

What's covered here?

- Data Movement Implementation
- Technical Options

Technical Options for Data Movement

- Quick and easy ways
 - SQL Select Into
 - Spreadsheets
 - Bulk copy programs
 - SSMS
 - Import Data
 - Export Data
 - Copy Database

Quick and easy ways

- SQL Select Into

```
select * into a_new_table  
from Employee
```

Quick and easy ways

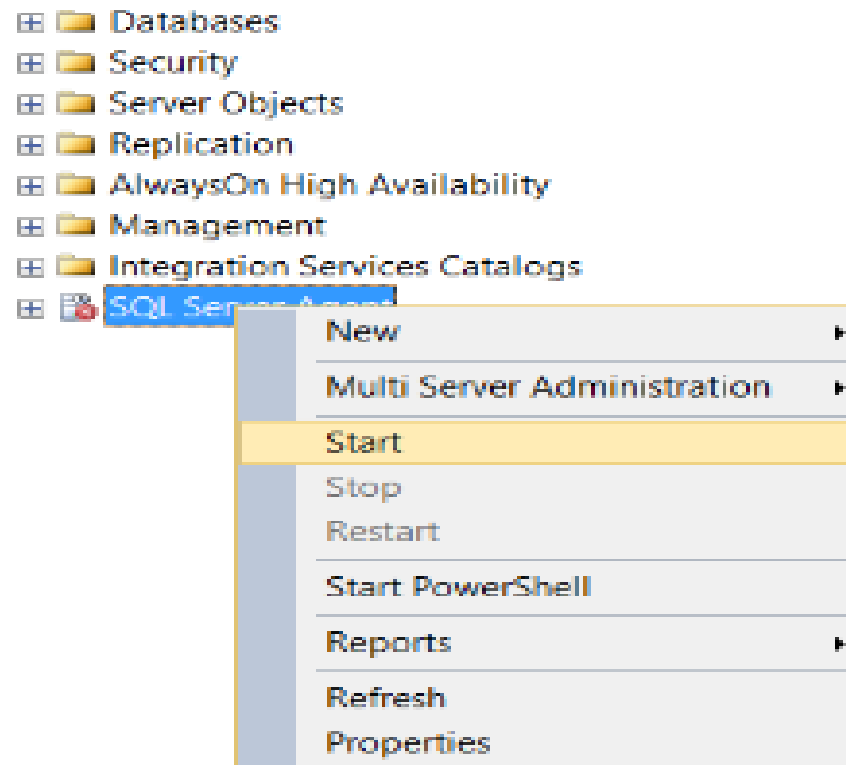
- SQL Select Into

```
select E.LastName, E.FirstName, P.YearlySalary  
into a_new_table  
from Employee E join PayRates P  
on E.EmpID = P.EmpID  
where E.LastName like 'w%'
```

