Configuration Guide for SAS® Activity-Based Management Adapter 6.2 for SAP R/3
Table of Contents

Introduction .............................................................................................................................. 1
  Installation Package Description ......................................................................................... 1

Software Product Requirements .......................................................................................... 2

SAP Server Installation and Configuration ......................................................................... 3
  SAP Transport File Installation ......................................................................................... 3
  Create Variant for ZSAS_ABM_COPA_GETQUANTITIES .............................................. 5

R/3 Authorizations Required for the Adapter ......................................................................... 7

Batch RFC Support – SAP Server Configuration ............................................................... 13

SAS Server Installation and Configuration ........................................................................ 17

Client Side Installation ....................................................................................................... 17

Server Side Installation ..................................................................................................... 18
  Customization of the Adapter Environment ..................................................................... 20
  Set the Adapter Parameters Files Location ..................................................................... 22
  Verify that the Installation is Set Up Correctly ............................................................... 23

RFC Server ........................................................................................................................ 24

Metadata Extraction ......................................................................................................... 25
  Procedure Using the Metadata Wizard ........................................................................... 26

Running the Adapter Using the Batch Mode Script ......................................................... 27
  Batch Mode Requirements .............................................................................................. 27
  Running Batch Mode ....................................................................................................... 28
Introduction

This document provides the instructions for configuring the SAS Activity-Based Management Adapter 6.2 for SAP R/3 (the adapter) server and client software on a Windows-based system. Please read these instructions before you attempt to configure the software.

Note: The client side and server side software must be installed on the same computer.

This document assumes that you are familiar with the Windows operating system, the SAS System, and SAS/ACCESS Interface to R/3 software.

The adapter relies on other software being in place, so it is important that all solution components are installed prior to testing. Installation and testing details of components other than the adapter are not provided in this document; refer to installation instructions specific to those components.

The recommended order of installation and installation testing is as follows:

1. The installation for SAS 9.1.3 Foundation will install the SAS Activity-Based Management Adapter 6.2 for R/3 software, along with all your other licensed SAS Foundation components. This installation is controlled by the SAS Installation Data (SID) which came in your Software Order E-mail (SOE). If the SAS Activity-Based Management Adapter 6.2 for R/3 is in the SID product listing in your SOE, the components will be unloaded in the Foundation install. If these products are NOT in your product listing, a correct SOE must be obtained before attempting installation.

2. Install SAP server (ABAP) components of SAS/ACCESS Interface to R/3, Release 9.1.3. This will require the use of the SAP transport system, and needs to be done by a SAP administrator.

3. Install SAP server (ABAP) components specific to the adapter. This will use SAP transports preferentially, and a SAP administrator should be available to assist.

4. Ensure that the RFC server (Windows service) is running.

5. Test that the SAS/ACCESS Interface to R/3 functions correctly.

6. Install and test the SAS Activity-Based Management Adapter 6.2 for SAP R/3 software.

7. Configure the SAS components of the adapter software.

Installation Package Description

After the foundation install there will be three self-extracting .exe files in the !sasroot\abmadaptsap\sasmisc subdirectory (Note that !sasroot typically resolves to C:\Program Files\SAS\SAS 9.1):

- Transprt.exe, contains the required files for the transport files for SAP
- Client.exe, contains the required files for the client side installation
- Server.exe, contains the required files for the server side installation
Software Product Requirements

SAS Activity-Based Management Adapter 6.2 for SAP R/3 requires SAP R/3 (Release 4.5B or higher) to be installed prior to the installation of the adapter itself. The adapter must be installed on a machine that already has the SAS Activity-Based Management SAS Server or SAS Activity-Based Management ETL Server installed on it.

Products Required for SAS Activity-Based Management Adapter 6.2 for SAP R/3:

- Base SAS software.
- SAS Activity-Based Management Adapter 6.2 for SAP R/3, which contains necessary elements of SAS/ACCESS Interface to R/3 software.
- SAS/ACCESS Interface to R/3 software, which is bundled with the adapter.

