SedonaOffice

The #1 Financial Software for Security Companies

SQL Server Reporting Services

Reference Guide

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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.

Overview

Over the last two years the Reporting Service Class has dealt with creating a specific, complex report that the users can return to their companies and implement. This year we will focus on taking existing reports from SedonaOffice and customizing the format to suit your needs!

Expanding on the Work That SedonaOffice Already Does

SedonaOffice provides you with plenty of useful and sometimes complex reports. What if you could take the reports that SedonaOffice provides and tailor them to your needs! Do you want to add a column or perhaps change the order of the columns? Maybe you just want to see it in a different font or add color! Graphs! Charts! All of these things and more are possible through SQL Reporting Services.

How Can I Possibly Reproduce All of These SQL Queries?

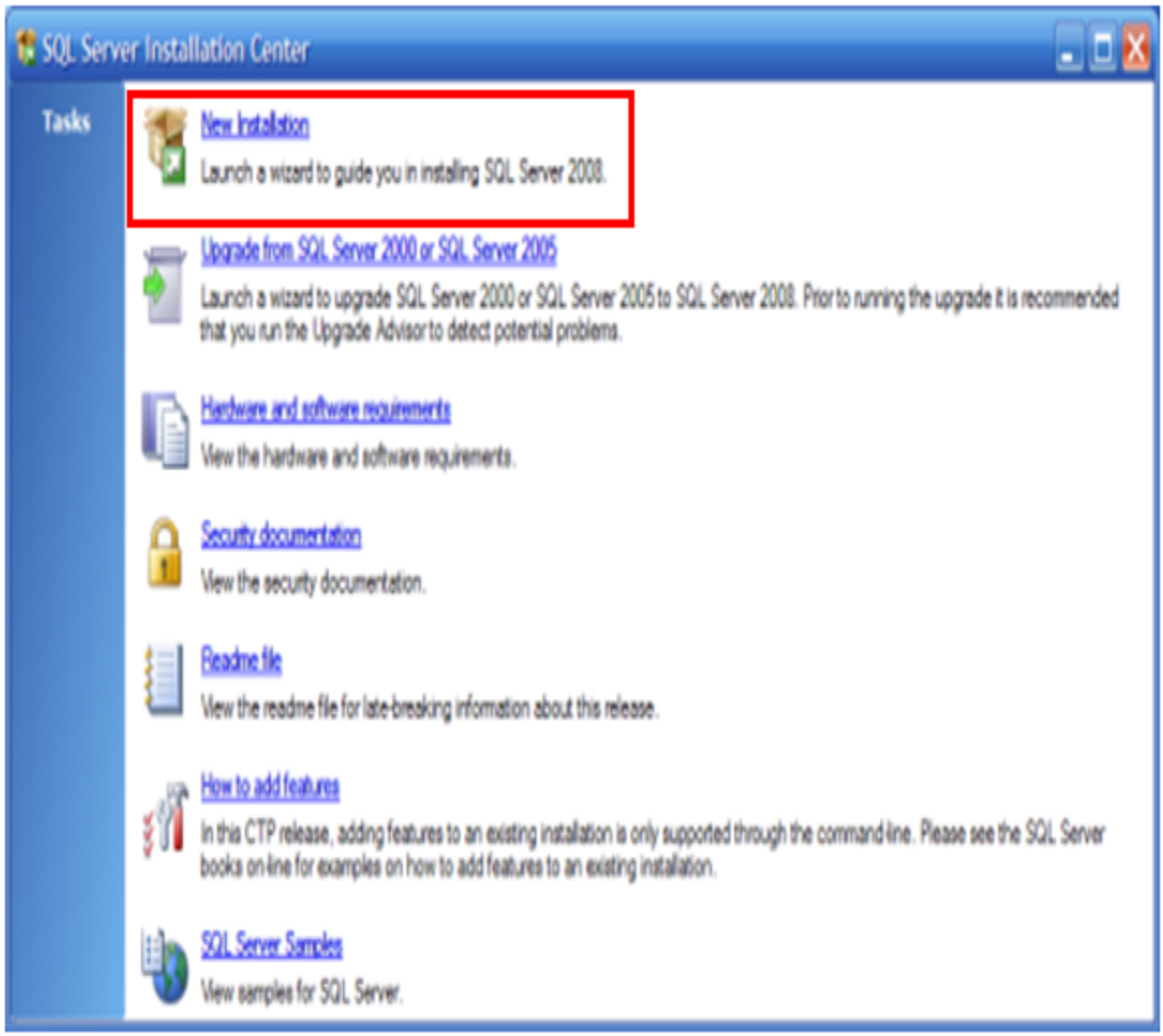
Reproducing the SQL scripts that are used to generate SedonaOffice reports would be a daunting task. You would need to intimately know all of the data tables and recreate the business rules and calculations. The number of hours would be prohibitive!

