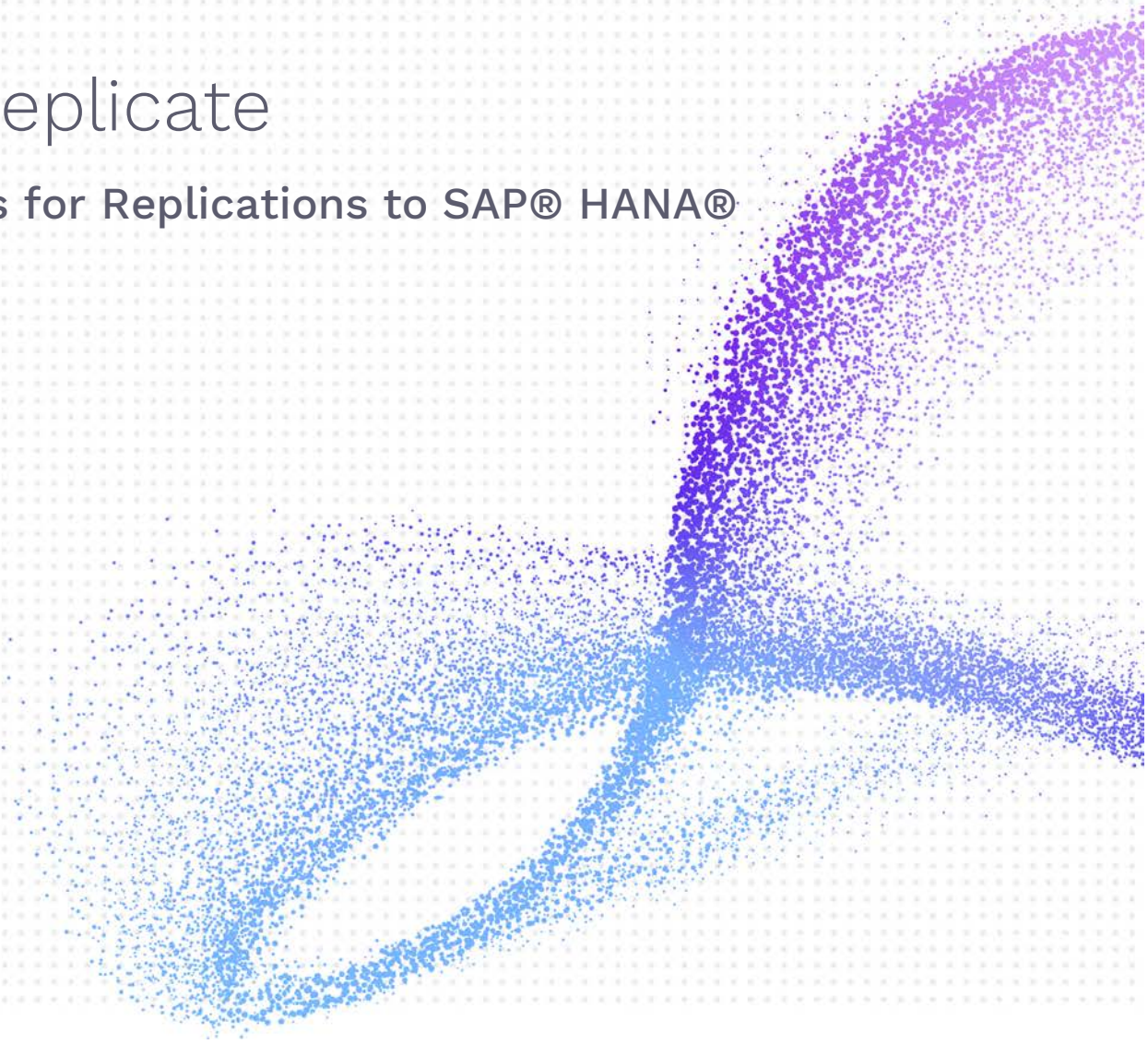
Syniti

Syniti Replicate

Setup Notes for Replications to SAP® HANA®

Version 10.3



Syniti

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Syniti Replicate

Syniti Replicate allows you to replicate data from relational database tables to **SAP HANA** in the following ways:

- **Refresh (Snapshot replication)**
  A one-time complete replication from any major relational database source to **SAP HANA** as a target, according to replication settings and scripts. You can control the timing of the replication, identify the columns to be replicated and add scripts to transform data during replication. Source databases include Oracle, Microsoft SQL Server, IBM Db2 for i, IBM Db2 LUW, Sybase, Informix, MySQL.

