



SQL Player
Play with data & have fun!

SQL Server database SSDT & CI/CD



Microsoft®
Most Valuable
Professional





Swag and more

- Claim your attendee Learner Badge here:
- 30 Days to learn it: aka.ms/global-azure/30D2L
- Virtual background and ANOTHER Badge: blog.globalazure.net/Swag



Kamil Nowiński



Microsoft Data Platform **MVP**

Speaker, blogger, data enthusiast

Group Manager at Avanade UK&I (www.avanade.com)

Almost 20 yrs experience as DEV/BI/(DBA)

Member of the Data Community PL

Project member of „SCD Merge Wizard”

Founder of blog SQLPlayer (www.SQLplayer.net)

SQL Server Certificates:

MCITP, MCP, MCTS, MCSA, MCSE Data Platform,

MCSE Data Management & Analytics

Moreover: Bicycle, Running, Digital photography

@NowinskiK, @SQLPlayer

Blog

- Technical posts
- Various skill level
- Cheat sheets
- Recommended books
- Many useful other links
- Interviews (Podcast)
- YouTube Channel



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www.SQLPlayer.net

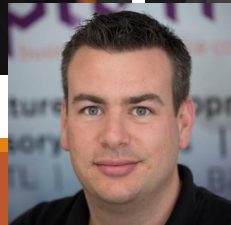
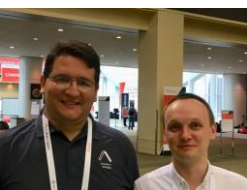
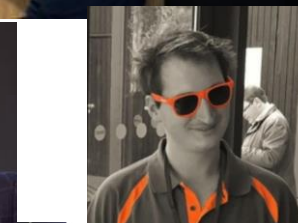
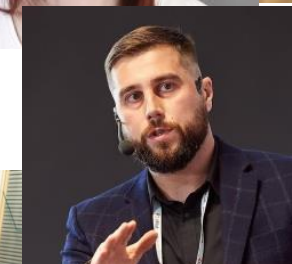
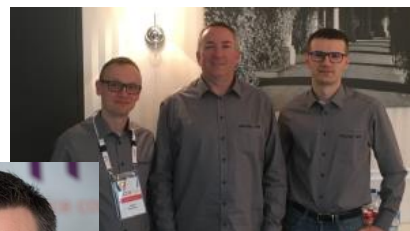
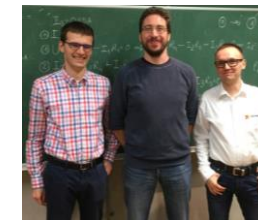


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"Ask SQL Family" #podcast



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YouTube



www.SQLPlayer.net/YouTube

Slides available



github.com
/NowinskiK/CommunityEvents

DevOps – definition (Wikipedia)

DevOps (a clipped compound of "**development**" and "**operations**") is a software engineering **culture and practice** that aims at unifying software development (Dev) and software operation (Ops). The main characteristic of the DevOps movement is to strongly advocate **automation and monitoring** at **all steps** of software construction, from integration, testing, releasing to deployment and infrastructure management.

DevOps aims at shorter development cycles, increased deployment frequency, and more dependable releases, in close alignment with business objectives.

What is DevOps?



Developers & Testers



IT Operations

DevOps – how to start?

- Database in source control
- Build CI process
- Deploy (CD) empty database
- Then add the rests:
 - data,
 - security,
 - Unit tests
 - Integration-test (if required)

What is the SSDT?

- SQL Server Data Tools
- Now, it's a part of Visual Studio
- Free!
- Database project, including:
 - Schema, Stored Procedures, Functions,
 - Tables, Views, Security, CLR
 - ... and much more!

SSDT: How to install?

Workloads

Individual components

Language packs

Installation locations

Web & Cloud (7)



ASP.NET and web development

Build web applications using ASP.NET, ASP.NET Core, HTML, JavaScript, and container development tools.



Python development

Editing, debugging, interactive development and source control for Python.



Data storage and processing

Connect, develop and test data solutions using SQL Server, Azure Data Lake, Hadoop or Azure ML.



Office/SharePoint development

Create Office and SharePoint add-ins, SharePoint solutions, and VSTO add-ins using C#, VB, and JavaScript.



Azure development

Azure SDK, tools, and projects for developing cloud apps and creating resources.



Node.js development

Build scalable network applications using Node.js, an asynchronous event-driven JavaScript runtime.