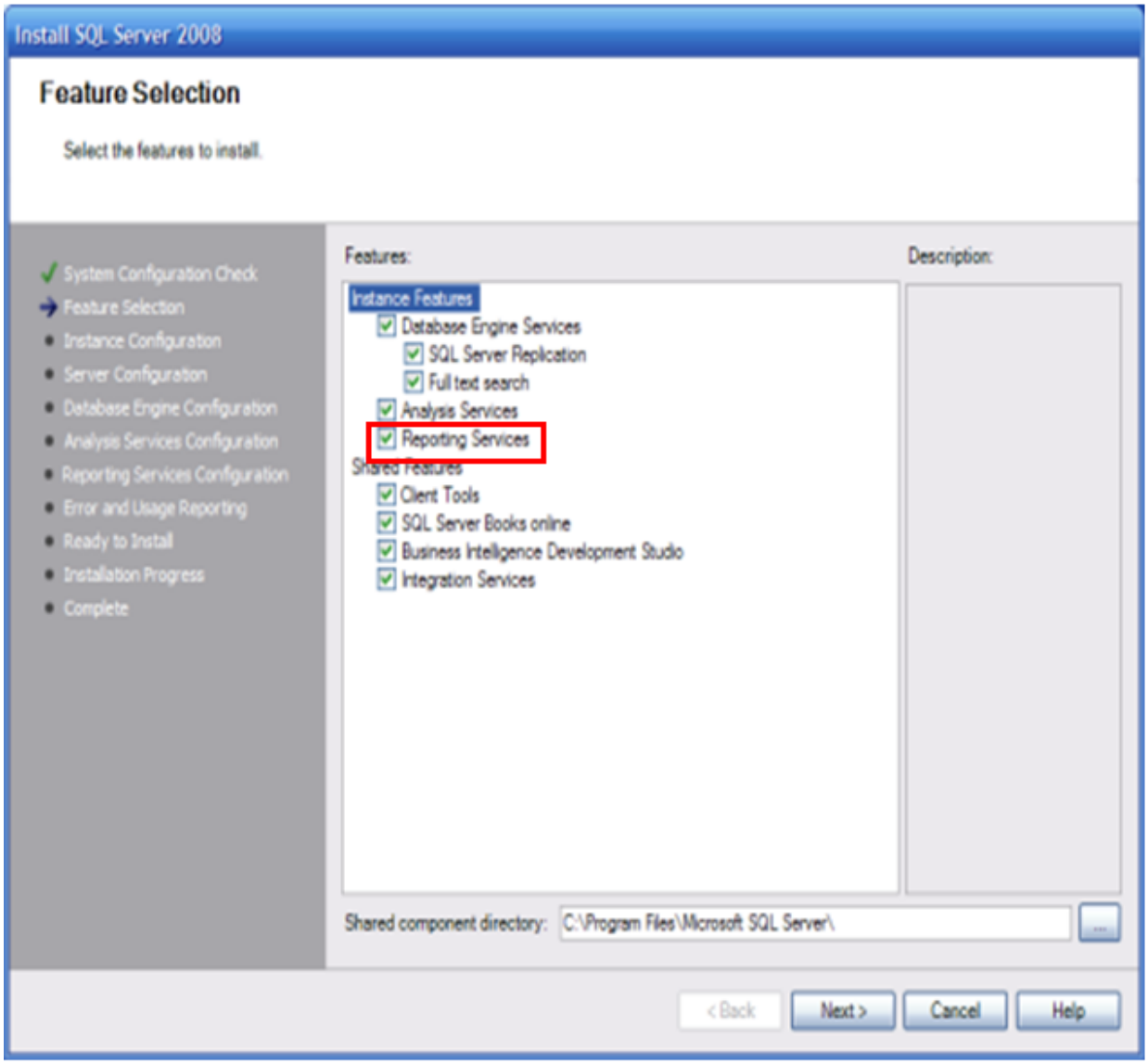
Microsoft SQL provides a wonderful tool that makes this entire task relatively simple: the Profiler. The SQL Profiler is designed to monitor the communications between applications and SQL Server. It tracks all of the scripts, functions and stored procedures and provides a detailed listing for each of these items. Many items are encrypted, so are not useful; however the majority of SedonaOffice reporting scripts can be captured and used as a basis for amazing reports in SSRS.

Before tackling the Profiler, we will review the basics of confirming Reporting Services is installed and installing the application if necessary.

Installing Reporting Services and Opening a New Project

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 → Control Panel → Add or Remove Programs → Microsoft SQL Server 2008 →Change/Remove → Add]. You will need to have your SQL Server Installation Disk available.


SQL Server Installation Center
Tasks
New Installation
Launch a wizard to guide you in installing SQL Server 2008.
Upgrade from SQL Server 2000 or SQL Server 2005
Launch a wizard to upgrade SQL Server 2000 or SQL Server 2005 to SQL Server 2008. Prior to running the upgrade it is recommended that you run the Upgrade Advisor to detect potential problems.
Hardware and software requirements
View the hardware and software requirements.
Security documentation
View the security documentation.
Readme file
View the readme file for late-breaking information about this release.
How to add features
In this CTP release, adding features to an existing installation is only supported through the command line. Please see the SQL Server books on line for examples on how to add features to an existing installation.
SQL Server Samples
View samples for SQL Server.



If the box for Reporting Services starts checked, then you do not need to do anything else. If it is unchecked, then check the box and click next and follow the prompts. You will need your original installation disks for SQL Server or you cannot install Reporting Services!

SQL Profiler

The SQL Profiler is a powerful tool that provides real time information on the processes and communications of SQL Server. Developers and Data Engineers utilize this tool to resolve deadlocks and bottlenecks, to manage the efficiency of the SQL installation and to diagnose problems with scripts, stored procedures and functions. These topics are beyond the scope of this class; however we can take great advantage of Profiler's ability to capture real time scripts. These are the same scripts that are used to generate most of SedonaOffice's reports and you need very little training to be able to capture and use these scripts!

