Redgate SQL Source Control vs SQL Server Data Tools (SSDT)
Why choose Redgate SQL Source Control vs SSDT?

At Redgate we believe that database development tools should support you in the way you prefer to work and provide a platform upon which you can build better development practices.

That’s why we provide a complete Database DevOps solution that integrates with the rest of your software development processes and improves the way you make database changes, while enabling you to continue working the way you already do.

SQL Source Control is the foundation for our solution.

Here are a few reasons why SQL Source Control may be a better choice for you than Microsoft SQL Server Data Tools (SSDT):

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<th>Feature</th>
<th>SSDT</th>
<th>SQL Source Control</th>
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<td>Database development in SQL Server Management Studio</td>
<td>✗</td>
<td>✓</td>
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<tr>
<td>Online / connected database development</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Shared model of database development</td>
<td>✗</td>
<td>✓</td>
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<td>Versioning of static data, look-up data and configuration data</td>
<td>✗</td>
<td>✓</td>
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<td>Use of migration scripts to handle complex changes</td>
<td>✗</td>
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<td>Integration with third party tools beyond the Microsoft stack</td>
<td>✗</td>
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<tr>
<td>Platform for a robust database continuous delivery process</td>
<td>✗</td>
<td>✓</td>
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<td>Works with SQL Toolbelt to improve database development practices</td>
<td>✗</td>
<td>✓</td>
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Develop databases online in SQL Server Management Studio (SSMS)

You can develop SQL Server databases using SSMS or Visual Studio but statistics show that the majority of database developers prefer to use SSMS.

**SSDT** forces you to do your database development offline in Visual Studio. Rather than working directly with the database, developers make changes to scripts which are later applied to a database.

Performance issues with the code are unlikely to be discovered until testing or staging and there is no clear audit trail for changes that have been made.

**SQL Source Control** is an add-in for SSMS that links your database to the version control system you use to develop your applications, for example TFS, Git, or Subversion. You can connect to a database, make any changes directly and commit them to source control.

Potential errors can be flagged up the moment they are made and rectified, avoiding time-consuming rework further down the line.
**Source control your reference data**

Lookup data in particular can often change, so it’s essential to have it tied into your database development process.

**SSDT** relies on a local sandboxed database for testing, which is isolated from your static data, meaning verification can only occur after the changes have been deployed. Without support for versioning or deployment of static data, the only option is to manually create post deployment script workarounds.

**SQL Source Control** enables static data, lookup data and configuration data to be source controlled and compared alongside database schema. You can be confident your reference data has kept up to speed with other database changes.
Add migration scripts for complex changes

A migrations driven approach is often more suited to automation than a state or model driven solution like SSDT. However, with pure migrations based approaches, managing dependencies, ordering and conflict can become a massive overhead at scale.

**SSDT**, as a purely state or model based solution, compares the state of the development database against a target database in order to automatically generate a change script. It can't handle certain changes, e.g. column splits or addition of NOT NULL columns, without the risk of losing data.

To avoid data loss, the auto-generated scripts will need to be manually edited before deployment, introducing the risk of human error.

**SQL Source Control** has a hybrid model that uses state by default but can introduce migration scripts where necessary, to handle more complex changes that state-based solutions struggle with.

The number of migration scripts you need to manage is greatly reduced yet you have the option to provide custom scripts for certain changes.
Extend your continuous delivery processes to the database

With companies under pressure to deliver software more rapidly, practices like continuous integration and release automation are becoming commonplace for the application. Database development practices need to be flexible enough to evolve and keep up with the pace of change.

**SSDT** offers limited options for implementing a continuous delivery process for the database. Teams are restricted to the Microsoft stack or a command line integration, and no user interfaces are available to ease the process.

It’s harder to extend SSDT to integrate with existing application development practices meaning you’ll have to change processes or include additional platforms.

**SQL Source Control** is the foundation of Redgate’s Database DevOps solution. With a host of third party plug-ins, you can version your database alongside your application code and then take the next steps with continuous integration and automated deployments using **SQL Change Automation**, part of the SQL Toolbelt.

You can use SQL Source Control with SQL Change Automation to extend your existing infrastructure and include the database in the same continuous delivery processes as your application.
Use alongside the SQL Toolbelt to improve database development practices

Version controlling your database is a major step towards improving how you make database changes, but you can maximise efficiency by improving other database development practices at the same time.

SSDT is intended to offer a complete development environment so that developers needn’t leave Visual Studio for database related development. However it doesn’t contain the full database development capability of SSMS and isn’t extensible with Redgate’s other productivity tools.

SSDT

Without the full capability of SSMS, or the ability to benefit from add-ons, there are limited opportunities to improve the efficiency of database development practices with SSDT.

SQL Source Control is part of the SQL Toolbelt and works best with the other Redgate tools, including:

- SQL Compare compares database revisions in SQL Source Control and generates upgrade scripts
- SQL Data Generator tests the changes you’ve committed to source control with realistic data
- DLM Dashboard tracks your database schema changes across different environments

The SQL Toolbelt also contains other Redgate tools designed to increase efficiency and productivity of your database development team when working in SSMS.

You can use SQL Source Control alongside the other tools in the SQL Toolbelt. These tools plug into SSMS to enhance your entire database development process and improve team productivity.

Find out more about SQL Source Control