Loading Data with SSIS

DESIGNING A DATA LOAD

Mike McQuillan
ARCHITECT, DEVELOPER, DATA SPECIALIST

@mcqtech   www.mcqtech.com

Loading Data with SSIS

Designing Control Flow

Building a Package

Event Handlers and Constraints

Testing and Debugging

Script Components

Designing a Data Load

Course Requirements

Windows

Visual Studio 2019 Community Edition

SQL Server Developer Edition

SQL Server Management Studio

SSIS Visual Studio Extension

Meet Bertie

Developer
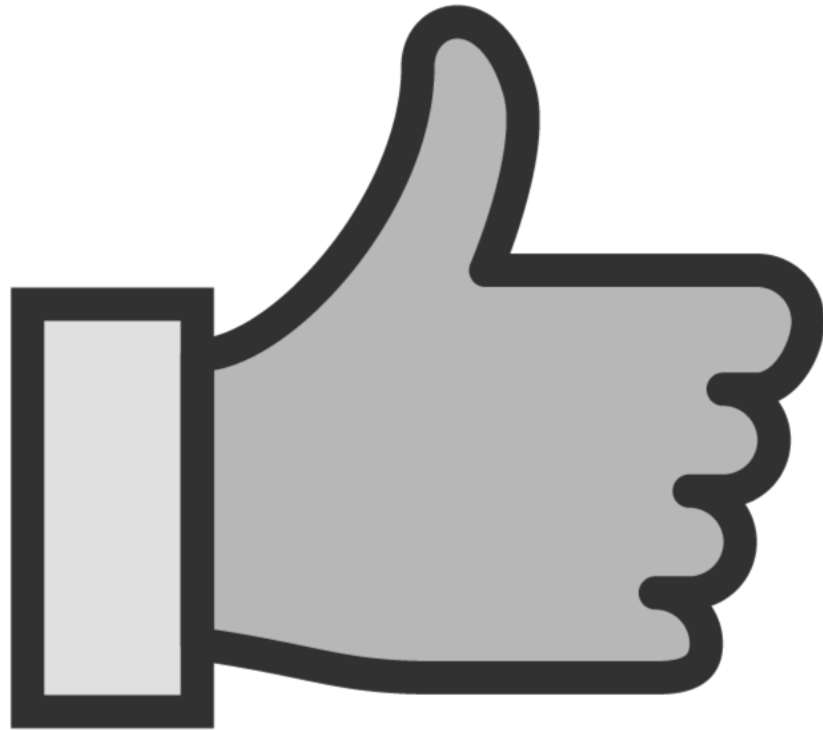
Cloud

Data Processing

Street Crime Data Files

Identify Hot Spots

Start with the Basics

At the Desk

Package Requirements

Handle Multiple Files

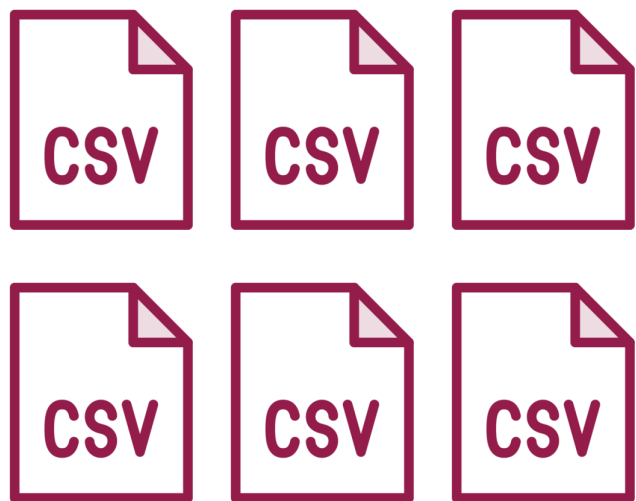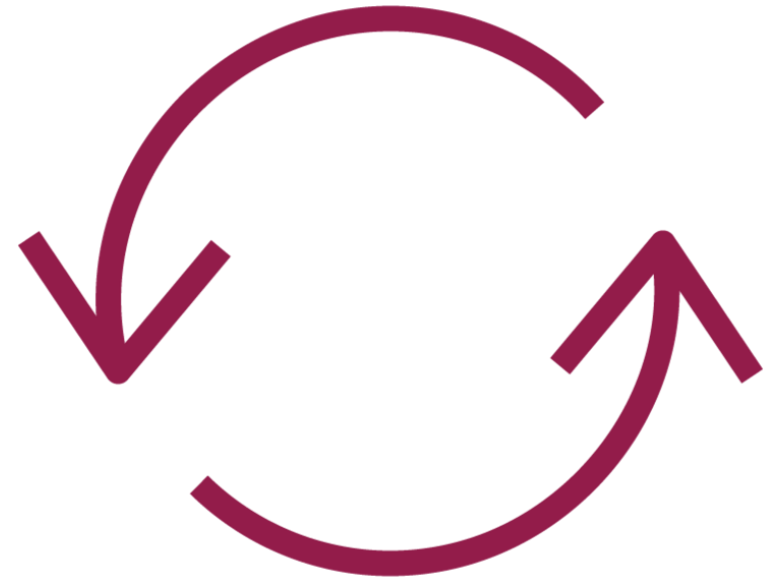Maintain Audit Trail

