Tech Note 817
Moving the Historian Runtime Database from One Machine to Another

Topic#: 002607
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Introduction

It is sometimes necessary to move a Runtime database from one Historian Server computer to another. This *Tech Note* provides step-by-step procedures to guide you through this process.

Application Versions

- Historian Server 10 or later
- Microsoft SQL Server 2005 SP3 (32-bit) -or-
- Microsoft SQL Server 2008 (32-bit)

Note: This *Tech Note* assumes that you are familiar with Wonderware Historian Server and Microsoft SQL Server Management Studio. If you have any questions regarding the Microsoft SQL Server, contact Microsoft Technical support at www.microsoft.com for further assistance.

This process consists of the following tasks:

- Back up the Runtime Database
- Restore the Runtime Database to the New Server
- Complete the Configuration on the New Server

Back Up the Runtime Database

The first task is to back up the Runtime Database on the existing server.

1. Start Microsoft SQL Server Management Studio (Figure 1 below). Make sure to login to the SQL Server using either the **sa** login or your Windows-Authenticated account with local administrative privileges.
2. Expand the tree on the left panel until you see **Databases + Runtime**.

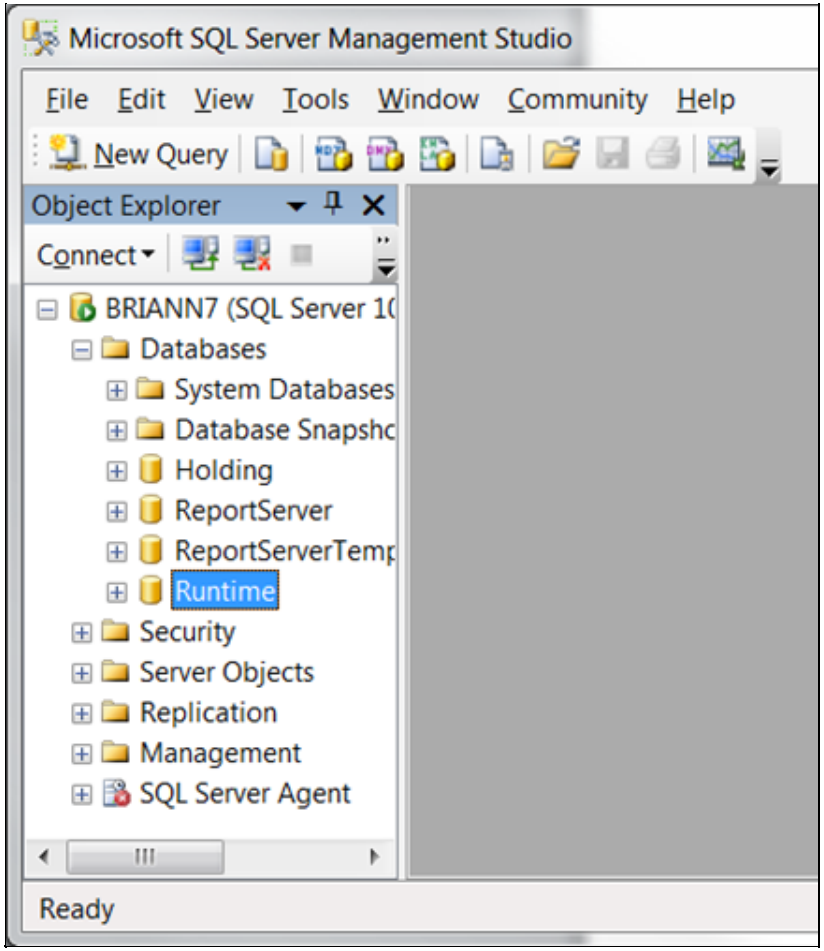

FIGURE 1: SQL SERVER MANAGEMENT STUDIO

3. Right-click the **Runtime Database** and click **Tasks/Back Up** (Figure 2 below).

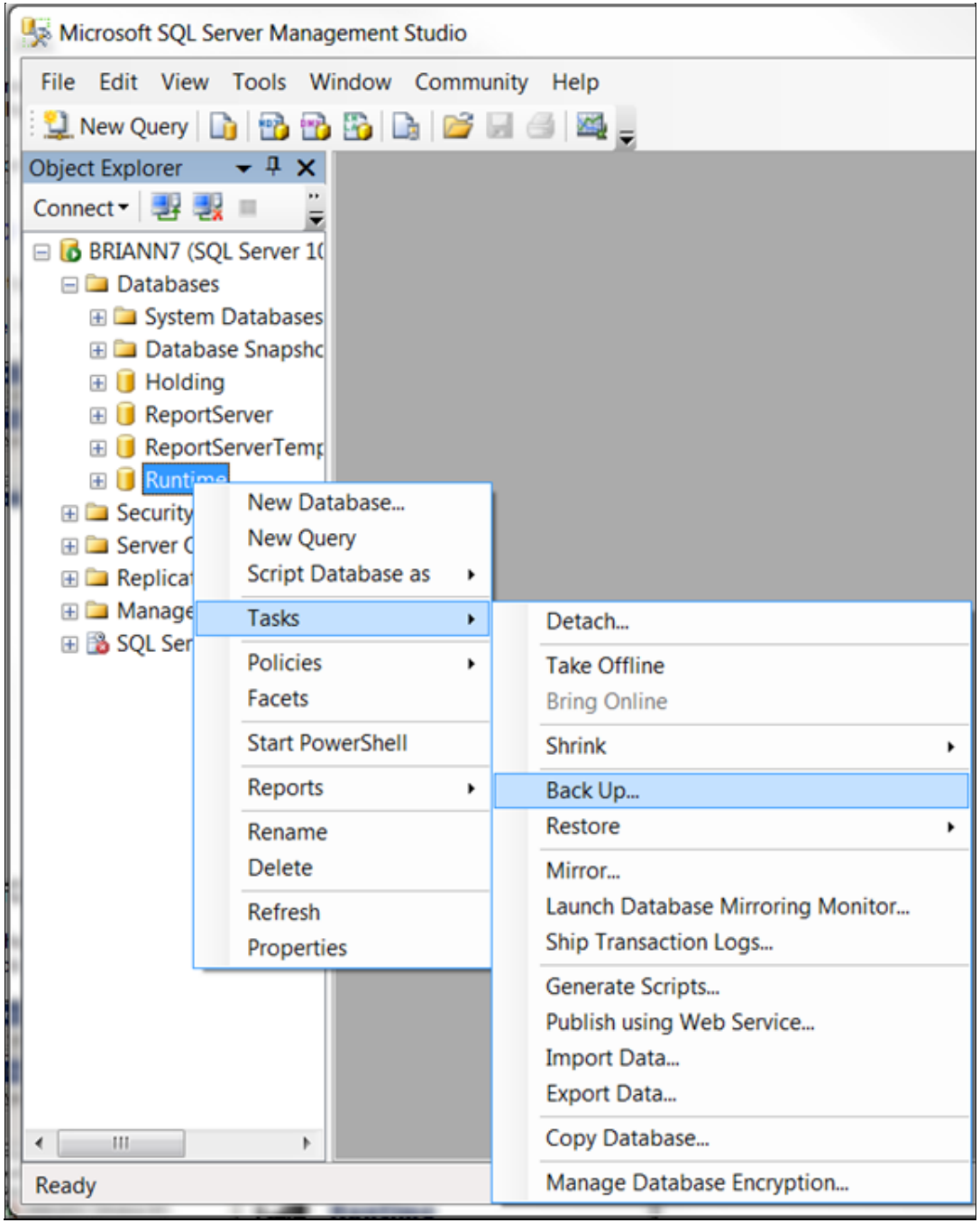

FIGURE 2: DATABASE TASKS / BACK UP

4. When the **Back Up Database - Runtime** dialog box (Figure 3 below) appears, make note of the Destination path for the backup file. The default is **...\Microsoft SQL Server\MSSQL 10.MSSQLSERVER\MSSQL\BACKUP\Runtime.bak**. Your location might be different.

