Syniti

Syniti Solutions

SAP RFC Data Extraction using Syniti Replicate via Syniti Migrate

Syniti info@Syniti.com www.Syniti.com



Table of Contents Overview..... Install SAP Query for Extracting Long Texts on SAP Application......7 Extracting Data using SAP NetWeaver Extract Database Type.....7 InitialValue 24 Views. 24 SNC Configuration in SAP

SAP RFC Data Extract using Syniti Replicate> Syniti Solutions > Page ii



Overview

Syniti Replicate version 10.0 and above supports the extraction of data from SAP ECC and S/4 HANA Systems through the application layer using Remote Function Calls (RFC). Syniti Migrate is integrated with Syniti Replicate to support the Snapshot Management process in Migrate i.e. the orchestration and movement of the data from the source and target systems involved in the migration to a corresponding SRC or TRG staging database. This document focuses on the capabilities and setup of the Syniti Replicate software to support ingestion from SAP Applications via RFC communication. The solution supports the following data objects in SAP. The below initial setup is required prior to Migrate running an SAP application level extraction as part of the Snapshot Management process.

SAP ECC Systems

- Tables
- Cluster TablesPooled Tables
- Pooled Table
- Long Texts

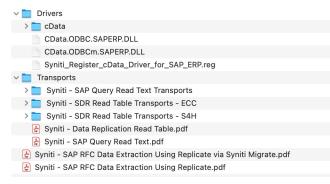
SAP S/4 HANA Systems

- Tables
- Views
- Long Texts

Customers that need to extract data from SAP ECC and S/4 HANA Systems using Syniti Replicate should raise a Syniti Support request for an <u>SAP RFC Extraction for Syniti Replicate</u>.

NOTE: You must be signed in to the Syniti Support site to submit a request.

Syniti support will provide a download link to the file 'SAP RFC Extraction for Syniti Replicate.zip'. This file includes the following artifacts:



1. SAP RFC Data Extraction Using Syniti Replicate User Guide (this document) i. Document Syniti - SAP RFC Data Extraction Using Replicate.docx

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 1 of 34



2. SAP ERP Driver Registration

- i. Windows Registry file Syniti_Register_cData_Driver_for_SAP_ERP.reg
- 3. Custom SAP Read Table Function
 - i. Overview document Syniti Data Replication Read Table.docx
 - ii. Transport RD2K9A011P for SAP ECC6 SAP Basis 700 731
 - iii. Transport DCSK900470 for SAP ECC6 SAP Basis 740 and higher
 - a. Containing Function /BOA/SDR_READ_TABLE
 - iv. Transport S4DK900435 for SAP S/4 HANA 1709 (S4CORE 102) and higher a. Containing Function /BS4/SDR_READ_TABLE
- 4. SAP Long Text Extract Query
 - i. Overview document Syniti SAP Query Read Text.docx
 - ii. Install Transport DCSK900570 for SAP ECC6 SAP Basis 700 and higher & S/4 HANA 1709 (S4CORE 102) and higher

a. Containing SAP Query BOAQ_READ_TEXT in User Group /BOA/QUERY

Prerequisites

Extracting data from SAP ECC and S/4 HANA Systems using Syniti Replicate requires software to be installed on the application server running Syniti Replicate and the SAP Application from which data is being extracted.

Syniti Replicate Windows Application Server

To use the Syniti Replicate SAP NetWeaver Extract database type, the SAP NetWeaver RFC SDK must be installed on the application server running Syniti Data Replication. The following libraries from the RFC SDK must be available at run time:

- sapnwrfc.dll
- icudt30.dll
- icuin30.dll
- icuuc30.dll
- libicudecnumber.dll
- libsapucum.dll

NOTE: Details explaining how to download the SAP NetWeaver RFC SDK can be found at the following location:

https://support.sap.com/en/product/connectors/nwrfcsdk.html

NOTE: The Syniti Replicate Application Server **MUST** have .Net Framework 3.5 and Windows Visual Studio 2013 C++ installed.

NOTE: After installing the SAP NetWeaver RFC SDK, the installation location must be added to the PATH System Environment Variables.

NOTE: It is important that the above installations are all aligned to the correct 64 bit processing capability as SDR is a 64bit application and will rely on the .Net Framework, Windows Visual Studio 2013 C++ and SAP NetWeaver RFC SDK being

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 2 of 34

Commented [JG1]: @Andrew Lund I don't believe this is the correct name space for S/4



aligned to 64bit. If not, then errors will occur when testing the connectivity either directly via 64 bit ODBC connections or via SDR.

Example

Variable	Value		
NUMBER OF PROCESSORS	2		
05	Windows NT		
Path	C:\Ruby22-x64\bin;C:\Program Files (x86	(Common Filer)	Oracle\la
PATHEXT PROCESSOR_ARCHITECTURE PROCESSOR_IDENTIFIER PROCESSOR_LEVEL	.COM; EXE; BAT; .CMD; .VBS; .VBE; JS; JSE; AMD64 Intel64 Family 6 Model 85 Stepping 7, Ge 6	WSF;.WSH;.MSC;.	
	New	Edit	Delete
C1Progra %System	m Files (x867).Common Files/OracleUaval.javapath mDatal;OracleUaval.javapath Root%j.gystem32	Edit Browse	
	loot%		
%System %SYSTEM	koot%/System32/Wbern ROOT%/System32/WindowsPowerShell\v1.0\	Delete	
15/ysteni 15/STEN 15/STEN C:Progra	ROOTN(System32)(WindowsRowerShell)(v1.0) ROOTN(System32)(OpenSSH) m Filee/Amazon(cfn-bootstrap), m Filee/Git/cmd	Delete Move Up	
Súysteni NSYSTEM C:Progra C:Progra C:Progra C:Progra C:Progra	ROOTNISystem32,WindowsRveeShellyr1,D, ROOTNISystem32,Open53H, m Files/Amazonich-bootstrap), m Files/Microsoft SQL Server(1), SOI(ODBC),170(1o- m Files/Microsoft SQL Server(1), SOI(ObBC),170(1o- m Files/Microsoft SQL Server(1), SOI(ObB/min), m Files/Microsoft SQL Server(1), SOI(ObB/min),		
9.5/ptem 9.5/5150 9.5/5150 C.1/hoga C.1/hoga C.1/hoga C.1/hoga C.1/hoga C.1/hoga C.1/hoga	ROOT%/System32(WindowsRoweShell/v1.0) ROOT%/System32(/openSSH) m Flee/Anazovich-bootstrap) m Flee/Alarcad m Flee/Alarcad m Flee/Alarcads SQL Serven(150/DobhSim)	Move Up	

