



SAP Landscape Transformation (SLT) Replication Server User Guide

NOTE :

Pease refer the following guide for SLT installation.

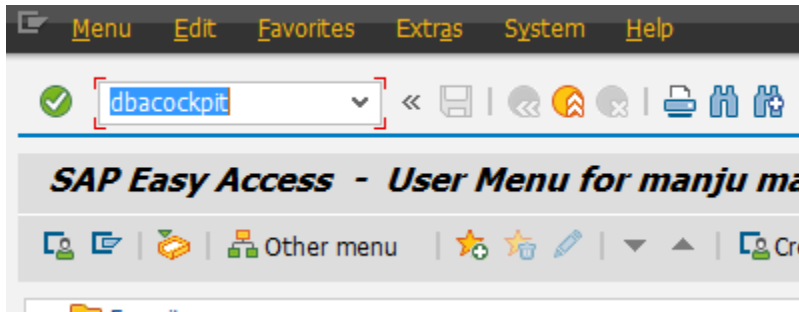
[http://help.sap.com/hana/SAP HANA Installation Guide Trigger Based Replication SLT en.pdf](http://help.sap.com/hana/SAP_HANA_Installation_Guide_Trigger_Based_Replication_SLT_en.pdf)

Once you done with your SLT installation, proceed as mentioned in this document for DATA replication/transfer from source DB to HANA DB.

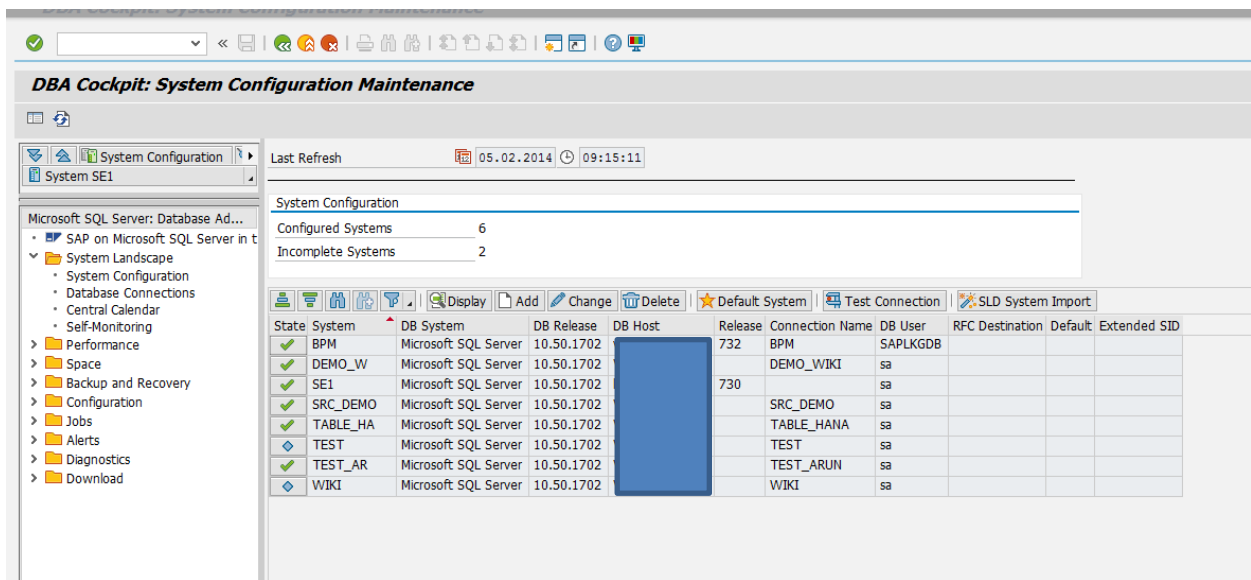
PART 1
*Creating a Source DB
connection*

Part 1:

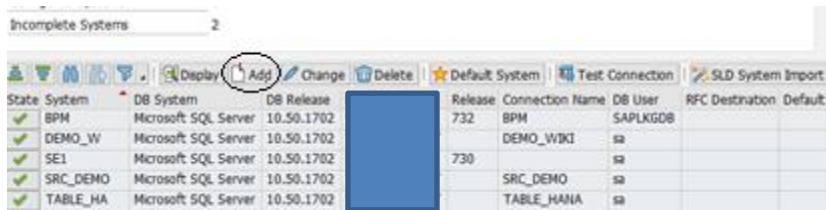
First step is to add source DB connection, Using the SAP GUI, logon to your SLT configured system with the user credentials and invoke transaction DBACOCKPIT



Here you could see all the available connection in DBCON table.



