DAT247x

Managing Database Operations

Lab 02 | Troubleshooting SQL Server

Estimated time to complete this lab is 60 minutes

Overview

You need to be able to resolve common issues with SQL Server processes and services at the time they are occurring.

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: Troubleshoot and Resolve a SQL Login Issue

Users of the Promote application are complaining that it can no longer connect to the server. The application connects using the SQL login **PromoteApp**.

Prepare the Lab Environment

1. In the C:\Labs folder, right-click **Setup.cmd**, and then click **Run as administrator**.
2. In the **User Account Control** dialog box, click **Yes**, and then wait for the script to finish.

Review the Exercise Scenario

- Review the exercise scenario; make sure you understand the problem you are trying to resolve.

Troubleshoot and Resolve the Issue

- Use Operations Studio to investigate and resolve the problem with the **PromoteApp** login.

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

Lab 02 ► Troubleshooting SQL Server

What was the cause of the connection problem?

_____

Exercise 2: Troubleshoot and Resolve a Performance Issue

Users of the **SalesSupport** application are reporting that the application has suddenly stopped responding; the **SalesSupport** administrator asks you to investigate, because the application log contains several recent messages reporting that queries run against the **AdventureWorks** database have timed out.

Simulate the Issue

1. Start two command prompt windows.
2. In the first command prompt, type the following command and press Enter:
   ```
   sqlcmd -d AdventureWorks2016 -q "BEGIN TRAN; UPDATE
   Purchasing.ShipMethod SET name = N'XRQ - TRUCK' WHERE shipmethodid =
   1;"
   ```
3. In the second command prompt, type the following command and press Enter:
   ```
   sqlcmd -d AdventureWorks2016 -q " BEGIN TRAN; SELECT * FROM
   Purchasing.ShipMethod AS sm WITH (REPEATABLEREAD) JOIN
   Sales.SalesOrderHeader AS soh ON sm.shipmethodid = soh.shipmethodid;
   COMMIT;"
   ```
4. Start SQL Operations Studio and connect to the localhost server.
5. From the **File** menu, click **Open file**, select **C:\Labs\Performance1.sql**, and click **Open**.
6. Click **Run**.
7. If prompted for a connection, type **localhost** in the **Server** box and click **Connect**.
8. From the **File** menu, click **Open file**, select **C:\Labs\Performance2.sql**, and click **Open**.
9. Click **Run**.
10. If prompted for a connection, type **localhost** in the **Server** box and click **Connect**.

Review the Exercise Scenario

- Review the exercise scenario; make sure you understand the problem you are trying to resolve.

Troubleshoot and Resolve the Issue

11. Start SQL Operations Studio and connect to the localhost server.
12. Right click your server and click **New query**.
13. In the query window, type the following command and click **Run**:
    sp_who2
14. Notice that for one of the rows the value of the **Status** column is **SUSPENDED**, and that another row has a value in the **BlkBy** column.
15. Notice that the **ProgramName** for both the blocked and blocking rows is **SQLCMD**.

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

Lab 02 ► Troubleshooting SQL Server

What is the value in the Blocked By column for the row that has a value?

_____

16. Open a third command prompt window.
17. In the third command prompt window, type the following command and press Enter:

    ```
    sqlcmd -d AdventureWorks2016 -q "KILL Type the BlkBy value from the previous task"
    ```

18. Notice that the second SQLCMD window has completed.
19. Close all of the command prompt windows.

You have now completed the lab.

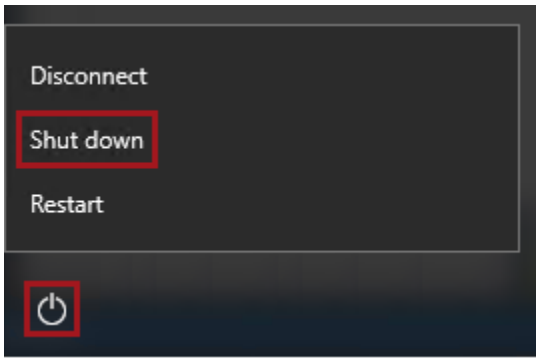
If you are not immediately continuing with the next lab, you should complete the ***Finishing Up*** *exercise to shut down and stop the VM.*

Finishing Up

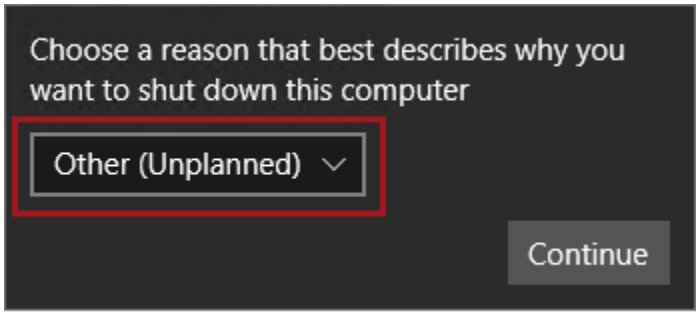
In this exercise, you will shut down and stop the VM.

1. 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**.

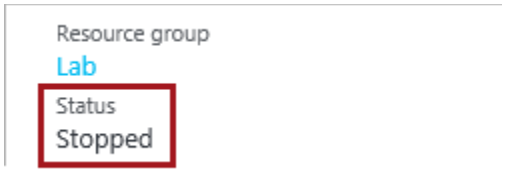


3. When prompted to choose a reason, to accept the default.



4. Click **Continue**.

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

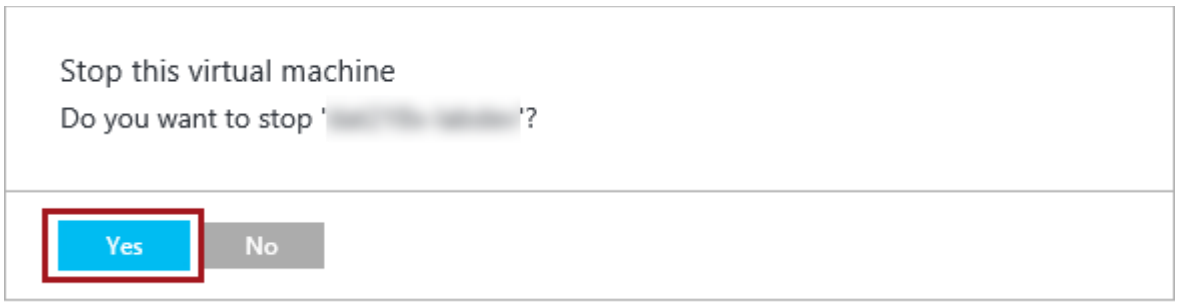


In this state, however, the VM is still billable.

6. Optionally, to deallocate the VM, click **Stop**.

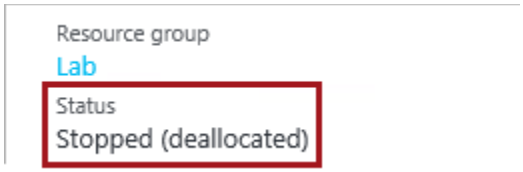
   Deallocation will take some minutes to complete, and also extends the time required to restart the VM. Consider deallocating the VM if you want to reduce costs, or if you choose to complete the next lab after an extended period.

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**.