Setup Steps to Extract Data from SAP Systems

- 1. Download zip file SAP RFC Extraction for Syniti Replicate.zip onto Syniti Replicate application server.
- 2. <u>Install cData Driver for SAP ERP</u>.
- 3. Register cData Driver for SAP ERP.
- 4. Install Custom Read Table Function on SAP Application.
- 5. Install SAP Query for Extracting Long Texts on SAP Application.

Download zip file SAP RFC Extraction for Syniti Replicate to Application Server

Download and unzip file SAP RFC Extraction for Syniti Replicate.zip onto the Windows Server where Syniti Replicate is installed. Before unzipping the file, check the properties of the zip file to ensure it's not blocked. If it is, check the Unblock flag and click apply.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 3 of 34



Simo	SAP RFC Extraction for Syniti F	Replicate.zip		
Type of file:	Compressed (zipped) Folder (.zip)		
Opens with:	Windows Explorer Change			
Location:	C:\			
Size:	10.4 MB (10,912,275 bytes)			
Size on disk:	10.4 MB (10,915,840 bytes)			
Created:	Tuesday, June 21, 2022, 12:17	:25 PM		
Modified:	Tuesday, June 21, 2022, 12:14	:14 PM		
Accessed:	Tuesday, June 21, 2022, 12:17	:25 PM		
Attributes:	Read-only Hidden	Advanced		
Security:	This file came from another comp and might be blocked to help pro this computer.			

The folder structure of the unzipped file should look as follows:

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 4 of 34



✓
> 🚞 cData
CData.ODBC.SAPERP.DLL
CData.ODBCm.SAPERP.DLL
Syniti_Register_cData_Driver_for_SAP_ERP.reg
Transports
> 🚞 Syniti - SAP Query Read Text Transports
> 🚞 Syniti - SDR Read Table Transports - ECC
> 🚞 Syniti - SDR Read Table Transports - S4H
🛃 Syniti - Data Replication Read Table.pdf
🛃 Syniti - SAP Query Read Text.pdf
🛃 Syniti - SAP RFC Data Extraction Using Replicate via Syniti Migrate.pdf
🛃 Syniti - SAP RFC Data Extraction Using Replicate.pdf

Install cData Driver for SAP ERP

To install the cData Driver for SAP ERP:

1. Copy folder cData and 2 cData DLL's highlighted below from extracted folder 'SAP RFC Extraction for Syniti Replicate'.

✓ ☐ Drivers	
> 🚞 cData	
CData.ODBC.SAPERP.DLL	
CData.ODBCm.SAPERP.DLL	
Syniti_Register_cData_Driver_for	_SAP_ERP.reg

2. Paste the folder and files into the location where Syniti Replicate was installed. By default, Syniti Replicate is installed in the following location: -

C:/Program Files/Syniti/Syniti Replicate

	> Thi	is PC > Local Disk (C:) > Program Files > Syn	iiti 🔹 Syniti Replicate 🗧
		Name	Date modified
iS		CData	5/16/2023 10:44 AM
	A	CData.ODBC.SAPERP.DLL	5/10/2023 1:42 AM
		CData.ODBCm.SAPERP.DLL	5/10/2023 1:42 AM

Register cData Driver for SAP ERP

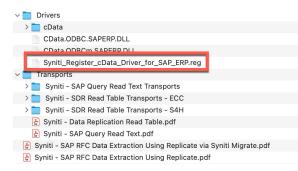
To register the cData Driver for SAP ERP:

1. A Windows Registry file Syniti_Register_cData_Driver_for_SAP_ERP.reg file is available in the zip file.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 5 of 34





2. The Syniti_Register_cData_Driver_for_SAP_ERP.reg file expects that the driver files have be copied to the default Syniti Replicate installation location. If Syniti Replicate has been installed in a different location, then the highlighted file paths below will need to be modified.

	Syniti_Register_cData_Driver_for_SAP_ERP.reg
Windows Registry Editor Version 5.00	
<pre>[HKEY_LOCAL_MACHINE\SOFTWARE\ODBC\N "Driver"="C:\Program Files\\Synitil\Syni "Setup"="C:\Program Files\\Synitil\Syni "OEM"="TRUE" "DisplayProperties"="ALL" "Help"="C:\\Program Files\\Syniti\\Synit "Help"="C:\Program Files\\Syniti\\Synit "Help"="C:\Program Files\\Syniti\\Synit "Help"="C:\Program Files\\Syniti\\Synit "Help"="C:\Program Files\\Syniti\\Synit "Help"="C:\Program Files\\Syniti\\Synit "Help"="C:\Program Files\\Syniti\Synit "Help"="C:\Program Files\\Syniti\Synit "Help"="C:\Program Files\\Synit "Help"="C:\Program Files\\Syniti\Synit "Help"="C:\Program Files\\Syniti\Synit "Help"="C:\Program Files\\Syniti\Synit "Help"="C:\Program Files\\Syniti\Synit "Help"="C:\Program Files\\Synit "Help"</pre>	<pre>iti Replicate\\CData.ODBC.SAPERP.dll"</pre>
[HKEY_LOCAL_MACHINE\SOFTWARE\ODBC\ODBCIN "Syniti-CData Driver for SAP ERP"="Insta	

To register the cData Driver for SAP ERP:

- 3. Double-click the Syniti_Register_cData_Driver_for_SAP_ERP.reg file
- 4. When prompted, confirm that you want to update the registry.