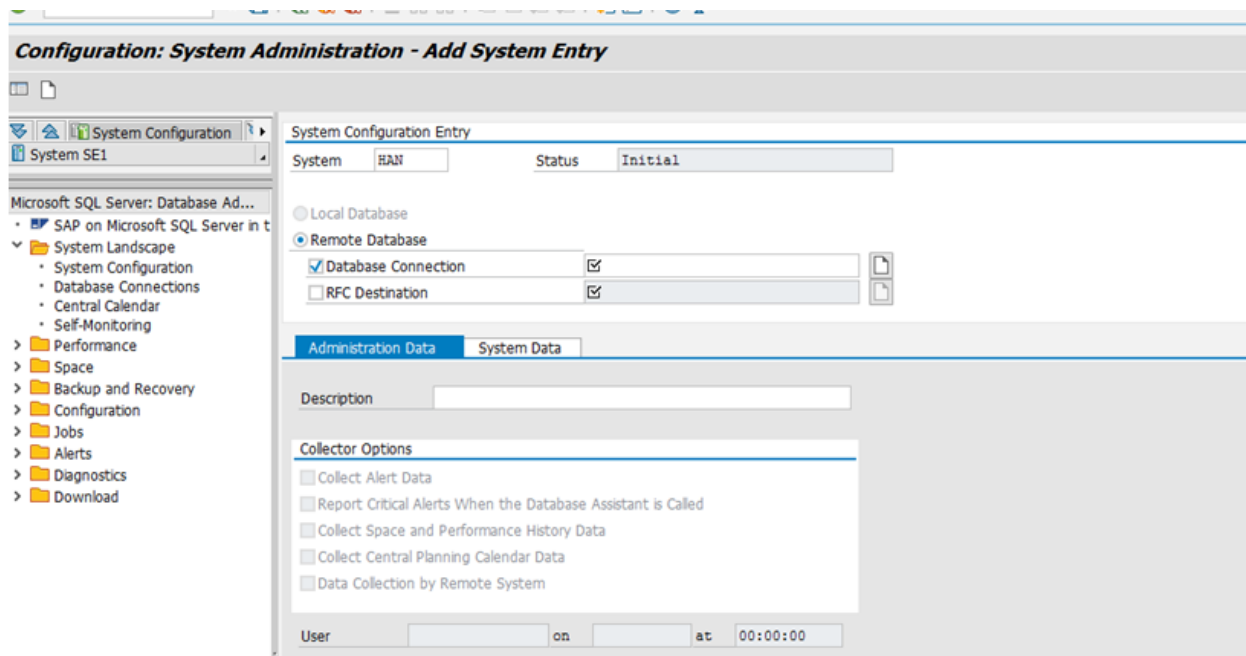
Click on ADD button



Configuration tab will open wherein you have to provide your source system (SAP / Non SAP) connection details.

If your source system is Non SAP system, choose Database connection

If it is a SAP system choose RFC connection.



Here in this document we are using Non SAP system so, chosen Database connection

Click on create icon



Choose your database type in **Database system** Drop down entry.

- MaxDB/liveCache
- DB2 for z/OS
- DB2 for i5/OS
- DB2 for LUW
- Microsoft SQL Server
- Oracle
- SAP Sybase ASE

Give all the required details (refer the following screen shot)

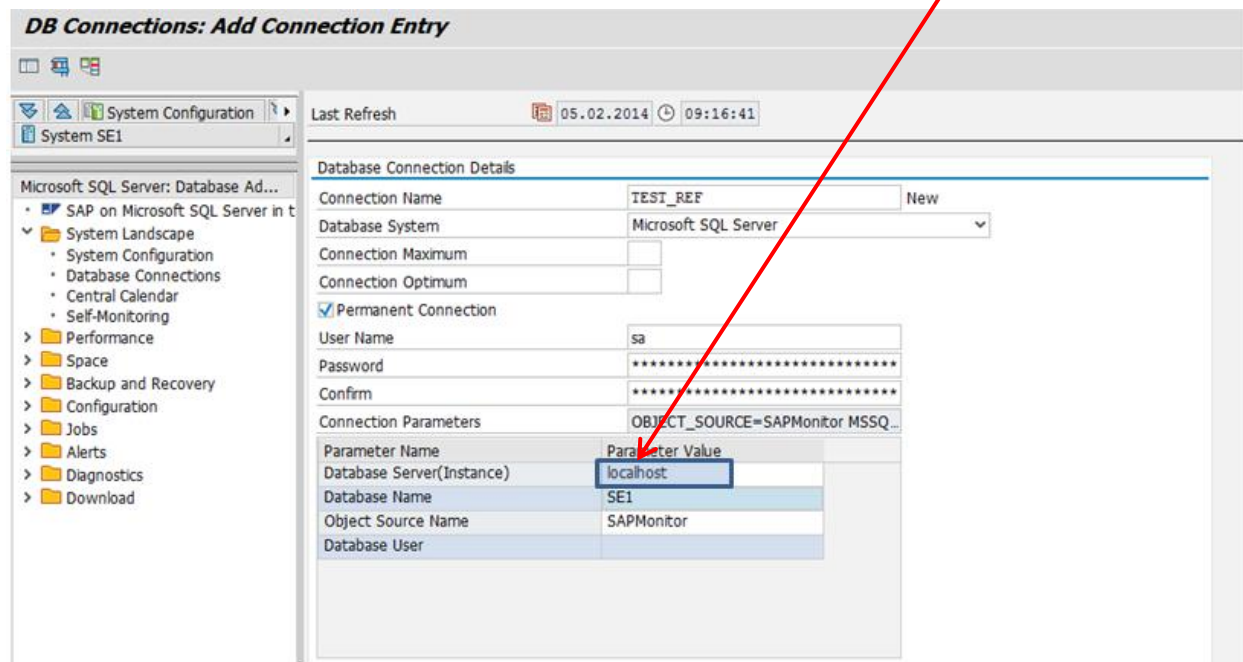
Here we are using MS SQL server.

Give the database user credentials in the provided field (refer the following screen shot)

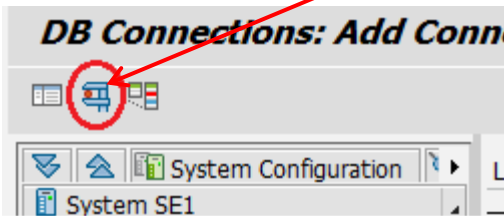
Here we are using local database where our SLT configured system is running so, we have given **local host** in Database Server field.