Data science and analytical applications

Languages and tooling for creating data science applications, including Python, R and F#.



Summary

- > Visual Studio core editor
- > Universal Windows Platform development
- > .NET desktop development
- > Mobile development with .NET
- > Office/SharePoint development *
- > Azure development
- > ASP.NET and web development
- > Game development with Unity
- ✓ **Data storage and processing**
 - Optional
 - ✓ SQL Server Data Tools
 - ✓ Azure Data Lake and Stream Analytics Tools
 - ✓ .NET Framework 4 – 4.6 development tools
 - ✓ Redgate ReadyRoll Core
 - ✓ Redgate SQL Prompt Core
 - ✓ Redgate SQL Search
 - ✓ F# language support

DEMO – part 1

- Create GIT repo in Azure DevOps
- Create empty database project
- Import database from server

Tips for 8 weeks



Learn with
SQL Player

- 1 email / week
- Useful things attached:
 - Cheat sheet
 - Tips
 - Step by step manual
- Visit:
 - <https://learn.sqlplayer.net/database-projects-with-ssdt-dacpac>



SCAN ME

Tips for 8 weeks



Learn with
SQL Player



Database projects with SQL Server Data Tools (SSDT)

Start your database project like any other component or application. Build, rename, detect bugs, test and publish automatically successfully.

This course will contain 64 videos, quiz on each module and many code examples. Sign up below to receive a few emails (8 weeks, one a week) with free, useful materials.

You're signing up to receive emails from Learn with SQLPlayer



SCAN ME

<https://learn.sqlplayer.net/database-projects-with-ssdt-dacpac>

Tips for 8 weeks

- Sign-up now:

Databases with SSDT: Deployment in CI/CD process with Azure DevOps

1 waiting • Scheduled for 16 Apr 2021



Kamil Nowinski
559 subscribers

When working on a database in SSDT, there is a need to deploy our changes to further environments and at the same time maintain the consistency of databases between environments. During the session, I will present how we can publish the solution manually and then go to the Continuous Integration and Continuous Deployment process using the Azure DevOps environment (formerly VSTS). In addition, we will work on inserting the unit tests, approval steps and the others using Pester and PowerShell in order to gain full automation in our database deployment process.

💡 Before we start - sign up for free materials and tips for 8 weeks:
<https://learn.sqlplayer.net/database-...>

SHOW LESS



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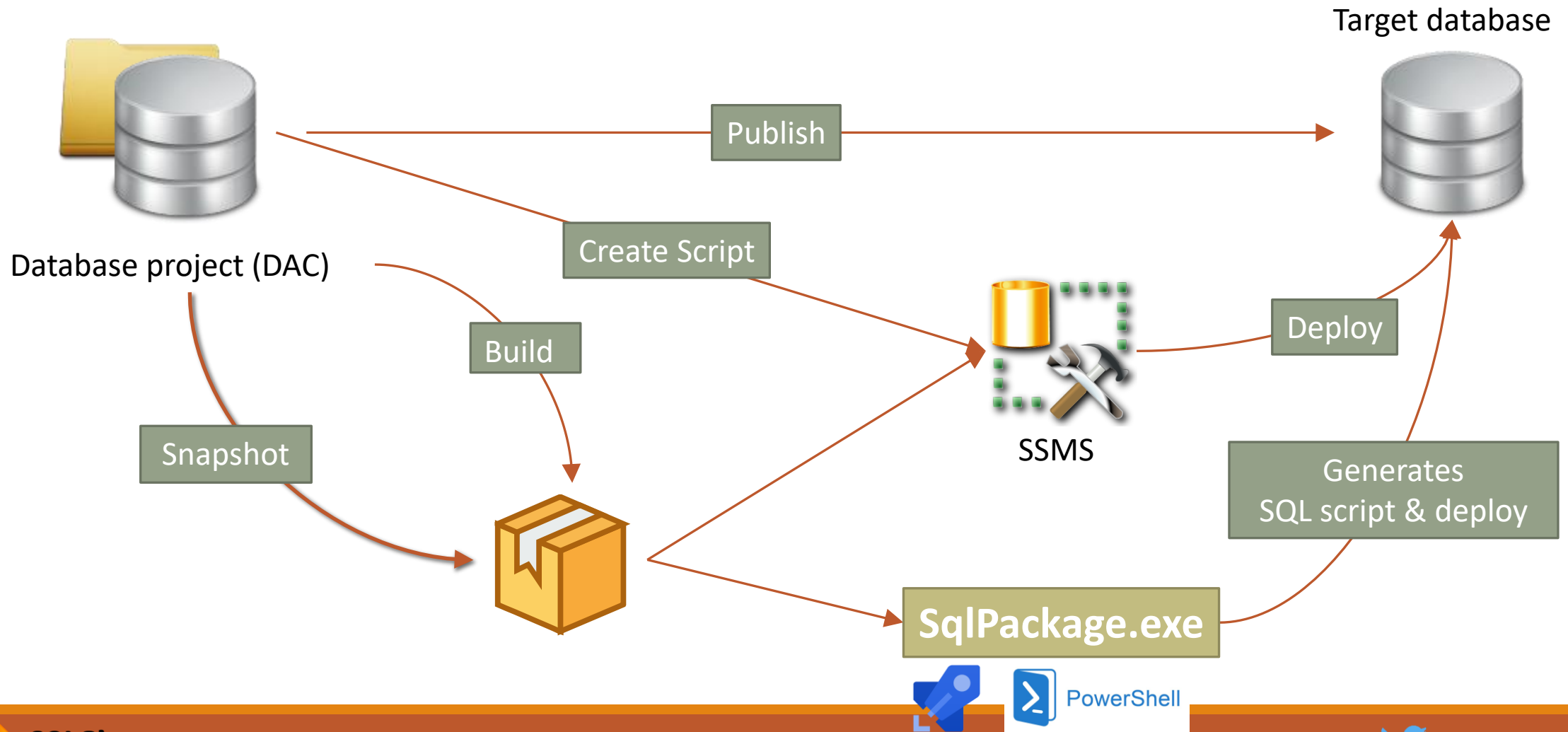
Comprehensive course