How to Capture a Script Using Profiler

> *For the next section, you will need to access the SQL Server computer to perform the required operations. If you do not have access to the server, either directly or via terminal session, please contact your IT professional for assistance.*

The process of capturing a report script consists of four steps:

1) Start Profiler
2) Create a trace in Profiler
3) Run the desired report within SedonaOffice
4) Locate and copy the associated script(s) from Profiler

Once you have copied the script, you will need to review it and may need to manipulate it using an SQL editor. *Note: For our class, we will use the SQL Management Studio to review and edit scripts.* After you are satisfied with your version of the captured script, you can copy this into Reporting Services and create the report.

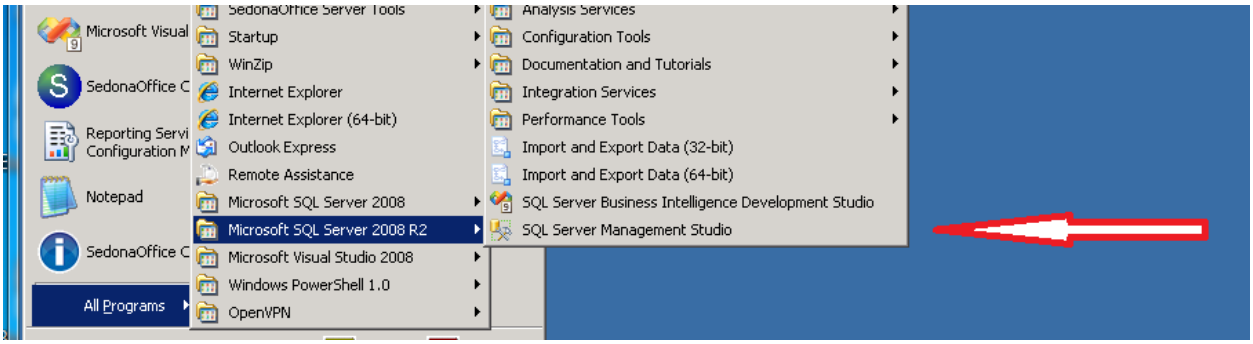
Starting Profiler

There are a number of ways to start the SQL Profiler application. Given that we will be reviewing our captured scripts in the Management Studio, we will use the path that takes us first to the SQL Management Studio and then to SQL Profiler.

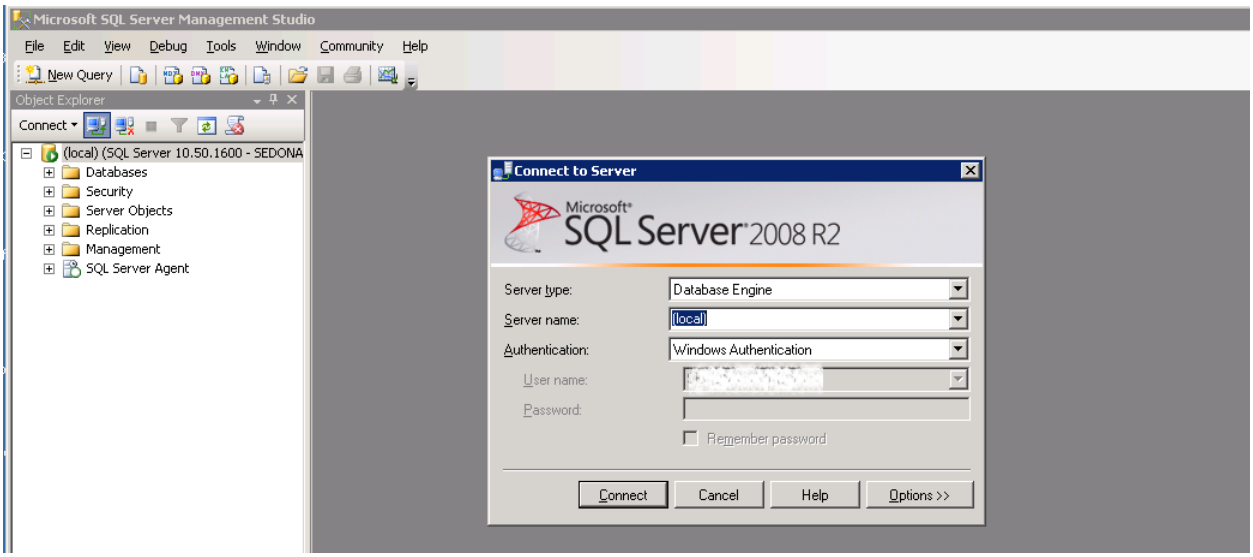
> *The SQL Management Studio is provided with SQL Server and is the primary interface between users and the SQL Server Databases. Some of the functionality includes: backing up, restoring, manipulating data structures, editing SQL scripting, etc. We will only use a fraction of this very powerful application.*

From your SQL Server:

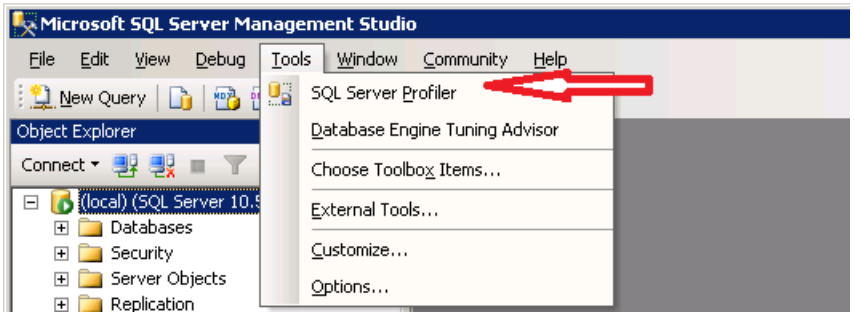
Click →Start → All Programs →Microsoft SQL Server 2008 R2 →SQL Server Management Studio



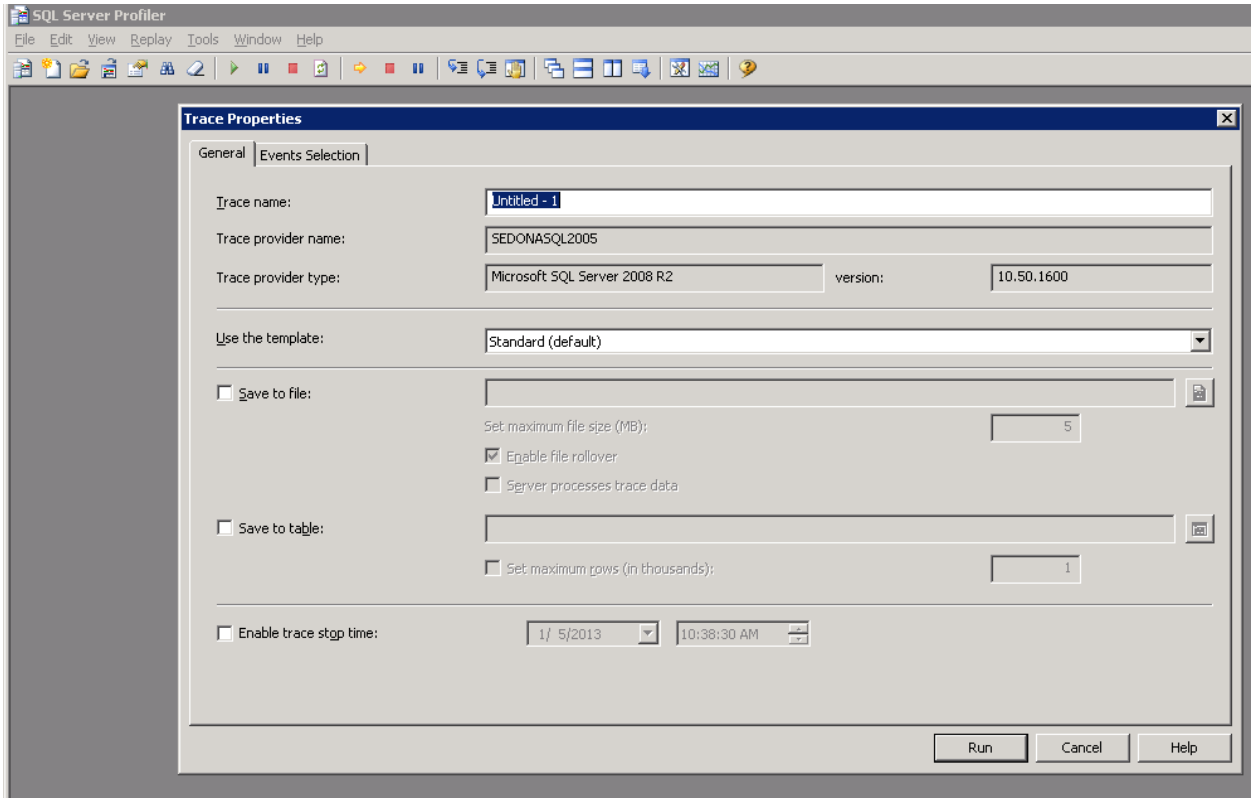
The following should come up:



At this point you should be able to click on *Connect* and proceed to the next step. If you receive an error after clicking, then you will need to contact your IT professional for further assistance. Once you have started the Management Studio, select the drop down for *Tools* and select *Profiler*.