NOTE:

If you are using separate MSSQL DB /other databases as a source, give the hostname in Database Server (Instance) field



After giving all details click on test icon in order to test your database connection.



If provided details are correct, following success message displays



Click on save button to save your configuration.



Once you save, your database connection details will appear in the table (in DBACOCKPIT transaction home page)

State	System	DB System	DB Release	DB Host	Release	Connection Name	DB User	RFC Destination	Default	Extended SID
✓	BPM	Microsoft SQL Server	10.50.1702		732	BPM	SAPLKGDB			
✓	DEMO_WI	Microsoft SQL Server	10.50.1702			DEMO_WIKI	sa			
✓	HAN	Microsoft SQL Server	10.50.1702		T 730	TEST_REF	sa			
✓	SE1	Microsoft SQL Server	10.50.1702				sa			
✓	SRC_DEMO	Microsoft SQL Server	10.50.1702			SRC_DEMO	sa			
✓	TABLE_HA	Microsoft SQL Server	10.50.1702			TABLE_HANA	sa			
◇	TEST	Microsoft SQL Server	10.50.1702			TEST	sa			
✓	TEST_AR	Microsoft SQL Server	10.50.1702			TEST_ARUN	sa			
◇	WIKI	Microsoft SQL Server	10.50.1702			WIKI	sa			


NOTE:

For non-SAP system choose RFC connection and give the details

System Configuration Entry

System Status

Local Database
 Remote Database

Database Connection
 RFC Destination 

Administration Data | System Data

Description

Collector Options

Collect Alert Data
 Report Critical Alerts When the Database Assistant is Called
 Collect Space and Performance History Data

Click on create and Choose the connection according to your requirements and proceed

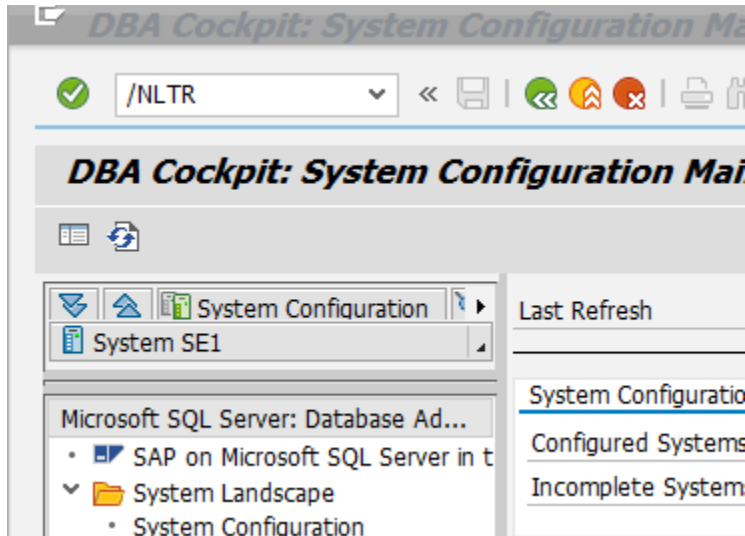
RFC Connections	Ty...	Comment
<ul style="list-style-type: none"> ▼ ABAP Connections 3 <ul style="list-style-type: none"> • BGRFCDEST 3 Generierte Destination für CUST_BACK • SAPOSS 3 SAPNet - R/3 Frontend • SAPSNOTE 3 SAP OCS SERVER (CSS) • SAPXICACHE001 3 Generierte Destination für CUST_BACK • SAPXIPP001 3 Generierte Destination für CUST_BACK • SE1 3 • SLTUSER 3 for slt connection • TMSADM@SE1.DOMAIN_SE1 3 TMS Communication Interface *generated* • TMSSUP@SE1.DOMAIN_SE1 3 TMS Communication Interface *generated* • WS_SRV_SAP_WSRT000 3 • WS_SRV_SAP_WSRT001 3 > HTTP Connections to ABAP System H > Internal Connections I > Logical Connections L > SNA/CPI-C connections S > TCP/IP connections T > Connections via ABAP Driver X 		

PART 2

*Creating a HANA schema
and providing source
and destination details*

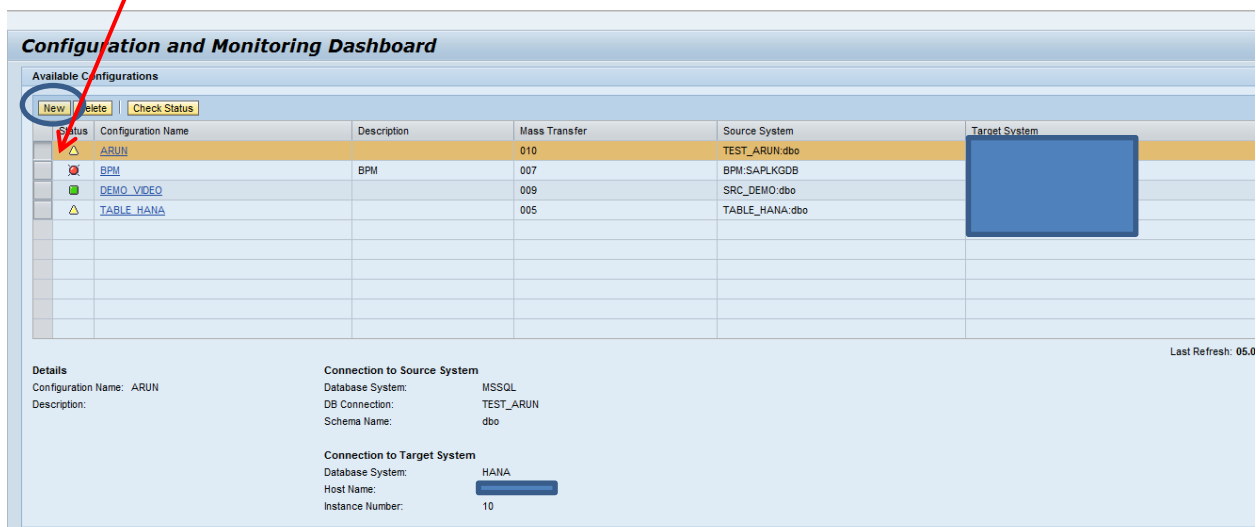
Part 2:

The Next step is to create HANA schema. Using the SAP GUI, logon to your SLT configured system with the user credentials and invoke transaction LTR.



This brings up a Webdynpro. This will display the available configurations, if any exists already.

Click on new button.



The following screen appears,

In the first step, define the configuration name and a description;

The configuration name will be also used as the new schema name that will be created in the HANA system.

The screenshot shows the 'Create Configuration' wizard at step 1, 'Specify General Data'. The progress bar at the top indicates six steps: 1. Specify General Data (highlighted), 2. Specify Source System, 3. Specify Target System, 4. Specify Transfer Settings, 5. Review and Create, and 6. Confirmation. Below the progress bar are 'Previous', 'Next', and 'Close' buttons. The 'General Data' section contains three input fields: 'Configuration Name' with the value 'TEST_HANA', 'Description' with the value 'TEST_HANA', and 'Authorization Group' which is empty.

Proceeding to next step;

In the second step, specify your source system. For an ABAP based system connect via RFC connection, for a non-ABAP system connect via secondary DB Connection (SLT supports only SAP supported DB's).

Choose system Data as **DB connection** for non-SAP system, select your database type, give your DB connection name which you have already created in previous steps (in DBACOCKPIT transaction) and also give schema name of your database.

The screenshot shows the 'Create Configuration' wizard at step 2, 'Specify Source System'. The progress bar at the top indicates six steps: 1. Specify General Data, 2. Specify Source System (highlighted), 3. Specify Target System, 4. Specify Transfer Settings, 5. Review and Create, and 6. Confirmation. Below the progress bar are 'Previous', 'Next', and 'Close' buttons. The 'System Data' section has two radio buttons: 'RFC Connection' (unselected) and 'DB Connection' (selected). Below these are three input fields: 'Database System' with a dropdown menu showing 'MSSQL', 'DB Connection' with the value 'TEST_REF', and 'Schema Name' with the value 'dbo'.

Proceeding to next step;

In the third step, specify all relevant information about the target system.

(With DMIS SP2011 SP5, SLT allows replication to SAP HANA and SAP BW. Replication to ABAP based targets and SAP supported DB are available project based.)

Refer the following screen shot.

Create Configuration

Configuration Name TEST_HANA Description TEST_HANA

1 Specify General Data 2 Specify Source System **3 Specify Target System** 4 Specify Transfer Settings 5 Review and Create 6 Confirmation

◀ Previous Next ▶ Close

Specify the relevant information in order to connect to the target system.

System Data

RFC Connection DB Connection

Database System: * HANA

Schema Name: TEST_HANA

Administration User Name: * SYSTEM

Password: *

Host Name: * [Redacted]

Instance Number: * 10

In the fourth step, specify the transfer settings.

There are two options for the initial load process - resource optimized or performance optimized.

The data class of the table space defines where SLT creates the logging tables on the source system. Administrators can use this option for better monitoring.

In the section Job Options, you can define the jobs that are allocated for this configuration at SAP LT Replication Server but, make sure that your SLT should have minimum 10 background jobs.

Here in job options, we are choosing **Real time** for Real time data replication.

Create Configuration

Configuration Name TEST_HANA Description TEST_HANA

1 Specify General Data 2 Specify Source System 3 Specify Target System **4 Specify Transfer Settings** 5 Review and Create 6 Confirmation

◀ Previous Next ▶ Close

Specify the settings for the data transfer and to manage system resources.

Data Transfer Settings

Initial Load Mode: Resource Optimized

Data Class of Tablespace: [Empty]