- 9 modules
- Over 20 hours in 64 videos
- Code examples (GitHub)
- Slide decks to download
- End-to-End scenario
- Over 100 questions in Quizzes
- Best practices
- Azure SQL DB & SQL Server on-premises
- Experienced trainer
- Available soon: H2/2021

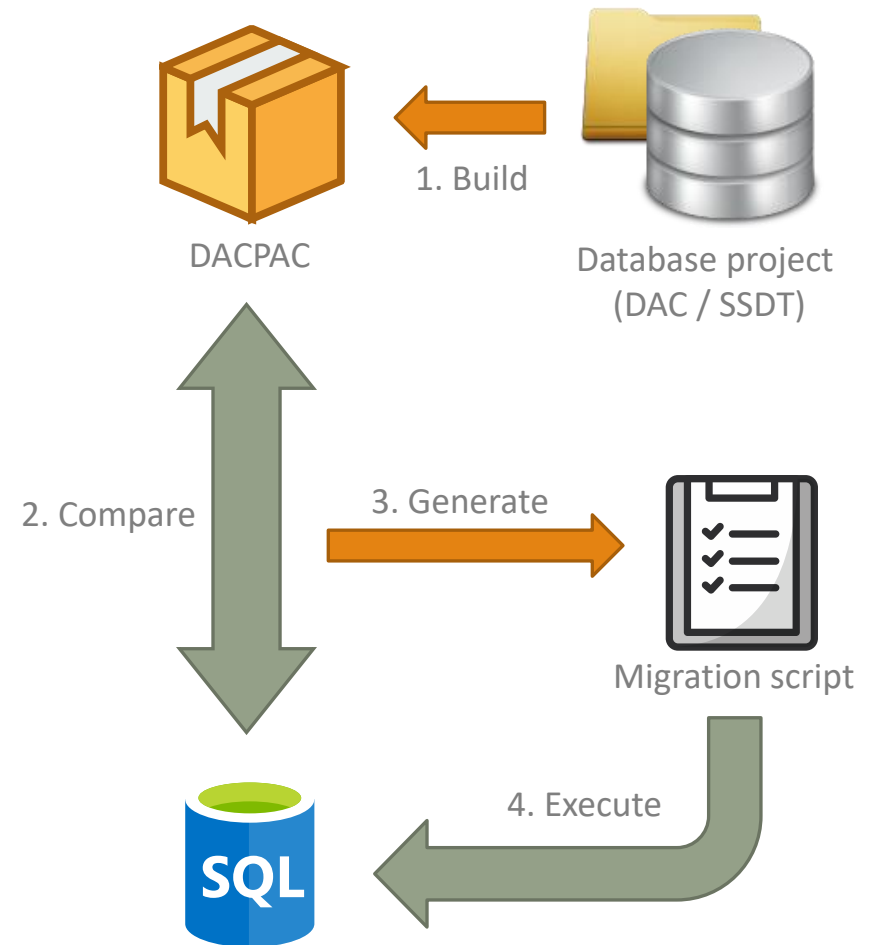


DACPAC file usage scenarios



SSDT Deployment Pipeline

- Build database project
 - Generates DACPAC
- SQLPackage compares
 - DACPAC to target database
- SQLPackage generates
 - Migration script
 - Execute script against target server