Are you sure you want to continue?	registry.	esktop/syniti_Ke	gister_cData_Dri	iver_for_SAP_ERF	reg, do not	add it to the
	Are you sure you w	ant to continue?				

Install Custom Read Table Function on SAP Application

To efficiently extract table / view data from SAP ECC and S/4 HANA Systems using Syniti Replicate, custom read table function SDR_READ_TABLE must be installed on the SAP system.

Transport RD2K9A011P contains the version of the function for SAP ECC6 SAP Basis 700 – 731.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 6 of 34



Transport DCSK900470 contains the version of the function for SAP ECC6 SAP Basis 740 and higher. Transport S4DK900435 contains the version of the function for SAP S/4 HANA 1709 (S4CORE 102) or higher.

Install the required version of the function using the standard SAP Transport import process.

Document Syniti - Data Replication Read Table.docx provides an overview of the contents of the specified SAP Transports.

Install SAP Query for Extracting Long Texts on SAP Application

To extract long text data from SAP ECC and S/4 HANA Systems using Syniti Replicate, install SAP Query BOAQ_READ_TEXT in User Group /BS4/QUERY on the SAP system.

Transport DCSK900570 contains the SAP Query that is compatible with SAP ECC & S/4 HANA.

Document Syniti - SAP Query Read Text.PDF provides an overview of the contents of the specified SAP Transports.

Extracting Data using SAP NetWeaver Extract Database Type

This section of the document provides detailed steps to: 1. Extract Long Texts

When Syniti Replicate is called by the Syniti Knowledge Platform Migrate solution, the creation of the Syniti Replicate Connections and Replications will be performed by Syniti Migrate as part of the Snapshot management process. The user does not need to create the Connections or Replication directly in the Syniti Replicate Management Center. The one exception to this is to support the extraction of SAP Long Texts, which is detailed below.

See <u>Appendix 1</u> for details regarding connection properties, should changes need to be made to the defaults set by Migrate as part of the Snapshot process.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 7 of 34



Extracting Long Texts

To extract long texts:

- 1. Import Table Metadata into Syniti Replicate
- 2. <u>Create Long Text Table in Target Data Source</u>
- **3.** <u>Create Long Text Replication</u>

Step 1: Import Table Metadata into Syniti Replicate

1. Right-click the Source Connection that represents the SAP System where data is being extracted and choose **Select Tables**.

				itart Page	Object Browser
📸 New Metadata 🛛 📲 🕌	0	5 😳 📰	: 目 (30 2	
🗉 🜔 Syniti DR			Demo	S4L_Demo_So	urce (Syniti DR ljocal/Demo lj
Billocal Billocal Billocal Billocal Billocal Billocal Billocal Sources		_			Replicatio
🖃 🔚 Targets	8	Execute SQL Query			
🖂 🗐 SDR_D 🛅 SD		Select Tables	Da .		
Replication		Create Multiple Replicati	ions		
🗄 🧮 Groups	٠.	Export Replications			
	82	Copy Connection	Ctrl+C		
	×C	Rename Connection	F2		
		Remove Connection			
	0	Refresh Schema Informa	rtion F5		
	s	Transactional Setup Connection Properties		*	

2. On the Select Tables dialog box, expand the Source navigation tree (S4I_Demo_Source) and then click the schema called **SAPERP**.

Tip: Avoid expanding the navigation tree below the SAPERP schema as doing this causes the system to attempt to load all the tables defined by the 'TableMode' connection property and could take a few minutes to complete.

Select Tables	- 0 ×
Expand the treeview and select th source connection.	e objects you want to replicate under the
Filter	¥×i±+
S45_Demo_Source	[•
	Ŀ
Hide System Tables	

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 8 of 34



3. Select the specific table to be extracted by entering the name in the **Filter** input field and then click the **Apply Filter** icon.

Tip: Append % to the first characters of a table to retrieve a list of tables that begin with specific characters.

Select Tables		-		3
Expand the treeview and select the obje source connection.	cts you want to r	eplicati	under the	
Filter: BOAQ_READ_TEXT		T I	< ± ·	
			ŀ	(
Hide System Tables	OK		Cance	
Select Tables Expand the treeview and select the obj source connection.	ects you want to		te under th	
Expand the treeview and select the obj	ects you want to			•
Expand the treeview and select the obj source connection.	ects you want to		te under th	
Expand the treeview and select the op source connection.	ects you want to		te under th	
Expand the treeview and select the op source connection.	ects you want to		te under th	

Step 2: Create Long Text Table in Target Data Source

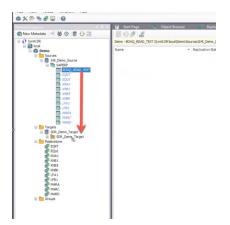
To create a new Long Text table in the target database:

1. Drag and drop the **BOAQ_READ_TABLE** source table onto the target data source.

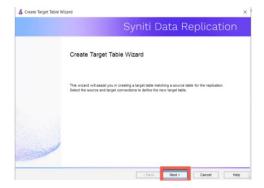
Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 9 of 34





2.On the 'Create Target Table Wizard', click Next.



- Confirm that the source connection name and source table name are correct.
 Click Next.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 10 of 34



		Syniti Data Replication
Source	Select the source table	to be copied.
arget connection		
Define columns	Connection Name:	S4LDemo_Source
lctions		
Summary	Table Name:	SAPERP.BOAQ_READ_TEXT V
		Open Table
State of the		
and a start of the		
Notraile		

- 3. Confirm that the target connection name, database name and owner name are correct.
- 4. By default, the target table name will be BOAQ_READ_TEXT. It's recommended that this table name is changed to something that represents the specific long texts being extracted.

NOTE: It's likely that several different long text extracts will be needed for different data objects.

5. Click Next.

		Syniti Data Replication
Source connection	Select the target conne	ction and define the target table name.
Farget connection Define columns GQL script Actions Gummary	Connection Name: Database Name: Owner Name:	SDR_Demo_Target v SDR_Demo_Target v 6a. v
	Table Name:	Material_Texts
100		
and the second		

The details of the table to be created display.