Job Options

No. of Data Transfer Jobs: * 008

No. of Initial Load Jobs: 008

No. of Calculation Jobs: 008

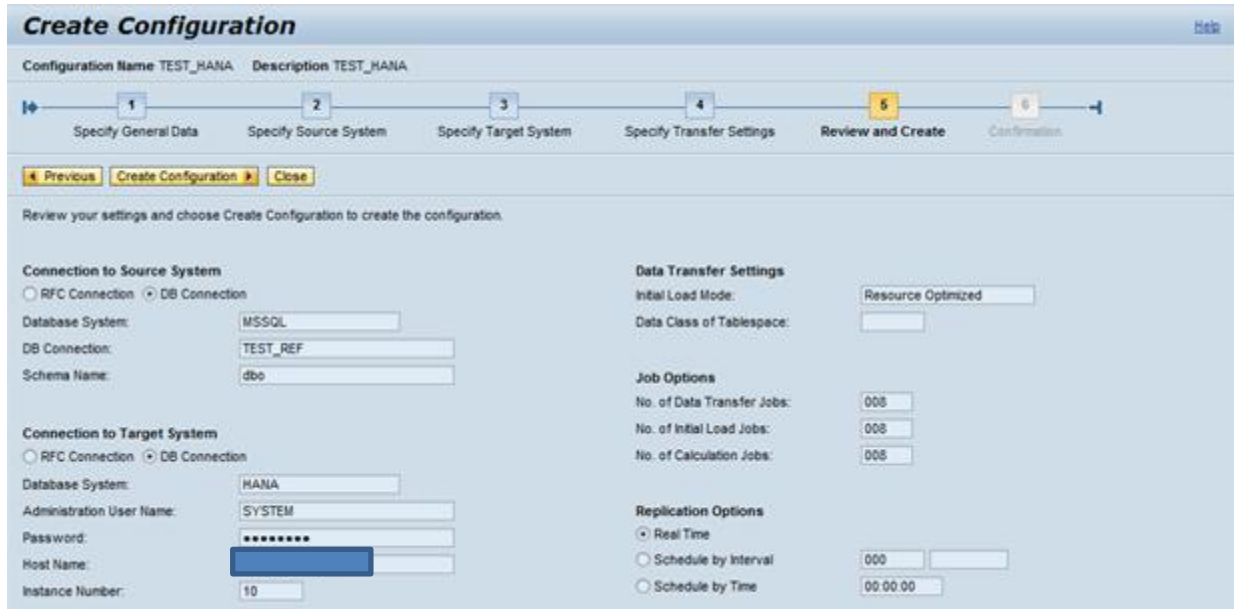
Replication Options

Real Time

Schedule by Interval 000 [Empty]

Schedule by Time 00:00:00

In the fifth step review all your settings and start the creation process of the configuration



Create Configuration Help

Configuration Name TEST_HANA Description TEST_HANA

1 Specify General Data 2 Specify Source System 3 Specify Target System 4 Specify Transfer Settings 5 **Review and Create** 6 Confirmation

Previous Create Configuration Close

Review your settings and choose Create Configuration to create the configuration.

Connection to Source System
 RFC Connection DB Connection
 Database System: MSSQL
 DB Connection: TEST_REF
 Schema Name: dbo

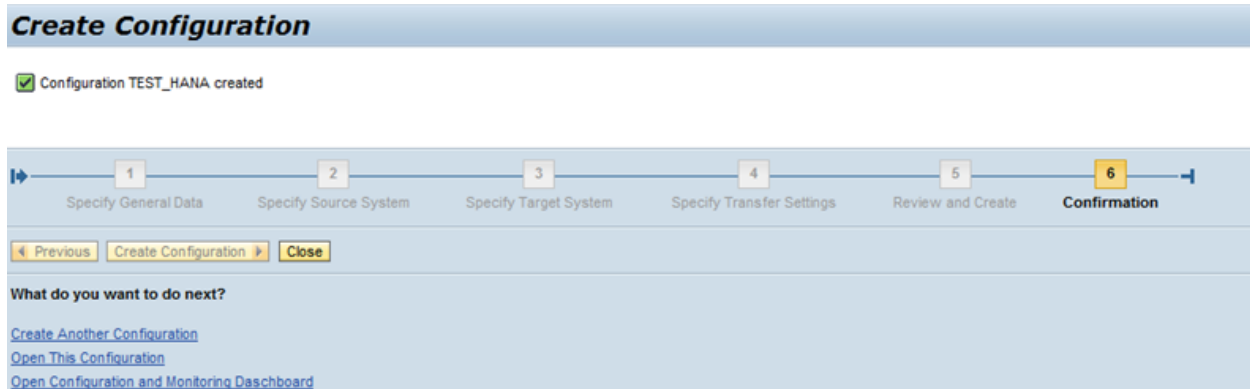
Connection to Target System
 RFC Connection DB Connection
 Database System: HANA
 Administration User Name: SYSTEM
 Password: *****
 Host Name: [Redacted]
 Instance Number: 10

Data Transfer Settings
 Initial Load Mode: Resource Optimized
 Data Class of Tablespace: [Empty]

Job Options
 No. of Data Transfer Jobs: 008
 No. of Initial Load Jobs: 008
 No. of Calculation Jobs: 008

Replication Options
 Real Time
 Schedule by Interval: 000 [Empty]
 Schedule by Time: 00 00 00

The system displays a success message when the configuration has been created successfully.



