

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 Linux 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.

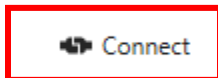
Exercise 1: Migrate a SQL Server Database to Linux

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

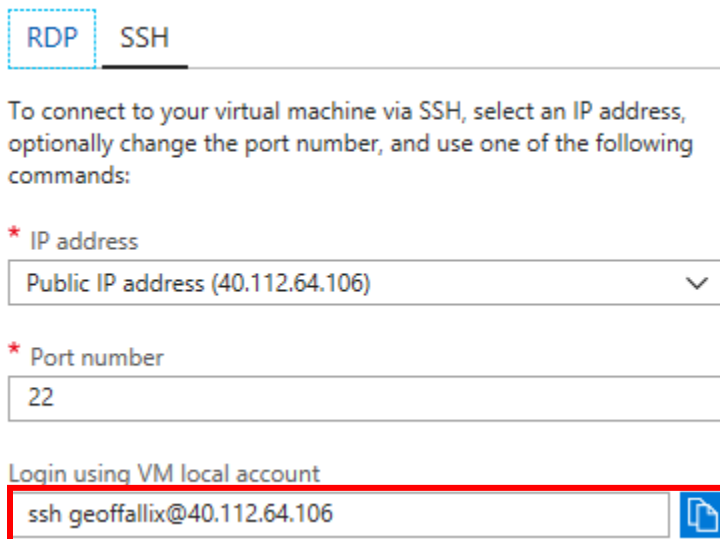
Start the Linux virtual machine

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. Copy the **ssh** command.

The image shows the "SSH" tab in the Azure portal's virtual machine connection interface. It includes a "Public IP address (40.112.64.106)" dropdown menu, a "Port number" input field with the value "22", and a "Login using VM local account" section. The "ssh geoffallix@40.112.64.106" command is entered in the text field, which is highlighted by a red box. A copy icon is visible to the right of the text field.

RDP SSH

To connect to your virtual machine via SSH, select an IP address, optionally change the port number, and use one of the following commands:

* IP address
Public IP address (40.112.64.106) ▼

* Port number
22

Login using VM local account
ssh geoffallix@40.112.64.106

4. Click **Cloud shell**.



5. In Cloud shell paste the ssh command and press Enter.
6. Type your password and press Enter.

Attach a SQL Server Database

In this task, you will attach a sample database.

1. In Cloud shell, type **cd /tmp** and press Enter.
2. Type **wget https://github.com/Microsoft/sql-server-samples/releases/download/adventureworks/AdventureWorks2016.bak** and press

Enter.

Note: This is a standard SQL Server backup file. You could use this command to import a database backup that you have created on SQL Server for Windows to your Linux file system.

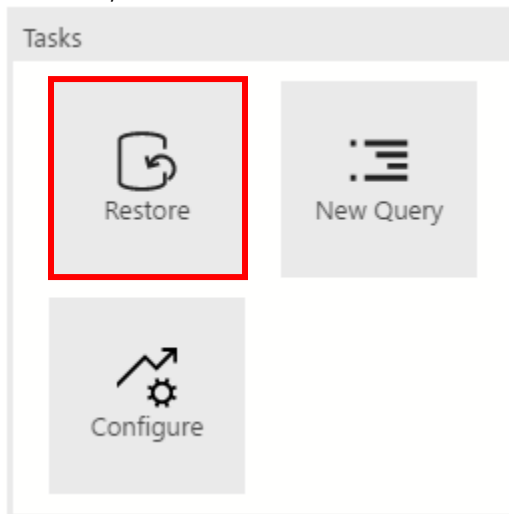
3. Wait until the download has completed.
4. Start SQL Operations Studio.
5. Click your server in the servers list and, when it has started, right-click the server and click **Manage**.

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

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In the **Search** box, what is listed? _____

6. In **Tasks**, click **Restore**.



7. In **Restore from**, click **Backup File**.
8. Click the build button for **Backup file path**.
9. Expand **tmp** and select **Adventureworks2016.bak**.
10. Click **OK**.
11. Click **Restore**.

Note: You might need to click on the **Database** drop-down button to make the **Restore**

button active.

Restore database - 40.112.64.106

GENERAL FILES OPTIONS

Source

Restore from: [Redacted]

Backup file path: /tmp/AdventureWorks2016.bak

Database: AdventureWorks2016

Destination

Target database: AdventureWorks2016

Restore to: The last backup taken (09 April 2018 14:44:02)

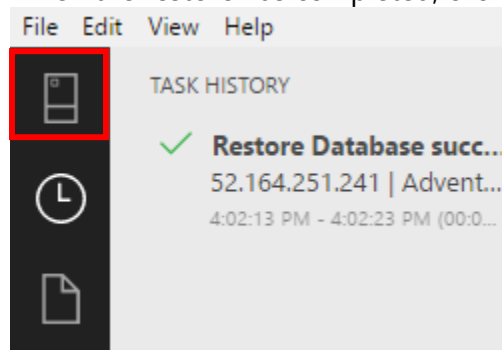
Restore plan

Backup sets to restore

Re...	Name	Type	Compo...	Server	Databa...	Position	First LSN	Last LSN	Full LSN	Checkp...	Start Da...	Finish D...	Size	User Na...	Expirati...	Id
<input checked="" type="checkbox"/>	Adventu...	Database	Full	BARBKE...	Adventu...	1	4000000...	4000000...	4000000...	4000000...	09/04/2...	09/04/2...	2150379...	REDMO...		7f63951...

Script [Redacted] Restore Cancel

12. When the restore has completed, click **Servers**.



13. Expand **Databases** and note that there is now an **AdventureWorks2016** database.

14. Expand **AdventureWorks2016**.

15. Expand **Tables**.

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

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The first three tables are in the **dbo** schema. What are their names? _____

16. Right-click **AdventureWorks2016** database and click **New Query**.

17. Type **SELECT * FROM Person.Person** and click **Run**.

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

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How many rows are affected? _____

18.

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

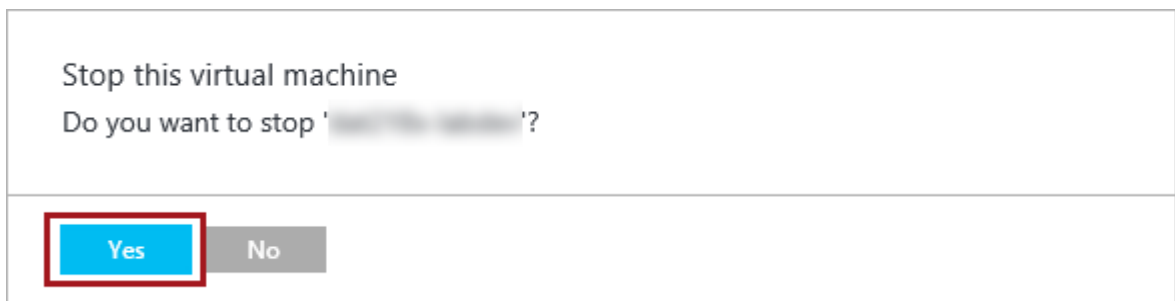
In this exercise, you will shut down and stop the VMs.

1. Deallocate the Linux VM by clicking **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.

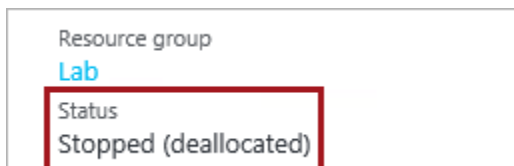


2. When prompted to stop the VM, click **Yes**.



The deallocation can take several minutes to complete.

3. 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.

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