

# Test if subscriber name is resolvable and accessible (Linked Server)

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## Purpose:

When setting up replication from MI to on-prem machine a push subscription must be used. Read why at [Publisher and Distributor on MI, Subscriber OnPrem](#)

That means the MI should have access to the on-prem machine, and the name of the on-prem should be resolvable within the MI.

## When it is applies?

If the on-prem machine using **legal public FQDN** (Fully Qualified Domain Name) then MI should be able to resolve the name, and should have access to the server's IP.

If the on-prem machine uses **internal DNS domain** which is not resolved by public DNS - **a custom DNS should be used on the MI**

Read here how to setup custom DNS for MI: <https://docs.microsoft.com/en-us/azure/sql-database/sql-database-managed-instance-custom-dns>

**Important note:** when custom DNS is being used Azure's recursive resolvers IP address 168.63.129.16 should be set as well.

## Apply settings on Managed Instance

After you set the custom DNS, MI should be restarted in order for the changed to take effect.

As there is no restart option on MI you can **scale to a different sku back and forth** to achieve the same goal

## Testing access by name

Run the following on the MI to create linked server

```
-- Create Linked Server
```

```
USE [master]
```

```
EXEC sp_addlinkedserver
```

```
@server=N'<Name Of This Linked Server,sysname,TestServer>', ---Give a name to linked server
```

```
@srvproduct=N'',
```

```
@provider=N'SQLNCLI',
```

```
@datasrc=N'<FQDN Name of the on-prem Server,sysname,>'; ---IP of VM (subscriber)
```

```
GO
```

```
USE [master]
```

```
GO
```

```
EXEC dbo.sp_addlinkedsrvlogin @rmtsrvname = N'<Name Of This Linked  
Server,sysname,TestServer>', ---Use same name for linked server as above
```

```
@locallogin = NULL ,
```

```
@useself = N'False', @rmtuser = N'<subscriber_login,sysname,>',
```

```
@rmtpassword = N'<YourStrongPassword,sysname,>'
```

```
GO
```

```
-- test the connection
```

```
select top 1 'Successful' from [<Name Of This Linked  
Server,sysname,TestServer>].master.dbo.spt_values
```

```
-- cleanup
```

```
EXEC dbo.sp_dropserver N'<Name Of This Linked Server,sysname,TestServer>','droplogins'
```

**Tip:** the above T-SQL can be used as template, within SSMS use the key combination CTRL+SHIFT+M to pop up template parameters form to supply values for this template.

## Results

- If you get successful results that means the server is accessible
- If you get the below error:

OLE DB provider "SQLNCLI11" for linked server "TestServer" returned message "Login timeout expired".

OLE DB provider "SQLNCLI11" for linked server "TestServer" returned message "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 allow remote connections. For more information see SQL Server Books Online."

Msg 53, Level 16, State 1, Line 13

Named Pipes Provider: Could not open a connection to SQL Server [53].

**This means that the name could not be resolved or the server is not accessible**

- If you get the following error:

Msg 18456, Level 14, State 1, Line 15

Login failed for user 'sa'.

This means that you have access, but the wrong login name or password was used.

**How good have you found this content?**

