Syniti Solutions

Syniti SAP Query Read Text

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Overview

This document describes the steps required to install the SAP transports needed to extract long text data from SAP Systems via RFC using Syniti Data Replication. Additionally, it describes the minimum SAP User requirements that need to be provisioned to allow table data to be extracted using Syniti Data Replication.

Prerequisites

SAP Environment Compatibility SAP ECC

Transports are compatible with SAP ECC6 SAP Basis 700 or higher.

SAP Environment Compatibility S/4HANA

Transports are compatible with SAP installations of S/4HANA 1709 [S4CORE 102] or higher.

SAP RFC User

Syniti recommends using a non-dialog RFC user with a non-expiring password. As a minimum, that user should be provisioned the authorisations shown below.

Extracting Data from SAP ECC Systems

Authorization Object	Authorization Field	Authorization Value
S_RFC	RFC_TYPE	FUNC
	ACTVT	16 (Execute)
	RFC_NAME	/BOA/*, RFC_READ_TABLE, RFCPING, DDIF_FIELDINFO_GET, RFC_GET_FUNCTION_INTERFACE, RSAQ_REMOTE_QUERY_CALL_CATALOG, RSAQ_REMOTE_QUERY_FIELDLIST, /OSP/GET_DECIMAL_NOTATION
S_RFC	RFC_TYPE	FUGR
	ACTVT	16 (Execute)
	RFC_NAME	AQRC
S_DEVELOP	DEVCLASS	SQUE

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	OBJTYPE	FUGR
	OBJNAME	AQRC
	P_GROUP	
	ACTVT	16

Table Access

Use authorisation object S_TABU_NAM to restrict by table. The minimum list of tables required are as follows. Additionally specific tables to be extracted will need to be added.

Authorization Object	Authorization Field	Authorization Value
S_TABU_NAM	TABLE	AQGQCAT, DD01T, DD02L, DD02T, DD03L, DD04L, DD04T, DD05Q, DD07L, DD07T, TCDOB
	ACTVT	03 (Display)

Use authorisation object S_TABU_NAM to restrict by table group. The minimum list of table group are as follows. Additionally specific table groups to be extracted will need to be added.

Authorization Object	Authorization Field	Authorization Value
S_TABU_DIS	DICBERCLS	&NC&, SS
	ACTVT	03 (Display)

Extracting Data from SAP S/4 HANA Systems

Authorization Object	Authorization Field	Authorization Value
S_RFC	RFC_TYPE	FUNC
	ACTVT	16 (Execute)
	RFC_NAME	/BS4/*, RFC_READ_TABLE, RFCPING, DDIF_FIELDINFO_GET, RFC_GET_FUNCTION_INTERFACE, RSAQ_REMOTE_QUERY_CALL_CATALOG, RSAQ_REMOTE_QUERY_FIELDLIST, /OSP/GET_DECIMAL_NOTATION
S_RFC	RFC_TYPE	FUGR
	ACTVT	16 (Execute)

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	RFC_NAME	AQRC
S_DEVELOP	DEVCLASS	SQUE
	OBJTYPE	FUGR
	OBJNAME	AQRC
	P_GROUP	
	ACTVT	16

Table Access

Use authorisation object S_TABU_NAM to restrict by table. The minimum list of tables required are as follows. Additionally specific tables to be extracted will need to be added.

Authorization Object	Authorization Field	Authorization Value
S_TABU_NAM	TABLE	AQGQCAT, DD01T, DD02L, DD02T, DD03L, DD04L, DD04T, DD05Q, DD07L, DD07T, TCDOB
	ACTVT	03 (Display)

Use authorisation object S_TABU_NAM to restrict by table group. The minimum list of table group are as follows. Additionally specific table groups to be extracted will need to be added.

Authorization Object	Authorization Field	Authorization Value
S_TABU_DIS	DICBERCLS	&NC&, SS
	ACTVT	03 (Display)

Set-Up Steps

Install Syniti SAP Query Read Text Transport

Install the provided transports into the SAP Application Server.

There are 2 transports files that must be installed in the following order. To have them installed, please contact the customer Basis team.