6. Click Next.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 11 of 34



A Create Target Table Ward Create Target Table Ward Create Target Connection Target connection Target connection Target connection Define contames Source connection Target connection Define contames Source connection Target connection Define contames Source connection Source connection

The create table SQL statement displays.

7. Click Next.

	Syniti Repl	licate
lource connection		
arget connection	Table Creation Script	
Define columns SQL script Actions Bummary	<pre>create table MATERIAL_LONG_TEXT creates table "dgBAL_Volume"."dbbd".MATERIAL_LONG_TEXT ("</pre>	~
and the second second		~

The long text table is created in the target database specified.

Step 3: Create Long Text Replication

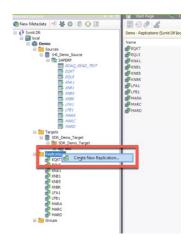
To create the replication:

1. Right-click the Replication folder and select Create New Replication.

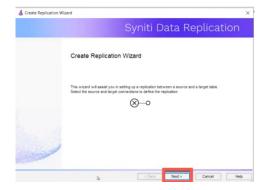
Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 12 of 34





2. Click Next.



- 3. Enter the Replication Name
- 4. Click Next.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 13 of 34



		Syniti Da	ta Replication
Replication type Source connection	server.	e a one-time unidirectional replication	, from the source server to the target
Source log rile Target connection	Replication Name Replication Name Description:	Material_Texts	
Target log inte Mapping info	Use Group:	O-undefined-	 ✓ Create
Scheduling Actions Summary	Replication Type Refresh Continuous Mirro Synchronization	ring	

- 5. Select the Source **Connection Name**
- 6. Select Table Name BOAQ_READ_TEXT
- 7. Click Next.

		S	yniti D	ata Re	eplicat	ion
Replication type	Select the source con	nnection and tabl	e to be replicated.			
Source connecti 3						
larget connection	Connection Name	S4LDer	no_Source			~
Mapping info	Table Name:	IIII SAPERA	BOAQ_READ_T	EXT .		~ F
Scheduling					Open Table	
lctions						_
Summary						
States 1						
- Calendar						

- 8. Select the Target Connection Name into which the long text data is to be replicated
- 9. Select **Database Name** into which the long text data is to be replicated
- 10. Select Schema **Owner Name** into which the long text data is to be replicated
- 11. Select **Table Name** into which the long text data is to be replicated
- 12. Click Next.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 14 of 34





13. Review the mapping information and click Next.

		S	yniti [Data F	Replica	atio	n
Replication type		been automatically (g source fields to tar				ource and	
Source connection	-						
	[S4LDemo_Source			[5	DR_Demo_Target)	SDR_Den	ю_Та
arget connection	Field name	Ordinal ^		F	field name	Ordinal	T) ^
	BOA READ	01 -			BOA READ	01	n\
	BOA_READ	02 -			BOA_READ	02	n\
Mapping into	BOA_READ	03 -			BOA_READ	03	n\
	BOA_READ	04 -		(_BOA_READ	04	n\
cheduling	BOA_READ	05 -			_BOA_READ	05	n\
ctions	BOA READ	06 4 -			BOA READ	06	n\ *
ummary	<	>		<			>
	Field name	Target Table	Ordinal	Type	Size		51
	BOA_READ.	[SDR_Demo_Tar	1	nvarchar	2000		
1.000	_BOA_READ	[SDR_Demo_Tar	2	nvarchar	2000		
Second and a	_BOA_READ	[SDR_Demo_Tar	3	nvarchar	2000		- 4
Contraction of the second	<						>

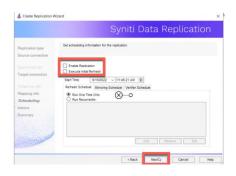
Before running an initial extract, a replication where clause to restrict it to a subset of long text records should be added. Therefore, on the next step:

- Deselect Enable Replication.
 Deselect Execute Initial Refresh.
- 16. Click Next.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 15 of 34





17. Click Next.

	Syniti Data Replication
Replication type Source connection	Choose the action(s) to perform at the end of the wizard.
	At the end of the wizard:
Target connection	Launch the Greate Replication Wizard Proceed with the creation of another replication.
Mapping info	
Scheduling	
Actions	
Summary	
and the state	
Contrada and	
C. S.	
	< Back Next Cancel Help

18. Click Finish.

		Syniti Data Repl	ication
Replication type	Click 'Finish' to create the replica	ten.	
Source connection			
	Replication Summary		
	Replication Name:	Material_Texts	^
Target connection	Source Connection:	S4LDemo_Source	
	Source Schema:	SAPERP	
	Source Table:	BOAQ_READ_TEXT	
	Target Connection:	SDR_Demo_Target	
Mapping info	Target Database:	SDR_Demo_Target	
Scheduling	Target Owner:	dbo	
Actions	Target Table:	Material_Texts	
	Replication Type:	Refresh	
Summary			
	Replication Status:	Disabled	
1	Click Finish to perform the follow	ing actions:	
Contraction of the second		Create Replication	~

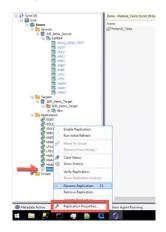
The replication is created, however, its icon is dimmed because it's not enabled.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 16 of 34



19. To add a where clause to the replication, right-click the replication and select Replication Properties.



On the 'Refresh' properties menu item, an extract where clause can be added to the attribute 'Refresh Filter Source'.