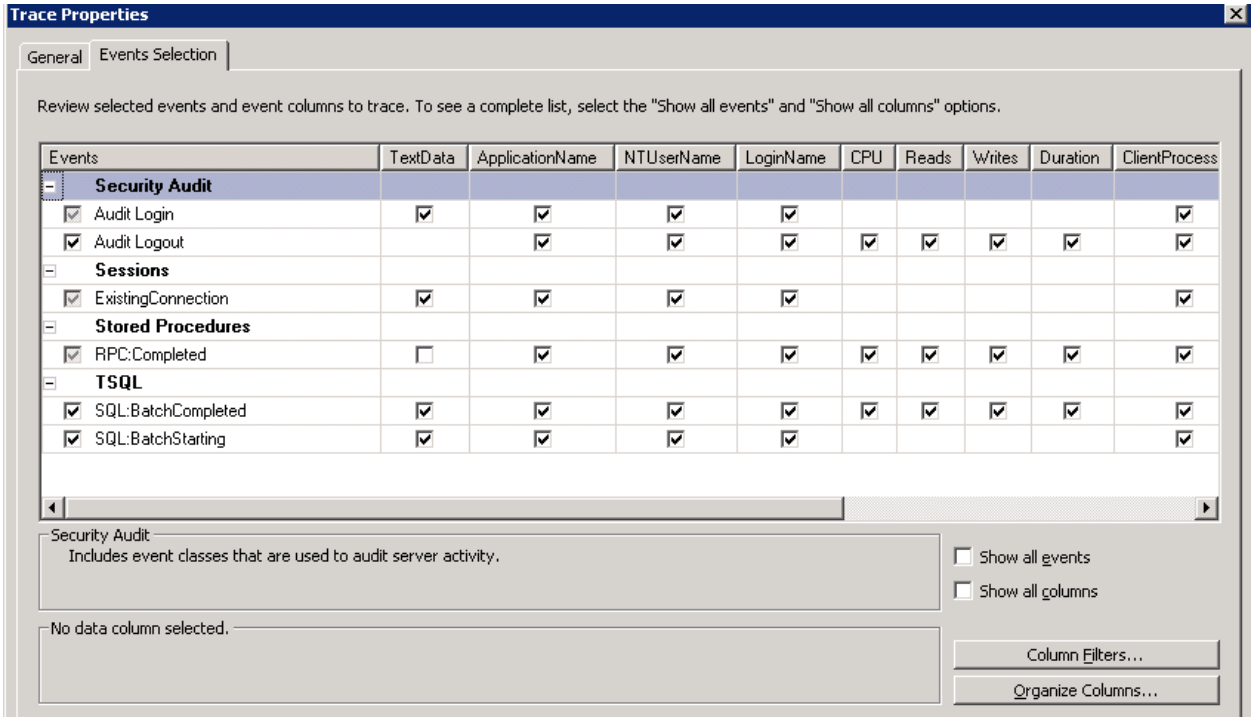


Click *Connect*.



Create a Trace in Profiler

Select the *Events Selection* tab.

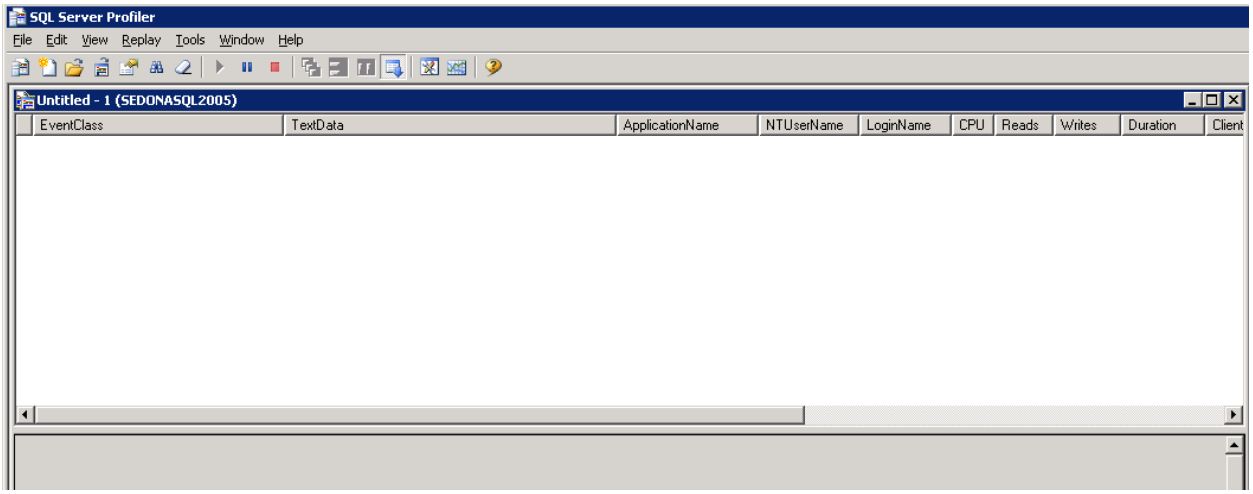


Right click on ***TSQL*** and choose *Select Event Category*

Right click on ***Stored Procedures*** and choose *Select Event Category*

A number of entries will now show and all will be checked. Leave these as they are!

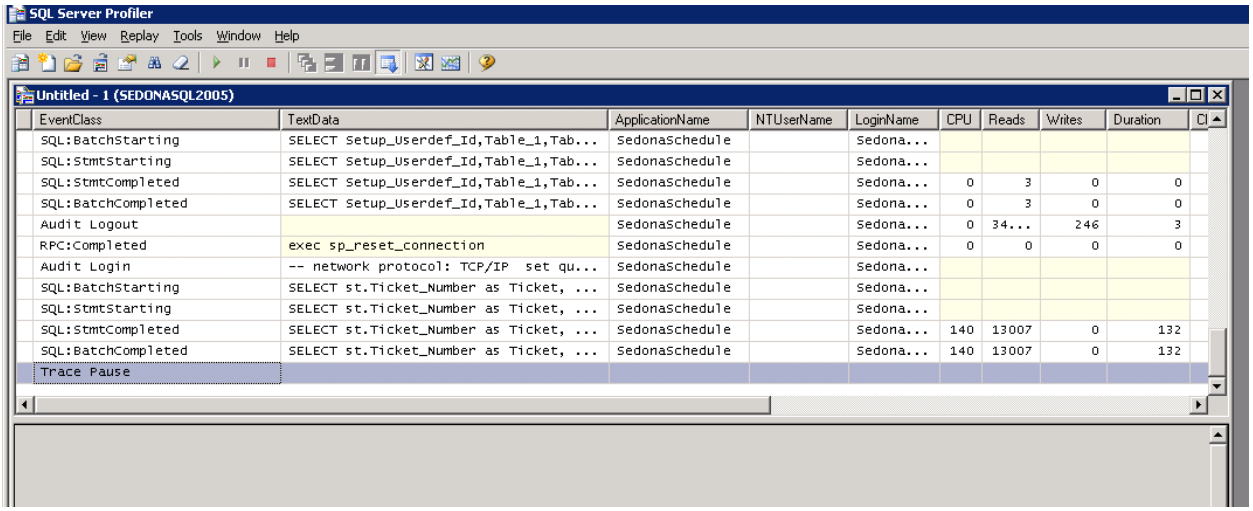
Now click *Run*.



