

MS DEV SUMMIT

SQL Server database SSDT & CI/CD

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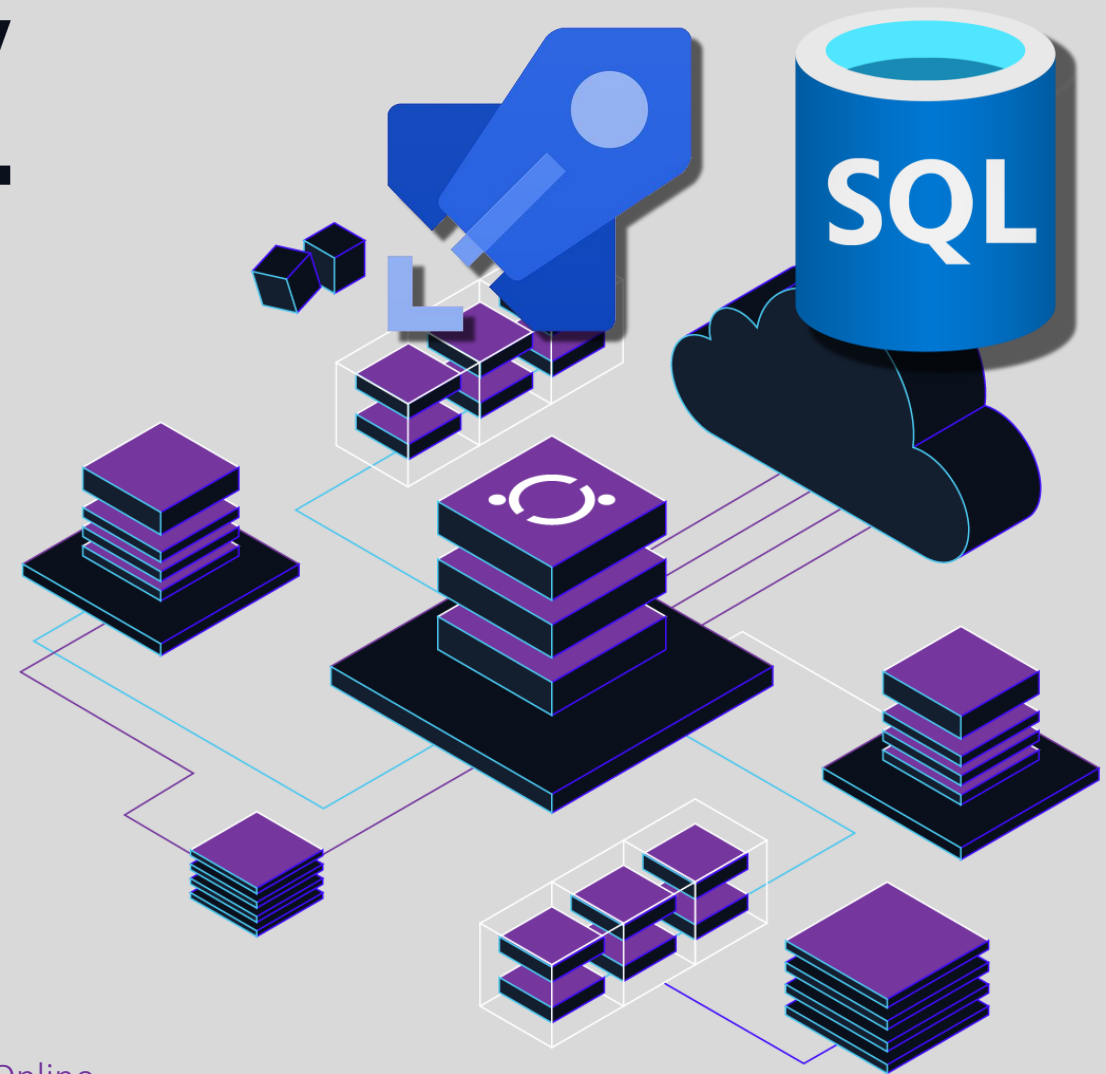
www.msdevsummit.com



10th of December 2021



Online



ORGANIZER:

AcademicPartners
FUNDACJA

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



SQL Player

Play with data & have fun!

www.SQLPlayer.net



Scan me

YouTube



www.SQLPlayer.net/YouTube

Slides available



github.com
/NowinskiK/CommunityEvents

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

- 1 email / week
- Useful things attached:
 - Cheat sheet
 - Tips
 - Step by step manuals
- Visit:
 - <https://learn.sqlplayer.net/ssdt-tips>



Tips for 8 weeks

SSDT - Tips & Cheat sheets

Enroll now to receive a few emails (8 weeks, one a week) with free, useful materials.
Afterwards, you'll have access to them forever!

