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Topic#: 002607 Created: January 2012

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.

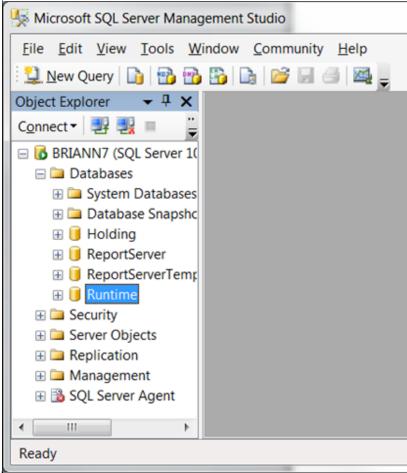


FIGURE 1: SQL SERVER MANAGEMENT STUDIO

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

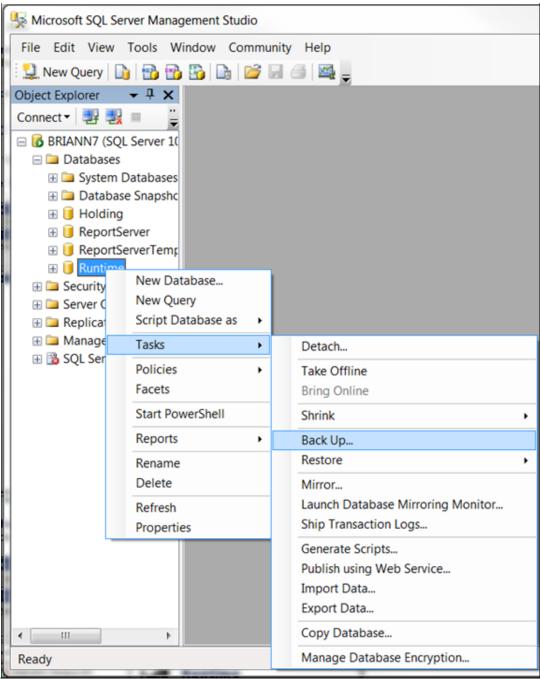


FIGURE 2: DATABASE TASKS/BACK UP

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.

Back Up Database - Runtime					
Select a page General	🖾 Script 🔻 🚺 Help				
P Options	Courses				
	Source				
	Da <u>t</u> abase:		Runtime		
	Recovery model:		SIMPLE		
	Backup type:		Full		
	Copy Only Backup				
	Backup component:				
	Oatabase				
	⑦ Files and filegroups:				
	Backup set				
	<u>N</u> ame:	Runtime-Full	Database Backup		
	Description:	1			
	Backup set will expire:				
	After:	0		days	
onnection	© <u>Q</u> n:	1/ 3/2012			
Server: 3RIANN7	Destination				
Connection:	Back up to:	Disk	0	Tape	
CORP\briannu	rosoft SQL Server\MSSQL10.MS	SQLSERVERMS	SQL\Backup\Runtim	e.bak	A <u>d</u> d
					<u>R</u> emove
Progress				5	Contents
Ready	•	1	11	F	
				ОК	Cancel

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.

Select a page General	🖾 Script 🔻 🚺 Help			
P Options	Overwrite media			
	Back up to the existing media set			
	Append to the existing backu			
	Overwrite all existing backup sets			
	Check media set name and b			
	Medio set game:			
	Back up to a new media set, and	erase all existing backup sets		
	New media set name:			
	New media set description:	12		
	Reliability	14		
	Verify backup when finished			
	Perform checksum before writing	to media		
Connection	Continue on error			
Server:	Transaction log			
BRIANN7	⑦ Truncate the transaction log			
Connection: CORP\briannu) Back up the tail of the log, and le	rave the database in the restoring state		
View connection properties	Tape drive			
	Uniged the tape after backup			
Progress	Rewind the tape before unlo	ading		
2 Ready	Compression			
Reddy	Set backup compression:	Use the default server setting		

FIGURE 4: SQL SERVER BACKUP DATABASE - OPTIONS PAGE

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

Microsoft SQL Server Management Studio					
1	The backup of database 'Runtime' completed successfully.				
B		ок			

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.

💋 SMC - [ArchestrA System Management (Console (TSLIAS65)\Histo	orian\Historian Group\TSLIAS65\M	anagement Console\Status]	
File Action View Help					
🗢 🔿 🙍 🖬 🙆 🖬					
ArchestrA System Management Console (TSLI)	AS65)	Item	Value	Module	Status
 Historian Historian Group TSLIAS65 Management Console Starts Dat Start Historian Stop Historian Clie All Tasks Galaxy Database M Galaxy Database M DAServer Manager Log Viewer Platform Manager 		on error reset storian ble on circular path	1/4/2012 4:19:50 PM 12/14/2011 3:28:28 AM 3 w/s 0 dys 12 hrs 51 mins 12/14/2011 3:27:39 AM 12/14/2011 3:27:39 AM Normal Running Valid 154 6 150,000 161,132,132 94.64 0 0 1 12/14/2011 3:27:39 AM 48.9 GB Undefined or invalid path 48.9 GB	 Storage Manual storage Tier-2 storage Replication Event system Retrieval Indexing OLE-DB provider Historian I/O server MDAS Server System driver Data acquisition on \\TSLIAS65 	Started Started Started Started Started Started Started Started Started Started Started

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).

🛃 🧃 Restore Database - Runtir	me		JOX		_ [] ×
I Select a page	Script + 🚺 Help				
Options	Destination for restore				
c	Select or type the name of a ne	v or existing database for your restore operation.			
E	To database:	Runtime			
	To a point in time:	Most recent possible			
	Source for restore				
	Specify the source and location	of backup sets to restore.			
	C From database:			🚺 Locate Backup File - TSLIAS65	
	From device:			Select the file:	
	Select the backup sets to resto	Specify Backup		Archesta Aspera	-
	Restore N Comp T.	S Dat. Specify the backup media and its location for you	r restore operation.	Common Files Internet Explorer	
Connection		Backup media: File		McAlee McAlee McAlee Security Scan	
Server:		Backup media: File Backup location:	1	Microsoft Analysis Services Microsoft CAPICOM 21.0.2	
TSLIAS65			Add	🛞 🦳 Microsoft Office	1
Connection: TSLIAS65\www.user			Remove	General SDK: Microsoft SDK: Microsoft Silverlight	
View connection properties			Gordenta	Hicrosoft SQL Server	
Progress	5			⊕	
Ready				MSAS10.MSSQLSERVER	
201				MSRS10.MSSQLSERVER MSSQL10.MSSQLSERVER	_
				😑 🧰 MSSQL	
			OK Cancel Help	Buntime bak	
				🕀 🦢 DATA	
				DOBS	
				III Cal Unorade	
				Selected path C: VProgram Files (x86)VM	
				Files of type: Backup Files(".bak.".tm) File game: Runtime bak	<u> </u>
				Constant of the second s	DK Cancel
Ready					

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).

Select a page	Script - 🚺 Help						
Select a page	Destination for restore Select or type the name of a new To database:	w or existing database for yo Runtime Most recent possible		operation.			
	I o a point in time: Source for restore Specify the source and location C From database:		21				
	Source for restoreSpecify the source and location			oft SQL Serve	er\MSSQL10.	MSSQLSE	
	Source for restore Specify the source and location	of backup sets to restore.		oft SQL Serve	er\MSSQL10.	MSSQLSE	
	Source for restore Specify the source and location C From database: C From device:	of backup sets to restore.		ioft SQL Serve	erVMSSQL10. Database	MSSQLSE	

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):

🧾 Restore Database - Runtim	e		
Select a page	🔄 Script 👻 🚺 Help		
Control Options	Restore options	KEEP_REPLICATION)	
	Briginal File Name	File Type	Restore As
	Run100Dat	Rows Data	C:\Program Files (x86)\Microsoft SQL Server\MSSQL10.MSSQLSE
	Run100Log	Log	C:\Program Files (x86)\Microsoft SQL Server\MSSQL10.MSSQLSE
Connection Server: TSLIAS65	C Leave the database non-operational, an	d do not roll back uncommitted transactions. Additional	transaction logs can be restored.(RESTORE WITH NORECOVERY)
Connection: TSLIAS65\www.ser	C Leave the database in read-only mode. I	Undo uncommitted transactions, but save the undo acti	ions in a standby file so that recovery effects can be reversed. (RESTORE WITH STANDBY)
View connection properties Progress	Standby file		
Ready	The Full-Text Upgrade Option server p	property controls whether full-text indexes are imported,	rebuilt, or reset.
			OK Cancel

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
```

file:///Cl/inetpub/wwwroot/t002607/t002607.htm[1/18/2012 8:24:36 AM]

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 aawdbo, 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 " \mathbf{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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Tech Notes are published occasionally by Wonderware Technical Support. Publisher: Invensys Systems, Inc., 26561 Rancho Parkway South, Lake Forest, CA 92630. There is also technical information on our software products at Wonderware Technical Support.

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Back to top

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