

Complete SQL Server Replication Guide -- Local SSMS Setup

Understanding SQL Server Replication

Its a technology that allow to copy and distribute data and database objects from one database to another to maintain consistency

Why Use Replication



Load Distribution
Data Availability
Geographic Distribution
Reporting

Types of Replication

1. Snapshot Replication

See this as a picture take from camera.
it takes a complete snapshot of the data at a specific point in time



When to use it

when data changes infrequently

cons

can be resource intensive for large dataset

Text

2. Transactional Replication

see this as a mirror in your home, any time there is passing it reflect.
captures and replicate individual data transactions as they occurs



When to use it

when need near real time data synchronization

Cons

. More complex
. requires stable network connection

3. Merge Replication

This allows changes at both publisher and subscriber,
then merges changes

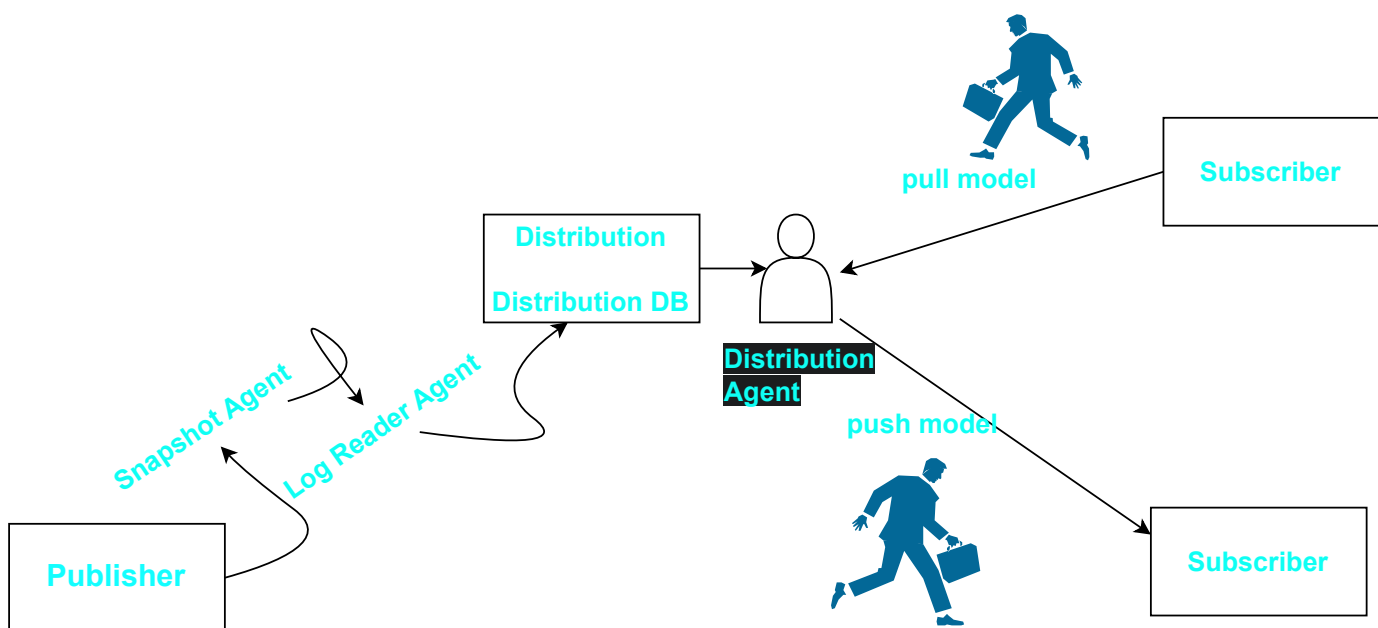
When to use it

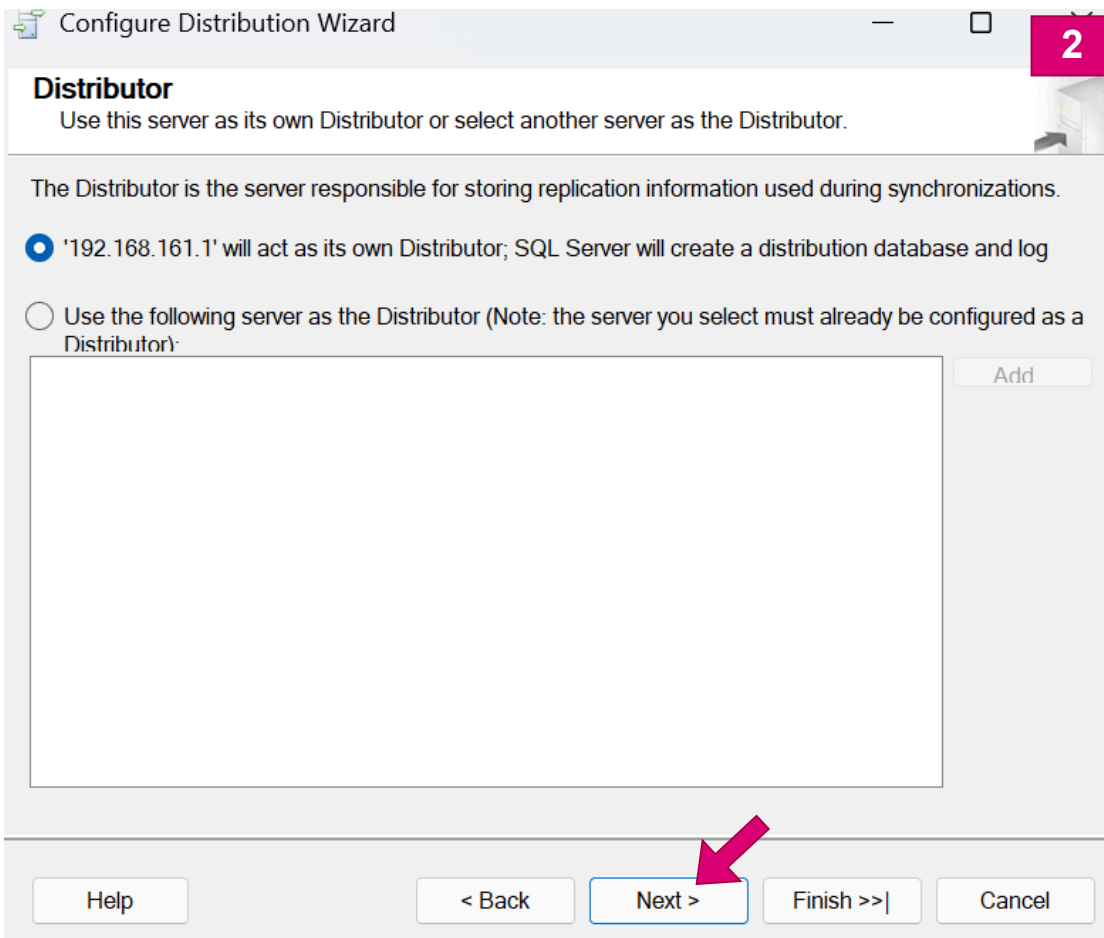
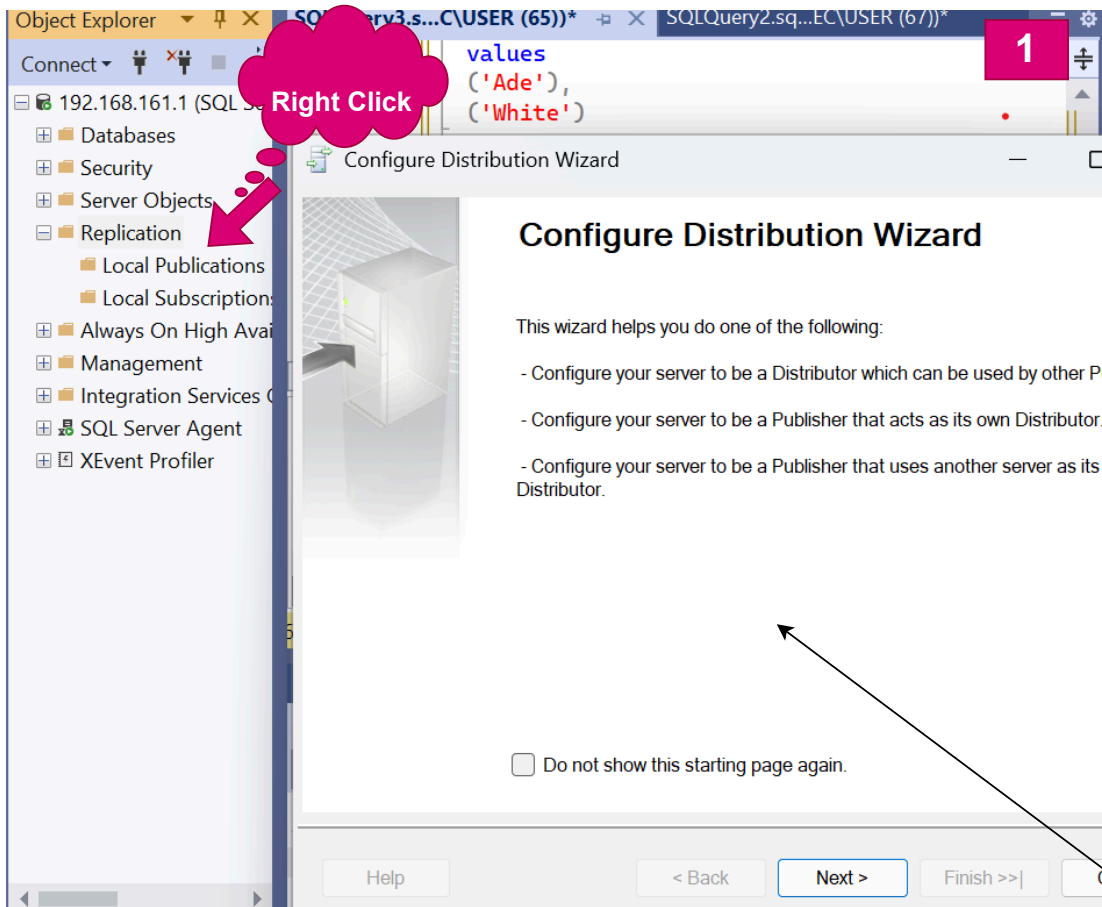
supports bidirectional changes,
good for mobiles scenerios

. Most complex to manage

j object

Replication Diagram





Configure Distribution Wizard

Snapshot Folder

Specify the root location where snapshots will be stored.

