# Configure Replication between Managed Instance and On premise_Subscriber

Last updated by | Vitor Tomaz | Jun 8, 2022 at 5:37 AM PDT

**Replication configuration between Managed Instance and On-premises common issues**

Contents



## Issue

Configuring Transactional Replication with Managed Instance has the requirement that both the Publisher and Distributor need to be placed together either on the Managed Instance or on the on-premise SQL Server. There are some other requirements as well, please see here.

The public documentation is already covering two topology scenarios:

1. Managed Instances as Publisher, Distributor and Subscriber
2. Managed Instances as Publisher and Distributor, Azure SQL Server in VM as Subscriber

In this article, we will focus on the 3rd scenario of Managed Instances acting as Publisher and Distributor for an on-premises Subscriber. This is very similar to scenario #2 above. The steps are almost the same, except for the network configuration and the step of creating the subscription.

## Steps to create the MI publication and on-premise Subscriber

After configuring the on-premises SQL Server and the Managed Instances, we first need to do the same as in scenario #2:

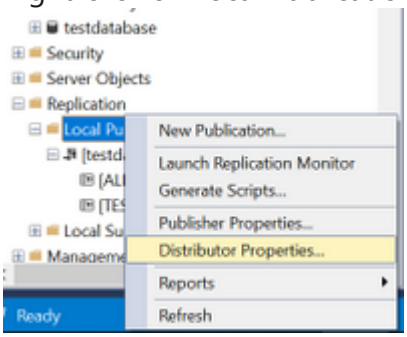
- Create an Azure storage account
- Create a database
- Configure distribution
- Create the publication

The next step then is to create the subscription where the difference is in the @subscriber parameter. For an on-premise Subscriber, we do not need a private DNS zone and the syntax will be similar to this:

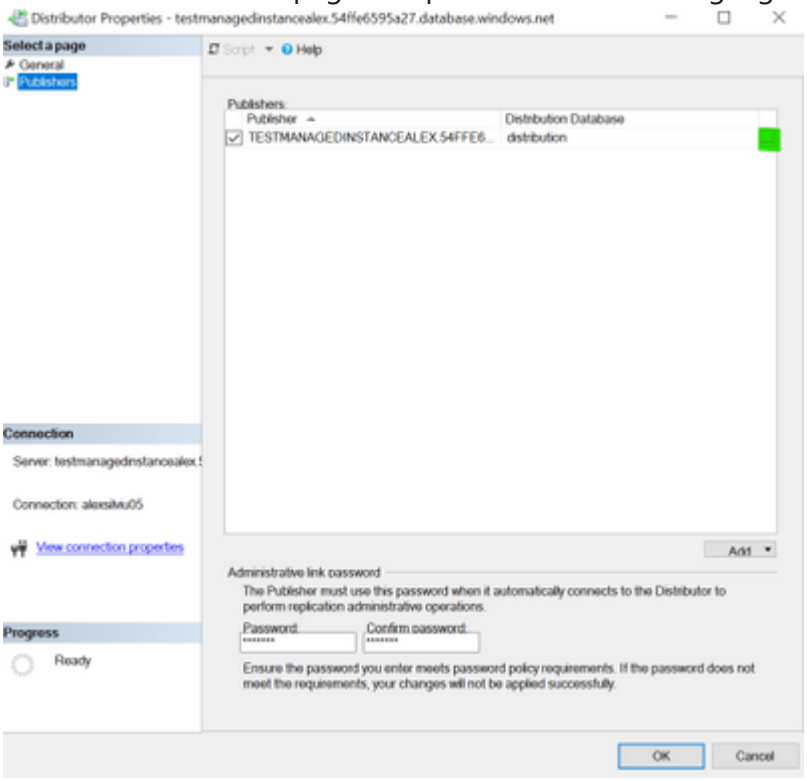
```
use [ReplTutorial]
exec sp_addsubscription
  @publication = N'ReplTest',
  @subscriber = N'OnPremServerName',
  @destination_db = N'ReplSub',
  @subscription_type = N'Push',
  @sync_type = N'automatic',
  @article = N'all',
  @update_mode = N'read only',
  @subscriber_type = 0

exec sp_addpushsubscription_agent
  @publication = N'ReplTest',
  @subscriber = N'OnPremServerName',
  @subscriber_db = N'ReplSub',
  @job_login = N'azureuser',
  @job_password = '<Complex Password>',
  @subscriber_security_mode = 0,
  @subscriber_login = N'azureuser',
  @subscriber_password = '<Complex Password>',
  @dts_package_location = N'Distributor'
GO
```