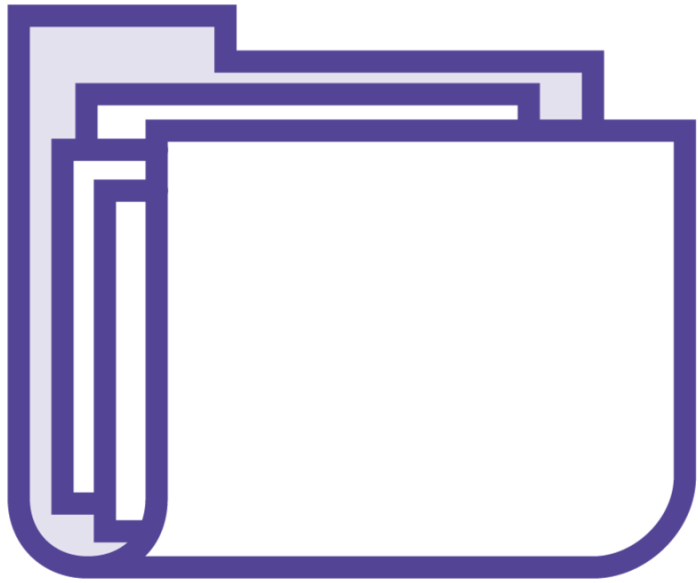Handle Exceptions

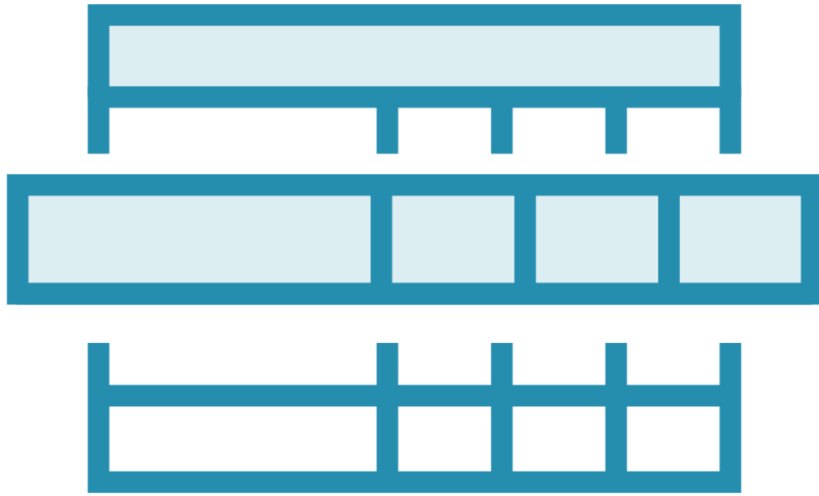Archive Processed Files

Send Status Report E-mail When Errors Found

Move File Data to Database

Process Multiple Files

Audit Trail

Table

Stored
Procedure

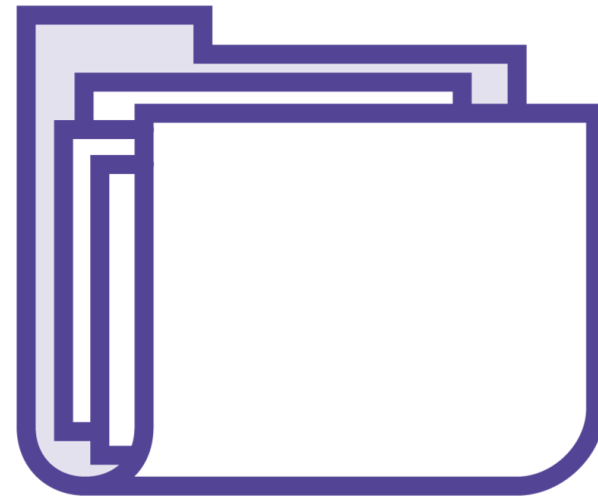# Data Flow

Two Tables

Target Table

Exceptions Table

Audit Trail and Archive

Stored Procedure
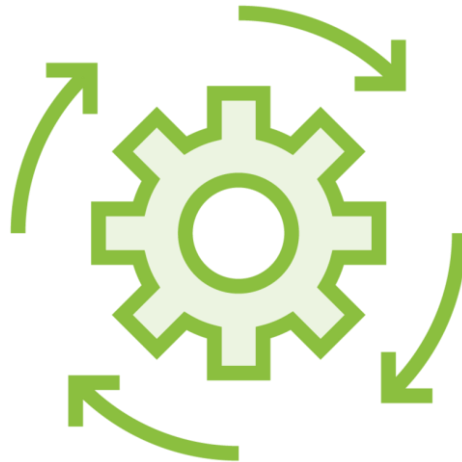
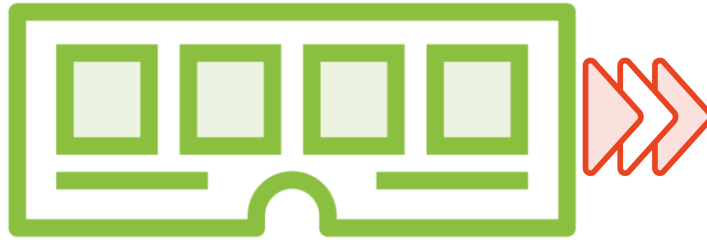**Archive Folder**

SQL Server vs. SSIS
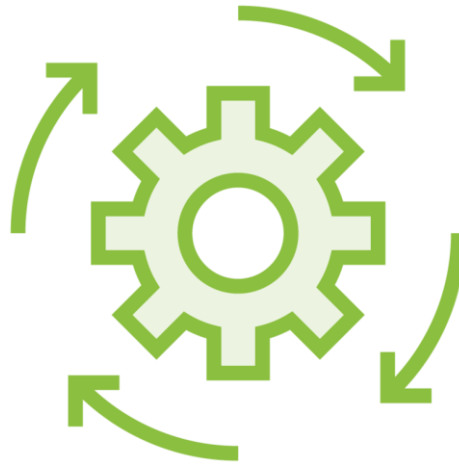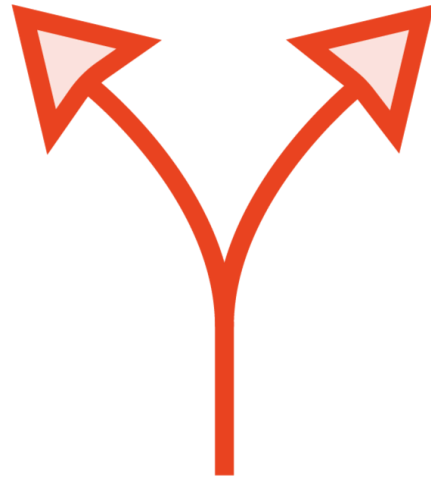
SQL Server

SSIS

Loading Data via SSIS

SSIS Shell Process

It Depends

SSIS Approach

Keep all code in one place

Centralized logic

Can help reduce database objects

Excellent transformation capabilities

Very fast

SQL Server Approach

Staging Table

