrow$  "After"
- 9) Right Click on "Service Level"
- 10) Select "Add Total"  $\rightarrow$  "After"

#### Note: Reporting Services inserts the "Sum" for the columns "Gross Profit", "Labor" and "JE"

- 11) Create the Sum expressions for "Net Profit", Total Cost, Parts and Expenses by:
  - a. Double click the line item



- b. Next to the "Value" section Select
- c. Copy the entire expression except for the "="
- d. Click Cancel
- e. Right click in the cell crossing that column and the lower most "Total"
- f. Select "Expression"
- g. Next to the "=", type "Sum ()"
- h. Position the cursor between the parenthesis and paste
- i. Click OK
- 12) You now should have each of the lowest data columns filled with an expression or sum.

## SedonaOffice Reporting Services Reference Guide

Net Profit	Gross Profit	Total Cost	Labor	Parts	Expenses	JE
[Net Profit]	[Gross Profit]	[Total Cost]	[Labor]	[Parts]	[Expense]	[JE]
	ı(Direct_Revei		3um(Labor_Cost			m(Journal_Entri
«Expr»	n(Direct_Rever	«Expr»	3um(Labor_Cost	«Expr»	«Expr»	m(Journal_Entri

- 13) Preview the report and make necessary adjustments to the format on the final totals
- 14) Copy the lowest seven cells starting at "Net Profit" moving across to "JE" (shift select)
- 15) Paste these values into the two rows above (yes, you will overwrite some expressions)
- 16) Edit and Format the total labels (under "Ticket Number", "Service Level", and "Service Company")

Service Ticket Costing Report											
Service Company Service Level Service Ticket Number Net Profit Gross Profit Total Cost Labor Parts Expenses JE											
[Service_Company]											
	[Service_Level]	[Ticket Number]	[Net Profit]	[Gross Profit]	[Total Cost]	[Labor]	[Parts]	[Expense]	(JE)		
		Total Level	«Expr»	n(Direct_Reve	«Expr»	um(Labor_Cost	«E ×pr»	«E xpr»	m(Journal_Em		
	Total Compan∨		«Expr»	i(Direct Reve	«Expr»	um(Labor_Cost	«E ×pr»	«E ×pr»	m(Journal_Em		
Total			«Expr»	i(Direct Reve	«Expr»	Sum(Labor_Cost	«E ×pr»	«E xpr»	m(Journal_Em		

17) Preview the Report

#### **Enabling Drill Down**

- 1) Insert a row above and inside the "Service Level"
- 2) Right click on the blank cell under the "Total Cost" heading
- 3) Select "Text Box Properties"
- 4) Change the "Name" to "CostToggle"
- 5) Change the Value to "Show Costs"
- 6) Click OK
- 7) Right click on the "Labor" Column Header
- 8) Select "Text Box Properties"
- 9) Click Visibility
- 10) Toggle Hide
- 11) Check "Display can be toggled by this report item"
- 12) Select "CostToggle"
- 13) Click OK
- 14) Repeat steps 7 through 13 for each cell in the itemized costing section including the "Service Level" total cells, but not the "Service Company" cells
- 15) Using the same method as above, use the "Total Cost" by "Service Company" to toggle the itemized total cost cells by "Service Company"
- 16) Repeat the process in 15 at the Grand Total level
- 17) Preview the report. You can now switch the itemized costing on and off!

Service Company	Service Level	Service Ticket Number	Net Profit	Gross Profit	Total Cost
Alarm Co - Detroit	Monroe Com Non Contract				
	Contract	2290	\$107.50	\$130.00	\$22.50
		2702	(\$45.00)	\$0.00	\$45.00
		3140	\$13.68	\$20.00	\$6.32
		3146	(\$180.00)	\$0.00	\$180.00
		3174	\$182.25	\$238.50	\$56.25