SAS/ACCESS Interface to R/3 software requires the use of communication protocols such as TCP/IP to function properly.

Products Required SAP R/3:

- SAP R/3, Release 4.5B or higher.
- SAP R/3 Remote Function Call Software Development Kit (RFCSDK), which can be installed together with the SAP GUI software.

Refer to the *Installation Instructions for SAS/ACCESS 9.1.3 Interface to R/3* for information on configuring SAS/ACCESS Interface to R/3 software.
SAP Server Installation and Configuration

SAP Transport File Installation

In addition to the SAP server installation and setup needed by SAS/ACCESS Interface to R/3 software, there are two more transports needed for the SAS Activity-Based Management Adapter 6.2 for SAP R/3. This document assumes that the standard SAP server components of the SAS/ACCESS Interface to R/3 software have already been installed. If this is not the case, please ensure that these components are installed before continuing.

The SAS Activity-Based Management Adapter 6.2 for SAP R/3 includes components that need to be installed on the SAP system. This is done in the form of SAP transports. The transports should be installed by the responsible SAP administrator.

Double-click the `!sasroot\abmadaptsap\sasmisc\Transprt.exe` file to unzip the SAP transports.

**Note:** The default path for extracting the files is `C:\`

By default, the extraction will create this directory structure:

```
C:\R3Transport
    K900385.SI3
    R900385.SI3
    K900339.SI2
    R900339.SI2
    SAP_Components_ABM.doc
```

The transports are named `SI3K900385` and `SI3K900339`. Each consists of two files—a data file and a cofile:

- R900385.SI3 (Data file)
- K900385.SI3 (Cofile)
- R900339.SI2 (Data file)
- K900339.SI2 (Cofile)

The transport S13K900385 consists of:

- a package ZSAS
- a function group ZSAS_ABM holding the following function modules:
  - Z_SAS_ABM_COPA_GETQUANTITIES
  - Z_SAS_BATCH_SPAWNER
- a report ZSAS_ABM_COPA_GETQUANTITIES
- six transparent tables:
  - ZSASABMDIMVALUES
  - ZSASABMPARMS
  - ZSASABMRESULTS
  - ZSASABMSELECTION
  - ZSASABMSFIELDS
  - ZSASABMSTATUS
The contents of the transport are shown in the following display:

**SI2K900339** consists of:

- A function group ZSAS_EH containing the following function module:
  
  - Z_SAS_G_SET_TREE_IMPORT2
Create Variant for ZSAS_ABM_COPA_GETQUANTITIES

The report ZSAS_ABM_COPA_GETQUANTITIES needs a variant called ZZ_ABM to run properly. Create the ZZ_ABM variant as follows:

1. Go to se38 in SAP.
2. Enter `ZSAS_ABM_COPA_GETQUANTITIES` as the name of the program.

3. Select **Variants** under the Subobjects heading.
4. Click **Change**.
5. Enter ZZ_AB to the variant field and click Create. You should see the following display:

![Display of a variant configuration in SAP R/3](image)

Click on Attributes and enter a description. Click the Save icon (or press CTRL+S) to save the variant.

**R/3 Authorizations Required for the Adapter**

This section describes the minimum authorizations required for SAS Activity-Based Management Adapter 6.2 for SAP R/3. Four specific SAP profiles are required. Two are standard SAP profiles. Two are custom user profiles which contain authorization objects described further below in this document.