String Columns

Initialization Stored Procedure

Validation T-SQL

Transformation and Insert/Update T-SQL

SQL Server vs. SSIS

SQL Server	SSIS
May be easier to change T-SQL code	Changes might be more involved
Simplified SSIS package	More complex SSIS package
Staging table	No staging table
May need log management	No log management
Possible transfer of unnecessary data	Only load required data
Manual transformations	Powerful SSIS transformations

Requiring a Few Rows

Where Condition = True

Staging Table Loading

Staging Table Filtering

Many Design Approaches
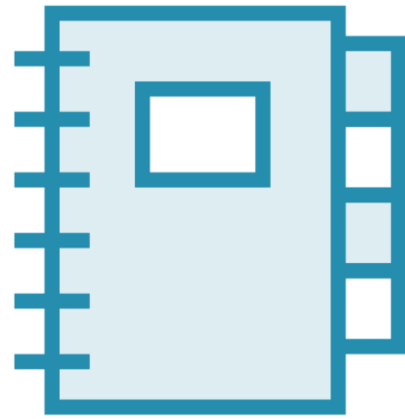
Use a Blend
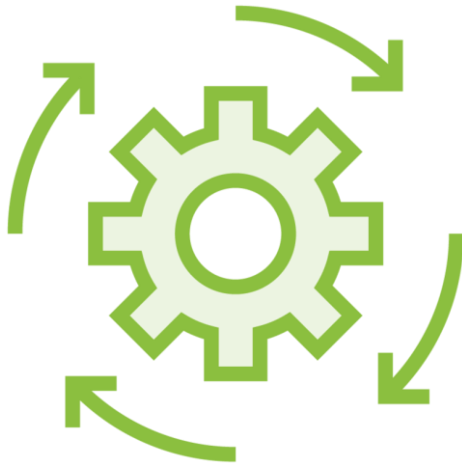
SSIS

T-SQL

SSIS Transformations

Off to Lunch

Overview/ Summary

The problem

Designing control flow

Different ways to develop SSIS

Use SSIS tasks and transformations

Use staging table