To allow Distribution and Merge Agents that run at Subscribers to access the snapshots of their publications, you must use a network path to refer to the snapshot folder.

Snapshot folder:
C:\Program Files\Microsoft SQL Server\MSSQL 16.MSSQLSERVER\MSSQL\RepData

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create a folder and ensure you share it and set permission

This snapshot folder does not support pull subscriptions created at the Subscriber. It is not a network path or it is a drive letter mapped to a network path. To support both push and pull subscriptions, use a network path to refer to this folder.

Help < Back Next > Finish >>| Cancel

Configure Distribution Wizard

Distribution Database

Select the name and location of the distribution database.

The distribution database stores changes to transactional publications. It also stores historical information for snapshot and merge publications.

Distribution database name:
distribution_for_DoMoreWithDataDB

Folder for the distribution database file:
C:\Program Files\Microsoft SQL Server\MSSQL 16.MSSQLSERVER\MSSQL\Data

Folder for the distribution database log file:
C:\Program Files\Microsoft SQL Server\MSSQL 16.MSSQLSERVER\MSSQL\Data

The paths must refer to disks that are local to the Distributor and begin with a local drive letter and colon (for example, C:). Mapped drive letters and network paths are invalid.

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Name it Distribution

Help < Back Next > Finish >>| Cancel

Configure Distribution Wizard

Publishers

Enable servers to use this Distributor when they become Publishers.

Publishers:

Publisher	Distribution Database
<input checked="" type="checkbox"/> 192.168.161.1	distribution_for_DoMoreWithDataDB