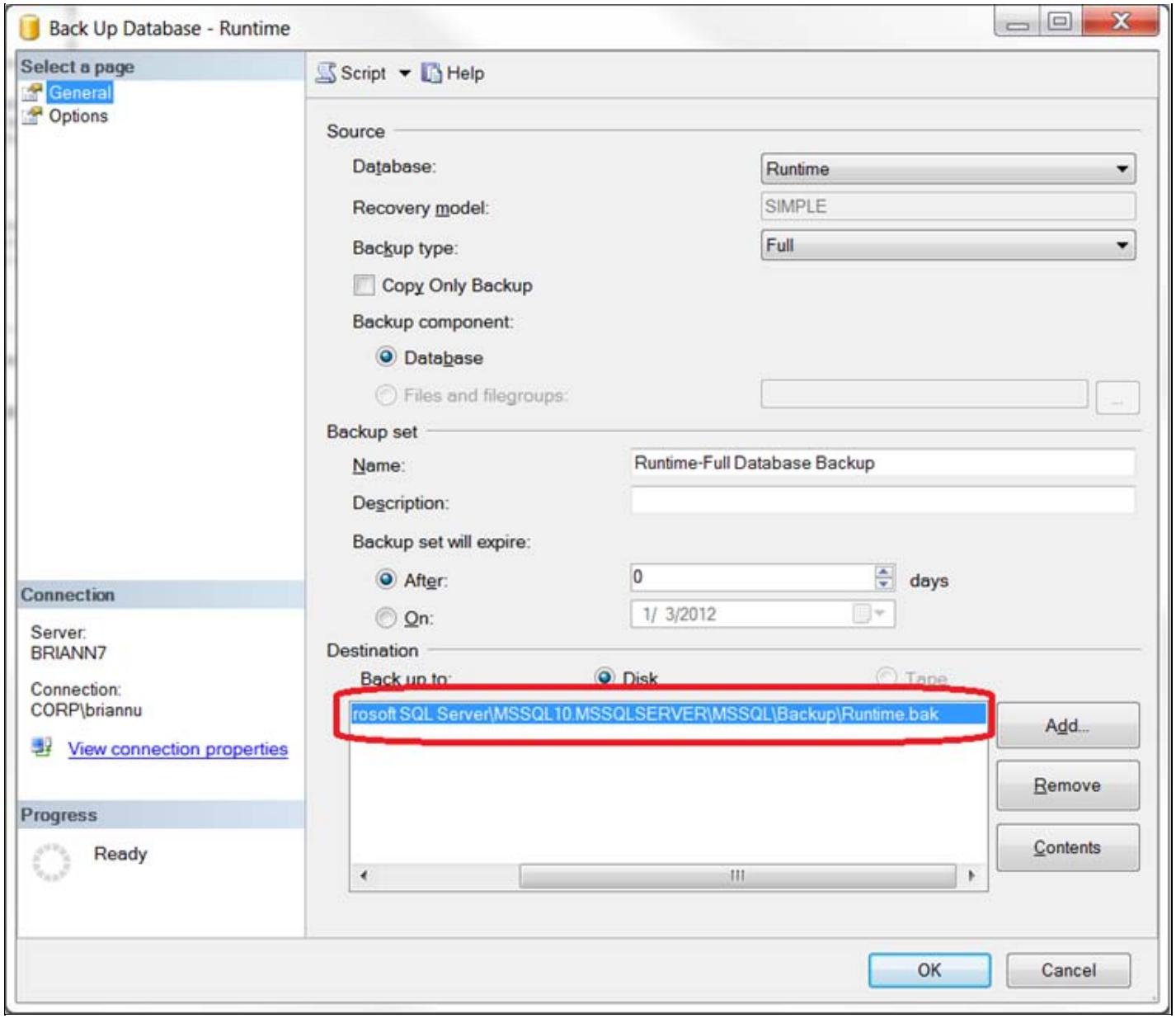

FIGURE 3: SQL SERVER BACKUP DATABASE – GENERAL PAGE

5. Click the **Options** item. In the **Overwrite media** section, click **Back up to the existing Media set** and **Append to the existing backup set**.
6. In the **Reliability** section, click the **Verify backup when finished** option.
7. Click **OK** to continue.