#### Service Ticket Costing Report

#### Service Ticket Costing Report

Service Company	Service Level	Service Ticket Number	Net Profit	Gross Profit	Total Cost				
Alarm Co - Detroit	Monroe Com Non Contract				≡ Shows Costs	Labor	Parts	Expenses	JE
		2290	\$107.50	\$130.00	\$22.50	\$22.50	\$0.00	\$0.00	\$0.00
		2702	(\$45.00)	\$0.00	\$45.00	\$45.00	\$0.00	\$0.00	\$0.00
		3140	\$13.68	\$20.00	\$6.32	\$0.00	\$6.32	\$0.00	\$0.00
		3146	(\$180.00)	\$0.00	\$180.00	\$180.00	\$0.00	\$0.00	\$0.00
		3174	\$182.25	\$238.50	\$56.25	\$56.25	\$0.00	\$0.00	\$0.00
		3486	(\$534.50)	\$0.00	\$534.50	\$270.00	\$242.00	\$22.50	\$0.00
		3960	(\$56.25)	\$0.00	\$56.25	\$56.25	\$0.00	\$0.00	\$0.00
		4716	(\$112.50)	\$0.00	\$112.50	\$112.50	\$0.00	\$0.00	\$0.00
		4764	(\$392.50)	\$0.00	\$392.50	\$157.50	\$235.00	\$0.00	\$0.00
		4798	\$48.75	\$150.00	\$101.25	\$101.25	\$0.00	\$0.00	\$0.00
		5120	\$62.50	\$130.00	\$67.50	\$67.50	\$0.00	\$0.00	\$0.00
		5181	\$39.38	\$55.55	\$16.17	\$0.00	\$16.17	\$0.00	\$0.00
		5211	\$7.50	\$30.00	\$22.50	\$22.50	\$0.00	\$0.00	\$0.00

#### **Reporting on Totals Only**

- 1) Click the "Solution Explorer" Tab
- 2) Right click "Service Ticket Costing.rdl"
- 3) Select Copy
- 4) Right click "Service Ticket Reports I"
- 5) Select Paste
- 6) Change the name of "Copy of Service Ticket Costing.rdl" to "Service Ticket Costing Totals.rdl"

#### Note: You must include the .rdl for the report to function correctly!

- 7) Double click the new report
- 8) Delete the row for "Ticket Number", the blank rows above and below, and the column for "Ticket Number"
- 9) Verify and adjust the visibility for the itemized costing cells to point to the corresponding "Total Cost" (the expression, not the column header!)
- 10) Center the Report Header
- 11) Insert Column Headers for the toggle columns

- 12) Insert a row between companies
- 13) Adjust cell and header formatting as needed
- 14) Preview the Report

### Service Ticket Costing Report

Service Company	Service Level	Net Profit	Gross Profit	Total Cost
Alarm Co - Detroit	Monroe Com Non		•	
	Contract	(\$1209.96)	\$1292.03	⊞ \$2501.99
	Monroe Resi Non			
	Contract	\$2984.38	\$4716.50	⊞ \$1732.12
	Company Total	\$1774.42	\$6008.53	♥ \$4234.11
Alarm Co - Grand	Grand Rapids Com			
Rapids	Contract	\$248.67	\$956.00	⊞ \$707.33
	Grand Rapids Com			
	Non Contract	\$889.89	\$10783.10	⊞ \$9893.21
	Company Total	\$1138.56	\$11739.10	⊞ \$10600.54

15) Save

#### **The Final Analysis**

#### What Have You Learned?

SQL Server Reporting Services can be used to create valuable reports from your SedonaOffice database. We have just created the framework for a number of reports on service costing that many customers have requested. You get it for free.

#### Where Do You Go From Here?

The reports we created today still need work to reach production grade. You still need the ability to:

- Including Service Contract Revenues
- Have versions of this report targeted to levels within your company
- Select date ranges
- Select by service level and company separately and individually
- Select costing by service tech
- Test pricing variations and how they would affect profitability
- Test parts costing and how it would affect profitability
- Publish the report
- Configure for emailing and internal distribution

#### **Extending This to Other Tables**

Just as we were able to create this report from the service side, you can create reports that cover any aspect of SedonaOffice's data. Using our database guides and your own ingenuity, there isn't any report you can't create.

#### **Books and Learning Materials**

There are numerous books available on using Reporting Services. Microsoft Press has released a number of very informative and well written manuals on the topic. These guides often include CD's with sample reports and training aids. If you are going to write your own reports I advise that you invest in at least one of these.

#### **Online Assistance**

The web also has plenty of guidance for those who want to write reports. You can search on Reporting Services Help. Note that you can also get lots of help on writing SQL queries as well.

#### **Getting Reporting Services Up and Running**

If it isn't already installed and configured correctly, you will need to do that before you can begin using the product. You can learn how to do this yourself, or tap an IT professional to do the heavy lifting for you. There are three things you should remember. First, you can design and generate reports using report services as long as the application is installed. You do not need a report server until you are going to publish reports. Second, the same books and websites that guide you through using Reporting Services often have sections on how to install and configure the product. Finally, your database is not tied to your Reporting Services installation. Reporting Services can be installed and uninstalled without any affect on your precious data!