This is the screen in which all of the script captures will show. If others are using the system then you will see activity scroll down the screen.

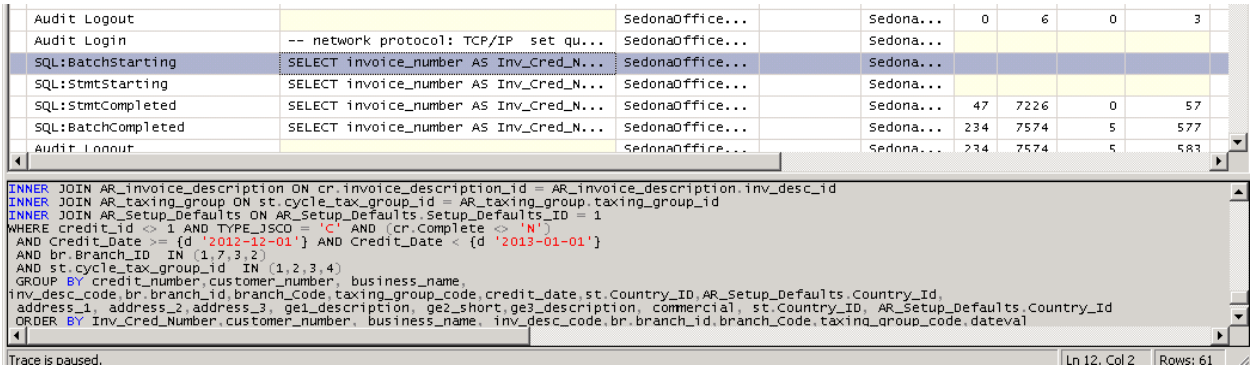
Run the Desired Report Within SedonaOffice

Now login to SedonaOffice (from the Server if you can) and open the report dialogue that you want to capture. Complete the selections for the report and prepare everything for running the report right to the point of selecting ***OK*** to run the report. Now return to the Profiler window and click the erase icon at the top of the screen. This will clear all of the previously captured information and make it easier to isolate the script from the report. Return to SedonaOffice and click ***OK*** to take the report. Wait for the report preview to appear and immediately return to the Profiler and click the ***Pause*** button . This will suspend the capture of data and make it easier to locate the report script. You should see something like the below screen:



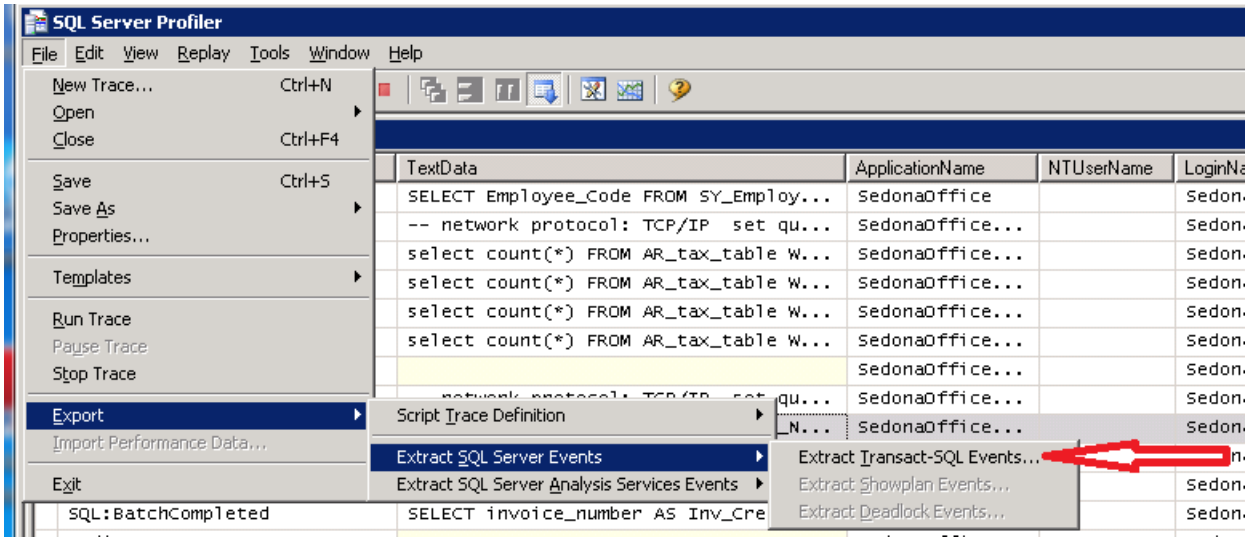
Locate and copy the associated script(s) from Profiler

Scroll up the captured data, line by line, until you find the report query.