It is also recommended to have an additional user ID that is to be used interactively in the SAP GUI to test functions, browse tables, and facilitate SAP data validation during the implementation phase. This user ID would typically have the same rights as someone in the Controlling department, but with the following additional rights to run transactions:

- SE16 to browse tables
- SE17 and SE38 to run single test functions and programs
- SM21 and SM37 to monitor jobs and logs
Standard R/3 Authorizations profiles:
K_PCA_AL1 - For Profit Center support
K_RKE_ALL - For COPA support

Custom profile for SAS Activity-Based Management Adapter to create:
Profile
|--. SAS-ABM <PRO> SAP Authorizations required for Activity-Based Management Adapter
 | |--. K_ABC <OBJ> CO-ABC: General Authorization Object, Business Processes
 | | |--. SASABM6 <AUT> Business Process
 | | | |--. AUTHAREA <FLD> Authorization Area for Business Processes
 | | | | | |-----BP*
 | | | |--. CO_ACTION <FLD> Actions for CO-OM Authorization Check
 | | | | | |-----*
 | | | |--. KSTAR <FLD> Cost element
 | | | | | |-----*
 | ||--. K_AUFK_ART <OBJ> CO-OPA: Order Types
 | | |--. SASABM14 <AUT> Order types
 | | | |--. ACTVT <FLD> Activity
 | | | | | |-----03
 | | | |--. ASTNR <FLD> Order status
 | | | | | |-----*
 | | | |--. AUFART <FLD> Order type
 | | | | | |-----*
 | ||--. K_AUFK_SET <OBJ> CO_OPA: Order groups
 | | |--. SASABM13 <AUT> Internal Order Group
 | | | |--. ACTVT <FLD> Activity
 | | | | | |-----03
 | | | |--. HNAME <FLD> Group Name
 | | | | | |-----*
 | ||--. K_CBPR_SET <OBJ> CO-ABC: Business Process Groups
 | | |--. SASABM3 <AUT> Authorizations required for Activity-Based Management Adapter
 | | | |--. ACTVT <FLD> Activity
 | | | | | |-----03
 | | | |--. KOKRS <FLD> Controlling Area
 | | | | | |-----*
 | |--. K_CCA <OBJ> CO-CCA: Gen. Authorization Object for Cost Center Accounting
 | | |--. SASABM11 <AUT> CCA
 | | | |--. CO_ACTION <FLD> Actions for CO-OM Authorization Check
 | | | | | |-----*
Authorization for SAS/ACCESS Interface to R/3:

Profile

|--. SAS-ACCR3 <PRO> Minimum authorizations for SAS/ACCESS Interface to R/3
  |--. $_BTCH_JOB <OBJ> Background Processing: Operations on Background Jobs
  |   |--. BTCHSAS <AUT> Minimum authorizations for SAS/ACCESS Interface to R/3
  |   |   |--. JOBACT <FLD> Job operations
  |   |       |-----RELE
  |   |   |--. JOBGROUP <FLD> Summary of jobs for a group
  |   |       |-----'
  |--. $_CPIC <OBJ> CPIC Calls from ABAP Programs
  |   |--. CPCSAS <AUT> Minimum authorizations for SAS/ACCESS Interface to R/3
  |   |   |--. ABAPFORM <FLD> Name of an ABAP/4 FORM routine
  |   |       |-----'
  |   |   |--. ACTVT <FLD> Activity
  |   |       |-----37
  |   |       |-----51
  |   |   |--. CPICDEST <FLD> Symbolic destination
  |   |       |-----SELF
  |   |   |--. PROGRAM <FLD> ABAP program name
  |   |       |-----SAPLZSAS
  |   |       |-----ZSASRDBT
S_RFC <OBJ> Authorization check for RFC access

RFCSAS <AUT> Minimum authorizations for SAS/ACCESS Interface to R/3

ACTVT <FLD> Activity

RFC_NAME <FLD> Name of RFC to be protected

RFC_TYPE <FLD> Type of RFC object to be protected

S_TABU_DIS <OBJ> Table Maintenance (via standard tools such as SM30)

TABUSAS <AUT> Minimum authorizations for SAS/ACCESS Interface to R/3

ACTVT <FLD> Activity

DICBERCLS <FLD> Authorization group
Batch RFC Support – SAP Server Configuration

The SAS Activity-Based Management Adapter 6.2 for SAP R/3 requires that the SAS/ACCESS Interface to R/3 RFC server be enabled to support batch mode extractions from SAP. The RFC server is used to connect the SAS server to the SAP server. This is not automatically enabled during the SAS Foundation installation on Windows platforms. The following steps outline what needs to be done on the SAP server to enable batch mode support:

Some screenshots from a SAP R/3 Enterprise system are used to illustrate the process.