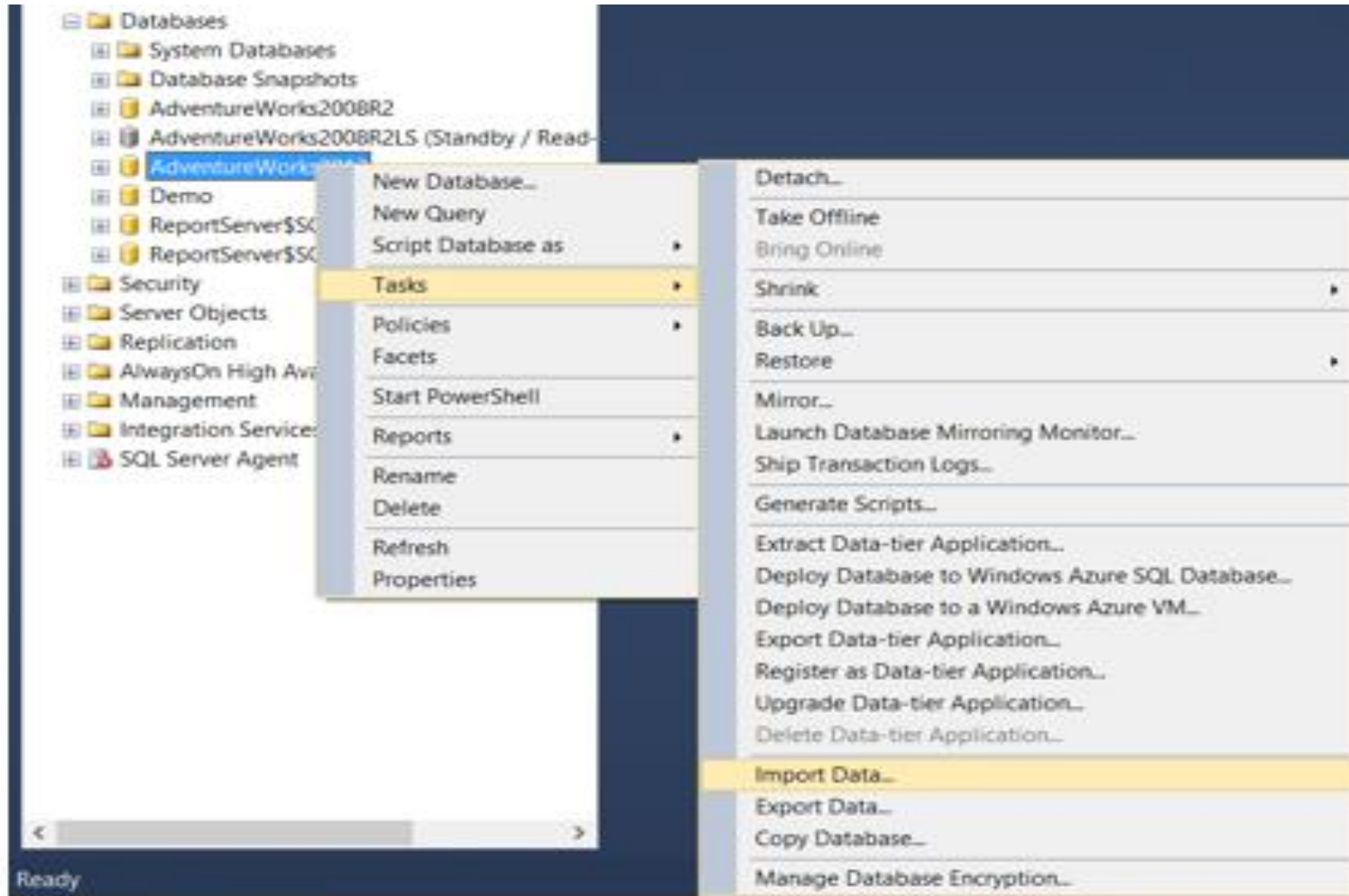
SQL Server Management Studio

- SQL Server Agent Service must be running
- Import/Export Data Wizard
- Copy Database Wizard