Long Text Data Filtering

Option 1: Using a 'where clause' to run a query with a specific Variant

To use this option, a Variant must be created for SAP Query 'BOAQ_READ_TEXT' in User Group /BOA/QUERY

Example Where Clause using a Variant

Variant = 'MY_VARIANT'

Option 2: Using a 'where clause' to pass in query selection parameters

SAP Query 'BOAQ_READ_TEXT' supports querying on the following selection parameters:

- Text Object: Field Name _BOA_READ_TEXT-OBJECT
- Text Name: Field Name _BOA_READ_TEXT-NAME
- Text ID: Field Name BOA READ TEXT-ID
- Language: Field Name _BOA_READ_TEXT-LANGUAGE

Example Where Clause using Input Parameters

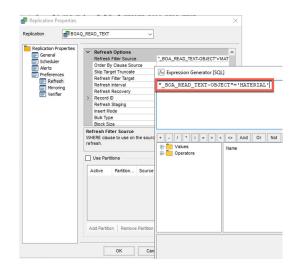
"_BOA_READ_TEXT-OBJECT" = 'MATERIAL' AND "_BOA_READ_TEXT-ID" = 'BEST'

NOTE: Double quotes need to be wrapped around the field names that are used in the where clause.

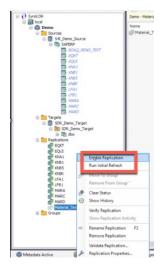
Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 17 of 34





- Run the long text replication by right-clicking the long text replication and selecting Enable Replication.
 Right-click the long text replication and select Run Initial Refresh.



Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 18 of 34



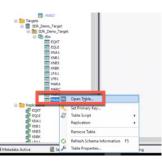
22. When prompted, click $\ensuremath{\textbf{Yes}}$ to confirm that a full refresh should be performed.



The long extract starts to process.

Start Page Start Diject Browser			Replication M do (Material_Texts)	Acenitor 🗙 🗾			17	ет(t)
Name Material_Tots	 Replication Status Idle 	Initialization Sta Executed	Replication Prog	Processed Recor	Failed Records	Total Records	LastReplication. 10 √ Success	, Hat

Once the extract is complete, view the extracted long text data by right-clicking the Long Text table under the Target Data Source and choosing **Open Table**.



The data extracted should correspond to parameters passed in the where clause or the variant used in the where clause.

esult	:								
	_BOA_READ_TEXT-OBJ	_BOA_READ_TEXT-NAME	_BOA_READ_TEXT-ID	_BOA_READ_TEXT-LAN	_BOA_READ_TEXT-FORMA	_BOA_READ_TEXT-LINE	_BOA_READ_TEXT-COUN	ZMANDT	Variant
	MATERIAL	TKW_1002	BEST	E	*	Semi-Metallic Brake Pads del	1	400	(null)
	MATERIAL	TKW_1002	BEST	E	1	pack. See Contract for com	2	400	(null)
	MATERIAL	TKW_1002	BEST	E	1		3	400	(null)
	MATERIAL	MH80008	BEST	E	*	Long PO description for the	1	400	(null)
	MATERIAL	MH80008	BEST	E	1	all nursing units and many d	2	400	(null)
	MATERIAL	MH81008	BEST	E	*	Long PO Description for Forc	1	400	(null)
	MATERIAL	MH81008	BEST	E	1	contain more detailed inform	2	400	(null)
	MATERIAL	MH51623	BEST	E	*	Zimmer, 4022-00-45, Zimme	1	400	(null)
	MATERIAL	MH51623	BEST	E	1	Fenestrated Stem $45 \text{mm} \times 1$	2	400	(null)
	MATERIAL	00000000000000183	GRUN	E	*	This is a test	1	400	(null)
	MATERIAL	00000000000014563	GRUN	E		Test	1	400	(null)

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 19 of 34



Appendix 1 – Important Connection Property Details

The table below defines the available cData ODBC SAP ERP driver connection properties along with recommended values to be used for particular properties.

YELLOW = Properties that are set by Migrate solution GREEN = SAP connection information that may or may not need to be populated based upon requirements

Group	Property	Recommended Value
Authentication	ConnectionType	Netweaver
Authentication	Host	{Enter SAP Host or Message Server}
Authentication	SystemNumber	{Enter SAP System Number}
Authentication	User	{Enter SAP RFC Username}
Authentication	Password	{Enter SAP RFC User Password}
Authentication	Client	{Enter SAP Client}
Authentication	X509Certificate	
Authentication	MessageServer	{Enter SAP Host or Message Server}
Authentication	Group	{Enter Group if using Message Server}
Authentication	SystemId	{Enter SAP System ID}
Authentication	RFCURL	
Authentication	MessageServerService	
Caching	AutoCache	FALSE
Caching	CacheProvider	
Caching	CacheConnection	
Caching	CacheLocation	%APPDATA%\CData\SAPERP Data Provider
Caching	CacheTolerance	600
Caching	Offline	FALSE
Caching	CacheMetadata	FALSE
Firewall	FirewallType	NONE
Firewall	FirewallServer	

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 20 of 34



Group	Property	Recommended Value
Firewall	FirewallPort	0
Firewall	FirewallUser	
Firewall	FirewallPassword	
Logging	Logfile	
Logging	Verbosity	1
Logging	LogModules	
Logging	MaxLogFileSize	100MB
Logging	MaxLogFileCount	-1
Misc	Charset	
Misc	Destination	
Misc	EndianType	Auto
Misc	GatewayHost	{Populate if SAP Gateway is used}
Misc	GatewayService	{Populate if SAP Gateway is used}
Misc	GenerateSchemaFiles	Never
Misc	InitialValueMode	InitialValue
Misc	Language	EN
Misc	Location	
Misc	MaxRows	-1
Misc	Other	{Populate with TrimStrings property to change the way leading and trailing spaces are handled – see appendix for further details}
Misc	Pagesize	25000
Misc	PseudoColumns	*=*
Misc	QueryMode	Global
Misc	ReadTableFunction	/BOA/SDR_READ_TABLE (SAP ECC Systems) /BS4/SDR_READ_TABLE (SAP S/4 HANA Systems)
Misc	RTK	
Misc	StoredProcedureFilter	BAPI*
Misc	SupportEnhancedSQL	TRUE

