Syniti Solutions

SAP Core Transports for Stewardship Tier
Version 7.4.8 and above

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Overview

Syniti provides SAP Transports that offer specific functionality that enhances the capabilities of the Syniti Stewardship Tier.

These capabilities are split into 2 SAP transports named Syniti – Stewardship Core Objects and Syniti – Stewardship Supplementary Objects. This document will discuss SAP Transports for Stewardship Core Objects.

Syniti – Stewardship Core Objects (DCSK900510) contains the minimum SAP components required for Syniti Stewardship Tier to integrate with SAP systems via the RFC protocol. It allows for the extraction of data from SAP by leveraging Remote Function Calls and allows for data load through BAPI's / RFC enabled functions and BDC Sessions.

The details of these transports are documented in corresponding document sections below.

SAP Authorization Requirements

This section provides an overview of the SAP authorizations needed for the Stewardship Tier and end users to use the intended functionality that is supported by the transports referenced in this document and standard functionality provided by SAP and called by the Stewardship Tier via RFC.

Note: In section 'Transport Syniti – Stewardship Core Objects (DCSK900510)' the SAP authorization requirements of each Function Module, Program and Transaction is provided.

Non-Dialog User

A non-dialog user with a non-expiring password is required for the RFC login. If a more granular security model is desired, create the user so that it only provides access to the required tables per project scope.

The following table provides the baseline SAP authorizations required of non-dialog users configured in the Stewardship Tier to interact with the SAP standard functionality:

Authorization Object	Authorization Field	Authorization Value
S_RFC	RFC_TYPE	FUGR (or FUNC if specifying Function Module names instead of Function Groups in RFC_NAME field)
	ACTVT	16 (Execute)
	RFC_NAME	SDTX, RFC1, RFC_METADATA, SDIFRUNTIME, SYST (or Function Module names)
S_TABU_CLI	CLIIDMAINT	'X'
S_TABU_DIS	ACTVT	02 (Change), 03 (Display)

	DICBERCLS	EDIDC, EDIDS, T100, APQD, APQI. Other Authorization Groups assigned to tables in scope.
S_DATASET	ACTVT	33 (Read)
S_IDOCCTRL	ACTVT	02 (Change)

The following table provides the SAP authorizations required of non-dialog users configured in the Stewardship Tier to interact with the Function Modules / Programs and Transactions referenced in this document:

Authorization Object	Authorization Field	Authorization Value
S_RFC	RFC_TYPE	FUGR (or FUNC if specifying Function Module names instead of Function Groups in RFC_NAME field)
	ACTVT	16 (Execute)
	RFC_NAME	/BOA/FG_EZPOST, /BOA/ZBOAINTMGR, /BOA/RFCTABLE, /BOA/RFCTEXT (or Function Module names)
S_TABU_CLI	CLIIDMAINT	'X'
S_TABU_DIS	ACTVT	02 (Change), 03 (Display)
	DICBERCLS	EDIDC, EDIDS, T100, APQD, APQI, SA, SC, SS. Other Authorization Groups assigned to tables in scope.
S_DATASET	ACTVT	33 (Read)
S_IDOCCTRL	ACTVT	02 (Change)
/BOA/FUNC	FNAM	/BOA/DSP_INTEGRATE_SUBMIT, /BOA/Z_INTERFACE_PROCESS_TABLE
	ACTVT	16 (Execute)

Dialog Users

If users need to execute /BOA/ZBDCPROCESS or /BOA/ZBDCANALYSIS directly in SAP, then they'll require a dialog user with the following authorizations:

Authorization Object	Authorization Field	Authorization Value
S_TABU_DIS	ACTVT	02 (Change), 03 (Display)
	DICBERCLS	AA, EDIDC, EDIDS, T100, APQD, APQI, /SAPDMC/LSOATT, /SAPDMC/LSOALG, SC. Other Authorization Groups assigned to tables in scope.
S_DATASET	ACTVT	33 (Read), 34 (Write)
	PROGRAM	/BOA/ZBDCPROCESS
	FILENAME	*
S_BDC_MONI	BDCAKTI	AONL
S_TCODE	TCD	/BOA/ZBDCANALYSIS, /BOA/ZBDCPROCESS,
S_PROGRAM	P_GROUP	/BOA/GRP
	P_ACTION	SUBMIT
S_DEVELOP	DEVCLASS	/BOA/BDCDIRECT, /BOA/UTILITY
	OBJTYPE	PROG
	OBJNAME	/BOA/ZBDCANALYSIS, /BOA/ZBDCPROCESS,
	P_GROUP	/BOA/GRP
	ACTVT	03 (Display), 16 (Execute)
/BOA/TCODE	ACTVT	16 (Execute)

 NOTE: If a project is using specific BAPI's, RFC enabled functions or BDC's that are not provided by Syniti then RFC / Dialog users will need to be granted the appropriate authorizations to these objects.