Add

Help < Back Next > Finish >>| Cancel

Choose the server name

Mark this

Configure Distribution Wizard

Wizard Actions

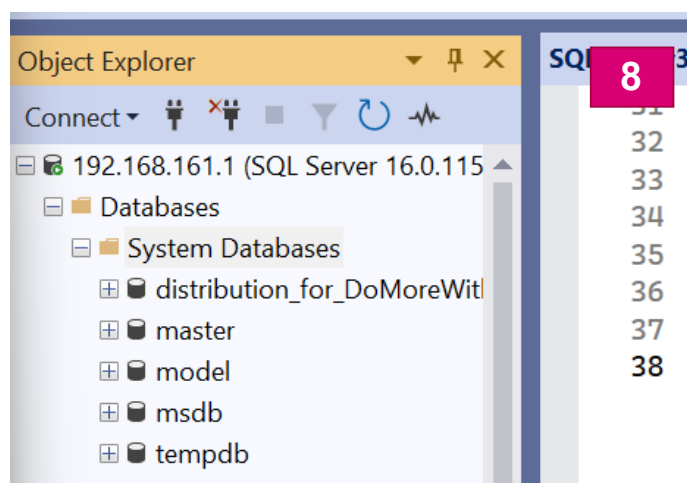
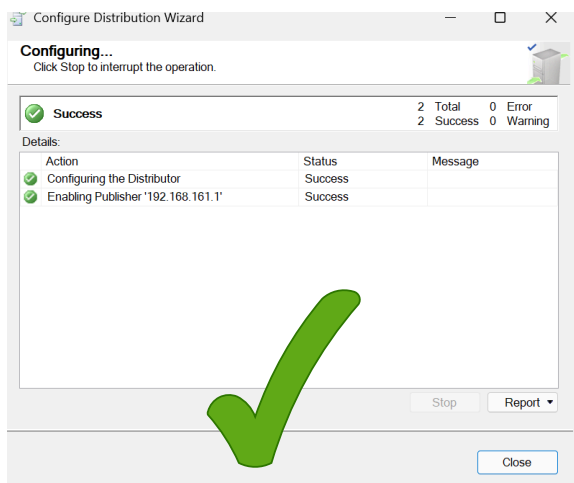
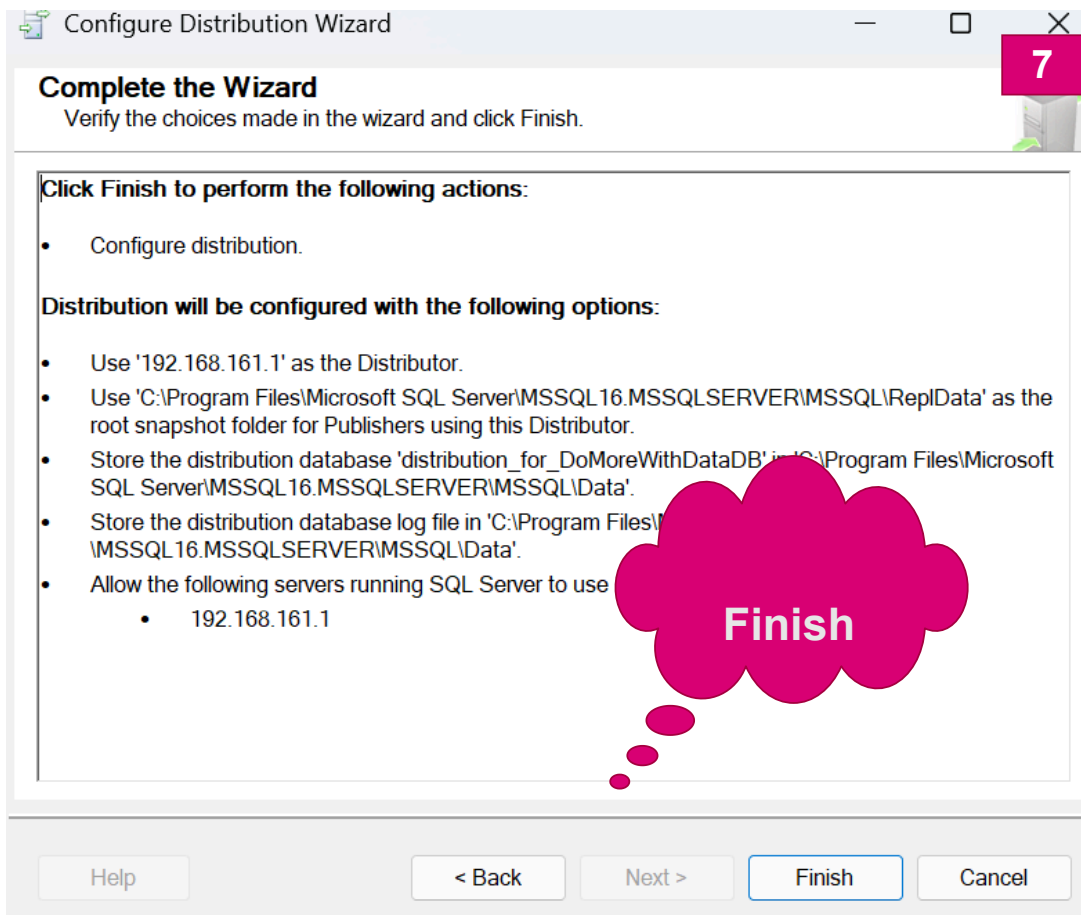
Choose what happens when you click Finish