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 21 of 34

Syniti

Group	Property	Recommended Value
		(NOT TABNAME LIKE '%/%' AND (TABCLASS =
Misc	TableMode	'TRANSP' OR TABCLASS = 'POOL' OR TABCLASS = 'CLUSTER') AND CONTFLAG <> 'L')
Misc		60
Misc	Timeout	FALSE
	UseLabels	
Misc	UseUnicodeRFC	TRUE
Misc	UseSimpleNames	FALSE
Misc	DefaultDomain	
Misc	EnableForeignKeyDetection	FALSE
Misc	IncludeDualTable	FALSE
Misc	LimitKeySize	255
Misc	MapBigintToVarchar	FALSE
Misc	MapToInt	FALSE
Misc	MapToLongVarchar	-1
Misc	MapToWVarchar	TRUE
Misc	MaximumColumnSize	16000
Misc	UpperCaseIdentifiers	FALSE
Proxy	ProxyAutoDetect	TRUE
Proxy	ProxyServer	
Proxy	ProxyPort	80
Proxy	ProxyAuthScheme	BASIC
Proxy	ProxyUser	
Proxy	ProxyPassword	
Proxy	ProxySSLType	Auto
Proxy	ProxyExceptions	
Schema	BrowsableSchemas	
Schema	Tables	
Schema	Views	
Security	SNCMode	{Set to TRUE if SNC Used} {See Appendix 3}

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 22 of 34



Group	Property	Recommended Value
Security	SNCName	{Populate if SNC is used}
Security	SNCQop	{Populate if SNC is used}
Security	SNCPartnerName	{Populate if SNC is used}
Security	SNCLibPath	{Populate if SNC is used}
SSL	SSLServerCert	

TableMode

The value entered here represents the filter criteria that is applied to SAP data dictionary table DD02L to extract the scope of tables available for extraction.

This statement can be altered to add some additional tables e.g., cluster / pooled or views e.g., (NOT TABNAME LIKE '%/%' AND TABCLASS = 'TRANSP' AND (CONTFLAG = 'A' OR CONTFLAG = 'C' OR CONTFLAG = 'G' OR CONTFLAG = 'E' OR CONTFLAG = 'S' OR CONTFLAG = 'W')) OR TABNAME = 'PAPPINSVH'

Using criteria that select more tables than recommended may cause performance issues when performing operations that browse the SAP metadata.

PageSize

This property defines the number of records that will be extracted per RFC call. The recommended default value is 25000, however, this can be adjusted. Using a higher value may reduce extraction times, however, if the value is too large, then extracting tables with lots of columns may fail due to lack of temporary memory on the SAP application side.

QueryMode

The SAP Query to extract long text BOAQ_READ_TEXT is a global query, hence by default it's recommended to use value Global. However, if Local queries are created, then this value can be set to ALL.

NOTE: If there are queries with names that overlap with standard SAP tables or queries with the same name but in different User Groups then this may be problematic and hence should be avoided if possible.

TrimStrings

This property provides control of how leading and trailing spaces are handled on extracted data. The options are: -

- TrimAll Trim the leading and trailing spaces of the string value.
- TrimLeft Trim the leading spaces of the string value.
- TrimRight Trim the trailing spaces of the string value.
- None Do not trim any spaces of the string value

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 23 of 34



The TrimStrings connection property is populated within the driver property 'Other' e.g. Other=TrimStrings=TrimRight. If no value is provided for this property, the default behavior is TrimAll - Trim the leading and trailing spaces of the string value.

InitialValue

This property controls how Blank versus NULL values are handled. By default, it's recommended that value InitialValue is used. This writes a <Blank> value to a table field with no data. This value can be changed to NULL if the value written should be NULL.

NOTE: If there are columns that are primary keys that have <Blank> values then using value NULL will cause the extract to fail.

Views

This property allows a subset of the tables returned by the TableMode criteria to be restricted in the metadata extract.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 24 of 34



Appendix 2 – Troubleshooting

If there are data extraction errors that can't be resolved through the usual Syniti Replicatelogs, it's possible to activate detailed logging in the cData Driver for SAP ERP. This can be done by setting the following connection properties:

- Logfile -> Enter the location and filename of the log file e.g. C:\SDR\Debuglog.txt
- Verbosity -> Enter value 3

Logging	
Logfile	C:\SDR\Debuglog.txt
Verbosity	3

Known Issue 1: Maximum ODBC Connection String Exceeded

When creating a connection using the properties in SDR, there is a limit to maximum connection string length. This limit is 1032 characters. Therefore, deviating from the recommended property values may cause the character limit to be exceeded and hence cause problems.

To get around this issue it's possible to create a DSN record and then reference this DSN directly in the SDR connection.

Known Issue 2: Performance Problems when CData Ingests SAP Metadata

On some deployments we have found an issue where the Replicate Service memory consumption rises a very large amount (4 to 5GB +) at certain intervals when running SAP NetWeaver based replications using the CData connection type. The issue is caused by CData caching the SAP table and field metadata every hour based on the default settings of the driver. Once the caching is complete the performance and memory usage returns to the pre-caching levels. A side effect of the caching can be that replications look to be in a pending state until the caching is complete.

To resolve this issue, you can change the caching refresh period from 60 mins to 24 hours by adding the following parameter string to the other parameter under the advanced settings.

SchemaCacheDuration=86400

It is then recommended to schedule an SAP replication to run once every 24 hours so that the caching is performed once a day and won't be retriggered during the snapshot or replication window.

Appendix 3 – SNC Configuration

This section details the steps to configure a Secure Network Communications (SNC) connection between a Replicate Server installed on Windows and an SAP ECC or S/4HANA server. This is an advanced topic, and an experienced SAP Basis resource will be required.

The SAP side of the configuration is typically the responsibility of the SAP Basis team. The steps for configuring different versions of SAP may differ so the steps below are intended for guidance only.

NOTE: The SAP server must have SNC enabled.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 25 of 34



Download and Extract the Files

To download and extract the files:

- 1. Retrieve the SAP Cryptographic Library files. The latest version can be downloaded from the SAP Marketplace. Download:
 - SAPCAR.EXE—Utility to uncompress .SAR files
 - SAPCRYPTOLIBP_<version number>.SAR Compressed file with the SAP crypto library, for example SAPCRYPTOLIBP 8536-20011729.SAR.
- 2. On the Replicate server, create a folder for the Cryptographic Library, for example C:\SAP_SNC.
- 3. Copy the files downloaded in step 1 to this folder.
- 4. Extract the files from the . SAR file by executing the SAPCAR application. Open a command prompt with Administrator privileges.
- 5. Move to the C:\SAP SNC folder and run the following command:

sapcar -xvf SAPCRYPTOLIBP_8536-20011729.sar

NOTE: Eight files are extracted, including the sapcrypto.dll and sapgenpse.exe.