1. Set up a SM59 destination in SAP.

   Enter the SM59 transaction command.

   ![SM59 Transaction Command](image1)

   Click **Create**.
In this example, the destination and program ID are both called SASABM. The connection type must be “T” (TCP/IP connection), and the Activation type must be Registration (Registered Server Program).

Save the destination.

2. Create a variant of the ABAP program /SAS/Z_SAS_READ that references this destination. On the SAS server (=default RFC server).

Enter the se38 transaction command.
Enter the program name `/SAS/_Z_SAS_READ`, and click **Variants** (or CTRL+F1).

Enter the variant name **SASABM**, and then click **Create**.

Enter the destination **SASABM**, and then click **Attributes**.
Enter a description, and save the Variant.

<table>
<thead>
<tr>
<th>Variant name</th>
<th>SASABM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meaning</td>
<td>Batch RFC support for SAS ABM</td>
</tr>
<tr>
<td>Created for selection screens</td>
<td>1000</td>
</tr>
</tbody>
</table>
SAS Server Installation and Configuration

Client Side Installation

To install the adapter on the client side:

1. Close all open SAS applications.
   
   **Note:** The SAS Foundation setup will normally install the SAS Private JRE which is 1.4.1 for Windows. The JRE is required to run the client.

2. Double-click the !sasroot\abmadaptsap\sasmisc\Client.exe file.
   
   **Note:** The default path for extracting the files should be C:\ (highly recommended). If you change this location, you will have to change many of the programs to deal with the revised directory paths.

   By default, the extraction will create this directory structure:

   C:\adapters
   \SASABM62
   \client
   \ExtractWizard.bat
   \TransformWizard.bat
   \ABMAdapterExtractWz.jar
   \ABMAdapterTransformWz.jar
   \saswizard.jar
   \SAS ABM Adapter Extraction Wizard
   \SAS ABM Adapter Transform Wizard

3. **Copy the SAS ABM Adapter Extraction Wizard** and **SAS ABM Adapter Transform Wizard shortcuts to the Windows Desktop.**

4. **Verify that the adapter client side software is installed correctly:**
   - Double-click the **SAS ABM Adapter Extraction Wizard** shortcut on the Desktop.
     If the Extraction Wizard was installed correctly, after a brief delay, the following window will appear:
• Click **Cancel**.

• Double-click the **SAS ABM Adapter Transform Wizard** shortcut on the Desktop. If the Transform Wizard was installed correctly, after a brief delay, the following window will appear:

![SAS ABM Adapter for R3 - Step 1 of 7. Parameter file selection](image)

• Click **Cancel**.

Description of client side installation files:

<table>
<thead>
<tr>
<th>Filename</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ExtractWizard.bat</td>
<td>Batch file to run the Extraction Wizard</td>
</tr>
<tr>
<td>TransformWizard.bat</td>
<td>Batch file to run the Transformation Wizard</td>
</tr>
<tr>
<td>SAS ABM Adapter Extraction Wizard</td>
<td>Shortcut to place on the Desktop to run the Extraction Wizard</td>
</tr>
<tr>
<td>SAS ABM Adapter Transform Wizard</td>
<td>Shortcut to place on the Desktop to run the Transformation Wizard</td>
</tr>
<tr>
<td>ABMAdapterExtractWz.jar</td>
<td>Extraction Wizard Java P-code</td>
</tr>
<tr>
<td>ABMAdapterTransformWz.jar</td>
<td>Transformation Wizard Java P-code</td>
</tr>
<tr>
<td>saswizard.jar</td>
<td>Common P-code for the Wizards</td>
</tr>
</tbody>
</table>

**Server Side Installation**

To install the adapter on the server side:

1. Install the SAS 9.1.3 Foundation software.
2. Install SAS/ACCESS Interface to R/3 software.
3. Create a directory to hold the SAP extracted data on your hard drive:
   ```
   C:\R3Data
   ```
4. Extract the R/3 Metadata. Refer to the “Metadata Extraction” section on page 25 for details.