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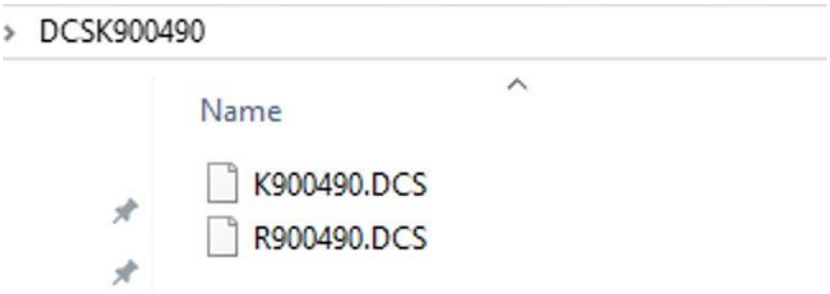
Transport File 1 DCSK900474

Transport File 2 DCSK900490



Transport Contents

Object Name	Type	Description
/BOA/UTILITY	Package	Package that contains all objects related to Syniti SAP Query Read Text
/BOA/READ_TEXT	Structure	Structure that defines available fields for Input parameters and Output table columns
/BOA/QUERY	User Group	User Group for Syniti SAP Query Read Text
/BOA/READ_TEXT	InfoSet	InfoSet for Syniti SAP Query Read Text. Assigned to User Group /BOA/QUERY. Main Query logic (input parameters definition and extraction logic) is implemented in this InfoSet.
/BOA/QUERY BOAQ_READ_TEXT	Query	Query for Syniti SAP Query Read Text. Created based on InfoSet /BOA/READ_TEXT. Output format (columns displayed and their sequence) is defined in this Query.

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Executing Syniti SAP Query Read Text

Using RSAQ_REMOTE_QUERY_CALL

Once the Syniti SAP Query Read Text is installed, it is ready to be executed and to extract text for the objects in scope.

When executing the query using RSAQ_REMOTE_QUERY_CALL Remote Enabled Function Module, the following input parameters must be provided:

- **WORKSPACE**: Value must be set to **G** as the Query was created under Global Area
- **QUERY**: Name of the Query to be executed. Value must be **BOAQ_READ_TEXT**
- **USERGROUP**: Name of the User Group that contains the Query. Value must be **/BOA/QUERY**
- **SKIP_SELSCREEN**: Do not use Selection Screen. Selection Screen Parameters are populated from Input Table SELECTION_TABLE (see below). Value must be **X**
- **DATA_TO_MEMORY**: Export extraction results to memory and fill Output Table LDATA (see LDATA Output Table for more information)
- **SELECTION_TABLE**:
    - **SELNAME**: Possible values are:
        - **S_TDOBJ**: Text Object
        - **S_TDNAME**: Text Name
        - **S_TDID**: Text ID
        - **S_SPRAS**: Language
    - **KIND**: Possible values are
        - **P**: Parameter
        - **S**: Select Option
    - **SIGN**: Possible values are:
        - **I**: Include
        - **E**: Exclude
    - **OPTION**: Possible values are:
        - **EQ**: Equal
        - **NE**: Not Equal
        - **GT**: Greater Than
        - **GE**: Greater or Equal Than
        - **LT**: Less Than
        - **LE**: Less or Equal Than
        - **BT**: Between
    - **LOW**: Lower Value
    - **HIGH**: Higher Value

LDATA Output Table

The output is exported in Output Table **LDATA**. This table has a generic row type and its contents have to be parsed by the consumer application.

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NOTE: In cases where the length of the result record is less than the length of the **LDATA** row, one row of Output Table **LDATA** may contain more than one result record from the Query.. It is also possible for one result record from the Query to span more than one row of Output Table **LDATA**, in cases where the length of the result record is greater than the length of **LDATA** row.

LDATA encodes the results in the following way:<VALUE_LENGTH>:<VALUE>[,<VALUE_LENGTH>:<VALUE>];' where:

- VALUE_LENGTH: 3 digits describing the length of VALUE
- VALUE: Actual field value

For Syniti SAP Query Read Text, every output record has 8 fields:

- Text Object
- Text Name
- Text ID
- Text Language
- Text Format
- Text Line
- Line Counter
- SAP Client

Using CData ODBC Driver for SAP ERP

Once the Syniti SAP Query Read Text and the CData ODBC Driver are installed, they are ready to be executed and to extract text for the objects in scope.

The CData ODBC driver is responsible for converting SQL Query Language (i.e., SQL Select Statements) into a Remote Function Call using RSAQ_REMOTE_QUERY_CALL Remote Enabled Function Module. The CData ODBC driver translates the SQL Query options into Importing and Table Parameters and parses the output of the Remote Function Call back into SQL compliant format. The Query Name must be informed in the From Clause and the following fields can be used in the Where Clause:

- **_BOA_READ_TEXT-OBJECT**: Text Object
- **_BOA_READ_TEXT-NAME**: Text Name
- **_BOA_READ_TEXT-ID**: Text ID
- **_BOA_READ_TEXT-LANGUAGE**: Language

The output can contain the fields below:

- Text Object
- Text Name
- Text ID
- Text Language

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- Text Format
- Text Line
- Line Counter
- SAP Client

Execution Examples

Execution using RSAQ_REMOTE_QUERY_CALL

To consume Syniti SAP Query Read Text using RSAQ_REMOTE_QUERY_CALL, the following fields must be populated:

- Workspace
- Query
- Usergroup
- Skip_selscreen
- Data_to_memory
- Selection_table

See Using RSAQ_REMOTE_QUERY_CALL for more details for each parameter.

