### Tech Note 918 Moving Historian Server Custom Tables

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#### Introduction

This Tech Note explains moving custom tables from one Historian Server to another.

Custom tables are tables you create to store information beyond the built-in tables already included in the Historian Server's Runtime database. These custom tables are not automatically migrated when Historian software is upgraded, it is necessary to migrate them manually.

This Tech Note uses Historian1 (existing Historian Server) and Historian2 (Target/New Historian Server) for reference and context.

#### **Application Versions**

- Wonderware Historian 10.0 and later
- Microsoft SQL Server 2008 and later

#### Procedure

To move custom tables from one Historian to another

Complete the following tasks:

Create a backup for the current Runtime database on the target server

😓 Microsoft SQL Server M	lanagement Studio	
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FIGURE 1: CREATE BACKUP OF THE RUNTIME DATABASE

### Use SSMS to create scripts from the original Runtime Database

1. From SQL Server Management Studio (SSMS) right click on the Runtime database and click Tasks/Generate Scripts.



FIGURE 2: GENERATE RUNTIME SCRIPTS

2. Click Next.



FIGURE 3: SCRIPT WIZARD

The Select Database Wizard appears.

3. Select Runtime and click Next.

🚪 Script Wizard - EGYMO	
Select Database Select the database you want to script.	
<u>S</u> elect a database:	
Holding master model msdb ReportServer ReportServerTempDB Runtime tempdb test	
Script all objects in the selected database	
<u>H</u> elp < <u>B</u> ack <u>N</u> ext > <u>Finish &gt;&gt;</u>	Cancel //

FIGURE 4: SELECT THE RUNTIME DATABASE

The Choose Script Options Wizard appears.

4. Accept the defaults and click **Next** (Figure 5 below).

<u>O</u> ptions		
2 <u>2</u>		
🗆 General		<b></b>
Ansi Padding	True	•
Append to File	False	
Continue Scripting on Error	False	
Convert UDDTs to Base Types	False	
Generate Script for Dependent Objects	False	
Include Descriptive Headers	True	
Include If NOT EXISTS	False	
Include system constraint names	False	
Script Collation	False	
Scrint Create	True	-

FIGURE 5: SCRIPT OPTIONS

The Choose Object Types Wizard appears (Figure 6 below).

Script Wizard - EGYMO	
Choose Object Types Choose the object types you want to script.	
□ Database roles         □ Stored procedures         □ Tables         □ User-defined data types         □ User-defined functions         □ Users         □ Views	
Select <u>All</u>	
Help < Back Next > Einish >>	Cancel

FIGURE 6: OBJECT TYPES OPTIONS

5. Select Tables and click Next.

The Choose Tables Wizard appears (Figure 7 below).

Select tables:		
Schema	Name	<b></b>
dbo	AttributeType	
dbo	CalcType	
dbo	ConfigStatusPending	
dbo	ConfigStatusSnapshot	
dbo	Context	
dbo	CurrentEditor	
dbo	CustomReplicationSchedule	
dbo	CustomTable1	
dbo	CustomTable2	
dbo	DetectorType	
dbo	Deviation	-
I I		

FIGURE 7: CHOOSE CUSTOM TABLES

- 6. Select the *Custom* tables for which you want to generate script and click **Next**.
- 7. Select the location at which to save script file and click **Save**, then **Next** (Figure 8 below).

Moving Historian Custom Tables



#### FIGURE 8: SELECT A LOCATION

8. Click Finish (Figure 9 below).



FIGURE 9: SCRIPT WIZARD SUMMARY

9. After the Script Generation operation finishes (Figure 10-11 below), close the SQL Server Management Studio.

🚪 Script Wizard - EGYMO		
Generate Script Progress Click Stop to interrupt the operation.		
1 Remaining	1 Total O Success	0 Error 0 Warning
Details: Action Determining objects in database 'Runtim	Status	Message
	Stop	Beport 🔻
		Close

FIGURE 10: GENERATE SCRIPT PROGRESS

Jer (	Derate Script Progress		
	Success	3 Total 3 Success	0 Error 0 Warning
<u>D</u> eta	ails:		
	Action	Status	Message
0	Determining objects in database 'Runtim	Success	
0	dbo.CustomTable1	Success	
0	dbo.CustomTable2	Success	

FIGURE 11: CLOSE THE WIZARD

# Move the Scripts to Another Historian Machine

To do this, run the scripts to create the new tables on the target machine.

1. From SSMS click **Open/File** from the main menu.



FIGURE 12: OPEN THE SCRIPT FILE

2. Browse to the script file location and click **Open**.

```
Moving Historian Custom Tables
```

Open File		<u>? ×</u>
Look jn:	🥯 Local Disk (C:) 💽 🎯 🗸 🖄 💮 🗙 📷 🗸 Tools 🗸	
Desktop My Projects My Computer	<ul> <li>0225cd5f59026718d5b280</li> <li>Backinfo</li> <li>Documents and Settings</li> <li>Inetpub</li> <li>InSQL</li> <li>MSOCache</li> <li>Program Files</li> <li>WINDOWS</li> <li>wmpub</li> <li>msizap.exe</li> <li>RunTime.sql</li> </ul> Type: Microsoft SQL Server Query File Date Modified: 4/24/2012 9:23 AM Size: 973 KB	
	File name:	en 💌
	Files of type:     All Files (*.*)         Can	cel

FIGURE 13: OPEN THE <SCRIPTNAME>.SQL FILE

3. Click the **Execute** button in the main Toolbar.

# Copy the Custom Table Data to the New Runtime Database

Create a linked server cube between the old Historian and new Historian.