   The metadata extraction should be done AFTER installing the SAP transport. This is required to get metadata registered by the Transport for the tables **ZSASABMRESULTS** and **ZSASABMSTATUS**.
5. Close all open SAS applications.

6. Double-click the "$sasroot\abmadaptsap\sasmisc\server.exe" file.

   **Note:** The default path for extracting the files should be C:\ (highly recommended).
   If you change this location, you will have to change many of the programs to deal with the revised directory paths.

   By default, the extraction will create this directory structure:

   C:\Adapters
   \SASABM62
   \Server
   \r3lib
   \Samples
   \ABM Extract Samples – Many files
   \Batch
   Batch_Periodic_extract.bat
   Scheduled_Extract_Period.sas
   Setenv.bat
   \abmadapt_export_to_access.sas
   \abmadapt_Extract_Master_Data.sas
   \abmadapt_Extract_Periodic_Data.sas
   \abmadapt_initial.sas
   \abmadapt_Transform.sas
   ABMExtract.txt
   ABMTransform.txt
   ABMTransform_all_params.txt
   autoexec.sas
   autoexec_ui.sas
   \B_ExportToAccess.bat
   \B_Extract_Meta_Data.bat
   \B_ExtractMaster.bat
   \B_ExtractPeriodic.bat
   \B_Transform.bat
   \common_logoff.sas
   \common_logon.sas
   \MetaDataExtraction.sas
   \SAS_9 ABM Adapter UI.lnk
   \SAS_9 ABM Adapter.lnk
   \setenv.bat

7. Copy the SAS ABM Adapter UI and SAS ABM Adapter shortcuts to the Windows Desktop.
Customization of the Adapter Environment

If you did not change the default installation path for the SAS 9.1.3 Foundation and the adapter, you can proceed to the section entitled “Verify that the Installation is Set Up Correctly” on page 23.

This installation package assumes that the SAS 9.1.3 Foundation was installed in (the default location)

C:\Program Files\SAS\SAS 9.1\

If you changed the default installation path, you must modify \setenv.bat to point to the correct path. To modify this file, select it with Windows Explorer, right-click the file name, then select Edit.

Change the reference to the SAS 9.1.3 Foundation, as shown in the following example:

If SAS is installed in E:\mySASpath, change the set SASROOT= statement in \setenv.bat from

set SASROOT= C:\Program Files\SAS\SAS 9.1\ to

set SASROOT= E:\mySASpath

You will also have to modify each of the four shortcuts on the Desktop with the proper path information. For example, to modify the SAS 9 ABM Adapter UI shortcut on the Windows Desktop, right-click the shortcut, select Properties, and modify the path to the SAS System in the Target field.

Next, modify the –config parameter in the target, and the Start in field. Click OK when done.
Be sure to modify the *remaining three icons* on the Windows Desktop to update the path information as necessary.

The default path statements are listed below. If you installed SAS and the adapter in the default locations, it is not necessary to edit any of these path statements.