## Verify the storage account configuration for the snapshot folder

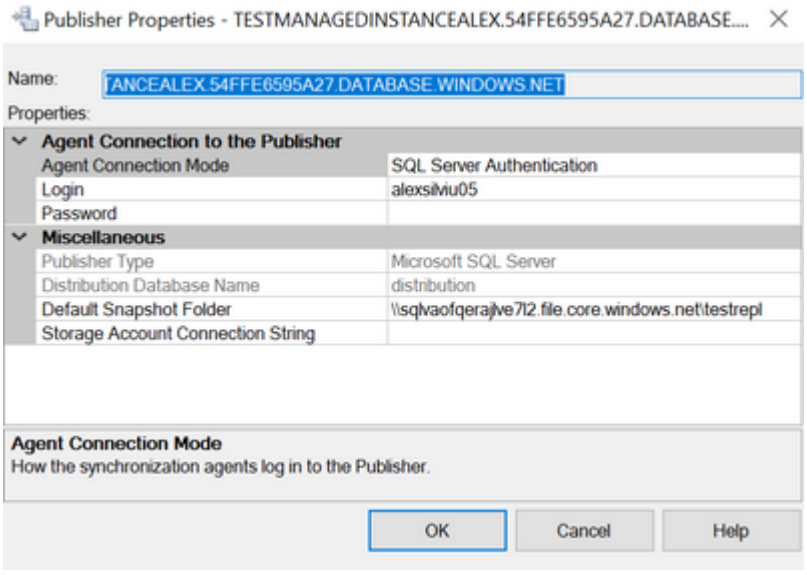
- Right-click on Local Publications and access Distributor properties:



- Access the Publishers page and press on the below highlighted area:

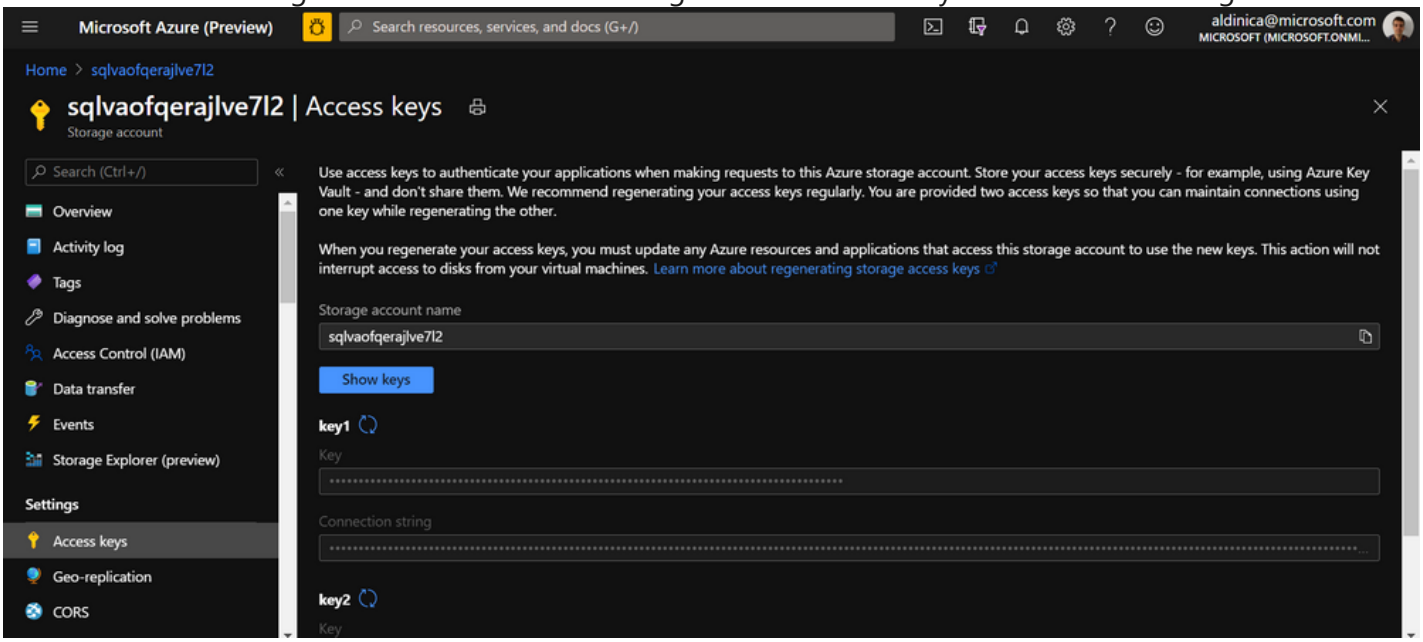



- You should see a window similar to this:




- In here please check that the Default Snapshot Folder is in the correct format.

