

CI/CD for Azure SQL in DevOps

Making it Easier

<https://github.com/gwalkey>



Overall Process

- 1) Develop your Database Project in Visual Studio and check it in
- 2) Create a Build Pipeline
- 3) Create a Release Pipeline
- 4) Enable the CI/CD Trigger
- 5) Enable Pre-Deployment Approvals
- 6) Verify your DB Changes
- 7) Setup the DevOps Dashboard Badges



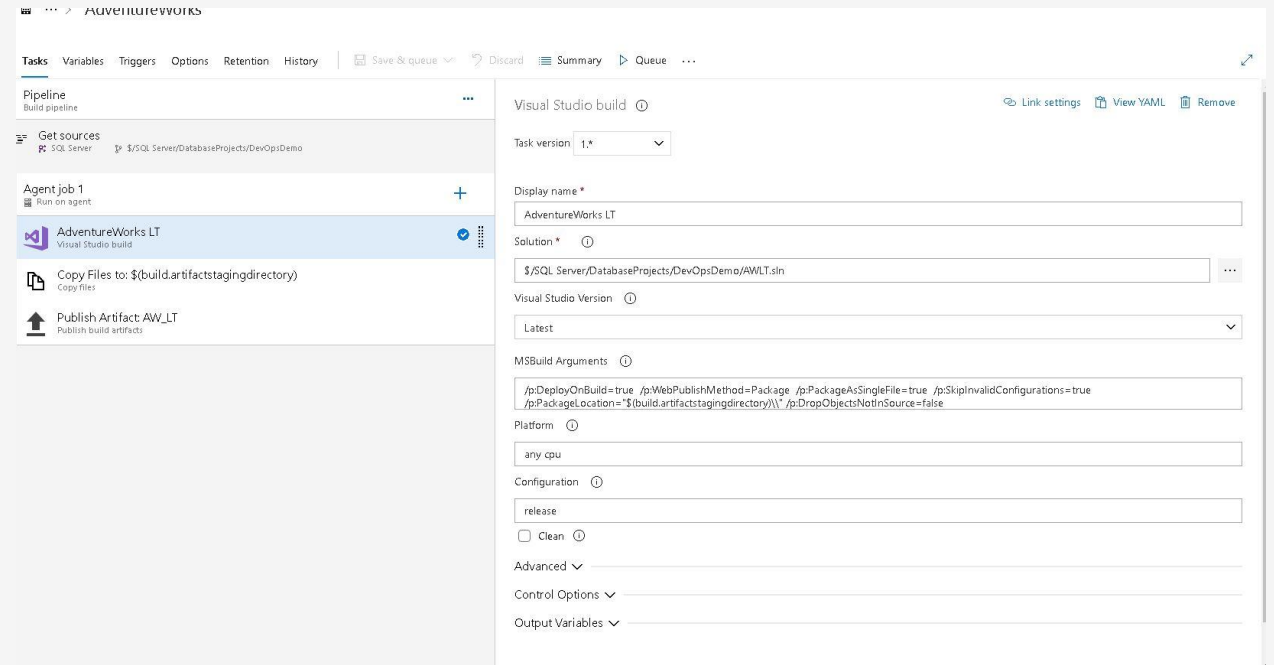
Creating a Build Pipeline

1 The Build Pipeline takes your source code and creates an **artifact**.

2 This requires that you store your code in a DevOps Repo. This Demo uses the TFVC Source Control provider.

3 Because this is a SQL instance, the build process simply runs SQLPACKAGE.EXE to create a DacPac as the artifact.

4 The DacPac becomes the input for the next step, the Release



Creating a Release Pipeline

- 1 The Release Pipeline takes the DacPac and publishes it to an Azure SQL instance.
- 2 You can chain deployments to QA, DEV, Prod tiers on the same or separate SQL Servers
- 3 You can ask a Process Manager to Approve the Deployment
- 4 The system emails you and sets Project Dashboard build badges

The screenshot shows the configuration for a release pipeline named 'AdventureWorks Deploy'. The left sidebar shows the 'QA' deployment process with an 'Agent job' and a task named 'Azure SQL DacpacTask'. The main panel shows the configuration for the 'Azure SQL Database deployment' task.

Task configuration details:

- Task version:** 1.*
- Display name:** Azure SQL DacpacTask
- Azure Service Connection Type:** Azure Resource Manager
- Azure Subscription:** (Scoped to subscription 'Pay-As-You-Go')
- SQL Database:**
 - Authentication Type:** SQL Server Authentication
 - Azure SQL Server:** insyncva.database.windows.net
 - Database:** \$(DatabaseName_QA)
 - Login:** \$(DatabaseUserName)
 - Password:** \$(DatabaseUserPassword)

CI/CD Trigger

The Continuous Integration/Continuous Deployment trigger is found on the Artifact object in the Release Pipeline

All pipelines > AdventureWorks Deploy

Pipeline Tasks Variables Retention Options History

Artifacts | + Add

Stages | + Add

QA
1 job, 1 task

Prod
1 job, 1 task

Dev
1 job, 1 task

Continuous deployment trigger

Build: _AdventureWorks Lite

☒ Enabled

Creates a release every time a new build is available.

Build branch filters ⓘ

No filters added.

+ Add

More questions about CI/CD in Azure SQL?

Azure Pipeline Docs



<https://github.com/gwalkey>