Add System Environment Variables

You must be an Administrator on the Replicate server to perform this action.

To add the environment variables:

1. Add a System environment variable named SECUDIR with a value of the folder path where the SAP Cryptographic Library files have been extracted. The screenshot below shows an example where the files were extracted to C:\SAP_SNC.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 26 of 34

Syniti

PROCESSOR_IDENTIFIER Intel64 Family 6 Model 79 Stepping 1, GenuineIntel PROCESSOR_LEVEL 6 PROCESSOR_REVISION 4f01 PSModulePath %ProgramFiles%\WindowsPowerShell\Modules;C:\Wind SECUDIR C:\SAP_SNC TEMP C:\Windows\TEMP	
PROCESSOR_REVISION 4f01 PSModulePath %ProgramFiles%\WindowsPowerShell\Modules;C:\Wind SECUDIR C:\SAP_SNC	
PSModulePath %ProgramFiles%\WindowsPowerShell\Modules;C:\Wind SECUDIR C:\SAP_SNC	
SECUDIR C:\SAP_SNC	
	ows\s
TEMP C:\Windows\TEMP	
TMP C:\Windows\TEMP	
New Edit	Delete

- 2. Add another System environment variable named SNC_LIB with a value of the SAP Cryptographic Library full path, for example C:\SAP_SNC\sapcrypto.dll.
- 3. If the Replicate services or applications were active during the creation of the environment variables, restart them to read the newly created variables.

Generate the Personal Security Environment and Certificate

A prerequisite to configuring an SAP NetWeaver connection, the Replicate application server must have a Personal Security Environment (PSE) with a certificate accepted by the SAP server. To generate the PSE and the certificate:

1. At the command prompt, run the following command to generate the PSE on the SST server:

sapgenpse gen_pse -v -p C:\SAP_SNC\RFC.pse

NOTE: Replace C:\SAP SNC\ in the above command with your file path if it is different.

- 2. The process prompts you for a PIN code. A password is not required. Either:
 - Do not enter a PIN and press the Enter key.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 27 of 34



- Enter a PIN, and note it as it will be needed again.
- The process prompts 'get_pse: Distinguished name of PSE owner'. Enter CN=ServerName

where *ServerName* is a name to identify the SST server in SAP, for example CN=RepProd. NOTE: As a result of this command, an RFC.pse is created in the SECUDIR folder.

4. At the command prompt, run the following command to generate the SST server certificate: sapgenpse export_own_cert -v -p C:\SAP_SNC\RFC.pse -o C:\SAP_SNC\RFC.crt NOTE: Replace C:\SAP_SNC\ in the above command with your file path if it is different. NOTE: As a result of this command, the RFC.crt certificate file is created.

Import the Certificate to the Server and Client PSEs

To continue setting up the SNC connection, import the certificate into the Server and the Client Personal Security Environments (PSEs).

To import the certificate into the Server PSE:

- 1. Navigate to the SAP System that Replicate should connect to via SNC.
- 2. Open the **STRUST** transaction.
- 3. Expand the **SNC SAPCryptolib** folder in the left panel and click the node below it. NOTE: You may be asked for a password to proceed.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 28 of 34



Trust Manager: Display	
9 M	
Struct SacCryptolb Dockascos SafLaid Dockascos SafLaid Dockascos SafLaid SSL dent Standard SSL dent SC. Ident (Incory X SSL X SSL dent SC. Ident (Incory X SSL X SSL SSL dent SSL Ident (Incory SSE SSL SSF SSL	Image: Control of the state of the stat

- 4. Click the Import Certificate button which is left of the Add to Certificate List button; a pop up opens.
- 5. Select your certificate file RFC.crt and click the Continue button. The certificate data displays.
- 6. Click the Add to Certificate List button. The certificate displays in the Certificate List.

NOTE: If the Add to Certificate List button is disabled, click the Display <-> Change button in the upper left corner to review the settings

7. Click the Save button (Ctrl + S).

Next, import the Server Certificate to the Client PSE:

- 1. Still in the **STRUST** transaction on the **SNC SAPCrytpolib** folder, double-click the Own Certificate Subject in the upper part of the screen, as shown in the screenshot below.
 - The Own Certificate data displays.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 29 of 34



P 🅅			
System PSE	SNC SAPCryptolib		
SNC SAPCryptolib	Own Certificate		
 pocdsap005_S4I_10 	Subject	CN=HE4, O=Kerberos	
SSL server Standard			
SSL client SSL Client (Anonyr		(Self-Signed)	
X SSL client BCM	a Issuer Certificates		
SSL client SSL Client (Standa SSL client PAYPAL			
WS Security Standard			
WS Security Standard			
WS Security WS Security Ke			
SMIME Standard		Trust own root certificate	
Ø File		L I rust own root certificate	
SSF Collaboration Integration			
SSF E-Learning	Certificate List		
SSF FI_MAP	C A 7 H K 7 . Q		
🖞 SSF Logon Ticket	Owner	Valid from Valid to	
SSF SAP Trade Repository Re	CN=USPM	18.12.2023 01.01.2038	
	CN=USPM2	17.12.2023 01.01.2038	
	CN=POCDAPP026	15.04.2021 01.01.2038	
	CN=DSPAppSite	28.04.2021 01.01.2038	
	CNI=DOCDADD022	06.07.000 01.01.000	
	Verification PSE	Password	
	Certificate		
	Subject	CN=HE4, O=Kerberos	
	Subject (Alt.)		
	Issuer	CN=HE4, O=Kerberos	
	Serial Number (Hex.)	0A:20:16:02:07:08:29:01	
	Serial Number (Dec.)	729607337597741313	
	Valid From	07.02.2016 08:29:01 to 01.01.2038 00:00:01	
	Algorithm	RSA	
	Key Strength	2048	
	Signature Algorithm	RSA+SHA1	
	Check Sum (MD5)	82:29:5D:37:87:04:DF:8E:08:C3:C7:A7:3F:E3:AB:4D	
	Checksum (SHA1)	62: C5: A3: 04: 60: 6A: 65: 50: 89: 04: 40: 19: A1: EE: A1: FA: D5: E2: 85: A0	
	Unecksum (SHAL) [b2:U3:A3:04:60:6A:65:50:89:04:40:19:A1:EE:A1:FA:D5:E2:85:A0		