#### Training

If you aren't into the whole self-taught method, then you can sign up for training on Reporting Services either locally or through classes that may be offered through SedonaOffice. Whether we sponsor classes depends largely on user demand, so if you are interested let us know!

#### **Final Word**

You have attended this class and are incredibly excited about the kinds of reports you can get from Reporting Services. Some of you will return to your servers and get started right away. Those of you who are willing but lack the available time can still take advantage of these wonderful reports and all they have to offer. You can contract with 3<sup>rd</sup> parties, or you can contract with SedonaOffice. We are available to design and build reports based on your specifications! No matter what path you choose, we have demonstrated the value of this resource and you now have sufficient knowledge to decide on how to best utilize it.

## Appendix

_	
d	08/17/2000
D	Thursday, August 17, 2000
f	Thursday, August 17, 2000 16:32
F	Thursday, August 17, 2000 16:32:32
g	08/17/2000 16:32
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r	Thu, 17 Aug 2000 23:32:32 GMT
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у	August, 2000
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dddd, MMMM dd	Thursday, August 17
M/yy	8/00
dd-MM-yy	17-08-00

Service Ticket Costing Query

```
Select
Ticket Number as "Ticket Number",
Company. Description as "Service Company",
SLevel.Description as "Service Level",
Employee.Employee Code as "Employee",
ClosedDate,
"Labor Cost" =
  IsNull ((select Cost = Sum ((Tech.RegularPayRate )
    DATEDIFF (minute, dispatch.Dispatch_Time, Departure_Time)) / 60)
 from SV Service Ticket Dispatch dispatch
  inner join SV_Service_Tech Tech on Tech.Service_Tech_Id = dispatch.Service_Tech_Id
  Where (Dispatch Time > '1900-1-1' and Departure Time > '1900-1-1') and
         Dispatch.Service Ticket Id = Ticket.Service Ticket Id), 0),
"Parts Cost Issued" =
 IsNull ((select Sum (Jrn.Extended Cost * Jrn.Multiplier * -1)
 From SV_Service_Ticket_Parts Parts
  inner join IN Journal Jrn on Jrn.Journal_Id = Parts.Journal_Id
  Where Parts.Service_Ticket_Id = Ticket.Service_Ticket_Id), 0),
"Parts Cost DE" =
  IsNull ((SELECT Sum(rp.extended cost * case r.Is return when 'N' then 1 else -1 end)
 From IN Receipt r
  Inner Join IN Receipt Parts rp ON rp.Receipt Id = r.Receipt Id
 Where r.Service Id = Ticket.Service Ticket Id and r.Direct Expense = 'Y'),0),
"Expense" =
 IsNull ((select Sum (Expense Total)
 From AP Invoice
  Where Service Ticket Id = Ticket.Service Ticket Id), 0) +
  ISNULL ((Select Sum (Expense Cost)
 From IN Receipt
 Where Service Id = Ticket. Service Ticket Id and Invoice Id < 2), 0),
"Credits to Expense" =
  ISNULL ((Select SUM (Expense Total * -1)
  From AP Credit
  Where Service Ticket Id = Ticket.Service Ticket ID), 0),
"Journal Entries" =
  ISNULL ((Select SUM (r.Amount * CASE WHEN Credit Or Debit = 'C' THEN -1
   WHEN Credit Or Debit = 'D' THEN 1 END)
 From GL_Register r
  INNER JOIN GL Account gl ON gl.Account id = r.Account id
  Where r.Service Ticket Id = Ticket.Service Ticket Id
   AND r.Register Type Id = 4
   AND gl.Account Type Id IN (3,13,14,15,16)), 0),
"Direct Revenue" =
 ISNULL ((Select SUM (Inv.Amount - Inv.Tax Amount - IsNull (Credit.Amount, 0)
  + IsNull (Credit.Tax_Amount, 0))
 From AR_Invoice Inv
 Left Outer join AR Credit Credit On Credit.Service Ticket Id =
   Ticket.Service Ticket Id
  Where Inv. Service Ticket Id = Ticket. Service Ticket Id), 0)
From SV Service Ticket Ticket
Inner Join SV Service Company Company on Company.Service Company Id =
  Ticket.Service_Company_Id
Inner Join SV Service_Level SLevel on SLevel.Service_Level_Id =
 Ticket.Service Level Id
Inner Join SV Service Tech Tech on Tech.Service Tech Id =
 Ticket.Last Service Tech Id
Inner Join SY_Employee Employee on Employee.Employee_Id = Tech.Employee Id
Where Ticket.Service_Ticket_Id > 1 and Resolution_Id <> 12 and Ticket Status = 'CL'
Order by Ticket Number
```