Create Configuration

Configuration TEST_HANA created

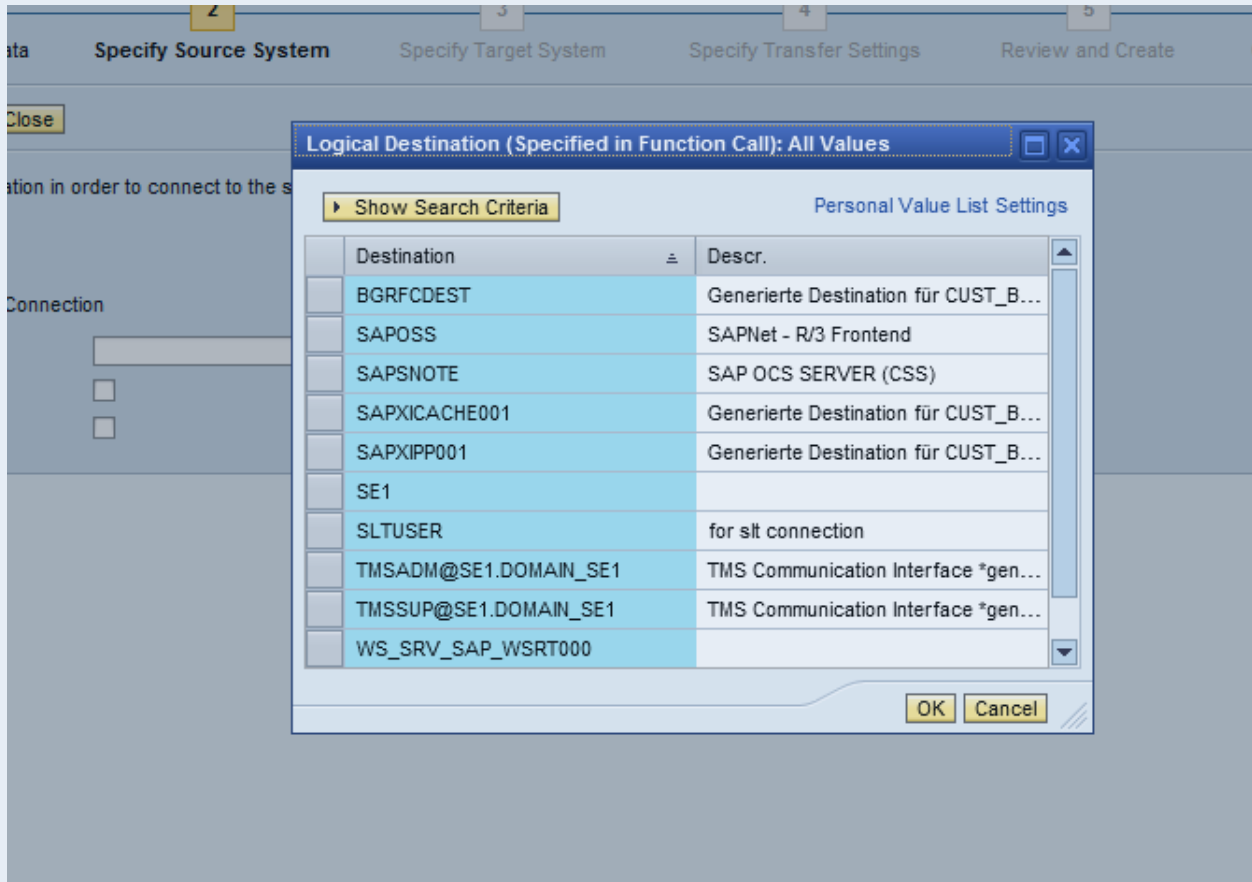
1 Specify General Data 2 Specify Source System 3 Specify Target System 4 Specify Transfer Settings 5 Review and Create 6 **Confirmation**

Previous Create Configuration Close

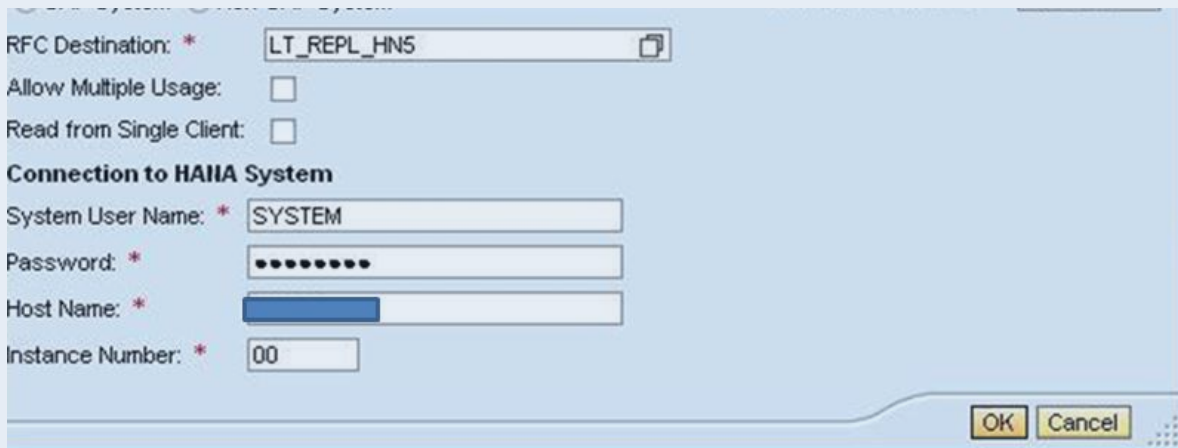
What do you want to do next?

[Create Another Configuration](#)
[Open This Configuration](#)
[Open Configuration and Monitoring Dashboard](#)

NOTE : For SAP system, choose RFC connection in step 2 and select your connection



After selecting your connection, give your HANA system details



You can open the configuration to monitor the triggers.

The screenshot shows the 'Configuration: TEST_HANA' window. At the top, it displays 'Status' (green), 'Source System' (TEST_REF:dbo), and 'Mass Transfer' (013). Below this are 'Description' (TEST_HANA) and 'Target System' (10). There are buttons for 'Edit', 'Close', 'Refresh', and 'Other Actions'. The main area has four tabs: 'Jobs and Connections', 'Triggers', 'Statistics', and 'Settings'. The 'Jobs and Connections' tab is active, showing 'Master Job' (Status: Running) and 'Data Transfer Jobs' (Status: green, Available: 012, Defined: 008, Running: [button]). The 'Connections' section on the right shows 'Source System' (Status: green, Database System: MSSQL, DB Connection: TEST_REF, Schema Name: dbo) and 'Target System' (Status: green, Database System: HDB, Schema Name: TEST_HANA, Administration User Name: SYSTEM, Replication User Name: TEST_HANA, Host Name: 1, Instance Number: 10).