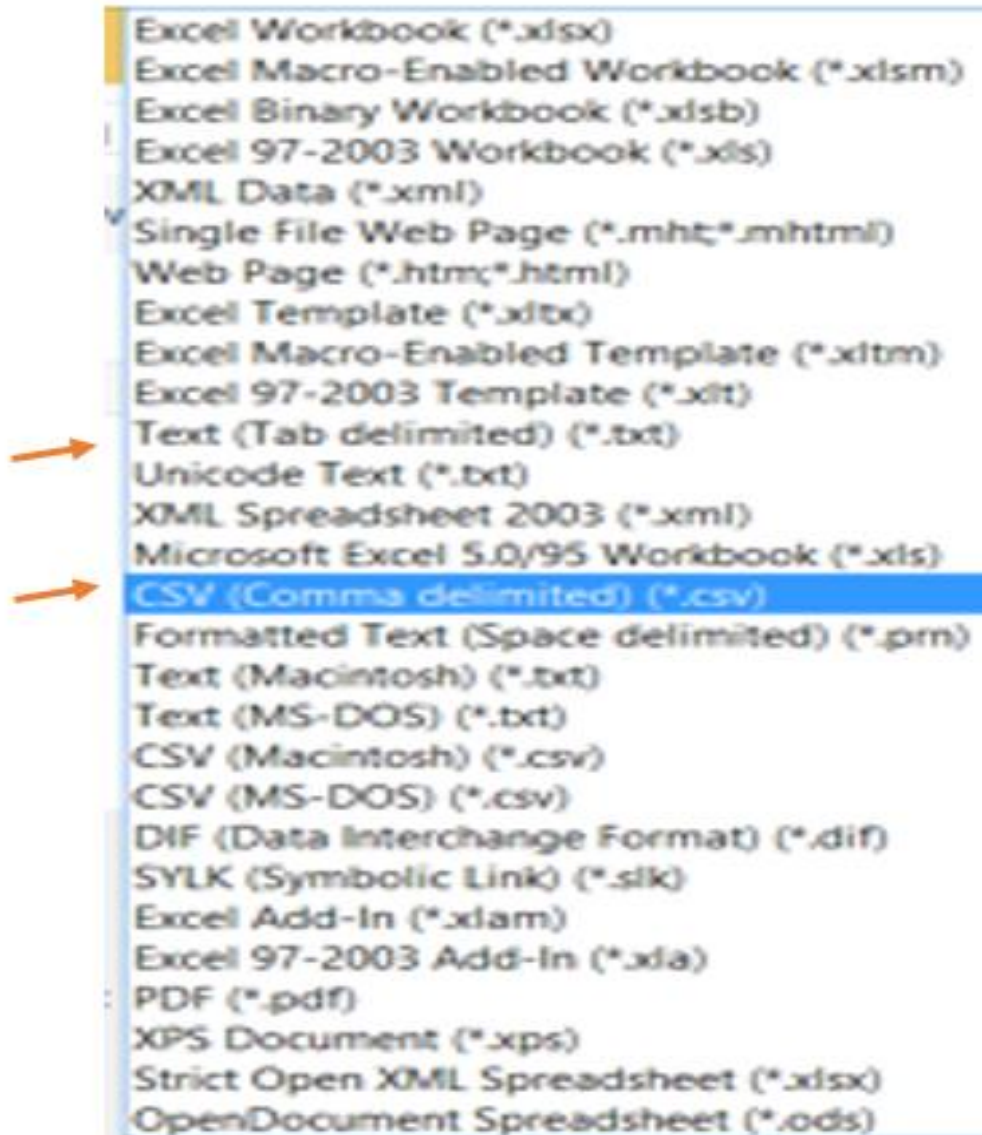
SQL Server Agent



Import/Export Data



Save As in Excel



Technical Options for Data Movement

- ETL (Extract Transform Load) Tools
 - Collect and cleanse data from different systems
 - Massive data refresh to support data warehouse
 - Many third-party vendors offer ETL tools
 - Use SQL scripts to fine tune ETL tool
 - OS or RDBMS job scheduler can be used to automate ETL process

SQL Server Integration Service (SSIS)

- Platform for ETL operations
- Fundamental Integration Services Concepts
 - Package
 - Control flow
 - Data flow
 - Variable
 - Event handler

SQL Server ETL Tool



Backup and Restore

- Compression can reduce the backup file size by 50%
- Move data between Test, Staging, and Production environments

Backup

Right click on a database → Tasks → Back up

Back Up Database - dbBasics

Select a page

- General
- Options

Script Help

Overwrite media

- ☒ Back up to the existing media set
- ☐ Append to the existing backup set
- ☐ Overwrite all existing backup sets
- ☐ Check media set name and backup set expiration

Media set name:

☐ Back up to a new media set, and erase all existing backup sets

New media set name:

New media set description:

Reliability

- ☐ Verify backup when finished
- ☐ Perform checksum before writing to media
- ☐ Continue on error

Transaction log

- ☐ Truncate the transaction log
- ☐ Back up the tail of the log, and leave the database in the restoring state

Tape drive

- ☐ Unload the tape after backup
- ☐ Rewind the tape before unloading

Compression

Set backup compression: Compress backup

Connection

Server: .