<table>
<thead>
<tr>
<th>What</th>
<th>Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desktop Icon</td>
<td>SAS ABM Adapter Transform Wizard</td>
</tr>
<tr>
<td>Default Target Path</td>
<td><code>C:\adapters\SASABM62\client\TransformWizard.bat</code></td>
</tr>
<tr>
<td>Default Start in</td>
<td><code>C:\adapters\SASABM62\client</code></td>
</tr>
<tr>
<td>Desktop Icon</td>
<td>SAS ABM Adapter Extract Wizard</td>
</tr>
<tr>
<td>Default Target Path</td>
<td><code>C:\adapters\SASABM62\client\ExtractWizard.bat</code></td>
</tr>
<tr>
<td>Default Start in</td>
<td><code>C:\adapters\SASABM62\client</code></td>
</tr>
<tr>
<td>Desktop Icon</td>
<td>SAS ABM Adapter UI</td>
</tr>
<tr>
<td>Default Target Path</td>
<td>&quot;C:\Program Files\SAS\SAS 9.1\sas.exe&quot; -autoexec autoexec_ui.sas</td>
</tr>
<tr>
<td>Default Start in</td>
<td><code>C:\Adapters\SASABM62\server</code></td>
</tr>
<tr>
<td>Desktop Icon</td>
<td>SAS ABM Adapter</td>
</tr>
<tr>
<td>Default Target Path</td>
<td>&quot;C::\Program Files\SAS\SAS 9.1\sas.exe&quot;</td>
</tr>
<tr>
<td>Default Start in</td>
<td><code>C:\Adapters\SASABM62\server</code></td>
</tr>
</tbody>
</table>
Set the Adapter Parameters Files Location

By default, the adapter process will search for these parameter files (if you installed the adapter in the default location you do not need to perform any edits):

- c:\Adapters\SASABM62\server\ABMExtract.txt
- c:\Adapters\SASABM62\server\ABMTransform.txt

These locations must be pointed to by the adapter Client Wizards. If you want the adapter to look for these files in another location, you have to modify the *autoexec.sas* file.

Open the *autoexec.sas* file specifically located in the adapter installation directory (C:\adapters\SASABM\server) with Notepad. There will be multiple copies of the *autoexec.sas* file based upon the base SAS install and what other SAS products are running on the system.

Using Notepad, modify these lines according to the installation:

```
* Autoexec for SAS Activity-Based Management Adapter for SAP R/3;
* ---------------------------------------------------------------
-----------------------------------;
Filename ABMEXTRA "c:\Adapters\SASABM62\server\ABMExtract.txt";
Filename ABMTRANS "c:\Adapters\SASABM62\server\ABMTransform.txt";
```

Save the *autoexec.sas* file.
Verify that the Installation is Set Up Correctly

Follow these steps:

1. Double-click the SAS ABM Adapter UI shortcut on the Windows Desktop.
2. SAS should run and open on the SAS ABM Adapter folder. You should see a window similar to the following:

![SAS ABM Adapter window](image)

Description of server side files:

<table>
<thead>
<tr>
<th>Filename</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>abmadapt_export_to_access.sas</td>
<td>SAS Script which runs exportation to access process</td>
</tr>
<tr>
<td>abmadapt_Extract_Master_Data.sas</td>
<td>SAS Script which runs master data extraction process</td>
</tr>
<tr>
<td>abmadapt_Extract_Periodic_Data.sas</td>
<td>SAS Script which runs Period data extraction process</td>
</tr>
<tr>
<td>abmadapt_initial.sas</td>
<td>SAS Script which can be used to extract Metadata</td>
</tr>
<tr>
<td>abmadapt_Transform.sas</td>
<td>SAS Script which runs Transformation process</td>
</tr>
<tr>
<td>ABMExtract.txt</td>
<td>Created as a result of running the Extract Wizard (contains a sample Extract file)</td>
</tr>
<tr>
<td>ABMTransform.txt</td>
<td>Created as a result of running the Transformation Wizard (contains a sample Transform file)</td>
</tr>
<tr>
<td>autoexec.sas</td>
<td>Autoexec where parameter file locations are referenced</td>
</tr>
<tr>
<td>autoexec_ui.sas</td>
<td>Autoexec used to start the interactive SAS ABM session</td>
</tr>
<tr>
<td>B_Extract_Meta_Data.bat</td>
<td>Runs Metadata extraction in Batch mode</td>
</tr>
</tbody>
</table>
## RFC Server

The SAS Activity-Based Management Adapter 6.2 for SAP R/3 requires that the SAS/ACCESS Interface to R/3 RFC server be enabled to support batch mode extractions from SAP. On the SAS server, using a Windows administrator user ID:

1. Remove the default installed service.
2. Re-install the RFC service with parameters that reference the ABAP variant.

These steps can be achieved by including the program `setup_batchrfc.sas` into the SAS editor. **Note:** This program assumes the default settings for port numbers, service names, etc.

