Document Information

Reference	PRO-180002
Title	Migrating DAS-SQL to a new SQL Server Instance
Synopsis	Beyond just installing SQL Server 2016 Express, this document guides a user through installing SQL Server 2016 Express, backing up the DAS SQL databases, detaching the databases, copying the databases to a new server / instance, re-attaching the DAS SQL databases, updating the database format then connecting a new DAS SQL instance to the databases.
Author	David Montgomery
Creation Date	2019-Jan-08

Revisions

Rev	Date	Who	Notes
001	2019-Jan-08	David Montgomery	Initial document
002	2020-Sep-28	David Montgomery	Update document title to make it more meaningful

Contents

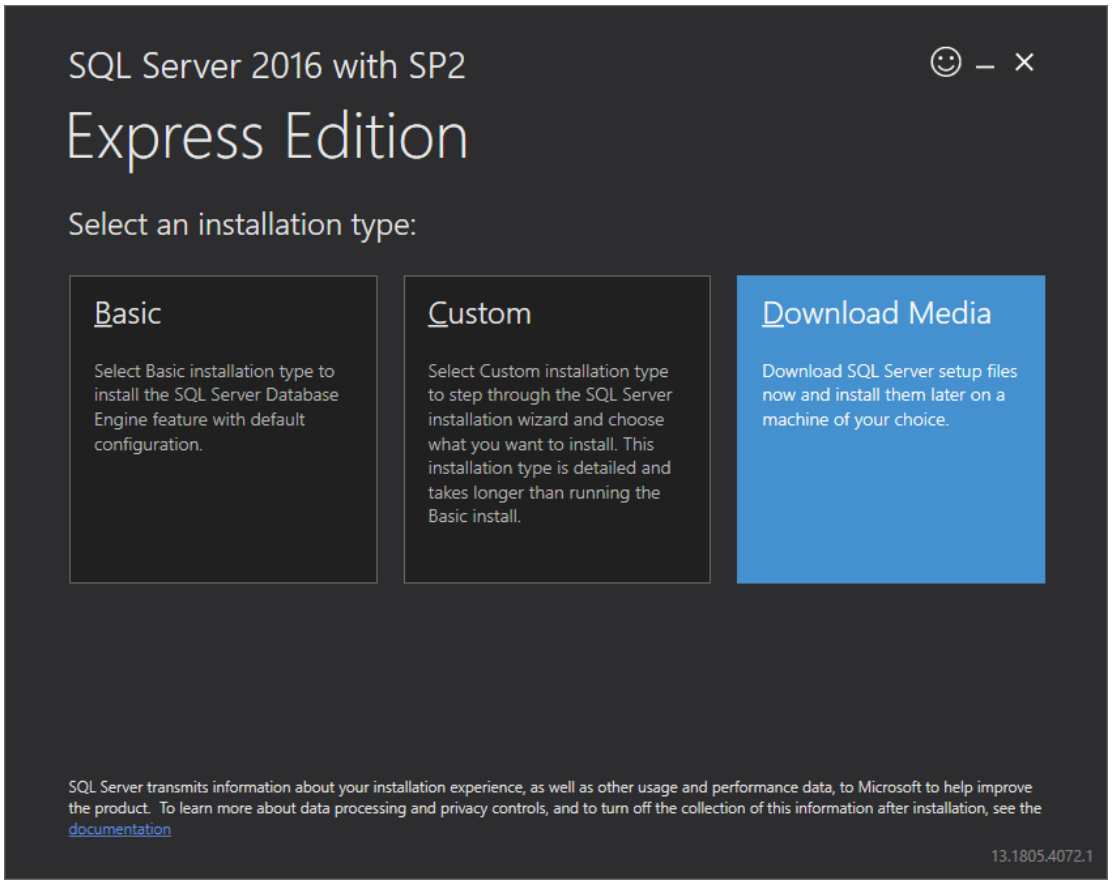
Microsoft SQL Server 2016 SP2 Express download 3
Download Media for use later 3
SQL Server 2016 Express Installation 7
Beginning the Installation 8
Preparing to connect DAS SQL to the New SQL instance 19
Preparing to transfer your database files. 22
Detaching your database files 23
Copying the data over 27
Connect to the new SQL instance 28
Attaching the database files 29
Connect DAS SQL to the new databases 32

Microsoft SQL Server 2016 SP2 Express download

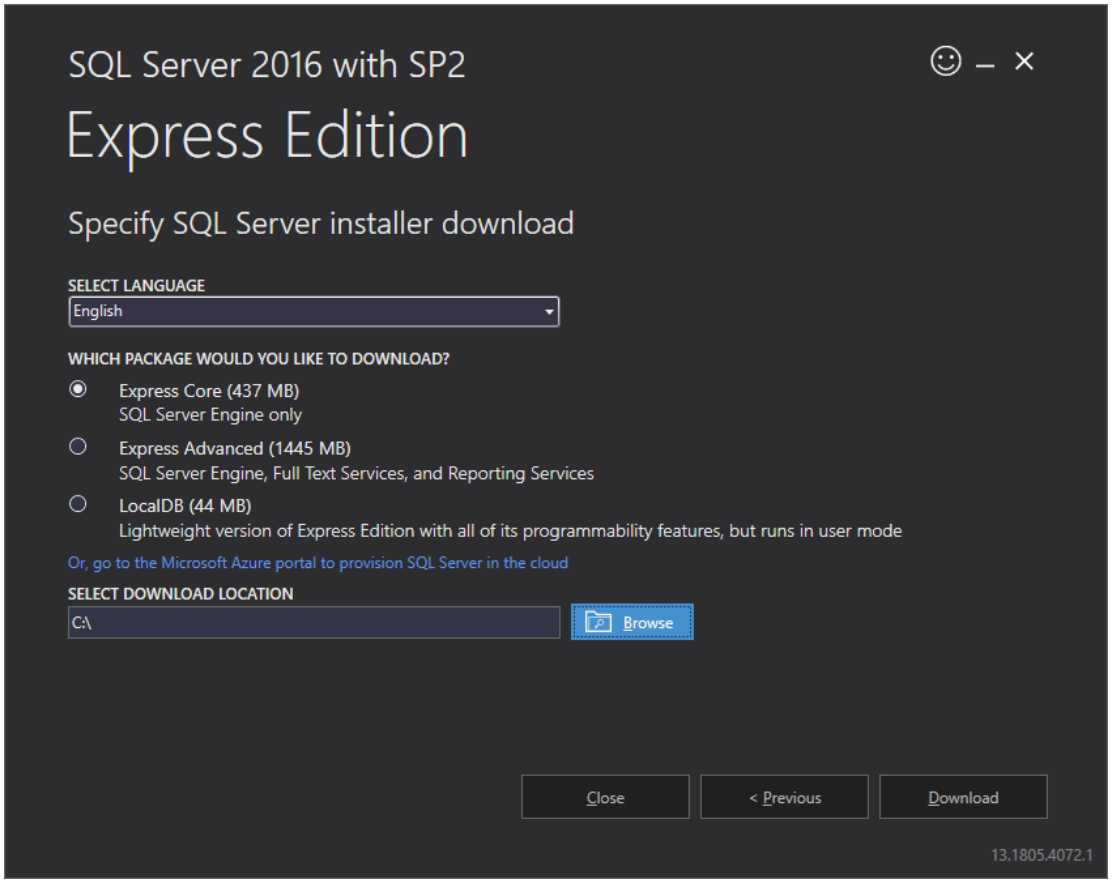
https://www.microsoft.com/en-us/download/details.aspx?id=56840

It downloads as an update launcher which will download the required binaries as you step through the installation wizard.

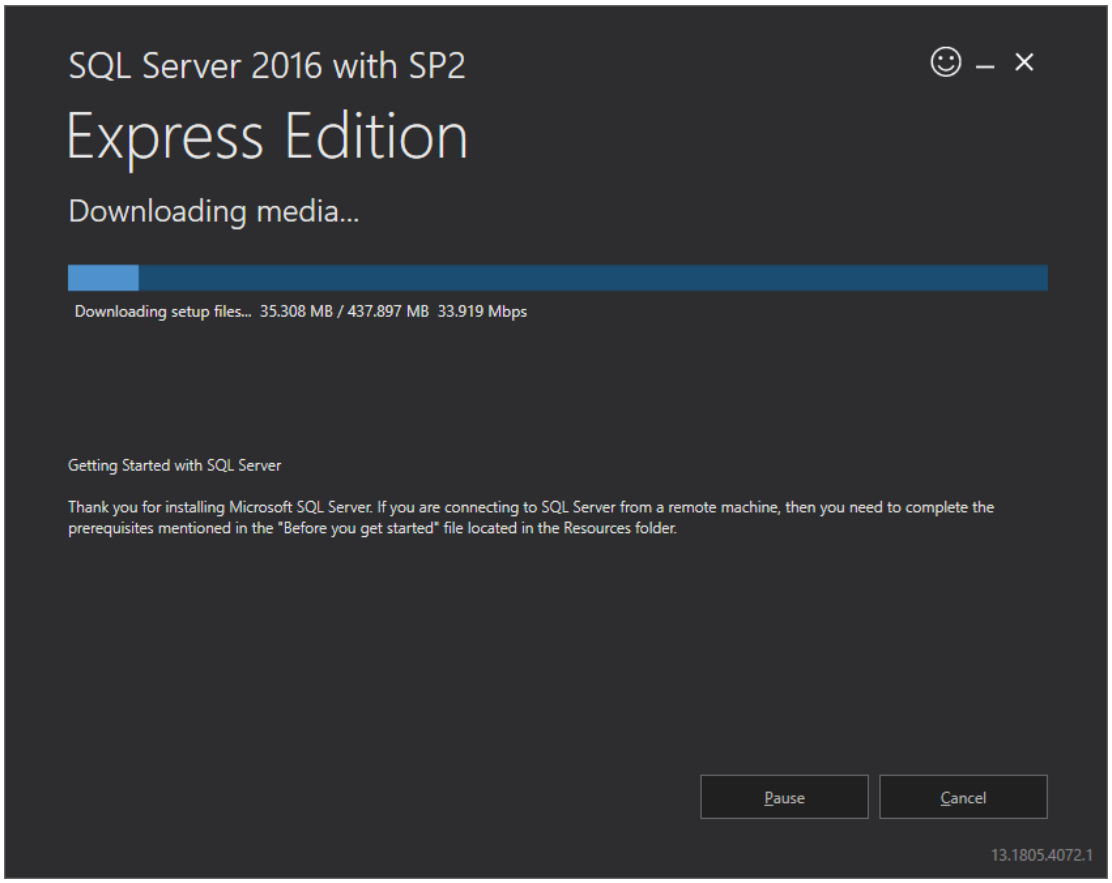
Download Media for use later



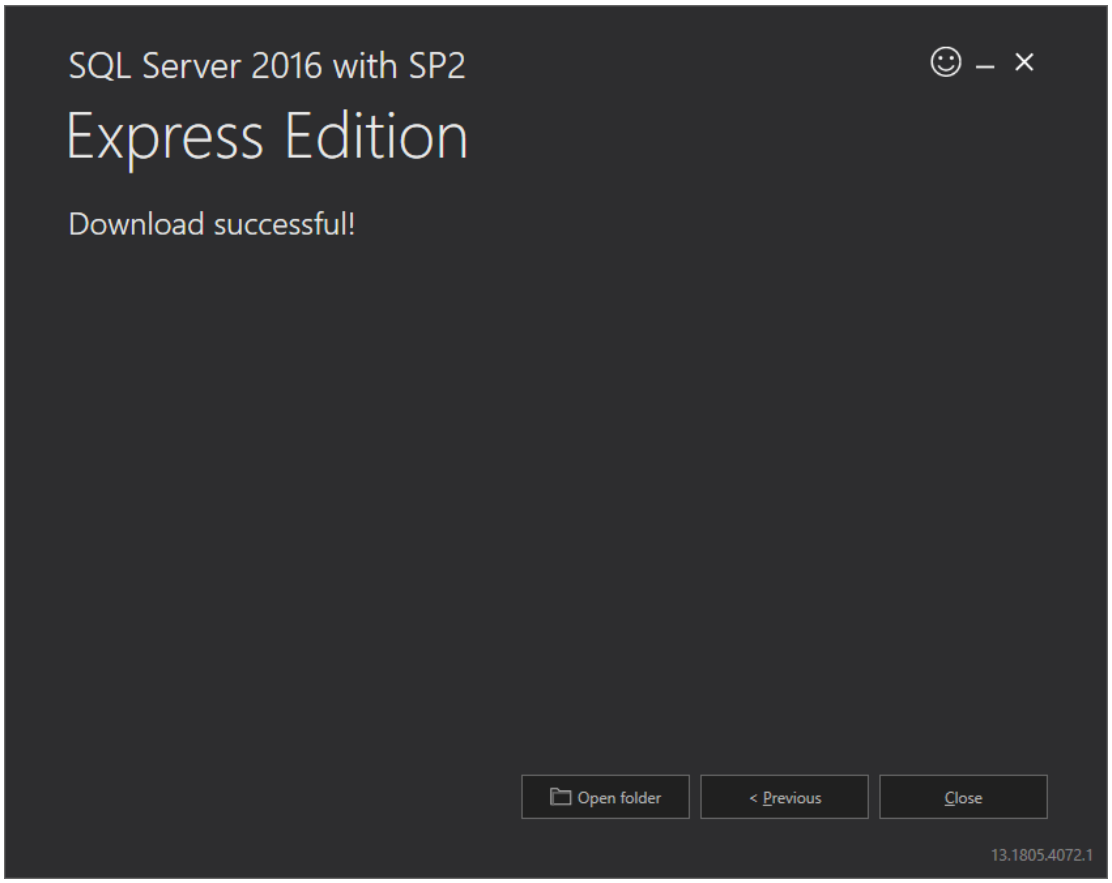
Select your download language, package (Express Core) and download location