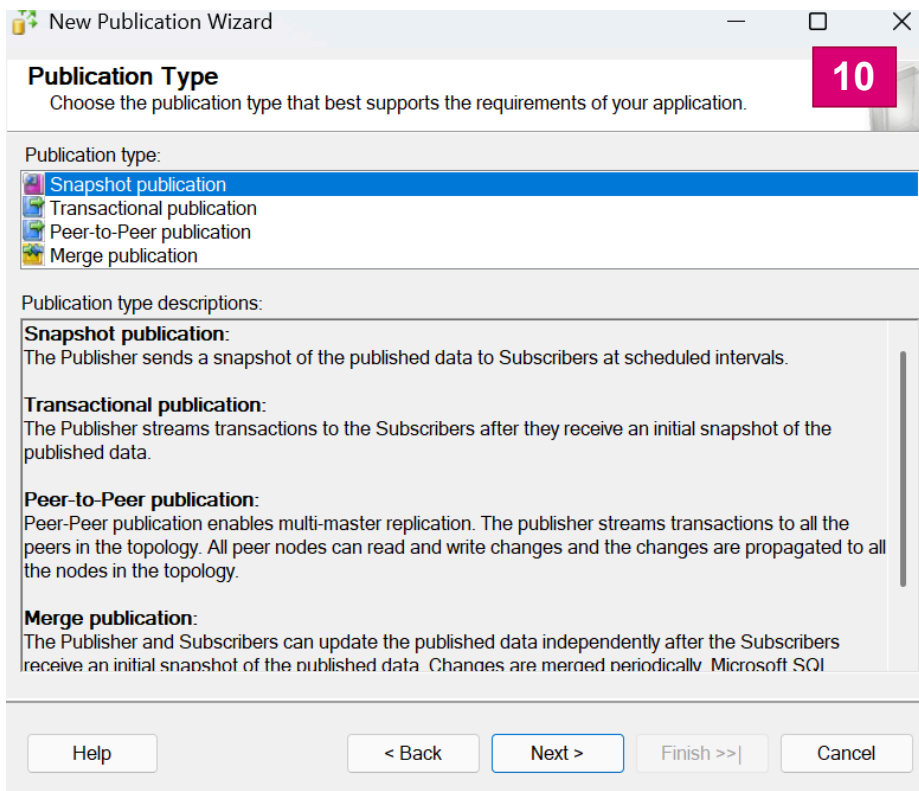
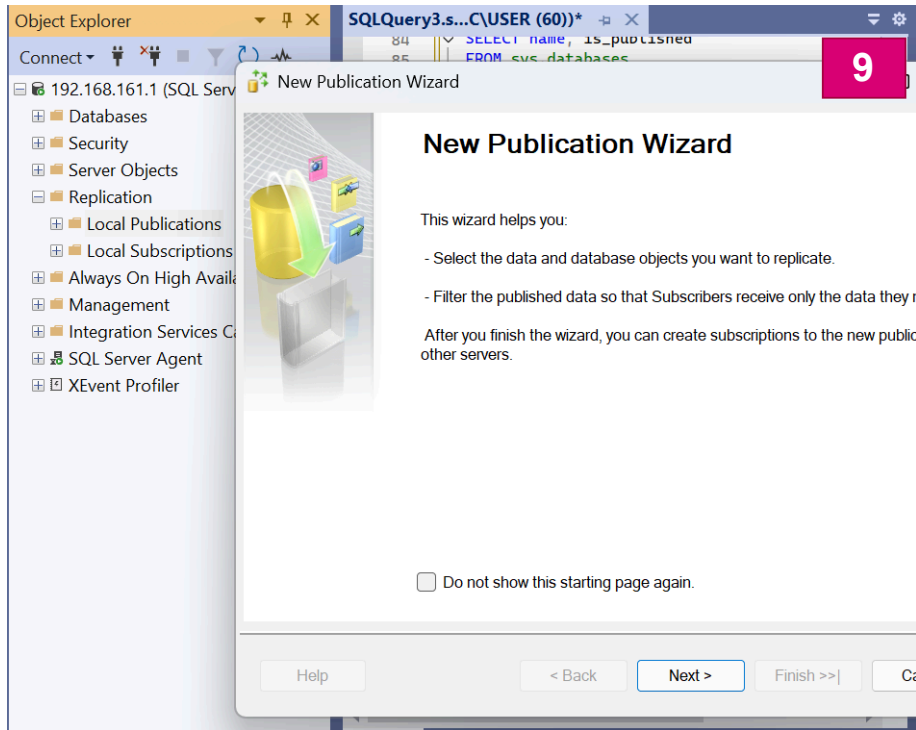
At the end of the wizard:

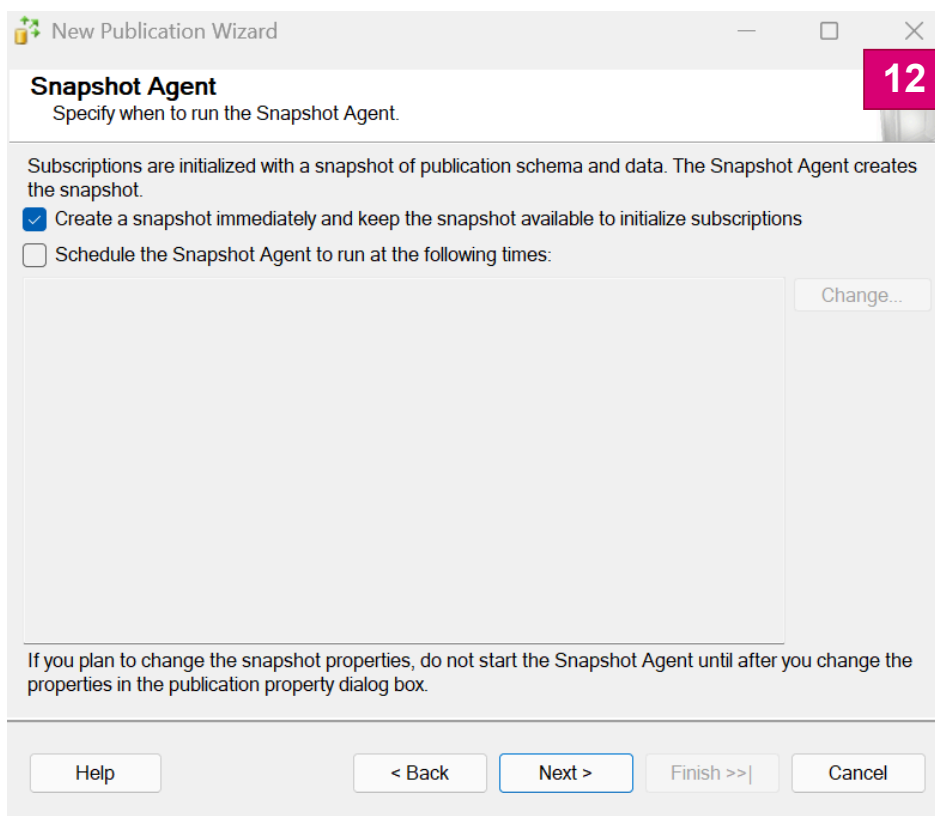
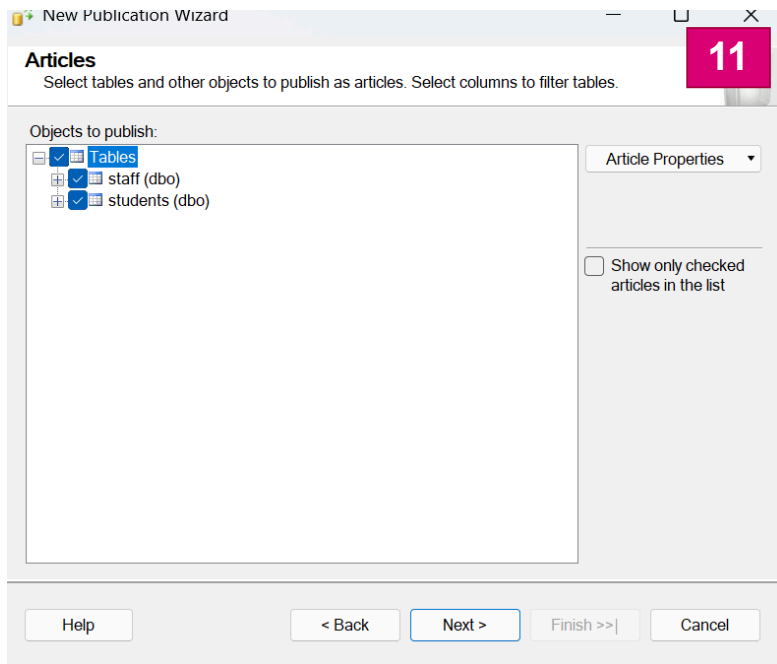
☒ Configure distribution