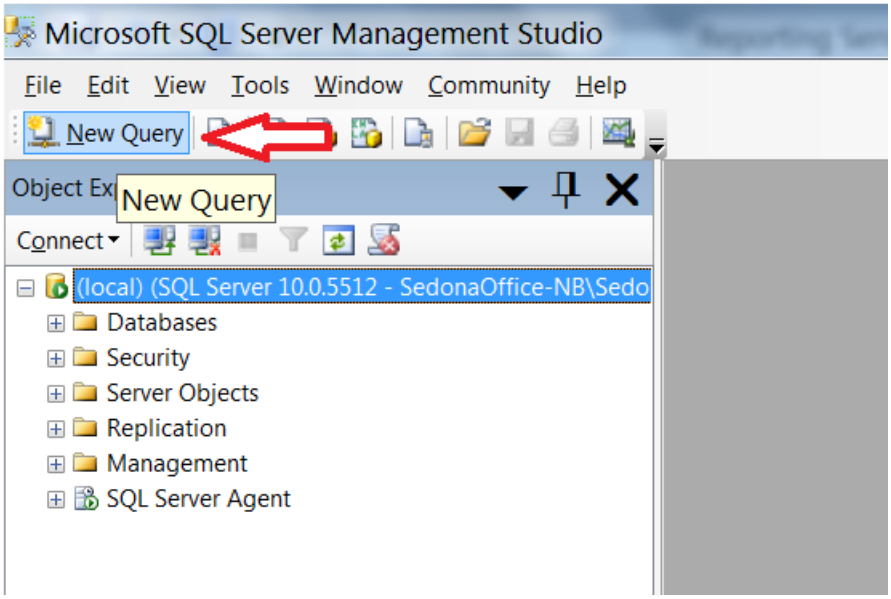
It can be challenging to identify which line item or line items is the actual report query. The above query is from an invoice register report. There are a number of tricks you can employ to make it easier to locate the script:

1) Arrange the report window and the Profiler windows so you can quickly leap from one to the other to click pause.
2) Choose report parameters that are easily recognizable. Date ranges (see above) can identify the script as can choosing a single branch or account. Note: be careful when using these queries since they will need to be modified to allow you to change date ranges, etc.
3) There is a search feature for the captured data (Text column) in the profiler window.
4) You can limit the data captured to a specific process ID. This is a VERY useful strategy and will be explored further in the class.
5) You can export all of the captured data into an SQL query file. This will allow you to review the data in an SQL editor window instead of the limited Profiler window.

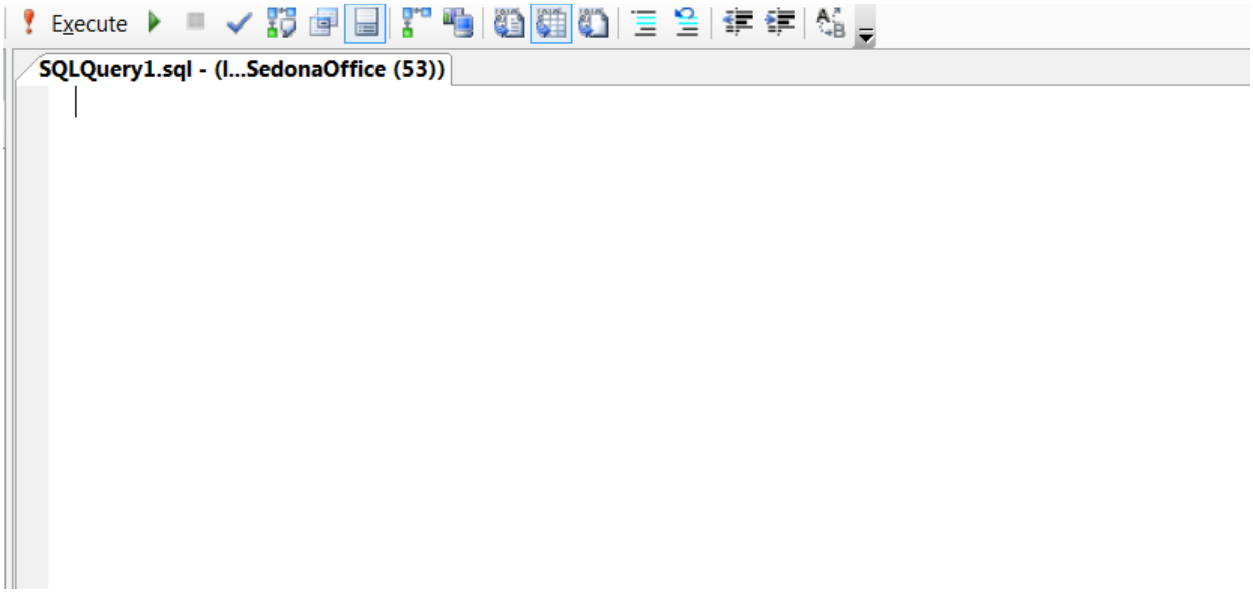


Once you have identified the segment that includes the report script, you can highlight the entire script and then *Right-Click* and select *copy*. Switch back to the SQL Management Studio.

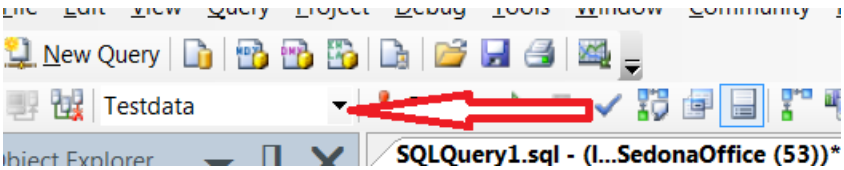
Click on the *New Query* button.