Transports Compatibility

Syniti Stewardship Tier Compatibility:

The transports can be applied to Syniti Solutions versions 7.4.8 and later.

SAP Environment Compatibility:

Transports are compatible with SAP installations of EHP 7 FOR SAP ERP 6.0 [SAP_APPL 617] (based on SAP NETWEAVER 740 [SAP_BASIS 740]) or higher.

Customers running older versions of the Stewardship Tier / DSP or SAP should refer to the Knowledge Base article SAP Transports for 7.1 through 7.4.7.

Transport Distribution

The Syniti Stewardship Tier 'Core' SAP transports are shipped with the Stewardship Tier installation files. They can be found in the following location:

{Installation_Directory}\BOA\DSP\Web\UserArea\0151a30b-2dd0-48ae-823d-d378e1ff5c05\SAP_Transports\Namespace

Transport Installation Sequence

The installation sequence of the SAP Transports for Stewardship Tier is depicted below:

Transport 1: Syniti – Stewardship Core Objects (DCSK900510)

- File 1 - K900510.DCS
- File 2 - R900510.DCS

Transport Syniti – Stewardship Core Objects (DCSK900510)

The table below contains the contents of the Syniti – Stewardship Core Objects SAP Transport.

Namespace

Object Name	Description
/BOA/	Syniti (Backoffice Associates) Namespace

Packages

Object Name	Description
/BOA/DSP_INTEGRATE	Data Stewardship Platform Integrate Objects Package.
/BOA/UTILITY	Data Extraction Utility Objects Package.
/BOA/BDCDIRECT	Data Stewardship Platform BDC Objects Package.

Function Groups

Object Name	Package	Description
/BOA/FG_EZPOST	/BOA/DSP_INTEGRATE	This Function Group contains functions that allow for the controlled execution of IDocs, BDC Sessions and Direct Inputs.
/BOA/RFCTABLE	/BOA/UTILITY	This Function Group contains functions that allow for the extraction of data from SAP tables to which the connection user has been granted access to.

/BOA/RFCTEXT	/BOA/UTILITY	This Function Group contains a function that allows for the extraction of Long Texts from SAP.
/BOA/ZBOAINTMGR	/BOA/BDCDIRECT	This Function Group contains functions that allow for the controlled execution BDC Sessions.

Function Modules

Object Name	Package	Description
/BOA/DSP_INTEGRATE_GETSTATUS	/BOA/DSP_INTEGRATE	This Function Module is used to retrieve status information using a Unique ID of the runs of Function Module /BOA/DSP_INTEGRATE_SUBMIT. **SAP Authorizations** To successfully execute this Function Module, the user must be granted access to the following authorization objects: • S_RFC: RFC_TYPE=FUGR OR FUNC, RFC_NAME=/BOA/FG_EZPOST (if RFC_TYPE=FUGR) or RFC_NAME=/BOA/DSP_INTEGRATE_GETSTATUS (if RFC_TYPE=FUNC), and ACTVT=16 • S_TABU_DIS: DICBERCLS=SA, SC, SS and ACTVT=03
/BOA/DSP_INTEGRATE_SUBMIT	/BOA/DSP_INTEGRATE	This Function Module is used to execute a Data Transfer Program (provided as a parameter), IDoc, or Syniti program /BOA/ZBDCPROCESS. Receives a Unique ID, File Name, and table of Parameters. The Unique ID is used to identify each run of the function module (and used by Function Module /BOA/DSP_INTEGRATE_GETSTATUS to retrieve the status of each run). The File Name should contain the file name in the application server of the file to processed - The folder in which the file should be located should be configured in AL11 as a User Directory named DIR_DSP_INTEGRATE (User Directory named DIR_DSP_ROOT should also be created). The contents of the file will differ based on the type of program to be executed (i.e.: IDoc, Direct Input or Batch Input). IDocs are processed according to the configured Partner Profiles in the system. Direct Input are run as Jobs, and for Batch Input, Batch Sessions are created and executed by report RSBDCSUB. **SAP Authorizations** To successfully execute this Function Module, the user must be granted access to the following authorization objects: • S_RFC: RFC_TYPE=FUGR OR FUNC, RFC_NAME=/BOA/FG_EZPOST (if RFC_TYPE=FUGR) or RFC_NAME=/BOA/DSP_INTEGRATE_SUBMIT (if RFC_TYPE=FUNC), and ACTVT=16 • /BOA/FUNC: FNAM=/BOA/DSP_INTEGRATE_SUBMIT, and ACTVT=16 • S_DATASET: ACTVT=33 • S_TABU_CLI: CLIIDMAINT='X

