



CASE STUDY | FINANCE

Republic Bank - Searching SQL Server databases, a typical quest begins...

"Often it's the simple tools that we turn to most often in our day to day jobs."

Chris Yates, Database Administration Manager



Introduction

I'm a DBA in the financial sector, managing a four-member team of DBAs responsible for **1492 databases**, spread across **four environments** (Development, QA, UAT/Staging, and Production) and **90 servers**. When managing this many servers and databases, we need an efficient way to search for objects in a particular database, or in a particular SQL Server instance, or even for particular strings within the object metadata. After all, even the most dedicated team will likely struggle to memorize every schema and every line of code in every database object!

Very limited searching on object names is available within SSMS Object Explorer (click F7 to open the search bar), but we need more than that. We might try the 'brute force' approach of scripting out the database schema into a text editor that has good string searching capabilities, but then often we want to search other objects too, such as SQL Server Agent jobs, SSIS Packages, and so on. With a bit of patience and some hand-rolled scripts and stored procedures, Phil Factor has proved that there is quite a lot of information we can drag out of the Information Schema and System Catalog views – see [Exploring SQL Server table metadata with SSMS and TSQL](#) and [Exploring your database schema with SQL](#).

However, for sheer ease of use, the tool I reach for when I need to perform a detailed search, is Redgate's [SQL Search](#), a free plug-in for SSMS. It allows me to search the object metadata across multiple object types and databases, and has saved me many hours of time and a lot frustration.

A typical quest begins: hunting down an Agent job

During a recent, typical day at work, I was tasked with implementing a maintenance job on one of our servers. I knew that a similar job existed already and I could recall a portion of its name, and even the job step name, but the server hosted a mind-boggling number of jobs and, for the life of me, I couldn't find the one I wanted.

Frustration started to set in, and I was just about to give up and rewrite the job from scratch, when I recalled reading somewhere that the latest version of SQL Search had expanded its search capabilities to include jobs.

It took a few seconds to download and install the upgrade to my current version, and then I opened up SSMS and fired up SQL Search (I am demoing this use case on my own local SQL Server instance rather than a Production instance!).

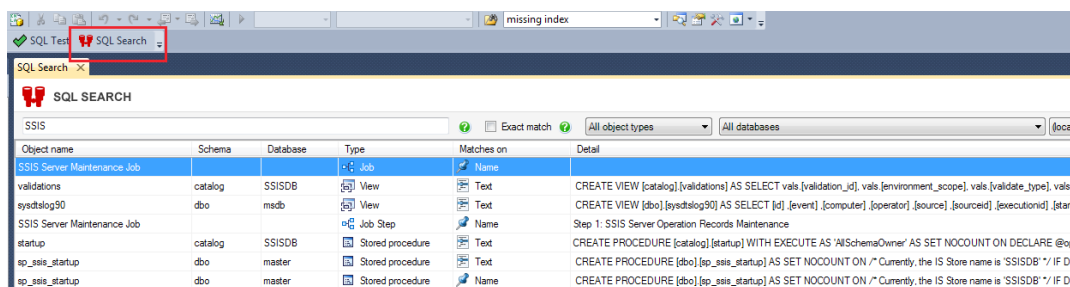


Figure 1 - Opening SQL Search in SSMS

Next, I had to **define my search**. I knew a phrase in my job name but didn't know the whole name, so I typed in what I knew, without selecting the "Exact match" search option.

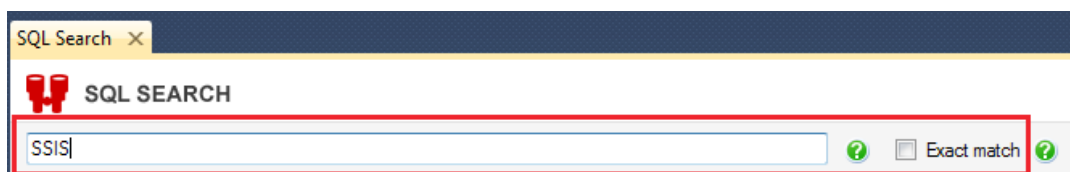


Figure 2 - Searching for part of a job name

Next, I clicked on the **All Object Type** drop-down to reveal, beneath the list of searchable database objects, the Server Object called Jobs. Even though I wanted only jobs, I was intrigued to see what else it would find, so I went ahead and checked them all.