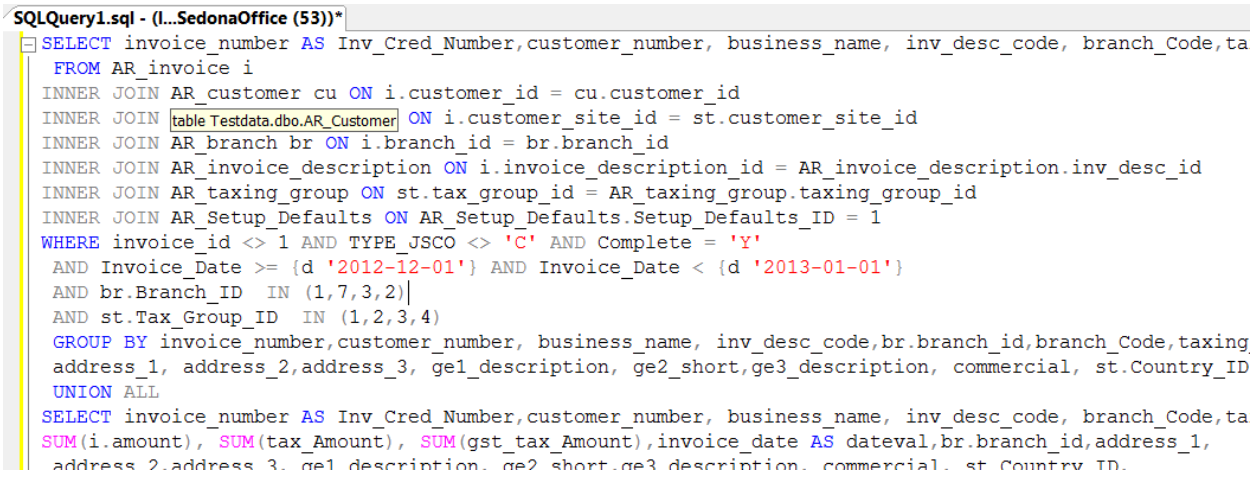
You will see a blank workspace.



Make sure the correct database is selected.



Right click and paste the script into the blank workspace.



As a test, click the *Execute* button (**!**).

Results | Messages

	Inv_Cred_Number	customer_num...	business_name	inv_desc_co...	branch_Co...	taxing_group_co...	(No column na...	(No column na...	(No column na
1	713817	10002	Hometown Diner #100	Recurring	MI	MI	180.00	0.00	0.00
2	713818	10002	Hometown Diner #101	Recurring	MI	MI	293.70	0.00	0.00
3	713819	10045	Bacon, Harold	Recurring	MI	MI	81.70	4.81	0.00
4	713820	2388	Lands, George	Recurring	MI	MI	179.71	10.57	0.00
5	713821	4444	Gordon, Jeff	Recurring	MI	MI	261.41	15.38	0.00
6	713822	9001	Nightingale, Flo	Recurring	MI	MI	67.65	0.00	0.00
7	713823	9003	Cooper, Steven	Recurring	MI	MI	62.09	3.65	0.00
8	713824	9050	Simply Sandwiches	Recurring	MI	MI	159.76	9.40	0.00
9	713825	9051	Polly's Pies	Recurring	MI	MI	355.33	17.65	0.00
10	713827	9074	Scott Blankenship	Recurring	MI	MI	165.75	9.75	0.00
11	713828	9078	Hartley, Mariette	Recurring	MI	MI	98.02	5.77	0.00
12	713829	9080	Max Headroom	Recurring	MI	MI	159.38	9.38	0.00
13	713830	9081	Valerie Vetter	Recurring	MI	MI	191.09	11.24	0.00

The results of running the script should resemble the report preview in SedonaOffice. Notice that there may be columns that have no name. You will need to edit the SQL script to add labels to these columns. You can now manipulate the query as you need and utilize all of the lessons from the last two years to build a magnificent report!

Final Analysis

Almost every report in SedonaOffice can be reproduced via this method. The challenge will be manipulating these reports to get the desired results. A basic report like the Invoice Register requires that you add column names while other reports may require that you capture and piece together multiple scripts. Still others may have to be heavily edited to even run. If you want to add columns to a report, this may be as simple as adding the column name, but it may require that you join in additional tables.

Do not let this scare you off. There is a significant advantage to starting with a working query. You can get your feet wet by simply duplicating existing reports. Once you are comfortable with that, move some columns. Then add additional columns, and finally, bring in data from other tables!

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!

Contracting Out the Work

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 3rd 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

Formatting Conventions for Dates:

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
G	08/17/2000 16:32:32
m	August 17
r	Thu, 17 Aug 2000 23:32:32 GMT
s	2000-08-17T16:32:32
t	16:32
T	16:32:32
u	2000-08-17 23:32:32Z
U	Thursday, August 17, 2000 23:32:32
y	August, 2000
dddd, MMMM dd yyyy	Thursday, August 17 2000
ddd, MMM d """yy	Thu, Aug 17 '00
dddd, MMMM dd	Thursday, August 17
M/yy	8/00
dd-MM-yy	17-08-00

Notes: