DAT219x

Provisioning Databases

Lab 03 | Migrating SQL Server Databases

Estimated time to complete this lab is 90 minutes

Overview

In this lab, you want to move a SQL Server database from a Windows instance to an Azure SQL Database.

The labs in this course are accumulative. You cannot complete the following labs if this lab has not been successfully completed.

What You'll Need

To complete this lab, you will need the following:

- High-speed and reliable internet connectivity (for remote connections to the VM)
- A second monitor is recommended (for the Remote Desktop connection)
- A Microsoft account (such as one used for outlook.com, Hotmail, or other Microsoft services)
- A Microsoft Azure subscription
- To have completed the previous labs in this course.

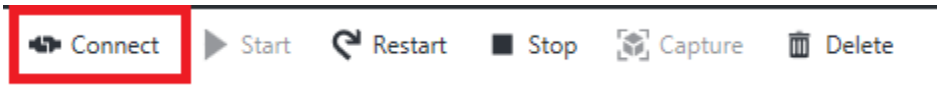
Exercise 1: Prepare the Lab Environment

In this exercise, you will prepare the lab environment for future exercises.

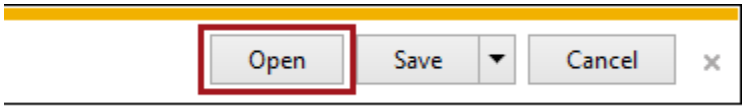
Start the Windows virtual machine

In this task, you will start the virtual machine for the lab.

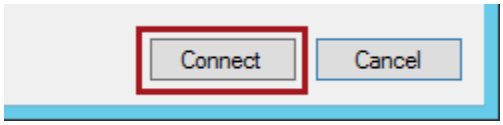
1. If the virtual machine that you created in Lab 00 is not already running, open the Azure Portal, sign in, select the virtual machine, and click **Start**.
2. When the virtual machine has started, click **Connect**.



3. Click **Save**.
4. When prompted by the web browser to open the Remote Desktop File, click **Open**.



5. If prompted to connect to the unknown publisher, click **Connect**.



*To enter your credentials, you may need to select **More Choices**, and then select **Use a Different Account**.*

6. In the **Windows Security** window, enter the password you created for your VM, select **Remember me** and click **OK**.
7. If you have a second monitor, maximize the Remote Desktop window inside a single monitor.

Attach a SQL Server Database

In this task, you will attach a sample database.

1. Open Internet Explorer, navigate to https://github.com/Microsoft/sql-server-samples/releases/tag/adventureworks and click **AdventureWorks2016.bak**.

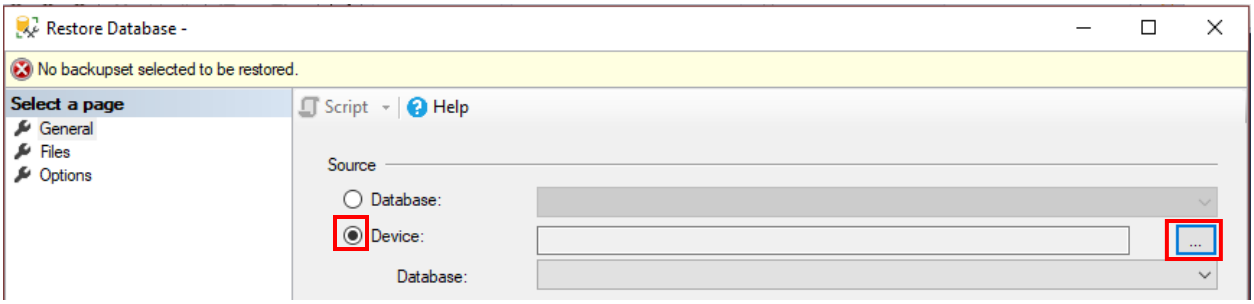
2. Click **Save as**.

3. Navigate to **C:\Labs** and click **Save**. Wait for the download to complete.

4. Start SQL Server Management Studio.

5. In the **Connect to Server** dialog box, verify that you are connecting to the server that you created and are using Windows Authentication and click **Connect**.

6. Click **Device** and click the build button.



7. Click **Add**.

8. Navigate to **C:\Labs**, select **AdventureWorks2016.bak** and click **OK**.

9. Click **OK** and click **OK** again.

10. Once the restore has completed, click **OK**.

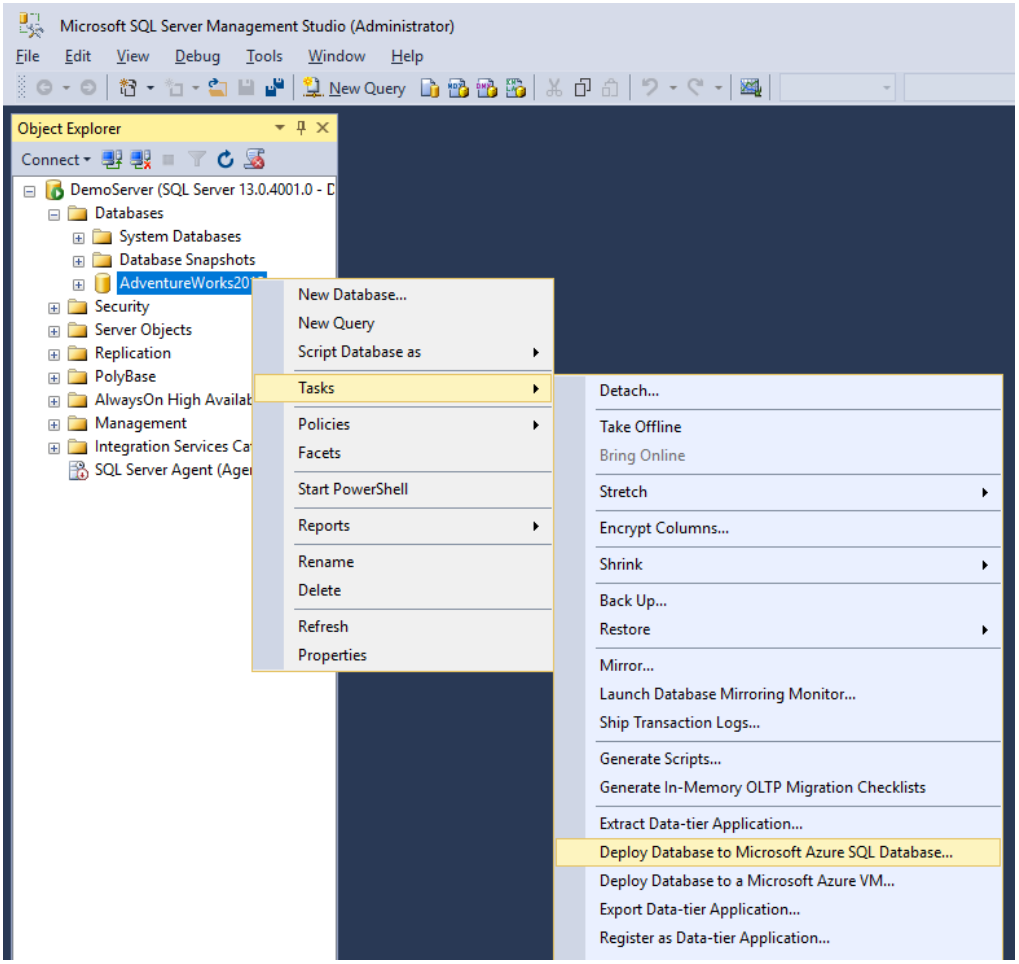
Exercise 2: Migrate a database to Azure

In this exercise, you will migrate a database from Windows to an Azure SQL Database.

Migrate a Database to Azure SQL Database

In this task, you will migrate a database from Windows to an Azure SQL Database.

1. Expand **Databases**, right-click **AdventureWorks2012**, point to **Tasks** and click **Deploy Database to Microsoft Azure SAQL Database**.



2. On the **Introduction** page, click **Next**.

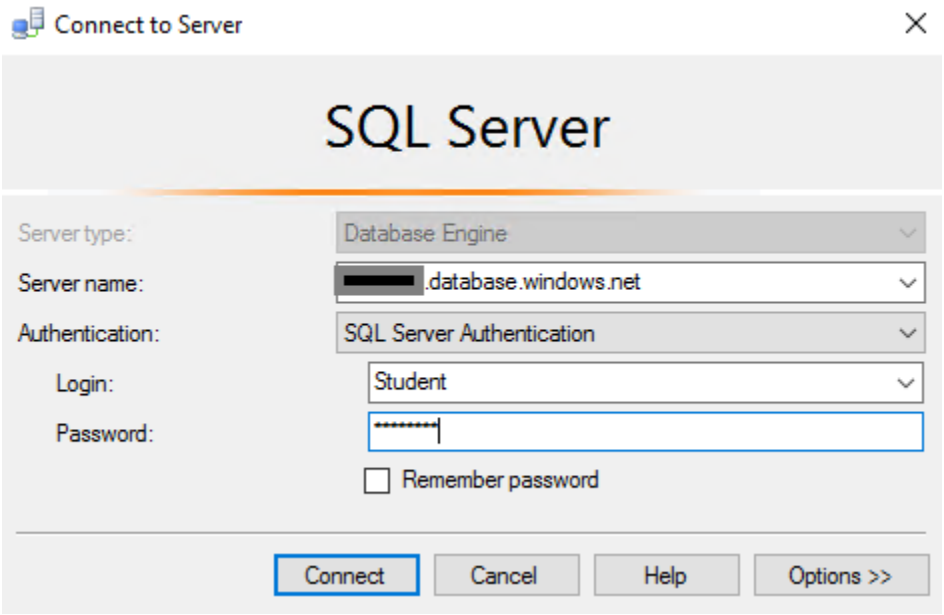
3. On the **Deployment Settings** page, click **Connect**.

4. In the **Connect to Server** dialog box, verify that you are connecting to the server that you created and are using Windows Authentication and click **Connect**.

5. In **Server name** type the server name that you noted down earlier.

6. Change **Authentication** to **SQL Server Authentication**.

7. In **Login**, type **Student**.
8. In **Password**, type **Pa$$w0rd**.



9. Click **Connect**.
10. In **New database name** type **MigratedAdventureWorks** and click **Next**.
11. On the **Summary** page, click **Finish**.

Lab Check – *You will need these answers for the module quiz – write them down!*

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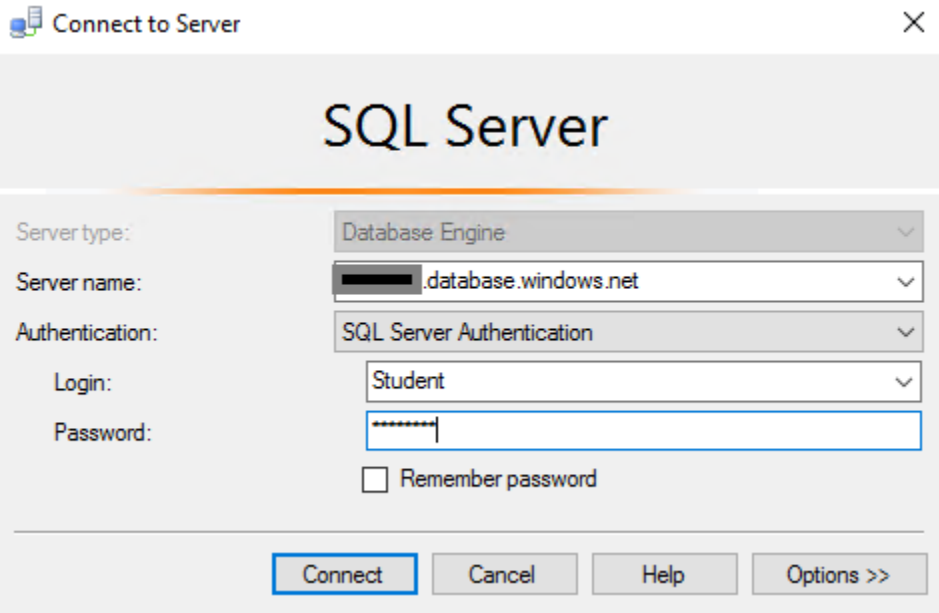
What is the first thing that happened to the indexes? _____

12. Click **Close**.
13. In Management Studio, click **Connect** and click **Database Engine**.
14. In **Server name** type the server name that you noted down earlier.
15. Ensure that **Authentication** is listed as **SQL Server Authentication**.
16. In **Login**, type **Student**.
17. In **Password**, type **Pa$$w0rd**.



18. Click **Connect**.

19. On the Azure database, expand **Databases**.

Lab Check – *You will need these answers for the module quiz – write them down!*

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What is listed under **Databases**? _____

20. Expand MigratedAdventureWorks.

21. Expand Tables.

22. Expand HumanResources.Department.

23. Expand Indexes.

Lab Check – *You will need these answers for the module quiz – write them down!*

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What is listed under **Indexes**? _____

You have now completed the lab.

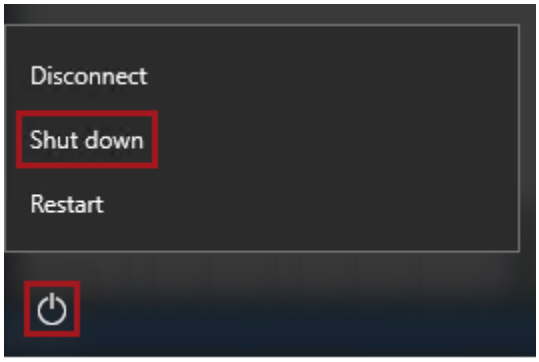
If you are not immediately continuing with the next lab, you should complete the ***Finishing Up*** *exercise to shut down and stop the VM.*

Finishing Up

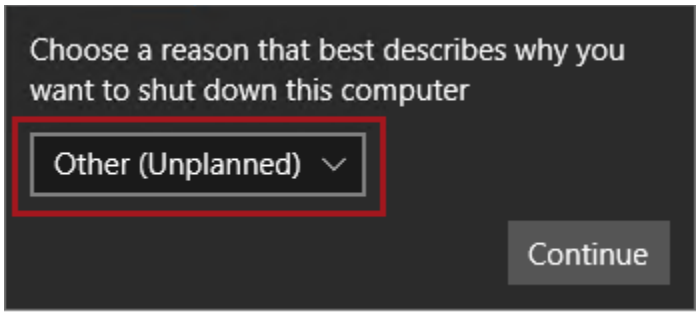
In this exercise, you will shut down and stop the VMs.

1. In the Windows virtual machine, close all open applications.

2. Press the **Windows** key, and then in the **Start** page, located at the bottom-left, click the **Power** button, and then select **Shut Down**.

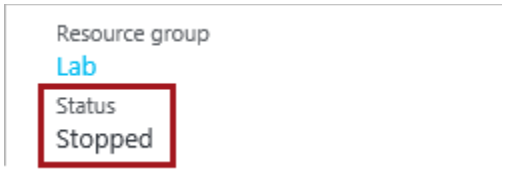


3. When prompted to choose a reason, to accept the default.



4. Click **Continue**.

5. In the **Azure Portal** Web browser page, wait until the status of the VM updates to **Stopped**.

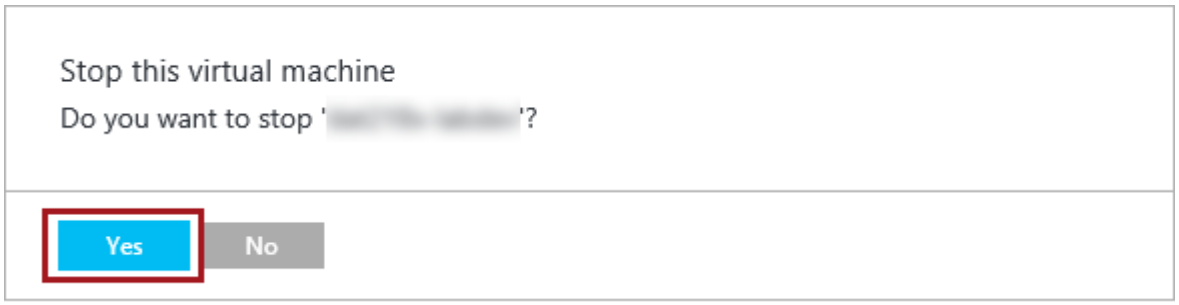


In this state, however, the VM is still billable.

6. Optionally, to deallocate both the Windows and Linux VMs, for both VMs, click **Stop**.

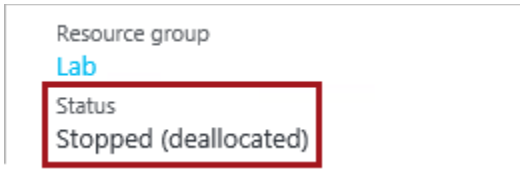
Deallocation will take some minutes to complete, and also extends the time required to restart the VM. Consider deallocating the VM if you want to reduce costs, or if you choose to complete the next lab after an extended period.

7. When prompted to stop the VM, click **Yes**.



The deallocation can take several minutes to complete.

8. Verify that the VM status updates to **Stopped (Deallocated)**.



In this state, the VM is now not billable—except for a relatively smaller storage cost.

Note that a deallocated VM will likely acquire a different IP address the next time it is started.

9. Sign out of the **Azure Portal**.