



# DBMoto<sup>®</sup>

## Setup Notes for SAP<sup>®</sup> HANA<sup>®</sup> Transactional Replications (Target)

Version 9.5.0.x

Software Release Date: 4/23/2018

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## Document History

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These notes provide essential information for setting up replications using **SAP HANA** as a **target database** for refresh, one-way mirroring and synchronization. For complete details on the setup process, check the *DBMoto User Guide* available from the Management Center **Help** menu or the *DBMoto Setup Guide*, available for download in the [Help Center](#).

**This guide describes the setup process when replicating data to an SAP HANA database.**

For mirroring replications using SAP HANA as a source, see *Setup Notes for SAP® HANA® Transactional Replications (Source)* in the [Help Center](#).

## Connection Type

Either:

SAP HANA .NET Data Provider version 1.0.84.0 or above (Supported in DBMoto 8.5 and above)

Or:

SAP HANA ODBC Driver

Available as part of the SAP HANA CLIENT Winx86 (32 or 64 bit)

Assembly: Usually located in C:\Program Files\sap\hdbclient\ado.net\v4.5\Sap.Data.Hana.v4.5.dll

## SAP HANA Database Setup

1. If you choose the ODBC driver to connect to HANA, DBMoto uses the <IMPORT FROM CSV file> statement to do bulk operations. This requires the addition of the IMPORT system privilege for the DBMoto user in HANA (security – users – DBMOTO – system privileges.)

The screenshot shows the DBMOTO configuration window. Under the 'Authentication' section, 'Password' is selected with a checked box. The 'Password\*' and 'Confirm\*' fields are empty. 'Kerberos' is unselected. The 'Valid From' field is set to 'Apr 21, 2016 5:53:21 AM GMT-04:00' and 'Valid Until' is empty. The 'Session Client' field is empty. Below this, there are tabs for 'Granted Roles', 'System Privileges', 'Object Privileges', 'Analytic Privileges', and 'Package Privileges'. The 'System Privileges' tab is active, showing a table with the following content:

System Privilege	Grantor
IMPORT	SYSTEM

2. The configuration of the HDB system under the SYSTEM user also needs to be changed (error message and change shown below)

Name	Default	System
indexserver.ini		◆
import_export		
csv_import_path_filter		
enable_csv_import_path_filter	true	● false
nameserver.ini		◆

3. Create a folder (Import Path) that can be accessed from the HANA database (/hana/local/downloads for example.)

## Add Target Connection Wizard

The following field(s) require specific information for SAP HANA.

### Select Provider Screen

### Database

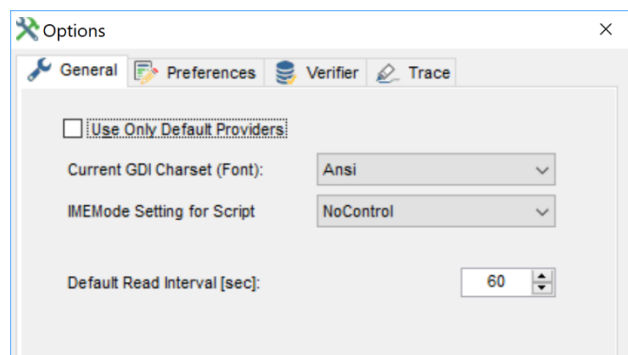
Choose SAP HANA from the drop-down list.

## Provider

The default value is SAP Hana .NET Driver. However, an ODBC driver is also available. While the .NET Provider is easier to set up and maintain, the ODBC driver can offer better performance. The ODBC driver uses SFTP to perform bulk inserts which requires setup and testing of the FTP and requisite folders.

To access the ODBC driver for SAP HANA:

1. Exit the Add Source Connection wizard.
2. On the **Tools** menu in the Management Center, click **Options**.
3. In the **Options** dialog, uncheck the **Use Only Default Providers** option.
4. Click **OK** to save the change.
5. Restart the Add Source Connection wizard.



## Assembly

(For .NET Data Provider connections only)

If no value is provided in the Assembly field, use the **Browse** button to locate the Sap.Data.Hana DLL. It is typically located in:

C:\Program Files\sap\hdbclient\ado.net\v4.5\Sap.Data.Hana.v4.5.dll

**NOTE:** The version number of your SAP HANA .NET Data Provider may be different. DBMoto supports SAP HANA .NET Data Provider version 1.0.84.0 or above.

## Set Connection String Screen

### Data Source

The IP address of your database server followed by a colon and the server port number.

**IMPORTANT:** The server name and port number should follow the format <server>:<port>. If you do not specify the port number, the default is used and the default is often not appropriate for standard SQL communications via client access. The format of the port for **standard SQL communication via client access is 3<instance-number>15** where <instance number> is the instance number of the SAP HANA database engine. For example, for instance 00, the port number would be 30015.

The default insert mode for replicated data has been set to BulkInsert for optimal performance. However, you can change this setting in one of two ways:

Opening the **Connection Properties dialog** after completing the wizard:

1. In the Metadata Explorer, locate the SAP HANA target connection.
2. From the right mouse button menu, choose **Connection Properties**.
3. Scroll down to one of the following fields:
  - The Refresh Options Default Insert Mode for Refresh replications
  - The Mirroring Options Default Insert Mode for Mirroring replications.
4. Choose a new value from the drop-down list.

Or, opening the **Replication Properties dialog** after creating the replication:

1. In the Metadata Explorer, locate the replication with the SAP HANA target.
2. From the right mouse button menu, choose **Replication Properties**.
3. Scroll down to one of the following fields:
  - Insert Mode for Refresh replications
  - Mirroring Insert Mode for Mirroring replications
4. Choose a new value from the drop-down list.

## Connection Properties Dialog

If using an ODBC connection, DBMoto transfers data from the source database to SAP HANA using the HANA Import from File feature. This means that data must first be transferred to the system where SAP HANA is running via FTP. Set the FTP connection properties after creating your target connection.

1. In the Metadata Explorer, select the SAP HANA target connection. From the right mouse button menu, choose **Connection Properties**.
2. Scroll to the Dynamic Properties section.
3. In the **FTP Type** field, choose SFTP.
4. Enter values for the **FTP Server**, **FTP Port**, **FTP User**, **FTP Password** and **Import Path** properties. **Import Path** is the complete path for the file location on the target system where HANA is installed.
5. Click **OK** to save your changes.

Connections using the .NET provider use an alternative approach to transferring the data from source to target, so no FTP setup is needed.

Last Updated on 9/13/2018