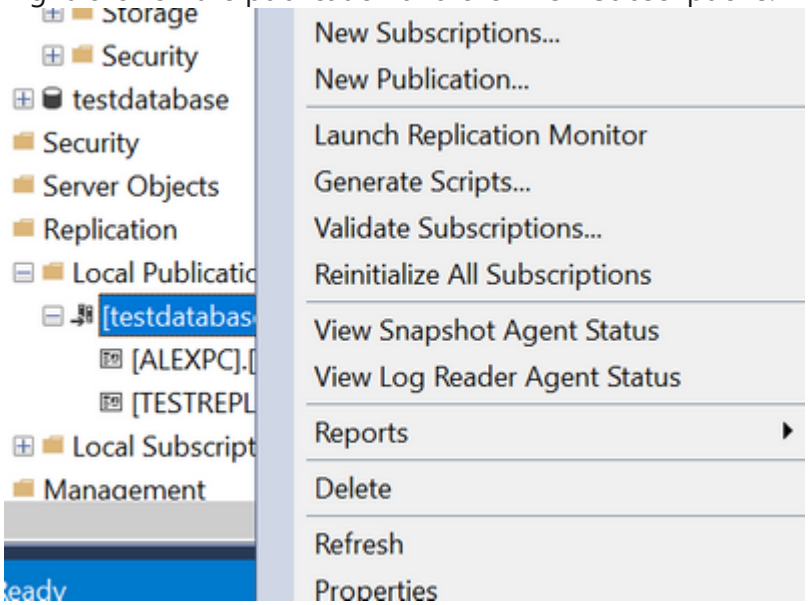
- Cross-check the Storage Account Connection String with the Access Key details on the Storage account:



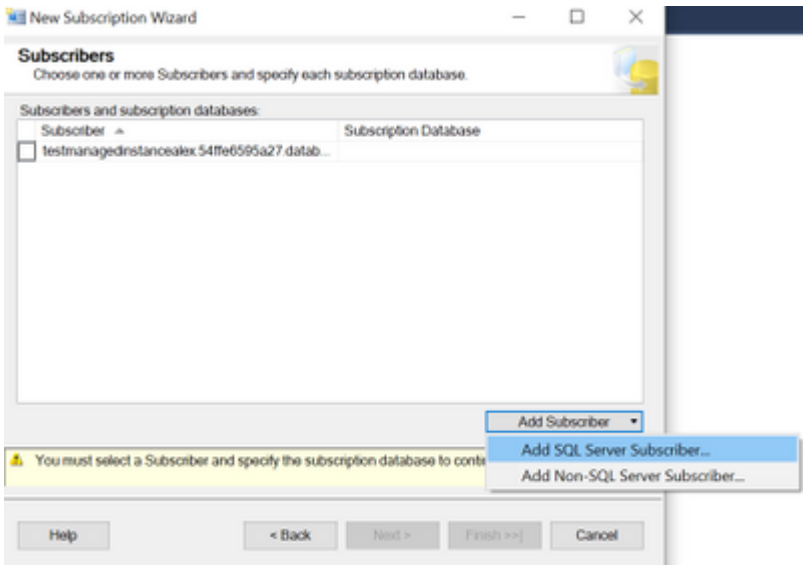

## SSMS as alternate method for creating the subscription

As an alternative to the SQL script mentioned above, you can also add the subscription directly from the GUI in SSMS:

Right-click on the publication and click New Subscriptions:

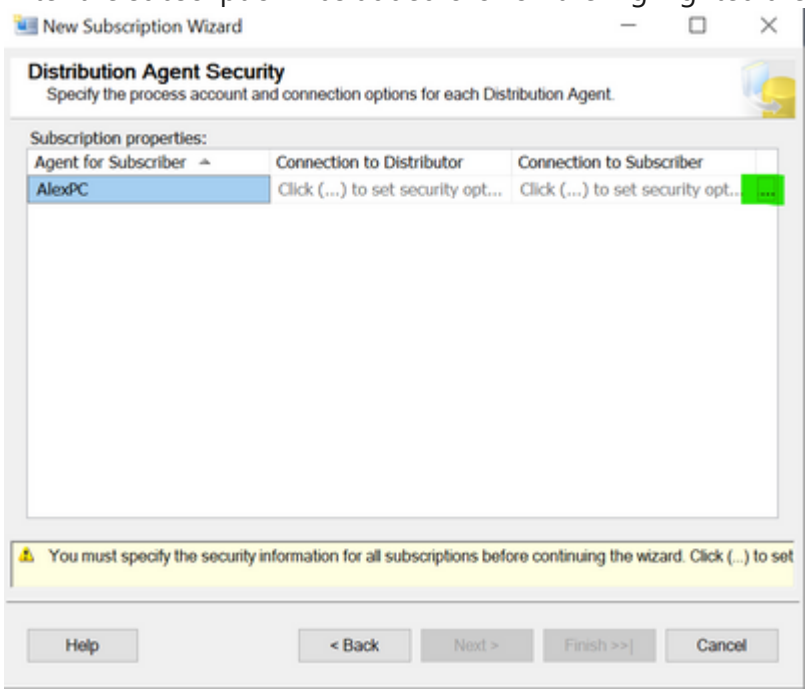



Click Next, select the publication name and click Next, Run all agents at the Distributor, Add SQL Server Subscriber:




Here we will need to connect to the on-premises server with SQL Authentication as mentioned in the first part of the requirements.

After the subscription was added click on the highlighted area below:




On the top part, use the login that you are using for the Distributor (SQL login that you are accessing the Managed Instance) and on the bottom part of the window, enter the SQL login used previously to access the on-premise SQL Server.

After that you can leave the Synchronization Schedule together with the Initialize Subscription steps as default and Finish the New Subscription Wizard.

## Common issues

### Failed to connect to Azure Storage with OS error 53

Error details:

```
2019-11-19 02:21:05.07 Obtained Azure Storage Connection String for replstorage
2019-11-19 02:21:05.07 Connecting to Azure Files Storage '\replstorage.file.core.windows.net\replshare'
2019-11-19 02:21:31.21 Failed to connect to Azure Storage '' with OS error: 53.
```

**Mitigation:**

- See article Snapshot Agent failing with OS Error: 53 for mitigation details.
- In addition, please check that the storage account configuration for the snapshot folder is correct, see Verify the storage account configuration for the snapshot folder above.

### Could not connect to Subscriber

Error details:

```
The process could not connect to Subscriber 'servername.REPLDNS.COM'. (Source: MSSQL_REPL, Error number: MSSQL
Get help: http://help/MSSQL_REPL0
Named Pipes Provider: Could not open a connection to SQL Server [53]. (Source: MSSQLServer, Error number: 53)
Get help: http://help/53
A network-related or instance-specific error has occurred while establishing a connection to SQL Server.
Server is not found or not accessible. Check if instance name is correct and if SQL Server is configured to al
For more information see SQL Server Books Online. (Source: MSSQLServer, Error number: 53)
Get help: http://help/53
Query timeout expired, Failed Command: (Source: MSSQLServer, Error number: HYT00)
Get help: http://help/HYT00
```

**Mitigation:**

- See article Distribution Agent Unable to connect to onprem Subscriber for mitigation details.
- See article Distribution Agent failing with requires actual server name for further steps on a very similar error.
- In addition, please check paragraph SSMS as alternate method for creating the subscription above and use the wizard to create the subscription.
- Also see the public information here.

As a short summary, the recommendations for the "Could not Connect to Subscriber" error are:

1. Ensure that the port 1433 is open and that the other requirements are met
2. Try as an alternative to add the subscription with SSMS
3. Provide the IP address of the on-premises server in the sp_addsubscription stored procedure
4. Check if the @@SERVERNAME is the same with SERVERPROPERTY(N'servername')

## Public Documentation Reference

- Original Blog Article

## Classification

Root cause Tree: Azure SQL v3\Surface Area\Transactional Replication

## How good have you found this content?