- 1. On the Historian 1 (Existing) machine, Open SQL Server Management Studio and connect to it.
- 2. In the Connect to Server dialog box, specify the name of the appropriate SQL Server, and then click Connect.
- 3. In SQL Server Management Studio, double-click Server Objects, right-click Linked Servers, then click New Linked Server.

🧏 Microsoft SQL Server	Management Studio
File Edit View Debu	ig Tools Window Commu
😳 New Query 🛛 🛅 🛛 🎬	) 📸 🛅   🕞   💕 🔲 👌
Object Explorer	+ <sup>‡</sup> ×
Connect 🕶 📑 📑 🦷	7 🛃 🍒
<ul> <li>□ ■ EGYMO2008 (SQL Set The set of the set</li></ul>	erver 10.50.2500 - EGYMO20(
	New Linked Server
E en INS E en INS E en INS	Start PowerShell
🕀 🧰 Trigger	Reports •
<ul> <li></li></ul>	Refresh
🕀 📸 SQL Server Age	nt

FIGURE 14: NEW LINKED SERVER

4. In the New Linked Server dialog box, type the Network name of the SQL Server you want to link to.

New Linked Server			
Select a page	🔄 Script 👻 📑 Help	η	
General Security Server Options	Linked server:	EGYMO	
	Server type:		
	SOL Server		
	C Other data source		
	Provider:	Microsoft OLE DB Provider for SQL Server	<b>v</b>
	Product name:		
	Data source:		
	Provider string:		
	Location		
	Catalog		
Connection			
Server: EGYMO2008			
Connection: EGYMO2008\Administrator			
View connection properties			
	Server Type is either SOL Se	anver or an OLE DB provider installed on the server. If SOL So	anvaria
Progress	selected then the Linked Se	rver name is also the network name of the server.	
Ready			
l			- 1
		ОК	Cancel

FIGURE 15: TYPE THE NETWORK NAME OF THE LINKED SERVER

5. For Server type, click SQL Server, then click OK.

**Note:** This procedure often refers to the server you are linking to as the remote server. This is for convenience only, to indicate the relationship of the linked (remote) server to the local server. Do not confuse this usage with the obsolete remote server functionality in SQL Server.

6. In the New Linked Server dialog box, click the Security page (Figure 16 below).

Mew Linked Server				
Select a page	🔄 Script 👻 📑 Help			
General Security Server Options	Local server login to remo	ote server login mapping	s:	
	Local Login	Impersonate	Remote User	Remote Password
		k ₽		
			A	dd Remove
Connection Server:	For a login not defined in	the list above, connecti	ons will:	
EGYMO2008	O Not be made			
EGYMO2008\Administrator	Be made without us	ing a security context		
View connection properties	O Be made using the I	ogin's current security co	ontext	
Progress	Be made using this :	security context:		
Ready	Remote login: With password:			
				OK Cancel

FIGURE 16: SECURITY SETTING FOR NEW LINKED SERVER

7. Click the **Be made using this security context** option, then provide the **Admin level** Remote Login and Password.

New Linked Server					_ 🗆 ×
Select a page	🔄 Script 👻 📑 Help				
General Security Server Options	Local server login to rem	ote server login mappin	lgs:		
	Local Login	Impersonate	Remote User	Remote	Password
Connection Server: EGYMO2008 Connection: EGYMO2008\Administrator EGYMO2008\Administrator View connection properties Progress Ready Ready	For a login not defined in O Not be made O Be made without us O Be made using the O Be made using this Remote login: With password:	n the list above, connect sing a security context login's current security of security context:	tions will: context	Add	Remove
				ОК	Cancel

FIGURE 17: PROVIDE SECURITY CONTEXT

- 11. Click Server Options.
- 12. Set the RPC and RPC Out parameters to True, then click OK.

Part Content Server			
Select a page	🕄 Script 👻 📑 Help		
General			
Security			
Server Options	Collation Compatible	False	
	Data Access	True	
	RPC	True	
	RPC Out	True	<u> </u>
	Use Remote Collation	True	
	Collation Name		
	Connection Timeout	0	
	Query Timeout	0	
	Distributor	False	
	Publisher	False	
	Subscriber	False	
	Lazy Schema Validation	False	
	Enable Promotion of Distributed Transaction	onst True	
Connection Server:			
EGYMO2008			
Connection: EGYMO2008\Administrator			
View connection properties			
Progress			
Ready			
		ок	Cancel

FIGURE 18: RPC AND OTHER LINKED SERVER OPTIONS

13. Click **OK**.

# Transfer all Records from the Old Tables to the New Tables

Now you have a Historian Server that contains custom tables, and you have tables in the target Historian Server with the same tables

but no data.

You have a linked server relationship between the Servers, and you are now ready to copy data from the original tables to the new tables.

Use the following SQL statement to copy the data (provide your actual table names).

```
INSERT CustomTable1 (ID, Name)
SELECT * FROM OPENQUERY([ORIGINALHISTORIANSERVERNAME],'SELECT ID,Name FROM [Runtime].[dbo].[CustomTable1]')
```

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### Back to top

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