Connection: sa

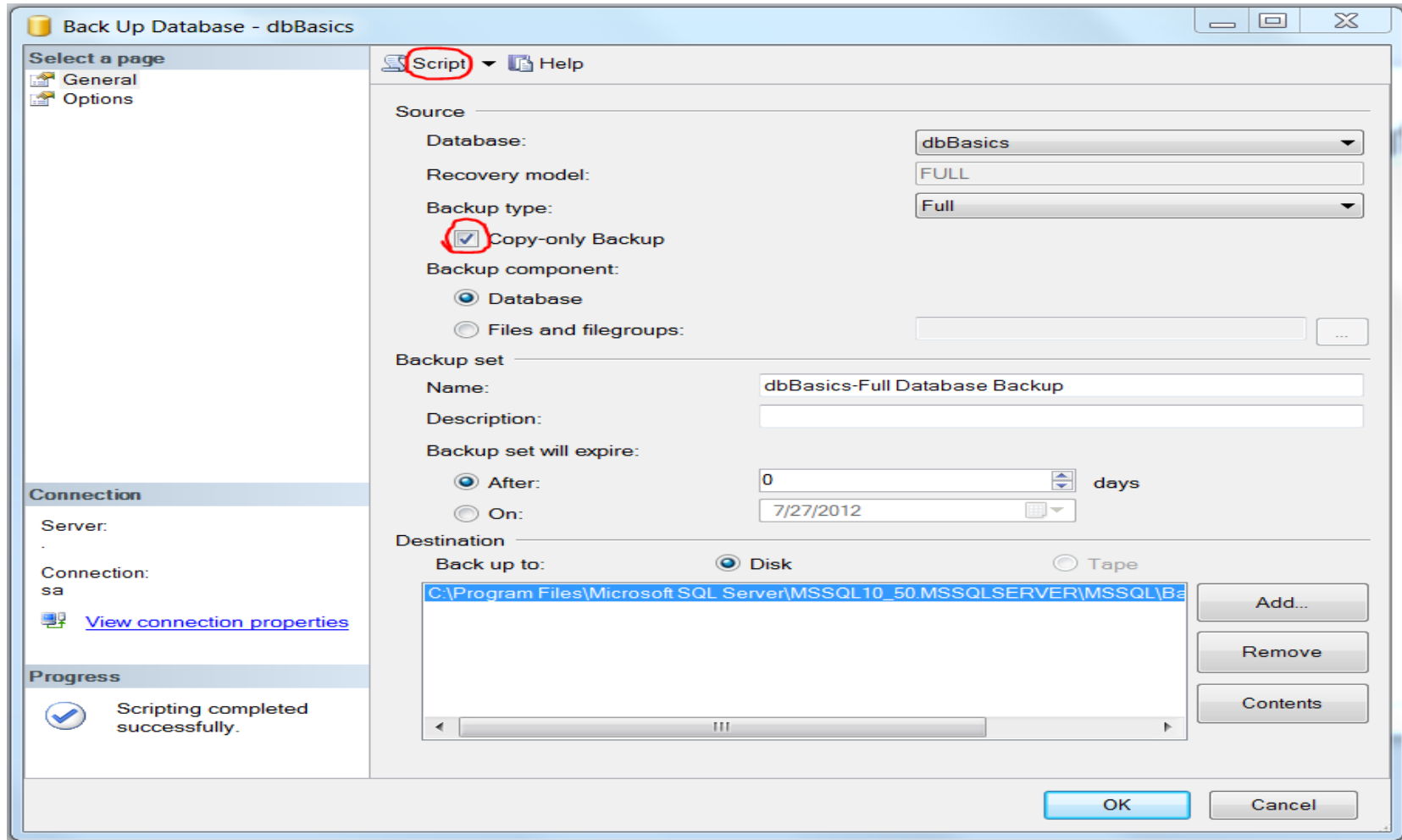
[View connection properties](#)

Progress

Ready

OK Cancel

Backup



Replication

- Publishers replicate data updates
- Subscribers accept data updates
- Distributors log and distribute data
- Published Data

Types of Replication

- Snapshot
- Transactional
- Merge

Advanced Technical Options

- Log Shipping
- Mirroring
- AlwaysOn Availability Groups