  Continuous refresh
  A regularly scheduled refresh replication as described above. The schedule is defined in the replication settings.

- **One-way mirroring (Incremental Replication)**
  A continuous update of replicated tables based on changes to the source database that have been recorded in the database server log. Typically, this involves an initial refresh operation, as described above, to set up the target table. Then you can define the replication settings to check the transaction log on the source database at regular intervals. Any changes found in the log are applied to data on the **SAP HANA** platform.

For complete details on the setup process, check the *Syniti Replicate User Guide* available from the Management Center **Help** menu or the *Syniti Replicate Setup Guide*, available for download in the Help Center.

Connection Type

One of the following:

- SAP HANA .NET Data Provider version 1.0.84.0 or above (Supported in DBMoto 8.5 and above or Syniti Replicate 9.6 or above)
  1. Log in and register your account: https://community.sap.com/topics/hana-data-management-suite?sourceid=PPCDevelopers2&url_id=text-crm-xh12-ppc-ppcdbdg4-developeredition
  2. Search for “Software Downloads”
     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 ODBC Driver

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

  SAP HANA CLIENT Winx86 (32 or 64 bit)
- CData ODBC driver for SAP ERP

  For use with a Runtime License (vs Enterprise License) that does not allow direct access to the database.

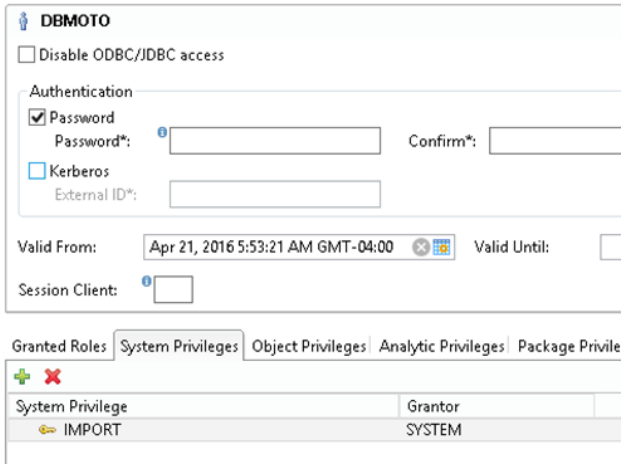
  Download from: https://www.cdata.com/drivers/sap/odbc/.

  NOTE: With this driver, SAP HANA can be used as a source only in refresh mode (no transactional replications via triggers), or as a target.

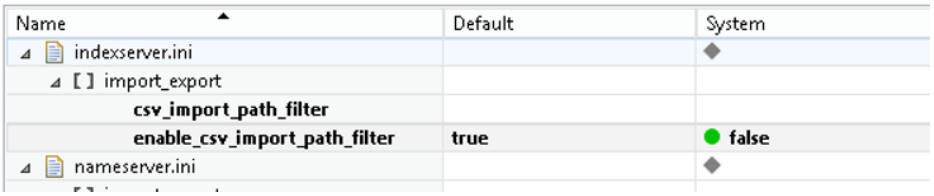
  See CData ODBC Driver Installation for more details.