Triggers tab :

The screenshot shows the 'Triggers' tab selected. It displays a table with the following data:

Status	Table Name	Description
<input checked="" type="checkbox"/>	TABLE_HANA	Trigger is active in Source System

Statistics tab :

The screenshot shows the 'Statistics' tab selected. It displays a table with the following data:

Status	Table Name	Current Action	Current Status	Latency Med (All)	Latency Med (24h)	Latency Min (24h)	Latency Max (24h)	Last Replication
<input checked="" type="checkbox"/>	TABLE_HANA	Replication	In Process	No latency data available	No latency data available	No latency data available	No latency data available	No record replicated yet

Settings tab:

The screenshot shows the 'Settings' tab in a SAP configuration interface. It is divided into several sections:

- General Data:** Includes fields for 'Description' and 'Authorization Group'.
- Transfer Settings:** Includes 'Initial Load Mode' (set to 'Resource Optimized') and 'Data Class'.
- Job Options:** Includes 'No. of Data Transfer Jobs' (005), 'Initial Load Jobs' (005), and 'No. of Calculation Jobs' (002).
- Replication Options:** Includes radio buttons for 'Real Time' (selected), 'Schedule by Interval' (with fields for 000 and an empty field), and 'Schedule by Time' (with field for 00:00:00).

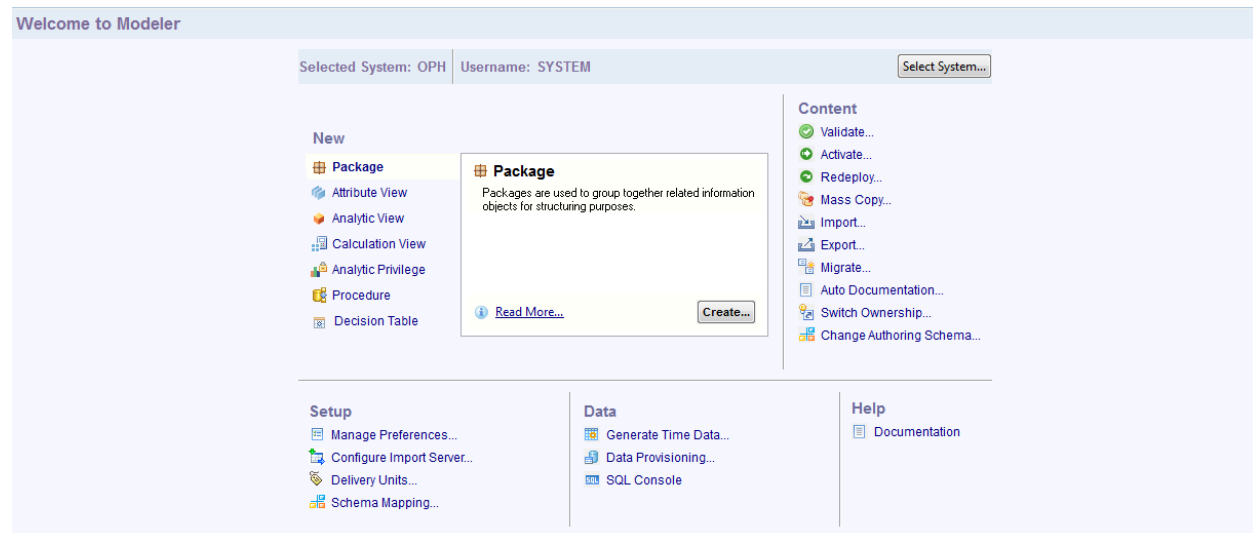
Now you are almost ready to transfer the tables/data from non-SAP system/SAP system to SAP HANA.

In order to initiate the replication, go to your HANA studio where your target system (HANA system which you have used in Configuration) is connected and proceed as mentioned in the part 3.

PART 3
*Initializing the
Replication*

Part 3:

SAP LT Replication Server is integrated into the HANA Modeler. Enter Data Provisioning to start the replication



Steps to be followed to start Replication

1. Select source system
2. Select the target schema (this is equal to your configuration name)
3. Use button Load and / or Replicate to set up the data replication
4. Use button Stop Replication to finish replication
5. Use button Suspend to pause replication
6. Use button Resume continuing replication

Use button Load and / or Replicate following window opens, select your source tables.

Here we are choosing TABLE_HANA table from our source system for replication.

Replicate Request

Select tables for replications

The screenshot shows the 'Replicate Request' dialog box. On the left, the 'Tables for selection' pane contains a search bar and a list of tables. The table 'TABLE_HANA' is highlighted. In the center, there are 'Add' and 'Remove' buttons. On the right, the 'Selected' pane shows a folder named 'Tables' containing the selected 'TABLE_HANA' table. A 'Load from file' button is located at the top right of the dialog.

Object Name	Description
/1CADMC/00000218	
/1CADMC/00000338	
/1CADMC/00000348	
/1CADMC/0000034:	
FINAL_TEST	
POT_WIKI_DEMO	
TABLE_HANA	
WIKI_DEMO	
sap_dblocks	
sap_mon_para	
sap_mon_text	
sap_perfctr	
sap_perfinfo	
sap_perfsample	
sap_perfvali	
sap_stmt_history	
sap_stmt_plan	
sap_stmt_sqltext	
sap_stmt_workload	
...	