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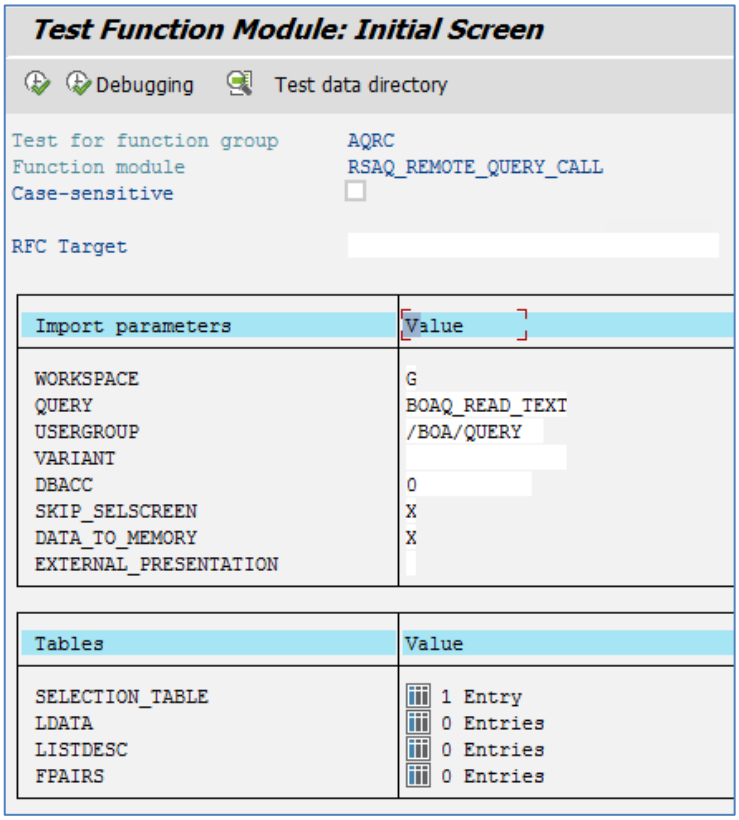

Figure 1 – RSAQ_REMOTE_QUERY_CALL - Parameters

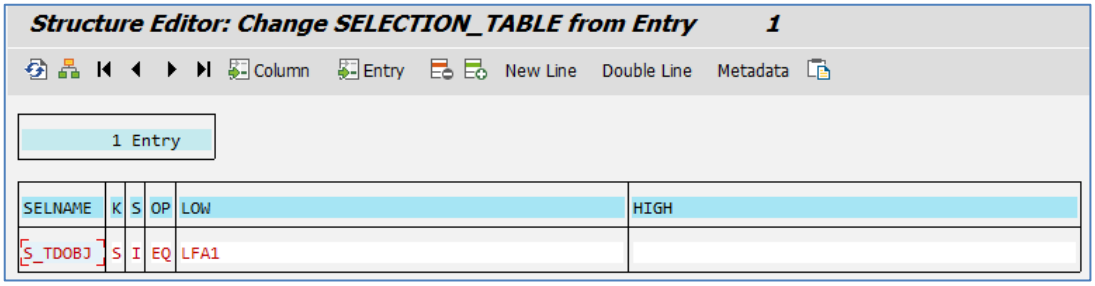

Figure 2 - RSAQ_REMOTE_QUERY_CALL - SELECTION_TABLE

The generated results can be found in Table LDATA:

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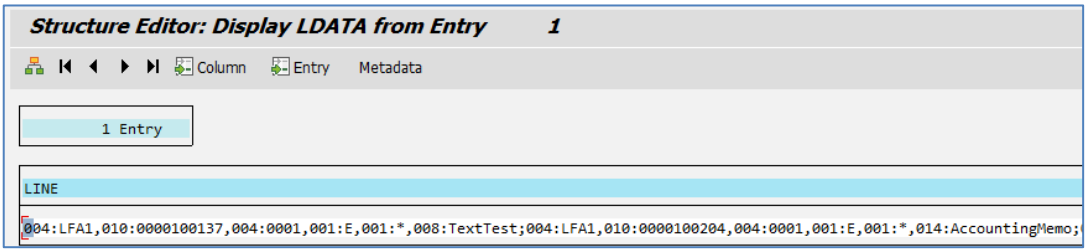

Figure 3 - RSAQ_REMOTE_QUERY_CALL - LDATA

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