☐ Generate a script file with steps to configure distribution

Help < Back Next > Finish >>| Cancel







New Publication Wizard

Agent Security

For each agent, specify the account under which it will run and its connection settings.

Snapshot Agent:

Security Settings

New Publication Wizard

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Complete the Wizard

Verify the choices made in the wizard and click Finish.

Publication name: DoMoreWithDataDB

Click Finish to perform the following actions:

- Create the publication.

A publication will be created with the following options:

- Create a snapshot publication from database 'DoMoreWithDataDB'.
- The Snapshot Agent process will run under the 'SQL Server Agent service' account.
- The publication compatibility level will support Subscribers that are servers running SQL Server 2008 or later.
- Publish the following tables as articles:
 - 'staff'
 - 'students'
- Create a snapshot of this publication immediately after the publication is created.

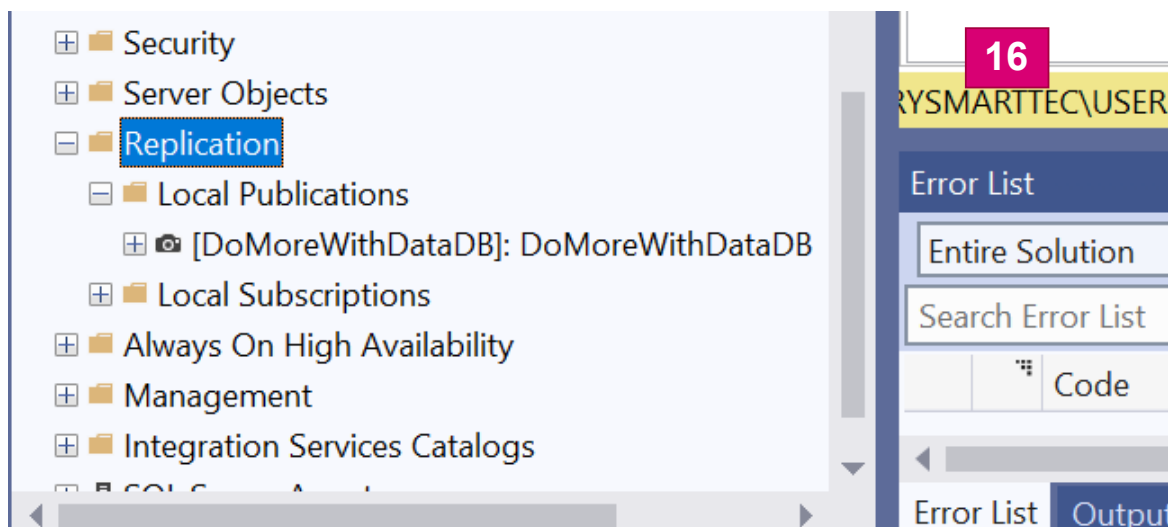
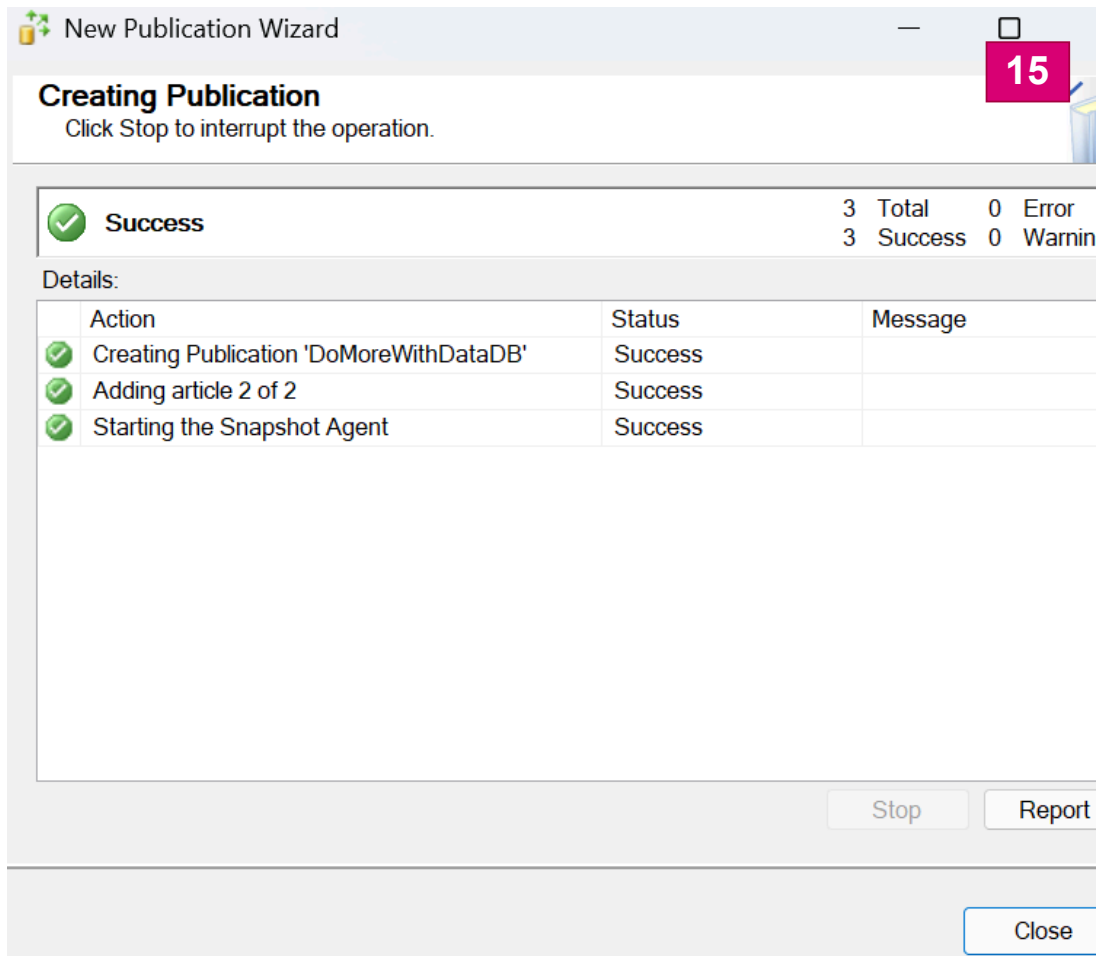
Help