Object Name	Descripi...
Tables	
TABLE_HANA	

After selecting your tables click on finish. It means your job is scheduled .

In the following screen shot you could see the Status as “**scheduled**”

SLT Based Table Data Provisioning OPH (SYSTEM) XXXXXXXXXXXX Last update: Feb 5, 2014

SAP Source System and HANA Target Schema Selection

Select Source System: 014 (OBJECT_SOURCE=SAPMonitor MSSQL_SERVER=localhost MSSQL_DBNAME=MANJU)

Target Schema Configured: TEST_MANJU

Source Details

Source System ID: 014 Host Name: OBJECT_SOURCE=SAPMonitor MSSQL_SERVER

SLT Source System ID: SE1 SLT Host Name: XXXXXXXXXXXX

Data Load Management

Filter pattern:

Schema	Table Name	Action	Status	Start Time
TEST_MANJU	TABLE_HANA	Replicate	Scheduled	2014-02-05 10:56:43.000000000

Load...

Replicate...

Stop Replication...

Suspend...

Resume...

Jobs...

Click on refresh button(or F5 key) after some seconds status turns to **In process** , you could see in the following screen shot.

SLT Based Table Data Provisioning OPH (SYSTEM) XXXXXXXXXXXX Last update: XXXXXXXXXXXX 4:03 Interval: 60 seconds

SAP Source System and HANA Target Schema Selection

Select Source System: 009 (OBJECT_SOURCE=SAPMonitor MSSQL_SERVER=localhost MSSQL_DBNAME=MANJU)

Target Schema: DEMO_VIDEO

Source Details

Source System ID: 009 Host Name of Source System: OBJECT_SOURCE=SAPMonitor f

SLT Replication Server System ID: SE1 Host Name of SLT Replication Server System: XXXXXXXXXXXX

Data Load Management

Filter pattern:

Schema	Table Name	Action	Status	Start Time
DEMO_VIDEO	TABLE_HANA	Replicate	In Process	2014-01-18 06:40:46.000000000

Load...

Replicate...

Stop Replication...

Suspend...

Resume...

Jobs...

Again click on refresh , now your replication is done and status turns to “Executed”

SLT Based Table Data Provisioning OPH (SYSTEM) [REDACTED] Last update: Feb 5, 2014 4:27:43 PM Interval

SAP Source System and HANA Target Schema Selection

Select Source System: 014 (OBJECT_SOURCE=SAPMonitor MSSQL_SERVER=localhost MSSQL_DBNAME=MANJU)
 Target Schema Configured: TEST_MANJU

Source Details

Source System ID: 014 Host Name: OBJECT_SOURCE=SAPMonitor MSSQL_SERVER
 SLT Source System ID: SE1 SLT Host Name: [REDACTED]

Data Load Management

Filter pattern

Schema	Table Name	Action	Status	Start Time
TEST_MANJU	TABLE_HANA	Load	Executed	2014-02-05 10:57:32.000000000

Load...
 Replicate...
 Stop Replication...
 Suspend...
 Resume...
 Jobs...

Now open your table in the created schema (Schema name is same as configuration name)

OPH (SYSTEM)

SELECT TOP 500000 * FROM "TEST_MANJU"."TABLE_HANA"

	SL_NO	RELEASE	SP	AREA	CAPABILITY	SUBCAPABILITY	TC	CLASS
1	4	731	00	EP-UI-KCF	Wiki	BAN Settings	BANHOSTNAME_DISABLE_LOGIN	
2	9	731	00	EP-UI-KCF	Wiki	Filters & Macros - Summary Page	SUMMARY_SPACE_MACRO	
3	3	731	00	EP-UI-KCF	Wiki	Filters & Macros - Summary Page	SUMMARY_SPACE_MACRO	
4	8	731	00	EP-UI-KCF	Wiki	Moderation	GROUP_MODERATION_SNI3	
5	6	731	00	EP-UI-KCF	Wiki	Moderation	MODERATION_SCENARIO_4	
6	7	731	00	EP-UI-KCF	Wiki	Moderation	MODERATION_SCENARIO_5	
7	5	731	00	EP-UI-KCF	Wiki	Wiki Search	WIKI_SEARCH_INDEX_PAGE	
8	1	731	00	EP-UI-KCF	Wiki	Wiki Search	WIKI_SEARCH_INDEX_PAGE	
9	2	731	00	EP-UI-KCF	Wiki	Wiki Search	WIKI_SEARCH_INDEX_PAGE	

Now you have successfully replicated the tables from source DB to HANA DB.

Information Sources

Web Sites

- SLT @ SAP Service Marketplace: <http://service.sap.com/hana>
- SLT @ SAP Help Portal: <http://help.sap.com/hana>
- SLT @ SCN: <http://scn.sap.com/community/replication-server>

SAP LT – important Documents and Links

- [Neu SLT – Introduction Video](#)
- [SLT – Overview Presentation](#)
- [Installation Guide](#)
- [Security Guide](#)
- [Operations Guide](#)
- [How-To Guide „Advanced Replication Settings“ \(see SAP Note 1733714\)](#)
- [HANA & SLT Sizing;](#)
- [SLT Sizing Guide](#)
- Important SLT Notes: see in SLT General Note [1605140](#)

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