Azure DevOps

- Build database project
 - Generates DACPAC
- SQLPackage compares
 - DACPAC to target database
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 - Migration script
 - Execute script against target server



DEMO – part 2

- Build (Visual Studio)
- Build Pipeline (Azure DevOps)
- Publish (Visual Studio)
- Release Pipeline (Azure DevOps)

SSDT offers much more...

- Database references
- Variables
- Publish Profiles
- Pre & Post-deployment scripts

Resources: <https://sqlplayer.net/ssdt>

SQL Server Data Tools (SSDT)

All the following posts are in **SSDT series** on the blog:

- New DB project with SSDT and import existing database
- How to create DACPAC file?
- #TSQL2sDay – How SQLPackage.exe can spoil your deployment
- Tokenization of database project in SSDT
- SSDT (SqlPackage) thread crashes with error when publishing
- Script and deploy the data for database from SSDT project
- 📺 Deployment of Microsoft SQL database with Azure DevOps (video)

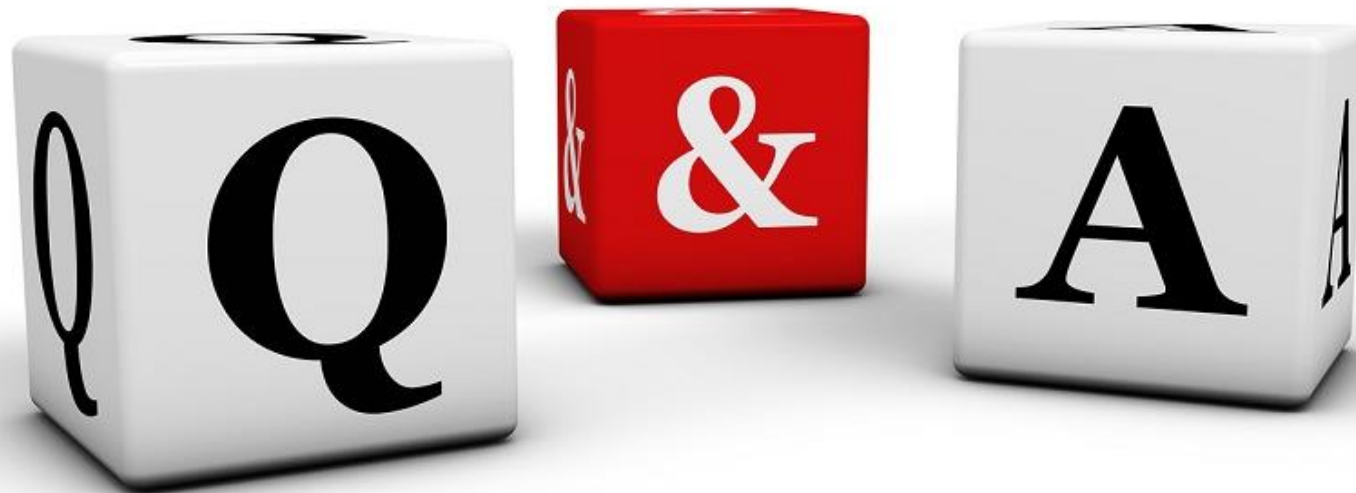
Microsoft resources:

- 🛠 SQL Server Data Tools (MSDN)
- 🛠 SQLPackage.exe (MSDN)
- 🛠 Data-tier Application Framework (DACFx)
- Microsoft SQL Server Data Tools Team Blog
- GIT – branch organization

Other resources:



Questions?



<https://github.com/NowinskiK/ssdt-training/discussions>

Thank you!



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SQLPlayer.net



<https://github.com/NowinskiK/CommunityEvents>



Kamil Nowinski

Microsoft Data Platform MVP

MCSE Data Platform & MCSE Data Management and Analytics