| | | • S_TABU_DIS: DICBERCLS=SA, SC, SS and ACTVT=03 |
		• S_TABU_DIS: ACTVT=02
/BOA/ZGET_TABLE_SIZE_RFC	/BOA/UTILITY	This Function Module is used to obtain the number of records for a given table. This function module supports the processing of Collect (Stewardship Tier/DSP module) RFC based extracts by enabling the number of times the application needs to make RFC calls (based upon RFC packet size) to be calculated. **SAP Authorizations** To successfully execute this Function Module, the user must be granted access to the following authorization objects: • S_RFC: RFC_TYPE=FUGR OR FUNC, RFC_NAME=/BOA/RFCTABLE (if RFC_TYPE=FUGR) or RFC_NAME=/BOA/ZGET_TABLE_SIZE_RFC (if RFC_TYPE=FUNC), and ACTVT=16; • S_TABU_CLI: CLIIDMAINT='X'; • S_TABU_DIS: DICBERCLS= <Authorization Group of Table being queried>, and ACTVT=03 - or S_TABU_NAM as below; • S_TABU_NAM: TABLE=<Table being queried>, and ACTVT=03; Note on Dynamic Programming: Given the need for dynamic statements for reading data, some measures were taken to mitigate the risk of undesired access to data: a. Authority to query the input table is checked using standard function module VIEW_AUTHORITY_CHECK on an all or nothing approach (i.e.: If the user has access to a table, it will have access to all its contents) in all Function Modules in this Function Group - Same approach is used by standard SAP function module RFC_READ_TABLE;
/BOA/ZRFC_READ_TABLE	/BOA/UTILITY	This Function Module is used to extract data from any table to which the user was granted access. It is an extension on the standard SAP RFC_READ_TABLE (main statements such as Authorization Check and Select statements are not changed) with extensions including wider output structure, handling of packed and raw fields. Additionally, dynamic coding techniques were employed to cater for non-Unicode systems when calculating the length of the lines to be output. This function module supports the processing of extracts using Collect (Stewardship Tier/DSP module) package type 'BOA RFC'. **SAP Authorizations** To successfully execute this Function Module, the user must be granted access to the following authorization objects: • S_RFC: RFC_TYPE=FUGR OR FUNC,

		RFC_NAME=/BOA/RFCTABLE (if RFC_TYPE=FUGR) or RFC_NAME=/BOA/ZRFC_READ_TABLE (if RFC_TYPE=FUNC), and ACTVT=16; • S_TABU_CLI: CLIIDMAINT='X'; • S_TABU_DIS: DICBERCLS= <Authorization Group of Table being queried>, and ACTVT=03 - or S_TABU_NAM as below; • S_TABU_NAM: TABLE=<Table being queried>, and ACTVT=03; Note on Dynamic Programming: Given the need for dynamic statements for reading data, some measures were taken to mitigate the risk of undesired access to data: a. Authority to query the input table is checked using standard function module VIEW_AUTHORITY_CHECK on an all or nothing approach (i.e.: If the user has access to a table, it will have access to all its contents) in all Function Modules in this Function Group - Same approach is used by standard SAP function module RFC_READ_TABLE; b. It is not possible to execute a SQL statement within a clause of another statement completely dynamically (i.e.: Code Injection is not possible - will cause runtime error); c. For extra protection, explicit check of statements SELECT, UPDATE, MODIFY, INSERT, DELETE, JOIN, LEFT, RIGHT, EXISTS' is also being carried out;
/BOA/ZRFC_READ_TEXT	/BOA/UTILITY	This Function Module is used to extract Texts from the Data Source using standard SAP Function Module READ_TEXT. It also searches for Object Links and extract texts from those (using READ_TEXT as well) if links are found. This function module supports the processing of extracts using Collect (Stewardship Tier/DSP module) package type 'SAP Text'. **SAP Authorizations** To successfully execute this Function Module, the user must be granted access to the following authorization objects: • S_RFC: RFC_TYPE=FUGR OR FUNC, RFC_NAME=/BOA/RFCTEXT (if RFC_TYPE=FUGR) or RFC_NAME=/BOA/ZRFC_READ_TEXT (if RFC_TYPE=FUNC), and ACTVT=16;
/BOA/Z_INTERFACE_PROCESS_TABLE	/BOA/BDCDIRECT	This Function Module is used to create and execute Batch Inputs by either creating a Batch Group or by executing a Call Transaction. **SAP Authorizations** To successfully execute this Function Module, the user must be granted access to the following authorization objects: • S_RFC: RFC_TYPE=FUGR OR FUNC,