Additional Requirements for SAP HANA

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



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

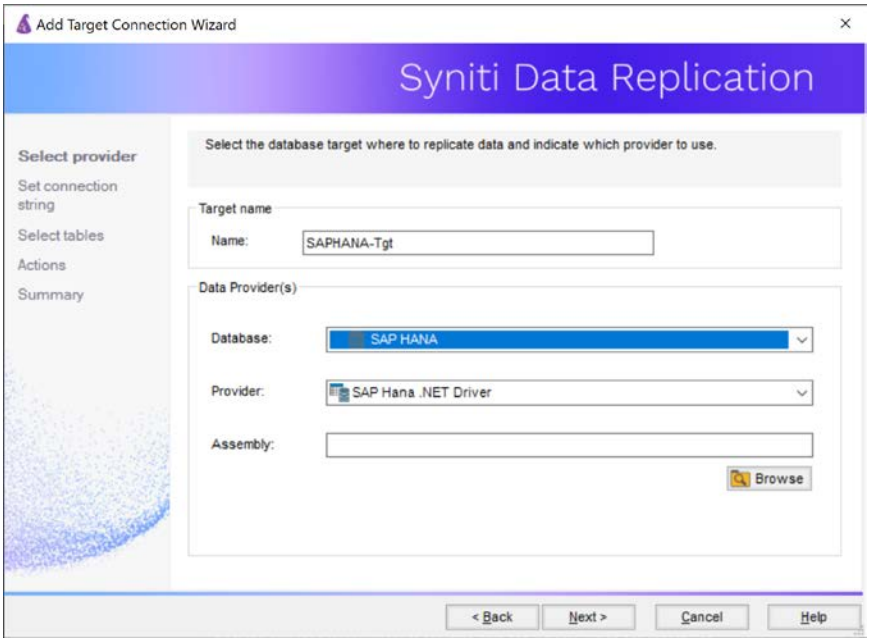


3. Create a folder (Import Path) that can be accessed from the HANA database (/hana/local/downloads for example.)

Add Target Connection Wizard

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

Select Provider Screen



Database

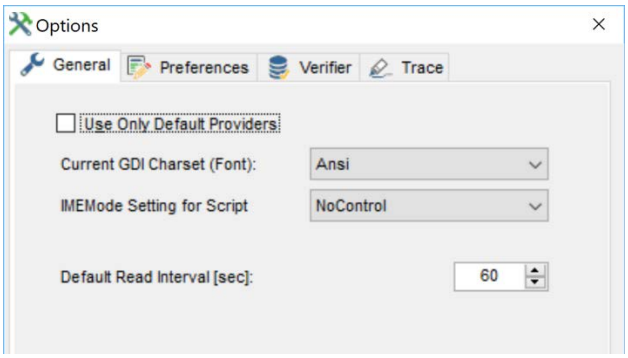
Choose SAP HANA from the drop-down list.

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. Syniti Replicate 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.

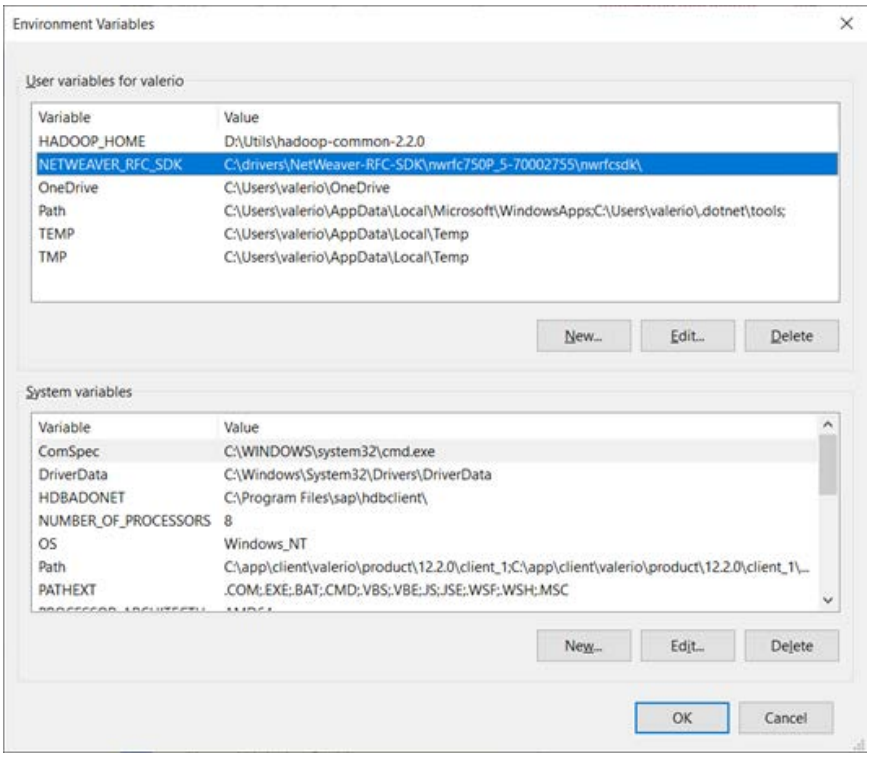
IMPORTANT: The server name and port number should follow the format <server>:<port>. If you do not specify the port number, the default is used and the default is often not appropriate for standard SQL communications via client access. The format of the port for **standard SQL communication via client 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.