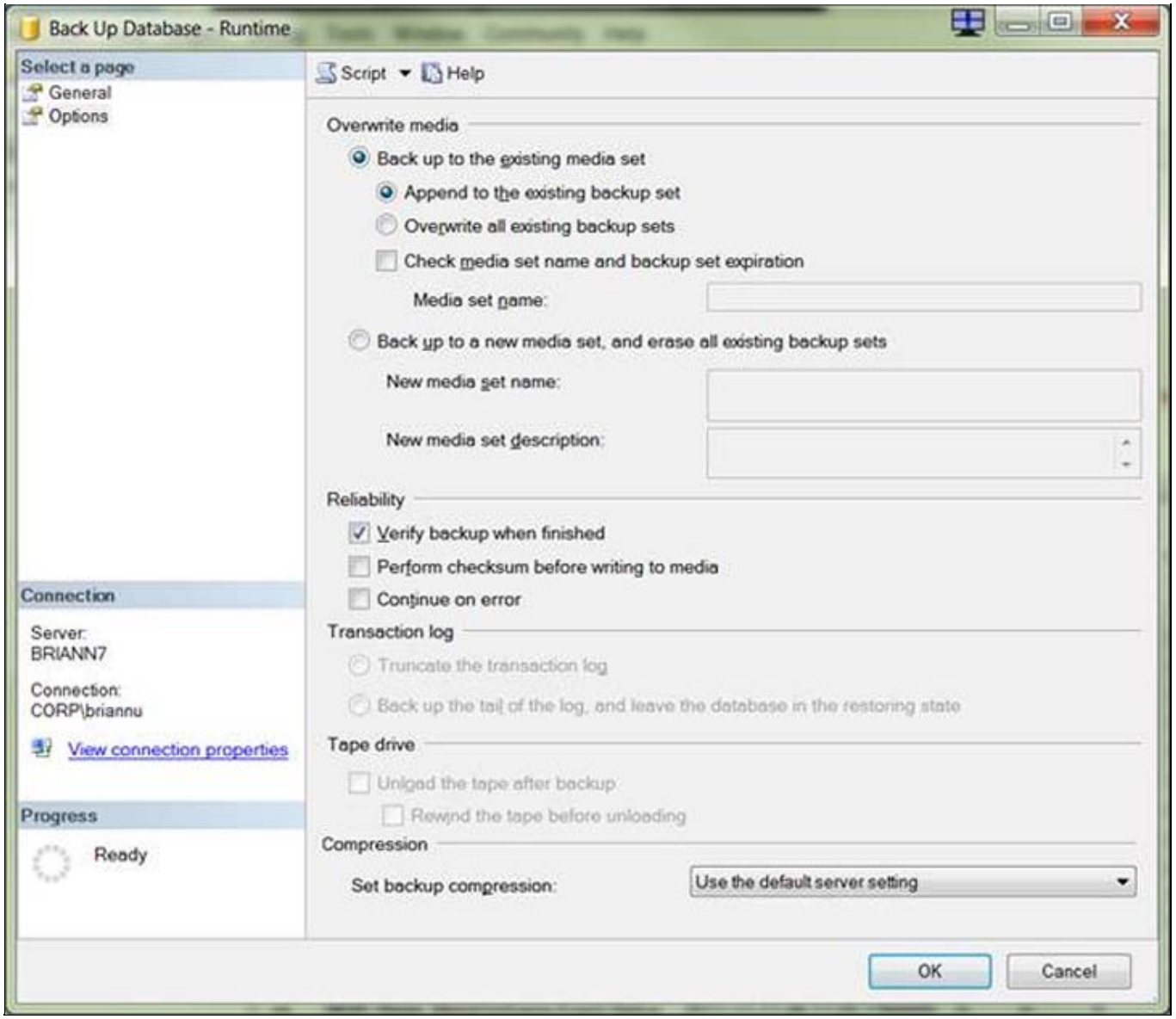

FIGURE 4: SQL SERVER BACKUP DATABASE – OPTIONS PAGE

8. After several moments a confirmation message appears (Figure 5 below). Click **OK**.

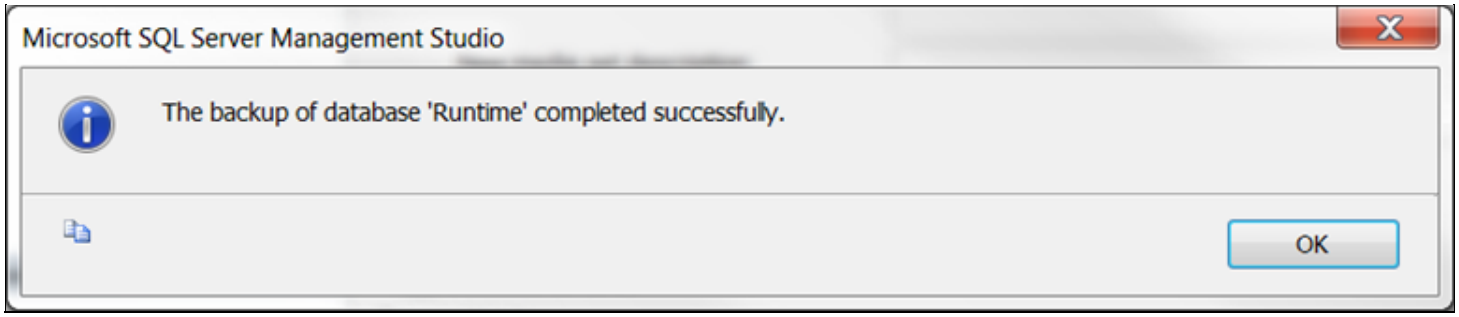

Figure 5: Backup Completed Successfully

Restore the Runtime Database to the New Server

This section describes the steps to restore the Runtime database onto the new destination server.

This Tech Note assumes that Historian Server is installed on the new machine.

1. Open the SMC, and expand the ArchestrA System Management Console + **Historian**.
2. Expand the **Historian Group / <LocalMachine> / Management Console**.
3. Right-click **Status** and click **All Tasks / Shutdown (and Disable) Historian**.

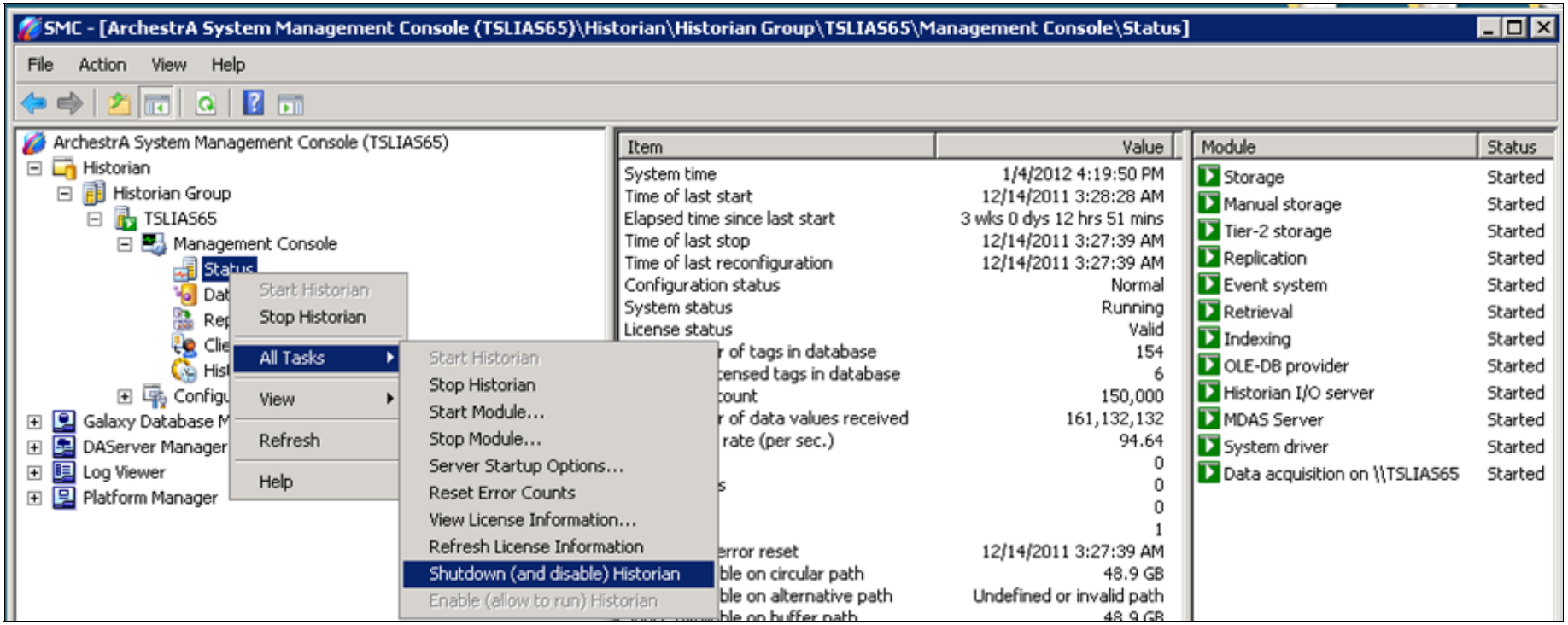

Figure 6: Shutdown (And Disable) Historian

4. Start the Microsoft SQL Server Management Studio. Make sure to login to SQL Server using either the **sa** login or your Windows-Authenticated account with local administrative privileges.

5. Open a new query window and copy/paste the following Transact-SQL code into the query area and execute it. This query will rename the existing Runtime database on the destination server to **Runtime_old** for safety purposes.

```
USE Master
GO
EXEC sp_dboption 'Runtime', 'single user','true'
GO
EXEC sp_renamedb 'Runtime', 'Runtime_old'
GO
```

6. Copy the Runtime backup file from the path in **Step 4 in the previous section** to a folder on the destination Server.

7. From the MS SQL Server Management Studio, right-click on the Database folder and click **Restore Database**. The Restore Database dialog appears.

8. Type the database name **Runtime** in the **To database** field.

9. Click **From device** then click on the ellipsis button (Figure 7 below) to browse to the folder where you copied the **Runtime.bak** file (Step 6 in this procedure).

10. The **Specify Backup** dialog box appears. Click the **Add** button to locate the folder where the backup file Runtime backup file resides (Figure 7 below).

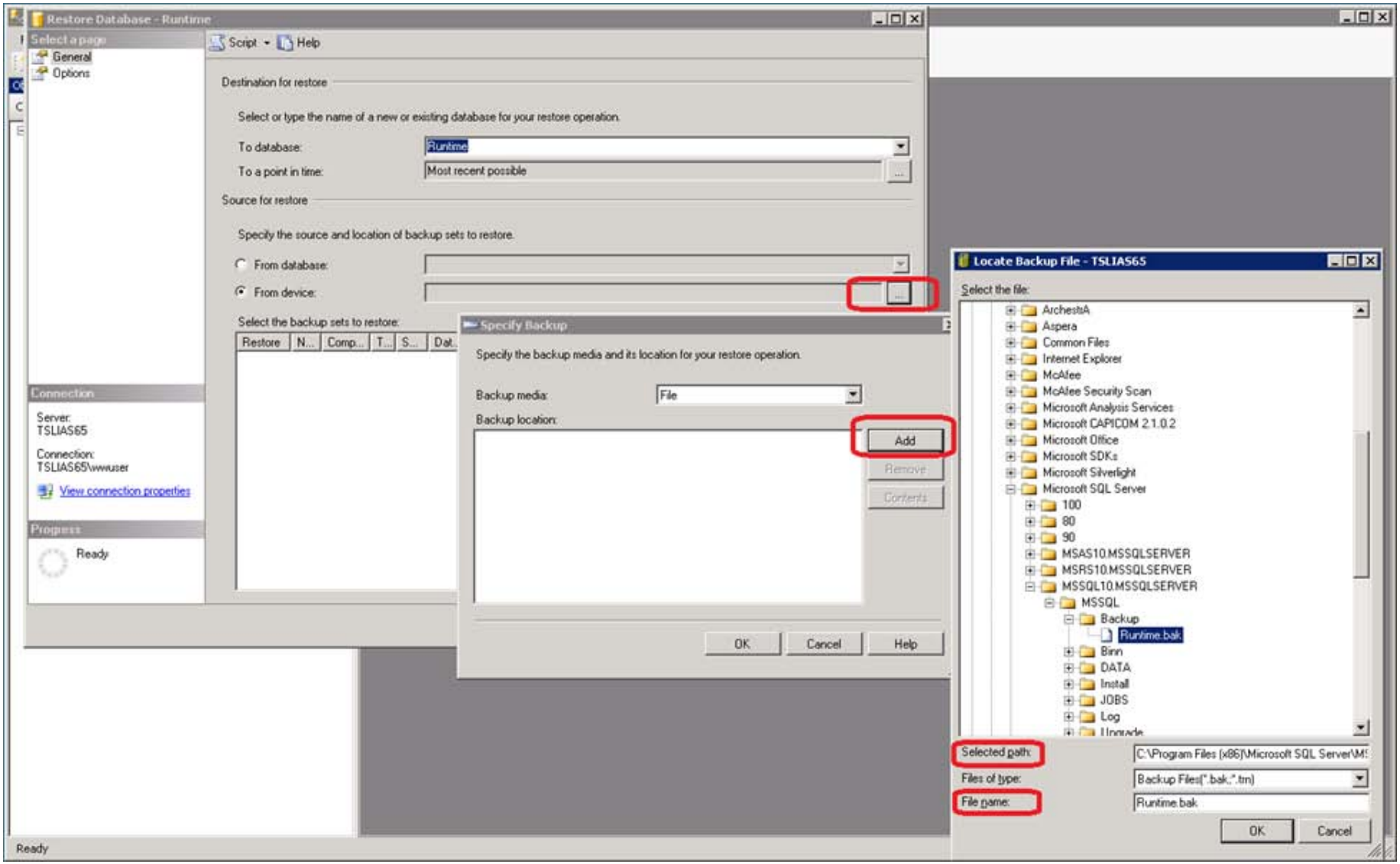

FIGURE 7: RESTORE DATABASE – RUNTIME AND LOCATE RUNTIME BACKUP FILE

11. Click **OK**, then **OK** again to return to the **Restore Database – Runtime** panel.
12. Click the **Restore** option to select the Runtime database backup (Figure 8 below).

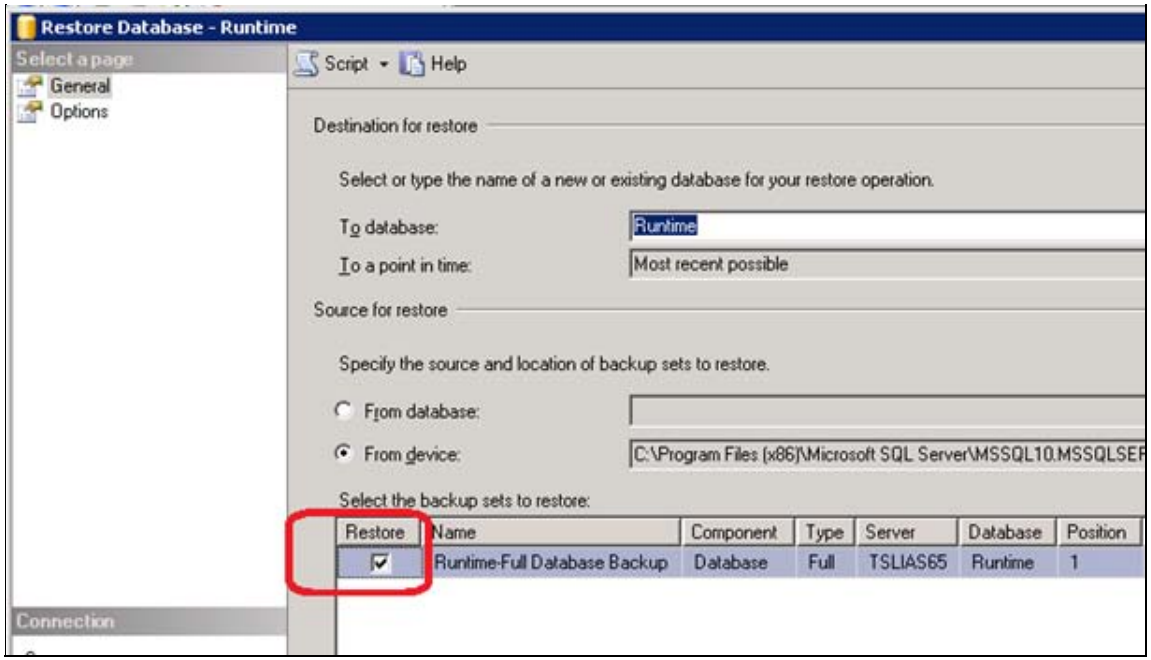

FIGURE 8: RESTORE DATABASE – RUNTIME DIALOG BOX

13. On the **Restore Database – Runtime** panel, click **Options**.
14. In the **Restore options** area, click the **Restore options** shown in Figure 9 (below):

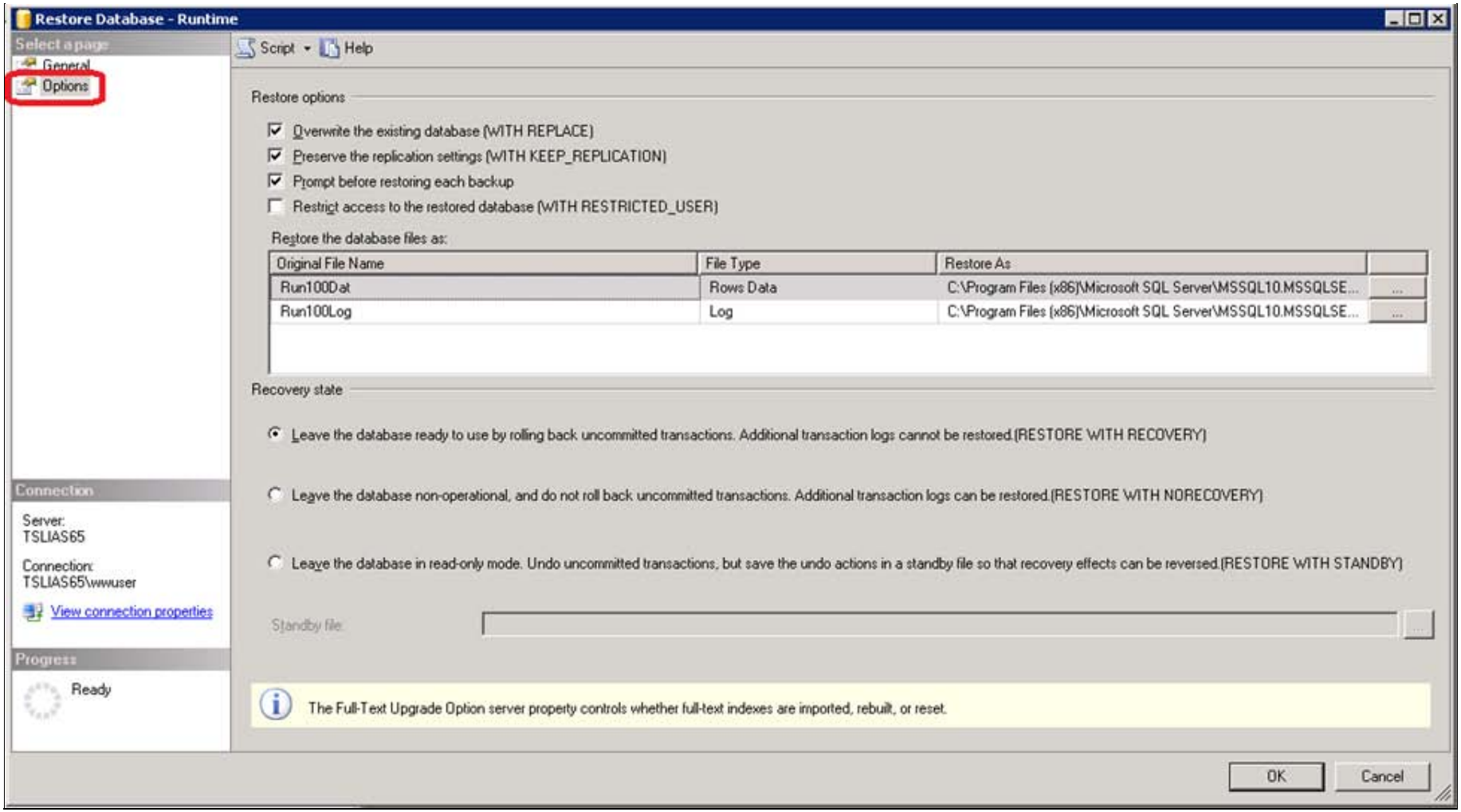

FIGURE 9: RESTORE DATABASE / OPTIONS PANEL

15. If necessary, modify the path for the Data file (LDF) and Log file (MDF) in the **Restore As** column.
16. Click **OK** to begin the restore process.
17. After the restore operation completes successfully, execute the following Transact-SQL script from the MS SQL Server Management Studio to ensure that all of the Historian Server's pre-configured user accounts and roles are properly connected.

```
USE Runtime
EXEC sp_change_users_login 'Auto_Fix', 'wwAdmin'
go
EXEC sp_defaultdb 'wwAdmin', 'Runtime'
go
EXEC sp_change_users_login 'Auto_Fix', 'wwUser'
go
EXEC sp_defaultdb 'wwUser', 'Runtime'
go
EXEC sp_change_users_login 'Auto_Fix', 'wwPower'
go
EXEC sp_defaultdb 'wwPower', 'Runtime'
go
EXEC sp_changedbowner wwdbo, true
```

```
go
EXEC sp_change_users_login 'Auto_Fix', 'aaAdmin'
go
EXEC sp_defaultdb 'aaAdmin', 'Runtime'
go
EXEC sp_change_users_login 'Auto_Fix', 'aaUser'
go
EXEC sp_defaultdb 'aaUser', 'Runtime'
go
EXEC sp_change_users_login 'Auto_Fix', 'aaPower'
go
EXEC sp_defaultdb 'aaPower', 'Runtime'
go
EXEC sp_changedbowner aadbo, true
go
```

Complete the Configuration on the New Server

The final task is to update the Node Name and Data Paths on the new machine.

Once the Runtime Database has been moved, you must modify the Runtime configuration settings to reflect the node name where the new installation resides. Also, if the drive or path where the History Blocks are stored has changed from the old existing node, these configuration settings must also be modified.

1. Make sure the Historian Server is still shutdown and disabled.
2. Copy and modify the following Transact-SQL statements for the Historian Server to run on the new node. Substitute **NewNodeName** and **OldNodeName** with the appropriate computer names where necessary.

- The **ComputerName** field in the StorageNode table contains the node name where the Historian Server data is logged.

```
UPDATE StorageNode
SET ComputerName = 'NewNodeName'
WHERE ComputerName = 'OldNodeName'
```

- The **ComputerName** field in the ServerList table also contains the node name where the Historian Server resides.

```
UPDATE ServerList