		RFC_NAME=/BOA/ZBOAINTMGR (if RFC_TYPE=FUGR) or RFC_NAME=/BOA/Z_INTERFACE_PROCESS_TABLE (if RFC_TYPE=FUNC), and ACTVT=16 • /BOA/FUNC: FNAM=/BOA/Z_INTERFACE_PROCESS_TABLE, and ACTVT=16;

Database Tables

Object Name	Package	Description
/BOA/EP_DIRECT	/BOA/DSP_INTEGRATE	Direct Input Session Names Created from EZPost
/BOA/EP_IDOC	/BOA/DSP_INTEGRATE	IDoc Session Names Created from EZPost
/BOA/EP_SESSIONS	/BOA/DSP_INTEGRATE	Batch Input Session Names Created from EZPost
/BOA/EP_STATUS	/BOA/DSP_INTEGRATE	EZPost File and GUID status
/BOA/ZBDCLOG	/BOA/BDCDIRECT	Interface status table
/BOA/ZBOAPARAMS	/BOA/BDCDIRECT	Parameters for processing
/BOA/ZBDCLOGHIST	/BOA/BDCDIRECT	Interface status table - History post processing

Structures

Object Name	Package	Description
/BOA/BAPILOG	/BOA/DSP_INTEGRATE	BAPI Log
/BOA/EP_PARAM	/BOA/DSP_INTEGRATE	EZPost Parameter Structure
/BOA/EP_RETURN	/BOA/DSP_INTEGRATE	EZPost Return Structure
/BOA/EP_SUMMARY	/BOA/DSP_INTEGRATE	EZPost Status Summary
/BOA/BAPI_DOC_DRAD	/BOA/UTILITY	DMS: document object links
/BOA/BAPI_DOC_DRAD_KEYS	/BOA/UTILITY	DMS: document object links keys
/BOA/IBIPTEXTLN	/BOA/UTILITY	Long text line with logical key
/BOA/SELECTOPTIONS	/BOA/UTILITY	Where clause for RFC read table
/BOA/TABRECORD	/BOA/UTILITY	30k character field for retrieving wide data
/BOA/ZBOA_CALL_TRAN	/BOA/BDCDIRECT	Input structure for Call Transaction function module

Authorization Objects

Object Name	Package	Description
/BOA/FUNC	/BOA/UTILITY	Authorization Object for DSP Integrate Function Modules
/BOA/TCODE	/BOA/UTILITY	Authorization Object for DSP Integrate Transactions

Programs

Object Name	Package	Description
/BOA/ZBDCPROCESS	/BOA/BDCDIRECT	Syniti's utility program to create Batch Input sessions from files in either the Presentation Server or the Application Server. Actual processing is done by Function Module /BOA/Z_INTERFACE_PROCESS_TABLE. If Queue Processing is specified, all the files in the queue will be processed. If a wait time is specified, after waiting the specified interval, it will repeatedly check the queue after clearing it and process new files listed. In this case the program can be terminated by executing program /BOA/ZBDCSTOP with the appropriate settings.

		SAP Authorizations
		To successfully execute this Program, the user must be granted access to the following authorization objects: • S_DATASET: PROGRAM='/BOA/ZBDCPROCESS', FILENAME=<filename provided in selection screen>, and ACTVT=34 • S_BDC_MONI: BDCAKTI=AONL • S_PROGRAM: P_GROUP='/BOA/GRP' • P_ACTION='SUBMIT'
/BOA/ZBDCANALYSIS	/BOA/BDCDIRECT	Syniti's utility program to analyze Batch Input sessions created using program /BOA/ZBDCPROCESS. **SAP Authorizations** To successfully execute this Program, the user must be granted access to the following authorization objects: • S_TABU_DIS: DICBERCLS=SC, and ACTVT=03 • S_PROGRAM: P_GROUP='/BOA/GRP' • P_ACTION='SUBMIT'

Transactions

Object Name	Package	Description
/BOA/ZBDCPROCESS	/BOA/BDCDIRECT	Transaction for Program /BOA/ZBDCPROCESS. **SAP Authorizations** To successfully execute this Transaction, the user must be granted access to the following authorization objects: • /BOA/TCODE: ACTVT=16, P_GROUP=*, OBJNAME='' • S_TCODE: TCD=/BOA/ZBDCPROCESS
/BOA/ZBDCANALYSIS	/BOA/BDCDIRECT	Transaction for Program /BOA/ZBDCANALYSIS. **SAP Authorizations** To successfully execute this Transaction, the user must be granted access to the following authorization objects: • /BOA/TCODE: ACTVT=16, P_GROUP=*, OBJNAME='' • S_TCODE: TCD=/BOA/ZBDCANALYSIS

Lock Object

Object Name	Package	Description
/BOA/EZZBDCLOG	/BOA/BDCDIRECT	Lock Object for Table ZBDCLOG