CData ODBC Driver Installation

The instructions below are provided for your convenience. If you experience any issues downloading or installating the CDATA driver, please contact CDATA directly.

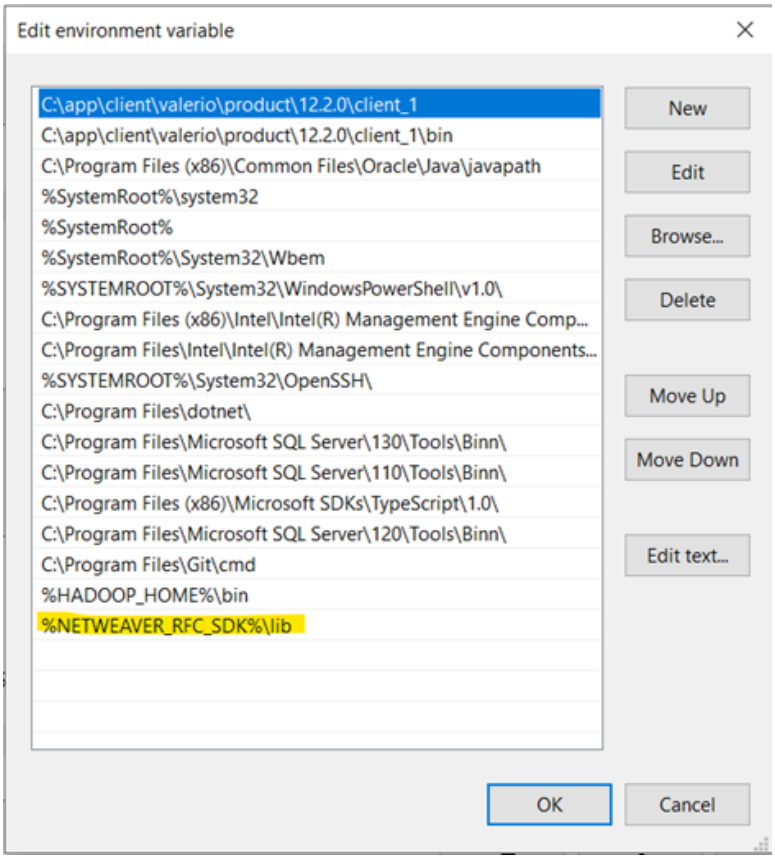
1. Download the ODBC driver for SAP ERP from here: https://www.cdata.com/drivers/sap/odbc/.
2. Install the driver.
3. Install the Netweaver RFC SDK by unzip the zip file on your system. This component is installed with the SAP GUI.
4. The CData driver needs to access some DLLs installed with the RFC SDK. Create an environment variable to make the SDK lib path visible to the driver:
   - Create a folder and unzip the SDK file: e.g., to: C:\drivers\NetWeaver-RFC-SDK\nwrfc750P_5-70002755\
   - Create a new environment variable via the Control Panel (System and Security/System/Advanced System Settings/Advanced Tab/Environment Variables button.)

- Create a new entry on the User Variables section, setting the path to the SDK:



- In the System variables section, select **Path** and click **Edit**.

- Add a new entry with the name of the user variable defined above:



- Click **OK** to all dialogs to save and close them.

5. Configure an ODBC DSN with the CData driver. See screenshots below for sample connection parameters that you will need to substitute with your own.
6. In the Syniti Replicate Management Center, create a connection to SAP HANA, selecting the CData RFC driver and pointing to the DSN that you just created using the connection string: "DSN=<myDSNName>".