At the end of the program, in the macro call of `%setup_batchrfc`, modify the name of the variant to match the name of the variant created on the SAP server, and submit

```
%setup_batchrfc(variant=SASABM, newpath=c:\Adapters\SASABM62);
```
In the Windows services window, check the SAS RFC Service V9 service is correctly started, and is set to start-up automatically.

If the default settings are not required, then refer to the SAS online help using Index “RFC Server, batch mode”.

**Metadata Extraction**

The adapter is based on the SAS/ACCESS Interface to R/3 software; the R/3 Metadata needs to be extracted to use it. If you have not already extracted the R/3 Metadata, or if you have not extracted the required table, you will have to perform this process.

The Metadata extraction process assumes that you are familiar with the SAS/ACCESS Interface to R/3 software.
**Procedure Using the Metadata Wizard**

- Open the SAS/ACCESS Interface to R/3 windows (enter `%r3access` in the transaction field of SAS).
- Logon to R/3 by clicking the Logon icon.
- Run the Metadata Extraction Wizard.
- Select **Data Dictionary** on the Select import type window, and then click **Next**.
- Select the connection on the Connection window, and then click **Next**.
- Select **R3Lib** on the Metadata destination window.
  
  ```
  Libname R3lib 'C:\adapters\SASABM62\server\r3lib';
  ```

- **Note:** *If you have already extracted Metadata for a tool other than the SAS Activity-Based Management Adapter 6.2 for SAP R/3, check the merge into existing metadata check box.*

- On the Metadata selection window, only check the **Tables** and **Fields** check boxes; uncheck any others.
- Click the **Range** button, and specify the following tables:

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>TKA01</td>
<td>TKA03</td>
</tr>
<tr>
<td>T001</td>
<td>T001</td>
</tr>
<tr>
<td>TGSBT</td>
<td>TGSBT</td>
</tr>
<tr>
<td>TFKBT</td>
<td>TFKBT</td>
</tr>
<tr>
<td>TCURT</td>
<td>TCURT</td>
</tr>
<tr>
<td>CEPC</td>
<td>CEPC</td>
</tr>
<tr>
<td>COSP</td>
<td>COSP</td>
</tr>
<tr>
<td>COSR</td>
<td>COSS</td>
</tr>
<tr>
<td>CSKS</td>
<td>CSLA</td>
</tr>
<tr>
<td>CSKB</td>
<td>CSKB</td>
</tr>
<tr>
<td>AUFK</td>
<td>AUFK</td>
</tr>
<tr>
<td>CBPR</td>
<td>CBPR</td>
</tr>
<tr>
<td>CBPT</td>
<td>CBPT</td>
</tr>
<tr>
<td>ZSASABMRESULTS</td>
<td>ZSASABMRESULTS</td>
</tr>
<tr>
<td>ZSASABMSTATUS</td>
<td>ZSASABMSTATUS</td>
</tr>
</tbody>
</table>

- Click **OK**, and then click **NEXT**.
- On the Select file window, you can create a SAS script which can be reused if you need to extract the Metadata again. If you want to create one, enter a **location** and a **script name**, and then click **NEXT**.
- On the Begin metadata extract window, click **Finish** to begin the process, which should take about two minutes to complete.
Running the Adapter Using the Batch Mode Script

You can use the script B_Extract_Meta_Data.bat to extract the metadata needed to run the adapter. You only need to extract the metadata once; either do so interactively using the Wizard to load metadata, or in batch mode using the script. Do not do both.

