



SQL Server DevOps

SQL Saturday Richmond - 2024

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About

- ▶ DB dev since 1985 - DBASE I on CP/M - Pre DOS
- ▶ Owned Original IBM 5150
- ▶ 10 years Data Manager/DBA at PatientFirst Corp
- ▶ <https://github.com/gwalkey>

Agenda

- ▶ DevOps Org Setup
- ▶ DevOps Project Setup
- ▶ Service Connection
- ▶ Build Pipeline - Explain Steps
- ▶ Release Pipeline - Explain Steps
- ▶ Live Demo - Schema change triggers Pipeline Run
- ▶ Repo Hack - Edit file triggers Pipeline Run
- ▶ DevOps Hints

Prerequisites

- ▶ Azure SQL Server and Database
- ▶ Azure DevOps Account with Organization/Project
- ▶ SQL Database Solution in Visual Studio checked into Git-provider Repo

DevOps Organization

- ▶ Established at Account Creation
- ▶ New Organization

Project Setup

- ▶ Go to Organization Settings
- ▶ General, Projects
- ▶ + New Project
- ▶ New Objects:
 - ▶ Overview
 - ▶ Boards
 - ▶ Repo
 - ▶ Pipelines

Service Connection

- ▶ Service Connection is the Link between your Project and your Azure Resources
 - ▶ Web Apps
 - ▶ SQL Databases
- ▶ Create Service Connection
 - ▶ Azure Resource Manager
 - ▶ Workload Identity federation
 - ▶ Pick your subscription
 - ▶ Pick a Resource Group

Create Build Pipeline

- ▶ Follow Syllabus at <https://github.com/gwalkey/Azure-SQL-DevOps>
- ▶ Create Agent Job with 3 Tasks
 - ▶ Visual Studio Build
 - ▶ Copy Files
 - ▶ Publish Build Artifacts

Create Release Pipeline

- ▶ Follow Syllabus at <https://github.com/gwalkey/Azure-SQL-DevOps>
- ▶ Add Artifact from Build Pipeline - “the Hookup”
- ▶ Edit Agent Job
 - ▶ Add Azure SQL Database Deployment task
 - ▶ Setup optional KeyVault for SQL admin username/passwords
 - ▶ Setup SQLPackage.EXE options
- ▶ Enable CI/CD Trigger
- ▶ Add optional Approvals and Notifications

Hints

- ▶ These example uses the “Classic Editor” not YAML files
- ▶ YAML files require a get-provider repo, as VSTS/TFS is not supported
- ▶ You *CAN* use DevOps pipelines to deploy to on-prem servers with local agents
 - ▶ Higher price than Azure Agents - but no time limits, also faster
 - ▶ Why use a Pipeline to deploy to On-Prem SQL servers? Volume, Code in Source
- ▶ Release Approvals/Notifications provide full life-cycle management
- ▶ Can call Data Factory Pipelines to load data via Add-Ins