Then click Download

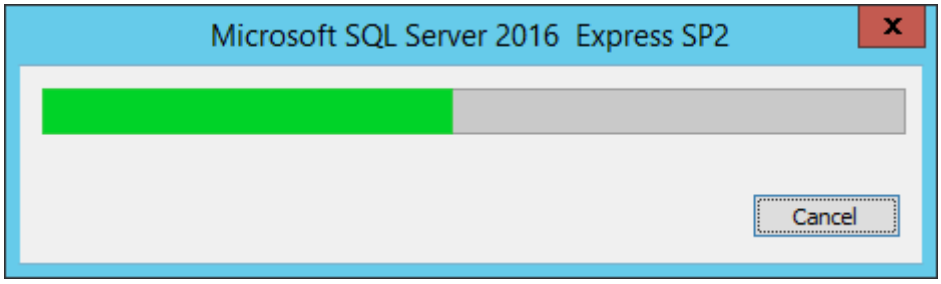


Confirmation that download is successful

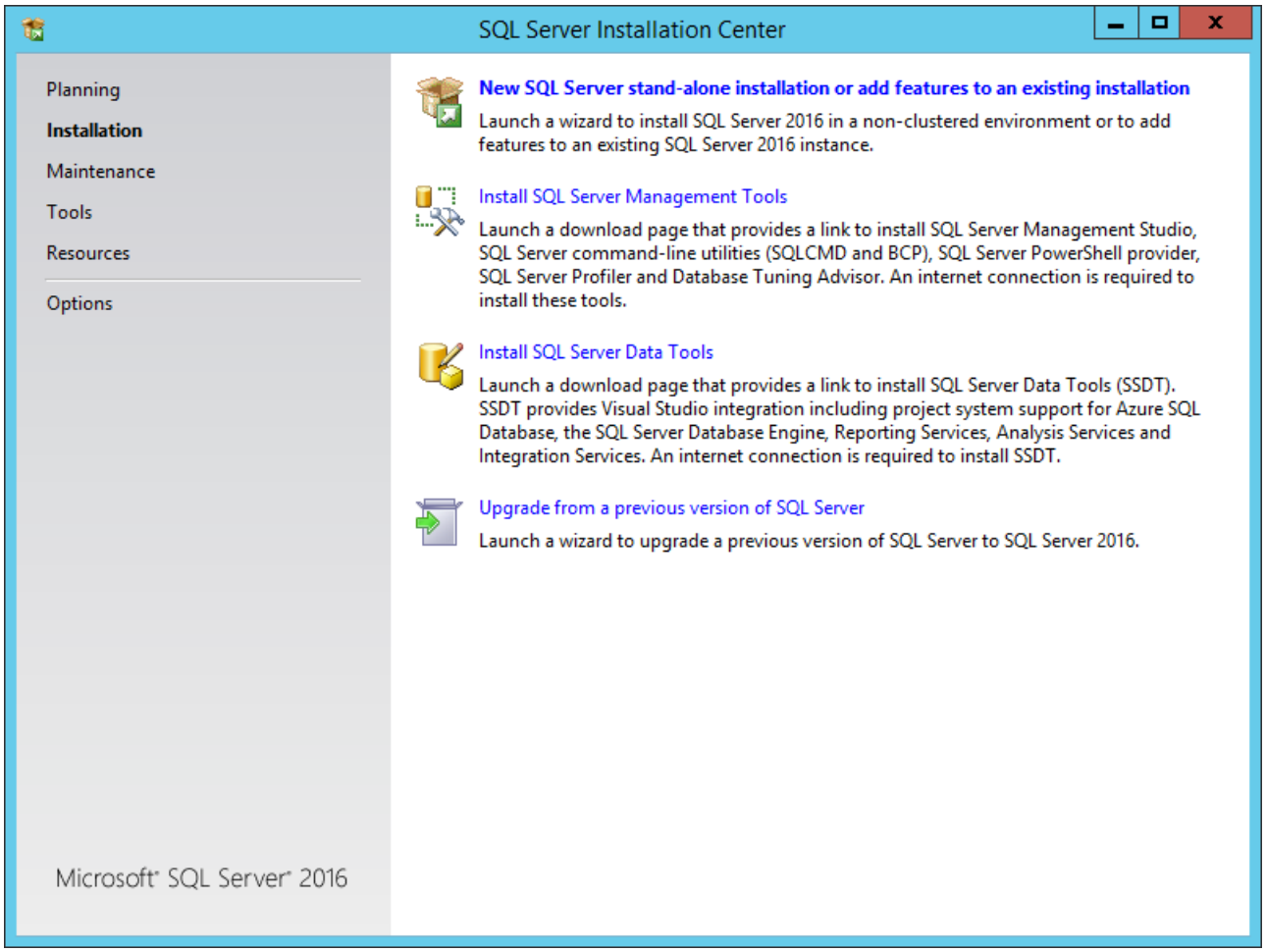

SQL Server 2016 with SP2
Express Edition
Download successful!
Open folder
< Previous
Close
13.1805.4072.1

SQL Server 2016 Express Installation

When you're ready to begin the installation, click Open Folder then run the SQL Express installer as Admin. You will be asked where you would like to unpack your installation files to:



Once completed, the SQL Server Installation Center will load.

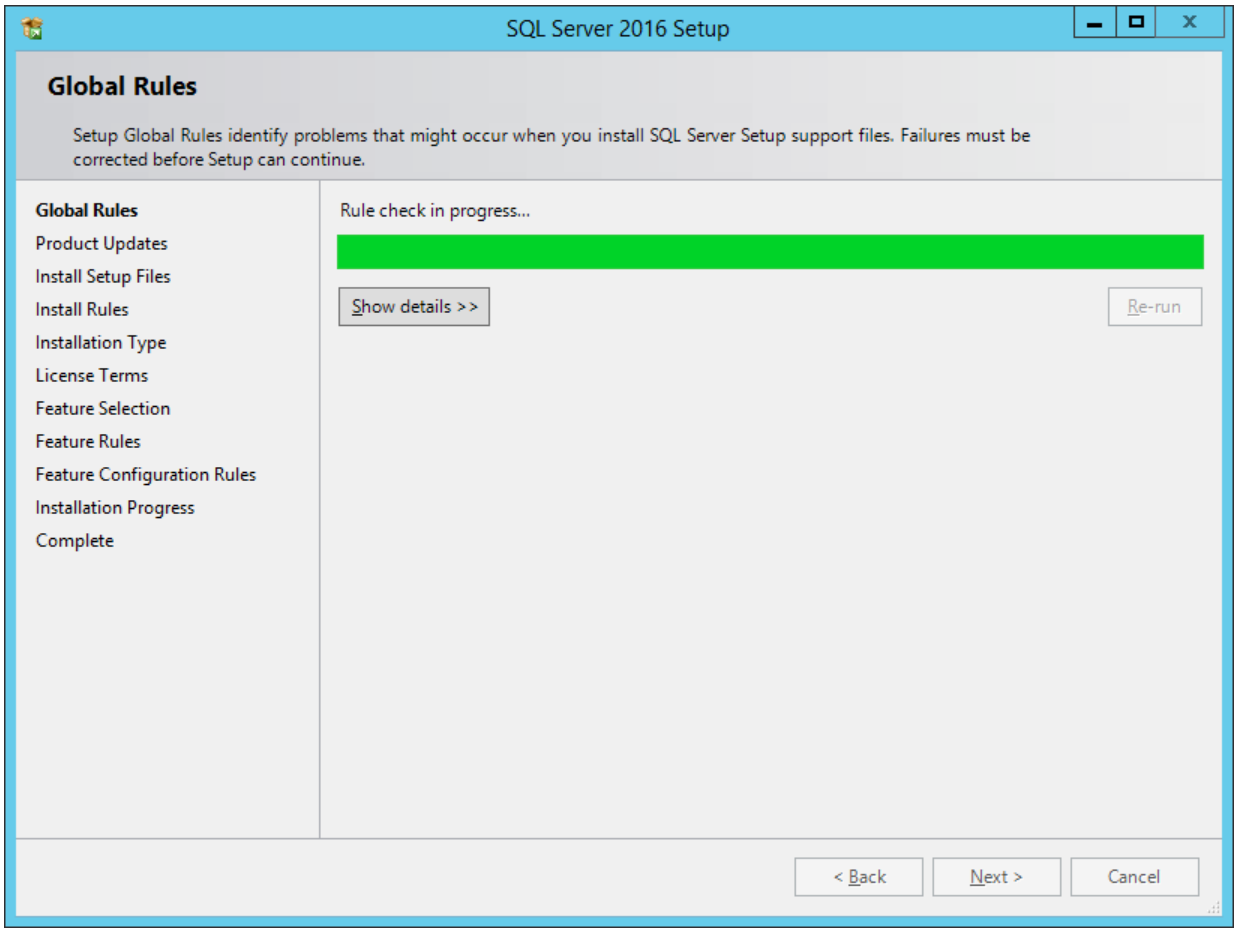


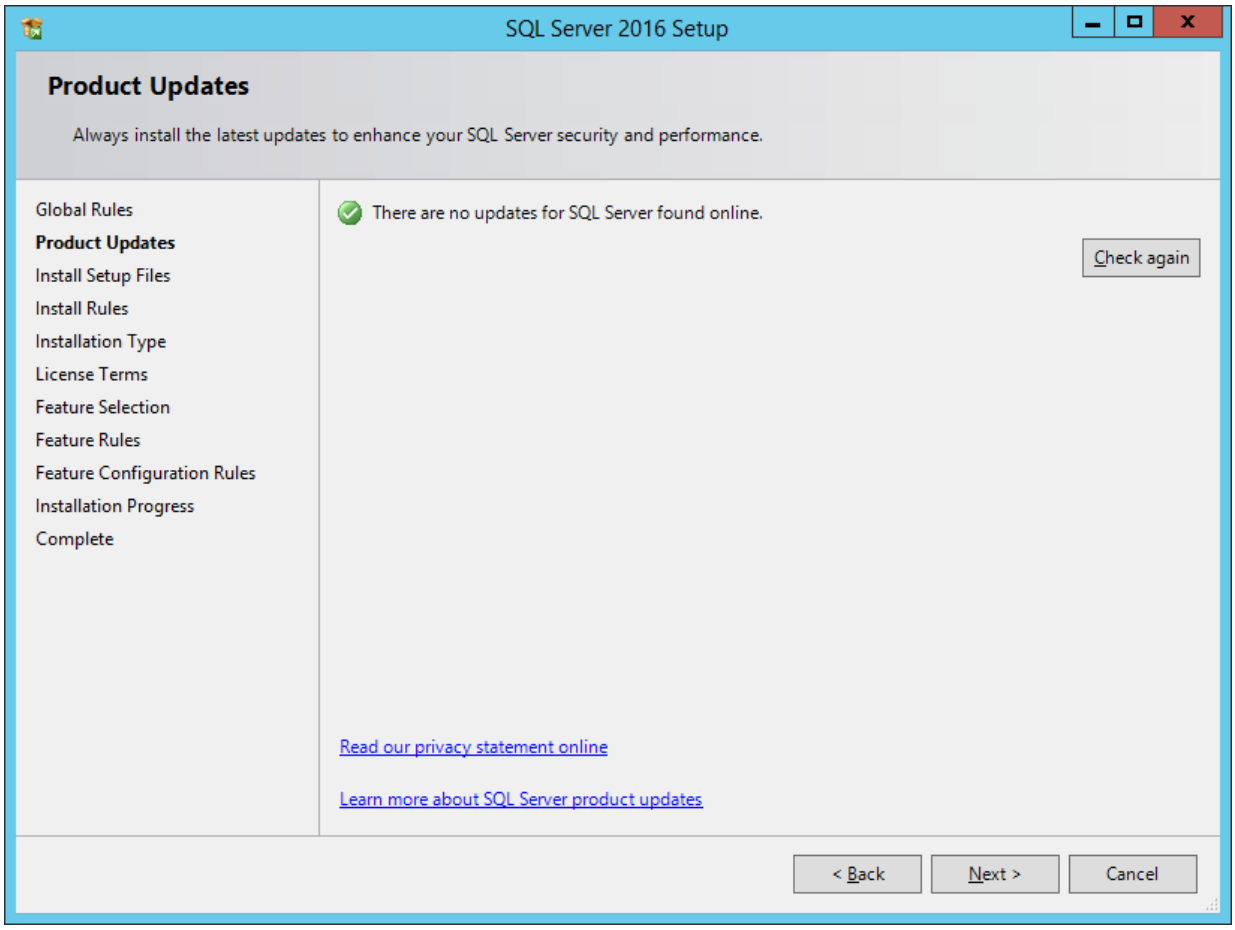
You now have the option to either:

- Create a new stand-alone 2016 instance OR
- Upgrade an existing instance

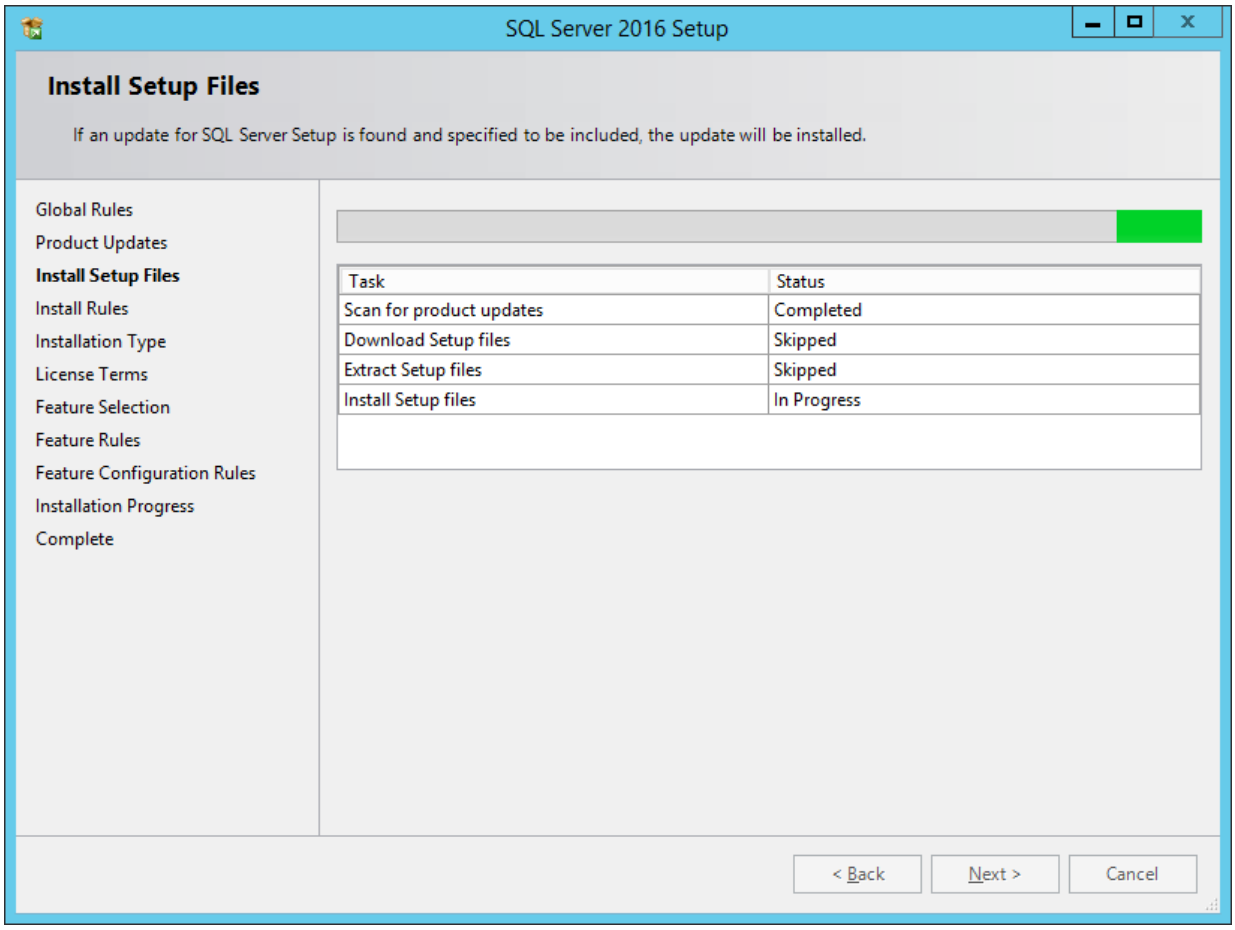
Ultimately this choice is down to your own organizational preferences but from a DAS SQL point of view, we recommend leaving your existing instance alone and creating a new stand-alone 2016 instance. At the end of the process, we can help transfer your files from your existing older SQL Server Express instance and then convert the database for the new SQL version by running a SQL script.

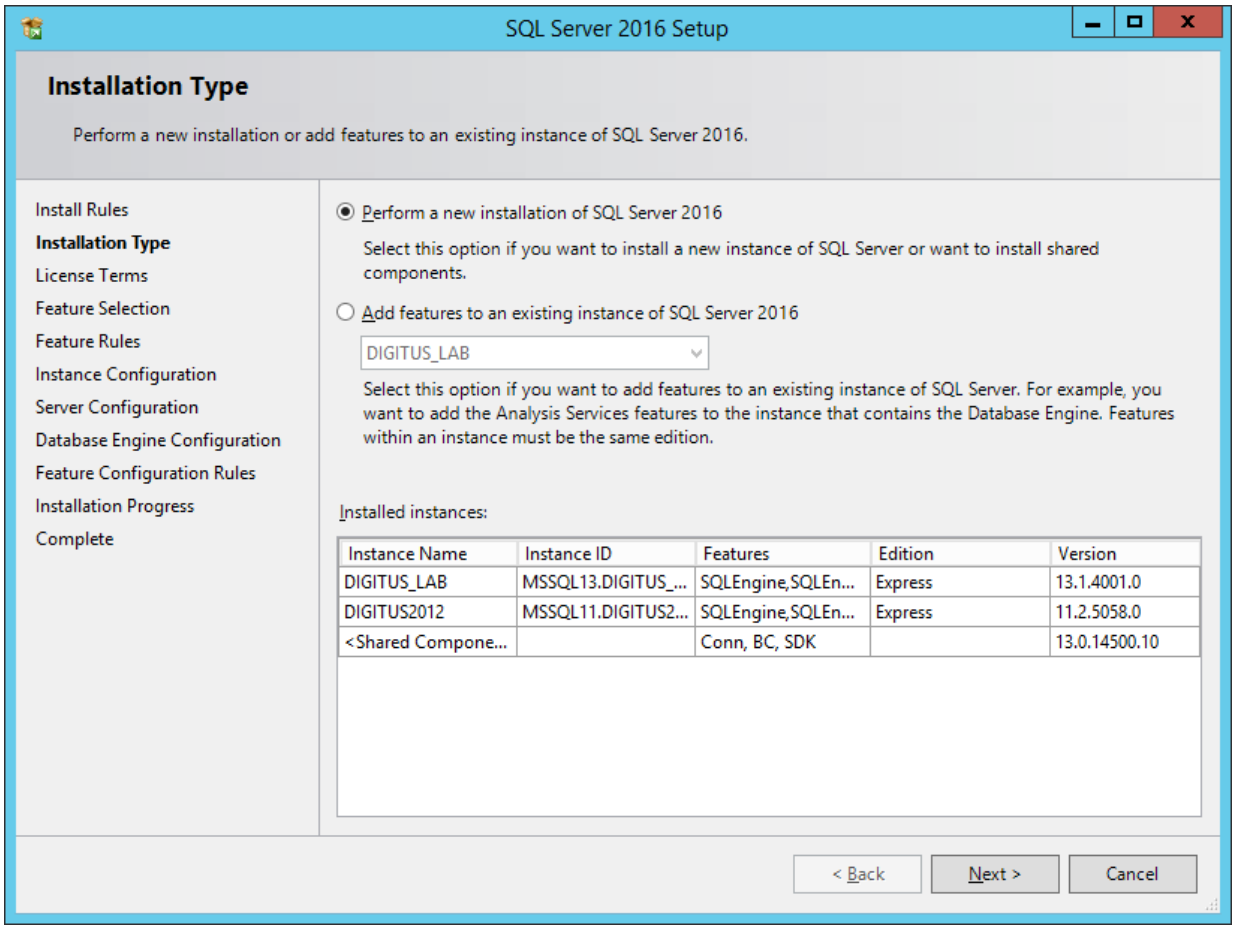
Beginning the Installation



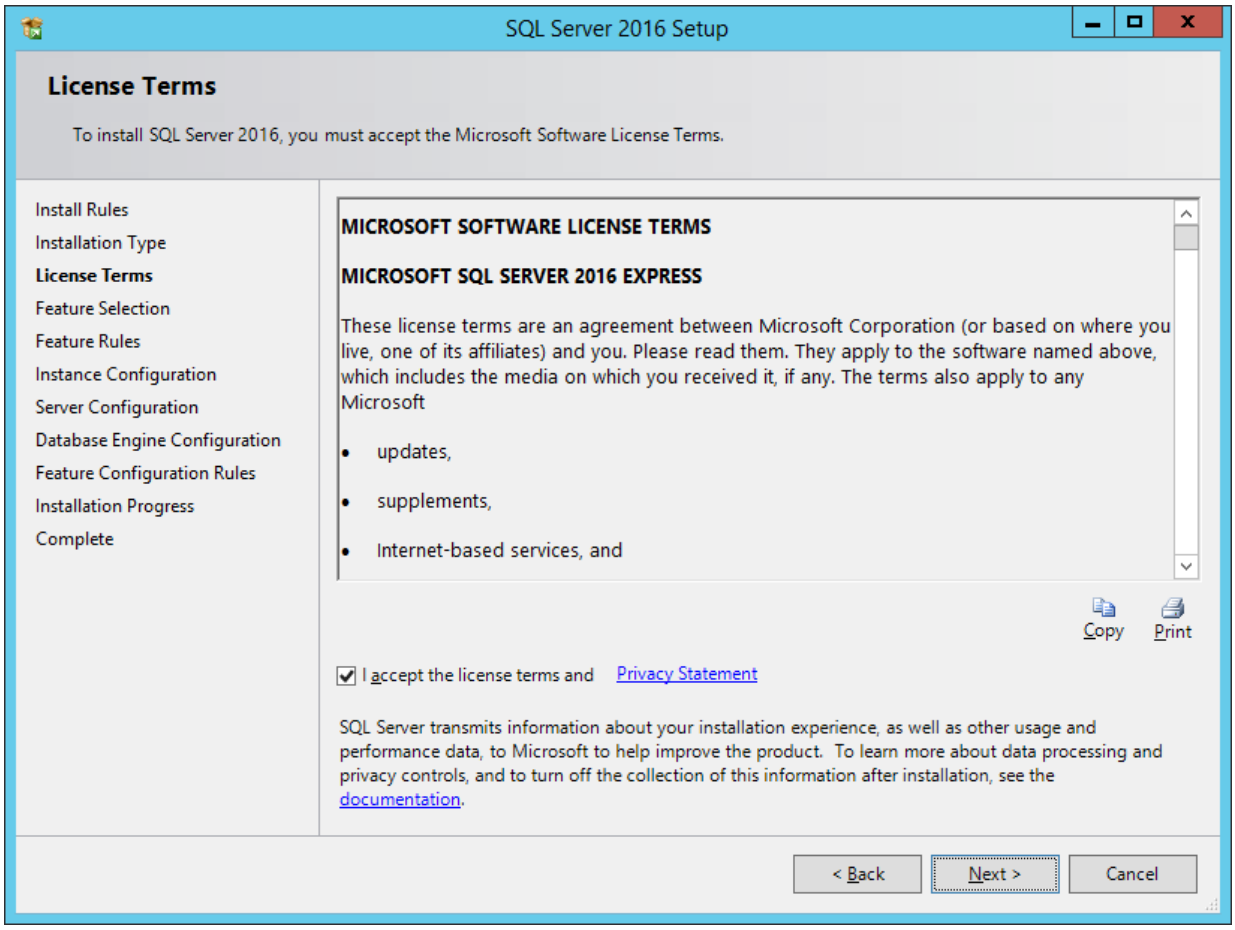


Click Next to begin the installation

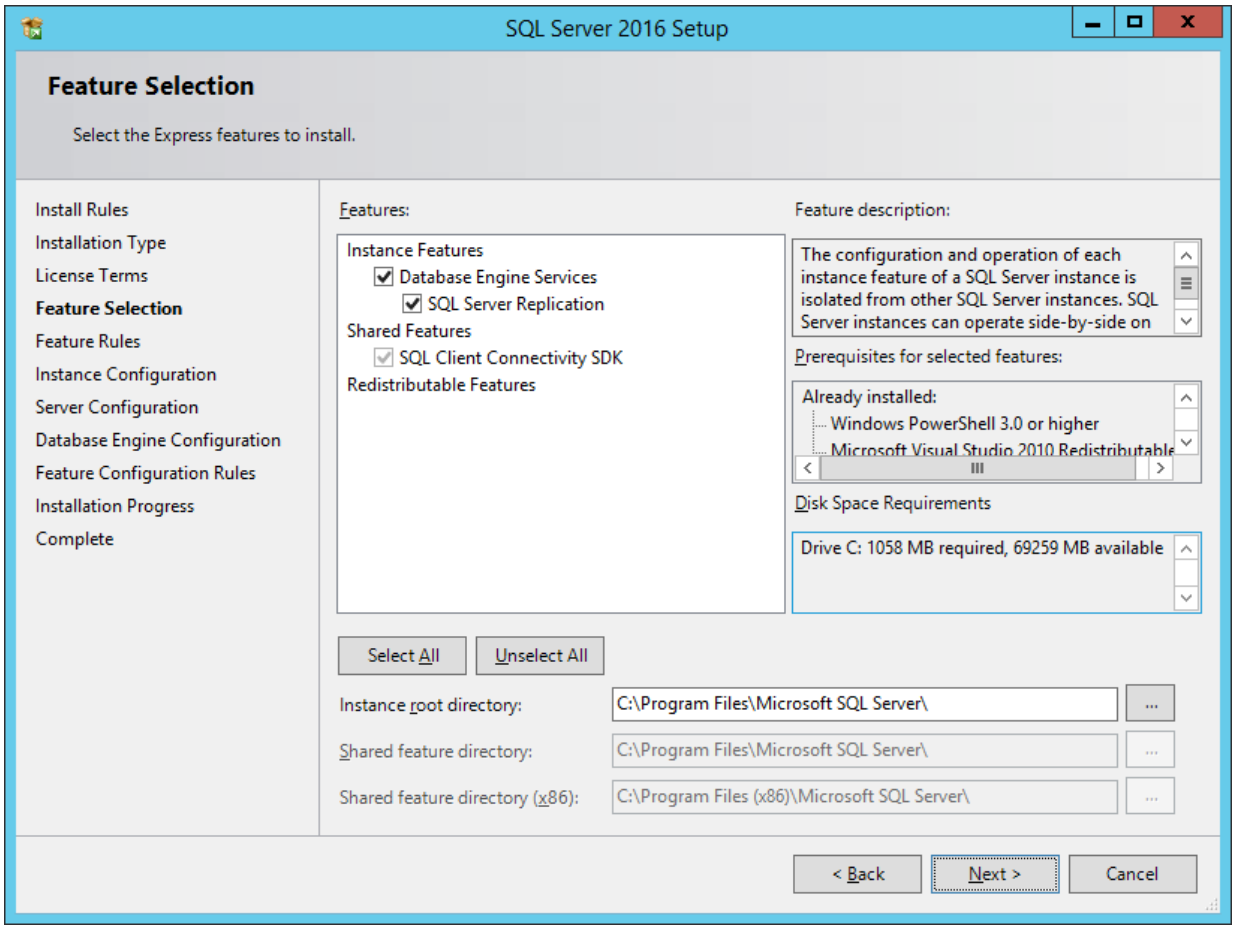

SQL Server 2016 Setup
Install Setup Files
If an update for SQL Server Setup is found and specified to be included, the update will be installed.
Global Rules
Product Updates
Install Setup Files
Install Rules
Installation Type
License Terms
Feature Selection
Feature Rules
Feature Configuration Rules
Installation Progress
Complete
Task
Status
Scan for product updates
Completed
Download Setup files
Skipped
Extract Setup files
Skipped
Install Setup files
In Progress
< Back
Next >
Cancel



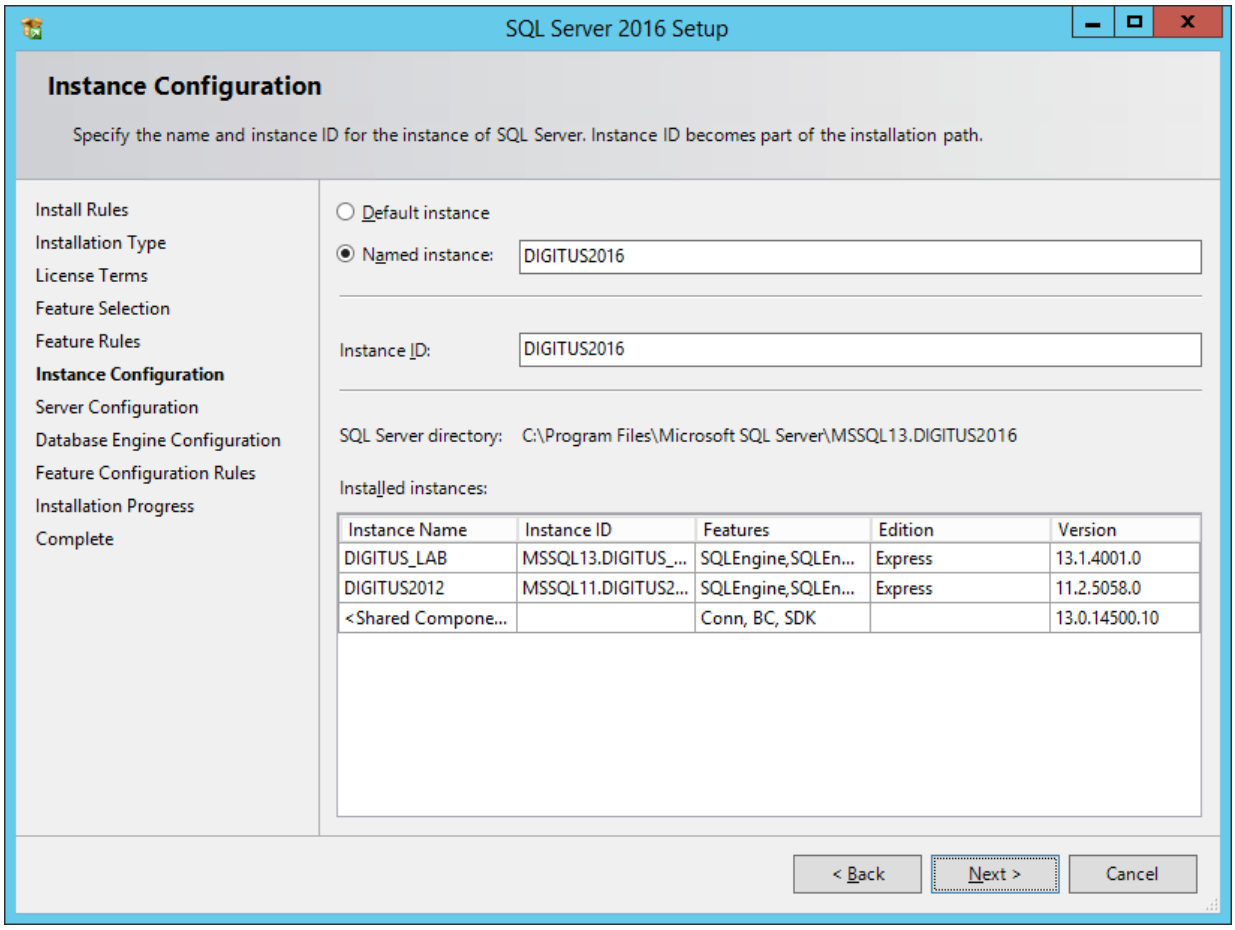
We are going to install a new SQL Server 2016 Express instance – notice the 2 x existing SQL instances (1 x SQL Server 2016 Express called DIGITUS_LAB and 1 x SQL Server 2012 Express called DIGITUS2012). Click Next



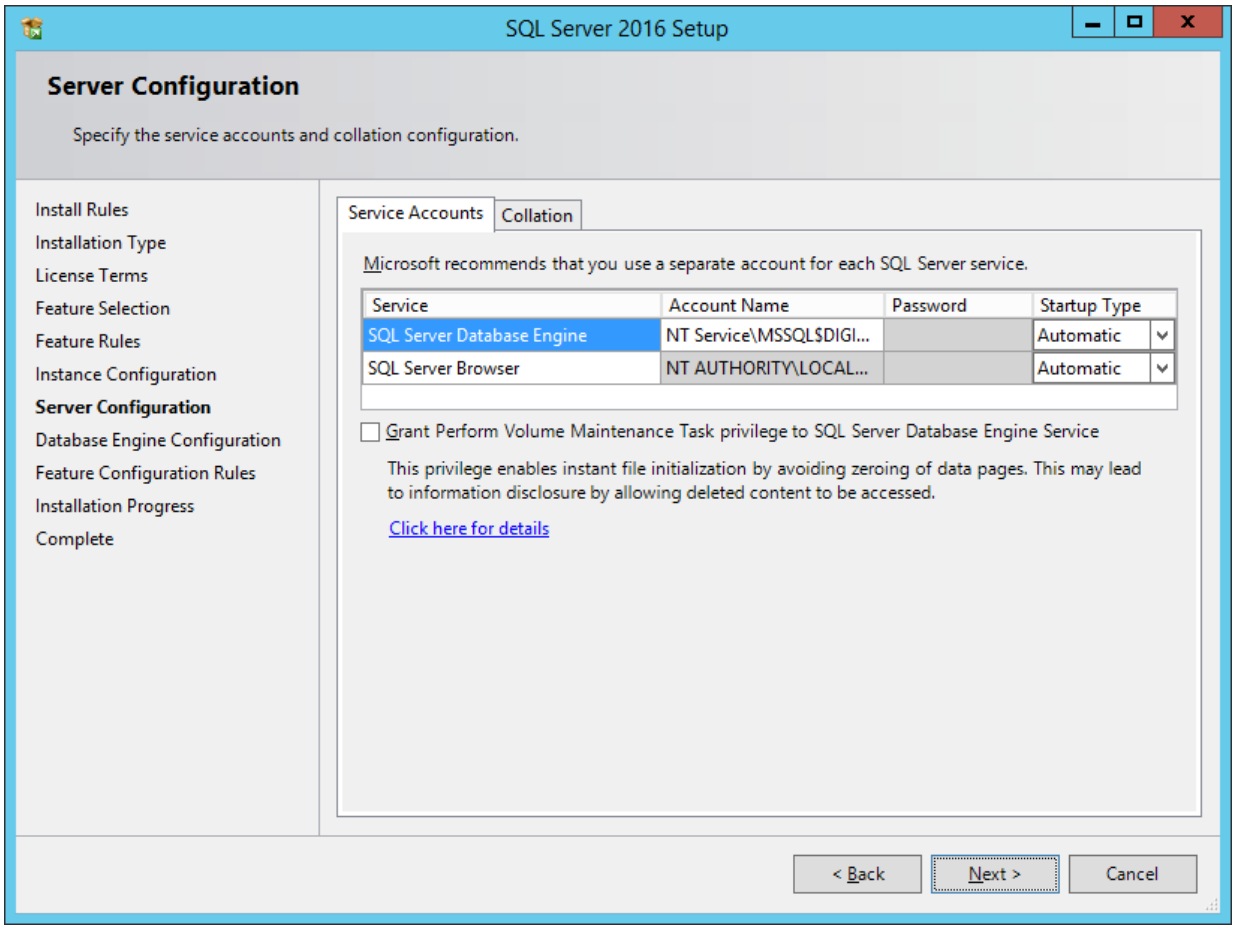
Accept the license terms and click Next



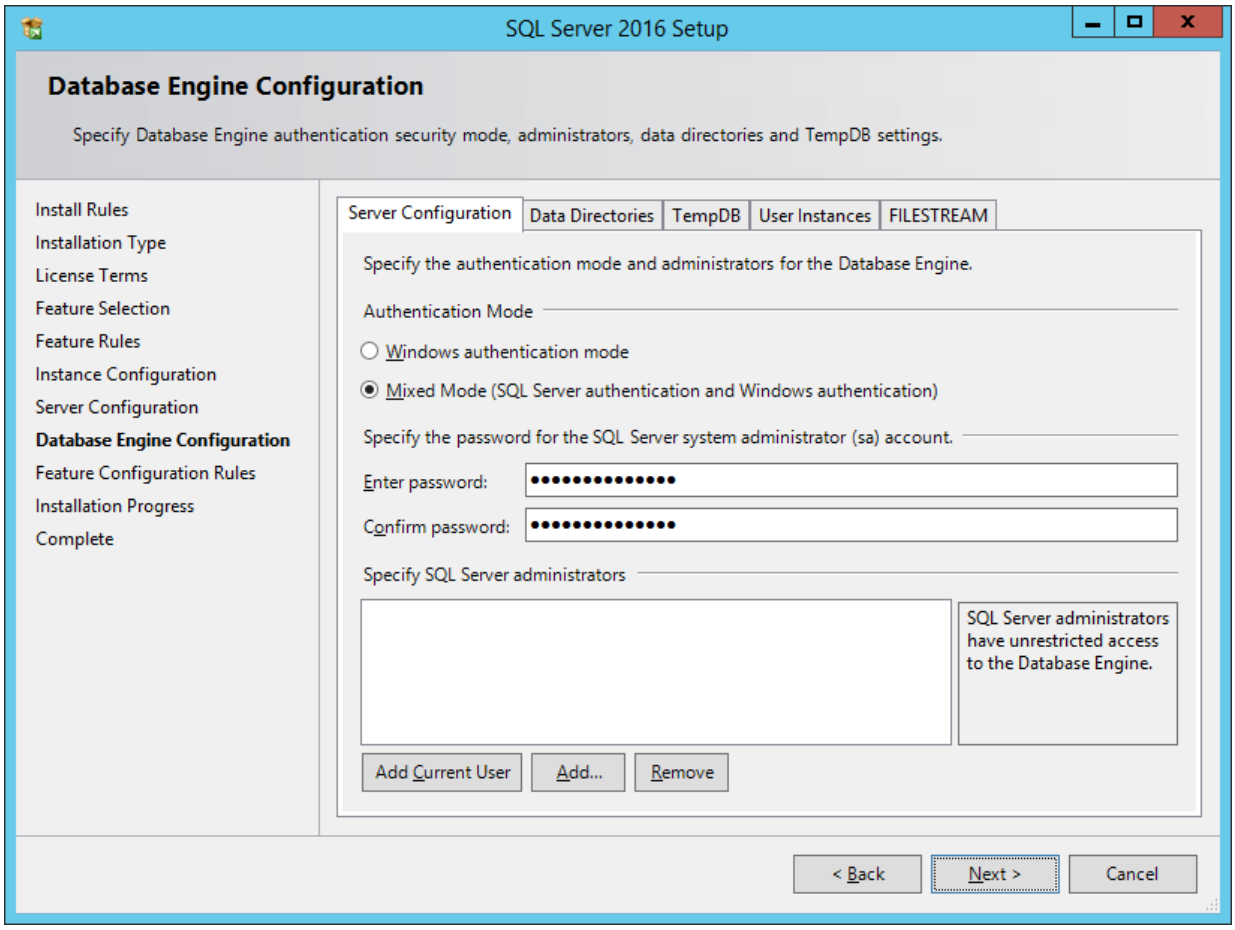
Check the installation options and path, then click Next



Give your SQL Server 2016 Express instance a meaningful name, then click Next

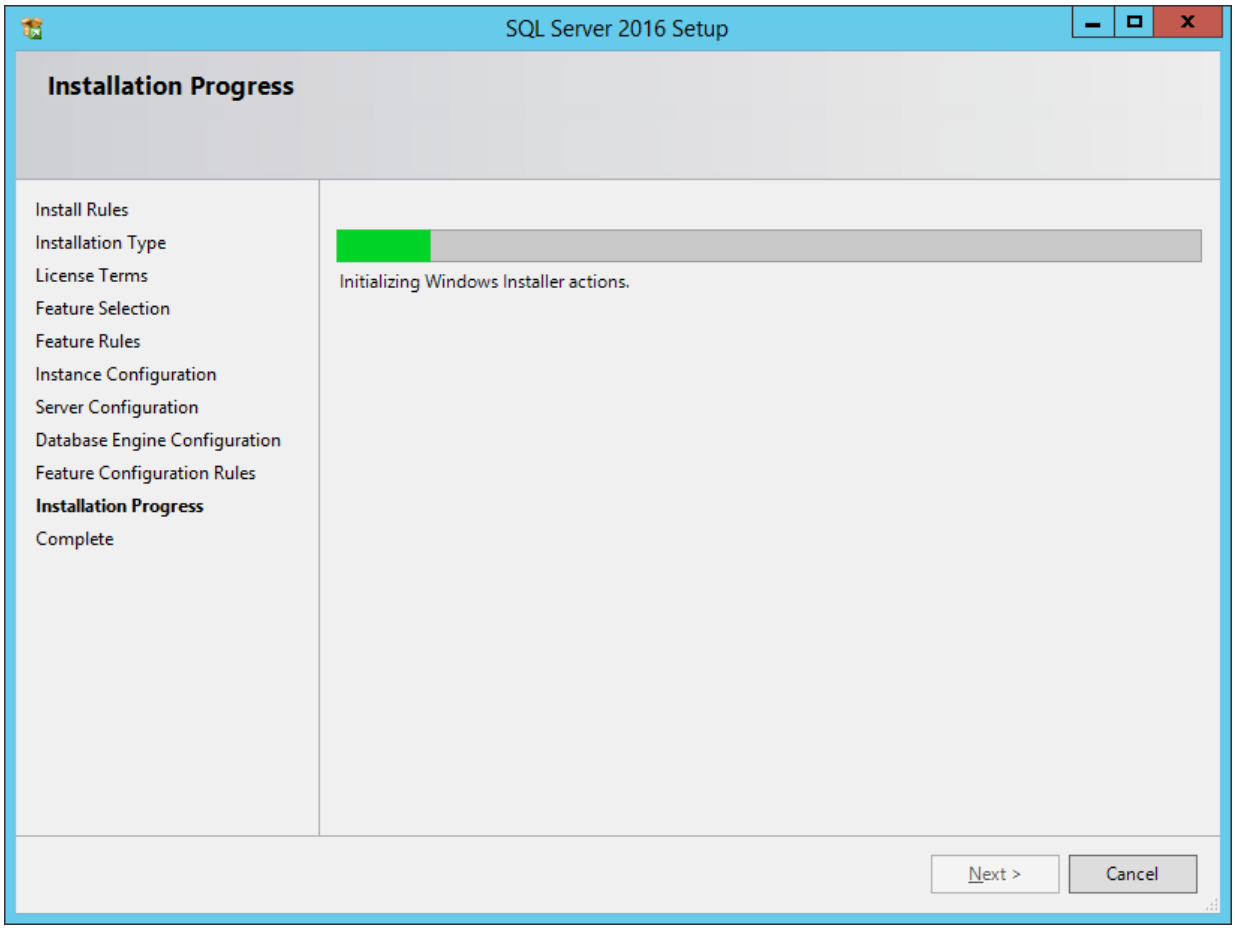


Makes changes to your Server Configuration if your organization requires it, we left the settings at default. Click Next

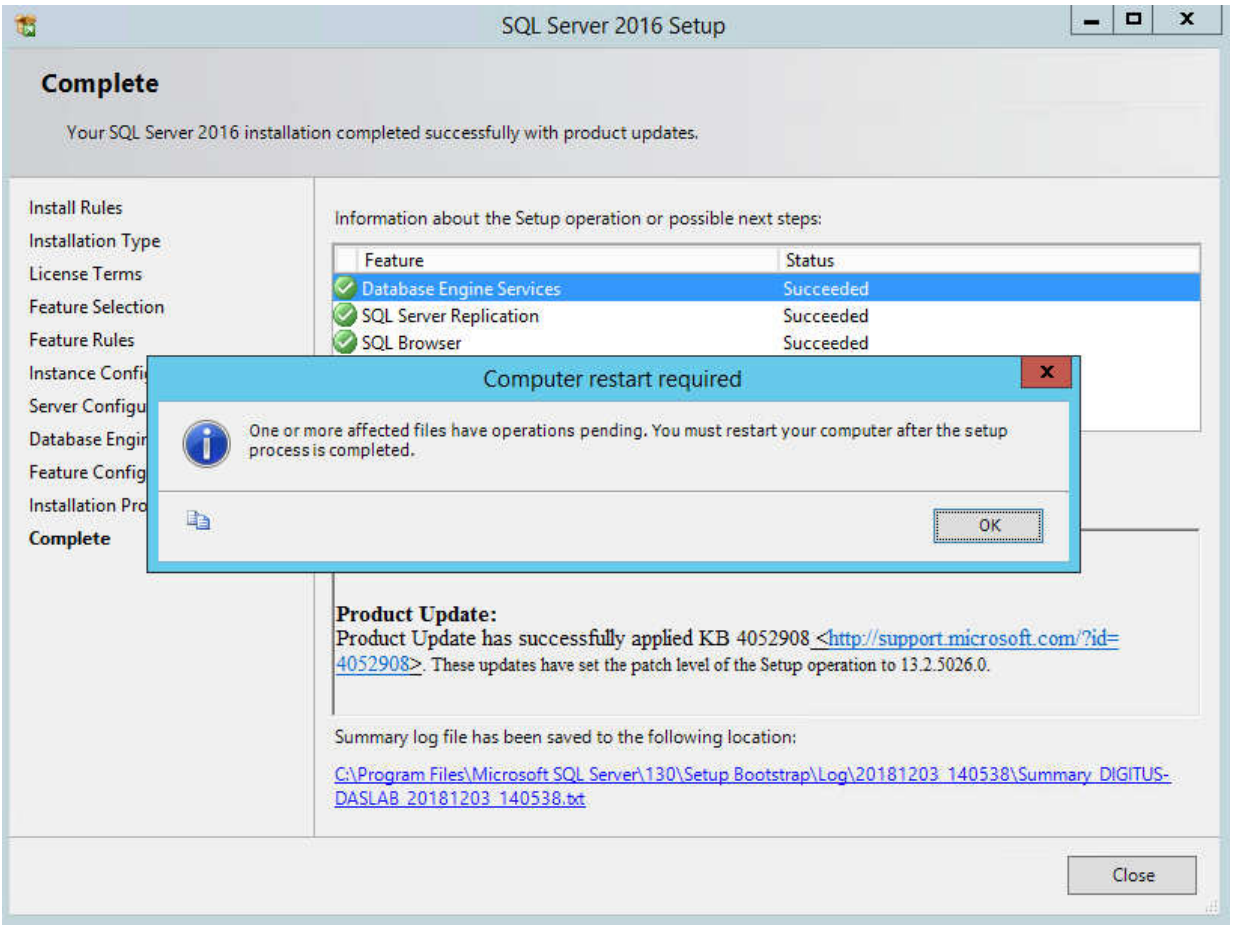


Digitus recommends that your SQL Server 2016 Express instance is installed in mixed mode. Select a suitable password for the 'sa' account – this will be used to connect your DAS-SQL Server / Service to the SQL database.

Don't forget to add any additional SQL Server admin users. Click Next



SQL Server installation has now started.

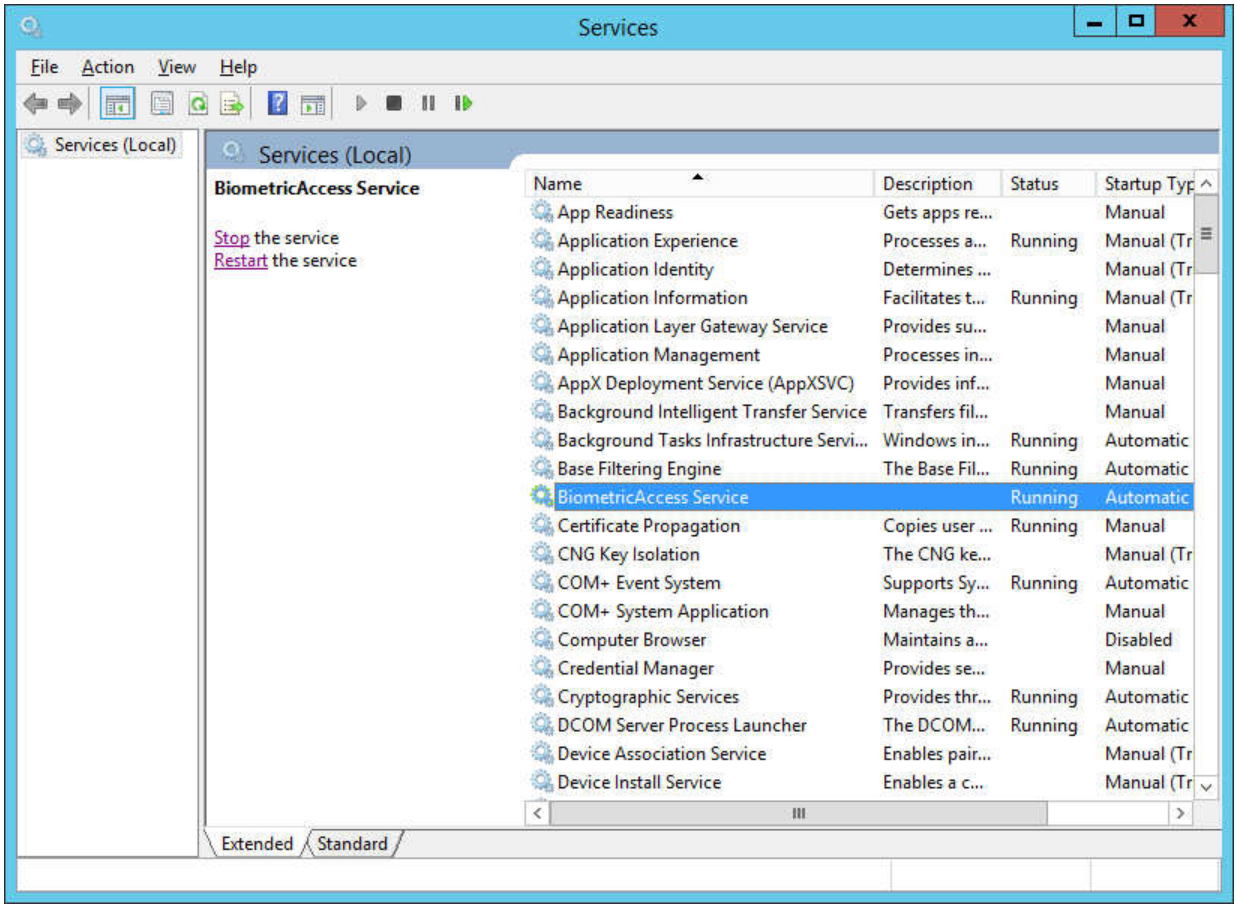


The installation of the new SQL Server 2016 Express instance is finished but a reboot is required to complete the installation.

Preparing to connect DAS SQL to the New SQL instance

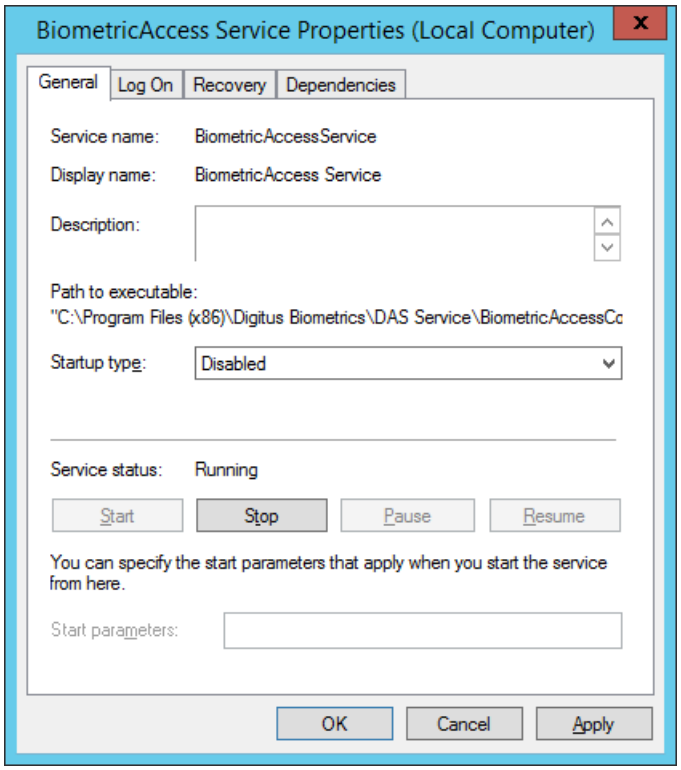
Next, we need to transfer the DAS-SQL databases.

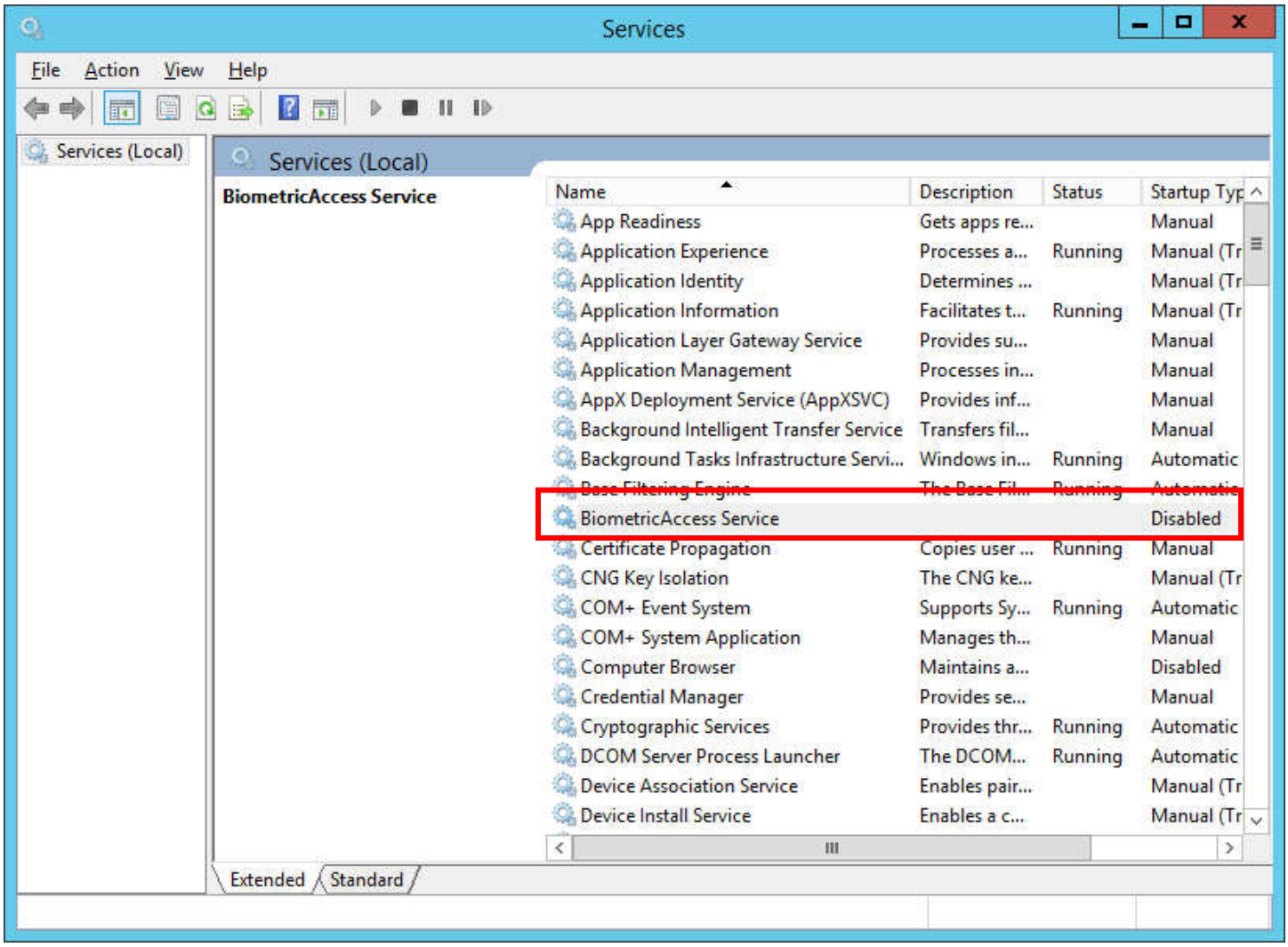
In order to do this and ensure that no further data is pulled in by the DAS Server / Service updating the old database, we need to stop the BiometricAccess Service on the old server.



Find the BiometricAccess service and click Stop to stop the service.

As an additional security measure, it is also recommended to the startup type for the “BiometricAccess Service” is set to “Disabled”.

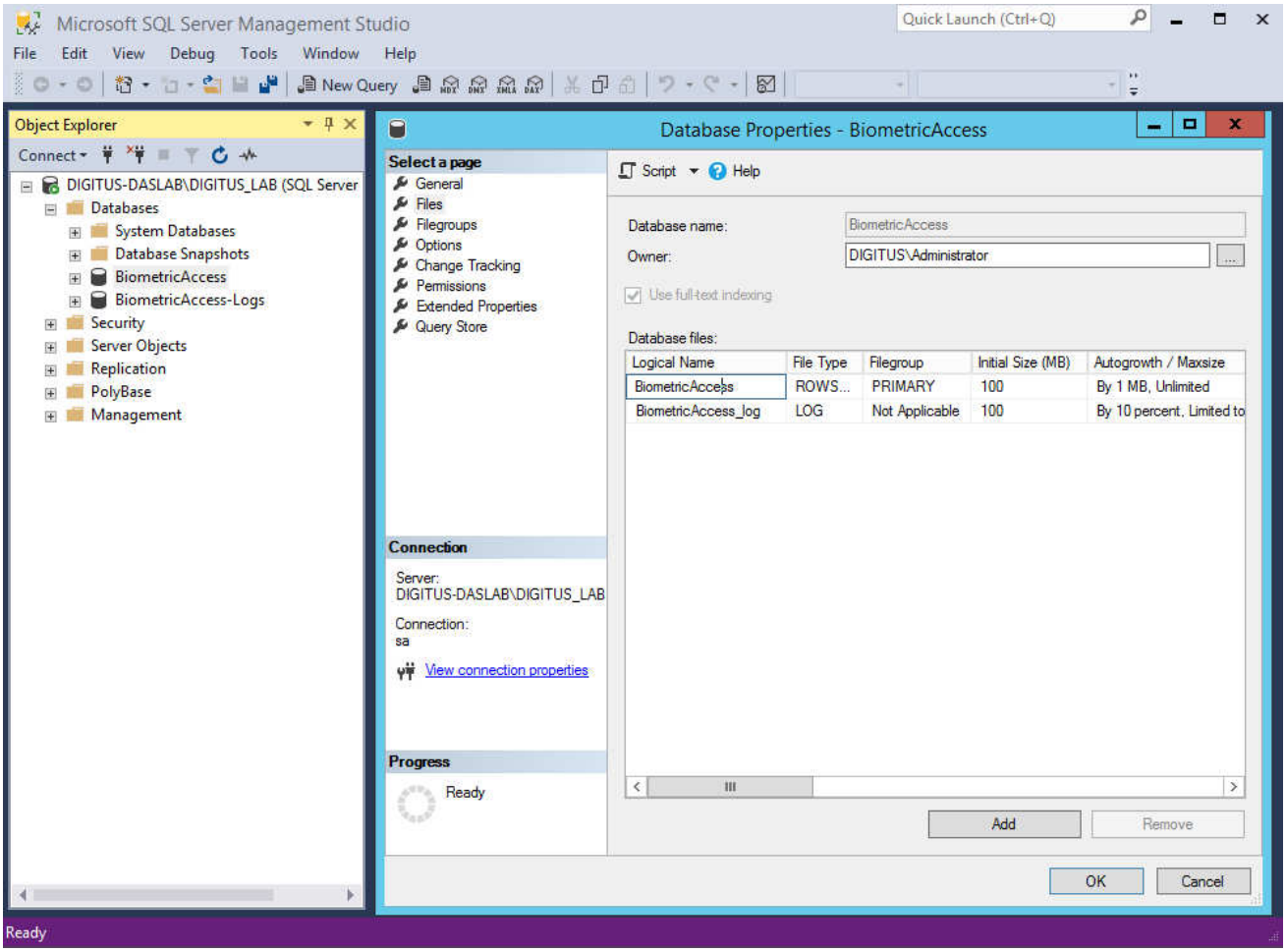




Confirmation that the" BiometricAccess Service" is stopped and its startup type is set to "Disabled".

Preparing to transfer the DAS-SQL database files

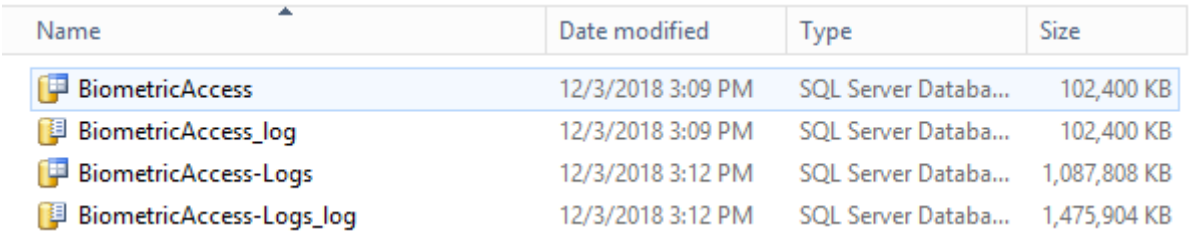
Open SQL Server Management Studio (SSMS) and connect to the DAS-SQL Instance, before opening the Databases tree and right-clicking BiometricAccess -> select “Properties” from the dropdown



In the Database Properties window, use the horizontal scroll bar to check the database path – this is where you are going to COPY your data from. Just double check the same path is set for the BiometricAccess-Logs database.

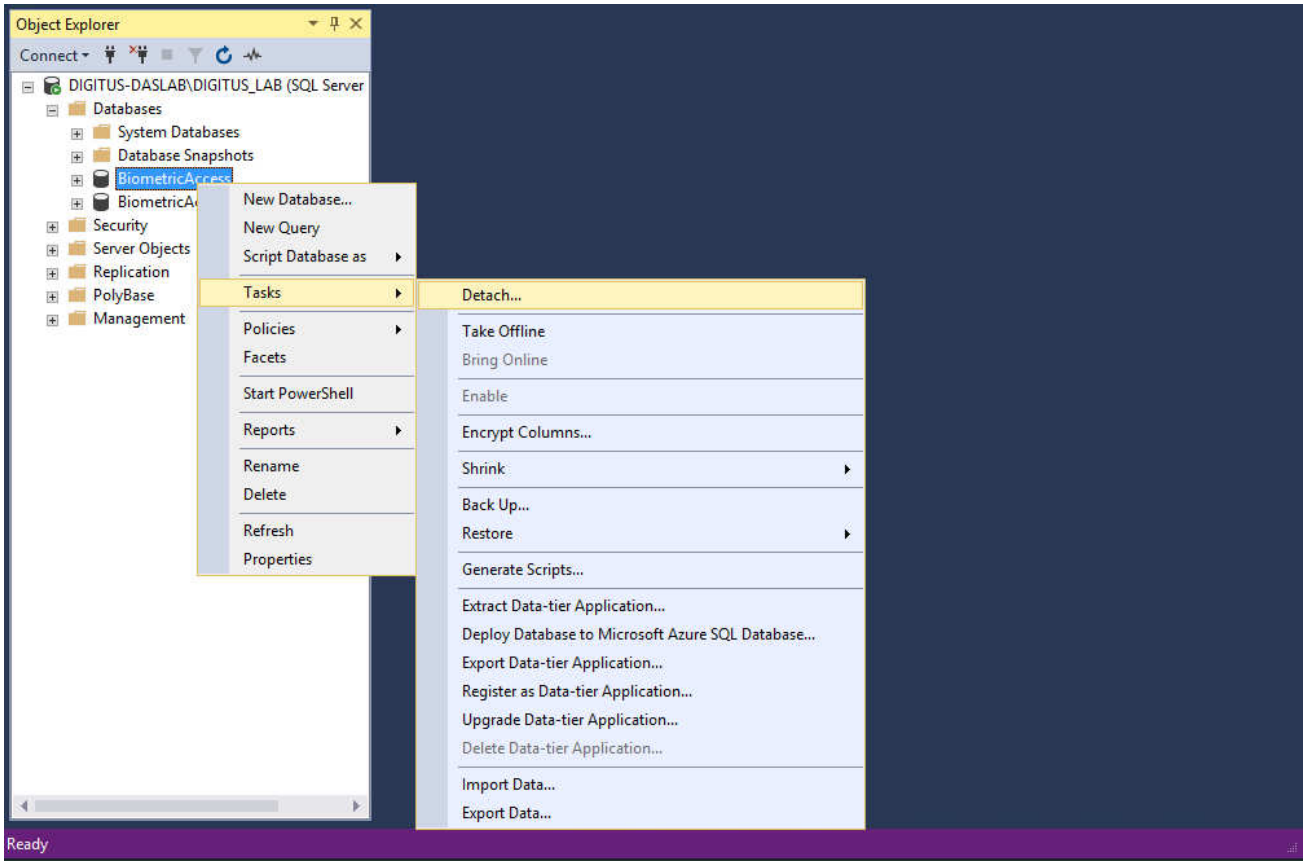
Once you have made a note of your data path, open Window Explorer and browse to the path noted above.

You should see 4 files as follows:

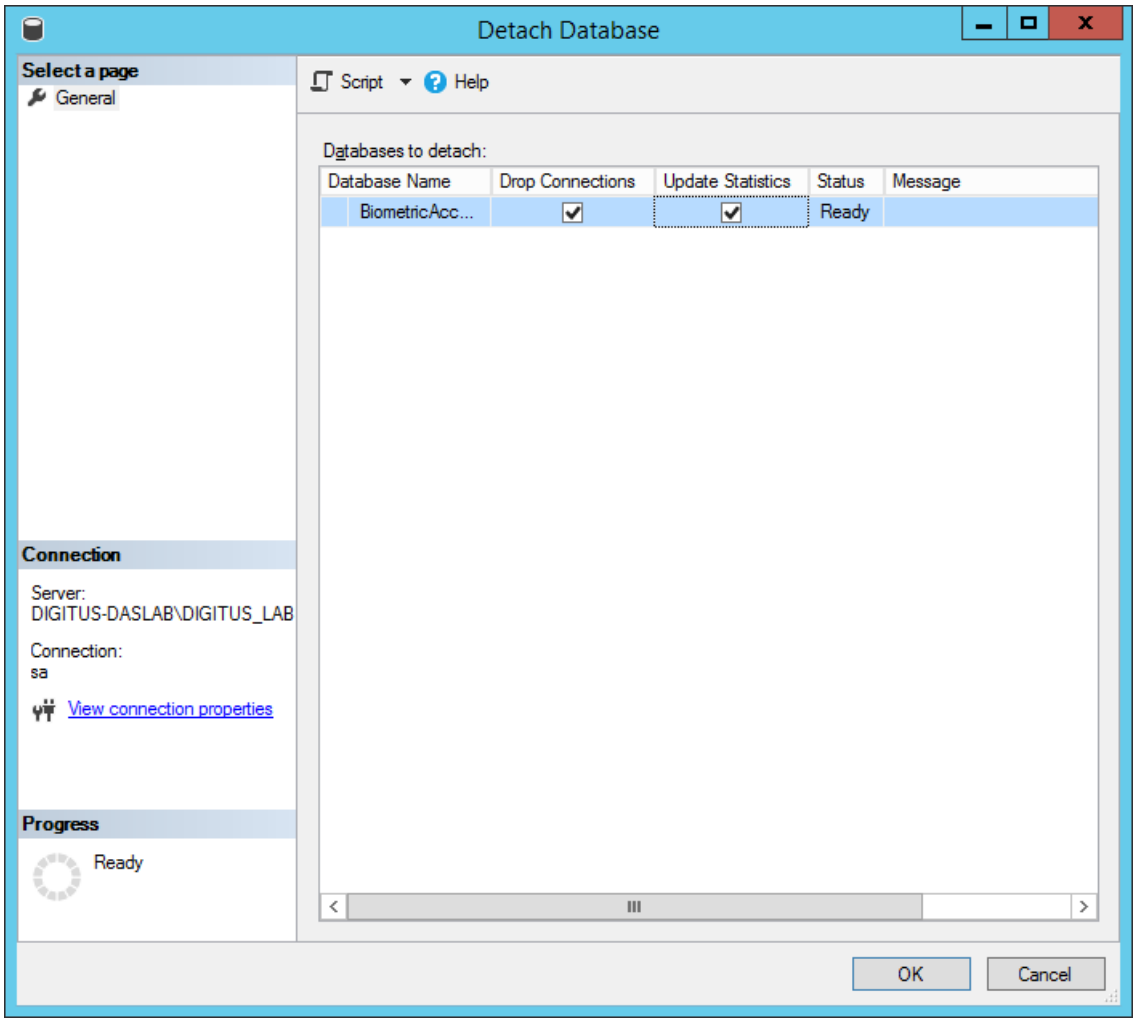


Detaching the DAS-SQL databases

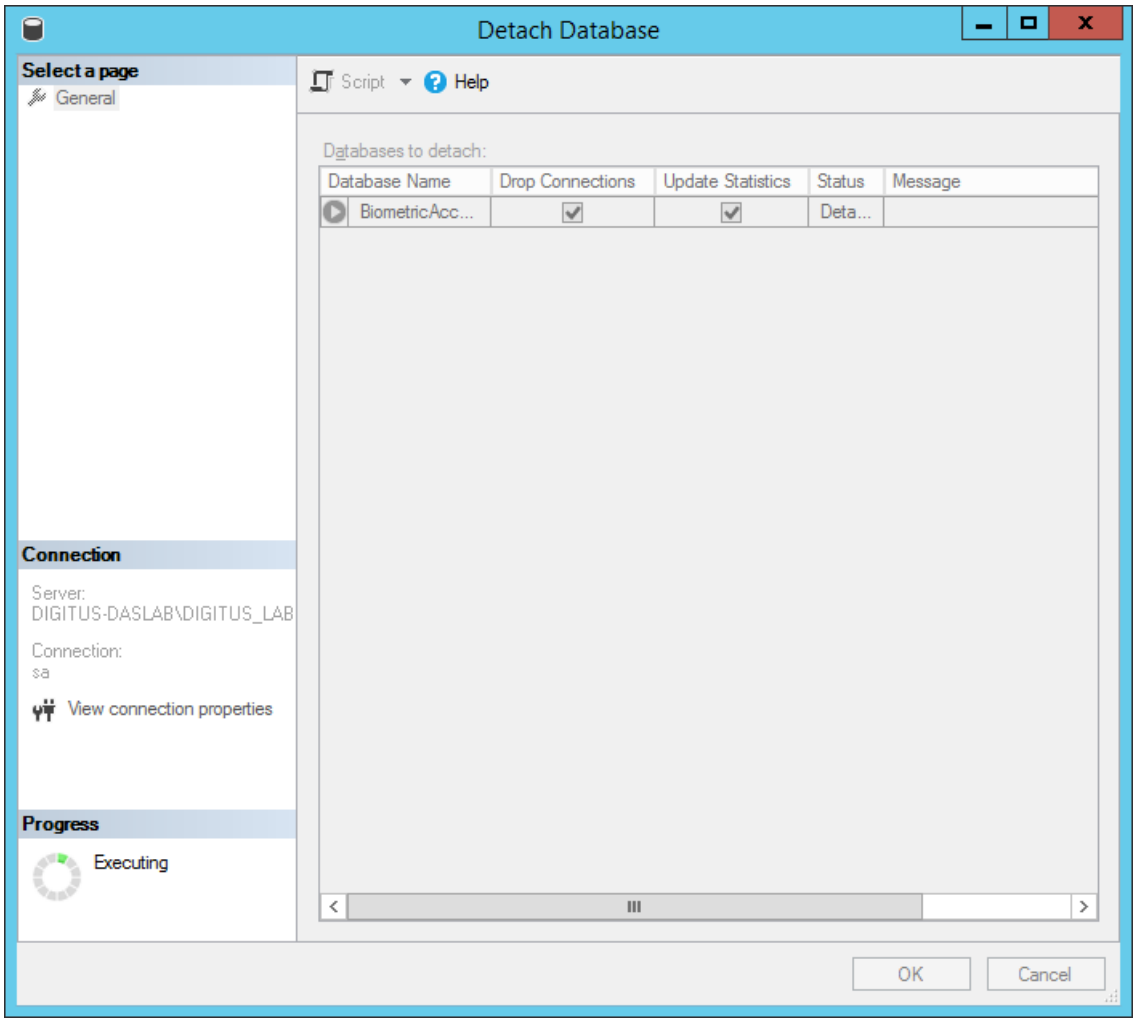
You now need to “detach” your BiometricAccess and BiometricAccess-Logs databases, so back in SQL Server Management Studio, browse to the BiometricAccess database, right click it, select Tasks, then Detach.



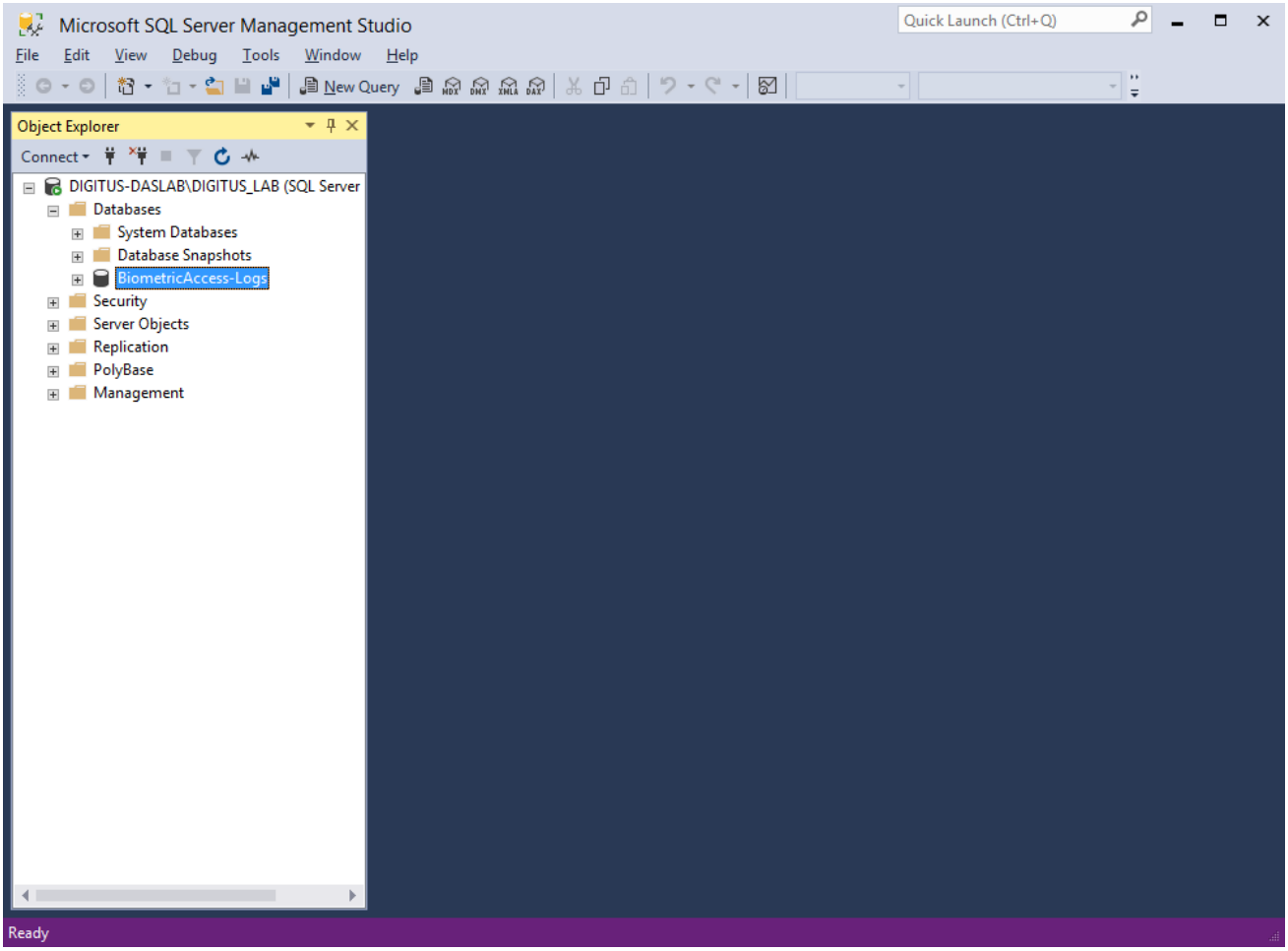
Detach Database, check both Drop Connections and Update Statistics before clicking OK



The Detach takes a few seconds to run

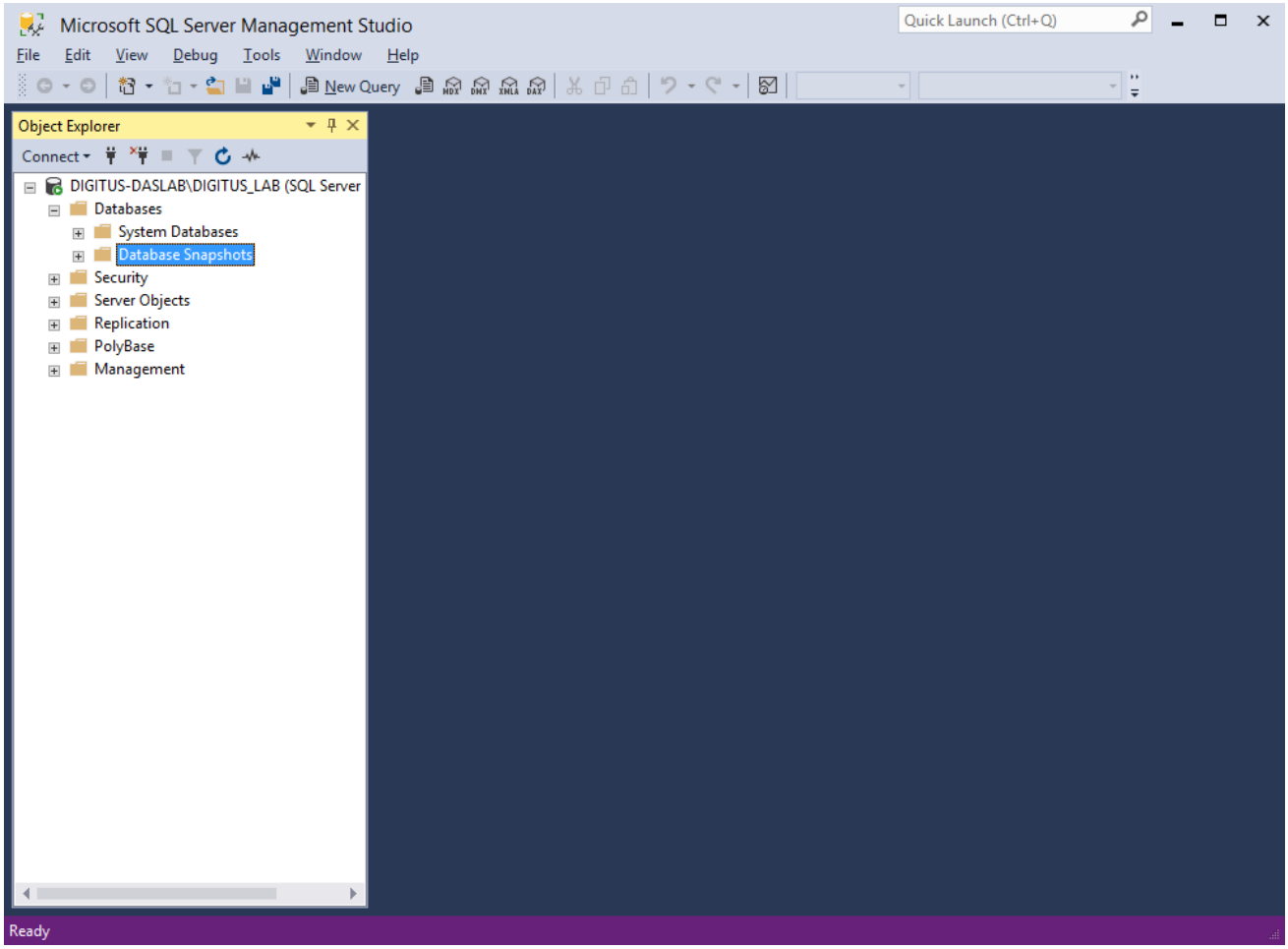


Checking back in SQL Server Management Studio shows that the BiometricAccess database is longer connected



Now repeat the process to detach the BiometricAccess-Logs database.

Once completed, you should see that SQL Server Management Studio has updated and both databases have been detached.



You should also notice that the time stamps have been updated for your 4 files in Windows Explorer.

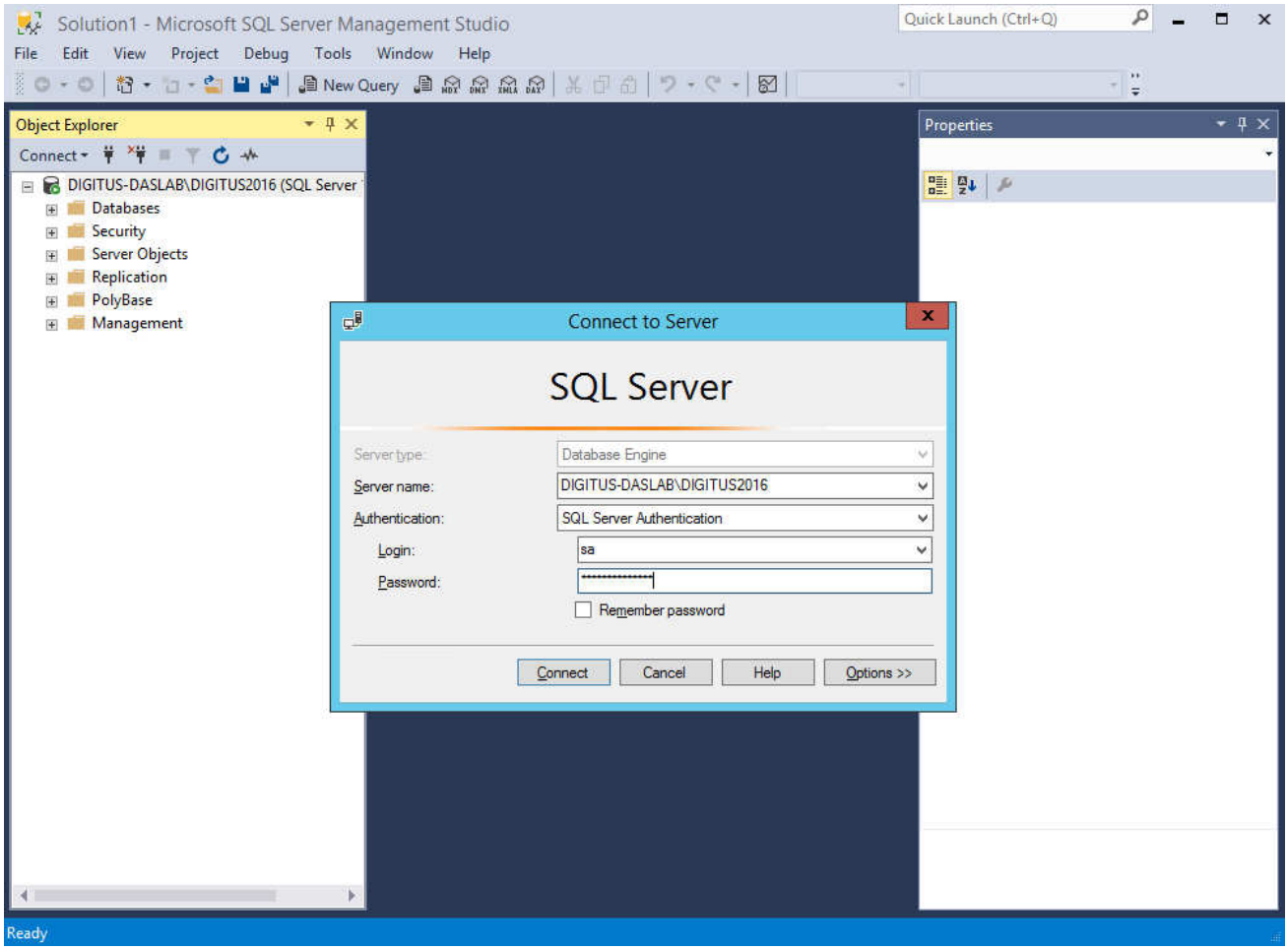
Name	Date modified	Type	Size
BiometricAccess	12/3/2018 3:56 PM	SQL Server Databa...	102,400 KB
BiometricAccess_log	12/3/2018 3:56 PM	SQL Server Databa...	102,400 KB
BiometricAccess-Logs	12/3/2018 3:58 PM	SQL Server Databa...	1,087,808 KB
BiometricAccess-Logs_log	12/3/2018 3:58 PM	SQL Server Databa...	1,475,904 KB

Copying the data over

Select your 4 files and copy them to the clipboard. In the event of large file sizes, and depending on whether you are moving to a new physical / virtual server, it may be worth zipping / compressing your files prior to copying them, copying the compressed files and then uncompressing them in the destination folder.

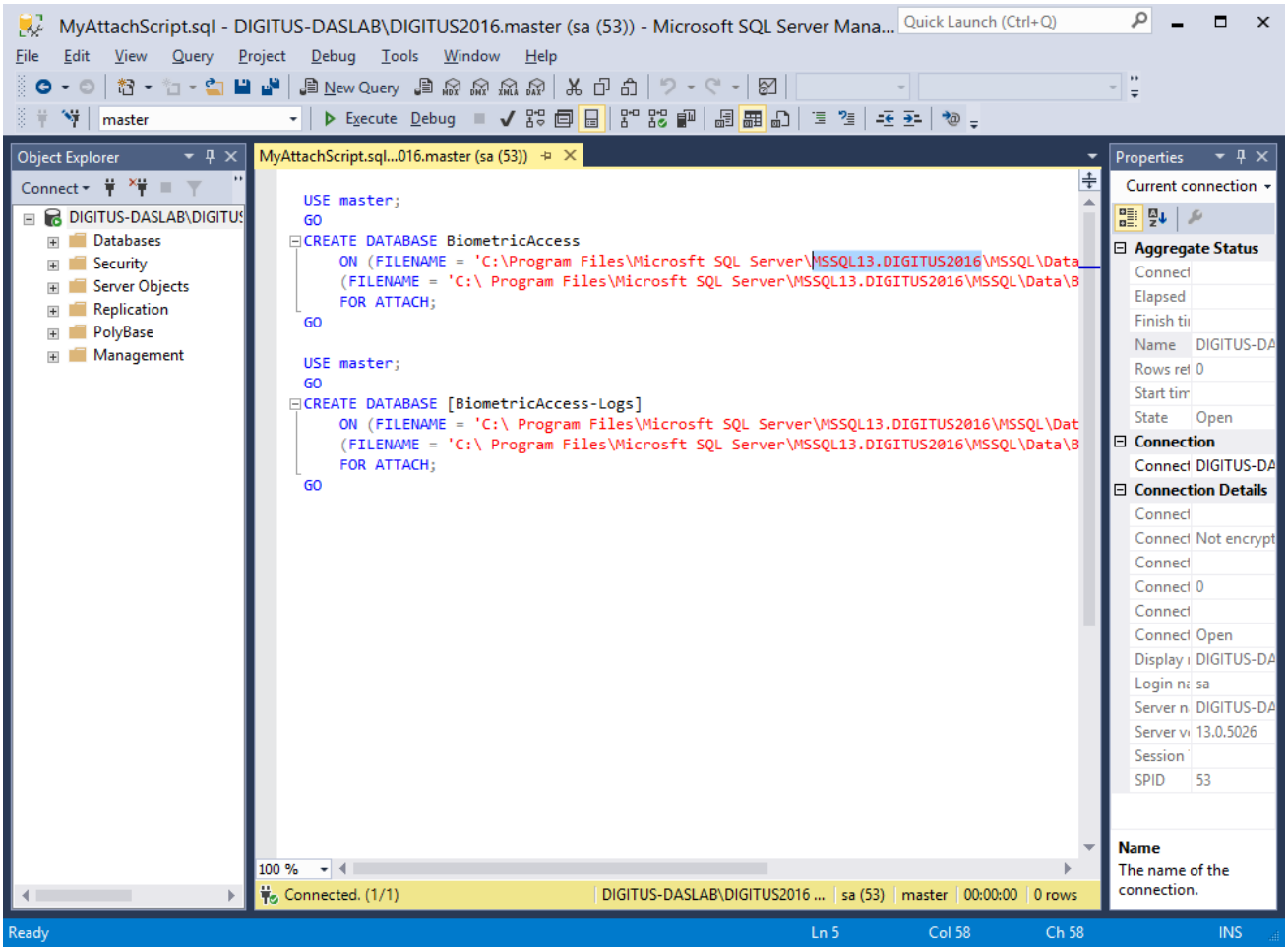
Connect to the new SQL instance

Connect SSMS to your new instance, using the 'sa' password you set when configuring your SQL Server 2016 Express instance.



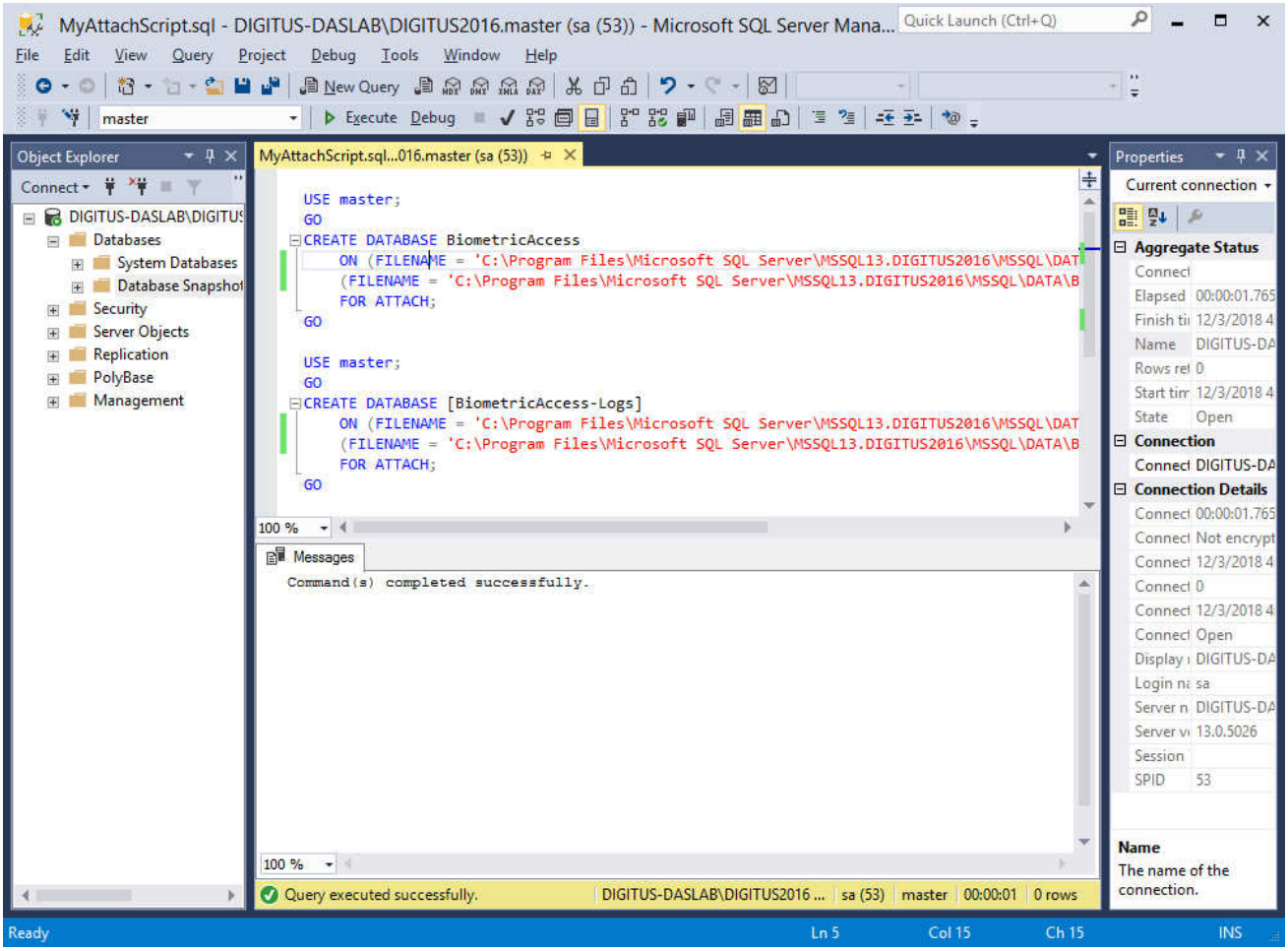
Attaching the database files

Load the MyAttachScript SQL script (provided separately), and be sure to change the data paths for the 4 files to match where you copied your SQL data

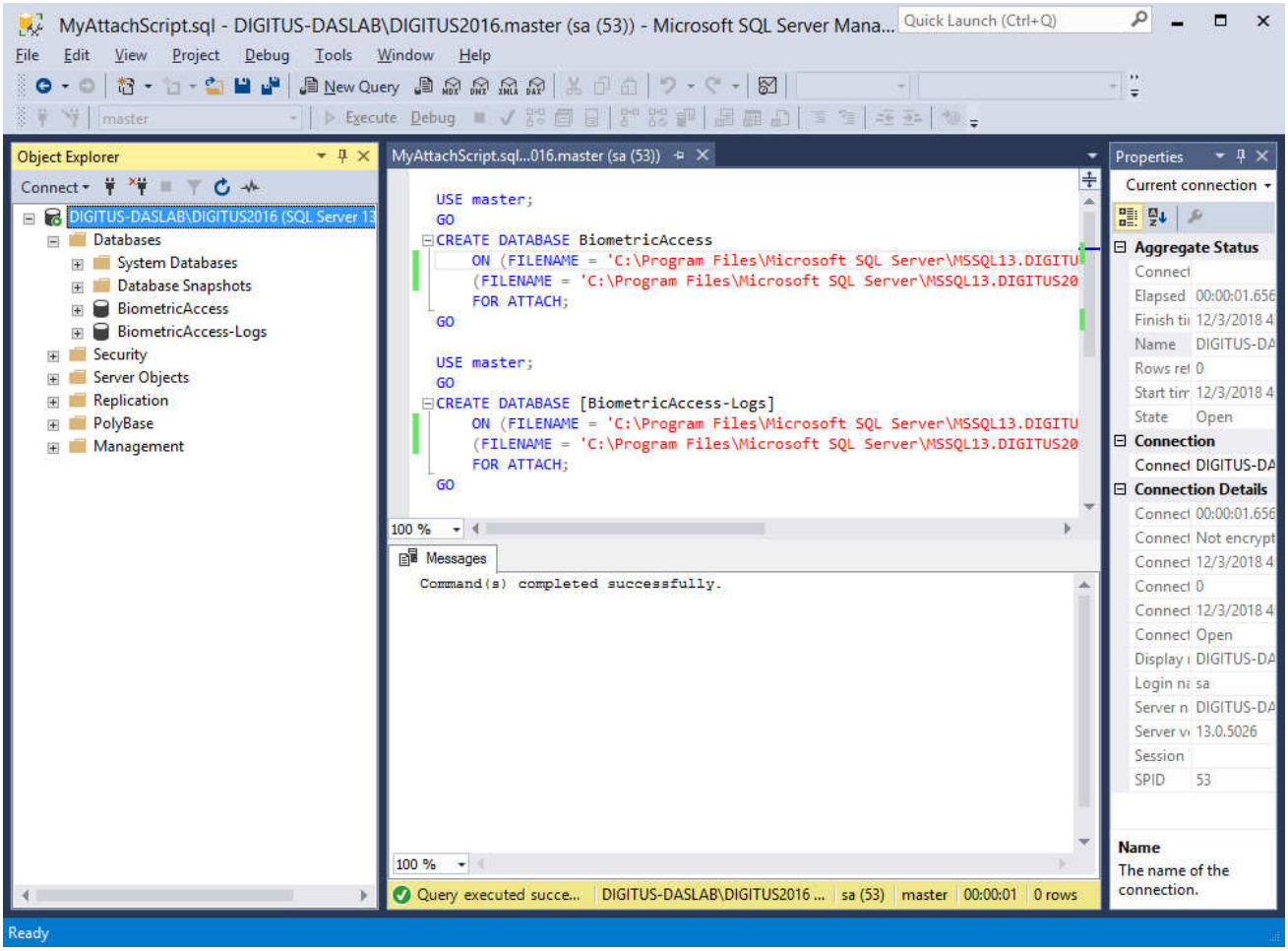


Notice the Instance path highlighted above.

Once you have modified the files paths, execute / run the script to attach your databases.

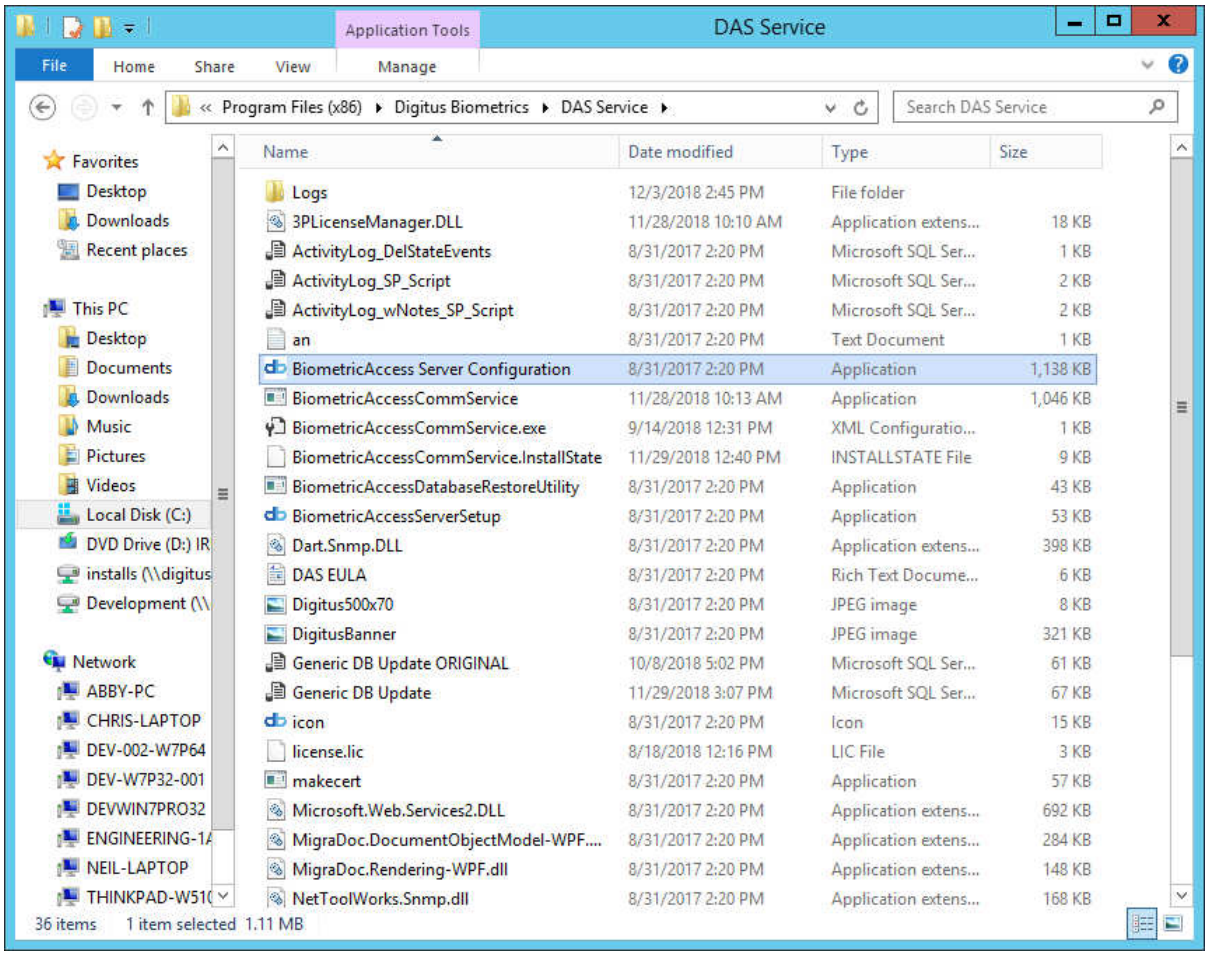


Once you see the “Command(s) completed successfully” message in the Messages window, click on your instance name in the top left of the SQL Server Management Studio window followed by Refresh in order to see the newly attached databases.

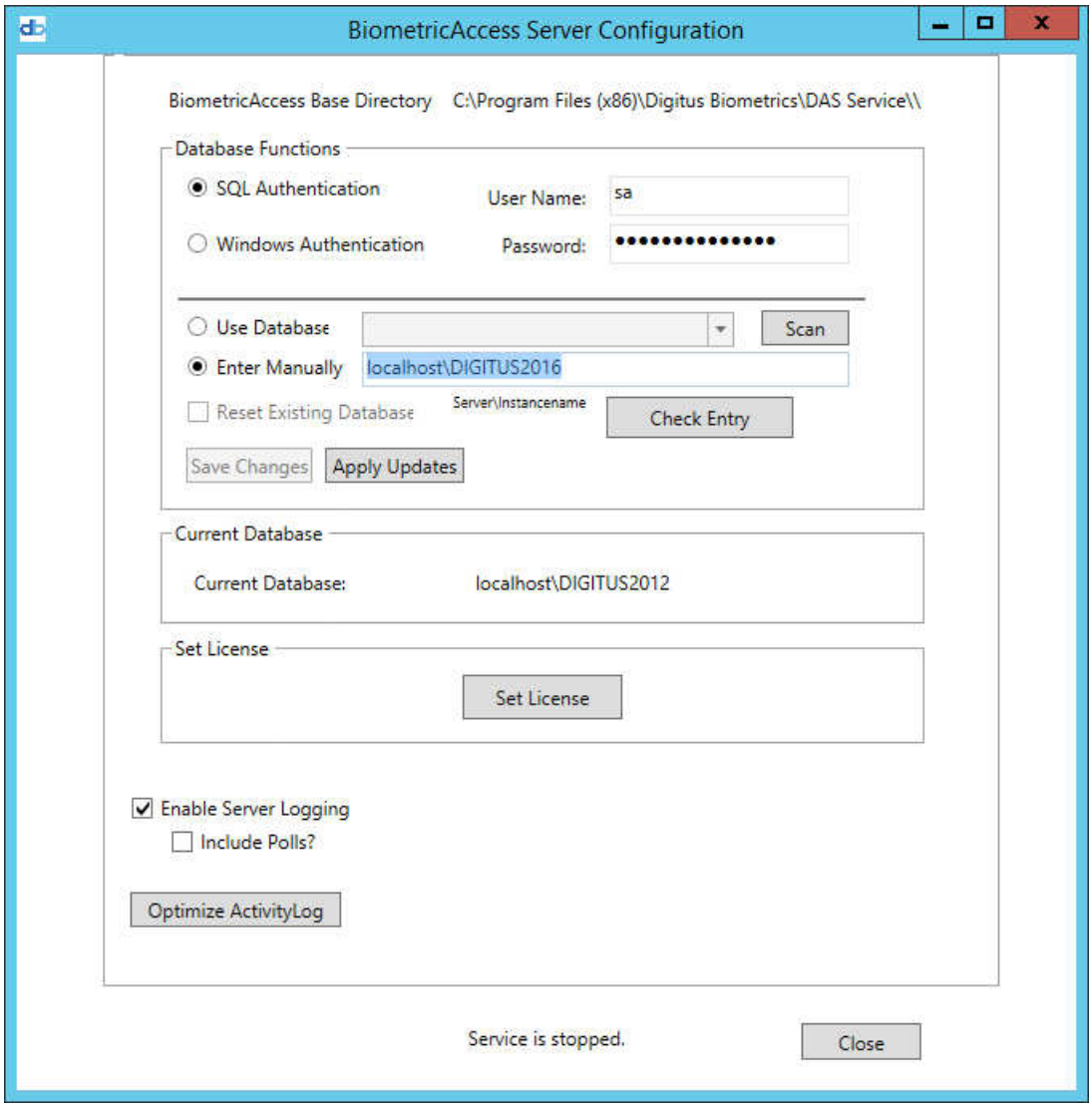

MyAttachScript.sql - DIGITUS-DASLAB\DIGITUS2016.master (sa (53)) - Microsoft SQL Server Mana...
Quick Launch (Ctrl+Q)
File Edit View Project Debug Tools Window Help
New Query
Execute Debug
Object Explorer
Connect
DIGITUS-DASLAB\DIGITUS2016 (SQL Server 13
Databases
System Databases
Database Snapshots
BiometricAccess
BiometricAccess-Logs
Security
Server Objects
Replication
PolyBase
Management
MyAttachScript.sql...016.master (sa (53))
USE master;
GO
CREATE DATABASE BiometricAccess
ON (FILENAME = 'C:\Program Files\Microsoft SQL Server\MSSQL13.DIGITU
(FILENAME = 'C:\Program Files\Microsoft SQL Server\MSSQL13.DIGITUS20
FOR ATTACH;
GO
USE master;
GO
CREATE DATABASE [BiometricAccess-Logs]
ON (FILENAME = 'C:\Program Files\Microsoft SQL Server\MSSQL13.DIGITU
(FILENAME = 'C:\Program Files\Microsoft SQL Server\MSSQL13.DIGITUS20
FOR ATTACH;
GO
100 %
Messages
Command(s) completed successfully.
100 %
Query executed succe...
DIGITUS-DASLAB\DIGITUS2016 ...
sa (53)
master
00:00:01
0 rows
Properties
Current connection
Aggregate Status
Connecti
Elapsed 00:00:01.656
Finish ti 12/3/2018 4
Name DIGITUS-DA
Rows ret 0
Start tim 12/3/2018 4
State Open
Connection
Connecti DIGITUS-DA
Connection Details
Connecti 00:00:01.656
Connecti Not encrypt
Connecti 12/3/2018 4
Connecti 0
Connecti 12/3/2018 4
Connecti Open
Display i DIGITUS-DA
Login na sa
Server n DIGITUS-DA
Server v 13.0.5026
Session
SPID 53
Name
The name of the connection.
Ready

Connect DAS SQL to the new databases

Connect your new SQL Server 2016 Express instance and newly copied / attached databases to DAS SQL.



Right click and run BiometricAccessServer Configuration as Admin.

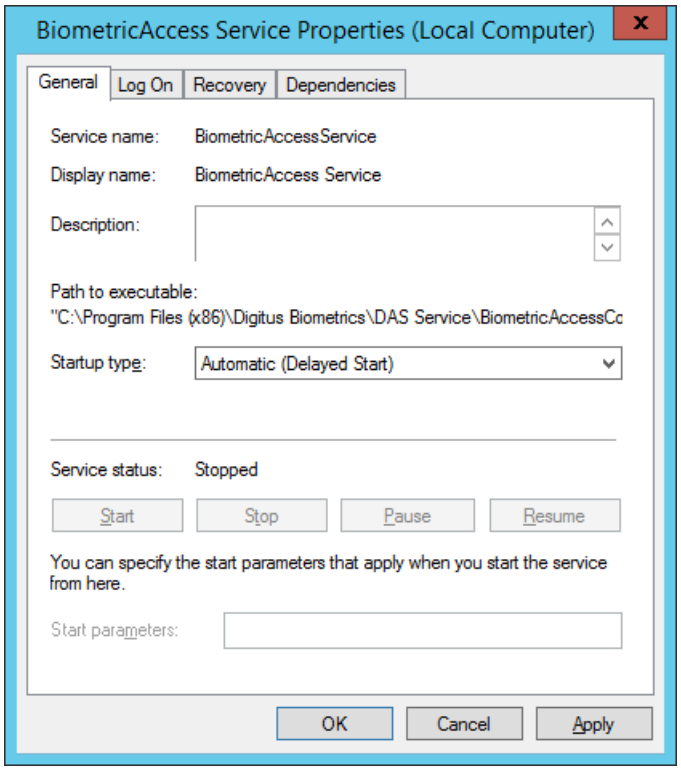


Enter your SQL Server instance name, then click the Check Entry button.

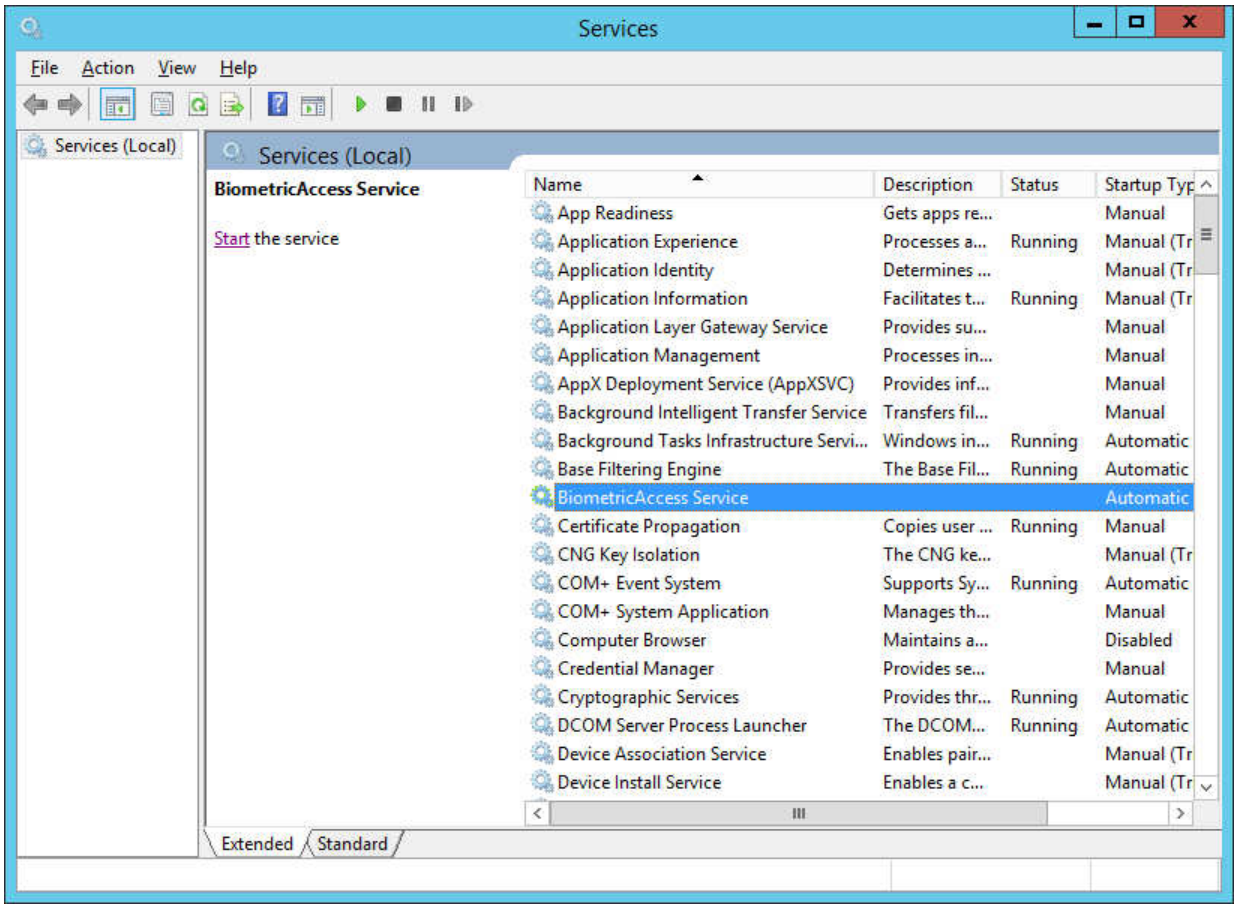
If DAS SQL can successfully connect to your instance, the Save Changes button will enable. Click the Save Changes button, the save operation should only take a second or 2. Then click Apply Updates to apply any schema changes to the DAS SQL databases. Again this should only take a matter of a couple of seconds.

Failing to Apply Updates could render DAS-SQL in-operable, if data fields have been added to the schema.

Once finished, click Close. You will be asked if “you wish to start the service at this time” – as we disabled the service earlier in the process, click No.



Go back to Windows Service and select / double click the BiometricAccess Service and set the startup type to “Automatic (Delayed Start), before clicking OK.



Now click Start to start the BiometricAccess Service, making sure that the service enters the “Running” state.

The final thing is to test you can access your DAS SQL by logging in to the client.