

# Advanced Design Patterns Part 2

CDC, Merge, Date Based

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# Change Data Capture

- Lets SQL Server track which rows in source have changed
- **Pros**
  - Tracks changes to data
  - Only read rows which have changed
  - Easy to determine Create / Update / Delete actions
- **Cons**
  - Only works with SQL Server
  - Requires setup work in database and tables before it can be used
  - Must have ability to alter the source system

# Merge

- Uses SQL Server MERGE statement
- Pros
  - Simple to implement
  - Very fast
- Cons
  - No transformations
  - No ability to track progress

# Date Based

- **Uses date driven values to determine changes**
- **Pros**
  - Easy to determine changes to rows
  - Reduces number of rows that are read
  - Can be combined with any of the other patterns
- **Cons**
  - Requires source system to have a reliable date field indicating changes
  - Still requires logic to determine new rows vs updates