Get access for free



SCAN ME

<https://learn.sqlplayer.net/ssdt-tips>

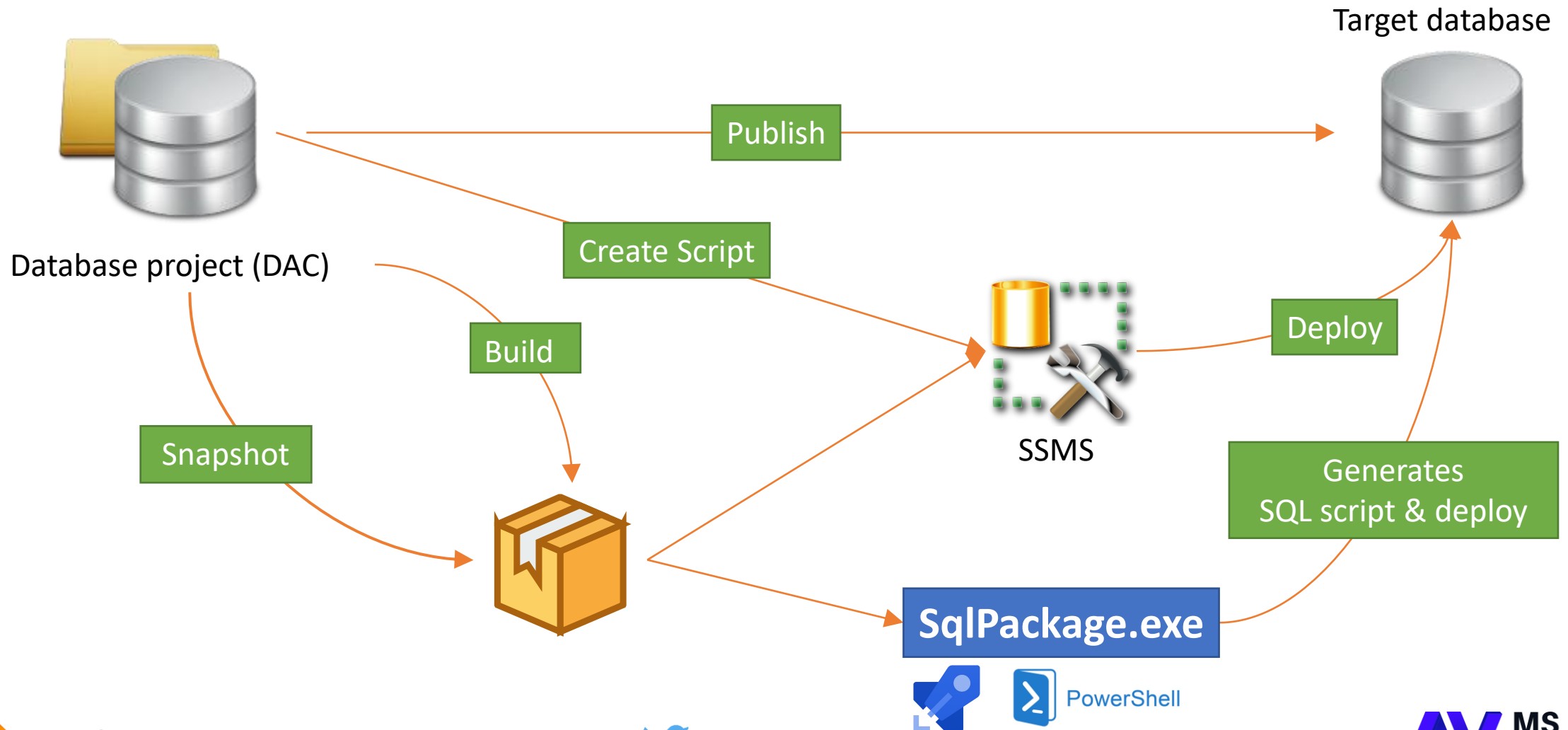
Comprehensive course



- 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

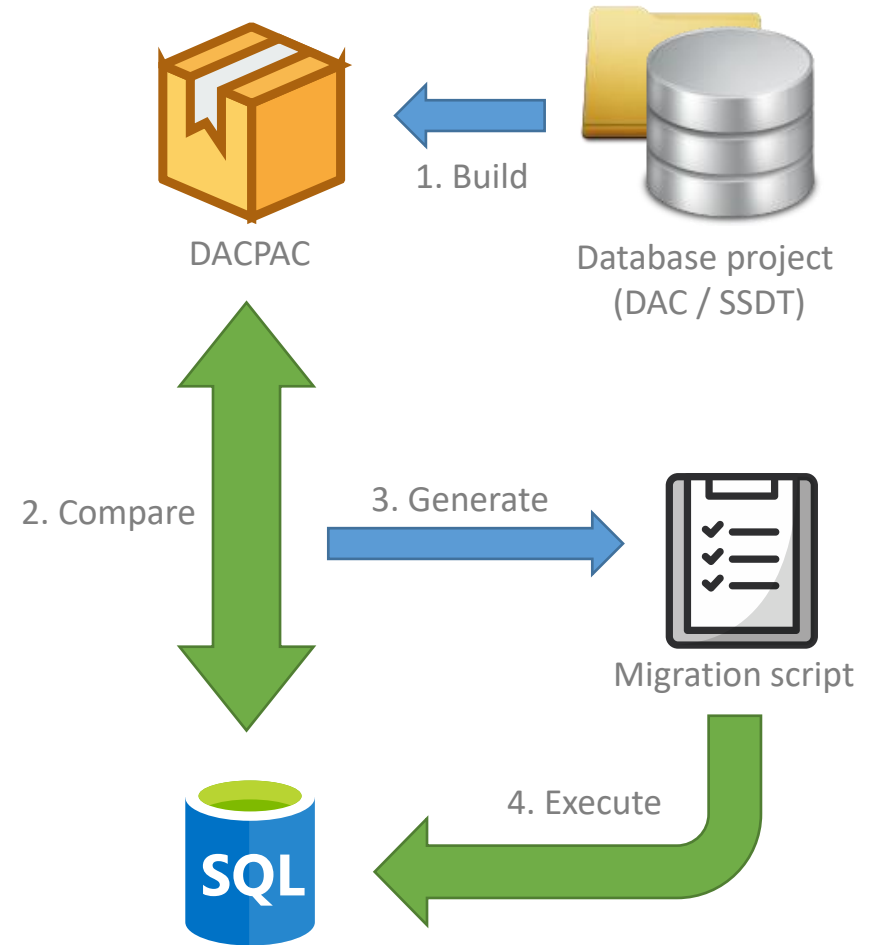


DACPAC file usage scenarios



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
- SQLPackage generates
 - 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>



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SQLPlayer.net



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

Thank you!