- 2. Click the Export Certificate button.
- 3. Assign a name to the exported certificate that identifies the SAP System where the certificate came from.
- 4. Select the Base64 option and click Continue (F8).

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 30 of 34



Trust Manager: Display	v			
19 M				
System PSE System PSE System PSE System Standard Society Standard Society Standard Society Standard Society Standard Society Standard WS Society Standard System Standard System Standard System Standard Society Standard System Standard System Standard System Standard WS Society Standard System Sta	SIX: SAPCryptolb Own Certificate Subject	(N+HE4, O-Kenteros (Self-Syned) Issuer Centificates		Vaid from 18.12.200 15.04.200 28.04.200 04.07.200
		✓ ×	01.01.2038 00:00:01	

5. Open a command prompt, move to the SECUDIR folder, and execute the following commands:

sapgenpse maintain_pk -v -a <full path and name of certificate> -p <full path and name of environment>

For example:

sapgenpse maintain_pk -v -a C:\SAP_SNC\RQ1.crt -p C:\SAP_SNC\RFC.pse

A message similar to this one displays:

Adding new certificate from file "[YourCertificate]"

The certificate downloaded from SAP has been incorporated into your PSE environment.

Create the Credentials File

Using the commands in this section, you can create the $cred_v2$ file that contains the secure credentials used in the SNC connections between Replicate and SAP. The $cred_v2$ file must be created in the SECUDIR directory (to continue the example from above C:\SAP_SNC). The operating system users that run the Replicate Service and Application must have entries in the file.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 31 of 34



To generate the file and grant access to the users, the following command must be run from a command prompt with Administrator privileges:

sapgenpse seclogin -p RFC.pse -O <User>

The command must be run for each user that needs to have access. For example, if the Replicate services are run by the LocalAccount or NetworkServices, the following commands should be executed:

sapgenpse seclogin -p C:\SAP_SNC\RFC.pse -O Administrator sapgenpse seclogin -p C:\SAP_SNC\RFC.pse -O System

sapgenpse seclogin -p C:\SAP_SNC\RFC.pse -O NetworkService

If Windows user Bob is running the Replicate Management Center he must also be added

sapgenpse seclogin -p C:\SAP SNC\RFC.pse -O Bob

The tool will ensure a valid Windows user and the correct Domain and Username is added. Upon completion, this message displays:

D:\snc_lib>sapgenpse seclogin -p RFC.pse -O Bob

running seclogin with USER="Bob"

creating credentials for user "WIN-S4DMXYZ\Bob" (yourself)...

Adjusting credentials and PSE ACLs to include " WIN-S4DMXYZ\Bob"...

d:\snc_lib\cred_v2 ... ok. d:\snc_lib\RFC.pse ... ok.

Added SSO-credentials for PSE "d:\snc_lib\RFC.pse"

SNC Configuration in SAP

Using transaction **snc0** add an entry for the Replicate server. **System ID** is the Replicate server's hostname and **SNC Name** is the *Distinguished name of PSE owner* from the step *Generate the Personal Security Environment* above.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 32 of 34



NC: Access Contro	l List (ACL) for Systems		
System ID	SNC name	RF	CP
4EH	p:CN=SCC, OU=HCP Scenarios, O=Trust Community, C=DE		
Cloud connector	p:CN=CC	\checkmark	
DSPAppSite	p:CN=DSPAppSite		\checkmark
POCDAPP023.pd	cla p:CN=POCDAPP023		\checkmark
POCDAPP026.pd	cla p:CN=POCDAPP026		\checkmark
POCXAPP111.po	clab.p:CN=POCXAPP111		\checkmark
SAP Cloud Conn	ector p:CN=cldvmxli00197.wdf.sap.corp, O=SAP, C=DE		
WIN-S4DM9098	A40 p:CN=USPM		П

Configuring a NetWeaver Connection to use SNC

Follow the instructions <u>here</u> to create a NetWeaver connection.

A basic connection uses the following connection properties.

⊿	Authentication		
	Connection Type	NetWeaver	
	Connection Scheme	ApplicationServer	
	Host	10.21.12.205	
	System Number	10	
	User	dsp_rfc	
	Password	•••••	
	Client	400	

Under the Advanced -> Security section of the connection, SNC can be configured. In the basic example below **SNC Partner name** is obtained from the SAP system and prefixed with p : . If **SNC Name** is empty, **User** and **Password** are used.

Note that using **SNC Name** is an advanced option requiring additional SAP configuration. SNC Name is configured for SAP logons in the SAP system.

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 33 of 34



⊿	Security	
	SNC Mode	True
	SNC Name	
	SNC Qop	9
	SNC Partner Name	p:CN=HE4, O=Kerberos
	SNC Lib Path	D:\snc_lib\sapcrypto.dll

Trust Manager: Display				
19 🅅				
System PSE Solution System PSE Solution Solution	SNC SAPCryptolib Own Certificate Subject	CN=HE4, O=Kerberos (Self-Signed) Issuer Certificates		

Copyright © 2022 Syniti and/or its affiliates. All rights reserved. This document contains confidential and proprietary information and reproduction is prohibited unless authorized by Syniti. Other names appearing in this document may be trademarks of their respective owners.

SAP RFC Data Extract using Syniti Replicate > Syniti Solutions > Page 34 of 34