# Replication Maintenance

[Drop and Recreate a Publication](#_Drop_and_Recreate)

[Measure Replication Latency](#_Measure_Replication_Latency)

[Replication Alerts](#_Replication_Alerts)

[Reinitialize a Subscription](#_Reinitialize_a_Subscription)

## Drop and Recreate a Publication

1. Determine which publication needs to be dropped. In this example we need to modify table PRODUCT\_INFO.Pricing.ProductClass\_PriceCode\_Variable. To determine which publication contains the table run the following query:

DECLARE @DatabaseName AS SYSNAME = 'PRODUCT\_INFO'

,@SchemaName AS SYSNAME = 'Pricing'

,@ObjectName AS SYSNAME = 'ProductClass\_PriceCode\_Variable';

SELECT Publication, [Schema], [Object], [Type], PubCreatedOn

FROM DBAdmin.Repl.PubObject

WHERE Publication LIKE (@DatabaseName + '%')

AND [Schema] = @SchemaName

AND [Object] = @ObjectName;

which returns the following (PubCreatedOn column omitted)

**Publication Schema Object Type**

PRODUCT\_INFO\_002 Pricing ProductClass\_PriceCode\_Variable Table

1. Drop the subscriptions to the publication and then drop the publication using the script PRODUCT\_INFO\_DropRepl.sql. Edit the script, set Pub = PRODUCT\_INFO\_002 and PubS = PRODUCT\_INFO\_002. No changes to EXEC statements. They are already pointed to PRODUCT\_INFO. Run the script in SQLCMD mode.
2. Make changes to table ProductClass\_PriceCode\_Variable.
3. Update the table DBAdmin.Repl.PubObject. Set PubCreatedOn = '001-01-01' for all rows where the publication equals PRODUCT\_INFO\_002 using the following script:

DECLARE @PublicationName AS SYSNAME = 'PRODUCT\_INFO\_002';

UPDATE [DBAdmin].[Repl].[PubObject]

SET PubCreatedOn = '0001-01-01'

WHERE Publication = @PublicationName

1. Update stored procedure DBAdmin.Repl.AddArticle to ensure the database part of the three part name calling Microsoft’s sys.sp\_add\_article procedure is pointed to PRODUCT\_INFO
2. Recreate the publication, then a snapshot and articles for the publication using script PRODUCT\_INFO\_CreatePub.sql. Edit the script, set Pub = PRODUCT\_INFO\_002 and PubS = PRODUCT\_INFO\_002. If the publication is a snapshot publication uncomment the two lines associated with snapshot publications and comment out the two lines associated with transactional publications. For all other publications do the opposite.

:SETVAR SyncMethod "concurrent" --Transactional

:SETVAR ReplFreq "continuous" --Transactional

--:SETVAR SyncMethod "native" --Snapshot

--:SETVAR ReplFreq "snapshot" --Snapshot

No changes to EXEC statements. They are already pointed to PRODUCT\_INFO. Run the script in SQLCMD mode.

1. Create a subscription for the publication at the publisher and subscriber, create a job for the subscription and then start the snapshot using script PRODUCT\_INFO\_StartRepl.sql. Edit the script, set Pub = PRODUCT\_INFO\_002 and PubS = PRODUCT\_INFO\_002. No changes to EXEC statements. They are already pointed to PRODUCT\_INFO. Run the script in SQLCMD mode.
2. Replication monitor can be used to check the replication status.

## Measure Replication Latency

1. Start Replication Monitor by right-clicking Replication in SSMS and selecting Launch Replication Monitor.
2. Select a publication.
3. Select the Tracer Tokens tab.
4. Select Insert Tracer. Statistics will be displayed for Publisher to Distributor and Distributor to Subscriber latency.

## Replication Alerts

Alerts have not been implemented yet, but will be based in part on <https://docs.microsoft.com/en-us/sql/relational-databases/replication/monitor/measure-latency-and-validate-connections-for-transactional-replication?view=sql-server-ver15>

## Reinitialize a Subscription

If a subscription gets behind and is not able catch up it may be necessary to reinitialize the subscription. Reinitializing causes a new snapshot to be generated. The snapshot is applied and then changes are applied going forward. To reinitialize a single subscription

1. Inside SSMS expand Replication then Local Publications. Expand the Publication containing the subscription you want to reinitialize.
2. Right-click the subscription and click Reinitialize.
3. Select Use a new snapshot.
4. Select Generate the new snapshot now.
5. Click Mark for Reinitialization.