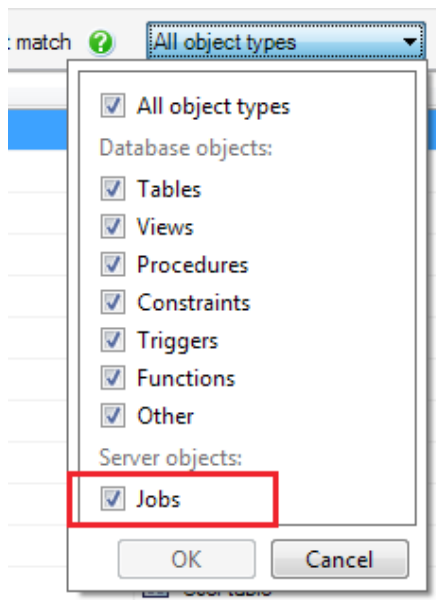


Figure 3 - The All Object Type drop-down

After a few moments, SQL Search returns my results:

Object name	Schema	Database	Type	Matches on	Detail
validations	catalog	SSISDB	View	Text	CREATE VIEW [catalog].[validations] AS SELECT vals.[validation_id], vals.[environment_scope], vals.[validate_type], vals
startup	catalog	SSISDB	Stored procedure	Text	CREATE PROCEDURE [catalog].[startup] WITH EXECUTE AS 'AllSchemaOwner' AS SET NOCOUNT ON DECLARE @c
set_folder_description	catalog	SSISDB	Stored procedure	Text	CREATE PROCEDURE [catalog].[set_folder_description] @folder_name NVARCHAR(128), @folder_description NVARCA
set_execution_parameter_value	catalog	SSISDB	Stored procedure	Text	CREATE PROCEDURE [catalog].[set_execution_parameter_value] @execution_id bigint, @object_type smallint, @param
SSIS Server Maintenance Job			Job Step	Name	Step 2: SSIS Server Max Version Per Project Maintenance
SSIS Server Maintenance Job			Job Step	Name	Step 1: SSIS Server Operation Records Maintenance
set_environment_variable_property	catalog	SSISDB	Stored procedure	Text	CREATE PROCEDURE [catalog].[set_environment_variable_property] @folder_name nvarchar(128), @environment_nam

Figure 4 - Results in SQL Search

In the Object Name column, I see my job name, and the Detail column even provides the actual job step detail!

Since then, I've used this job search on numerous occasions. A quick search on a keyword will reveal job steps associated with, for example, SSIS package execution, far quicker than drilling down into the Agent to review each individual step.

What else is possible?

Most often, I use SQL Search to track down all occurrences of a specific schema object, or column in a table, or to find the whole set of schema objects related to a particular business unit.

For example, we'll be working with a vendor on a process flow for an upgrade and will need to review all schema objects related to that specific business unit. Since each business unit uses strict naming conventions for their business objects, a quick search on "lawyer", say, will return all of the tables, views, and stored procedures related to this unit.

Other times, a developer will approach us with a tuning or maintenance question about a particular stored procedure, but won't necessarily know in which of the 1500 databases it is located. Fortunately, a DBA will know the server on which to look and, armed with SQL Search, will quickly locate any stored procedures with the name provided.

Another good use case is hunting down occurrences of "troublesome" strings in our database code base. Many years ago, we didn't have source control validation to check for issues such as `/**To do...**/` comments in the code, or use of `SELECT *`. In a code base of the size we manage, they still crop up from time to time. However, they are becoming fewer and fewer, since a quick SQL Search on `*To` will hunt them down quickly. The latest version of SQL Search, which also introduces the ability to search with % wildcards and Boolean operators, makes these sorts of string searches even more powerful.

Summary

When managing a lot of database servers, and even more databases, we need tools and automation to help us do our job efficiently. SQL Search is a simple tool that helps us track down specific objects, or fragments of SQL within an object, or all objects that belong to a particular business function, and so on. It is a simple tool, but often it's the simple tools that we turn to most often in our day to day jobs.

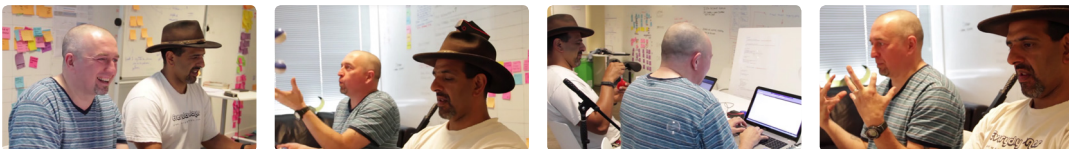
SQL Search

Start using SQL Search. It's a **free** add-in for SQL Server Management Studio that lets you quickly search for SQL across your databases.

www.red-gate.com/sql-search

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