SET ComputerName = 'NewNodeName'
WHERE ComputerName = 'OldNodeName'
```

- The **MachineName** field in the InTouchNode table contains the names of all nodes from which the InTouch tagname databases have been imported. You only need to modify this table if the Historian Server tags were imported from an InTouch application that was local to the Historian Server on the old computer and has also been moved to this new computer.

```
UPDATE InTouchNode
SET MachineName = 'NewNodeName'
WHERE MachineName = 'OldNodeName'
```

- The **ComputerName** field in the IOServer table contains the node names where the internal System Driver (SysDrv) and various I/O Servers or DAServers for IDAS data collection are installed. If any I/O sources that were running locally to the Historian Server on the old node are not going to be running locally on the new node, you will need to manually modify the IOServer entries afterward using Historian Server Configuration Editor (SMC).

```
UPDATE IOServer
SET ComputerName = 'NewNodeName'
WHERE ComputerName = 'OldNodeName'
```

- Run the following statements only if the drive or path selected for the Historian Server storage locations (Circular, Buffer, Permanent, Alternate) was changed with the new installation. Before making any modifications to the StorageLocation paths, run the following SELECT statement and use Windows Explorer to confirm the paths listed.

```
SELECT * FROM StorageLocation
```

If necessary, use the statements below to modify any paths that are different on this node. Replace the drive letter "**x**" in the following code with the drive letter that is appropriate for your installation.

```
UPDATE StorageLocation
SET path = 'x:\Historian\DATA\Circular'
WHERE StorageType = 1
UPDATE StorageLocation
SET path = 'x:\Historian\DATA\Buffer'
WHERE StorageType = 3
UPDATE StorageLocation
SET path = 'x:\Historian\DATA\Permanent'
WHERE StorageType = 4
```

3. Enable and restart the Historian Server from the SMC by right-clicking **Status** and clicking **All Tasks/Enable (allow to run) Historian**.
4. If the System Parameter for AutoStart is not enabled, right-click **Status** and click **Start Historian**.

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