Batch Mode Requirements

In order to use the scripts, a few prerequisites must be met:

1. The default configuration assumes that sas.exe is located in
   
   C:\Program Files\SAS\SAS 9.1\sas.exe
   
   If you need to change this location, edit the file setenv.bat.

2. You need a valid logon profile in SAS/ACCESS Interface to R/3 named
   ABM_SAP_PROFILE. Alternatively, you can use a different profile name by editing
   autoexec.sas to include the following statement:

   %let sap_profile=<the profile name>.

   Please see the SAS/ACCESS Interface to R/3 documentation and the SAP system
   administrator for the parameters required to define the ABM_SAP_Profile (all
   advanced tabs for Profile – general, TCP/IP, RFC, CPI-C). You should define two Profiles:
   (1) an ABM_SAP_Profile for basic access using Remote Function Calls, and (2) an
   ABM_SAP_Profile_Batch for remote access using the Batch Remote Function Calls. A
   different port number will be used for each of the two profiles.

3. The SAP Metadata should be located (by default) in
   
   C:\Adapters\SASABM62\server\r3lib. If you need to change this location, edit
   autoexec.sas. For example, if the metadata resides in C:\metadata, then adjust the
   line LIBNAME r3lib... in autoexec.sas to
   
   LIBNAME r3lib 'C:\metadata';

   If you intend to use the script B_Extract_Meta_Data.bat to extract Metadata from an SAP
   system, please make sure that the directory specified in the LIBNAME statement already exists in
   the file system.
Running Batch Mode

In addition to using the interactive wizard to load metadata to run the metadata extractions, you can use scripts in batch mode to automate the process. Using batch mode allows the jobs to be run in the background without user interaction.

To run the batch scripts:

1. Create a SAS/ACCESS Interface to R/3: Profile “ABM_SAP_PROFILE”.
2. Run through the SAS Activity-Based Management Adapter Extraction Wizard to make selections.
3. Open Windows Explorer.
4. Browse to the install for the adapter – C:\adapters\SASABM62\Server\.
5. Double-click on the specific batch file to run it – the order makes a difference.
   a. B_Extract_Meta_Data.bat – to extract the SAP Metadata specific to SAS Activity-Based Management
   b. B_ExtractMaster.bat – to extract the Master SAP data
   c. B_ExtractPeriod.bat – to extract the Periodic SAP data
6. Run through the Transformation Wizard to make selections.
   a. B_Transform.bat – transforms data for SAS Activity-Based Management
   b. B_ExportToAccess.bat – exports SAS tables to MS Access
7. Review all logs for errors – saved in C:\Adapters\SASABM62\Server. 
   a. Abmadapt_initial.log – for the Metadata extraction
   b. Abmadapt_Extract_Master_Data – for the master data
   c. Abmadapt_Extract_Periodic_Data – for the Periodic data
   d. Abmadapt_Transform – for the transform to Staging tables
   e. Abmadapt_export_to_Access
8. The following scripts (initial sequence) can be used to automate the data extraction process:

   B_Extract_Meta_Data.bat  (Extracts Metadata from SAP)
   B_ExtractMaster.bat      (Extracts master data from SAP)
   B_ExtractPeriodic.bat   (Extracts periodic data from SAP)
   B_Transform.bat         (Transforms the extracted data to fit the SAS ABM)
   B_ExportToAccess.bat    (Creates an MS Access database from the SAS datasets)
9. The scripts rely on existing configuration files created by the Extraction Wizard and the Transformation Wizard (default locations C:\Adapters\SASABM62\Server\ABMExtract.txt and C:\Adapters\SASABM62\Server\ABMTransform.txt), and that the specified directories exist in the file system (for example, the Destination Library Path default is C:\R3DATA\).
SAS is the world leader in providing software and services that enable customers to transform data from all areas of their business into intelligence. SAS solutions help organizations make better, more informed decisions and maximize customer, supplier, and organizational relationships. For more than 25 years, SAS has been giving customers around the world The Power to Know®. Visit us at www.sas.com.