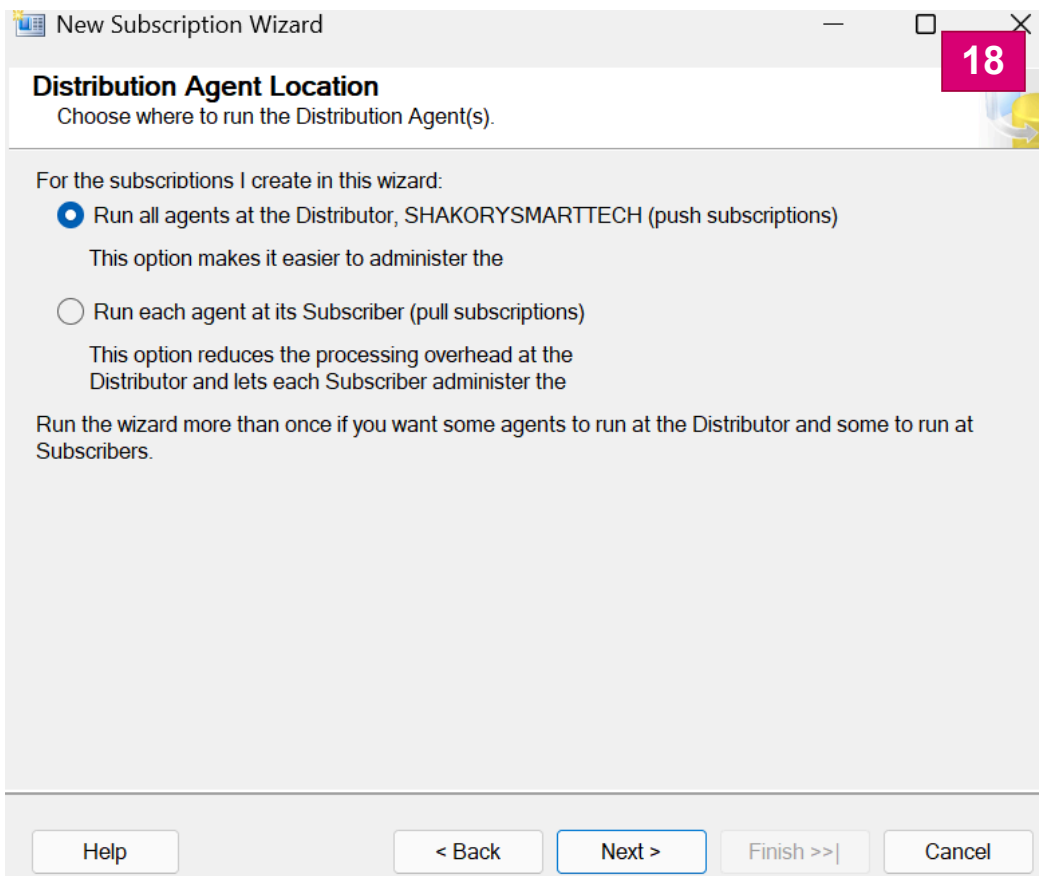
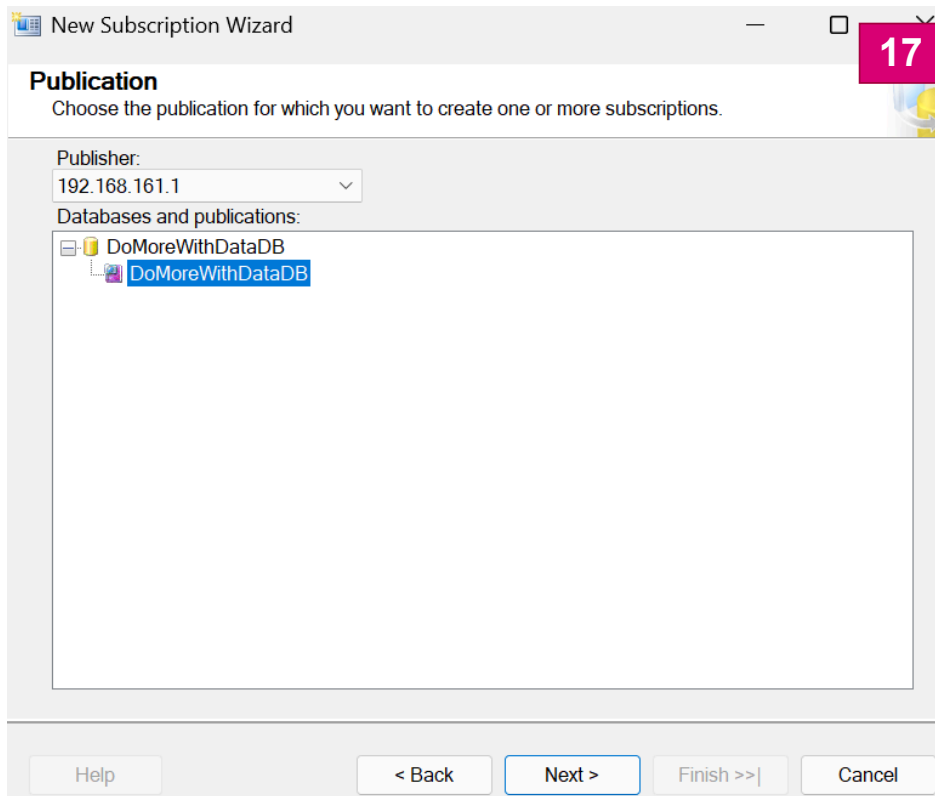
< Back

Next >

Finish

Cancel





New Subscription Wizard

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Subscribers

Choose one or more Subscribers and specify each subscription database.

Subscribers and subscription databases:

Subscriber ▲	Subscription Database
<input type="checkbox"/> 192.168.161.1	
<input checked="" type="checkbox"/> SHAKORYSMARTTEC	DomoreWithDataDB_Replica

Add Subscriber ▼

Help

< Back

Next >

Finish >>

Cancel

New Subscription Wizard

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Creating Subscription(s)...

Click Stop to interrupt the operation.

✓ Success

2 Total 0 Error
2 Success 0 Warning

Details:

Action	Status	Message
✓ Creating subscription for 'SHAKORYSMARTT...	Success	
✓ Starting the Snapshot Agent	Success	

Stop

Report ▼

Close

Integration Services Catalogs

View Snapshot Agent Status - DoMoreWithDataDB

Agent type:Snapshot Agent

Publication:DoMoreWithDataDB

Publication database:[DoMoreWithDataDB]

Duration:00:01:02

Status:

✓

[100%] A snapshot of 2 article(s) was generated.

The agent is not running.

Start

Stop

Monitor

Close

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192.168.161.1 (16.0 RTM) | SHAKORYSMARTTEC\USER (69) | mac

